



Development Review Committee

1020 East Pioneer Road
Draper, Utah 84020

STAFF REPORT

February 23, 2022

To: Jennifer Jastremsky, Zoning Administrator

Approved

Date

From: Maryann Pickering, AICP, Planner III
(801) 576-6391 or maryann.pickering@draperutah.gov

Re: AT&T Downtown Draper UTL02188 – Permitted Use Permit Request

Application No.: USE-013-2022
Applicant: Cierra House of Smartlink Group on behalf of AT&T
Project Location: Approximately 11901 S. 700 East
Current Zoning: CN (Neighborhood Commercial) Zone
Acreage: Approximately 1.01 acres (approximately 43,995 square feet)
Request: Request for approval of a permitted use permit in the CN zone regarding an existing wireless facility equipment upgrade.

SUMMARY AND BACKGROUND

This application is a request for approval of a Permitted Use Permit for approximately 1.01 acres located on the east side of 700 East, at approximately 11901 S. 700 East (Exhibit B). The property is currently zoned CN. The parcel is owned by Orian W. Collinsworth and Marjory J. McKenna and is more commonly known as the business located on it, Pirate O's. Since the monopole has all necessary permits, and since no additional monopole height is being requested, this request may be approved at staff level and without a public hearing.

The subject monopole was approved by the Draper Planning Commission on June 6, 2002. The application was Conditional Use Permit #02-027. The monopole has been in continuous use since that approval.



ANALYSIS

General Plan and Zoning. The Land Use Map of the General Plan calls for the Neighborhood Commercial land use designation for the subject property (Exhibit C). This category is characterized as follows:

Neighborhood Commercial

LAND USE DESCRIPTION	
CHARACTERISTICS	<ul style="list-style-type: none">• Small-scale commercial land uses that serve local residents in adjacent neighborhoods• Minimal impact in predominantly residential areas• Well-landscaped street frontages• Limited traffic access points and pedestrian access from surrounding residential areas• Don't overcrowd commercial lots; i.e., require adequate setback and landscape buffers• Screened parking and adequate ingress and egress to parking areas• Adequate drainage• Low noise standards
LAND USE MIX	<ul style="list-style-type: none">• Small-scale commercial• Planned retail• Office
COMPATIBLE ZONING	<ul style="list-style-type: none">• Neighborhood Commercial (CN)• Institutional Care (IC)• Commercial Services (CS)
LOCATION	<ul style="list-style-type: none">• Adjacent to neighborhood• Along local roads

The property has been assigned the CN zoning classification (Exhibit D). According to DCMC Section 9-8-020 the purpose of the CN zone is to *“The purpose of the CN zone is to provide areas where convenience buying outlets, having small trade areas, may be established to serve surrounding residential neighborhoods. This zone is intended to promote a combination of retail and service facilities which, in character and scale, meet day to day needs of nearby residents.”* The property is surrounded by CN zoning to the north, RA1 (Residential Agricultural, 40,000 square foot minimum) to the east across the Trax line, CC (Community Commercial) to the south and RM2 (Multiple Family Residential) to the west across 700 East.

Requested Modification. The applicant is proposing an upgrade to the existing equipment within the tower. The application requests that the additions be approved as an eligible facilities request under the Federal Spectrum Act and FCC regulations.



Electronic Code of Federal Regulations

Title 47, Chapter I, Subchapter A, Part 1, Subpart U, §1.6100

(b) Definitions.

- (3) Eligible facilities request. Any request for modification of an existing tower or base station that does not substantially change the physical dimensions of such tower or base station, involving:
 - (i) Collocation of new transmission equipment;
 - (ii) Removal of transmission equipment; or
 - (iii) Replacement of transmission equipment.
- (7) Substantial change. A modification substantially changes the physical dimensions of an eligible support structure if it meets any of the following criteria:
 - (i) For towers other than towers in the public rights-of-way, it increases the height of the tower by more than 10% or by the height of one additional antenna array with separation from the nearest existing antenna not to exceed twenty feet, whichever is greater; for other eligible support structures, it increases the height of the structure by more than 10% or more than ten feet, whichever is greater;
 - (A) Changes in height should be measured from the original support structure in cases where deployments are or will be separated horizontally, such as on buildings' rooftops; in other circumstances, changes in height should be measured from the dimensions of the tower or base station, inclusive of originally approved appurtenances and any modifications that were approved prior to the passage of the Spectrum Act.
 - (ii) For towers other than towers in the public rights-of-way, it involves adding an appurtenance to the body of the tower that would protrude from the edge of the tower more than twenty feet, or more than the width of the tower structure at the level of the appurtenance, whichever is greater; for other eligible support structures, it involves adding an appurtenance to the body of the structure that would protrude from the edge of the structure by more than six feet;
 - (iii) For any eligible support structure, it involves installation of more than the standard number of new equipment cabinets for the technology involved, but not to exceed four cabinets; or, for towers in the public rights-of-way and base stations, it involves installation of any new equipment cabinets on the ground if there are no pre-existing ground cabinets associated with the structure, or else involves installation of ground cabinets that are more than 10% larger in height or overall volume than any other ground cabinets associated with the structure;
 - (iv) It entails any excavation or deployment outside of the current site, except that, for towers other than towers in the public rights-of-way, it entails any excavation or deployment of transmission equipment



outside of the current site by more than 30 feet in any direction. The site boundary from which the 30 feet is measured excludes any access or utility easements currently related to the site;

- (v) It would defeat the concealment elements of the eligible support structure; or
- (vi) It does not comply with conditions associated with the siting approval of the construction or modification of the eligible support structure or base station equipment, provided however that this limitation does not apply to any modification that is non-compliant only in a manner that would not exceed the thresholds identified in §1.40001(b)(7)(i) through (iv).

(c) Review of applications. A State or local government may not deny and shall approve any eligible facilities request for modification of an eligible support structure that does not substantially change the physical dimensions of such structure.

The proposed additions to the tower and ground area for the co-location are not considered to be substantial under the FCC regulations and the request complies with listed standards to be considered as an eligible facilities request. The following is proposed:

- Removing six antennas and installing nine newer technology antennas.
- Removing nine RRHs (remote radio heads) and installing (9) newer technology RRHs.
- Removing six TMAs (tower mounted amplifiers) and installing one DC9 squid, two DC power trunks, and one fiber trunk.

There will be no changes to the height of the structure or ground space. The proposed plan set is included at Exhibit E.

Criteria for Approval. The criteria for review and potential approval of a permitted use request is found in Section 9-5-070(E) of the Draper City Municipal Code. This section depicts the standard of review for such requests as:

- E. Approval Standards: The following standards shall apply to the issuance of a permitted use permit. A permitted use shall:
1. Be allowed as a permitted use in the applicable zone;
 2. Conform to development standards of the applicable zone;
 3. Conform to applicable regulations of general applicability and regulations for specific uses set forth in this title;
 4. Not be located on any land classified as a primary or secondary conservation area or sensitive land area, except as expressly permitted by provisions of this title;
 5. Not be located in any protected area as shown on a natural resource inventory; and

6. Conform to any other applicable requirements of this code.

The proposed co-location and installation of proposed appurtenances conform generally to applicable requirements of the code under 9-5-070(E), and FCC issued regulations.

The criteria for review and approval of an Eligible facilities request are found in the Electronic Code of Federal Regulations Title 47, Chapter I, Subchapter A, Part 1, Subpart U, §1.6100, (c). This section depicts the standard of review for such requests as:

- (c) Review of applications. A State or local government may not deny and shall approve any eligible facilities request for modification of an eligible support structure that does not substantially change the physical dimensions of such structure.

REVIEWS

Planning Division Review. The Draper City Planning Division has completed their review of the Permitted Use Permit submission. Comments from this division, if any, can be found in Exhibit A.

Engineering and Public Works Divisions Review. The Draper City Engineering and Public Works Divisions have completed their reviews of the Permitted Use Permit submission. Comments from these divisions, if any, can be found in Exhibit A.

