

FA #:

PACE ID:

PTN:

SITE ID:

SITE NAME:

SITE ADDRESS:

SITE TYPE:

PROJECT:

14652325

MRNYJ013215

2191A0YB3M

NWL06274

CHESTER II

60 EVAN ROAD

WARWICK, NY 10990

WATERTANK

NSB - COLOCATION

APPLICABLE BUILDING CODES AND STANDARDS

2020 BUILDING CODE OF NEW YORK STATE - 2018 INTERNATIONAL BUILDING CODE

2020 NEW YORK ELECTRICAL CODE OF NEW YORK STATE - 2017 NATIONAL ELECTRICAL CODE (NFPA 70)

2020 MECHANICAL CODE OF NEW YORK STATE - 2018 INTERNATIONAL MECHANICAL CODE

ANSI/TIA-222-H STRUCTURAL STANDARD FOR ANTENNA SUPPORTING STRUCTURES, ANTENNAS AND SMALL WIND TURBINE SUPPORT STRUCTURES

ANSI/TIA-607-B - GENERIC TELECOMMUNICATIONS BONDING AND GROUNDING (EARTHING) FOR CUSTOMER PREMISES

ACI 318-14, AMERICAN CONCRETE INSTITUTE -318 -14, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE

AISC" WITH " AISC STEEL CONSTRUCTION MANUAL, 15TH/ ED

IEEE C2: NATIONAL ELECTRICAL SAFETY CODE

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.

DRIVING DIRECTIONS

START AT:1 AT&T WAY, BEDMINSTER, NJ 07921

HEAD NORTHEAST TOWARD AT&T WAY0.1 MI

TURN RIGHT ONTO AT&T WAY1.0 MI

CONTINUE STRAIGHT ONTO US-202 S/US-206 S0.4 MI

TURN LEFT ONTO SCHLEY MOUNTAIN ROAD0.5 MI

MERGE ONTO I-287 N45.0 MI

USE THE LEFT 2 LANES TO MERGE ONTO I-87 N/NY-17 N

TOWARD NEW YORK THRUWAY/ALBANY14.3 MI

USE THE RIGHT 3 LANES TO TAKE EXIT 16 FOR NY-17 TOWARD US-6/HARRIMAN

CONTINUE ONTO NY-17 W1.4 MI

CONTINUE ONTO NY-17 W/US-6 W1.1 MI

TAKE EXIT 127 TOWARD GREYCOURT ROAD/SUGAR LOAF/WARWICK6.4 MI

TURN LEFT ONTO LEHIGH AVE0.1 MI

MERGE ONTO BROOKSIDE AVE0.6 MI

TURN LEFT ONTO CO ROAD 13/KINGS HWY220 FT

TURN RIGHT ONTO KINGS HWY2.3 MI

TURN RIGHT ONTO DARIN ROAD1.6 MI

TURN RIGHT ONTO EVAN466 FT

ARRIVE AT:60 EVAN ROAD, WARWICK, NY 109900.2 MI

PROJECT CONTACTS

TITLE	NAME	COMPANY	CONTACT NUMBER
SAQ	REBECCA RIVERA	AIROSMITH DEVELOPMENT	(203) 500-1615
A&E	AJ DESANTIS	AIROSMITH ENGINEERING	(518) 306-1711



PROJECT SCOPE

INSTALLATION OF AT&T GROUND AND ANTENNA EQUIPMENT AT AN EXISTING WATERTANK TELECOMMUNICATIONS FACILITY.

GROUND SCOPE OF WORK:

- INSTALL NEW WIC AND 30KW DIESEL GENERATOR WITH BELLY TANK ON PROPOSED CONCRETE PADS AT GRADE.
- INSTALL NEW UNDERGROUND CONDUIT FROM WIC TO EXISTING WATER TANK.
- INSTALL NEW 200A 120/240V UTILITY SERVICE FROM EXISTING METER BOARD TO NEW WIC.
- INSTALL NEW CONDUIT FOR BACKHAUL SERVICE TO WIC FROM EXISTING TELCO DEMARC.
- INSTALL (2) NEW FIBER MANAGEMENT BOXES.
- INSTALL (3) DC 12 UNITS

ANTENNA LEVEL SCOPE OF WORK:

- INSTALL (12) NEW PANEL ANTENNAS ON NEW ANTENNA MOUNTS ON EXISTING TOWER.
- INSTALL (12) REMOTE RADIO UNITS (RRU'S).
- INSTALL (3) DC9 SURGE SUPPRESSOR UNITS.
- INSTALL (3) FIBER AND (6) DC TRUNK CABLES FROM WIC TO ANTENNAS.
- INSTALL (3) ANTENNA MOUNTING FRAMES.

SITE INFORMATION

PROPERTY OWNER:KINGS ESTATE LTD PARTNERSHIP  
PREL PLAZA, SUITE 15  
ORANGEBURG, NY 10962

MUNICIPALITY:TOWN OF CHESTER

COUNTY:ORANGE

TOWER OWNER:TOWN CHESTER

SITE ID:NWL06274

ZONING DISTRICT:SR-1 SUBURBAN RESIDENTIAL

AT&T FA NUMBER:14652325

AT&T PACE ID:MRNYJ013215

AT&T PTN:2191A0YB3M

AT&T SITE NAME:CHESTER II

APPLICANT:NEW CINGULAR WIRELESS PCS, LLC  
1 AT&T WAY  
BEDMINSTER, NJ 07921

SITE ADDRESS:60 EVAN ROAD  
WARWICK, NY 10990

PARCEL ID:17-1-51

LATITUDE:41° 18' 05.74" N 41.3015944°

LONGITUDE:74° 17' 38.93" W -74.2941472°

GROUND ELEVATION:722± AMSL

POWER COMPANY:O & R (ORANGE & ROCKLAND)

TELCO COMPANY:LIGHT TOWER FIBER NETWORK

GENERAL NOTES

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE; NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.

RF DATA NOTE

CONTRACTOR SHALL OBTAIN LATEST RF DATA SHEET AND CONFIRM SAME WITH AT&T CONSTRUCTION MANAGER PRIOR TO START OF CONSTRUCTION. THESE DRAWINGS ARE BASED ON

RFDS 2023 NEW SITE  
RFDS VERSION: 1.00  
DATED: 4/27/2022

DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY ALL PLANS & EXISTING DIMENSIONS & CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME

SHEET NO:	DRAWING INDEX	REV
T01	TITLE SHEET	0
GN01	GENERAL NOTES	0
GN02	GENERAL NOTES CONT	0
A01	OVERALL SITE PLAN	0
A02	COMPOUND PLAN	0
A02A	ENLARGED SITE PLAN	0
A02B	STAKING PLAN	0
A03	ELEVATION VIEW AND ORIENTATION PLAN	0
A04	AT&T RF TABLE	0
A05	EQUIPMENT DETAILS	0
A06	EQUIPMENT DETAILS	0
A07	DETAILS	0
A08	GENERATOR DETAILS	0
A09	WIC PLATFORM DETAILS	0
A10	CONCRETE PAD DETAILS	0
A11	PLUMBING DIAGRAM	0
G01	GROUNDING PLAN	0
G02	GROUNDING DETAILS	0
G03	GROUNDING DETAILS	0
E01	UTILITY PLAN AND DETAILS	0
E02	ONE LINE DIAGRAM	0
S01-S08	MOUNT DESIGN DETAILS	1

CARRIER:



CONSULTANT TEAM:



AIROSMITH DEVELOPMENT  
AIROSMITH ENGINEERING  
318 WEST AVE.  
SARATOGA SPRINGS, NY 12866  
CLUSTER #  
ATT NSB NYC 202103

THIS DOCUMENT IS PRELIMINARY  
IN NATURE AND IS NOT FINAL,  
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THIS DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED  
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WITHOUT THE WRITTEN AUTHORIZATION OF AIROSMITH  
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APPROVAL OF THE PROFESSIONAL OF RECORD.

PROFESSIONAL STAMP:



DRAWINGS ISSUED FOR:

REV.	DATE	DRAWN	DESCRIPTION	QA/QC
A	05/20/22	ASW	FOR REVIEW	AJD
B	06/27/22	BMM	FOR REVIEW	ASW
0	07/12/22	BMM	FOR FINALS	ASW

PROJECT INFORMATION:

SITE:  
14652325  
CHESTER II  
  
60 EVAN ROAD  
WARWICK, NY 10990  
ORANGE COUNTY  
WATER TANK

SHEET TITLE:

TITLE  
SHEET

SHEET NUMBER:

T01

REVISION:

0



GENERAL CONSTRUCTION NOTES:

1.

FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:  
GENERAL CONTRACTOR  
SUBCONTRACTOR – CONTRACTOR (CONSTRUCTION)  
OWNER – AT&T
2.

ALL SITE WORK SHALL BE COMPLETED AS INDICATED ON THE DRAWINGS AND AT&T PROJECT SPECIFICATIONS.
3.

GENERAL CONTRACTOR AND SUBCONTRACTOR SHALL VISIT THE SITE AND SHALL FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS. GENERAL CONTRACTOR AND SUBCONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS, DIMENSIONS, AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
4.

ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. GENERAL CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF WORK.
5.

ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES, AND APPLICABLE REGULATIONS.
6.

UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
7.

PLANS ARE NOT TO BE SCALED. THESE PLANS ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY UNLESS OTHERWISE NOTED. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS OTHERWISE NOTED. SPACING BETWEEN EQUIPMENT IS THE MINIMUM REQUIRED CLEARANCE. THEREFORE, IT IS CRITICAL TO FIELD VERIFY DIMENSIONS, SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH THE WORK. DETAILS ARE INTENDED TO SHOW DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF WORK AND PREPARED BY THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH WORK.
8.

THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
9.

IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE SPACE FOR APPROVAL BY THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING.
10.

GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF WORK AREA, ADJACENT AREAS AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFORM TO ALL OSHA REQUIREMENTS AND THE LOCAL JURISDICTION.
11.

GENERAL CONTRACTOR SHALL COORDINATE WORK AND SCHEDULE WORK ACTIVITIES WITH OTHER DISCIPLINE.
12.

ERECTION SHALL BE DONE IN A WORKMANLIKE MANNER BY COMPETENT EXPERIENCED WORKMEN IN ACCORDANCE WITH APPLICABLE CODES AND THE BEST ACCEPTED PRACTICE. ALL MEMBERS SHALL BE LAID PLUMB AND TRUE AS INDICATED ON THE DRAWINGS.
13.

SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH UL LISTED MATERIALS APPROVED BY LOCAL JURISDICTION. SUBCONTRACTOR SHALL KEEP AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DEBRIS.
14.

WORK PREVIOUSLY COMPLETED IS REPRESENTED BY LIGHT SHADED LINES AND NOTES. THE SCOPE OF WORK FOR THIS PROJECT IS REPRESENTED BY DARK SHADED LINES AND NOTES. SUBCONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR OF ANY EXISTING CONDITIONS THAT DEVIATE FROM THE DRAWINGS PRIOR TO BEGINNING CONSTRUCTION.
15.

SUBCONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO THE CONSTRUCTION MANAGER 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
16.

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 THE OWNER.
17.

THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
18.

GENERAL CONTRACTOR SHALL COORDINATE AND MAINTAIN ACCESS FOR ALL TRADES AND SUBCONTRACTORS TO THE SITE AND/OR BUILDING.
19.

THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SECURITY OF THE SITE FOR THE DURATION OF CONSTRUCTION UNTIL JOB COMPLETION.
20.

THE GENERAL CONTRACTOR SHALL MAINTAIN IN GOOD CONDITION ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA, AND CHANGE ORDERS ON THE PREMISES AT ALL TIMES.
21.

THE GENERAL CONTRACTOR AND SUBCONTRACTOR SHALL PROVIDE PORTABLE FIRE EXTINGUISHERS WITH A RATING OF NOT LESS THAN 2-A OT 2-A:10-B:C AND SHALL BE WITHIN 25 FEET OF TRAVEL DISTANCE TO ALL PORTIONS OF WHERE THE WORK IS BEING COMPLETED DURING CONSTRUCTION.
22.

ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY THE ARCHITECT/ENGINEER. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS SHALL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION, B) CONFINED SPACE, C) ELECTRICAL SAFETY, D) TRENCHING & EXCAVATION.
23.

ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED, CAPPED, PLUGGED OR OTHERWISE DISCONNECTED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, AS DIRECTED BY THE RESPONSIBLE ARCHITECT/ENGINEER, AND SUBJECT TO THE APPROVAL OF THE OWNER AND/OR LOCAL UTILITIES.
24.

THE AREAS OF THE OWNER'S PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION.
25.

SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO THE EXISTING SITE DURING CONSTRUCTION, EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE FEDERAL AND LOCAL JURISDICTION FOR EROSION AND SEDIMENT CONTROL.
26.

NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUNDING. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
27.

THE SUBGRADE SHALL BE BROUGHT TO A SMOOTH UNIFORM GRADE AND COMPACTED TO 95 PERCENT STANDARD PROCTOR DENSITY UNDER PAVEMENT AND STRUCTURES AND 80 PERCENT STANDARD PROCTOR DENSITY IN OPEN SPACE. ALL TRENCHES IN PUBLIC RIGHT OF WAY SHALL BE BACKFILLED WITH FLOWABLE FILL OR OTHER MATERIAL PRE-APPROVED BY THE LOCAL JURISDICTION.
28.

ALL NECESSARY RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A LAWFUL MANNER.
29.

ALL BROCHURES, OPERATING AND MAINTENANCE MANUALS, CATALOGS, SHOP DRAWINGS, AND OTHER DOCUMENTS SHALL BE TURNED OVER TO THE GENERAL CONTRACTOR AT COMPLETION OF CONSTRUCTION AND PRIOR TO PAYMENT.
30.

SUBCONTRACTOR SHALL SUBMIT A COMPLETE SET OF AS-BUILT REDLINES TO THE GENERAL CONTRACTOR UPON COMPLETION OF PROJECT AND PRIOR TO FINAL PAYMENT.
31.

SUBCONTRACTOR SHALL LEAVE PREMISES IN A CLEAN CONDITION.
32.

THE PROPOSED FACILITY WILL BE UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SEWER SERVICE, AND IS NOT FOR HUMAN HABITAT (NO HANDICAP ACCESS REQUIRED).
33.

OCCUPANCY IS LIMITED TO PERIODIC MAINTENANCE AND INSPECTION, APPROXIMATELY 2 TIMES PER MONTH, BY AT&T TECHNICIANS.
34.

NO OUTDOOR STORAGE OR SOLID WASTE CONTAINERS ARE PROPOSED.
35.

ALL MATERIAL SHALL BE FURNISHED AND WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST REVISION OF AT&T MOBILITY GROUNDING STANDARD "TECHNICAL SPECIFICATION FOR CONSTRUCTION OF GSM/GPRS WIRELESS SITES" AND "TECHNICAL SPECIFICATION FOR FACILITY GROUNDING." IN CASE OF A CONFLICT BETWEEN THE CONSTRUCTION SPECIFICATION AND THE DRAWINGS, THE DRAWINGS SHALL GOVERN.
35.

SUBCONTRACTORS SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS REQUIRED FOR CONSTRUCTION. IF SUBCONTRACTOR CANNOT OBTAIN A PERMIT, THEY MUST NOTIFY THE GENERAL CONTRACTOR IMMEDIATELY.
36.

SUBCONTRACTOR SHALL REMOVED ALL TRASH AND DEBRIS FROM THE SITE ON A DAILY BASIS.
37.

INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FROM SITE VISITS AND/OR DRAWINGS PROVIDED BY THE SITE OWNER. CONTRACTORS SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
38.

NO WHITE STROBE LIGHTS ARE PERMITTED. ANY REQUIRED LIGHTING MUST MEET FAA STANDARDS AND REQUIREMENTS.
39.

ALL COAXIAL CABLE INSTALLATIONS TO FOLLOW MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
40.

NO SIGNIFICANT NOISE, SMOKE, DUST OR VIBRATIONS WILL RESULT FROM THIS FACILITY. (DISREGARD THIS NOTE IF THIS SITE HAS A GENERATOR)
41.

NO ADDITIONAL PARKING TO BE PROPOSED. EXISTING ACCESS AND PARKING TO REMAIN, UNLESS NOTED OTHERWISE.
42.

NO LANDSCAPING IS PROPOSED AT THIS SITE, UNLESS NOTED OTHERWISE.

ELECTRICAL NOTES:

1.

ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL ANY/ALL ELECTRICAL WORK INDICATED. ANY/ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH DRAWINGS AND ANY/ALL APPLICABLE SPECIFICATIONS. IF ANY PROBLEMS ARE ENCOUNTERED BY COMPLYING WITH THESE REQUIREMENTS, CONTRACTOR SHALL NOTIFY 'CONSTRUCTION MANAGER' AS SOON AS POSSIBLE, AFTER THE DISCOVERY OF THE PROBLEMS, AND SHALL NOT PROCEED WITH THAT PORTION OF WORK, UNTIL THE 'CONSTRUCTION MANAGER' HAS DIRECTED THE CORRECTIVE ACTIONS TO BE TAKEN.
2.

ELECTRICAL CONTRACTOR SHALL VISIT THE JOB SITE AND FAMILIARIZE HIMSELF WITH ANY/ALL CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATION INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF. ALL EXISTING CONDITIONS OF ELECTRICAL EQUIP., LIGHT FIXTURES, ETC., THAT ARE PART OF THE FINAL SYSTEM, SHALL BE VERIFIED BY THE CONTRACTOR, PRIOR TO THE SUBMITTING OF HIS BID. FAILURE TO COMPLY WITH THIS PARAGRAPH WILL IN NO WAY RELIEVE CONTRACTOR OF PERFORMING ALL WORK NECESSARY FOR A COMPLETE AND WORKING SYSTEM.

3.

ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NEC AND ALL CODES AND LOCAL ORDINANCES OF THE LOCAL POWER & TELEPHONE COMPANIES HAVING JURISDICTION AND SHALL INCLUDE BUT NOT BE LIMITED TO:  
C – NATIONAL FIRE CODES  
A. UL – UNDERWRITERS LABORATORIES  
B. NEC – NATIONAL ELECTRICAL CODE  
C. NEMA – NATIONAL ELECTRICAL MANUFACTURERS ASSOC.  
D. OSHA – OCCUPATIONAL SAFETY AND HEALTH ACT  
E. SBC – STANDARD BUILDING CODE
4.

DO NOT SCALE ELECTRICAL DRAWINGS; REFER TO SITE PLANS AND ELEVATIONS FOR EXACT LOCATIONS OF ALL EQUIPMENT, AND CONFIRM WITH 'CONSTRUCTION MANAGER' ANY SIZES AND LOCATIONS WHEN NEEDED.
5.

EXISTING SERVICES: CONTRACTOR SHALL NOT INTERRUPT EXISTING SERVICES WITHOUT WRITTEN PERMISSION OF THE OWNER.
6.

CONTRACTOR SHALL PAY FOR ANY/ALL PERMITS, FEES, INSPECTIONS, AND TESTING. CONTRACTOR IS TO OBTAIN PERMITS AND APPROVED SUBMITTALS PRIOR TO THE WORK BEGINNING OR ORDERING EQUIPMENT.
7.

THE TERM "PROVIDE" USED IN CONSTRUCTION DOCUMENTS AND SPECIFICATIONS, INDICATES THAT THE CONTRACTOR SHALL FURNISH AND INSTALL.
8.

CONTRACTOR SHALL CONFIRM WITH LOCAL UTILITY COMPANY ANY/ALL REQUIREMENTS, SUCH AS THE: LUG SIZE RESTRICTIONS, CONDUIT ENTRY, SIZE OF TRANSFORMERS, SCHEDULED DOWNTIME FOR THE OWNERS' CONFIRMATION, ETC... ANY/ALL CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER, PRIOR TO BEGINNING ANY WORK.
9.

MINIMUM WIRE SIZE SHALL BE #12 AWG, NOT INCLUDING CONTROL WIRING, UNLESS NOTED OTHERWISE. ALL CONDUCTORS SHALL BE COPPER WITH THWN INSULATION.
10.

OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED HUBS IN WET/DAMP LOCATIONS AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.
11.

IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF THE CONSTRUCTION. CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS FOR THE EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
12.

ELECTRICAL SYSTEM SHALL BE AS COMPLETELY AND EFFECTIVELY GROUNDED, AS REQUIRED BY SPECIFICATIONS, SET FORTY BY AT&T.
13.

ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS, WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND SUBJECT TO REGULATORY INSPECTION & APPROVAL BY CONSTRUCTION MANAGER.
14.

ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
15.

CONTRACTOR SHALL GUARANTEE ANY/ALL MATERIALS AND WORK FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE OF ACCEPTANCE.
16.

THE CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ANY ADDITIONAL CHARGE AND SHALL INCLUDE THE REPLACEMENT OR THE REPAIR OF ANY OTHER PHASE OF THE INSTALLATION, WHICH MAY HAVE BEEN DAMAGED THEREIN.
17.

ADEQUATE AND REQUIRED LIABILITY INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LOSS AND ANY/ALL PROPERTY DAMAGE FOR THE DURATION OF WORK.
18.

PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WIRES, BOXES, COVER PLATES AND DEVICES FOR ALL OUTLETS AS INDICATED.
19.

DITCHING AND BACK FILL: CONTRACTOR SHALL PROVIDE FOR ALL UNDERGROUND INSTALLED CONDUIT AND/OR CABLES INCLUDING EXCAVATION, BACKFILLING AND COMPACTION. REFER TO 'FOUNDATION, EXCAVATION, AND BACKFILLING NOTES.'
20.

MATERIALS, PRODUCTS AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SHALL APPEAR ON THE LIST OF U.L. APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF THE NEC, NEMA, AND IECE.
21.

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR MANUFACTURERS CATALOG INFORMATION OF ANY/ALL LIGHTING FIXTURES, SWITCHES, AND ALL OTHER ELECTRICAL ITEMS FOR APPROVAL BY THE CONSTRUCTION MANAGER PRIOR TO INSTALLATION.
22.

ANY CUTTING OR PATCHING DEEMED NECESSARY FOR ELECTRICAL WORK IS THE ELECTRICAL CONTRACTORS RESPONSIBILITY AND SHALL BE INCLUDED IN THE COST FOR WORK AND PERFORMED TO THE SATISFACTION OF THE 'CONSTRUCTION MANAGER' UPON FINAL ACCEPTANCE.
23.

THE ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELS WITH ONLY TYPEWRITTEN DIRECTORIES. ALL ELECTRICAL WIRING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
24.

DISCONNECT SWITCHES SHALL BE H.P. RATED HEAVY-DUTY, QUICK-MADE AND QUICK-BREAK ENCLOSURES, AS REQUIRED BY EXPOSURE TYPE.
25.

ALL CONNECTIONS SHALL BE MADE WITH A PROTECTIVE COATING OF AN ANTI-OXIDE COMPOUND SUCH AS "NO-OXIDE A" BY DEARBORNE CHEMICAL CO. COAT ALL WIRE SURFACES BEFORE CONNECTING. EXPOSED COPPER SURFACES, INCLUDING GROUND BARS, SHALL BE TREATED – NO SUBSTITUTIONS.
26.

RACEWAYS: CONDUIT SHALL BE SCHEDULE 40 PVC MEETING OR EXCEEDING NEMA TC2 – 1990. CONTRACTOR SHALL PLUG AND CAP EACH END OF SPARE AND EMPTY CONDUITS AND PROVIDE TWO SEPARATE PULL STRINGS – 200 LBS TEST POLYETHYLENE CORD. ALL CONDUIT BENDS SHALL BE A MINIMUM OF 2 FT. RADIUS. RGS CONDUITS WHEN SPECIFIED, SHALL MEET UL-6 FOR GALVANIZED STEEL. ALL FITTINGS SHALL BE SUITABLE FOR USE WITH THREADING RIGID CONDUIT. COAT ALL THREADS WITH 'BRITE ZINC' OR 'GOLD CALV.'
27.

SUPPORT OF ALL ELECTRICAL WORK SHALL BE AS REQUIRED BY NEC.
28.

CONDUCTORS: CONTRACTOR SHALL USE 98% CONDUCTIVITY COPPER WITH TYPE THWN INSULATION, 800 VOLT, COLOR CODED. USE SOLID CONDUCTORS FOR WIRE UP TO AND INCLUDING NO. 8 AWG. USE STRANDED CONDUCTORS FOR WIRE ABOVE NO. 8 AWG.

29.

CONNECTORS FOR POWER CONDUCTORS: CONTRACTOR SHALL USE PRESSURE TYPE INSULATED TWIST-ON CONNECTORS FOR NO. 10 AWG AND SMALLER. USE SOLDERLESS MECHANICAL TERMINAL LUGS FOR NO. 8 AWG AND LARGER.
30.

SERVICES: 240/120V, SINGLE PHASE, 3 WIRE CONNECTION AVAILABLE FROM UTILITY COMPANY. OWNER OR OWNERS AGENT WILL APPLY FOR POWER.
31.

TELEPHONE SERVICE: CONTRACTOR SHALL PROVIDE EMPTY CONDUITS WITH PULL STRINGS AS INDICATED ON DRAWINGS.
32.

ELECTRICAL AND TELCO RACEWAYS TO BE BURIED A MINIMUM OF 2' DEPTH.
33.

CONTRACTOR SHALL PLACE TWO LENGTHS OF WARNING TAPE AT A DEPTH OF 12" BELOW GROUND AND DIRECTLY ABOVE ELECTRICAL AND TELCO SERVICE CONDUITS. CAUTION TAPE TO READ "CAUTION BURIED ELECTRIC" OR "BURIED TELECOMM."
34.

ALL BOLTS SHALL BE STAINLESS STEEL

GROUNDING NOTES:

1.

COMPRESSION CONNECTIONS (2), 2 AWG BARE TINNED SOLID COPPER CONDUCTORS TO GROUNDING BAR. ROUTE CONDUCTORS TO BURIED GROUNDING RING AND PROVIDE PARALLEL EXOTHERMIC WELD.
2.

EC SHALL USE PERMANENT MARKER TO DRAW THE LINES BETWEEN EACH SECTION AND LABEL EACH SECTION ("P," "A," "N," "I") WITH 1" LETTERS.
3.

ALL HARDWARE 18-8 STAINLESS STEEL, INCLUDING LOCK WASHERS, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING. ALL HARDWARE SHALL BE STAINLESS STEEL 3/8 INCH DIAMETER OR LARGER.
4.

FOR GROUND BOND TO STEEL ONLY: INSERT A CADMIUM FLAT WASHER BETWEEN LUG AND STEEL, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.
5.

NUT & WASHER SHALL BE PLACED ON THE FRONT SIDE OF THE GROUNDING BAR AND BOLTED ON THE BACK SIDE.
6.

NUMBER OF GROUNDING BARS MAY VARY DEPENDING ON THE TYPE OF TOWER, ANTENNA LOCATION, AND CONNECTION ORIENTATION. PROVIDE AS REQUIRED.
7.

WHEN THE SCOPE OF WORK REQUIRES THE ADDITION OF A GROUNDING BAR TO AN EXISTING TOWER, THE SUBCONTRACTOR SHALL OBTAIN APPROVAL FROM THE TOWER OWNER PRIOR TO MOUNTING THE GROUNDING BAR TO THE TOWER.
8.

ALL ELECTRICAL AND GROUNDING AT THE CELL SITE SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (NEC), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 780 (LATEST EDITION), AND MANUFACTURER.

FOUNDATION, EXCAVATION, & BACKFILL NOTES:

1.

ALL FINAL GRADED SLOPES SHALL BE A MAXIMUM OF 3 HORIZONTAL TO 1 VERTICAL.
2.

ALL EXCAVATIONS PREPARED FOR PLACEMENT OF CONCRETE SHALL BE OF UNDISTURBED SOILS, SUBSTANTIALLY HORIZONTAL, AND FREE FROM ANY LOOSE, UNSUITABLE MATERIAL OR FROZEN SOILS, AND WITHOUT THE PRESENCE OF POUNDING WATER. DEWATERING FOR EXCESS GROUND WATER SHALL BE PROVIDED WHEN REQUIRED. COMPACTION OF SOILS UNDER CONCRETE PAD FOUNDATIONS SHALL NOT BE LESS THAN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY FOR THE SOIL IN ACCORDANCE WITH ASTM D1557.
3.

CONCRETE FOUNDATIONS SHALL NOT BE PLACED ON ORGANIC OR UNSUITABLE MATERIAL. IF INADEQUATE BEARING CAPACITY IS REACHED AT THE DESIGNED EXCAVATION DEPTH, THE UNSATISFACTORY SOIL SHALL BE EXCAVATED TO ITS FULL DEPTH AND EITHER BE REPLACED WITH MECHANICALLY COMPACTED GRANULAR MATERIAL OR THE EXCAVATION SHALL BE FILLED WITH CONCRETE OF THE SAME TYPE SPECIFIED FOR THE FOUNDATION. CRUSHED STONE MAY BE USED TO STABILIZE THE BOTTOM OF THE EXCAVATION. ANY STONE SUB BASE MATERIAL, IF USED, SHALL NOT SUBSTITUTE FOR REQUIRED THICKNESS OF CONCRETE.
4.

ALL EXCAVATIONS SHALL BE CLEAN OF UNSUITABLE MATERIAL SUCH AS VEGETATION, TRASH, DEBRIS, AND SO FORTH PRIOR TO BACK FILLING. BACK FILL SHALL CONSIST OF APPROVED MATERIALS SUCH AS EARTH, LOAM, SANDY CLAY, SAND AND GRAVEL, OR SOFT SHALE, FREE FROM CLODS OR LARGE STONES OVER 2 1/2 MAX DIMENSIONS. ALL BACK FILL SHALL BE PLACED IN COMPACTED LAYERS.
5.