Fire Division Review. The Draper City Fire Marshal has completed his review of the Permitted Use Permit submission. Comments from this division, if any, can be found in Exhibit A.

Noticing. Notice has been properly issued in the manner outlined in the City and State Codes.

STAFF RECOMMENDATION

Staff finds that the application complies with the DCMC and recommends that the Zoning Administrator review the request and approve the application based on the findings listed below and the criteria for approval, as listed within the staff report.

If the Zoning Administrator decides to approve the request, staff recommends they include the following conditions of approval:

1. That the proposed changes will have no perceptible visual impact.
2. That the proposed changes are compliant with Section 9-41-050(E) of the DCMC.
3. The applicant shall obtain all applicable permits from Draper City Fire and the Building Division for this upgrade.



DEVELOPMENT REVIEW COMMITTEE ACKNOWLEDGEMENT

We, the undersigned, as duly appointed members of the Draper City Development Review Committee, do acknowledge that the application which provides the subject for this staff report has been reviewed by the Committee and has been found to be appropriate for review by the Draper City Planning Commission and/or City Council.

Draper City Public Works Department

Draper City Planning Division

Draper City Fire Department

Draper City Legal Counsel

Draper City Building Division



EXHIBIT A DEPARTMENT REVIEWS

REVIEWS ARE NOT MEANT TO BE AN ALL INCLUSIVE LIST OF POSSIBLE COMMENTS OR CONDITIONS.

Planning Division Review

No additional comments provided.

Engineering and Public Works Divisions Review.

No additional comments provided.

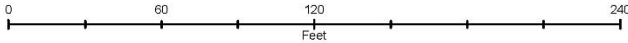
Fire Division Review.

1. 2A-10BC Fire Extinguishers required. The extinguisher needs to be a serviceable type meaning metal head and metal neck. Extinguishers need to be located in a conspicuous location where they will be readily accessible and immediately available for use. Placed on every level of the home. If in cabinet or not the extinguisher or cabinet needs to be mounted so that the top is not more than five (5) feet above the floor.
2. Fire Department Access is required to be maintained. Vehicles cannot park in such a way to impede fire department or emergency vehicle access.
3. Hazardous Material Permit – A Draper City Fire Hazardous Material Permit may need to be obtained. This is for all new and existing installations.

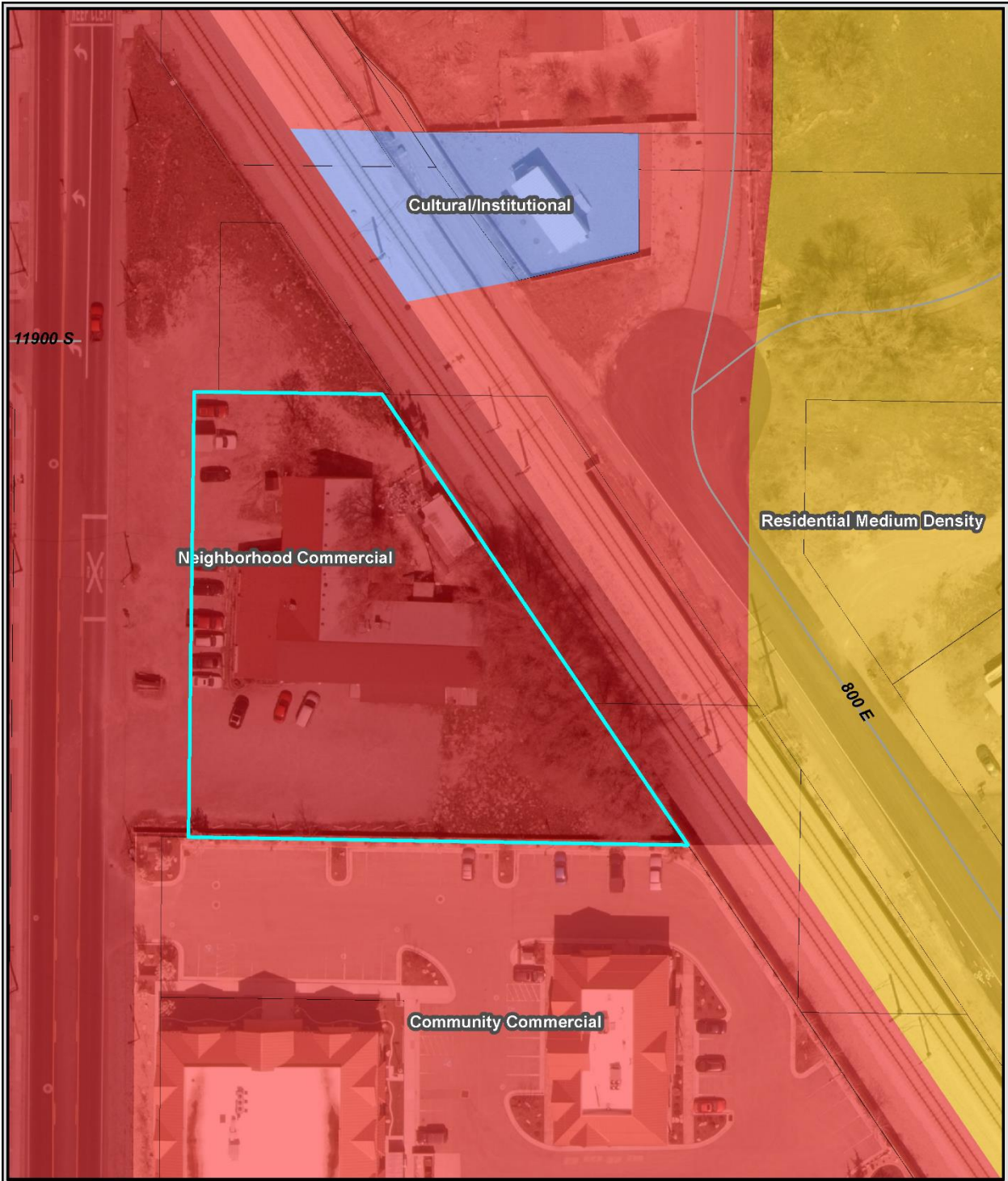
**EXHIBIT B
AERIAL MAP**



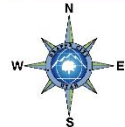
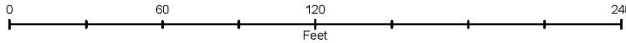
**ATTUTL02188 Permitted Use
11901 S. 700 East**



**EXHIBIT C
LAND USE MAP**



**ATTUTL02188 Permitted Use
11901 S. 700 East**



**EXHIBIT D
ZONING MAP**



**ATTUTL02188 Permitted Use
11901 S. 700 East**

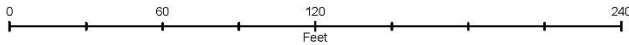


EXHIBIT E
PROPOSED PLANS

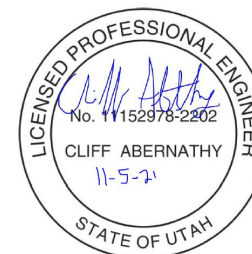


AT&T

UPGRADE: LTE 5G NR/ANTENNA MOD 4TXRX



1825 W. WALNUT HILL LANE, SUITE 120
IRVING, TEXAS 75038
1-855-669-5421



DRAWING SCALES ARE INTENDED FOR 11"x17" SIZE
PRINTED MEDIA ONLY.