ALL FILL MATERIALS AND FOUNDATION BACK FILL SHALL BE PLACED IN MAXIMUM 6" THICK LIFTS BEFORE COMPACTION. EACH LIFT SHALL BE WETTED IF REQUIRED AND COMPACTED TO NOT LESS THAN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY FOR SOIL IN ACCORDANCE WITH ASTM D1557
6.

NEWLY PLACED CONCRETE FOUNDATIONS SHALL CURE A MINIMUM OF 72 HOURS PRIOR TO BACK FILLING.
7.

FINISHED GRADING SHALL BE SLOPED TO PROVIDE POSITIVE DRAINAGE AND PREVENT STANDING WATER. THE FINAL (FINISH) ELEVATION OF SLAB FOUNDATIONS SHALL SLOPE AWAY IN ALL DIRECTIONS FROM THE CENTER. FINISH GRADE OF CONCRETE PADS SHALL BE A MAXIMUM OF 4 INCHES ABOVE FINAL FINISH GRADE ELEVATIONS. PROVIDE SURFACE FILL GRAVEL TO ESTABLISH SPECIFIED ELEVATIONS WHERE REQUIRED.
8.

NEWLY GRADED SURFACE AREAS TO RECEIVE GRAVEL SHALL BE COVERED WITH GEOTEXTILE FABRIC TYPE: TYPAR-3401 AS MANUFACTURED BY "CONSTRUCTION MATERIAL 1-800-239-3841" OR AN APPROVED EQUIVALENT, SHOWN ON PLANS. THE GEOTEXTILE FABRIC SHALL BE BLACK IN COLOR TO CONTROL THE RECURRENCE OF VEGETATIVE GROWTH AND EXTEND TO WITHIN 1 FOOT OUTSIDE THE SITE FENCING OR ELECTRICAL GROUNDING SYSTEM PERIMETER WHICHEVER IS GREATER. ALL FABRIC SHALL BE COVERED WITH A MINIMUM OF 4" DEEP COMPACTED STONE OR GRAVEL AS SPECIFIED. I.E. FDOT TYPE NO.57 FOR FENCED COMPOUND; FDOT TYPE NO. 67 FOR ACCESS DRIVE AREA.
9.

IN ALL AREAS TO RECEIVE FILL, REMOVE ALL VEGETATION, TOPSOIL, DEBRIS, WET AND UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS FROM GROUND SURFACE. PLOW STRIP OR BREAK UP SLOPED SURFACES STEEPER THAN 1 VERTICAL TO 4 HORIZONTAL SUCH THAT FILL MATERIAL WILL BIND WITH EXISTING/PREPARED SOIL SURFACE.

CARRIER:



CONSULTANT TEAM:



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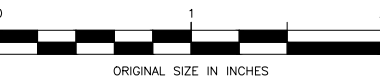
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A	05/20/22	ASW	FOR REVIEW	AJD
B	06/27/22	BMM	FOR REVIEW	ASW
0	07/12/22	BMM	FOR FINALS	ASW



PROJECT INFORMATION:

SITE:  
14652325  
CHESTER II  
  
60 EVAN ROAD  
WARWICK, NY 10990  
ORANGE COUNTY  
WATER TANK

SHEET TITLE:

GENERAL  
NOTES

SHEET NUMBER:

GN01

REVISION:

0



10. WHEN SUBGRADE OR PREPARED GROUND SURFACE HAS A DENSITY LESS THAN THAT REQUIRED FOR THE FILL MATERIAL, SCARIFY THE GROUND SURFACE TO DEPTH REQUIRED, PULVERIZE, MOISTURE-CONDITION AND/OR AERATE THE SOILS AND RE-COMPACT TO THE REQUIRED DENSITY PRIOR TO PLACEMENT OR FILLS.
11. IN AREAS WHICH EXISTING GRAVEL SURFACING IS REMOVED OR DISTURBED DURING CONSTRUCTION OPERATIONS, REPLACE GRAVEL SURFACING TO MATCH ADJACENT GRAVEL SURFACING AND RESTORED TO THE SAME THICKNESS AND COMPACTION AS SPECIFIED. ALL RESTORED GRAVEL SURFACING SHALL BE FREE FROM CORRUGATIONS AND WAVES.
12. EXISTING GRAVEL SURFACING MAY BE EXCAVATED SEPARATELY AND REUSED WITH THE CONDITION THAT ANY UNFAVORABLE AMOUNTS OF ORGANIC MATTER, OR OTHER DELETERIOUS MATERIALS ARE REMOVED PRIOR TO REUSE. FURNISH ANY ADDITIONAL GRAVEL RESURFACING MATERIAL AS NEEDED TO PROVIDE A FULL DEPTH COMPACTED SURFACE THROUGHOUT SITE.
13. GRAVEL SUB SURFACE SHALL BE PREPARED TO REQUIRED COMPACTION AND SUBGRADE ELEVATIONS BEFORE GRAVEL SURFACING IS PLACED AND/OR RESTORED. ANY LOOSE OR DISTURBED MATERIALS SHALL BE THOROUGHLY COMPACTED AND ANY DEPRESSIONS IN THE SUBGRADE SHALL BE FILLED AND COMPACTED WITH APPROVED SELECTED MATERIAL. GRAVEL SURFACING MATERIAL SHALL NOT BE USED FOR FILLING DEPRESSIONS IN THE SUBGRADE.
14. PROTECT EXISTING GRAVEL SURFACING AND SUBGRADE IN AREAS WHERE EQUIPMENT LOADS WILL OPERATE. USE PLANKING 'MATT'S' OR OTHER SUITABLE PROTECTION DESIGNED TO SPREAD EQUIPMENT LOADS AS MAY BE NECESSARY. REPAIR ANY DAMAGE TO EXISTING GRAVEL SURFACING OR SUB GRADE WHERE SUCH DAMAGE IS DUE TO THE CONTRACTORS OPERATIONS.
15. DAMAGE TO EXISTING STRUCTURES AND/OR UTILITIES RESULTING FROM CONTRACTORS NEGLIGENCE SHALL BE REPAIRED AND/OR REPLACED TO THE OWNERS SATISFACTION AT NO ADDITIONAL COST TO THE CONTRACT.
16. ALL SUITABLE BORROW MATERIAL FOR BACK FILL OF THE SITE SHALL BE INCLUDED IN THE BID. EXCESS TOPSOIL AND UNSUITABLE MATERIAL SHALL BE DISPOSED OF OFF SITE AT LOCATIONS APPROVED BY GOVERNING AGENCIES AT NO ADDITIONAL COST TO THE CONTRACT.

ENVIRONMENTAL NOTES:

1. ALL WORK PERFORMED SHALL BE DONE IN ACCORDANCE WITH ISSUED PERMITS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYMENT OF FINES AND PROPER CLEAN UP FOR AREAS IN VIOLATION.
2. CONTRACTOR AND/OR DEVELOPER SHALL BE RESPONSIBLE FOR CONSTRUCTION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS DURING CONSTRUCTION FOR PROTECTION OF ADJACENT PROPERTIES, ROADWAYS AND WATERWAYS AND SHALL BE MAINTAINED IN PLACE THROUGH FINAL JURISDICTIONAL INSPECTION & RELEASE OF SITE.
3. CONTRACTOR SHALL INSTALL/CONSTRUCT ALL NECESSARY SEDIMENT/SILT CONTROL FENCING AND PROTECTIVE MEASURES WITHIN THE LIMITS OF SITE DISTURBANCE PRIOR TO CONSTRUCTION.
4. NO SEDIMENT SHALL BE ALLOWED TO EXIT THE PROPERTY. THE CONTRACTOR IS RESPONSIBLE FOR TAKING ADEQUATE MEASURES FOR CONTROLLING EROSION. ADDITIONAL SEDIMENT CONTROL FENCING MAY BE REQUIRED IN ANY AREAS SUBJECT TO EROSION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY INSPECTIONS AND ANY REPAIRS OF ALL SEDIMENT CONTROL MEASURES INCLUDING SEDIMENT REMOVAL AS NECESSARY.
6. CLEARING OF VEGETATION AND TREE REMOVAL SHALL BE ONLY AS PERMITTED AND BE HELD TO A MINIMUM. ONLY TREES NECESSARY FOR CONSTRUCTION OF THE FACILITIES SHALL BE REMOVED.
7. SEEDING AND MULCHING AND/OR SODDING OF THE SITE WILL BE ACCOMPLISHED AS SOON AS POSSIBLE AFTER COMPLETION OF THE PROJECT FACILITIES AFFECTING LAND DISTURBANCE.
8. CONTRACTOR SHALL PROVIDE ALL EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED BY LOCAL, COUNTY AND STATE CODES AND ORDINANCES TO PROTECT EMBANKMENTS FROM SOIL LOSS AND TO PREVENT ACCUMULATION OF SOIL AND SILT IN STREAMS AND DRAINAGE PATHS LEAVING THE CONSTRUCTION AREA. THIS MAY INCLUDE SUCH MEASURES AS SILT FENCES, STRAW BALE SEDIMENT BARRIERS, AND CHECK DAMS.
9. RIP RAP OF SIZES INDICATED SHALL CONSIST OF CLEAN, HARD, SOUND, DURABLE, UNIFORM IN QUALITY STONE FREE OF ANY DETRIMENTAL QUANTITY OF SOFT, FRIABLE, THIN, ELONGATED OR LAMINATED PIECES, DISINTEGRATED MATERIAL, ORGANIC MATTER, OIL, ALKALI, OR OTHER DELETERIOUS SUBSTANCES.

CONCRETE MASONRY NOTES:

1. CONCRETE MASONRY UNITS SHALL BE MEDIUM WEIGHT UNITS CONFORMING TO ASTM C90, GRADE N-1, (F'M=1,500 PSI). MEDIUM WEIGHT (115).
2. MORTAR SHALL BE TYPE "S" (MINIMUM 1,800 PSI AT 28 DAYS).
3. GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI AT 28 DAYS.
4. ALL CELLS CONTAINING REINFORCING STEEL OR EMBEDDED ITEMS AND ALL CELLS IN RETAINING WALLS AND WALLS BELOW GRADE SHALL BE SOLID GROUTED.
5. ALL HORIZONTAL REINFORCING STEEL SHALL BE PLACED IN BOND BEAM OR LINTEL BEAM UNITS.
6. WHEN GROUTING IS STOPPED FOR ONE HOUR OR LONGER, HORIZONTAL CONSTRUCTION JOINTS SHALL BE FORMED BY STOPPING THE GROUT POUR 1-1/2" BELOW TOP OF THE UPPERMOST UNIT.
7. ALL BOND BEAM BLOCK SHALL BE "DEEP CUT" UNITS.
8. PROVIDE INSPECTION AND CLEAN-OUT HOLES AT BASE OF VERTICAL CELLS HAVING GROUT LIFTS IN EXCESS OF 4'-0" OF HEIGHT.
9. ALL GROUT SHALL BE CONSOLIDATED WITH A MECHANICAL VIBRATOR. CEMENT SHALL BE AS SPECIFIED FOR CONCRETE.
11. REINFORCING BARS – SEE NOTES UNDER "REINFORCING STEEL" FOR REQUIREMENTS.

31. PROVIDE ONE BAR DIAMETER (A MINIMUM OF 1/2") GROUT BETWEEN MAIN REINFORCING AND MASONRY UNITS.
32. LOW LIFT CONSTRUCTION, MAXIMUM GROUT POUR HEIGHT IS 4 FEET.
33. LIFT GROUTED CONSTRUCTION MAY BE USED IN CONFORMANCE WITH PROJECT SPECIFICATIONS AND SECTION 2104.6.1 OF CURRENT BUILDING CODE.
34. ALL CELLS IN CONCRETE BLOCKS SHALL BE FILLED SOLID WITH GROUT, EXCEPT AS NOTED IN THE DRAWINGS OR SPECIFICATIONS.
35. CELLS SHALL BE IN VERTICAL ALIGNMENT, DOWELS IN FOOTINGS SHALL BE SET TO ALIGN WITH CORES CONTAINING REINFORCING STEEL.
36. REFER TO ARCHITECTURAL DRAWINGS FOR SURFACE AND HEIGHT OF UNITS, LAYING PATTERN AND JOINT TYPE.
37. SAND SHALL BE CLEAN, SHARP AND WELL GRADED, FREE FROM INJURIOUS AMOUNTS OF DUST, LUMPS, SHALE, ALKAU OR ORGANIC MATERIAL.
38. BRICK SHALL CONFORM TO ASTM C-62 AND SHALL BE GRADE MW OR BETTER.

STRUCTURAL CONCRETE NOTES:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI-301-10
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH fc'=2,500 PSI AT 28 DAYS UNLESS NOTED OTHERWISE.
3. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE.
4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
- |  |           |
|--|-----------|
| CONCRETE CAST AGAINST EARTH  | 3 IN.     |
| CONCRETE EXPOSED TO EARTH OR WEATHER:                                  |           |
| #6 AND LARGER  | 2 IN.     |
| #5 AND SMALLER & WWF   | 1-1/2 IN. |
| CONCRETE NOT EXPOSED TO EARTH OR WEATHER, NOR CAST AGAINST THE GROUND: |           |
| SLAB AND WALL  | 3/4 IN.   |
| BEAMS AND COLUMNS  | 1-1/2 IN. |
5. A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE U.N.O. IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
6. HOLES TO RECEIVE EXPANSION/WEDGE ANCHORS SHALL BE 1/8" LARGER IN DIAMETER THAN THE ANCHOR BOLD, DOWEL OR ROD AND SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. LOCATE AND AVOID CUTTING EXISTING REBAR WHEN DRILLING HOLES IN ELEVATED CONCRETE SLABS.
7. USE AND INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER ICBO & MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURES.

STRUCTURAL STEEL NOTES:

1. ALL STEEL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION. STEEL SECTIONS SHALL BE IN ACCORDANCE WITH ASTM AS INDICATED BELOW:
- W-SHAPES: ASTM A992, 50 KSI
- ANGLES, BARS CHANNELS: ASTM A36, 36 KSI
- HSS SECTIONS: ASTM 500, 46 KSI
- PIPE SECTIONS: ASTM A53-E, 35 KSI
2. ALL EXTERIOR EXPOSED STEEL AND HARDWARE SHALL BE HOT DIPPED GALVANIZED.
3. ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION." PAINTED SURFACES SHALL BE TOUCHED UP.
4. BOLTED CONNECTIONS SHALL BE ASTM A325 BEARING TYPE 3/4" Ø CONNECTIONS AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
5. NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" Ø ASTM A307 BOLTS UNLESS NOTED OTHERWISE.
6. FIELD MODIFICATIONS ARE TO BE COATED WITH ZINC ENRICHED PAINT.

SITE WORK & DRAINAGE:

PART 1 – GENERAL

CLEARING, GRUBBING, STRIPPING, EROSION CONTROL, SURVEY, LAYOUT, SUBGRADE PREPARATION AND FINISH GRADING AS REQUIRED TO COMPLETE THE PROPOSED WORK SHOWN IN THESE PLANS.

1.1 REFERENCES:

- A. DOT (STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR WAY CONSTRUCTION – CURRENT EDITION)
- B. ASTM (AMERICAN SOCIETY FOR TESTING AND MATERIALS)
- C. OSHA (OCCUPATION SAFETY AND HEALTH ADMINISTRATION)

1.2 INSPECTION AND TESTING:

- A. FIELD TESTING OF EARTHWORK COMPACTION AND CONCRETE CYLINDERS
- B. ALL WORK SHALL BE INSPECTED AND RELEASED BY THE GENERAL CONTRACTOR WHO SHALL CARRY OUT THE GENERAL INSPECTION OF THE WORK WITH SPECIFIC CONCERN TO PROPER PERFORMANCE OF THE WORK AS SPECIFIED AND/OR CALLED FOR ON THE DRAWINGS. IT IS THE SUBCONTRACTOR'S RESPONSIBILITY TO REQUEST TIMELY INSPECTIONS PRIOR TO PROCEEDING WITH FURTHER WORK THAT WOULD MAKE PARTS OF WORK INACCESSIBLE OR DIFFICULT TO INSPECT.

1.3 SITE MAINTENANCE AND PROTECTION:

- A. PROVIDE ALL NECESSARY JOB SITE MAINTENANCE FROM COMMENCEMENT OF WORK UNTIL COMPLETION OF THE SUBCONTRACT.
- B. AVOID DAMAGE TO THE SITE AND TO EXISTING FACILITIES, STRUCTURES, TREES, AND SHRUBS DESIGNATED TO REMAIN. TAKE PROTECTIVE MEASURES TO PREVENT EXISTING FACILITIES THAT ARE NOT DESIGNATED FOR REMOVAL FROM BEING DAMAGED BY THE WORK.
- C. KEEP SITE FREE OF ALL PONDING WATER.
- D. PROVIDE EROSION CONTROL MEASURES IN ACCORDANCE WITH STATE DOT AND EPA REQUIREMENTS.
- E. PROVIDE AND MAINTAIN ALL TEMPORARY FENCING, BARRICADES, WARNING SIGNALS AND SIMILAR DEVICES NECESSARY TO PROTECT AGAINST THEFT FROM PROPERTY DURING THE ENTIRE PERIOD OF CONSTRUCTION. REMOVE ALL SUCH DEVICES UPON COMPLETION OF THE WORK.
- F. EXISTING UTILITIES: DO NOT INTERRUPT EXISTING UTILITIES SERVING FACILITIES OCCUPIED BY THE OWNER OR OTHERS, EXCEPT WHEN PERMITTED IN WRITING BY THE ENGINEER, AND THEN ONLY AFTER ACCEPTABLE TEMPORARY UTILITY SERVICES HAVE BEEN PROVIDED.

PROVIDE A MINIMUM 48-HOUR NOTICE TO THE ENGINEER AND RECEIVE WRITTEN NOTICE TO PROCEED BEFORE INTERRUPTING ANY UTILITY SERVICE.

PART 2 – PRODUCTS

- 2.1 SUITABLE BACKFILL: ASTM D2321 (CLASS I, II, III, OR IVA) FREE FROM FROZEN LUMPS, REFUSE, STONES OR ROCKS LARGER THAN 3 INCHES IN ANY DIMENSION OR OTHER MATERIAL THAT MAY MAKE THE INORGANIC MATERIAL UNSUITABLE FOR BACKFILL.
- 2.2 NON-POROUS GRANULAR EMBANKMENT AND BACKFILL: ASTM D2321 (CLASS III, IVA OR IVB) COARSE AGGREGATE. FREE FROM FROZEN LUMPS, REFUSE, STONES, OR ROCKS LARGER THAN 3 INCHES IN ANY DIMENSION OR OTHER MATERIAL THAT MAY MAKE THE INORGANIC MATERIAL UNSUITABLE FOR BACKFILL.
- 2.3 POROUS GRANULAR EMBANKMENT AND BACKFILL: ASTM D2321 (CLASS IA, IB, OR II) COARSE AGGREGATE FREE FROM FROZEN LUMPS, REFUSE, STONES, OR ROCKS LARGER THAN 3 INCHES IN ANY DIMENSION OR OTHER MATERIAL THAT MAY MAKE THE INORGANIC MATERIAL UNSUITABLE FOR BACKFILL.
- 2.4 SELECT STRUCTURAL FILL: GRANULAR FILL MATERIAL MEETING THE REQUIREMENTS OF ASTM E850-95. FOR USE AROUND AND UNDER STRUCTURES WHERE STRUCTURAL FILL MATERIAL ARE REQUIRED.
- 2.5 GRANULAR BEDDING AND TRENCH BACKFILL: WELL-GRADED SAND MEETING THE GRADATION REQUIREMENTS OF ASTM D2487 (SE OR SW-SM).
- 2.6 COARSE AGGREGATE FOR ACCESS ROAD SUB BASE COURSE SHALL CONFORM TO ASTM D2940.
- 2.7 UNSUITABLE MATERIAL: AND MODERATELY PLASTIC SILTS AND CLAYS (LL>45). MATERIAL CONTAINING REFUSE, FROZEN LUMPS, DEMOLISHED BITUMINOUS MATERIAL, VEGETATIVE MATTER, WOOD, STONES IN EXCESS OF 3 INCHES IN ANY DIMENSION, AND DEBRIS AS DETERMINED BY THE CONSTRUCTION MANAGER. TYPICAL THESE WILL BE SOILS CLASSIFIED BY ASTM AS PT, MH, CH, OH, ML, AND OL.
- 2.8 GEOTEXTILE FABRIC: MIRAFI 500X OR APPROVED EQUAL.
- 2.9 PLASTIC MARKING TAPE: SHALL BE ACID AND ALKALI RESISTANT POLYETHYLENE FILM SPECIFICALLY MANUFACTURED FOR MARKING AND LOCATING UNDERGROUND UTILITIES, 6 INCHES WIDE WITH A MINIMUM THICKNESS OF 0.004 INCH. TAPE SHALL HAVE MINIMUM STRENGTH OF 1500 PSI IN BOTH DIRECTIONS AND MANUFACTURED WITH INTEGRAL CONDUCTORS, FOIL BACKING OR OTHER MEANS TO ENABLE DETECTION BY A METAL DETECTOR WHEN BURIED UP TO 3 FEET DEEP. THE METALLIC CORE OF THE TAPE SHALL BE ENCASED IN A PROTECTIVE JACKET OR PROVIDED WITH OTHER MEANS TO PROTECT IT FROM CORROSION. TAPE COLOR SHALL BE RED FOR ELECTRIC UTILITIES AND ORANGE FOR TELECOMMUNICATION UTILITIES.

PART 2 – EXECUTION

3.1 GENERAL:

- A. BEFORE STARTING GENERAL SITE PREPARATION ACTIVITIES, INSTALL EROSION AND SEDIMENT CONTROL MEASURES. THE WORK AREA SHALL BE CONSTRUCTED AND MAINTAINED IN SUCH A CONDITION THAT IN THE EVENT OF RAIN THE SITE WILL BE DRAINED AT ANY TIME.
- B. BEFORE ALL SURVEY, LAYOUT, STAKING, AND MARKING, ESTABLISH AND MAINTAIN ALL LINES, GRADES, ELEVATIONS AND BENCHMARKS NEEDED FOR EXECUTION OF THE WORK.
- C. CLEAR AND GRUB THE AREA WITHIN THE LIMITS OF THE SITE. REMOVE TREES, BRUSH, STUMPS, RUBBISH AND OTHER DEBRIS AND VEGETATION RESTING ON OR PROTRUDING THROUGH THE SURFACE OF THE SITE AREA TO BE CLEARED.
1. REMOVE THE FOLLOWING MATERIALS TO A DEPTH OF NO LESS THAN 12 INCHES BELOW THE ORIGINAL GROUND SURFACE: ROOTS, STUMPS, AND OTHER DEBRIS, BRUSH, AND REFUSE EMBEDDED IN OR PROTRUDING THROUGH THE GROUND SURFACE, RAKE, DISK OR PLOW THE AREA TO A DEPTH OF NO LESS THAN 6 INCHES, AND REMOVE TO A DEPTH OF 12 INCHES ALL ROOTS AND OTHER DEBRIS THEREBY EXPOSED.
2. REMOVE TOPSOIL MATERIAL COMPLETELY FROM THE SURFACE UNTIL THE SOIL NO LONGER MEETS THE DEFINITION OF TOPSOIL. AVOID MIXING TOPSOIL WITH SUBSOIL OR OTHER UNDESIRABLE MATERIALS. EXCEPT WHERE EXCAVATION TO GREATER DEPTH IS INDICATED, FILL DEPRESSIONS RESULTING FROM CLEARING, GRUBBING, AND DEMOLITION WORK COMPLETELY WITH SUITABLE FILL.
- D. REMOVE FROM THE SITE AND DISPOSE IN AN AUTHORIZED LANDFILL ALL DEBRIS RESULTING FROM CLEARING AND GRUBBING OPERATIONS. BURNING WILL NOT BE PERMITTED.

- E. PRIOR TO EXCAVATING, THOROUGHLY EXAMINE THE AREA TO BE EXCAVATED AND/OR TRENCHED TO VERIFY THE LOCATIONS OF FEATURES INDICATED ON THE DRAWINGS AND TO ASCERTAIN THE EXISTENCE AND LOCATION OF ANY STRUCTURE, UNDERGROUND STRUCTURE, OR OTHER ITEM NOT SHOWN THAT MIGHT INTERFERE WITH THE PROPOSED CONSTRUCTION. NOTIFY THE CONSTRUCTION MANAGER OF ANY OBSTRUCTIONS THAT WILL PREVENT ACCOMPLISHMENT OF THE WORK AS INDICATED ON THE DRAWINGS.
- F. SEPARATE AND STOCK PILE AL EXCAVATED MATERIALS SUITABLE FOR BACKFILL. ALL EXCESS EXCAVATED AND UNSUITABLE MATERIALS SHALL BE DISPOSED OF OFF-SITE IN A LEGAL MANNER.

3.2 BACKFILL:

- A. AS SOON AS PRACTICAL, AFTER COMPLETING CONSTRUCTION OF THE RELATED STRUCTURE, INCLUDING EXPIRATION OF THE SPECIFIED MINIMUM CURING PERIOD FOR CAST-IN-PLACE CONCRETE, BACKFILL THE EXCAVATION WITH APPROVED MATERIAL TO RESTORE THE REQUIRED FINISHED GRADE.
- B. PRIOR TO PLACING BACKFILL AROUND STRUCTURES, ALL FORMS SHALL BE REMOVED AND THE EXCAVATION CLEANED OF ALL TRASH, DEBRIS, AND UNSUITABLE MATERIALS.
- C. BACKFILL BY PLACING AND COMPACTING SUITABLE BACKFILL MATERIAL OR SELECT GRANULAR BACKFILL MATERIAL WHEN REQUIRED IN UNIFORM HORIZONTAL LAYERS OF NO GREATER THAN 8-INCHES LOOSE THICKNESS AND COMPACTED. WHERE HAND OPERATED COMPACTORS ARE USED, THE FILL MATERIAL SHALL BE PLACED IN LIFTS NOT TO EXCEED 4 INCHES IN LOOSE DEPTH AND COMPACTED.
- D. WHENEVER THE DENSITY TESTING INDICATES THAT THE CONTRACTOR HAS NOT OBTAINED THE SPECIFIED DENSITY, THE SUCCEEDING LAYER SHALL NOT BE PLACED UNTIL THE SPECIFICATION REQUIREMENTS ARE MET UNLESS OTHERWISE AUTHORIZED BY THE GEOTECHNICAL ENGINEER. THE CONTRACTOR SHALL TAKE WHATEVER APPROPRIATE ACTION IS NECESSARY , SUCH AS DISKING AND DRYING, ADDING WATER, OR INCREASING THE COMPACTIVE EFFORT TO MEET THE MINIMUM COMPACTION REQUIREMENTS.
- E. THOROUGHLY COMPACT EACH LAYER OF BACKFILL TO A MINIMUM 95% OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE STANDARD PROCTOR TEST, ASTM D 698.

3.3 TRENCH EXCAVATION:

- A. UTILITY TRENCHES SHALL BE EXCAVATED TO THE LINES AND GRADES SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE GENERAL CONTRACTOR. PROVIDE SHORING, SHEETING AND BRACING AS REQUIRED TO PREVENT CAVING OR SLOUGHING OF THE TRENCH WALLS.
- B. EXTEND THE TRENCH WIDTH A MINIMUM OF 6 INCHES BEYOND THE OUTSIDE EDGE OF THE OUTERMOST CONDUIT.
- C. WHEN SOFT YIELDING, OR OTHERWISE UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED, BACKFILL AT THE REQUIRED TRENCH TO A DEPTH OF NO LESS THAN 12 INCHES BELOW THE REQUIRED ELEVATION AND BACKFILL WITH GRANULAR BEDDING MATERIAL.

3.4 TRENCH BACKFILL:

- A. PROVIDE GRANULAR BEDDING MATERIAL IN ACCORDANCE WITH THE DRAWINGS AND THE UTILITY REQUIREMENTS.
- B. NOTIFY THE GENERAL CONTRACTOR 24 HOURS IN ADVANCE OF BACKFILLING.
- C. CONDUCT UTILITY CHECK TESTS BEFORE BACKFILLING. BACKFILL AND COMPACT TRENCH BEFORE ACCEPTANCE TESTING.
- D. PLACE GRANULAR TRENCH BACKFILL UNIFORMLY ON BOTH SIDES OF THE CONDUITS IN 6-INCH UNCOMPACTED LIFTS UNTIL 12 INCHES OVER THE CONDUITS. SOLIDLY RAM AND TAMP BACKFILL INTO SPACE AROUND CONDUITS.
- E. PROTECT CONDUIT FROM LATERAL MOVEMENT, IMPACT DAMAGE, OR UNBALANCED LOADING.
- F. ABOVE THE CONDUIT EMBEDMENT ZONE, PLACE AND COMPACT SATISFACTORY BACKFILL MATERIAL IN 8-INCH MAXIMUM LOOSE THICKNESS LIFTS TO RESTORE THE REQUIRED FINISHED SURFACE GRADE.
- G. COMPACT FINAL TRENCH BACKFILL TO A DENSITY EQUAL TO OR GREATER THAN THAT OF THE EXISTING UNDISTURBED MATERIAL IMMEDIATELY ADJACENT TO THE TRENCH BUT NO LESS THAN A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE STANDARD PROCTOR TEST, ASTM D 698.

3.5 FINISH GRADING:

- A. PERFORM ALL GRADING TO PROVIDE POSITIVE DRAINAGE AWAY FROM STRUCTURES AND SMOOTH, EVEN SURFACE DRAINAGE OF THE ENTIRE AREA WITHIN THE LIMITS OF CONSTRUCTION. GRADING SHALL BE COMPATIBLE WITH ALL SURROUNDING TOPOGRAPHY AND STRUCTURES.
- B. UTILIZE SATISFACTORY FILL MATERIAL RESULTING FROM THE EXCAVATION WORK IN THE CONSTRUCTION OF FILLS, EMBANKMENTS AND FOR REPLACEMENT OF REMOVED UNSUITABLE MATERIALS.
- C. ACHIEVE FINISHED GRADE BY PLACING A MINIMUM OF 4 INCHES OF 1/2" – 3/4" CRUSHED STONE ON TOP SOIL STABILIZER FABRIC.
- D. REPAIR ALL ACCESS ROADS AND SURROUNDING AREAS USED DURING THE COARSE OF THIS WORK TO THEIR ORIGINAL CONDITION.

3.7 ASPHALT PAVING ROAD:

- A. DIVISION 600 – KDOT FLEXIBLE PAVEMENT. (UPDATE PER LOCAL DOT)
- B. SECTION 403 – MODOT ASPHALT CONCRETE PAVEMENT.



CONSULTANT TEAM:

**AIROSMITH**

AIROSMITH DEVELOPMENT  
AIROSMITH ENGINEERING  
318 WEST AVE.  
SARATOGA SPRINGS, NY 12866  
CLUSTER #  
ATT NSB NYC 202103

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PROFESSIONAL STAMP:

STATE OF NEW YORK  
JOSEPH R. JOHNSTON  
091187  
LICENSED PROFESSIONAL ENGINEER  
01/21/2022

DRAWINGS ISSUED FOR:				
REV.	DATE	DRAWN	DESCRIPTION	QA/QC
A	05/20/22	ASW	FOR REVIEW	AJD
B	06/27/22	BMM	FOR REVIEW	ASW
0	07/12/22	BMM	FOR FINALS	ASW



PROJECT INFORMATION:

**SITE:**  
**14652325**  
**CHESTER II**

**60 EVAN ROAD**  
**WARWICK, NY 10990**  
**ORANGE COUNTY**

**WATER TANK**

SHEET TITLE:

**GENERAL**  
**NOTES CON'T**

SHEET NUMBER: **GN02**

REVISION: **0**

- NOTES:
- EXISTING CONDITIONS INFORMATION BASED ON INFORMATION PROVIDED TO AIROSMITH.
  - AIROSMITH HAS NOT EVALUATED THE EXISTING TOWER STRUCTURE OR ANTENNA MOUNTS AND ASSUMES NO LIABILITY REGARDING ITS EXISTING OR PROPOSED LOADING. FINAL INSTALLATION TO COMPLY WITH RESULTS OF PASSING STRUCTURAL ANALYSIS.
  - INSTALLER SHALL PROVIDE ALL NECESSARY CONDUITS AND CIRCUITS AS REQUIRED FOR A COMPLETED INSTALLATION AND SHALL COMPLY WITH EQUIPMENT MANUFACTURER'S INSTALLATION REQUIREMENTS.
  - INSTALLER SHALL PROVIDE ALL STRAIN RELIEF FOR ALL CABLE ASSEMBLIES ROUTING TO THE ANTENNAS. UTILIZATION OF HOISTING GRIPS ON ALL DC POWER AND FIBER OPTIC CABLES SHALL BE UTILIZED.

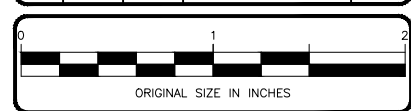


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B	06/27/22	BMM	FOR REVIEW	ASW
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PROJECT INFORMATION:

SITE:  
14652325  
CHESTER II

60 EVAN ROAD  
WARWICK, NY 10990  
ORANGE COUNTY

WATER TANK

SHEET TITLE:

OVERALL  
SITE PLAN

SHEET NUMBER: A01

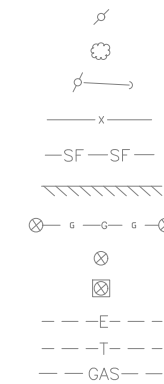
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#### ABBREVIATIONS

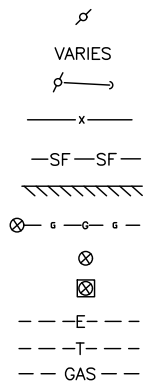
AWG	AMERICAN WIRE GAUGE
BFG	BELOW FINISH GRADE
BTS	BARE TINNED STRANDED
C	CONDUIT
CAB	CABINET
DLO	DIESEL LOCOMOTIVE CABLE
DWG	DRAWING
EGR	EXTERIOR GROUND RING
EIGB	EXTERIOR ISOLATED GROUND BAR
G	GROUND
HALO	INTERIOR GROUND RING
MIGB	MAIN ISOLATED GROUND BAR
MGN	MULTI-GROUNDED NEUTRAL
MSC	MOBILE SWITCHING CENTER
MTSO	MOBILE TELEPHONE SWITCHING OFFICE
PVC	POLYVINYL CHLORIDE
RGS	RIGID GALVANIZED STEEL
SS	STAINLESS STEEL
SST	SELF SUPPORTING TOWER
TGR	TOWER GROUND RING
TYP	TYPICAL

#### LEGEND

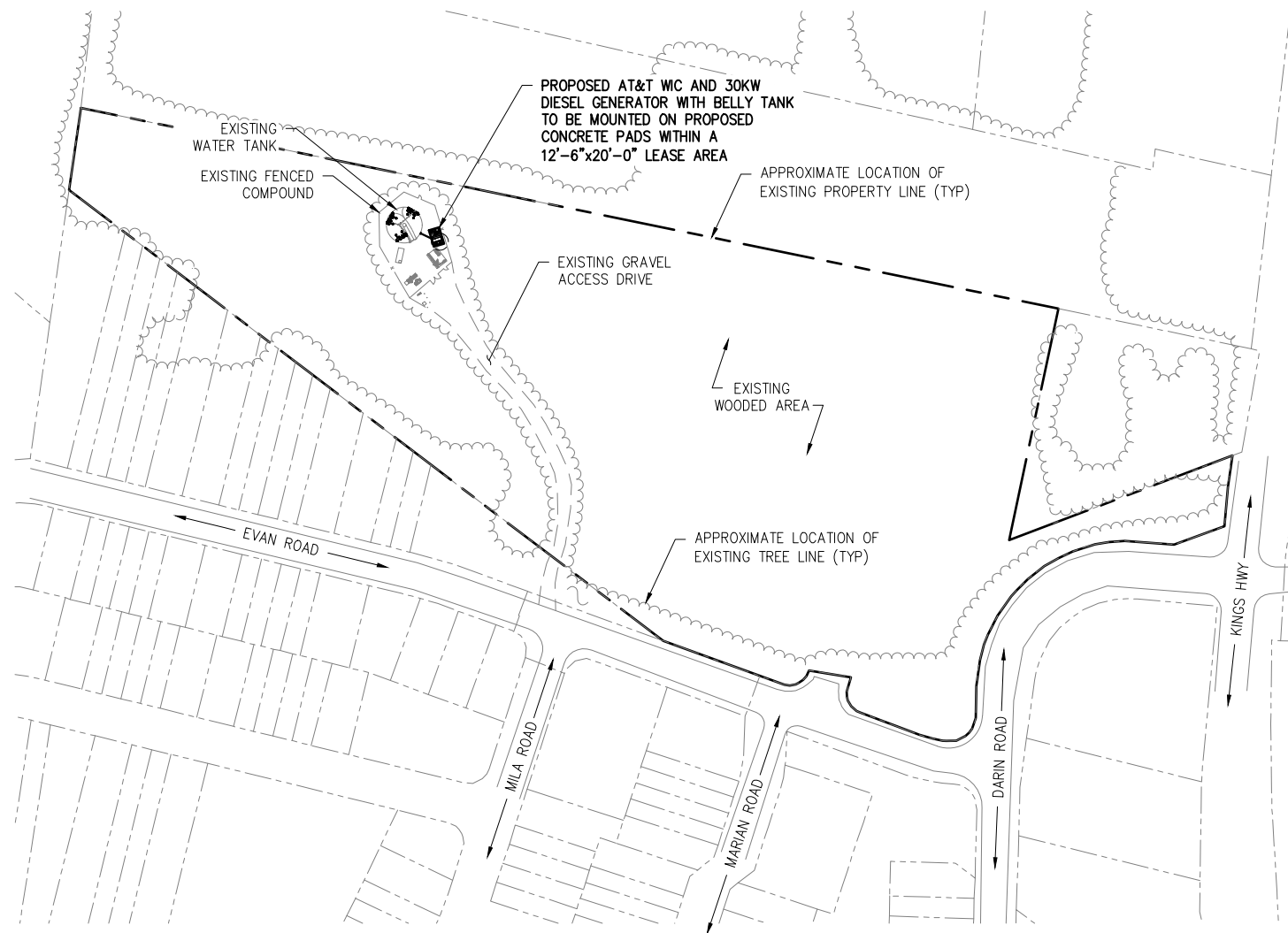
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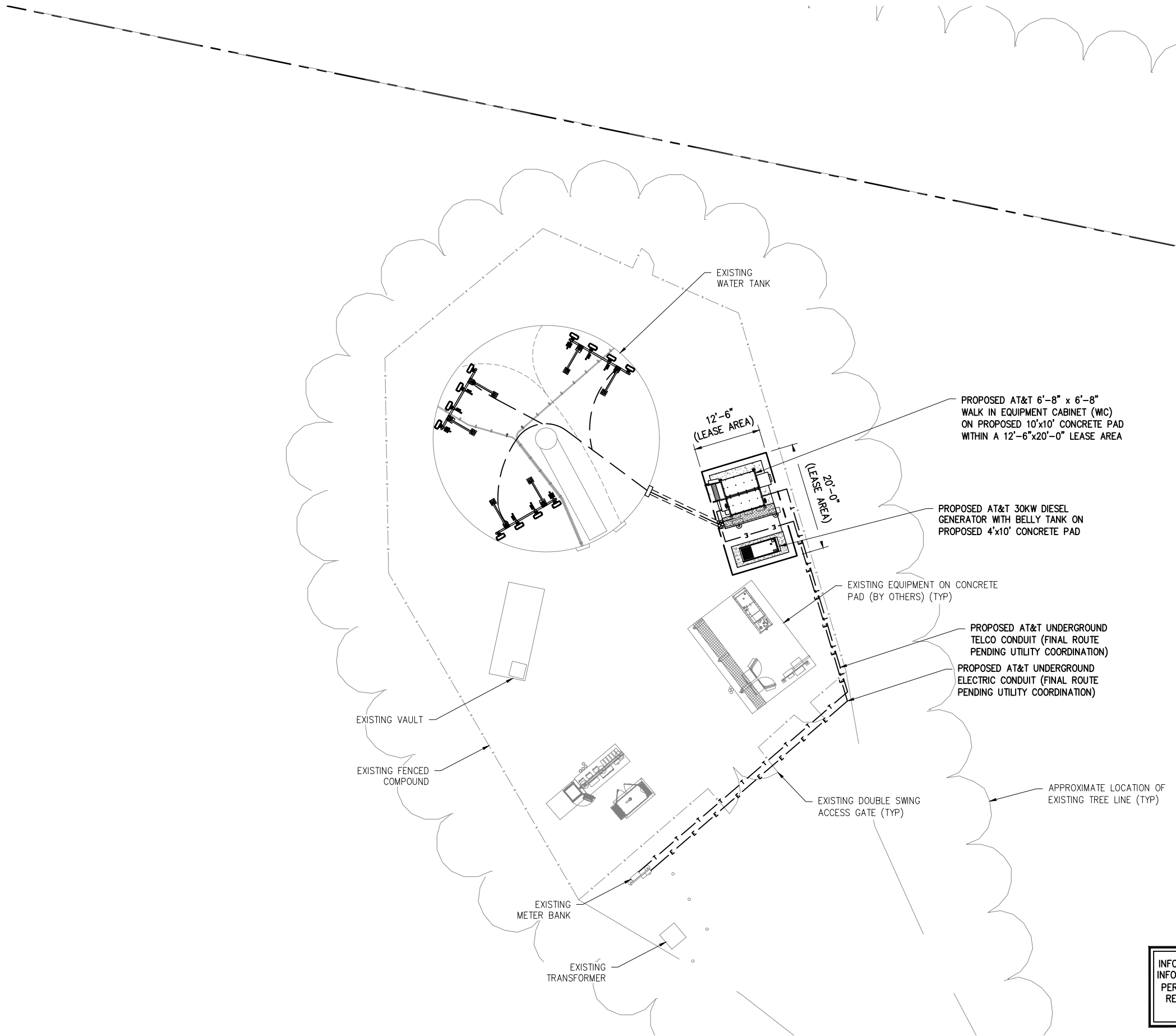
##### PROPOSED



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RESULT OF AN ON-SITE FIELD SURVEY. CONTRACTOR TO  
VERIFY PRIOR TO CONSTRUCTION.







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CONSULTANT TEAM:  
**AIROSMITH**  
AIROSMITH DEVELOPMENT  
AIROSMITH ENGINEERING  
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CLUSTER #  
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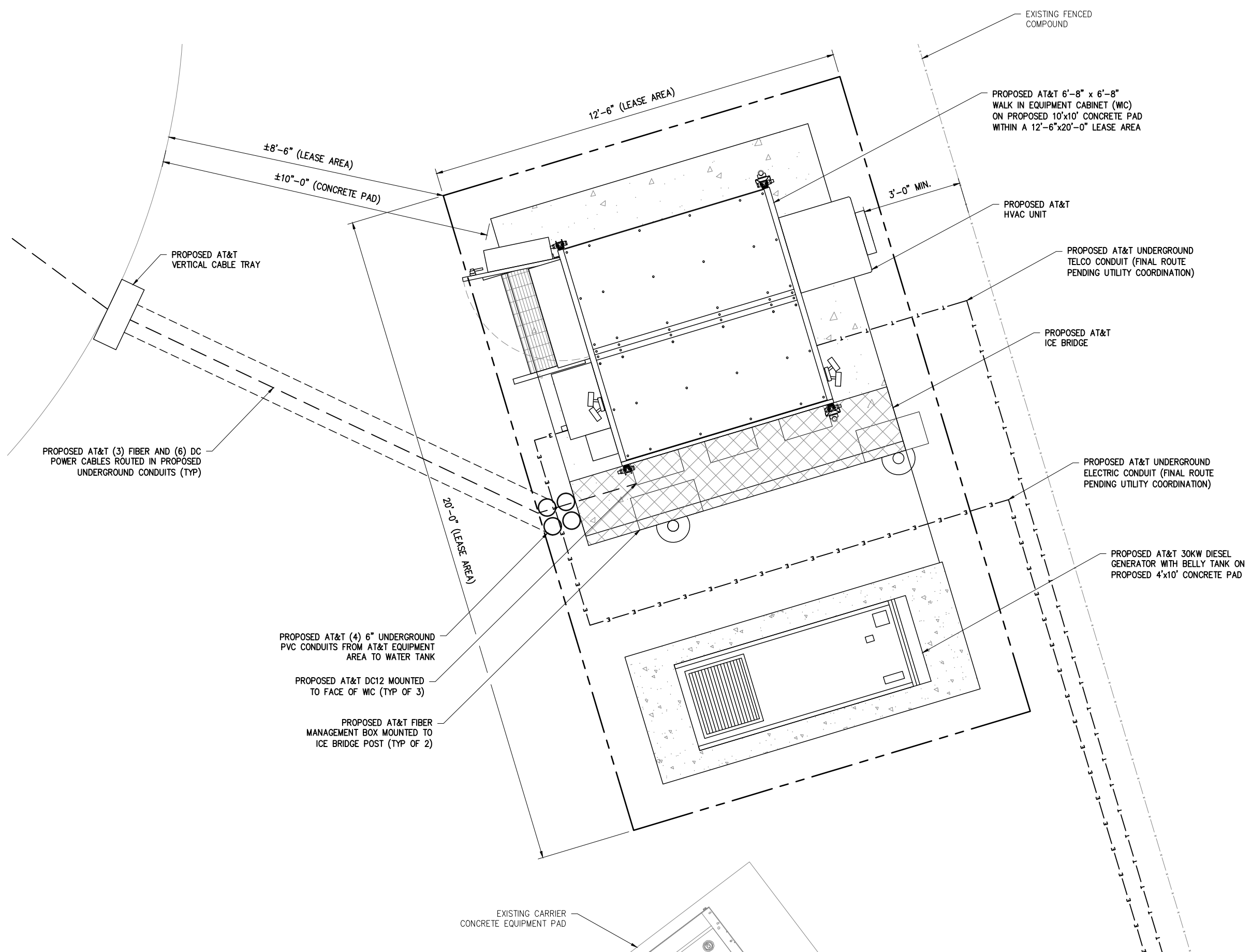
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14652325  
CHESTER II  
  
60 EVAN ROAD  
WARWICK, NY 10990  
ORANGE COUNTY  
  
WATER TANK

SHEET TITLE:  
**COMPOUND PLAN**

SHEET NUMBER:  
**A02**

REVISION:  
**0**





CONSULTANT TEAM:

**AIRSMITH**

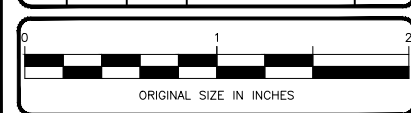
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AIRSMITH ENGINEERING  
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SARATOGA SPRINGS, NY 12866  
CLUSTER #  
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14652325  
CHESTER II  
60 EVAN ROAD  
WARWICK, NY 10990  
ORANGE COUNTY  
WATER TANK

SHEET TITLE:

**ENLARGED  
SITE PLAN**

SHEET NUMBER:

**A02A**

REVISION:

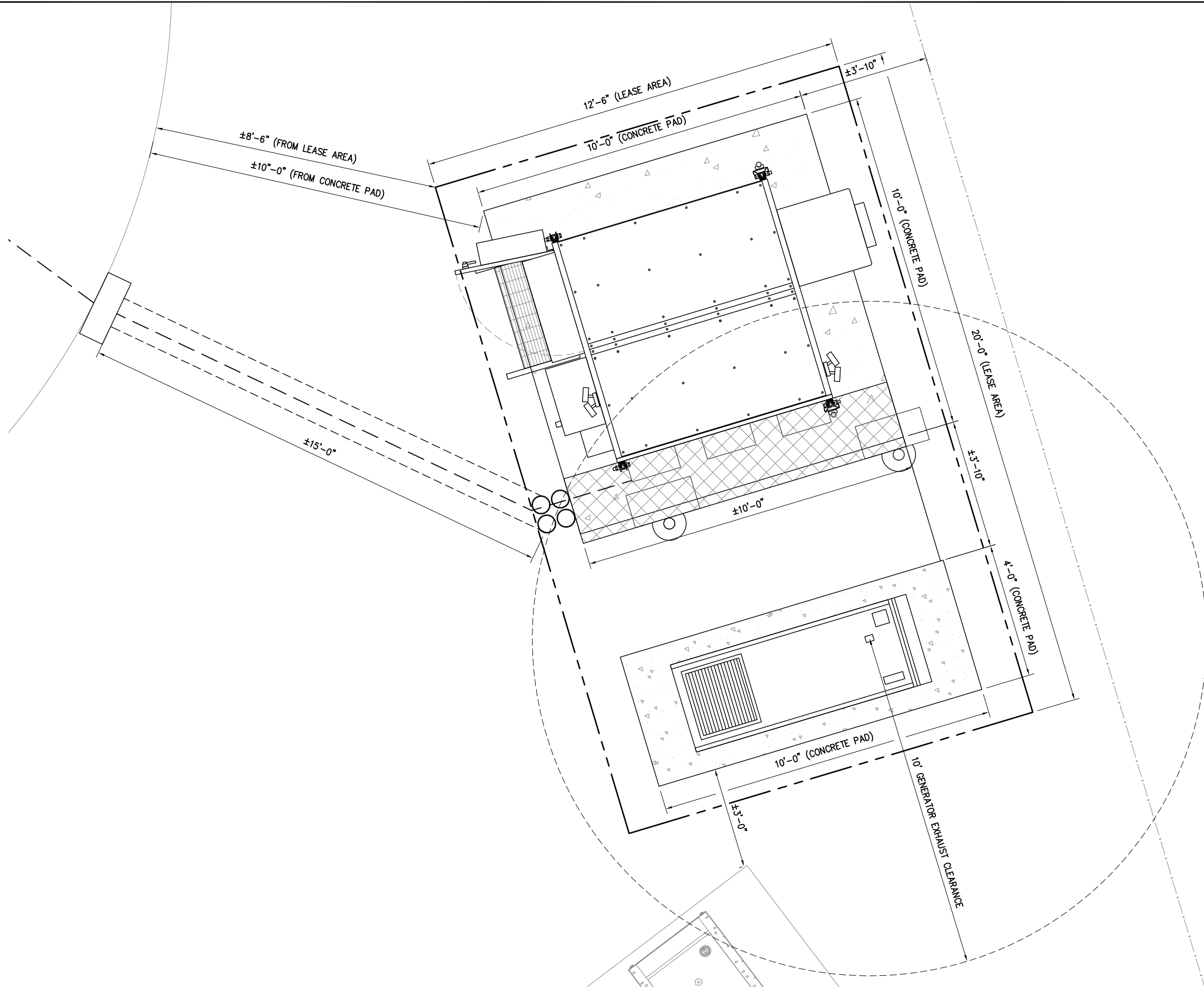
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# 1 ENLARGED SITE PLAN

SCALE: 1" = 3' (11"x17"), 1" = 1'-6" (22"x34")





CARRIER:



CONSULTANT TEAM:



AIROSMITH DEVELOPMENT  
AIROSMITH ENGINEERING  
318 WEST AVE.  
SARATOGA SPRINGS, NY 12866  
CLUSTER #  
ATT NSB NYC 202103

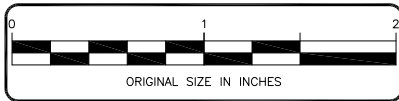
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14652325  
CHESTER II  
60 EVAN ROAD  
WARWICK, NY 10990  
ORANGE COUNTY  
WATER TANK

SHEET TITLE:

STAKING  
PLAN

SHEET NUMBER:

A02B

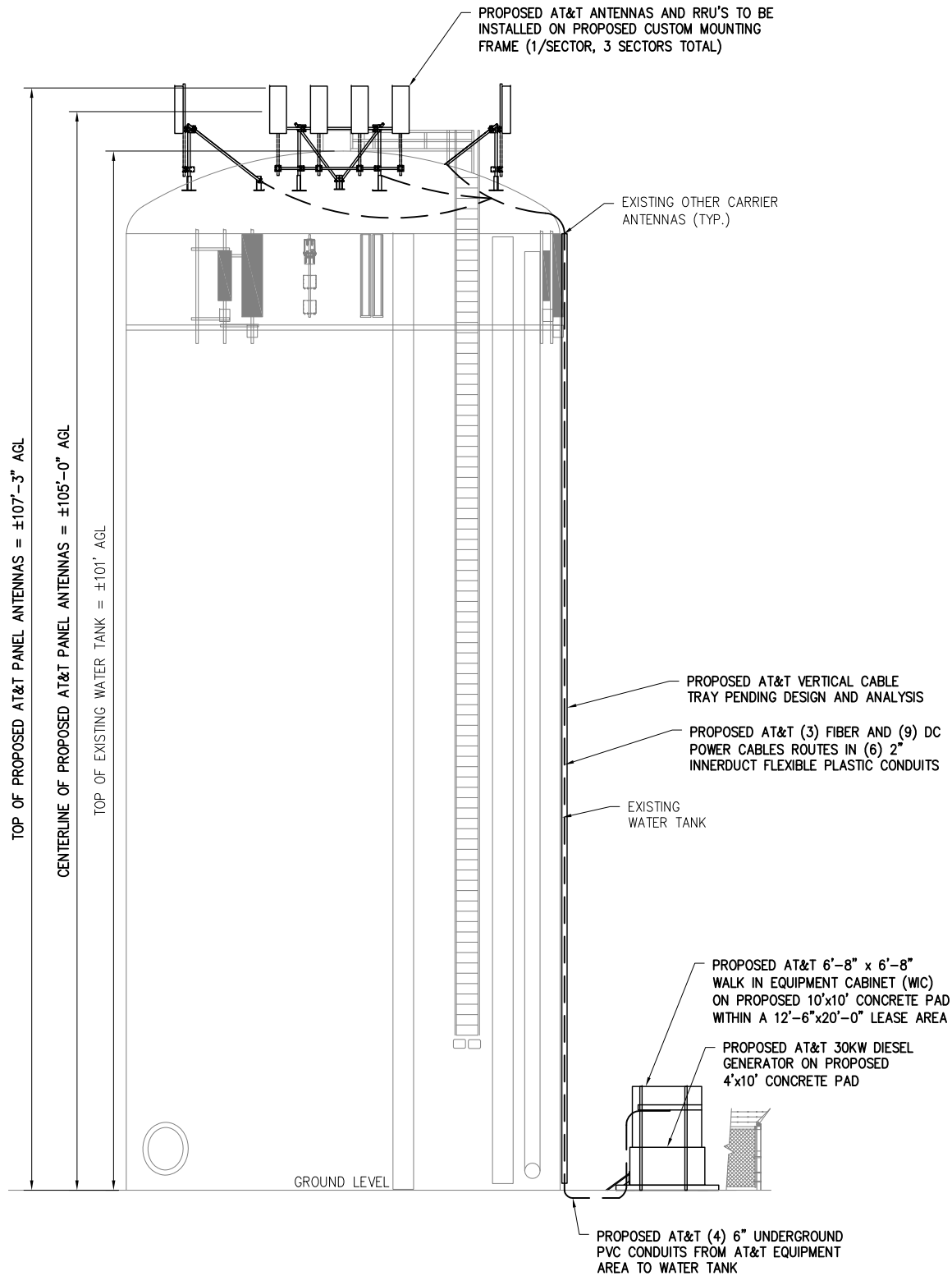
REVISION:

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STRUCTURAL NOTE:  
STRUCTURAL ANALYSIS COMPLETED BY AIROSMITH  
ENGINEERING, TITLED 'STRUCTURAL ANALYSIS REPORT',  
DATED 7/1/22.

MOUNT ANALYSIS NOTE:  
MOUNT DESIGN AND ANALYSIS COMPLETED BY  
AIROSMITH ENGINEERING, TITLED 'MOUNT DESIGN  
REPORT', DATED 7/1/22. SEE SHEETS S01-S08 FOR  
MOUNT DESIGN AND INSTALLATION DETAILS.