SUBMITTALS

REV	DATE	DESCRIPTION	BY
A	09/23/21	90% CD	DHR
B	10/21/21	90% CD	DHR
C	10/25/21	90% CD	SUA
D	11/01/21	100% CD	SUA

SITE INFORMATION

SITE ID:
UTL02188

RFDS NAME:
UTL02188

SITE NAME:
DOWNTOWN DRAPER

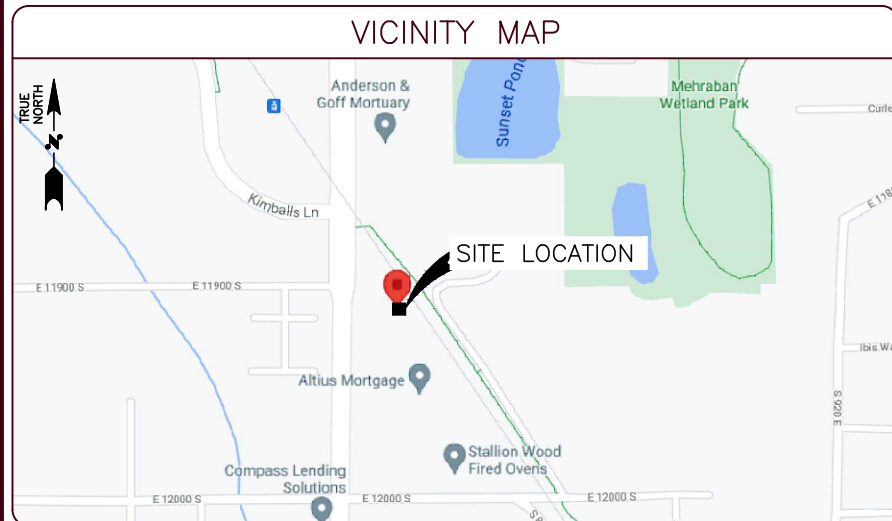
SITE ADDRESS:
11901 SOUTH 700 EAST
DRAPER, UT 84020

SHEET DESCRIPTION

TITLE SHEET

SHEET No.

T-1



DRIVING DIRECTIONS

FROM: 776 N TERMINAL DR, SALT LAKE CITY, UT 84122
TO: 11901 SOUTH 700 EAST, DRAPER, ut 84020

- GET ON I-80 E FROM CROSSBAR AND TERMINAL DR
- SLIGHT RIGHT
- USE THE MIDDLE LANE TO TURN RIGHT TOWARD N 3700 W
- USE THE LEFT LANE TO TURN SLIGHTLY RIGHT ONTO N 3700 W
- CONTINUE ONTO CROSSBAR
- TAKE THE RAMP ONTO TERMINAL DR
- USE THE LEFT 2 LANES TO TAKE THE I-80 E RAMP TO CITY CENTER/OGDEN/PROVO
- KEEP LEFT AT THE Y JUNCTION, FOLLOW SIGNS FOR I-80 E AND MERGE WITH I-80 E
- TAKE I-15 S TO UT-175/W 11400 S. TAKE EXIT 292 FROM I-15 S
- MERGE WITH I-80 E
- USE ANY LANE TO TAKE EXIT 121 TO MERGE WITH I-15 S/I-80 E TOWARD CHEYENNE/LAS VEGAS
- KEEP LEFT TO CONTINUE ON I-15 S.
- KEEP LEFT TO STAY ON I-15 S
- USE THE RIGHT 2 LANES TO TAKE EXIT 292 FOR UT-175 E
- CONTINUE ON W 11400 S. DRIVE TO UT-71 S/S 700 E IN DRAPER

PROJECT INFORMATION

SITE NAME:	DOWNTOWN DRAPER
RFDS NAME:	UTL02188
SITE TYPE:	MONOPOLE
COUNTY:	SALT LAKE
JURISDICTION:	CITY OF DRAPER
ZONING:	CN
LATITUDE:	40.5340700° / N 40° 32' 02.95"
LONGITUDE:	-111.8706100° / W 111° 52' 13.82"
AMSL:	±4505'(ASML)
SITE ADDRESS:	11901 SOUTH 700 EAST DRAPER, UT 84020
APN:	28291510160000
PROPERTY OWNER:	ORIAN W. COLLINSWORTH AND MARJORY J. MCKENNA
TOWER OWNER:	CROWN CASTLE



SITE ID:

UTL02188

FA NUMBER:

10088379

RFDS NAME:

UTL02188

SITE NAME:

DOWNTOWN DRAPER

LTE NEXT CARRIER PACE:

MRUTH045566/MRUTH045631/MRUTH045634
/MRUTH045661/MRUTH046490

SITE ADDRESS:

11901 SOUTH 700 EAST
DRAPER, UT 84020

PROJECT DESCRIPTION

THE PROJECT WILL BE COMPRISED OF
MODIFICATION TO AT&T ANTENNA ARRAY:

- INSTALL (3) (N) C-BAND ANTENNAS N IN TOP LOCATION (1 PER SECTOR)
- INSTALL (3) (N) AEQK C-BAND ANTENNAS IN BOTTOM LOCATION (1 PER SECTOR)
- REMOVE (3) (E) ANDREW SBNHH-1D65C ANTENNAS & REPLACE W/ (3) (N) NNH4-65C-R6-53 ANTENNAS
- REMOVE (3) (E) POWERWAVE 7750 ANTENNAS
- REMOVE (3) (E) RRU RRR2x40W_7L & REPLACE W/ (3) (N) AIRSCALE TRI RRH 4T4R B12/14/29 370W AHLBBA
- REMOVE (3) (E) RRU RRR B25 RRR4X30-4R & REPLACE W/ (3) (N) AIRSCALE DUAL RRH 4T4R B25/66 320W AHFIB
- REMOVE (3) (E) RRU FRIB & REPLACE W/ (3) (N) AIRSCALE RRH 4T4R B5 160W AHCA
- REMOVE (6) (E) TMAS
- INSTALL (1) (N) RAYCAP DC9-48-60-24-EV
- INSTALL (2) (N) DC POWER TRUNKS & (1) (N) FIBER TRUNK

MODIFICATION TO AT&T EQUIPMENT ENCLOSURE:

- REMOVE (1) (E) TYCO GPS2424 +24VDC POWER PLANT
- REMOVE (1) (E) BATTERY RACK
- INSTALL (1) (N) 7100 POWER PLANT
- INSTALL (1) (N) SEISMIC RATED BATTERY RACK
- INSTALL (11) (N) -48v RECTIFIER IN NEW POWER PLANT
- INSTALL (2) ABIA, (1) ASIA, (1) AMIA, (2) ASIK & (4) ABIL
- AC POWER LOAD ESTIMATED @ 198A, EXISTING 200A ELECTRICAL SERVICE IS SUFFICIENT
- NO PERMANENT STANDBY GENERATOR, MINIMUM REQUIRED BATTERY BACKUP TIME IS 4.0 HOURS

BATTERY CHECK:

- REUSE (16) CELLS OF EXISTING MARATHON M12V180FT BATTERIES. INSTALL (4) NEW MARATHON BATTERIES FOR A TOTAL OF (20) CELLS CONFIGURED AS PLACE (12) BATTERIES IN POWER PLANT & (8) BATTERIES ON BATTERY RACK. FIVE BATTERY STRINGS WILL PROVIDE 4.39 HRS OF BATTERY RESERVE CAPACITY

ELECTRICAL PANEL SCHEDULE: SEE PANEL SCHEDULE

HVAC UNITS:

- SITE HAS TWO EXISTING "BARD" 5-TON HVAC UNITS [SUFFICIENT].

PROJECT TEAM

APPLICANT COMPANY: ADDRESS:	AT&T MOBILITY 161 INVERNESS DR. W., 2ND FL. ENGLEWOOD, CO 80112
PROJECT MANAGER PHONE: COMPANY: ADDRESS:	DANIELLE FINLAY 425-919-7445 TRYLON 1825 W. WALNUT HILL LANE, SUITE 120 IRVING, TX 75038
CONSTRUCTION MANAGER PHONE: COMPANY: ADDRESS:	BRYAN SVENONIUS 858-531-5308 BLACK & VEATCH 8965 SOUTH EASTERN AVE, LAS VEGAS, NV 89123
SITE ACQUISITION: PHONE: COMPANY: ADDRESS:	TAMARA SHIVELEY 801-230-4877 SMARTLINK, LLC 1997 ANNAPOLIS EXCHANGE PARKWAY, SUITE 200 ANNAPOLIS, MD 21401
ARCHITECT/ENGINEER PHONE: EMAIL: COMPANY: ADDRESS:	ATTN: KATYA SERAVALLE 1-855-669-5421 KATYA.SERAVALLE@TRYLON.COM TRYLON TSF 1825 W. WALNUT HILL LANE, SUITE 120 IRVING, TX 75038

CODE COMPLIANCE

ALL WORK & MATERIALS SHALL BE PERFORMED & INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES:

- 2018 INTERNATIONAL BUILDING CODE WITH APPENDIX "J"
- 2018 INTERNATIONAL MECHANICAL CODE
- 2015 INTERNATIONAL RESIDENTIAL CODE WITH APPENDIX "E"
- 2017 NATIONAL ELECTRICAL CODE

THIS FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. THIS FACILITY IS NON-OCCUPIABLE AND ACCESSIBLE ONLY TO SERVICE PERSONNEL.

SHEET INDEX

SHEET #	DESCRIPTION	REVISION #
T-1	TITLE SHEET	0
GN-1	GENERAL NOTES	0
A-1	SITE PLAN	0
A-2	ENLARGED SITE PLAN	0
A-3	EXISTING & PROPOSED EQUIPMENT SHELTER PLANS	0
A-4	EXISTING & PROPOSED ANTENNA PLANS	0
A-5	EXISTING & PROPOSED TOWER ELEVATIONS	0
A-6	ANTENNA AND EQUIPMENT SCHEDULE	0
A-7	EQUIPMENT DETAILS	0
A-8	EQUIPMENT DETAILS	0
A-9 - A-12	EQUIPMENT DETAILS	0
E-1	GROUNDING PLAN	0
E-2 & E-3	AC PANEL SCHEDULE & SINGLE LINE DIAGRAM	0
E-4	GROUNDING DETAILS	0

GENERAL NOTES

1. GENERAL REQUIREMENTS

A. PURPOSE AND INTENT

1. THE DRAWING AND SPECIFICATION ARE INTENDED TO BE FULLY EXPLANATORY AND SUPPLEMENTARY, HOWEVER, SHOULD ANYTHING BE SHOWN, INDICATED, OR SPECIFIED ON ONE AND NOT THE OTHER, IT SHALL BE DONE THE SAME AS IF DISCREPANCIES BETWEEN REQUIREMENTS SHOWN IN BOTH, THE MORE STRINGENT REQUIREMENTS SHALL APPLY.

2. THE INTENTION OF THE DOCUMENT IS TO INCLUDE ALL LABOR AND MATERIALS REASONABLY NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK AS STIPULATED IN THE CONTRACT.

A. CONFLICTS

1. VERIFY ALL MEASUREMENTS AT THE SITE BEFORE ORDERING MATERIAL OR DOING ANY WORK, NO EXTRA CHARGE OR COMPENSATION WILL BE ALLOWED DUE TO DIFFERENCES BETWEEN ACTUAL DIMENSIONS OR DIMENSIONS SHOWN ON PLANS SUBMIT NOTICE OF ANY DISCREPANCY IN DIMENSIONS OR OTHERWISE TO AT&T FOR RESOLUTION BEFORE PROCEEDING WITH THE WORK.

2. NO PLEA OF IGNORANCE OF CONDITIONS THAT EXIST, OR OF DIFFICULTIES OR CONDITIONS THAT MAY BE ENCOUNTERED, OR OF ANY OTHER RELEVANT MATTER CONCERNING THE EXECUTION OF THE WORK WILL BE ACCEPTED AS AN EXCUSE FOR ANY FAILURE OR OMISSION ON THE PART OF THE CONTRACTOR TO FULFILL EVERY DETAIL OF ALL THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS GOVERNING THE WORK.

A. CLEANING

1. KEEP THE SITE FREE FROM ACCUMULATION OF WASTE AND RUBBISH CAUSED BY EMPLOYEES AT THE COMPLETION OF THE WORK, REMOVE ALL WASTE AND NON-CONSTRUCTION MATERIAL INCLUDING ALL CONTRACT TOOLS, SCAFFOLDING, AND SURPLUS MATERIAL AND LEAVE SITE CLEAN AND READY FOR USE.

A. CODES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR FOLLOWING ALL LAWS, REGULATIONS, AND RULES PROMULGATED BY FEDERAL STATE AND LOCAL AUTHORITIES WITH JURISDICTION OVER THE SALTIER. THIS RESPONSIBILITY IS IN EFFECT REGARDLESS OF WEATHER THE LAW, ORDINANCE, REGULATION OR RULE IS MENTIONED IN THESE SPECIFICATIONS.

A. LICENSING

1. CONTRACTOR SHALL HAVE AND MAINTAIN A VALID CONTRACTOR'S LICENSE FOR THE LOCATION IN WHICH THE WORK IS TO BE PERFORMED. FOR JURISDICTIONS THAT LICENSE INDIVIDUAL TRADES, THE TRADESMAN OR SUBCONTRACTOR PERFORMING THOSE SHALL BE LICENSED, RESEARCHED AND COMPLY WITH THE LICENSING LAWS, PAY LICENSE FEES, AND SELECT AND INFORM SUBCONTRACTORS REGARDING THESE LAWS.

A. OSHA

1. FOLLOW ALL APPLICABLE RULES AND REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATIONS AND STATE LAWS BASED IN THE FEDERAL OCCUPATION SAFETY AND HEALTH ACT. THESE REGULATIONS INCLUDE, BUT ARE NOT LIMITED TO, REGULATIONS DEALING WITH TOWER CONSTRUCTION AND SAFETY, EXCAVATION AND TRENCHING, AND WORK IN CONFINED SPACES. ENSURE THAT EMPLOYEES AND SUBCONTRACTORS WEAR HARD HATS AT ALL TIMES DURING CONSTRUCTION.

A. PHOTOS

1. PROVIDE PHOTOGRAPHIC EVIDENCE OF ALL FOUNDATION INSTALLATIONS, GROUNDING, AND TRENCHING AFTER PLACEMENT OF UTILITIES PRIOR TO BACKFILL.

A. BUILDING PERMITS

1. CONTRACTOR WILL SUBMIT CONSTRUCTION DOCUMENTS TO THE JURISDICTIONAL AUTHORITY FOR PLAN CHECK AND REVIEW. CONTRACTOR WILL SUBMIT LICENSING AND WORKMAN'S COMPENSATION INFORMATION TO THE JURISDICTION AS REQUIRED TO OBTAIN THE BUILDING PERMIT. CONTRACTOR SHALL COORDINATE AND SCHEDULE REQUIRED INSPECTIONS AND POST REQUIRED PERMITS AT THE JOB SITE COMPLY WITH SPECIFIC PROJECT RELATED REQUESTS AND SUGGESTIONS MADE BY BUILDING INSPECTOR, AND INFORM CONSTRUCTION MANAGER OF ANY SUCH WORK THAT MAY BE BEYOND THE SCOPE OF THE CONTRACT OR DEVIATE FROM THE CONSTRUCTION DOCUMENT. AT&T WILL REIMBURSE THE CONTRACTOR FEES FOR PLAN REVIEW, BUILDING PERMIT, CONNECTIONS, AND INSPECTIONS. (INCLUDED IN THE BASE PROPOSAL).

A. ZONING REGULATIONS AND CONDITIONAL USE PERMITS

1. CONTRACTOR WILL SUBMIT ALL ZONING AND CONDITIONAL USE PERMITS. SOME USE PERMITS MAY HAVE SPECIFIC REQUIREMENTS FOR THE SITE RELATED TO CONSTRUCTION, SUCH AS NOISE REGULATIONS, HOURS OF WORK, ACCESS LIMITATIONS, ETC. THE CONSTRUCTION MANAGER WILL INFORM THE CONTRACTOR OF THESE REQUIREMENTS AT THE PRE-BID MEETING OR AS SHOWN IN THE CONSTRUCTION DOCUMENTS.

A. FAA PERMIT AND TOWER LIGHTING

1. REFER TO CONSTRUCTION DOCUMENTS AND CONSTRUCTION MANAGER FOR FAA AND STATE LIGHTING REQUIREMENTS. CONTRACTOR SHALL PROVIDE TEMPORARY FM APPROVED LIGHTING UNTIL PERMANENT LIGHTING IS OPERATIONAL.