1

## ELEVATION VIEW

NOT TO SCALE

PROPOSED AT&T NNHH-65A-R4  
PANEL ANTENNA TO BE INSTALLED  
(4/SECTOR, 3 SECTORS TOTAL)

GAMMA SECTOR  
AZIMUTH = 300°

ALPHA SECTOR  
AZIMUTH = 30°

PROPOSED AT&T NOKIA  
RRH-4T4R B30 TO BE INSTALLED  
(1/SECTOR, 3 SECTORS TOTAL)

PROPOSED AT&T NOKIA  
RRH-4T4R B5 TO BE INSTALLED  
(1/SECTOR, 3 SECTORS TOTAL)

PROPOSED AT&T FIBER  
MANAGEMENT BOX TO BE INSTALLED  
(1/SECTOR, 3 SECTORS TOTAL)

PROPOSED AT&T ANTENNA CUSTOM  
ANTENNA MOUNT (SEE SHEETS  
S01-S08 FOR MOUNT DESIGN DETAILS)  
(1/SECTOR, 3 SECTORS TOTAL)

PROPOSED AT&T NOKIA RRH-4T4R  
B25/66 TO BE INSTALLED  
(1/SECTOR, 3 SECTORS TOTAL)

PROPOSED AT&T NOKIA RRH-4T4R  
B12/14/29 TO BE INSTALLED  
(1/SECTOR, 3 SECTORS TOTAL)

PROPOSED AT&T DC-9 SURGE  
SUPPRESSOR 'SQUID' TO BE INSTALLED  
(1/SECTOR, 3 SECTORS TOTAL)

BETA SECTOR  
AZIMUTH = 150°



2

## AT&T ANTENNA ORIENTATION PLAN

SCALE: 1" = 3' (11"x17"), 1" = 1'-6" (22"x34")

CARRIER:



CONSULTANT TEAM:



AIROSMITH DEVELOPMENT  
AIROSMITH ENGINEERING  
318 WEST AVE.  
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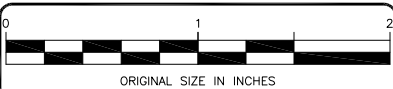
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PROJECT INFORMATION:

SITE:  
14652325  
CHESTER II  
  
60 EVAN ROAD  
WARWICK, NY 10990  
ORANGE COUNTY  
WATER TANK

SHEET TITLE:

ELEVATION VIEW  
AND ORIENTATION PLAN

SHEET NUMBER:

A03

REVISION:

0



PROPOSED ANTENNA AND RADIO MODEL NUMBERS									
SECTOR	EXISTING/ PROPOSED	BAND	ANTENNA	ANTENNA ⌀ HEIGHT	AZIMUTH	RRU	TMA/DIPLEXER	CABLE	CABLE LENGTH
ALPHA	PROPOSED	LTE 700/1900/AWS	(1) COMMSCOPE NNHH-65A-R4	105'	30°	(1) RRH 4T4R B12/14/29 370W AHLBBA (P) (1) RRH 4T4R B25/66 320W AHFIB (P)	--	(2) DC POWER	±150'
							--	(1) FIBER	±150'
	PROPOSED	LTE 5G 850	(1) COMMSCOPE NNHH-65A-R4	105'	30°	(1) RRH 4T4R B5 160W AHCA (P)	--	--	--
	PROPOSED	LTE 700/WCS	(1) COMMSCOPE NNHH-65A-R4	105'	30°	(1) RRH 4T4R B30 100W AHNA (P)	--	--	--
BETA	PROPOSED	LTE	(1) COMMSCOPE NNHH-65A-R4	105'	30°	--	--	--	--
							--	--	--
	PROPOSED	LTE 700/1900/AWS	(1) COMMSCOPE NNHH-65A-R4	105'	150°	(1) RRH 4T4R B12/14/29 370W AHLBBA (P) (1) RRH 4T4R B25/66 320W AHFIB (P)	--	(2) DC POWER	±150'
							--	(1) FIBER	±150'
GAMMA	PROPOSED	LTE 5G 850	(1) COMMSCOPE NNHH-65A-R4	105'	150°	(1) RRH 4T4R B5 160W AHCA (P)	--	--	--
	PROPOSED	LTE 700/WCS	(1) COMMSCOPE NNHH-65A-R4	105'	150°	(1) RRH 4T4R B30 100W AHNA (P)	--	--	--
	PROPOSED	LTE	(1) COMMSCOPE NNHH-65A-R4	105'	150°	--	--	--	--
							--	--	--
GAMMA	PROPOSED	LTE 700/1900/AWS	(1) COMMSCOPE NNHH-65A-R4	105'	300°	(1) RRH 4T4R B12/14/29 370W AHLBBA (P) (1) RRH 4T4R B25/66 320W AHFIB (P)	--	(2) DC POWER	±150'
							--	(1) FIBER	±150'
	PROPOSED	LTE 5G 850	(1) COMMSCOPE NNHH-65A-R4	105'	300°	(1) RRH 4T4R B5 160W AHCA (P)	--	--	--
	PROPOSED	LTE 700/WCS	(1) COMMSCOPE NNHH-65A-R4	105'	300°	(1) RRH 4T4R B30 100W AHNA (P)	--	--	--
GAMMA	PROPOSED	LTE	(1) COMMSCOPE NNHH-65A-R4	105'	300°	--	--	--	--
							--	--	--

\* CABLE LENGTH INCLUDES:

- VERTICAL RUN ON TOWER (GRADE TO ⌀)
- HORIZONTAL ICE BRIDGE LENGTH
- VERTICAL RUN INSIDE WIC (GRADE TO CEILING, +10')

NO ADDITIONAL BUFFER HAS BEEN ADDED.

CARRIER:



AT&T

CONSULTANT TEAM:



AIROSMITH DEVELOPMENT  
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ORIGINAL SIZE IN INCHES

PROJECT INFORMATION:

SITE:  
14652325  
CHESTER II  
  
60 EVAN ROAD  
WARWICK, NY 10990  
ORANGE COUNTY  
WATER TANK

SHEET TITLE:

AT&T RF  
TABLE

SHEET NUMBER:

A04

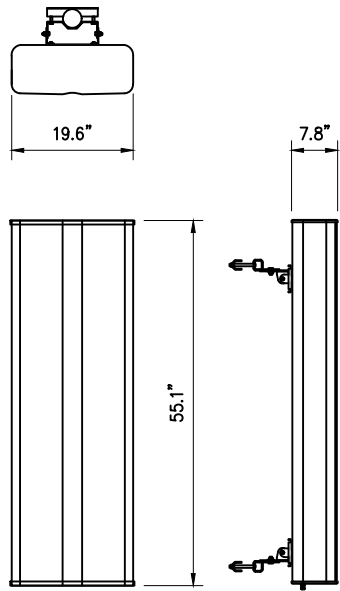
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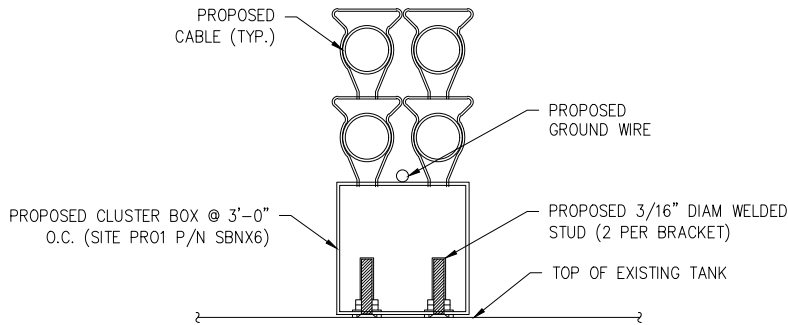
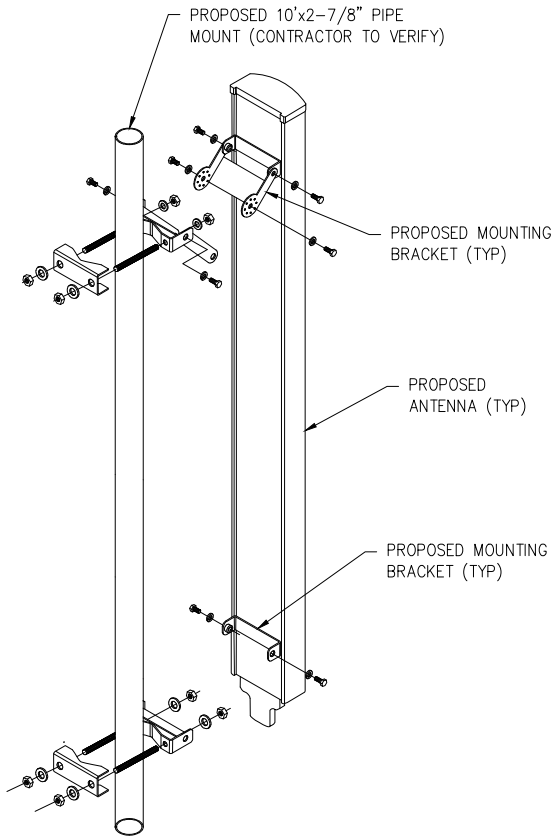
1

AT&T RF TABLE

SCALE: NOT TO SCALE



COMMSCOPE MODEL NO.:	NNHH-65A-R4
RADOME MATERIAL:	FIBERGLASS, UV RESISTANT
RADOME COLOR:	LIGHT GRAY
DIMENSIONS, HxWxD:	55.1"x19.6"x7.8"
WEIGHT, W/ PRE-MOUNTED BRACKETS:	66.1 LBS
CONNECTOR:	8 x 4.3-10 FEMALE



## 1 ANTENNA DETAIL

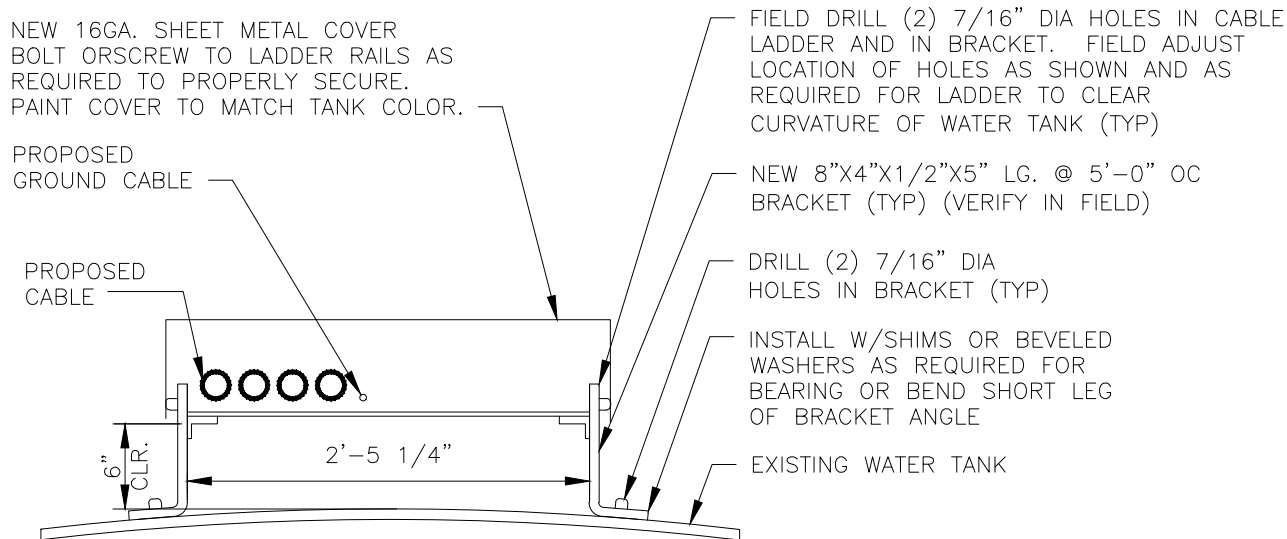
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## 2 MOUNTING DETAIL

SCALE: NOT TO SCALE

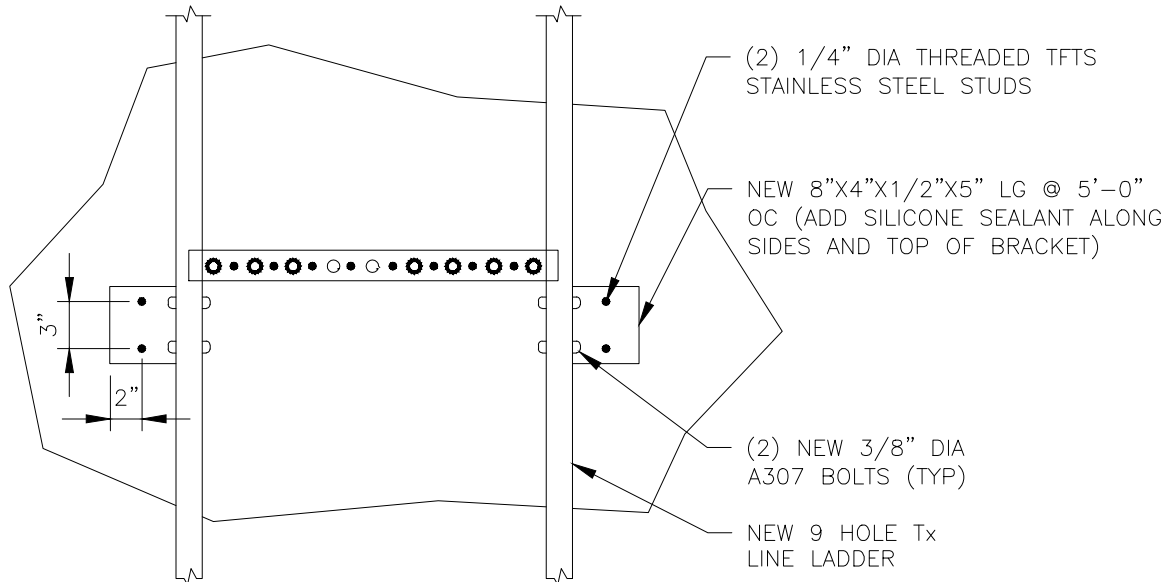
## 3 TOP OF TANK CABLE ROUTING

SCALE: NOT TO SCALE



### NOTES:

- LOCATE NEW BRACKETS AT TOP AND BOTTOM OF EACH CABLE LADDER SECTION.
- ALL CABLE TRAY COMPONENTS TO BE HOT-DIP GALVANIZED, U.N.O..
- 6x24 HCS SHOWN SCHEMATICALLY. ATTACH HCS TO CABLE LADDER USING APPROPRIATE 1-5/8"Ø SITE PRO 1 SNAP-IN CLIPS OR EQUIVALENT.



NOTE: CABLES AND COVER NOT SHOWN FOR CLARITY.

## 4 VERTICAL CABLE TRAY DETAIL

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A	05/20/22	ASW	FOR REVIEW	AJD
B	06/27/22	BMM	FOR REVIEW	ASW
0	07/12/22	BMM	FOR FINALS	ASW

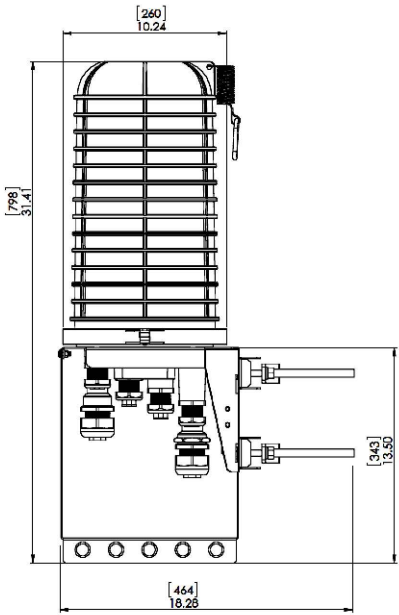


PROJECT INFORMATION: SITE: 14652325, CHESTER II, 60 EVAN ROAD, WARWICK, NY 10990, ORANGE COUNTY, WATER TANK

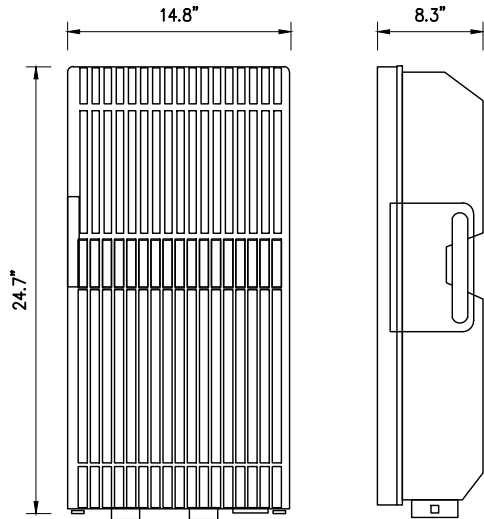
SHEET TITLE: EQUIPMENT DETAILS

SHEET NUMBER: A05, REVISION: 0

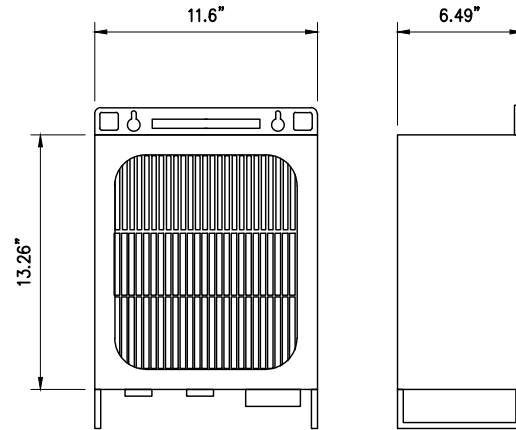




**RAYCAP DC9-48-60-24-8C-EV**  
• HxWxD, (INCHES): 31.41"x10.24"x18.28"  
• WEIGHT (LBS): 26.2 LBS



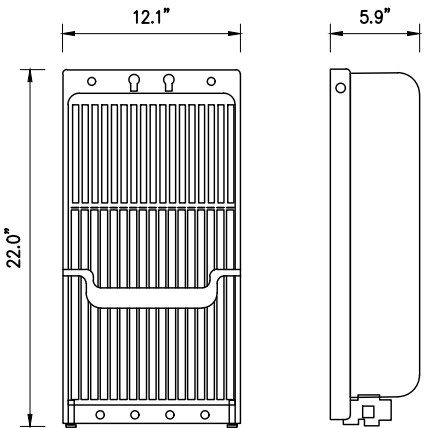
**MANUFACTURER:** NOKIA  
**MODEL:** AIRSCALE RRH 4T4R B12/14/29  
**TECHNOLOGY:** TRI BAND  
**DIMENSIONS (HxWxD):** 24.7" x 14.8" x 8.3"  
627mm x 376mm x 210mm  
**WEIGHT:** <101.4 LBS  
**POWER SUPPLY:** -48V DC



**MANUFACTURER:** NOKIA  
**MODEL:** AIRSCALE RRH 4T4R B5 160W  
**DIMENSIONS (HxWxD):** 13.26" x 11.6" x 6.49"  
337mm x 295mm x 165mm  
**WEIGHT:** <36.8 LBS  
**POWER SUPPLY:** -48V DC

## 1 SQUID DETAIL

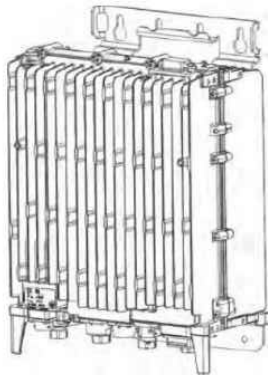
SCALE: NOT TO SCALE



**MANUFACTURER:** NOKIA  
**MODEL:** AIRSCALE RRH 4T4R B25/66 320W AHFIB  
**TECHNOLOGY:** DUAL BAND  
**DIMENSIONS (HxWxD):** 22.0" x 12.1" x 5.9"  
560mm x 308mm x 149mm  
**MODEM:** <66.1 LBS  
**POWER SUPPLY:** -48V DC

## 2 RRH - 4T4R B12/B14/29

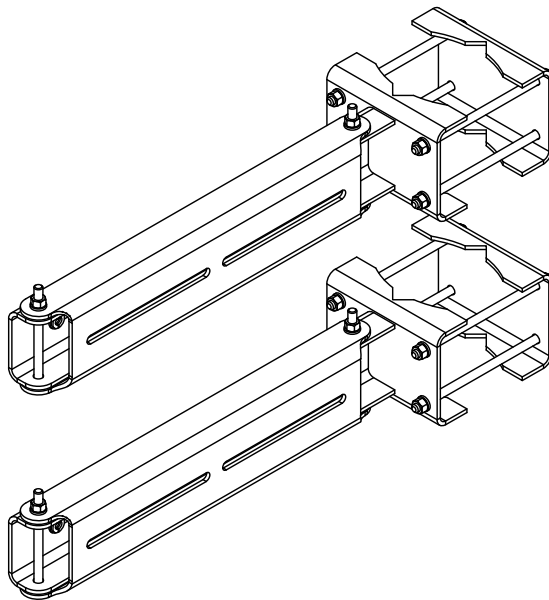
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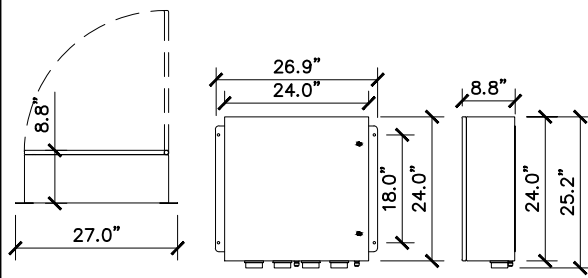
**MANUFACTURER:** NOKIA  
**MODEL:** AIRSCALE RRH 4T4R B30 100W AHNA  
**TECHNOLOGY:** DUAL BAND  
**DIMENSIONS (HxWxD):** 13.25" x 12.76" x 7.22"  
336.5mm x 324mm x 183.5mm  
**MODEM:** <34.17 LBS  
**POWER SUPPLY:** -48V DC

## 3 RRH - 4T4R B5 160W

SCALE: NOT TO SCALE



**ROSENBERGER DUAL RRU MOUNT**  
• P/N: D220RRUDSM  
• HxLxW, (INCHES): 4.0"x22.75"x6.5"  
• INSTALLATION NOTE: UTILIZE (2) BRACKETS PER RRU MOUNTING LOCATION.



**PLAN VIEW FRONT VIEW SIDE VIEW**  
**RAYCAP - DC12-48-60-0-25E**  
DC SURGE PROTECTION SOLUTION  
SURGE PROTECT 60 kA  
MAXIMUM IMPULSE CURRENT 5 kA  
ENCLOSURE TYPE (OUTDOOR) NEMA 4  
WEIGHT 56.3 LBS

## 4 RRH - 4T4R B25/66 32W

SCALE: NOT TO SCALE

## 5 RRH - 4T4R B30 100W

SCALE: NOT TO SCALE

## 6 RRU MOUNTING BRACKET

SCALE: NOT TO SCALE

## 7 DC12 DETAIL

SCALE: NOT TO SCALE

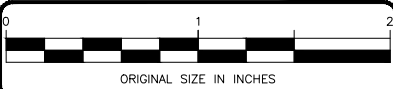


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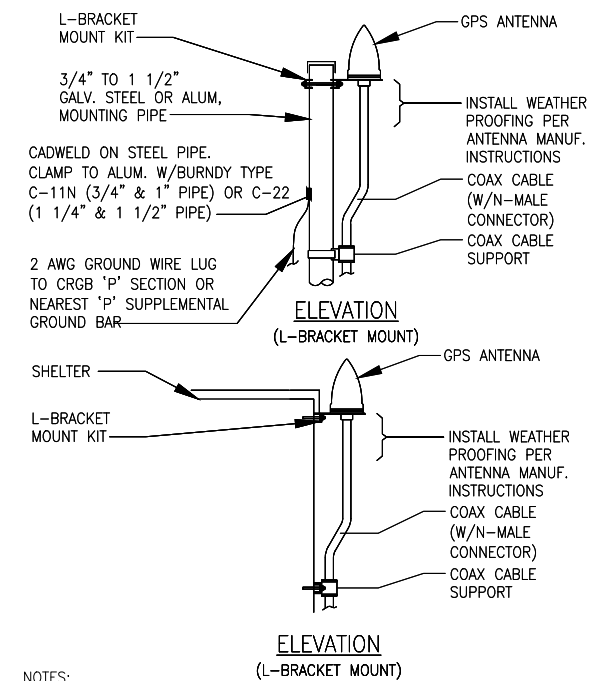
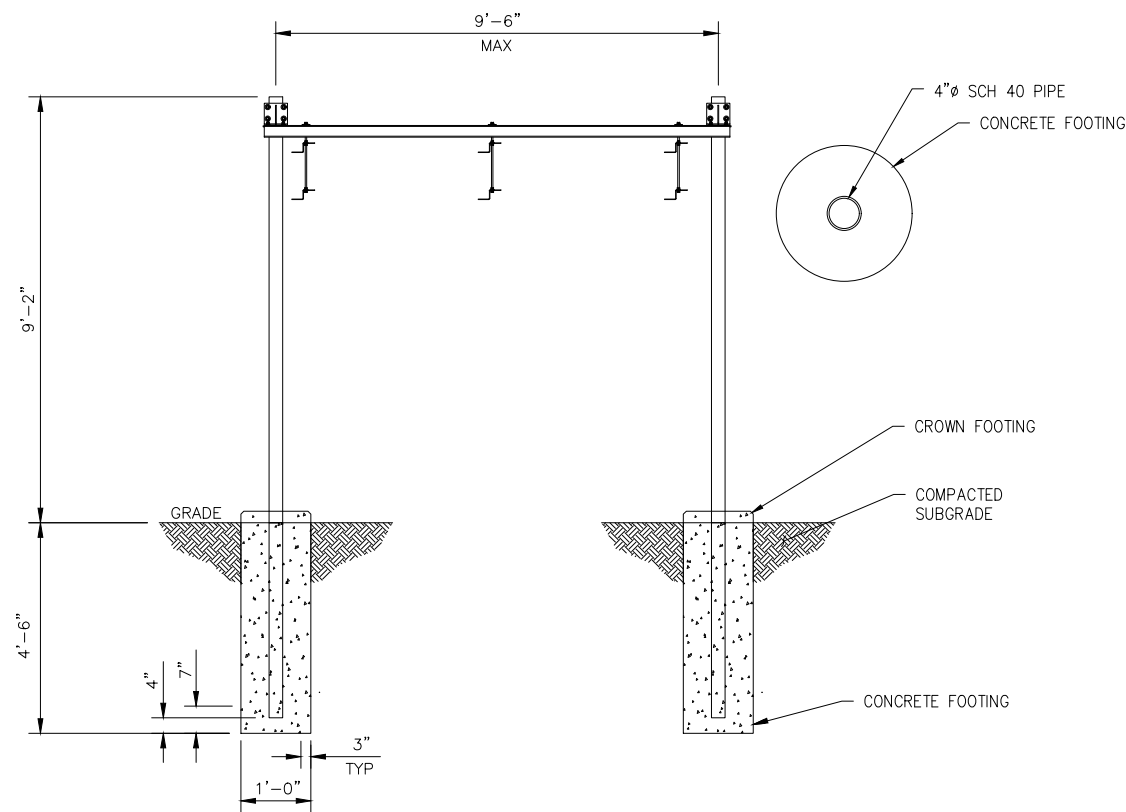
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0	07/12/22	BMM	FOR FINALS	ASW



**PROJECT INFORMATION:**  
**SITE:**  
14652325  
CHESTER II  
  
60 EVAN ROAD  
WARWICK, NY 10990  
ORANGE COUNTY  
WATER TANK

**SHEET TITLE:**  
EQUIPMENT  
DETAILS

**SHEET NUMBER:** A06 **REVISION:** 0



1. CADWELDING SHALL NOT BE PERFORMED ON ROOFTOPS.
2. LTE-GPS ANTENNA SHALL BE LOCATED 10' FROM ALL ANTENNAS.

CARRIER:



**AT&T**

CONSULTANT TEAM:



The logo for AIROSMITH features a stylized green circular graphic composed of concentric arcs, resembling a signal or a stylized 'A'. To the right of this graphic, the word 'AIROSMITH' is written in a bold, sans-serif font. 'AIRO' is in green and 'SMITH' is in blue.

**AIROSMITH**

**AIROSMITH DEVELOPMENT**  
**AIROSMITH ENGINEERING**  
318 WEST AVE.  
SARATOGA SPRINGS, NY 12866

CLUSTER #  
ATT NSB NYC 202103

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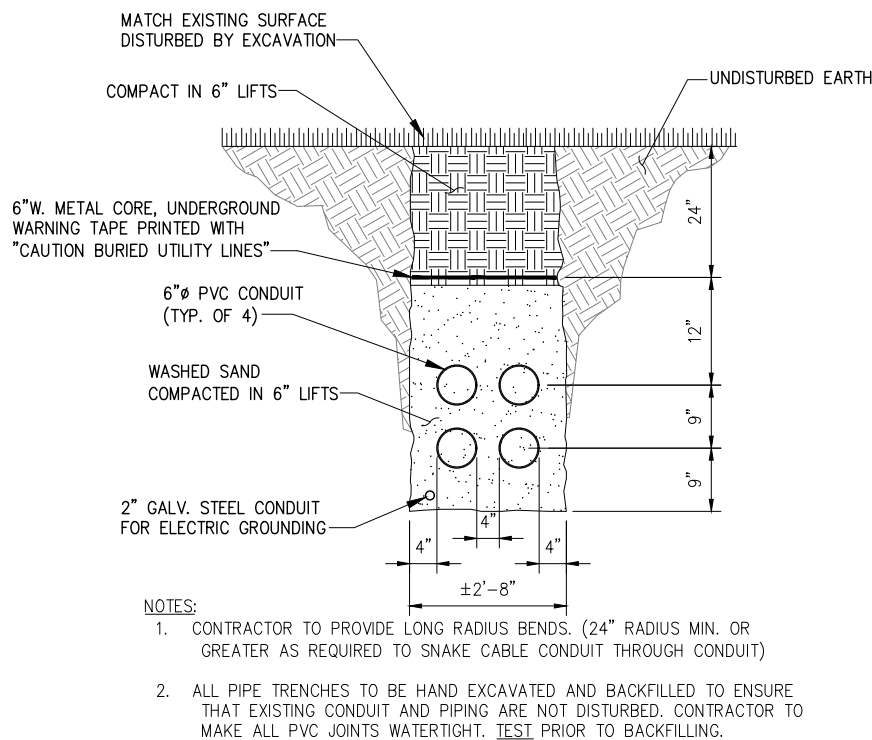
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14652325  
CHESTER II  
60 EVAN ROAD  
WARWICK, NY 10990  
ORANGE COUNTY  
WATER TANK

SHEET TITLE: EQUIPMENT  
DETAILS

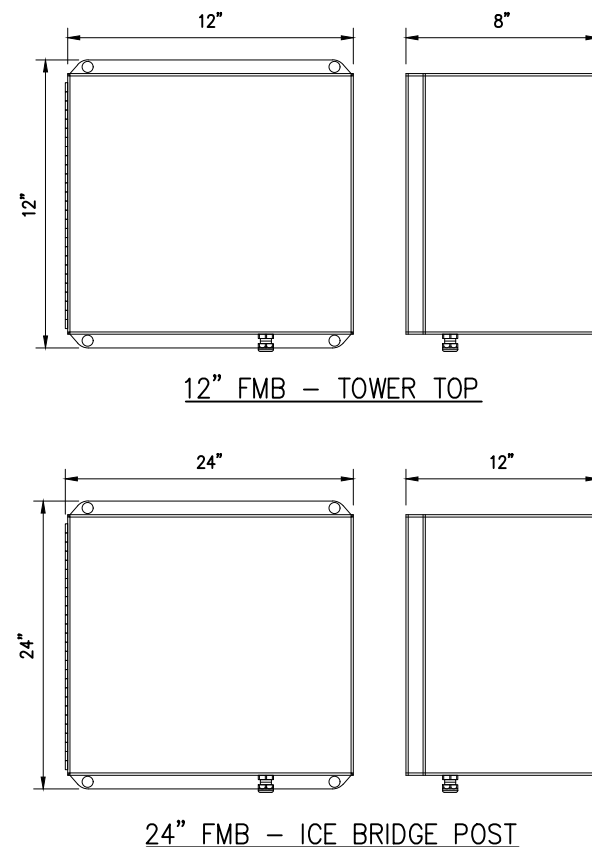
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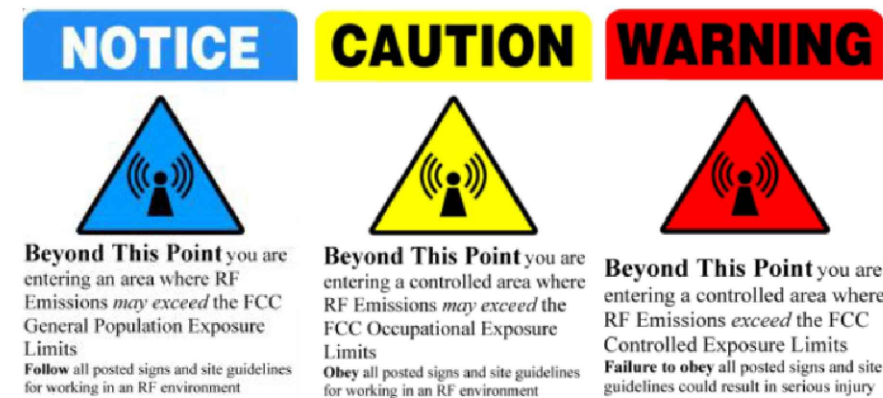


SCALE: NOT TO SCALE



## SCALE: NOT TO SCALE

SCALE: NOT TO SCALE



1. INSTALLATION CONTRACTOR SHALL INSTALL SIGNS IN ACCORDANCE WITH FCC, OHSA AND AT&T STANDARDS.
2. AFFIX APPLICABLE SIGNS ON EACH FENCE GATE VISIBLE TO EXTERIOR OF FENCED COMPOUND.

SCALE: NOT TO SCALE



Specification sheet

Diesel generator set

25 kW - 40 kW  
EPA emissions  
stationary Standby

Description

Cummins® generator sets are fully integrated power generation systems providing optimum performance, reliability and versatility for stationary Standby applications.

Features

**Cummins heavy-duty engine** - Rugged 4-cycle, liquid-cooled, industrial diesel engine delivers reliable power, low emissions and fast response to load changes.

**Alternator** - Several alternator sizes offer selectable motor starting capability with low reactance 2/3 pitch windings, low waveform distortion with non-linear loads and fault clearing short-circuit capability.

**Control system** - The PowerCommand® 1.1 electronic control is standard equipment and provides total generator set system integration including automatic remote starting/stopping, precise frequency and voltage regulation, alarm and status message display, output metering, auto-shutdown at fault detection and NFPA 110 Level 1 compliance.

Model	Standby rating 60 Hz		Prime rating 60 Hz		Data sheets 60 Hz
	kW	kVA	kW	kVA	
C25 D6	25	31.3	22.7	28.4	NAD-5860
C30 D6	30	37.5	27	33.8	NAD-5861
C35 D6	35	43.8	32	40	NAD-5862
C40 D6	40	50	36	45	NAD-5863

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power.cummins.com

Model	Dim "A" mm (in.)	Dim "B" mm (in.)	Dim "C" mm (in.)	Set weight* dry kg (lbs)	Set weight* wet kg (lbs)
Open set					
C25 D6	2224 (87.5)	864 (34)	1121 (44.13)	504 (1115)	525 (1161)
C30 D6	2224 (87.5)	864 (34)	1121 (44.13)	533 (1178)	553 (1224)
C35 D6	2224 (87.5)	864 (34)	1121 (44.13)	552 (1221)	573 (1267)
C40 D6	2224 (87.5)	864 (34)	1121 (44.13)	566 (1252)	587 (1298)
Sound attenuated enclosure Level 1					
C25 D6	2384 (93.8)	864 (34)	1156 (45.5)	551 (1219)	572 (1265)
C30 D6	2384 (93.8)	864 (34)	1156 (45.5)	580 (1282)	600 (1328)
C35 D6	2384 (93.8)	864 (34)	1156 (45.5)	599 (1325)	620 (1371)
C40 D6	2384 (93.8)	864 (34)	1156 (45.5)	613 (1356)	634 (1402)
Sound attenuated enclosure Level 2					
C25 D6	2629 (103.5)	864 (34)	1156 (45.5)	570 (1261)	591 (1307)
C30 D6	2629 (103.5)	864 (34)	1156 (45.5)	599 (1324)	619 (1370)
C35 D6	2629 (103.5)	864 (34)	1156 (45.5)	618 (1367)	639 (1413)
C40 D6	2629 (103.5)	864 (34)	1156 (45.5)	632 (1398)	653 (1444)

\*Weights represent a set with standard features. See outline drawings for weights of other configurations.

Codes and standards

Codes or standards compliance may not be available with all model configurations – consult factory for availability.

	This generator set is designed in facilities certified to ISO 9001 and manufactured in facilities certified to ISO 9001 or ISO 9002.		The generator set is available Listed to UL 2200, Stationary Engine Generator Assemblies.
	The Prototype Test Support (PTS) program verifies the performance integrity of the generator set design. Cummins products bearing the PTS symbol meet the prototype test requirements of NFPA 110 for Level 1 systems.		Engine certified to U.S. EPA SI Stationary Emission Regulation 40 CFR, Part 60.
	All low voltage models are CSA certified to product class 4215-01.		The generator set is certified for seismic application in accordance with International Building Code (IBC) 2012.

**Warning:** Back feed to a utility system can cause electrocution and/or property damage. Do not connect to any building's electrical system except through an approved device or after building main switch is open.

Generator set specifications

Governor regulation class	ISO8528 Part 1 Class G2
Voltage regulation, no load to full load	± 1.0%
Random voltage variation	± 0.5% - 3 Phase only
Frequency regulation	Isochronous
Random frequency variation	± 0.5%
Radio frequency emissions compliance	FCC code Title 47 Part 15 Class B

Engine specifications

Bore	95.0 mm (3.74 in.)
Stroke	115.1 mm (4.53 in.)
Displacement	3.3 litres (199 in³)
Configuration	Cast iron, in-line, 4 cylinder
Battery capacity	550 amps at ambient temperature of 0 °F to 32 °F (-18 °C to 0 °C)
Battery charging alternator	40 amps
Starting voltage	12 volt, negative ground
Fuel system	Indirect injection, number 2 diesel fuel, fuel filter, electric fuel shut off
Fuel filter	Single element, 10 micron filtration, spin-on fuel filter with water separator
Air cleaner type	Dry replaceable element
Lube oil filter type(s)	Spin-on, full flow
Standard cooling system	50 °C (122 °F) ambient cooling system

Alternator specifications

Design	Brushless, 4 pole, drip proof, revolving field
Stator	2/3 pitch
Rotor	Direct coupled, flexible disc
Insulation system	Class H per NEMA MG1-1.65
Standard temperature rise	120 °C (248 °F) Standby
Exciter type	Torque match (ahunt) with PMG/EBS as option
Alternator cooling	Direct drive centrifugal blower
AC waveform Total Harmonic Distortion (THDV)	< 5% no load to full linear load, < 3% for any single harmonic
Telephone Influence Factor (TIF)	< 50 per NEMA MG1-22.43
Telephone Harmonic Factor (THF)	0.03

Available voltages

Single phase	3 phase
• 120/240	• 120/208 • 120/240 delta • 277/480 • 347/600

Note: Consult factory for other voltages.

Generator set options

- Fuel system**
- Basic fuel tanks
  - Regional fuel tanks
- Engine**
- Engine air cleaner – normal or heavy duty
  - Shut down – low oil pressure
  - Extension – oil drain
- Alternator**
- 120 °C (248 °F) temperature rise alternator
  - 105 °C (221 °F) temperature rise alternator
  - Excitation Boost System (EBS) or PMG
  - Alternator heater, 120 V

Control

- AC output analog meters (bargraph)
  - Stop switch – emergency
  - Auxiliary output relays (2)
  - Auxiliary configurable signal inputs (8) and relay outputs (8)
- Electrical**
- Single circuit breaker
  - Dual circuit breakers
  - 80% rated circuit breakers
  - 100% rated circuit breakers
- Enclosure**
- Aluminum enclosure sound level 1 or level 2, with muffler installed, sandstone or green color
  - Open set

Cooling system

- Shutdown – low coolant level
  - Warning – low coolant level
  - Extension – coolant drain
  - Cold weather option for operating at <4 °C (40 °F)
- Exhaust system**
- Exhaust connector - NPT
  - Open set with muffler mounted
- Generator set application**
- Battery rack, larger battery
  - Radiator outlet duct adapter

Generator set options (continued)

Warranty

- Base warranty – 2 year, 1000 hour, Standby
- Standby, 3 year, 1500 hour, parts
- Standby, 5 year, 2500 hour, parts
- Standby, 3 year, 1500 hour, parts and labor

Generator set accessories

- Extreme cold weather kit
- Battery rack, larger battery
- Battery heater kit
- HMI211RS in-home display, including pre-configured 12" harness
- HMI211 remote display, including pre-configured 12" harness
- HMI220 remote display
- Auxiliary output relays (2)
- Auxiliary configurable signal inputs (8) and relay outputs (8)
- Annunciator – RS485
- Remote monitoring device – PowerCommand 500

- Standby, 5 year, 2500 hour, parts and labor
- Standby, 3 year, 1500 hour, parts, labor and travel
- Standby, 5 year, 2500 hour, parts, labor and travel

- Battery charger – stand-alone, 12 V
- Circuit breakers
- Enclosure Sound Level 1 to Sound Level 2 upgrade kit
- Enclosure paint touch up kit
- Mufflers – industrial, residential or critical
- Alternator Excitation Boost System (EBS) or PMG
- Alternator heater
- Maintenance and service kit
- Engine lift kit
- Various fuel tanks and accessories

Control system PowerCommand 1.1



**PowerCommand control** is an integrated generator set control system providing voltage regulation, engine protection, operator interface and isochronous governing (optional). Major features include:

- Battery monitoring and testing features and smart starting control system.
  - Standard PCCNet interface to devices such as remote annunciator for NFPA 110 applications.
  - Control boards potted for environmental protection.
  - Control suitable for operation in ambient temperatures from -40 °C to +70 °C (-40 °F to +158 °F) and altitudes to 5000 meters (13,000 feet).
  - Prototype tested; UL, CSA, and CE compliant.
  - InPower™ PC-based service tool available for detailed diagnostics.
- Operator/display panel**
- Manual off switch
  - Alpha-numeric display with pushbutton access for viewing engine and alternator data and providing setup, controls and adjustments (English or international symbols)
  - LED lamps indicating generator set running, not in auto, common warning, common shutdown, manual run mode and remote start
  - Suitable for operation in ambient temperatures from -40 °C to +70 °C
  - Bargraph display (optional)

AC protection

- Over current warning and shutdown
- Over and under voltage shutdown
- Over and under frequency shutdown
- Over excitation (loss of sensing) fault
- Field overload

Engine protection

- Overspeed shutdown
- Low oil pressure warning and shutdown
- High coolant temperature warning and shutdown
- Low coolant level warning or shutdown
- Low coolant temperature warning
- High, low and weak battery voltage warning
- Fail to start (overcrank) shutdown
- Fail to crank shutdown
- Redundant start disconnect
- Cranking lockout
- Sensor failure indication
- Low fuel level warning or shutdown

Alternator data

- Line-to-Line and Line-to-Neutral AC volts
  - 3-phase AC current
  - Frequency
  - Total kVA
- Engine data**
- DC voltage
  - Lube oil pressure
  - Coolant temperature
  - Engine speed

CARRIER:



CONSULTANT TEAM:



AIROSMITH DEVELOPMENT  
AIROSMITH ENGINEERING  
318 WEST AVE.  
SARATOGA SPRINGS, NY 12866  
CLUSTER #  
ATT NSB NYC 202103

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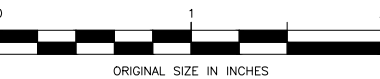
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0	07/12/22	BMM	FOR FINALS	ASW



ORIGINAL SIZE IN INCHES

PROJECT INFORMATION:

SITE:  
14652325  
CHESTER II  
  
60 EVAN ROAD  
WARWICK, NY 10990  
ORANGE COUNTY  
WATER TANK

SHEET TITLE:

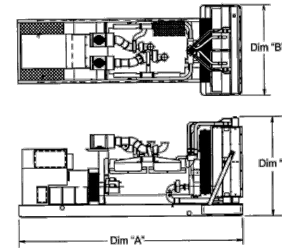
GENERATOR  
DETAILS

SHEET NUMBER:

A08

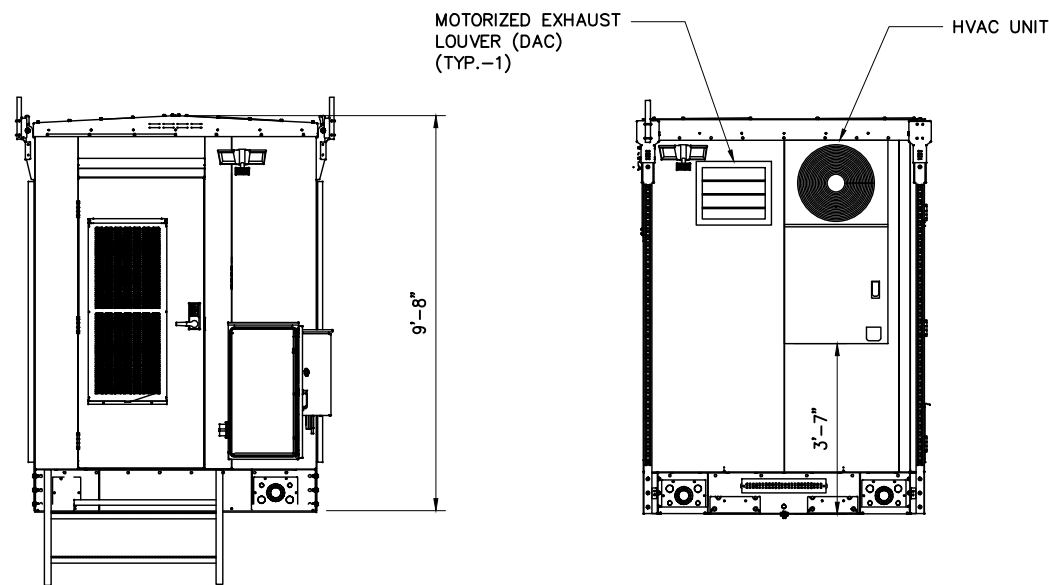
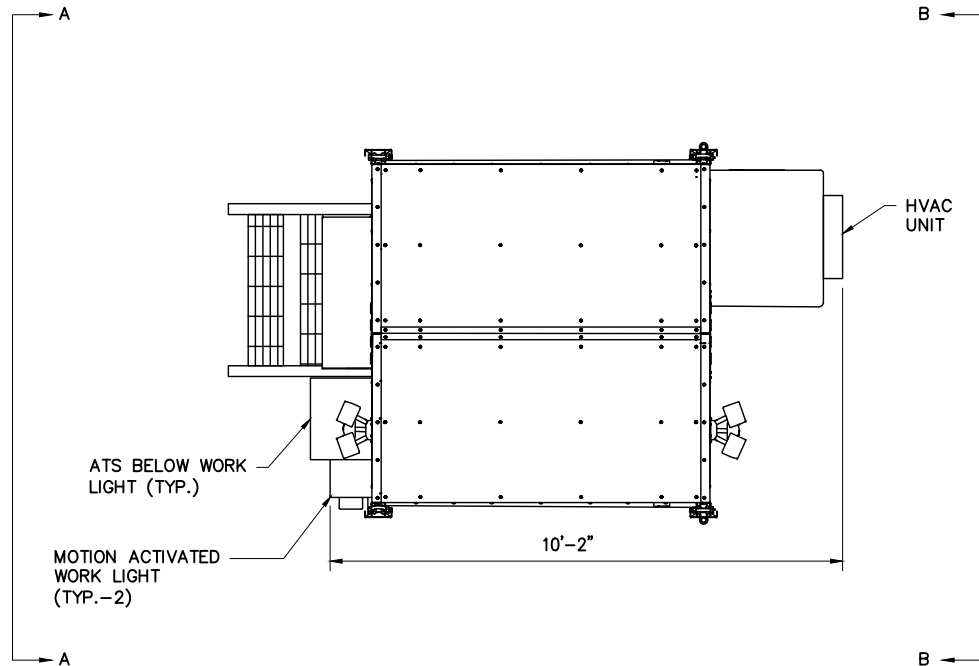
REVISION:

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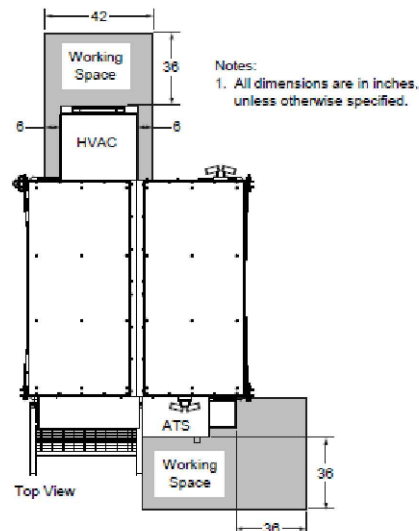
This outline drawing is for reference only. See respective model data sheet for specific model outline drawing number.

Do not use for installation design

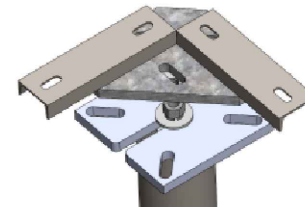


SECTION A-A

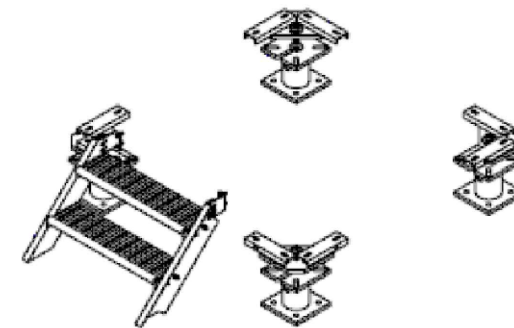
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REQUIRED CLEARANCES

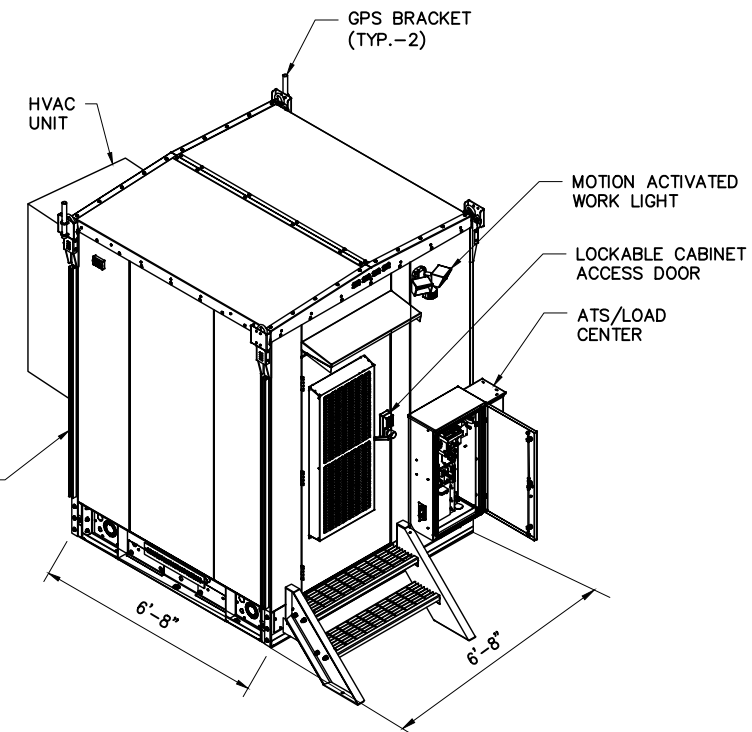


CORNER PLATES



LEVELING AND ANCHOR PLATES

GALVANIZED UNISTRUT RACK PROVIDED ON LEFT & RIGHT SIDES OF WIC TO BE UTILIZED FOR DC12, FMB & RRH'S. INSTALL CAPS ON ALL UNISTRUT EXPOSED ENDS.



ISOMETRIC VIEW

EQUIPMENT PLATFORM AND EQUIPMENT AS SHOWN IS A SCHEMATIC DEPICTION OF PROPOSED EQUIPMENT AND PLATFORM FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR TO REFER TO SITE SPECIFIC PLATFORM AND EQUIPMENT DESIGN AS SUPPLIED BY AT&T.

ABOVE DETAILS EXTRACTED FROM "VERTIV XTE 802 WALK-IN-CABINET (WIC) DESCRIPTION AND INSTALLATION MANUAL", SPECIFICATION NUMBER: F2018009. DOCUMENT NUMBER: 631-205-434\_REV4

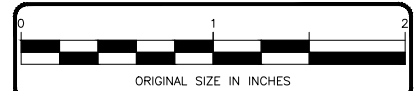


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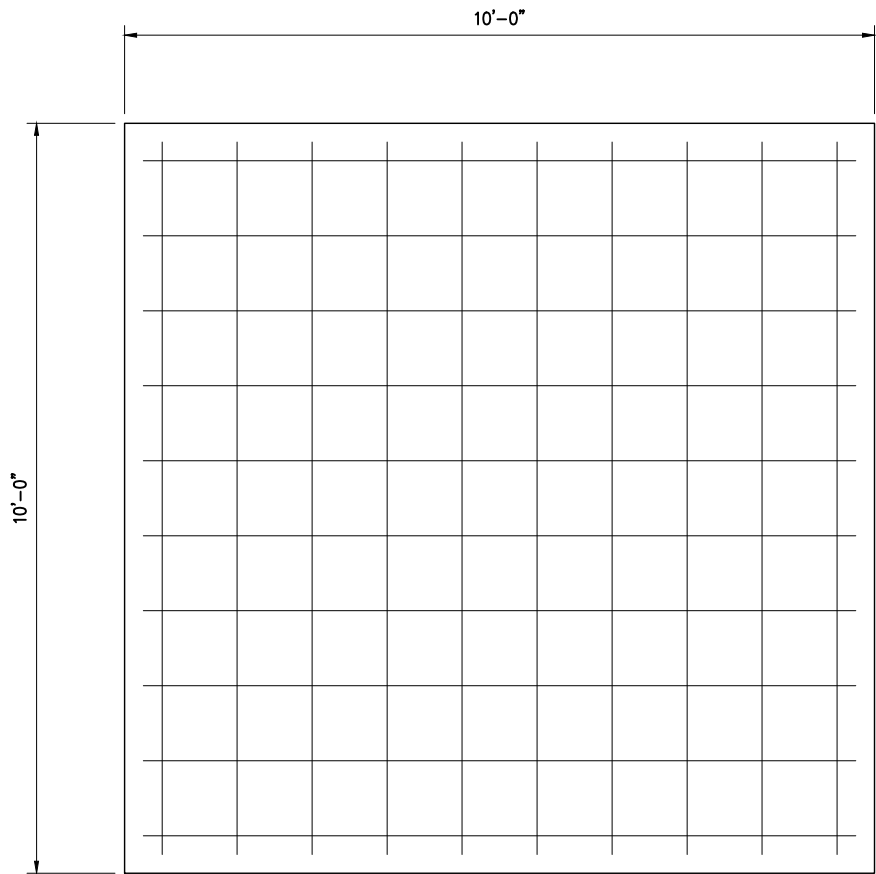


PROJECT INFORMATION: SITE: 14652325 CHESTER II 60 EVAN ROAD WARWICK, NY 10990 ORANGE COUNTY WATER TANK

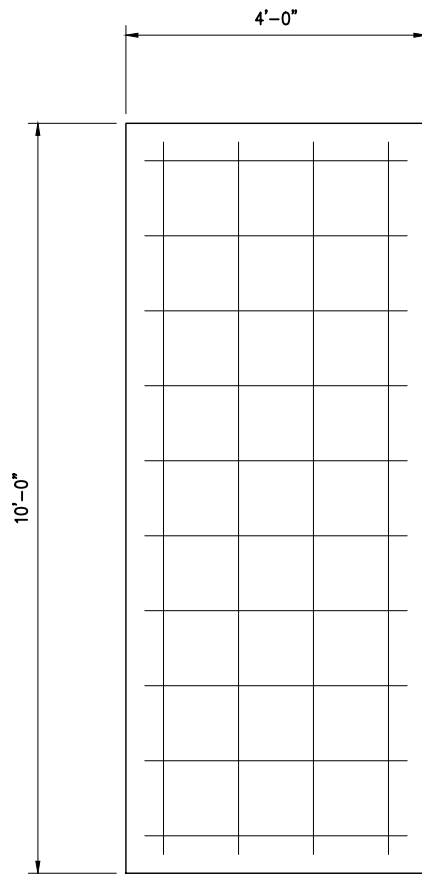
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SHEET NUMBER: A09 REVISION: 0

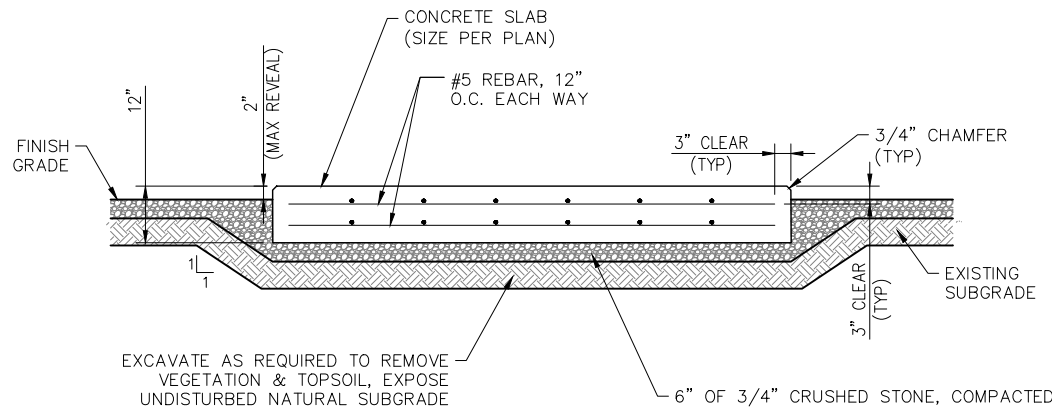




WIC SLAB PLAN



GENERATOR PLAN



- NOTES:
1. CONTRACTOR TO VERIFY FINAL PAD DIMENSIONS PRIOR TO CONSTRUCTION OF PAD.
  2. PROVIDE POSITIVE DRAINAGE FROM CONCRETE PAD.
  3. ANCHOR EQUIPMENT TO PAD PER MANUFACTURER REQUIREMENTS.
  4. COMPACT CRUSHED STONE FILL TO 95% COMPACTION
  5. ANY SOIL THAT IS UTILIZED AS FILL SHALL BE FREE FROM ORGANIC MATERIAL.
  6. CONCRETE TO HAVE A COMPRESSIVE STRENGTH OF 4,000 PSI.
  7. ALL STEEL REINFORCEMENT SHALL HAVE A MINIMUM OF 3" COVER IN ALL DIRECTIONS.



CONSULTANT TEAM:

**AIROSMITH**

AIROSMITH DEVELOPMENT  
AIROSMITH ENGINEERING  
318 WEST AVE.  
SARATOGA SPRINGS, NY 12866  
CLUSTER #  
ATT NSB NYC 202103

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REV.	DATE	DRAWN	DESCRIPTION	QA/QC
A	05/20/22	ASW	FOR REVIEW	AJD
B	06/27/22	BMM	FOR REVIEW	ASW
0	07/12/22	BMM	FOR FINALS	ASW



PROJECT INFORMATION:

**SITE:**  
14652325  
CHESTER II

60 EVAN ROAD  
WARWICK, NY 10990  
ORANGE COUNTY

**WATER TANK**

SHEET TITLE:

**CONCRETE  
PAD DETAILS**

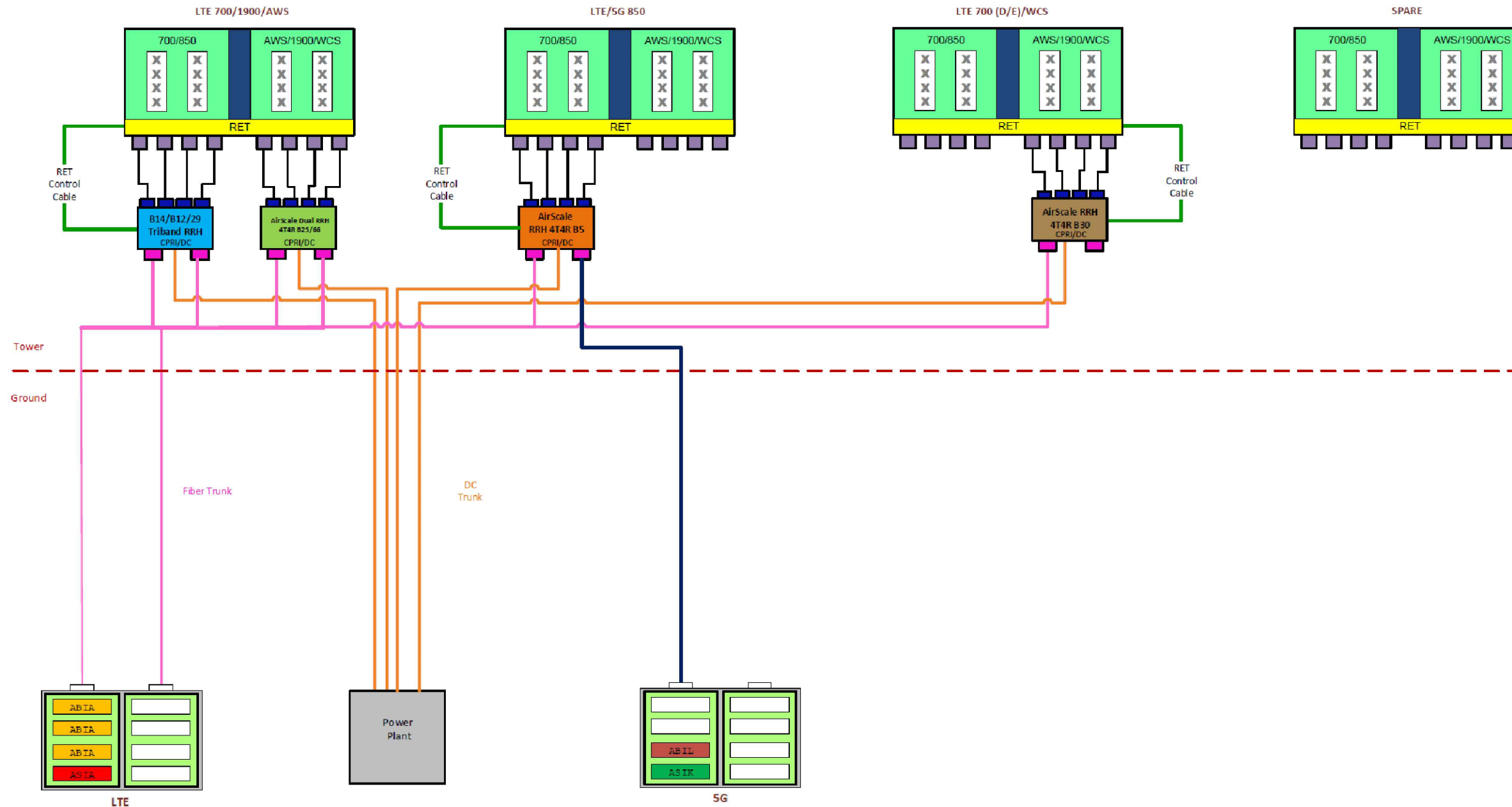
SHEET NUMBER: **A10**

REVISION: **0**

Proposed Configuration

# NWL06274 – All Sectors

Before starting RRH/antenna installation, please refer to Nokia field guides and notices for requirements.