A. TOWER SECURITY

1. IF REQUIRED, TOWER MUST BE FENCED, TEMPORARILY OR PERMANENTLY WITHIN 24 HOURS OF ERECTION. DO NOT ALLOW THE GATE ACCESSING THE TOWER AREA TO REMAIN OPEN OR UNATTENDED ANY TIME FOR ANY REASON. KEEP THE GATE CLOSED AND LOCKED WHEN NOT IN USE.

L. SITE CONTROL

1. THE CONTRACTOR IS COMPLETELY RESPONSIBLE FOR CONTAINMENT OF SEDIMENT AND CONTROL OF EROSION AT THE SITE. ANY DAMAGE TO ADJACENT OR DOWNSTREAM PROPERTIES WILL BE CORRECTED BY THE CONTRACTOR AT NO EXPENSE TO AT&T.

2. THE CONTRACTOR IS TO MAINTAIN ADEQUATE DRAINAGE AT ALL TIMES. DO NOT ALLOW WATER TO STAND OR POND. ANY DAMAGE TO STRUCTURES OR WORK ON THE SITE CAUSED BY INADEQUATE MAINTENANCE OF DRAINAGE PROVISIONS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND ANY COST ASSOCIATED WITH REPAIRS FOR SUCH DAMAGE WILL BE AT THE CONTRACTOR'S EXPENSE.

3. ALL WASTE MATERIAL SHALL BE PROPERLY DISPOSED OF OFF-SITE OR AS DIRECTED BY CONSTRUCTION MANAGER AND IN ACCORDANCE WITH JURISDICTIONAL AUTHORITIES.

M. LIVESTOCK PROTECTION

1. PROTECT AND SECURE LIVESTOCK. MAINTAIN AND SECURE EXISTING PERIMETER FENCE AND/OR GATE ENCLOSURES.

2. SITE PREPARATION

A. SCOPE OF WORK INCLUDES

1. PROTECTION OF EXISTING TREES, VEGETATION AND LANDSCAPING MATERIALS WHICH MIGHT BE DAMAGED BY CONSTRUCTION ACTIVITIES.

2. TRIMMING OF EXISTING TREES AND VEGETATION AS REQUIRED FOR PROTECTION DURING CONSTRUCTION ACTIVITIES.

3. CLEANING AND GRUBBING OF STUMPS, VEGETATION, DEBRIS, RUBBISH, DESIGNATED TREES AND SITE IMPROVEMENTS.

4. TOPSOIL STRIPPING AND STOCKPILING.

5. TEMPORARY EROSION CONTROL, SILTATION CONTROL, AND DUST CONTROL CONFORMING TO LOCAL REQUIREMENTS AS APPLICABLE.

6. TEMPORARY PROTECTION OF ADJACENT PROPERTY, STRUCTURES, BENCHMARKS, AND MONUMENTS.

7. PROTECTION AND TEMPORARY RELOCATION, STORAGE AND RE-INSTALLATION OF EXISTING FENCE AND OTHER SITE IMPROVEMENTS SCHEDULED FOR RE-USE.

8. REMOVAL AND LEGAL DISPOSAL OF CLEARED MATERIALS.

B. PRODUCTS AND MATERIALS (AS APPROVED BY CONSTRUCTION MANAGER OR AS NOTED IN CONSTRUCTION DOCUMENTS)

1. MATERIALS USED FOR TREE PROTECTION, EROSION CONTROL, SILTATION CONTROL, AND DUST CONTROL.

3. EARTHWORK

A. SCOPE OF WORK INCLUDES

1. EXCAVATION, TRENCHING, FILLING, COMPACTION, AND GRADING FOR STRUCTURES, SITE IMPROVEMENTS AND UTILITIES.

2. MATERIALS FOR SUB-BASE, DRAINAGE, BACKFILL AND GRAVEL FOR SLABS, PAVEMENT AND IMPROVEMENTS.

3. ROCK EXCAVATION WITHOUT BLASTING.

4. SUPPLY OF ADDITIONAL MATERIALS FOR OFFSITE AS REQUIRED.

5. REMOVAL AND LEGAL DISPOSAL OF EXCAVATED MATERIAL AS REQUIRED.

B. QUALITY ASSURANCE

1. COMPACTION

A. UNDER STRUCTURES, BUILDING SLABS, PAVEMENTS AND WALKWAYS WILL OBTAIN A 95% COMPACTION AT A MINIMUM DRY DENSITY AS DETERMINED BY ASTM 0-1557 OR WITH PLUS OR MINUS 3% OF THE MOISTURE CONTENT.

2. GRADING TOLERANCES OUTSIDE BUILDING LINES

A. LAWNS, UNPAVED AREAS AND WALKS PLUS OR MINUS 1 INCH.

B. UNDER PAVEMENTS PLUS OR MINUS 1/2 INCH.

3. GRADING TOLERANCES FOR FILL UNDER CONCRETE APPLICATIONS
A. PLUS OR MINUS 1/2 INCH MEASURED WITH 10 FOOT STRAIGHT EDGE.

C. PRODUCTS AND MATERIALS (AS APPROVED BY CONSTRUCTION MANAGER OR AS NOTED IN CONSTRUCTION DOCUMENTS)

1. SUB-BASE MATERIAL: GRADED MIXTURE OF NATURAL OR CRUSHED GRAVEL, CRUSHED STONE OR SLAG, AND NATURAL SAND.

2. WASHED MATERIAL, EVENLY GRADED MIXTURE OF CRUSHED STONE OR GRAVEL WITH 95% PASSING A 1-1/2 INCH SIEVE.

3. GRADING MATERIAL WILL CONSIST OF SATISFACTORY NATIVE OR IMPORTED SOIL MATERIALS FREE OF CLAY, ROCK OR GRAVEL NOT LARGER THAN 2 INCHES IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIALS AND OTHER UNSUITABLE MATERIALS WILL NOT BE ALLOWED FOR USE. IMPORTED MATERIALS SHALL HAVE A CLAY CONTENT OF NO MORE THAN 5%.

4. GRAVEL MATERIAL: EVENLY GRADED MIXTURE OF CRUSHED STONE OR GRAVEL WITH 95% PASSING A 1-1/2 INCH SIEVE.

5. GEOTEXTILE FABRIC: AS PER CONSTRUCTION DOCUMENTS.

D. CLEARING AND GRUBBING

1. REMOVE ALL VEGETATION AND MATERIALS AS REQUIRED. REMOVE STUMPS COMPLETELY UNDER FOUNDATIONS AND ROADWAYS. DISPOSE OF CLEARING AND GRUBBING OFF-SITE OR IN AN ON-SITE LOCATION APPROVED BY CONSTRUCTION MANAGER.

E. STRIPPING

1. STRIP NOT LESS 3 INCHES OF SOD AND TOPSOIL FROM AREAS THAT WILL UNDERLAY GRAVEL, PAVEMENT, NEW STRUCTURES OR EMBANKMENTS. STOCKPILE STRIPPING ON-SITE FOR RE-USE AND FINAL LANDSCAPING.

G. EMBANKMENT

1. CONSTRUCT EMBANKMENT TO THE LINES AND GRADES SHOWN ON THE DRAWING.

2. CONSTRUCT EMBANKMENT FROM ON-SITE EXCAVATION MATERIAL WHEN SUITABLE. USE IMPORTED BACKFILL ONLY AFTER AVAILABLE ON-SITE EXCAVATION MATERIAL HAS BEEN USED.

3. CONSTRUCT IN LIFTS OF NOT MORE THAN 12 INCHES IN LOOSE DEPTH. THE FULL WIDTH OF THE CROSS SECTION SHALL BE BROUGHT UP UNIFORMLY.

4. MATERIAL SHALL BE PLACED IN LAYERS AND SHALL BE NEAR OPTIMUM MOISTURE CONTENT BEFORE ROLLING TO OBTAIN THE PRESCRIBED COMPACTION. WETTING OR DRYING OF THE MATERIAL AND MANIPULATION TO SECURE A UNIFORM MOISTURE CONTENT THROUGHOUT THE LAYERS MAY BE REQUIRED. SUCH OPERATIONS SHALL BE INCLUDED IN THE APPROPRIATE BID ITEM. SHOULD THE MATERIAL BE TOO WET TO PERMIT PROPER COMPACTION, IT IS THE CONTRACTOR'S RESPONSIBILITY TO UTILIZE MATERIAL WITH AN ACCEPTABLE MOISTURE CONTENT.

5. DO NOT PLACE FROZEN MATERIAL IN THE EMBANKMENT AND DO NOT PLACE EMBANKMENT MATERIAL UPON FROZEN MATERIAL.

6. CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF EMBANKMENTS AND THE REPLACEMENT OF ANY PORTION WHICH HAS BECOME DISPLACED DUE TO CONTRACTOR'S OPERATIONS.

7. START LAYERS IN THE DEEPEST PORTION OF THE FILL AND AS PLACEMENT PROGRESSES, CONSTRUCT LAYERS APPROXIMATELY PARALLEL TO THE FINISH GRADE LINE.

8. ROUTE EQUIPMENT BOTH LOADED AND EMPTY, OVER THE FULL WIDTH OF THE EMBANKMENT TO ENSURE UNIFORMITY OF MATERIAL PLACEMENT.

9. COMPACT EMBANKMENT UNDERLYING NEW GRAVEL PAVING, FLOOR SLABS AND STRUCTURES TO BE 95% COMPACTION AT A MINIMUM DRY DENSITY AS DETERMINED BY ASTM 0-1557 OR WITHIN PLUS OR MINUS 3% OF OPTIMUM MOISTURE CONTENT. COMPACT NON-STRUCTURAL AREA EMBANKMENTS TO A MINIMUM OF 90% OF ASTM 0-1557.

H. SITE GRADING

1. USING ON-SITE EXCAVATION MATERIAL, SHAPE, TRIM, FINISH AND COMPACT SURFACE AREAS TO CONFORM TO THE LINES. GRADES AND CROSS SECTIONS SHOWN ON THE DRAWING OR AS DESIGNATED BY THE CONSTRUCTION MANAGER.

2. GRADE SURFACES TO DRAIN AND ELIMINATE ANY PONDING OR EROSION.

3. ELIMINATE WHEEL RUTS BY REGRADING.

4. COMPACT AREAS OF UNDERLYING NEW GRAVEL, PAVING, FLOOR SLABS AND STRUCTURES TO BE AT 95% COMPACTION AT A MAXIMUM DRY DENSITY AS DETERMINED BY THE ASTM 0-1557 OR WITHIN PLUS OR MINUS 3% OF OPTIMUM MOISTURE CONTENT.

5. CONSTRUCT FINISH SURFACE OF SITE GRADING AREAS WITHIN 1 INCH FROM SPECIFIED GRADE.

I. SUBGRADE PREPARATION

1. SHAPE TOP OF SUBGRADE TO THE LINES AND GRADES SHOWN ON THE DRAWINGS.

2. MAINTAIN TOP OF SUBGRADE IN A FREE-DRAINING CONDITION.

3. DO NOT STOCK PILE MATERIAL ON TOP OF SUBGRADE UNLESS AUTHORIZED BY CONSTRUCTION MANAGER.

4. COMPACT THE TOP 12 INCHES OF SUBGRADE TO A 95% COMPACTION AT A MAXIMUM DRY DENSITY AS DETERMINED BY ASTM 0-1557 OR WITHIN PLUS OR MINUS 3% OF THE OPTIMUM MOISTURE CONTENT.

5. CONSTRUCT TOP OF SUBGRADE WITHIN 1 INCH OF ESTABLISHED GRADE AND CROSS SECTION.

J. GEOTEXTILE FABRIC

1. LAY GEOTEXTILE FABRIC OVER COMPACTED SUBGRADE IN THE COMPOUND AREA AND UNDER LENGTH OF ROAD (WHEN REQUIRED). LAP ALL JOINTS TO A MINIMUM OF 36 INCHES.

K. GRAVEL SURFACING

1. CONSTRUCT GRAVEL SURFACING AREAS USING CRUSHED AGGREGATE BASE AND FINISH COURSES AS SPECIFIED BY CONSTRUCTION MANAGER. SPREAD GRAVEL AND RAKE TO OBTAIN A UNIFORM SURFACE AREA.

L. LANDSCAPING

1. FURNISH, INSTALL AND MAINTAIN LANDSCAPE WORK AS SHOWN AND/OR REQUIRED WITHIN THE CONSTRUCTION DOCUMENTS OR AS SPECIFIED IN THE CONSTRUCTION SPECIFICATIONS.

M. CONCRETE FORM WORK

1. FORMS: SMOOTH AND FREE OF SURFACE IRREGULARITIES. UTILIZE FORM RELEASE AGENTS.

2. CHAMFER EXPOSED EDGES OF ALL TOWER FOUNDATION SHALL RECEIVE A 1/2 INCH BY 1/2 INCH 45 DEGREE CHAMFER. OTHER EXPOSED EDGES SHALL RECEIVE A TOOLED RADIUS FINISH.

3. UPON COMPLETION, REMOVE ALL FORMS INCLUDING THOSE CONCEALED OR BURIED.

4. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.

4. GENERAL NOTES

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE ALL PLAN SHEETS AND SPECIFICATIONS AND COORDINATE HIS WORK WITH THE WORK OF ALL OTHER CONTRACTORS TO ENSURE THAT WORK PROGRESSION IS NOT INTERRUPTED.

2. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING A NEAT AND ORDERLY SITE, YARD AND GROUNDS. CONTRACTOR SHALL REMOVE AND DISPOSE OFF SITE ALL RUBBISH, WASTE MATERIAL, LITTER AND ALL FOREIGN SUBSTANCES. REMOVE PETROCHEMICAL SPILLS, STAINS AND OTHER FOREIGN DEPOSITS. RAKE GROUND TO A SMOOTH EVEN-TEXTURED SURFACE.

3. THE PLANS SHOW SOME KNOWN SUBSURFACE STRUCTURE ABOVE GROUND STRUCTURES AND/OR UTILITIES BELIEVED TO EXIST IN THE WORKING AREA, EXACT LOCATION OF WHICH MAY VARY FROM THE LOCATION INDICATED. IN PARTICULAR THE CONTRACTOR IS WARNED THAT THE EXACT OR EVEN APPROXIMATE LOCATION OF SUCH PIPELINES, SUBSURFACE STRUCTURES AND/OR UTILITIES IN THE AREA MAY BE SHOWN OR MAY NOT BE SHOWN AND IT SHALL BE HIS RESPONSIBILITY TO PROCEED WITH GREAT CARE IN 48 HOURS BEFORE YOU DIG, DRILL OR BLAST CALL LOCAL UTILITIES LOCATOR COMPANY.

4. THE OWNER OR OWNER'S REPRESENTATIVE SHALL BE NOTIFIED IN WRITING OF ANY CONDITIONS THAT VARY FROM THOSE SHOWN ON THE PLANS. THE CONTRACTOR'S WORK SHALL NOT VARY FROM THE PLANS WITHOUT THE EXPRESSED APPROVAL OF THE OWNER OR THE OWNER'S REPRESENTATIVE.

5. THE CONTRACTOR IS INSTRUCTED TO COOPERATE WITH ANY AND ALL OTHER CONTRACTORS PERFORMING WORK ON THE SITE DURING THE PERFORMANCE OF THIS CONTRACT.

6. THE CONTRACTOR SHALL RESTORE ALL DAMAGED, PUBLIC OR PRIVATE PROPERTY TO AT LEAST AS GOOD OF CONDITION AS BEFORE DISTURBED AS DETERMINED BY THE OWNER OR OWNER'S REPRESENTATIVE.

7. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIRED PERMITS.