CONSULTANT TEAM:

**AIROSMITH**

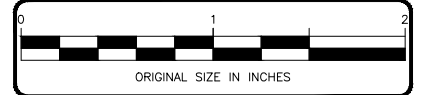
AIROSMITH DEVELOPMENT  
AIROSMITH ENGINEERING  
318 WEST AVE.  
SARATOGA SPRINGS, NY 12866  
CLUSTER #  
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PROJECT INFORMATION:

SITE:  
14652325  
CHESTER II  
60 EVAN ROAD  
WARWICK, NY 10990  
ORANGE COUNTY  
WATER TANK

SHEET TITLE:

PLUMBING  
DIAGRAM

SHEET NUMBER:

A11

REVISION:

0



CODED DRAWING NOTES

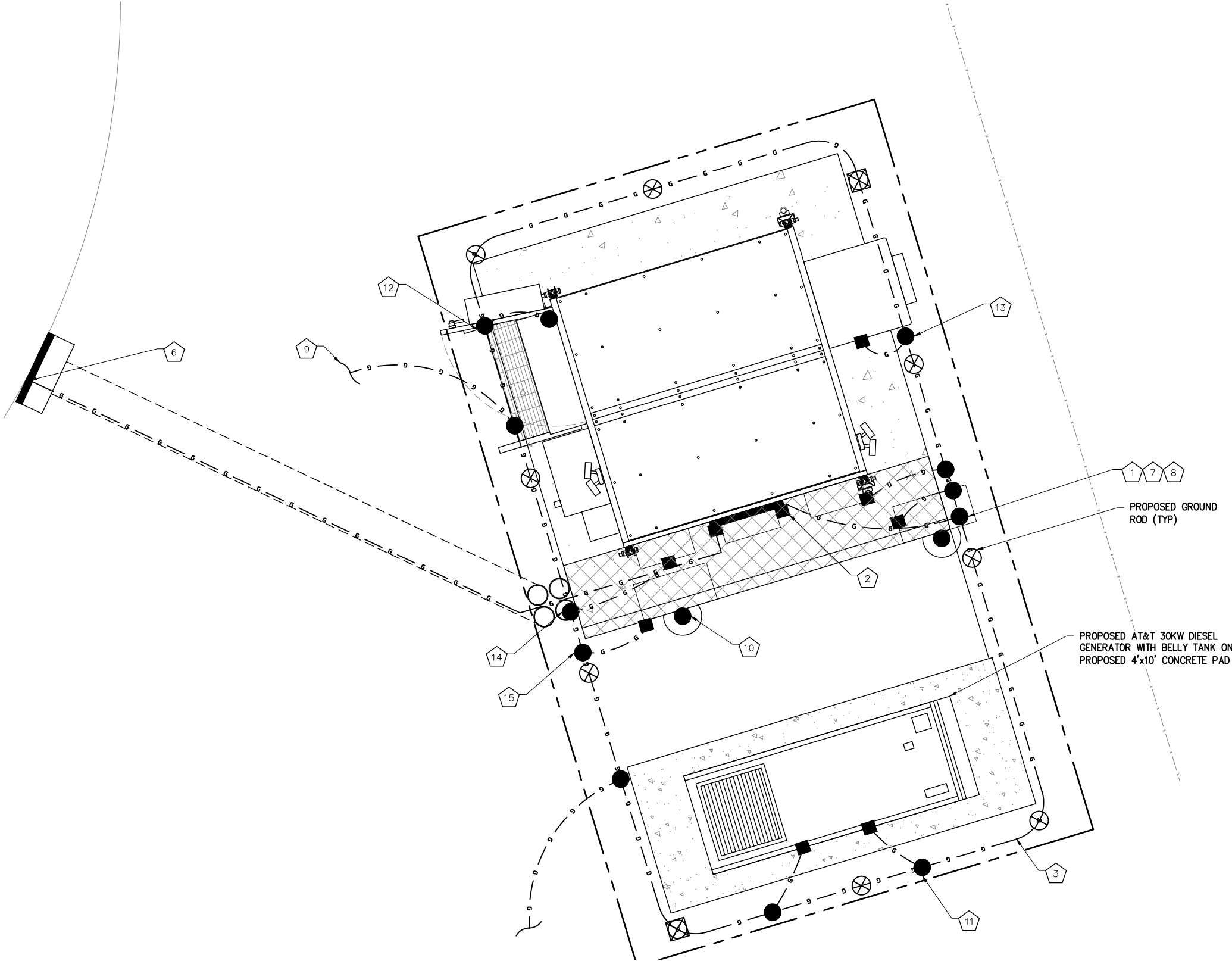
- 1
- PROPOSED AT&T EQUIPMENT SHELTER TO BE GROUNDED PER MANUFACTURER'S SPECIFICATIONS. (TYP)
- 2
- PROPOSED MAIN GROUND BAR, NEAR PROPOSED EQUIPMENT.
- 3
- PROPOSED #2 SOLID TINNED BCW BURIED GROUND RING
- 4
- PROPOSED SECONDARY GROUND BAR, AT BASE OF TOWER. (TYP)
- 5
- BOND PROPOSED SECONDARY GROUND BAR TO MAIN GROUND BAR
- 6
- BOND PROPOSED SECONDARY GROUND BAR TO TOWER GROUND RING WITH PROPOSED #2 SOLID TINNED BCW (TYP OF (2) PLACES).
- 7
- BOND PROPOSED EQUIPMENT SHELTER TO PROPOSED GROUND RING WITH #2 SOLID TINNED BCW (TYP).
- 8
- BOND PROPOSED MAIN GROUND BAR TO PROPOSED GROUND RING WITH #2 SOLID TINNED BCW (TYP OF (2) PLACES).
- 9
- BOND PROPOSED GROUND RING TO COMPOUND GROUND SYSTEM WITH #2 SOLID TINNED BCW (TYP OF (2) PLACES).
- 10
- BOND PROPOSED ICE BRIDGE TO PROPOSED GROUND RING WITH #2 SOLID TINNED BCW AS REQUIRED. (TYP ALL POSTS)
- 11
- BOND PROPOSED GENERATOR TO PROPOSED GROUND RING WITH #2 SOLID TINNED BCW AS REQUIRED.
- 12
- BOND PROPOSED STAIRS TO PROPOSED SITE GROUND RING. (TYP)
- 13
- BOND PROPOSED HVAC UNIT TO PROPOSED SITE GROUND RING. (TYP)
- 14
- BOND PROPOSED DC12 TO PROPOSED SITE GROUND RING. (TYP)
- 15
- BOND FIBER MANAGEMENT BOX TO PROPOSED SITE GROUND RING. (TYP)

GROUNDING SYMBOLS

- S/G

SOLID GROUND BUS BAR
- S/N

SOLID NEUTRAL BUS BAR
- SUPPLEMENTAL GROUND CONDUCTOR
- 2-POLE THERMAL-MAGNETIC CIRCUIT BREAKER
- SINGLE-POLE THERMAL-MAGNETIC CIRCUIT BREAKER
- CHEMICAL GROUND ROD
- GROUND ROD
- DISCONNECT SWITCH
- METER
- CADWELD TYPE CONNECTION
- COMPRESSION TYPE CONNECTION
- GROUNDING WIRE



CONSULTANT TEAM:

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PROJECT INFORMATION:

SITE:  
14652325  
CHESTER II  
  
60 EVAN ROAD  
WARWICK, NY 10990  
ORANGE COUNTY  
WATER TANK

SHEET TITLE:

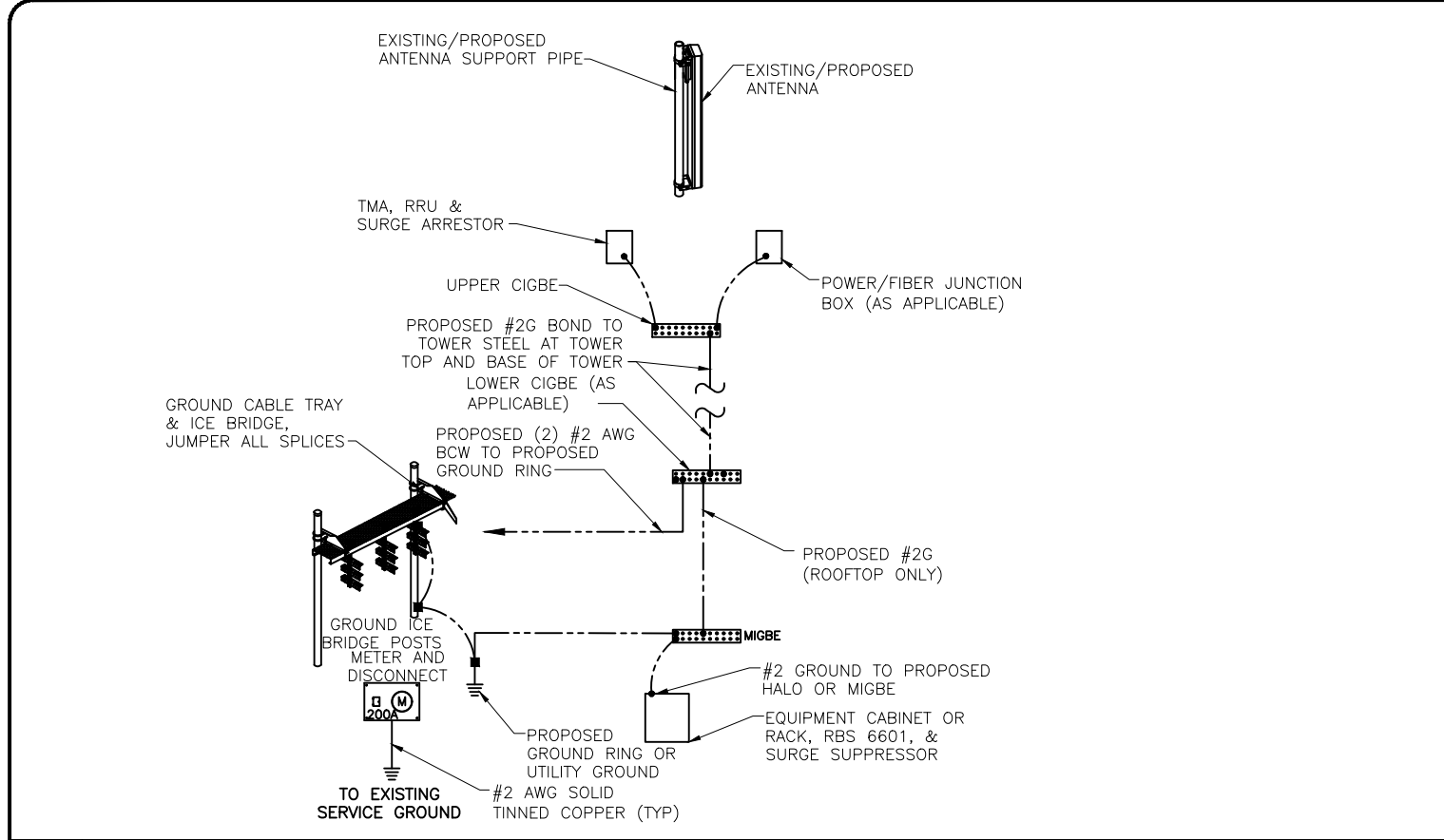
GROUNDING  
PLAN

SHEET NUMBER:

G01

REVISION:

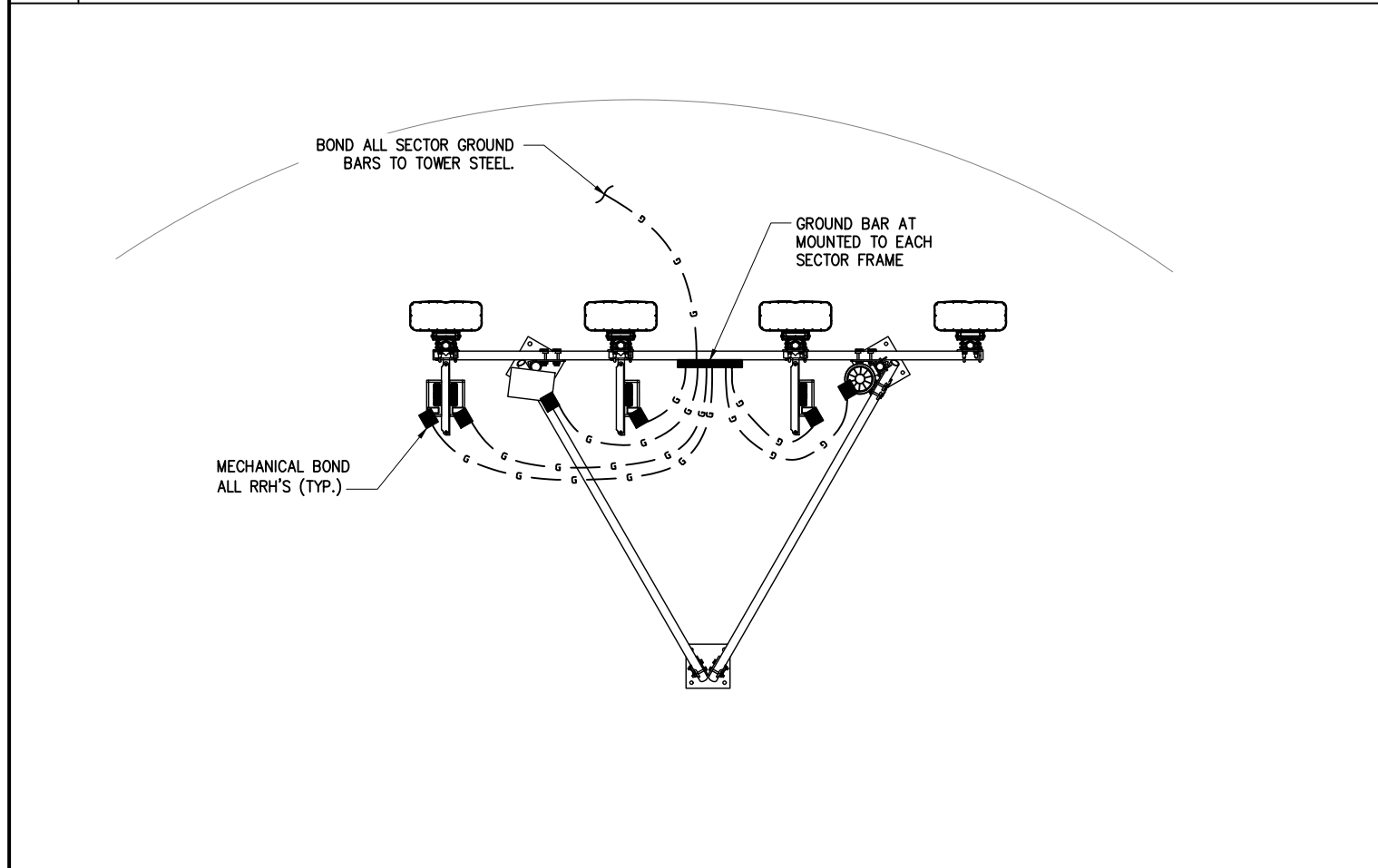
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1

GROUNDING SCHEMATIC

SCALE: NOT TO SCALE



2

MOUNT GROUNDING PLAN

SCALE: NOT TO SCALE

GROUNDING NOTES:

1. ALL DOWN CONDUCTORS AND GROUND RING AND CONDUCTOR SHALL BE #2 AWG, SOLID, BARE, TINNED COPPER, UNO. ALL CONNECTIONS TO GROUND RING SHALL BE EXOTHERMICALLY WELDED. CONDUCTOR SHALL BE A MINIMUM DEPTH BELOW GRADE OF 30 INCHES OR TO THE LEDGE. MINIMUM BEND RADIUS SHALL BE 8 INCHES. CONDUCTOR SHALL BE AT LEAST 24 INCHES FROM ANY FOUNDATION, UNO.
2. WHERE MECHANICAL CONDUCTOR CONNECTIONS ARE SPECIFIED, BOLTED, COMPRESSION-TYPE CLAMPS OR SPLIT-BOLT TYPE CONNECTORS SHALL BE USED. GRIND OFF GALVANIZING IN AFFECTED AREA. EXOTHERMICALLY WELD #2 CONDUCTOR AT 6 INCHES ABOVE GRADE R FOUNDATION, WHICHEVER IS HIGHER. COLD-GALV AFTER. EXOTHERMICALLY WELD OTHER END TO THE GROUND.
3. GROUND CONDUCTORS ON EXTERIOR WALL OF SHELTER SHALL BE ENCASED IN 3/4" PVC CONDUIT TO GRADE. MOUNT PVC WITH GALVANIZED "C" CLAMPS. SEAL TOP ENDS.
4. FOLLOWING COMPLETION OF WORK, CONDUCT GROUND TEST. SUBMIT WRITTEN TEST TO CONSTRUCTION MANAGER AND PROJECT MANAGER.
5. ALL GROUNDING WORK SHALL COMPLY WITH CARRIER(S) STANDARDS.
6. GROUNDING REQUIREMENTS SHOWN ON THIS PLAN ARE FOR ITEMS THAT ARE LOCATED NEAR GRADE LEVEL AND THAT NEED TO BE TIED TO THE BELOW GRADE GROUND RING.
7. UNLESS NOTED OTHERWISE, ALL GROUNDING SHALL BE IN ACCORDANCE WITH AT&T'S SSEQ DOCUMENTS 3.018.02.004 "BONDING, GROUNDING AND TRANSIENT PROTECTION FOR CELL SITES", AND 3.018.10.002 "SITE RESISTANCE TO EARTH TESTING". ALL GROUNDING SHALL ALSO COMPLY WITH ALL STATE AND LOCAL CODES, AND THE NATIONAL ELECTRICAL CODE (NEC).
8. UNLESS NOTED OTHERWISE, ALL GROUNDING CONNECTIONS SHALL BE MADE BY AN EXOTHERMIC WELD.
9. RESISTANCE TO EARTH TESTING IS REQUIRED PER AT&T STANDARDS ON ALL NEW SITES.

CARRIER:

CONSULTANT TEAM:

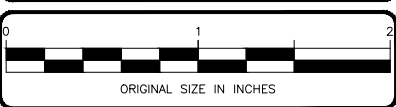
AIROSMITH DEVELOPMENT  
AIROSMITH ENGINEERING  
318 WEST AVE.  
SARATOGA SPRINGS, NY 12866  
CLUSTER #  
ATT NSB NYC 202103

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A	05/20/22	ASW	FOR REVIEW	AJD
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0	07/12/22	BMM	FOR FINALS	ASW



PROJECT INFORMATION:

SITE:  
14652325  
CHESTER II  
  
60 EVAN ROAD  
WARWICK, NY 10990  
ORANGE COUNTY  
WATER TANK

SHEET TITLE:

GROUNDING  
DETAILS

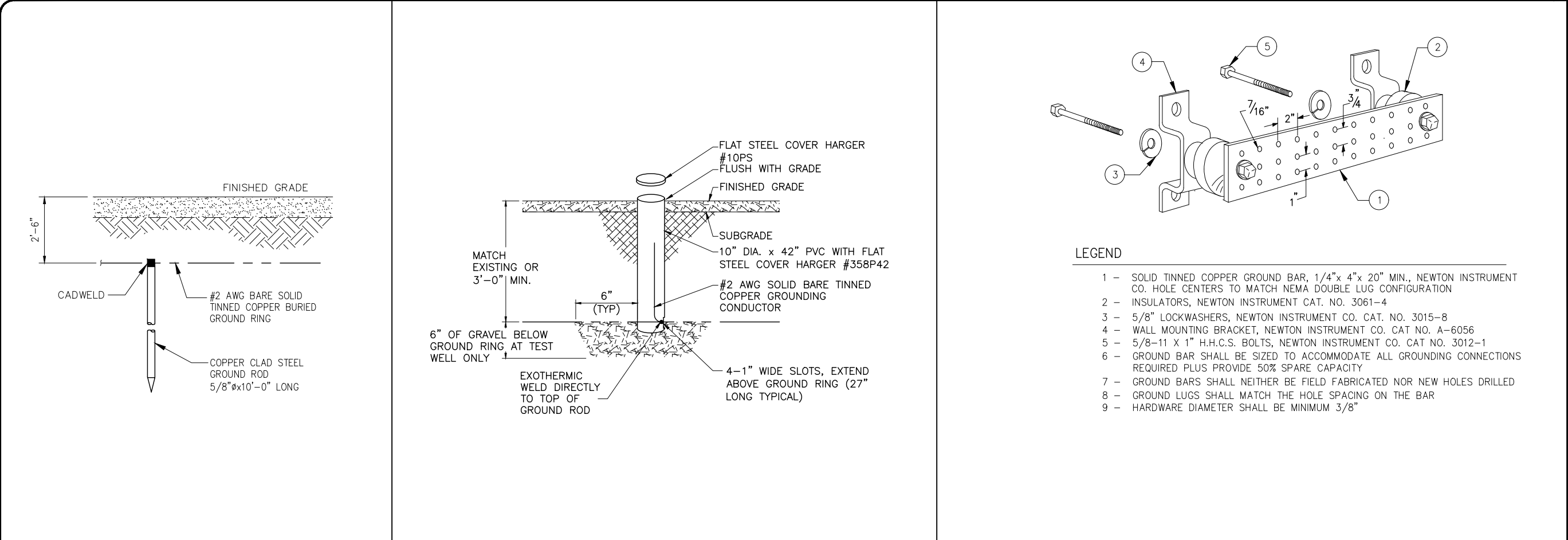
SHEET NUMBER:

G02

REVISION:

0

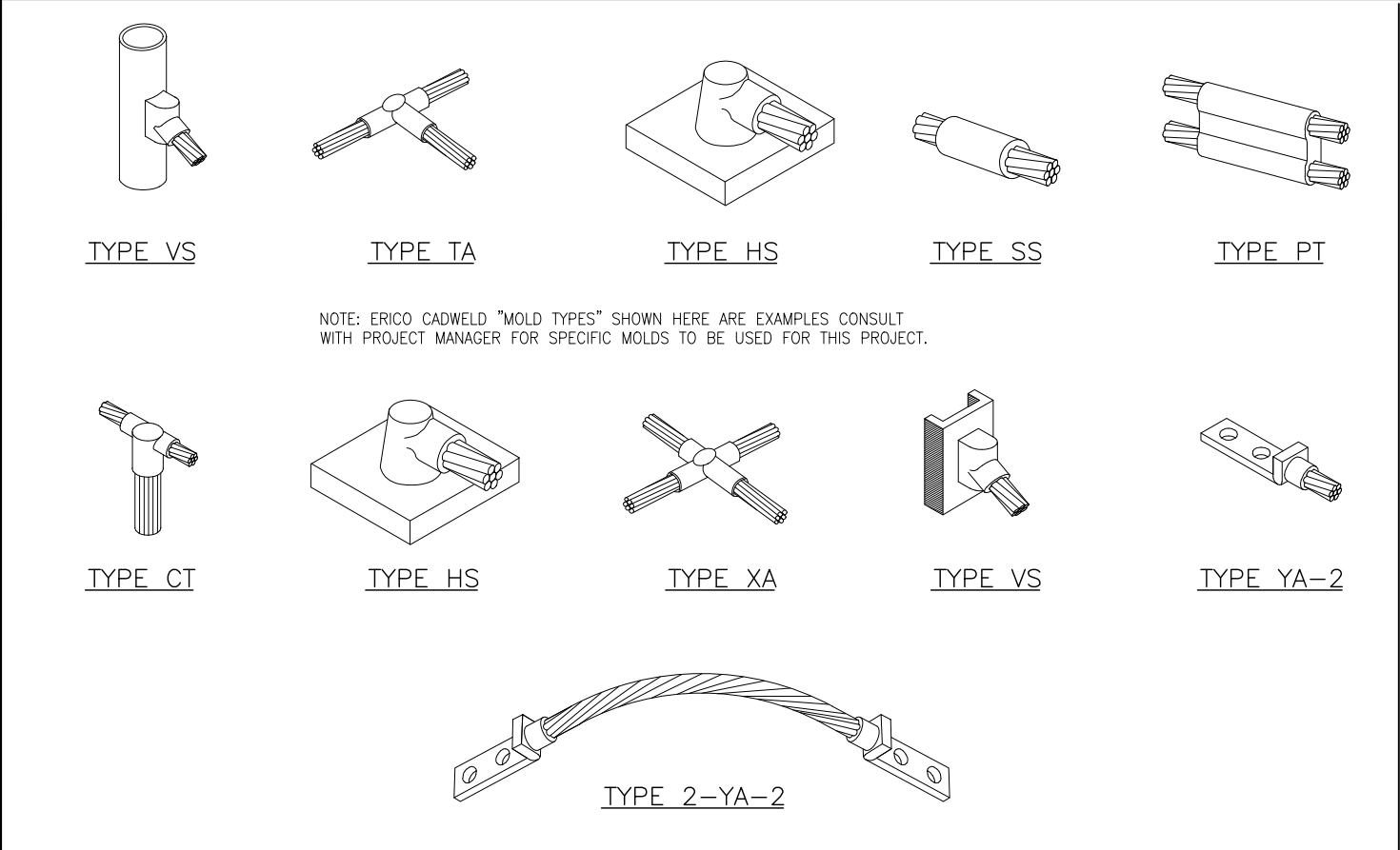




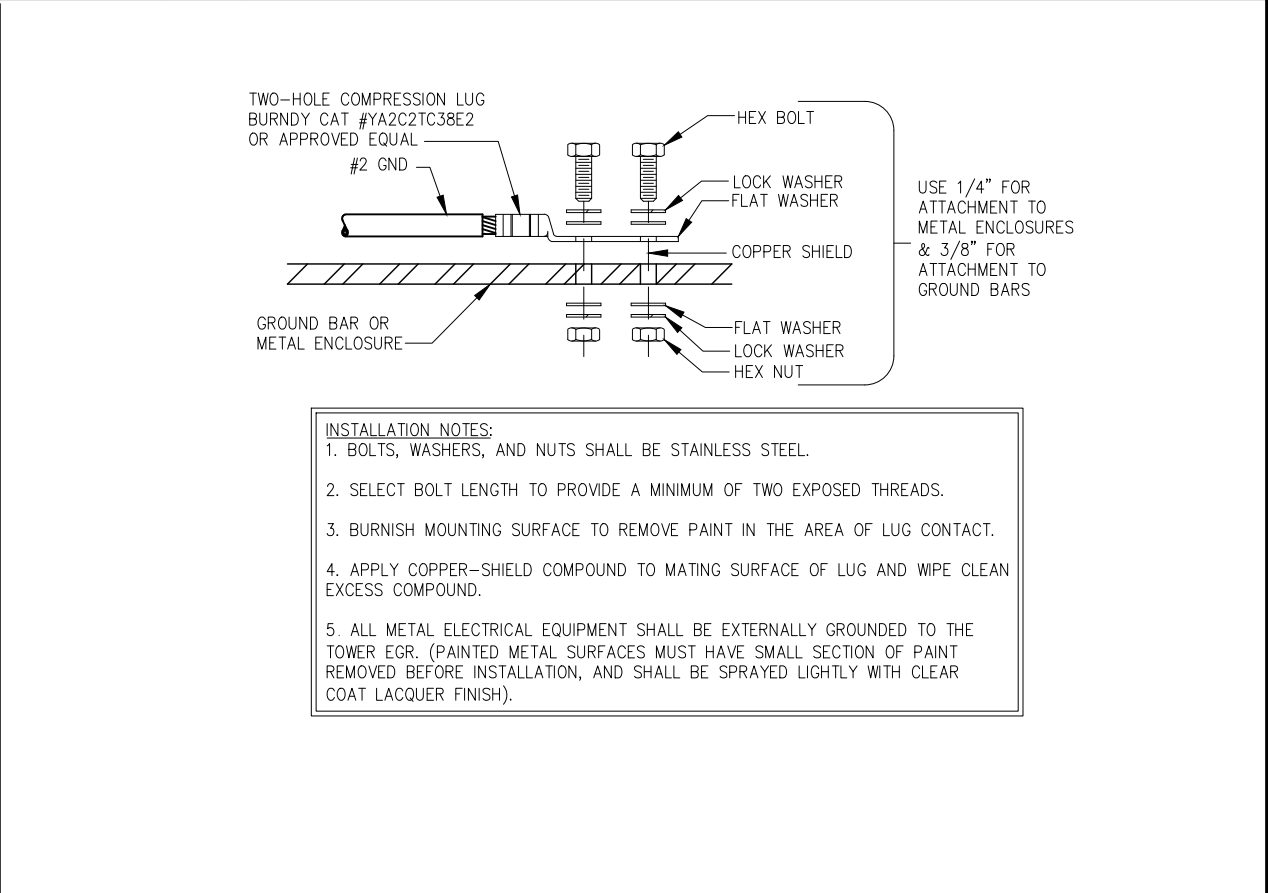
1 GROUND ROD DETAIL SCALE: NOT TO SCALE

2 GROUND TEST WELL SCALE: NOT TO SCALE

3 GROUND BAR SCALE: NOT TO SCALE



4 EXOTHERMIC WELD DETAILS SCALE: NOT TO SCALE



5 GROUND WIRE TO GROUND BAR DETAIL SCALE: NOT TO SCALE

CARRIER: **AT&T**

CONSULTANT TEAM: **AIROSMITH**

AIROSMITH DEVELOPMENT  
AIROSMITH ENGINEERING  
318 WEST AVE.  
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PROFESSIONAL STAMP:

STATE OF NEW YORK  
JOSEPH R. JOHNSTON  
091187  
LICENSED PROFESSIONAL ENGINEER

DRAWINGS ISSUED FOR:

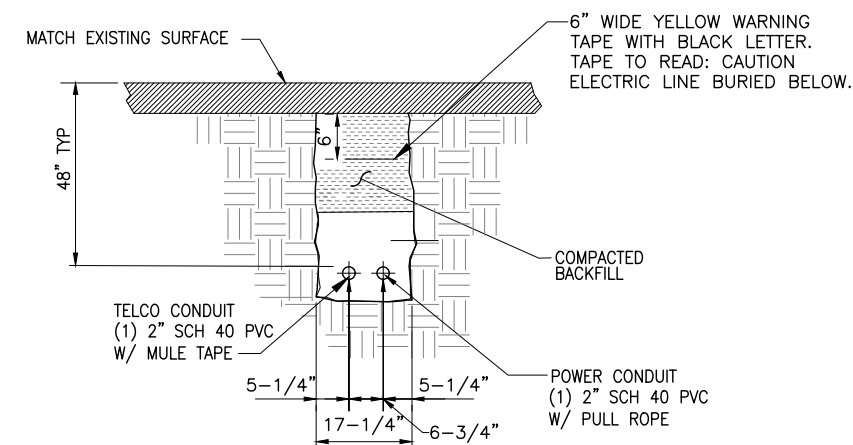
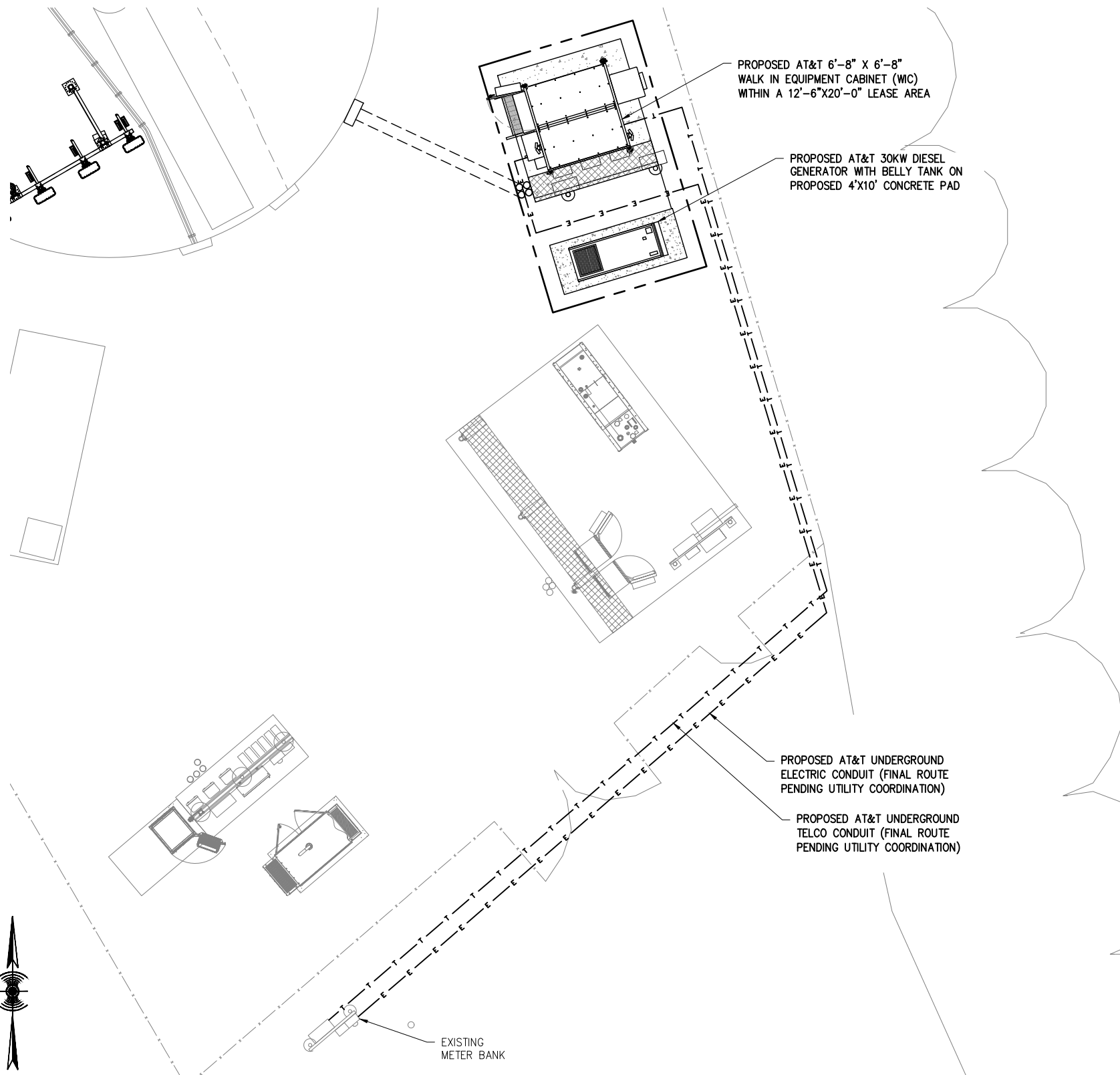
REV.	DATE	DRAWN	DESCRIPTION	QA/QC
A	05/20/22	ASW	FOR REVIEW	AJD
B	06/27/22	BMM	FOR REVIEW	ASW
O	07/12/22	BMM	FOR FINALS	ASW

PROJECT INFORMATION:

SITE:  
14652325  
CHESTER II  
60 EVAN ROAD  
WARWICK, NY 10990  
ORANGE COUNTY  
WATER TANK

SHEET TITLE: **GROUNDING DETAILS**

SHEET NUMBER: **G03** REVISION: **0**



- NOTE:
1. NUMBER AND SIZE OF CONDUITS MAY VARY. REFER TO CONSTRUCTION DRAWINGS FOR CONDUIT SIZE AND LOCATION. CONFIRM DIMENSIONS SHOWN WITH UTILITY COMPANY.
  2. CONTRACTOR TO VERIFY IN FIELD THE LOCATION, SIZE, TYPE, AND DEPTH OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO DIGGING THE SERVICE TRENCH. PROVIDE A MINIMUM OF 18" CLEARANCE BETWEEN PROPOSED UTILITIES AND EXISTING UTILITIES IN THE CASE OF UTILITY LINE CROSSINGS.
  3. UTILIZE SCH 80 CONDUIT OR CONCRETE ENCASE IN ANY AREAS WHERE CONDUIT IS BELOW TRAVELWAY OR CROSSES ANY FENCED COMPOUND ACCESS GATES.



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O	07/12/22	BMM	FOR FINALS	ASW



PROJECT INFORMATION:

SITE:  
14652325  
CHESTER II

60 EVAN ROAD  
WARWICK, NY 10990  
ORANGE COUNTY  
WATER TANK

SHEET TITLE:

UTILITY PLAN AND DETAILS

SHEET NUMBER: E01

REVISION: 0

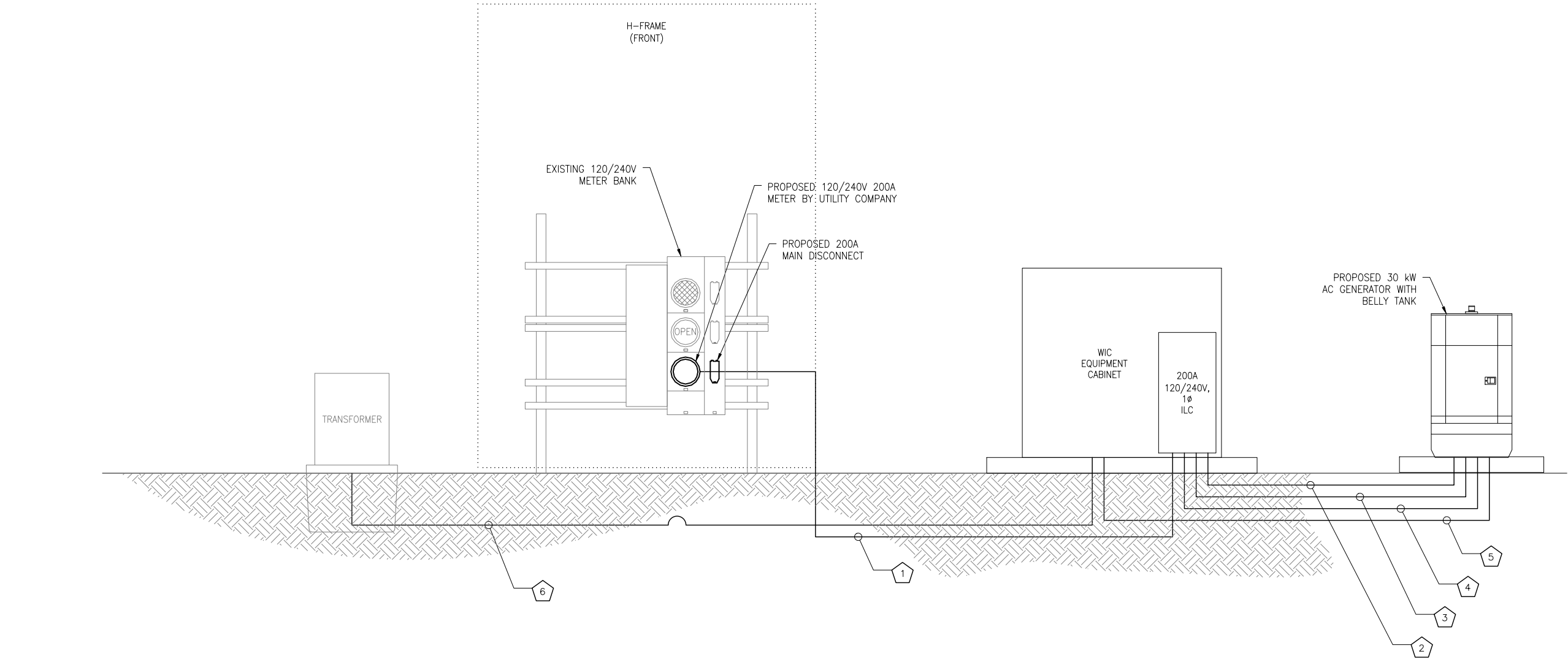
## 1 UTILITY ROUTING PLAN

SCALE: 1" = 20' (11"x17"), 1" = 10' (22"x34")

## 2 UTILITY TRENCH DETAIL

SCALE: NOT TO SCALE





CONDUITS AND CONDUCTORS:

- 1 (3) #3/0 + (1) #2G IN 2" SCH. 40 PVC CONDUIT (TO METER)
- 2 (3) #4 + (1) #6G IN 2" SCH. 40 PVC CONDUIT (TO ATS)
- 3 (2) #10 + (1) #10G IN 2" SCH. 40 PVC CONDUIT (FOR GENERATOR CIRCUITS)
- 4 (2) #12 + (1) #12G IN 3/4" SCH. 40 PVC CONDUIT (CONTROL WIRING)
- 5 (1) 3/4" SCH. 40 PVC CONDUIT AND PULL STRING (ALARM WIRING)
- 6 2" TELCO CONDUIT WITH 1000LB MULE TAPE

1 ONE LINE DIAGRAM

SCALE: NOT TO SCALE



CONSULTANT TEAM:

**AIROSMITH**

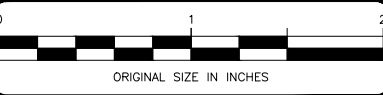
AIROSMITH DEVELOPMENT  
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PROJECT INFORMATION:

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14652325  
CHESTER II  
60 EVAN ROAD  
WARWICK, NY 10990  
ORANGE COUNTY  
WATER TANK

SHEET TITLE:

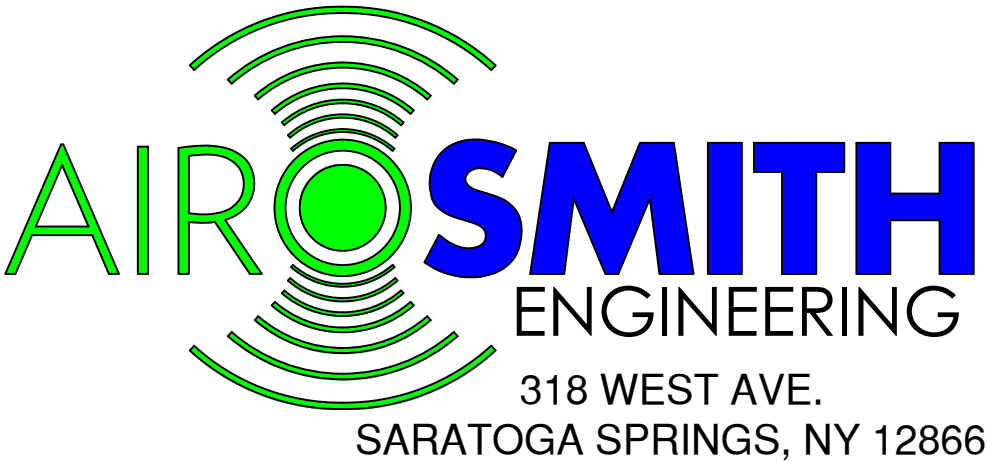
ONE LINE DIAGRAM

SHEET NUMBER: E02

REVISION: 0

DESCRIPTION:

NEW SITE BUILD  
DRAWINGS



SITE NAME:

CHESTER II

NUMBER:

14652325

SITE ADDRESS:

60 EVAN ROAD  
WARWICK, NY 10990

COORDINATES:

LAT: 41° 18' 05.74" N  
LONG: 74° 17' 38.93" W

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CARRIER:



CONSULTANT TEAM:



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AIROSMITH ENGINEERING  
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0	6/30/22	VEB	FOR REVIEW	AV
1	7/12/22	ASW	FOR REVIEW	AV

PROJECT INFORMATION:

SITE:  
14652325  
CHESTER II  
  
60 EVAN RD  
WARWICK, NY 10990  
ORANGE COUNTY  
WATER TANK

SHEET TITLE:

TITLE  
SHEET

SHEET NUMBER:

S01

REVISION:

1



GENERAL NOTES:

1. THESE DOCUMENTS WERE DESIGNED IN ACCORDANCE WITH THE LATEST VERSION OF APPLICABLE LOCAL/STATE/COUNTY/CITY BUILDING CODES, AS WELL AS ANSI/TIA-222 STANDARD, AWWA-D100 STANDARD, NDS, NEC, MSJC, AND/OR THE LATEST VERSION OF THE INTERNATIONAL BUILDING CODE, UNLESS NOTED OTHERWISE IN THE CORRESPONDING STRUCTURAL REPORT.
2. ALL CONSTRUCTION METHODS SHOULD FOLLOW STANDARDS OF GOOD CONSTRUCTION PRACTICE.
3. ALL WORK INDICATED ON THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN SIMILAR CONSTRUCTION.
4. ALL NEW WORK SHALL ACCOMMODATE EXISTING CONDITIONS. IF OBSTRUCTIONS ARE FOUND, CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD PRIOR TO CONTINUING WORK.
5. ANY CHANGES OR ADDITIONS MUST CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS, AND SHOULD BE SIMILAR TO THOSE SHOWN. ALL CHANGES OR ADDITIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION AND/OR CONSTRUCTION.
6. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND EXECUTION OF ALL MISCELLANEOUS SHORING, BRACING, TEMPORARY SUPPORTS, ETC. NECESSARY TO PROVIDE A COMPLETE AND STABLE STRUCTURE DURING CONSTRUCTION. TIA-1019-A-2011 IS AN APPROPRIATE REFERENCE FOR THOSE DESIGNS MEETING TIA STANDARDS. THE ENGINEER OF RECORD MAY PROVIDE FORMAL RIGGING PLANS AT THE REQUEST AND EXPENSE OF THE CONTRACTOR.
7. INSTALLATION SHALL NOT INTERFERE NOR DENY ADEQUATE ACCESS TO OR FROM ANY EXISTING OR PROPOSED OPERATIONAL AND SAFETY EQUIPMENT.
8. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO ANY FABRICATION. CONTACT AIROSMITH ENGINEERING IF ANY DISCREPANCIES EXIST.

STEEL CONSTRUCTION NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO THE AISC MANUAL OF STEEL CONSTRUCTION 15TH EDITION, FOR THE DESIGN AND FABRICATION OF STEEL COMPONENTS.
2. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES, AND GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS' RECOMMENDATIONS.
3. ALL FIELD DRILLED HOLES TO BE USED FOR FIELD BOLTING INSTALLATION SHALL BE STANDARD HOLES, AS DEFINED BY AISC, UNLESS NOTED OTHERWISE.
4. ALL EXTERIOR STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123.
5. ALL STEEL MEMBERS AND CONNECTIONS SHALL MEET THE FOLLOWING GRADES:
  - ANGLES, CHANNELS, PLATES AND BARS TO BE A36.  $F_y=36$  KSI, U.N.O.
  - W SHAPES TO BE A992.  $F_y=50$  KSI, U.N.O.
  - RECTANGULAR HSS TO BE A500, GRADE B.  $F_y=46$  KSI, U.N.O.
  - ROUND HSS TO BE A500, GRADE B.  $F_y=42$  KSI, U.N.O.
  - STEEL PIPE TO BE A53, GRADE B.  $F_y=35$  KSI, U.N.O.
  - BOLTS TO BE A325.  $F_u=120$  KSI, U.N.O.
  - U-BOLTS AND LAG SCREWS TO BE A307 GR A.  $F_u=60$  KSI, U.N.O.
6. ALL WELDING SHALL BE DONE USING E70XX ELECTRODES, U.N.O.
7. ALL WELDING SHALL CONFORM TO AISC AND AWS D1.1 LATEST EDITION.
8. ALL HILTI ANCHORS TO BE CARBON STEEL, U.N.O.
  - MECHANICAL ANCHORS: KWIK BOLT-TZ, U.N.O.
  - CMU BLOCK ANCHORS: ADHESIVE - HY270, U.N.O.
  - CONCRETE ANCHORS: ADHESIVE - HY150, U.N.O.
  - CONCRETE REBAR: ADHESIVE - RE500, U.N.O.
9. ALL STUDS TO BE NELSON CAPACITOR DISCHARGE 1/4"-20 LOW CARBON STEEL COPPER-FLASH AT 55 KSI ULT/50 KSI YIELD, U.N.O.
10. BOLTS SHALL BE TIGHTENED TO A "SNUG TIGHT" CONDITION AS DEFINED BY AISC.
11. MINIMUM EDGE DISTANCES SHALL CONFORM TO AISC TABLE J3.4.
12. REMOVAL/REPLACEMENT OF STRUCTURAL MEMBERS SHALL BE DONE ONE MEMBER AT A TIME. CONTRACTOR IS RESPONSIBLE FOR ENSURING THE STRUCTURAL INTEGRITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION.

CONCRETE CONSTRUCTION NOTES:

1. CONCRETE TO BE 4000 PSI @ 28 DAYS. REINFORCING BAR TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. CONCRETE INSTALLATION TO CONFORM TO ACI-318 BUILDING REQUIREMENTS FOR REINFORCED CONCRETE. ALL CONCRETE TO BE PLACED AGAINST UNDISTURBED EARTH FREE OF WATER AND ALL FOREIGN OBJECTS AND MATERIALS. A MINIMUM OF THREE INCHES OF CONCRETE SHALL COVER ALL REINFORCEMENT. WELDING OF REBAR IS NOT PERMITTED.
2. EXISTING CONCRETE SURFACES THAT ARE TO BE IN CONTACT WITH NEW PROPOSED CONCRETE SHOULD BE WIRE BRUSHED CLEAN AND TREATED WITH APPROPRIATE MECHANICAL SCRATCH COAT AND REPAIR MATERIALS OR APPROPRIATE CHEMICAL METHODS SUCH AS THE APPLICATION OF A BONDING AGENT, EX. SAKRETE OR EQUIVALENT, TO ENSURE A QUALITY BOND BETWEEN EXISTING AND PROPOSED CONCRETE SURFACES.

FIBER REINFORCED POLYMER (FRP) NOTES:

1. FRP PLATES, SHAPES, BOLTS AND NUTS (STUD/NUT ASSEMBLIES) SHALL CONFORM TO ASTM D638, 695, 790. PLATES AND SHAPES TO BE  $F_y = 5.35$  KSI LW (SAFETY FACTOR OF 8), .945 KSI CW (SAFETY FACTOR OF 8) MIN.
2. IF FIELD FABRICATION IS REQUIRED, ALL CUT EDGES AND DRILLED HOLES TO BE SEALED USING VINYL ESTER SEALING KIT SUPPLIED BY THE MANUFACTURER.
3. ALL FASTENERS TO BE 1/2" DIA FRP THREADED ROD WITH FIBER REINFORCED THERMOPLASTIC NUT, SPACED AT 12 INCHES ON CENTER MAXIMUM, U.N.O., FOR PANELS AND AS DESIGNED FOR STRUCTURAL MEMBERS.
4. THE COLOR AND SURFACE PATTERN OF EXPOSED FRP PANELS SHALL MATCH THE EXTERIOR OF THE EXISTING BUILDING, U.N.O.
5. STUD/NUT ASSEMBLIES SHOULD BE LUBRICATED FOR INSTALLATION
6. ENSURE BEARING SURFACES OF THE NUTS ARE PARALLEL TO THE SURFACES BEING FASTENED.
7. TORQUE BOLTS ACCORDING TO THE FOLLOWING TABLE:

INSTALLATION TORQUE TABLE		
SIZE	ULTIMATE TORQUE STRENGTH	RECOMMENDED MAXIMUM INSTALLATION TORQUE
3/8-16 UNC	8 FT-LBS	4 FT-LBS
1/2-13 UNC	18 FT-LBS	8 FT-LBS
5/8-11 UNC	35 FT-LBS	16 FT-LBS
3/4-10 UNC	50 FT-LBS	24 FT-LBS
1-8 UNC	110 FT-LBS	50 FT-LBS

8. WHEN TIGHTENING FRP STUD/NUT ASSEMBLIES, WRENCHES MUST MAKE FULL CONTACT WITH ALL NUT EDGES. A STANDARD SIX POINT SOCKET IS RECOMMENDED.
9. STUD/NUT ASSEMBLIES SHOULD BE BONDED BY APPLYING BONDING AGENT TO ENTIRE NUT AND EXPOSED STUD.
10. ALL FRP MATERIALS TO BE PROVIDED BY FIBERGRATE COMPOSITE STRUCTURES, DALLAS TX, OR APPROVED EQUAL.
11. ALL FRP SHAPES TO BE DYNAFORM PULTRUDED STRUCTURAL SHAPES.
12. ALL FRP PLATES TO BE FIBERPLATE MOLDED FRP PLATE.
13. ALL FRP PANELS TO BE FIBERPLATE CLADDING PANEL.
14. EACH FRP PANEL TO BE IDENTIFIED WITH LARR#25536 AND FIBERGRATE COMPOSITE STRUCTURAL LABEL.
15. FRP MATERIAL TO BE CLASSIFIED AS CC1 OR BETTER, AND HAVE MAXIMUM FLAME SPREAD OF 50.
16. ALL DESIGN AND CONSTRUCTION TO BE COMPLETED IN ACCORDANCE WITH LOS ANGELES RESEARCH REPORT RR25536, DATED FEBRUARY 1, 2016.
17. SPECIAL INSPECTIONS MUST BE PROVIDED FOR ALL FRP INSTALLMENTS. SEE SPECIAL INSPECTION SECTION, THIS SHEET.

RATIO OF EDGE DISTANCE TO FRP FASTENER DIAMETER		
	RANGE	RECOMMENDED
EDGE DISTANCE - CL* BOLT TO END	2.0-4.0	3.0
EDGE DISTANCE - CL* BOLT TO SIDE	1.5-3.5	2.5
BOLT PITCH - CL* TO CL*	4.0-5.0	5.0

WOOD CONSTRUCTION NOTES:

1. ALL EXISTING WOOD SHAPES ARE ASSUMED TO BE DOUGLAS FIR-LARCH WITH A REFERENCE DESIGN BENDING VALUE OF 1000 PSI MIN.
2. ALL PROPOSED WOOD SHAPES ARE TO BE DOUGLAS FIR-LARCH WITH A REFERENCE DESIGN BENDING VALUE OF 1000 PSI MIN. U.N.O.
3. ALL EXISTING AND PROPOSED GLUED LAMINATED TIMBERS ARE TO BE 24F-1.8C DOUGLAS FIR BALANCED WITH A REFERENCE DESIGN BENDING VALUE OF 2400 PSI MIN. U.N.O.

MASONRY CONSTRUCTION NOTES:

1. ALL BRICK TO BE 1500 PSI MIN. REINFORCING BAR (IF APPLICABLE) TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. ALL MORTAR TO BE 2000 PSI MIN.
  - FOR INTERIOR/ABOVE GRADE APPLICATIONS TYPE N MORTAR HAVING MINIMUM MODULUS OF RUPTURE OF 100 PSI SHALL BE USED. FOR EXTERIOR/BELOW GRADE APPLICATIONS TYPE M OR S MORTAR HAVING A MINIMUM MODULUS OF RUPTURE OF 133 PSI.
  - BRICK AND MORTAR INSTALLATION TO CONFORM TO MSJC BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.
2. ALL CMU TO BE 1500 PSI MIN. REINFORCING BAR (IF APPLICABLE) TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. ALL MORTAR TO BE 2000 PSI MIN.
  - FOR INTERIOR/ABOVE GRADE APPLICATIONS, TYPE N MORTAR HAVING MINIMUM MODULUS OF RUPTURE OF 64 PSI SHALL BE USED FOR UNGROUTED BLOCKS, AND 158 PSI FOR FULLY GROUTED BLOCKS.
  - FOR EXTERIOR/BELOW GRADE APPLICATIONS TYPE M OR S MORTAR HAVING A MINIMUM MODULUS OF RUPTURE OF 84 PSI SHALL BE USED FOR UNGROUTED BLOCKS, AND 163 PSI FOR FULLY GROUTED BLOCKS.
  - BRICK AND MORTAR INSTALLATION TO CONFORM TO MSJC BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.

POST-INSTALLED ANCHOR NOTES:

1. WHEN USING HILTI ADHESIVE ANCHORS (HY-270 OR HY-70) IN WALLS LESS THAN 13" THICK, AN ON-SITE TENSION TEST SHALL BE PERFORMED TO VERIFY THAT THE CAPACITY OF THE ANCHOR MEETS THE JOBSITE REQUIREMENTS FOR LOAD CAPACITY.