8. THE CONTRACTOR SHALL PROTECT EXISTING PROPERTY LINE MONUMENTATION. ANY MONUMENTATION DISTURBED OR DESTROYED, AS JUDGED BY THE OWNER OR OWNER'S REPRESENTATIVE, SHALL BE REPLACED.

9. ALL TRENCH EXCAVATION AND ANY REQUIRED SHEETING AND SHORING SHALL BE DONE IN ACCORDANCE WITH OSHA REGULATIONS FOR CONSTRUCTION.

10. CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING AND THE MAINTENANCE OF SURFACE DRAINAGE DURING THE COURSE OF WORK.

11. ALL UTILITY WORK INVOLVING CONNECTIONS TO EXISTING SYSTEMS SHALL BE COORDINATED WITH THE OWNER OR OWNER'S REPRESENTATIVE BEFORE EACH AND EVERY CONNECTION TO EXISTING SYSTEMS IS MADE.

12. MAINTAIN FLOW FOR ALL EXISTING UTILITIES

13. ALL SITE FILL SHALL MEET SELECTED FILL STANDARDS AS DEFINED BY THE OWNER OR OWNER'S REPRESENTATIVE ON THE DRAWINGS OR GEOTECHNICAL REPORT RECOMMENDATIONS.

14. CONTRACTOR TO GRADE ALL AREAS OF THE SITE TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE BUILDING OR EQUIPMENT PAD AND THE TOWER.

15. IF NECESSARY, THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING AND REGRADING ROADWAY AND ANY DISTURBED AREAS FOLLOWING INSTALLATION OF UTILITIES.

16. NO COMMERCIAL MESSAGES TO BE DISPLAYED ON TOWER

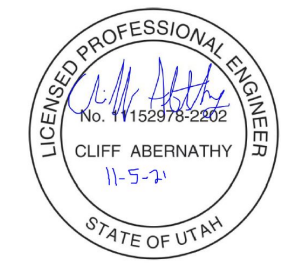
17. WATER AND SEWER SERVICES ARE NOT REQUIRED FOR THE DEVELOPMENT

18. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIAL UNLESS OTHERWISE NOTED.

19. ELECTRICAL DRAWINGS HAVE BEEN REVIEWED AND SEALED FOR STRUCTURAL PURPOSES ONLY.



1825 W. WALNUT HILL LANE, SUITE 120
IRVING, TEXAS 75038
1-855-669-5421



DRAWING SCALES ARE INTENDED FOR 11"x17" SIZE PRINTED MEDIA ONLY.

SUBMITTALS			
REV	DATE	DESCRIPTION	BY
A	09/23/21	90% CD	DHR
B	10/21/21	90% CD	DHR
C	10/25/21	90% CD	SUA
0	11/01/21	100% CD	SUA

SITE INFORMATION

SITE ID:
UTL02188

RFDS NAME:
UTL02188

SITE NAME:
DOWNTOWN DRAPER

SITE ADDRESS:
11901 SOUTH 700 EAST
DRAPER, UT 84020

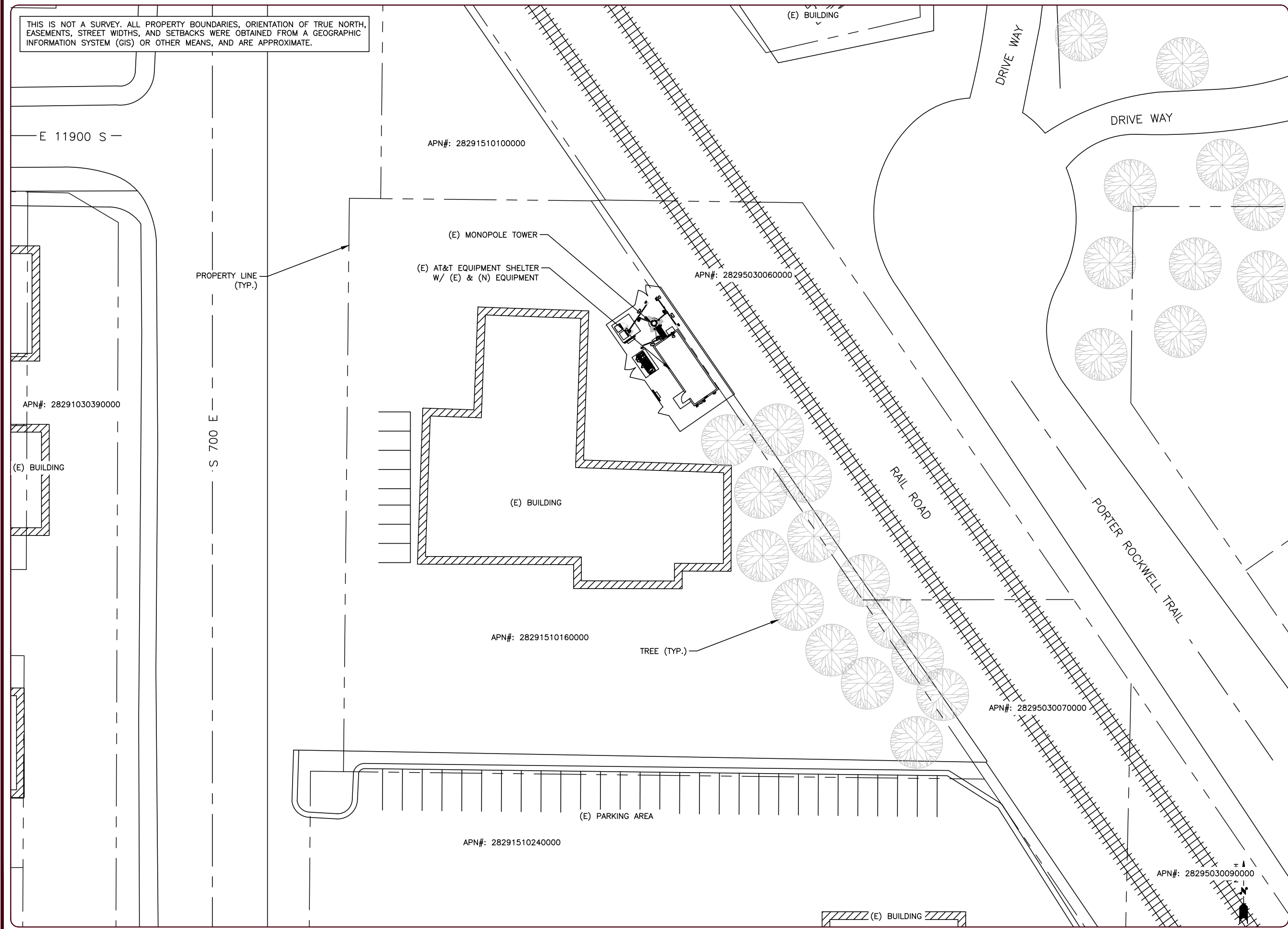
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GENERAL NOTES

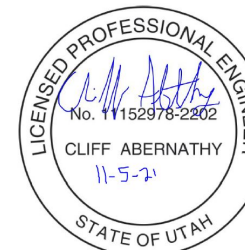
SHEET No.

GN-1

THIS IS NOT A SURVEY. ALL PROPERTY BOUNDARIES, ORIENTATION OF TRUE NORTH, EASEMENTS, STREET WIDTHS, AND SETBACKS WERE OBTAINED FROM A GEOGRAPHIC INFORMATION SYSTEM (GIS) OR OTHER MEANS, AND ARE APPROXIMATE.



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RFDS NAME:
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DOWNTOWN DRAPER

SITE ADDRESS:
11901 SOUTH 700 EAST
DRAPER, UT 84020

SHEET DESCRIPTION

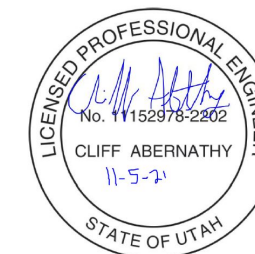
SITE PLAN

SHEET No.