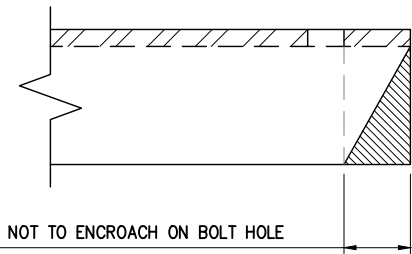
TOWER PLUMB & TENSION NOTES:

1. PLUMB AND TENSION TOWER UPON COMPLETION OF STRUCTURAL MODIFICATIONS DETAILED IN THESE DRAWINGS.
2. RETENSIONING OF EXISTING GUY WIRES SHALL BE PERFORMED AT A TIME WHEN THE WIND VELOCITY IS LESS THAN 10 MPH AT GROUND LEVEL AND WITH NO ICE ON THE STRUCTURE AND GUY WIRES.
3. PLUMB THE TOWER WHILE RETENSIONING THE EXISTING GUY WIRES. THE HORIZONTAL DISTANCE BETWEEN THE VERTICAL CENTERLINES AT ANY TWO ELEVATIONS SHALL NOT EXCEED 0.25% OF THE VERTICAL DISTANCE BETWEEN TWO ELEVATIONS FOR LATTICED STRUCTURES.
4. THE TWIST BETWEEN ANY TWO ELEVATIONS THROUGHOUT THE HEIGHT OF A LATTICE STRUCTURE SHALL NOT EXCEED 0.5 DEGREES IN 10 FEET. THE MAXIMUM TWIST OVER THE LATTICE STRUCTURE HEIGHT SHALL NOT EXCEED 5 DEGREES.

SPECIAL INSPECTIONS NOTES:

1. A QUALIFIED INDEPENDENT TESTING LABORATORY, EMPLOYED BY THE OWNER AND APPROVED BY THE JURISDICTION, SHALL PERFORM INSPECTION AND TESTING IN ACCORDANCE WITH THE THE GOVERNING BUILDING CODE, APPLICABLE SECTION(S) AS REQUIRED BY PROJECT SPECIFICATIONS FOR THE FOLLOWING CONSTRUCTION WORK:
  - a. STRUCTURAL WELDING (CONTINUOUS INSPECTION OF FIELD WELDS ONLY).
  - b. HIGH STRENGTH BOLTS (PERIODIC INSPECTION OF A325 AND/OR A490 BOLTS) TO BE TIGHTENED PER "TURN-OF-THE-NUT" METHOD.
  - c. MECHANICAL AND EPOXIED ANCHORAGES.
  - d. FIBER REINFORCED POLYMER.
    - THE SPECIAL INSPECTOR MUST VERIFY THAT THE FRP MATERIAL SPECIFIED ON THE APPROVED DESIGN DOCUMENTS IS BEING INSTALLED.
    - THE SPECIAL INSPECTOR MUST VERIFY THAT ALL CUT EDGES AND DRILLED HOLES ARE PROPERLY SEALED USING A VINYL ESTER SEALING KIT SUPPLIED BY THE MANUFACTURER.
    - THE SPECIAL INSPECTOR MUST VERIFY THAT THE STRUCTURE IS BUILT IN ACCORDANCE WITH THE APPROVED DESIGN DOCUMENTS.
2. THE INSPECTION AGENCY SHALL SUBMIT INSPECTION AND TEST REPORTS TO THE BUILDING DEPARTMENT, THE ENGINEER OF RECORD, AND THE OWNER UNLESS THE FABRICATOR IS APPROVED BY THE BUILDING OFFICIAL TO PERFORM WORK WITHOUT THE SPECIAL INSPECTIONS.

MAXIMUM ALLOWABLE ANGLE CLIP



CARRIER:



CONSULTANT TEAM:



AIROSMITH DEVELOPMENT  
AIROSMITH ENGINEERING  
318 WEST AVE.  
SARATOGA SPRINGS, NY 12866  
CLUSTER #  
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1	7/12/22	ASW	FOR REVIEW	AV

PROJECT INFORMATION:

SITE:  
14652325  
CHESTER II  
  
60 EVAN RD  
WARWICK, NY 10990  
ORANGE COUNTY  
WATER TANK

SHEET TITLE:

GENERAL  
NOTES

SHEET NUMBER:

S02

REVISION:

1



- NOTES:
1. VARIOUS EXISTING CONDITIONS AND PROPOSED MAY NOT BE SHOWN FOR CLARITY.
  2. ALL DESIGNATED PARTS ARE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS, UNLESS OTHERWISE NOTED.
  3. CONTRACTOR TO FIELD VERIFY REQUIRED LENGTHS OF PROPOSED ANGLES, PIPES & PLATES, AND CUT & DRILL ON SITE AS NECESSARY.

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ORANGE COUNTY  
WATER TANK

SHEET TITLE:

LOCATION  
PLAN

SHEET NUMBER:

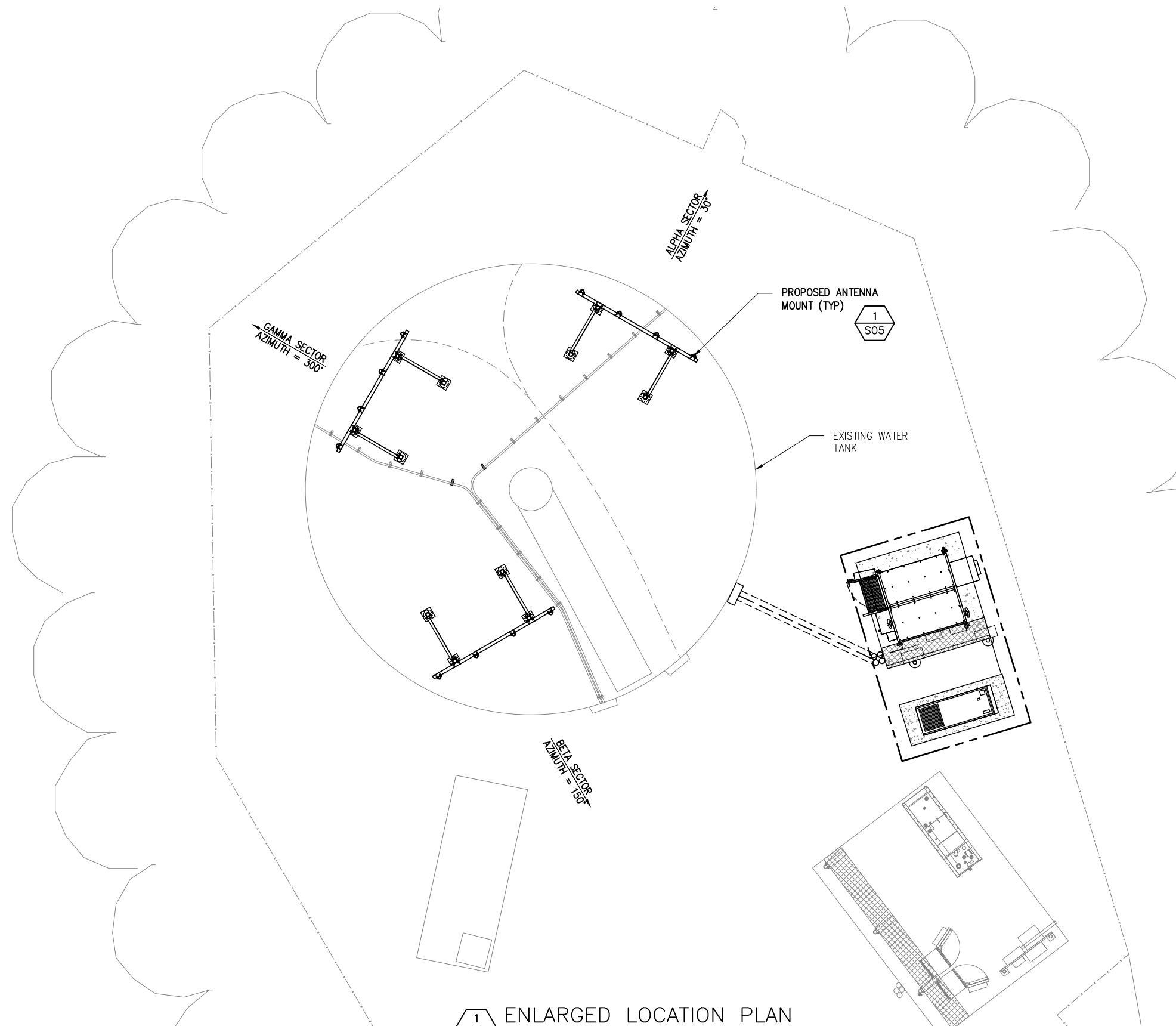
S03

REVISION:

1

1 LOCATION PLAN  
SCALE: NOT TO SCALE





1 ENLARGED LOCATION PLAN  
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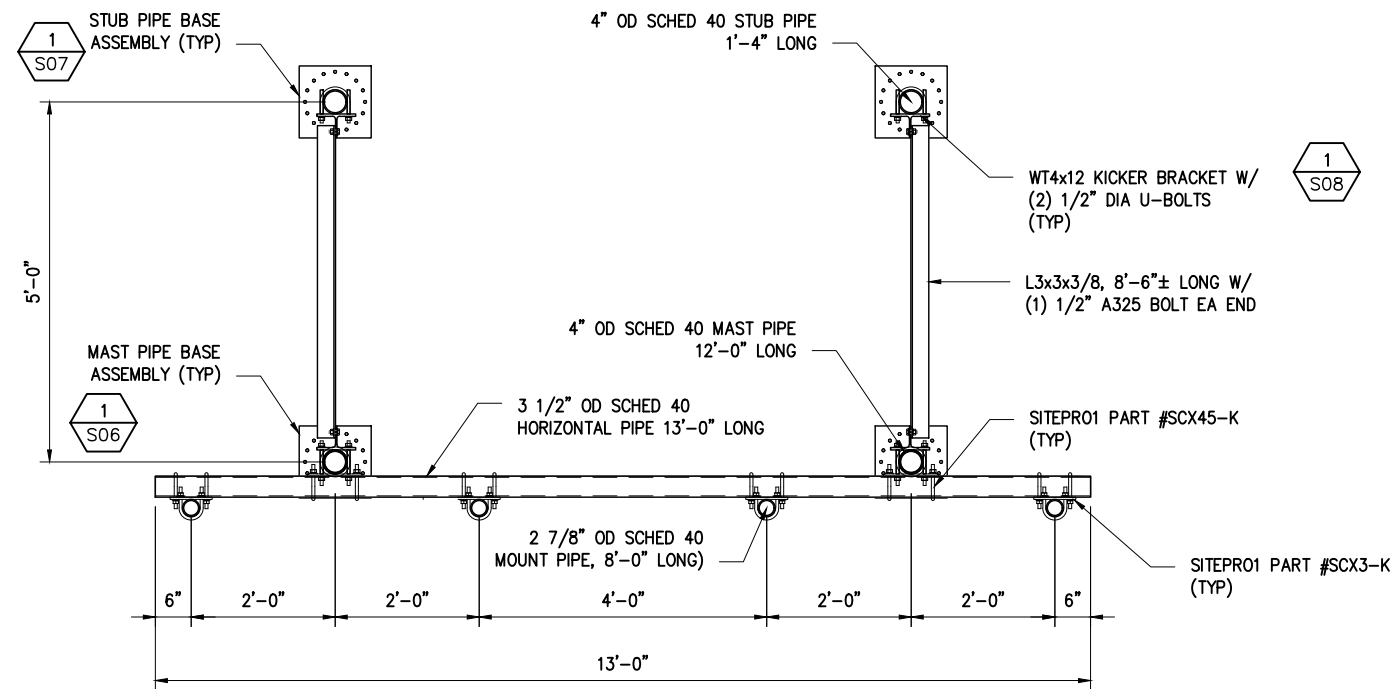
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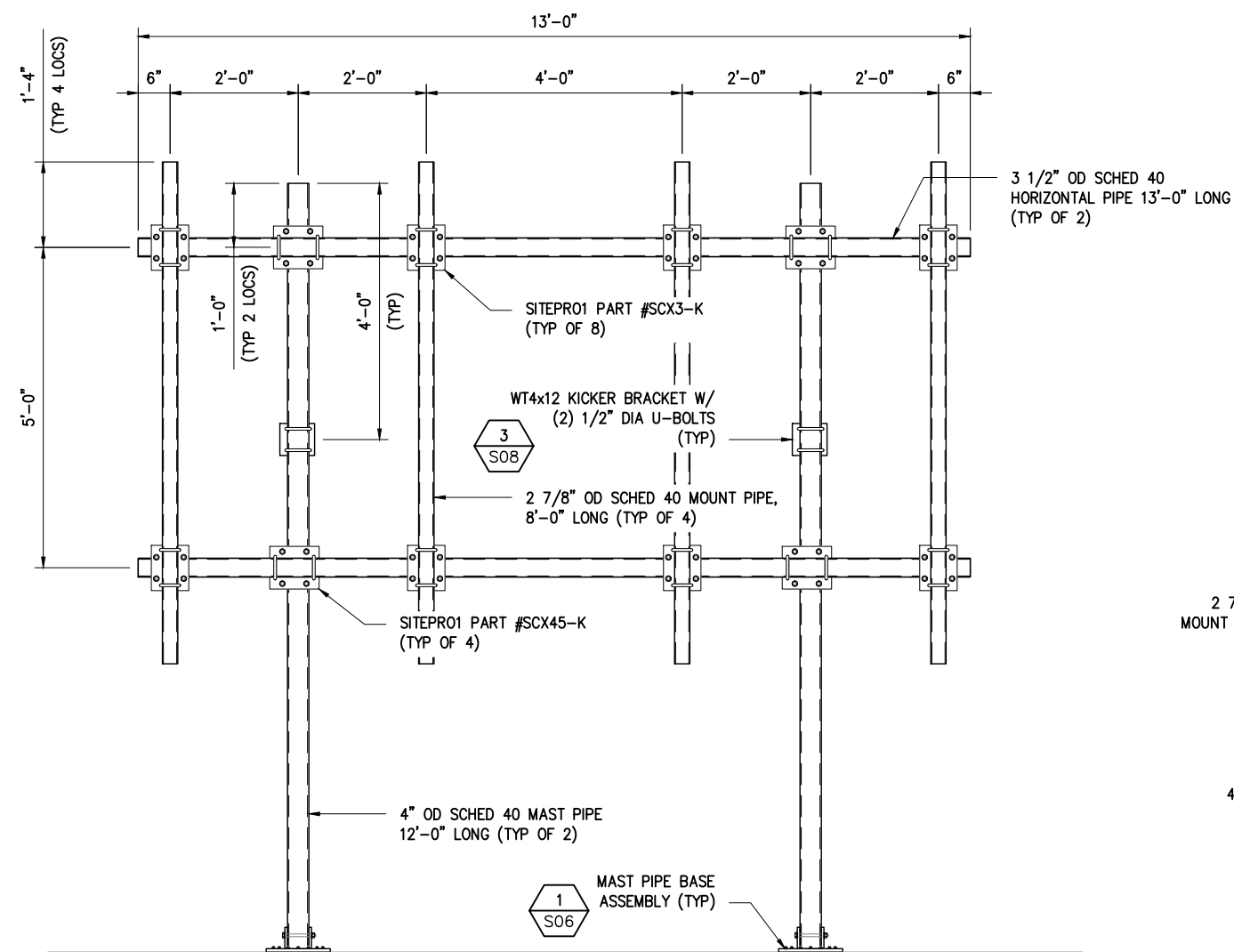
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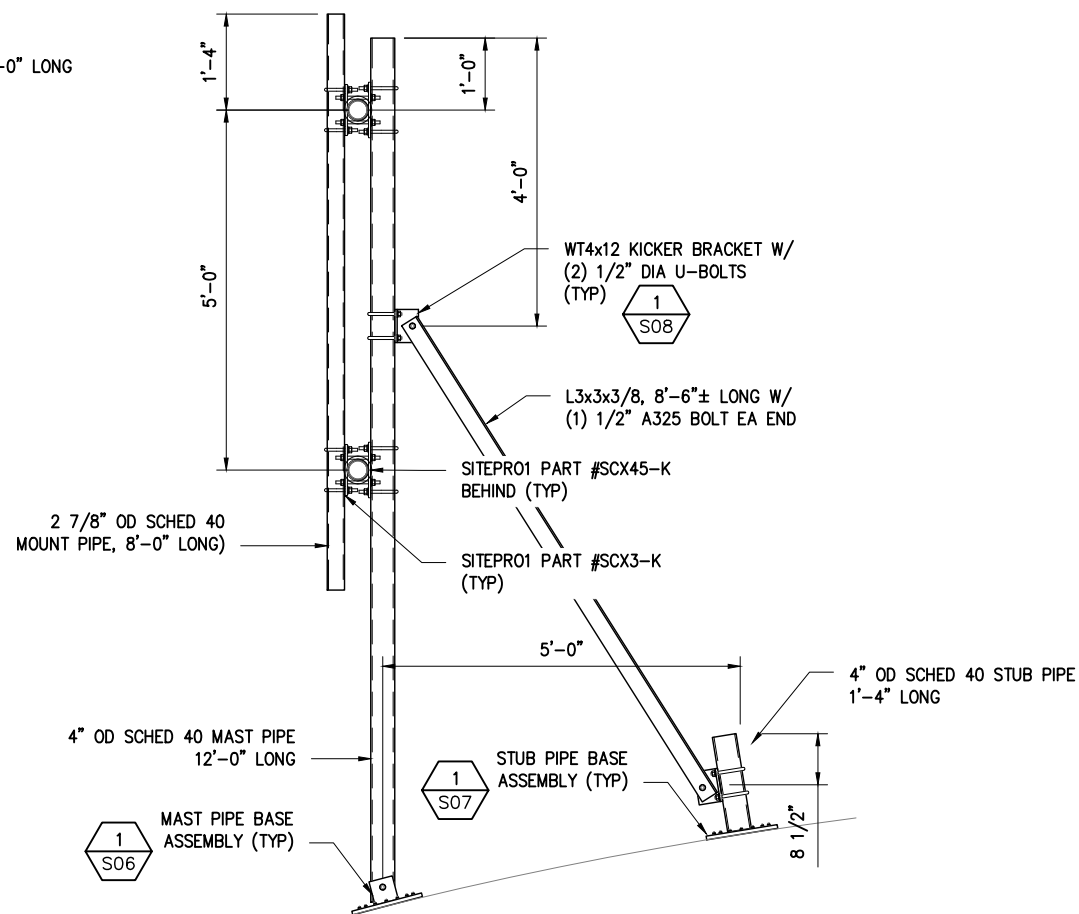
PLAN VIEW



ELEVATION VIEW

1 MOUNT DESIGN

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SIDE VIEW

CARRIER:



CONSULTANT TEAM:



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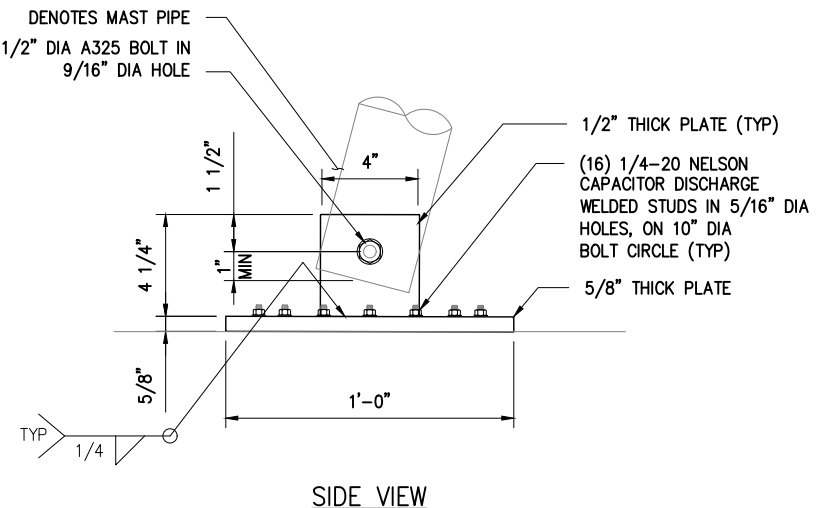
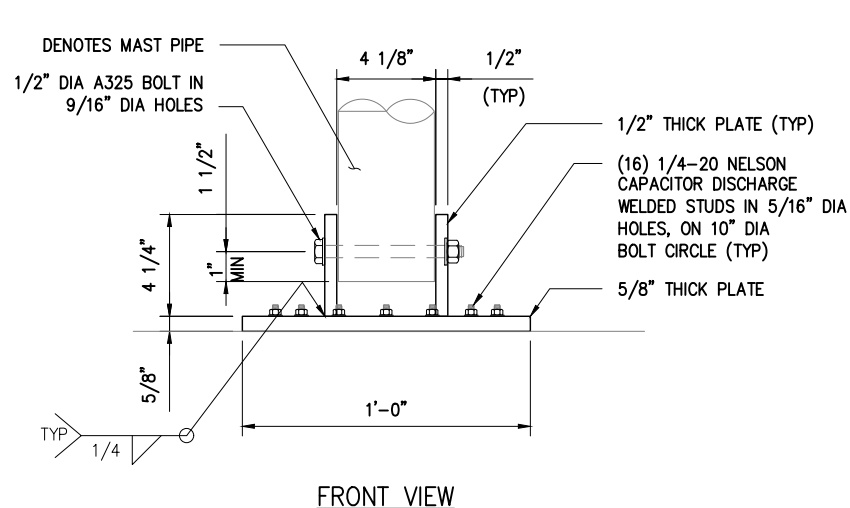
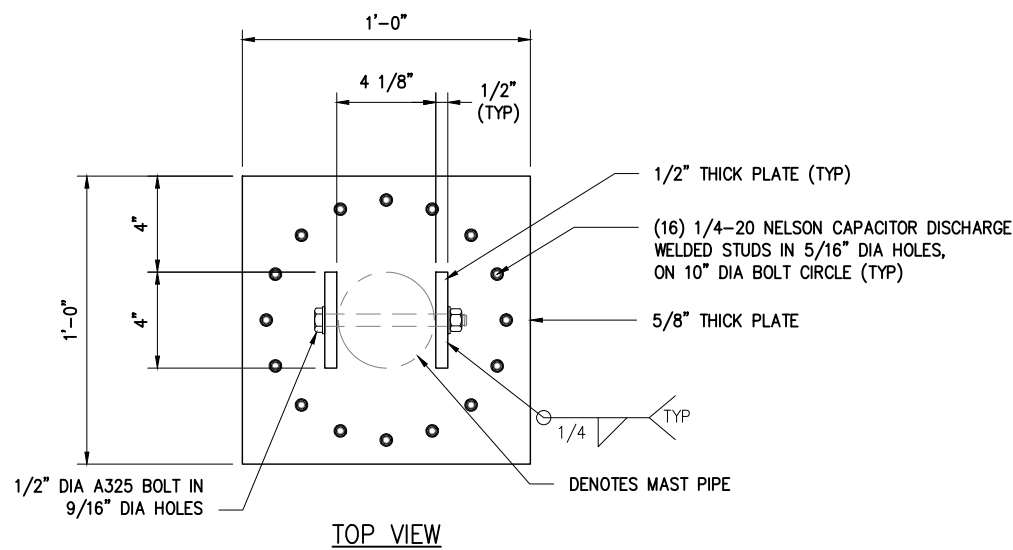
MOUNT  
DESIGN

SHEET NUMBER:

S05

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1 MAST PIPE BASE ASSEMBLY  
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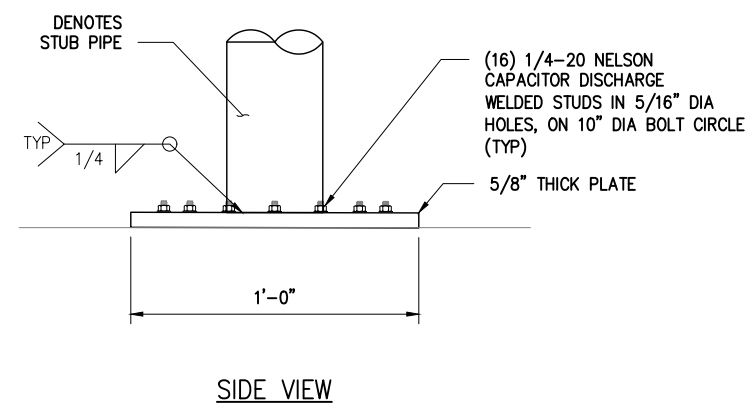
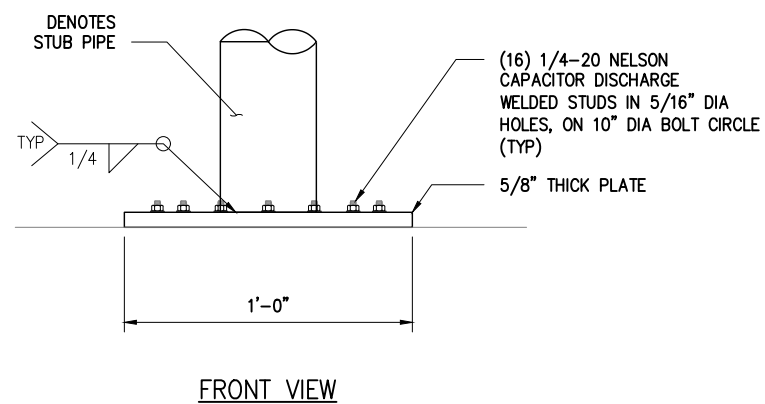
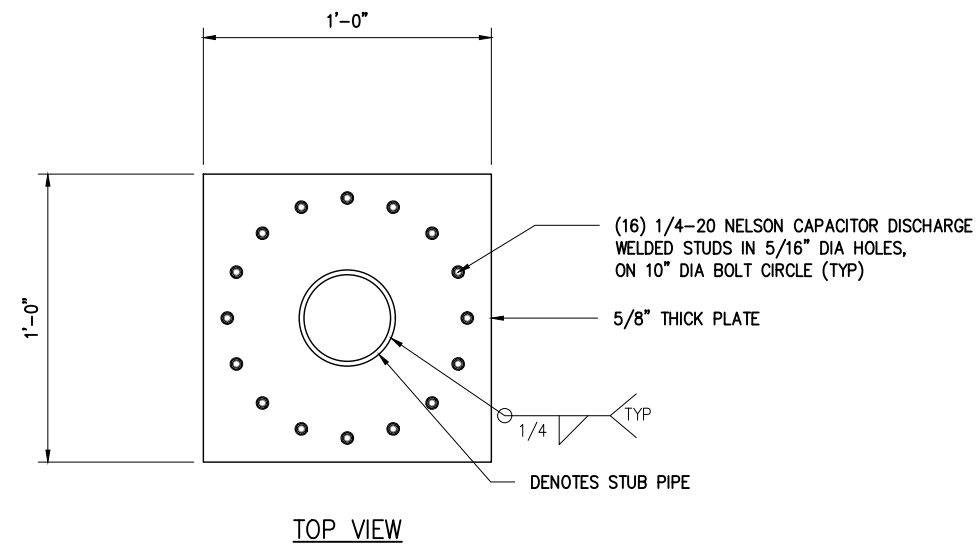
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SHEET TITLE: MAST PIPE  
BASE ASSEMBLY

SHEET NUMBER: S06  
REVISION: 1





1 STUB PIPE BASE ASSEMBLY  
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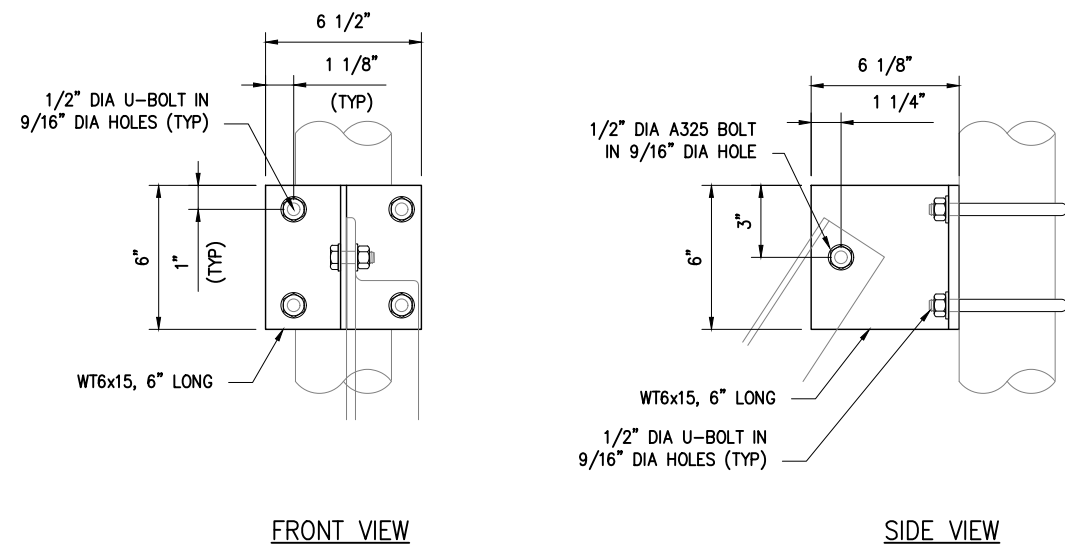
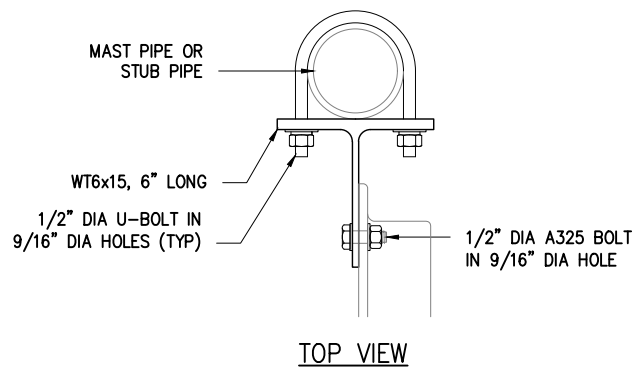
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ORANGE COUNTY  
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SHEET TITLE:

STUB PIPE  
BASE ASSEMBLY

SHEET NUMBER: S07

REVISION: 1



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ORANGE COUNTY

WATER TANK

SHEET TITLE:

KICKER  
BRACKET

SHEET NUMBER: S08

REVISION: 1