A-1



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IRVING, TEXAS 75038
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SUBMITTALS

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D	11/01/21	100% CD	SUA

SITE INFORMATION

SITE ID:
UTLO2188

RFDS NAME:
UTLO2188

SITE NAME:
DOWNTOWN DRAPER

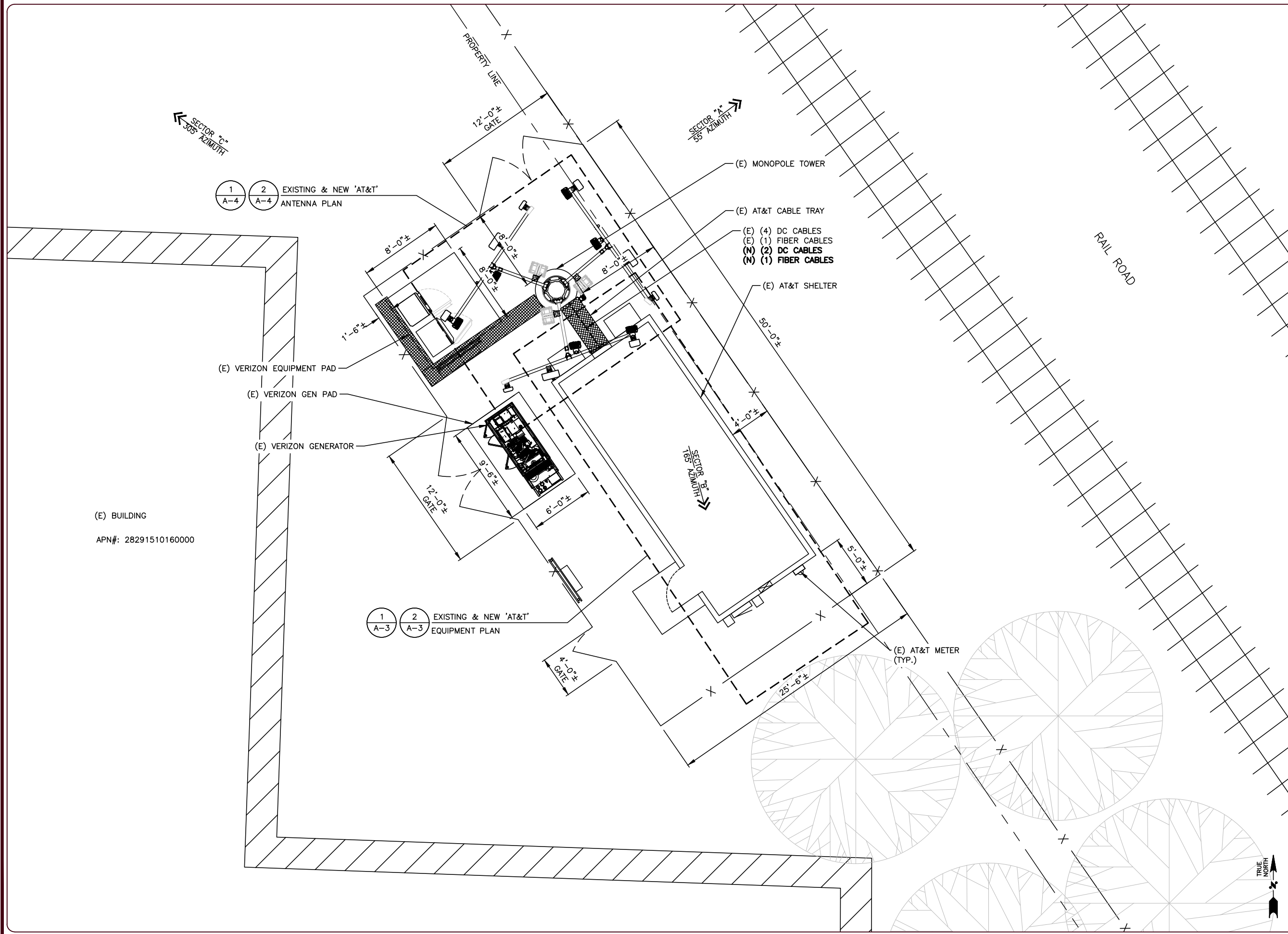
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11901 SOUTH 700 EAST
DRAPER, UT 84020

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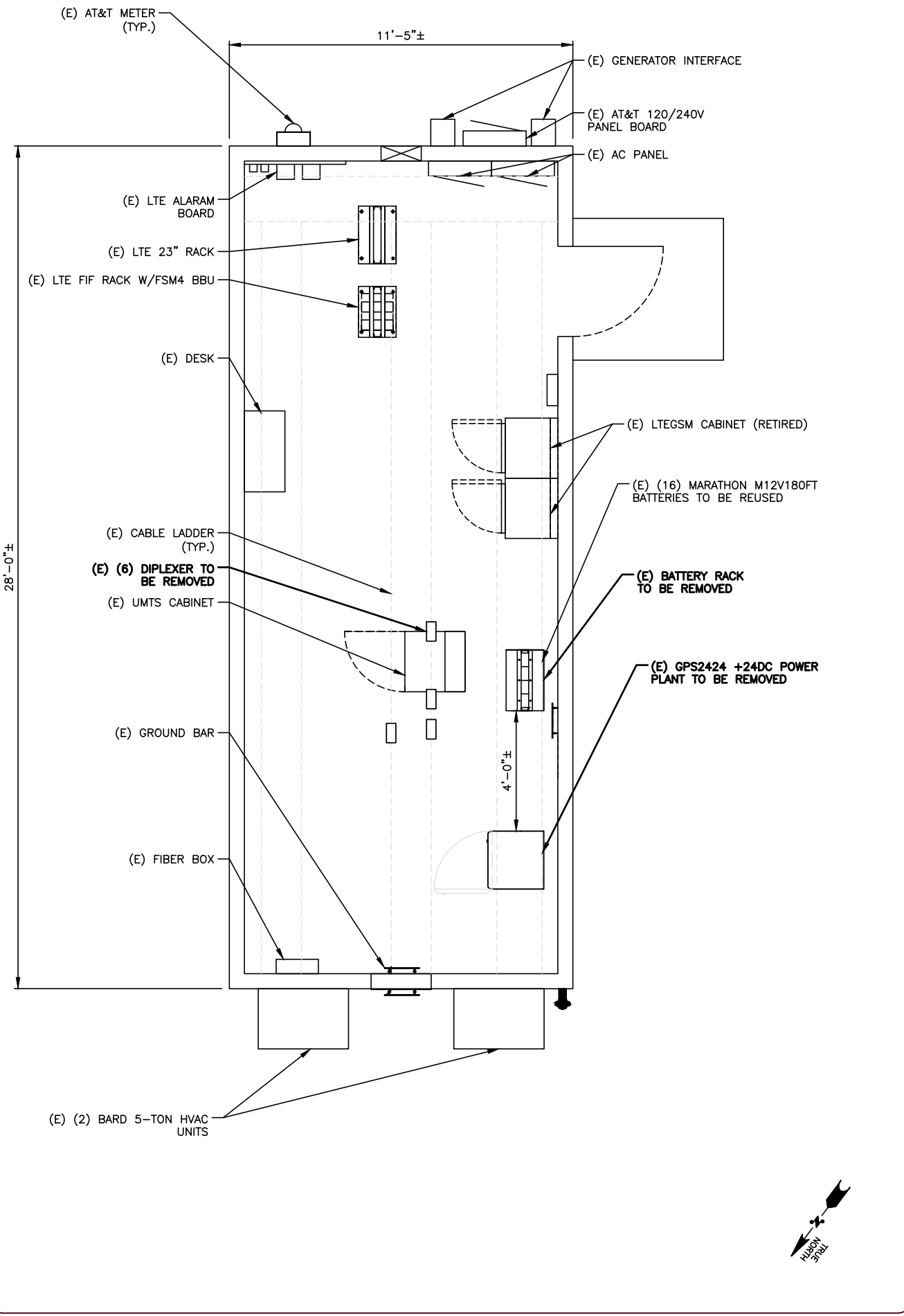
ENLARGED SITE PLAN

SHEET No.

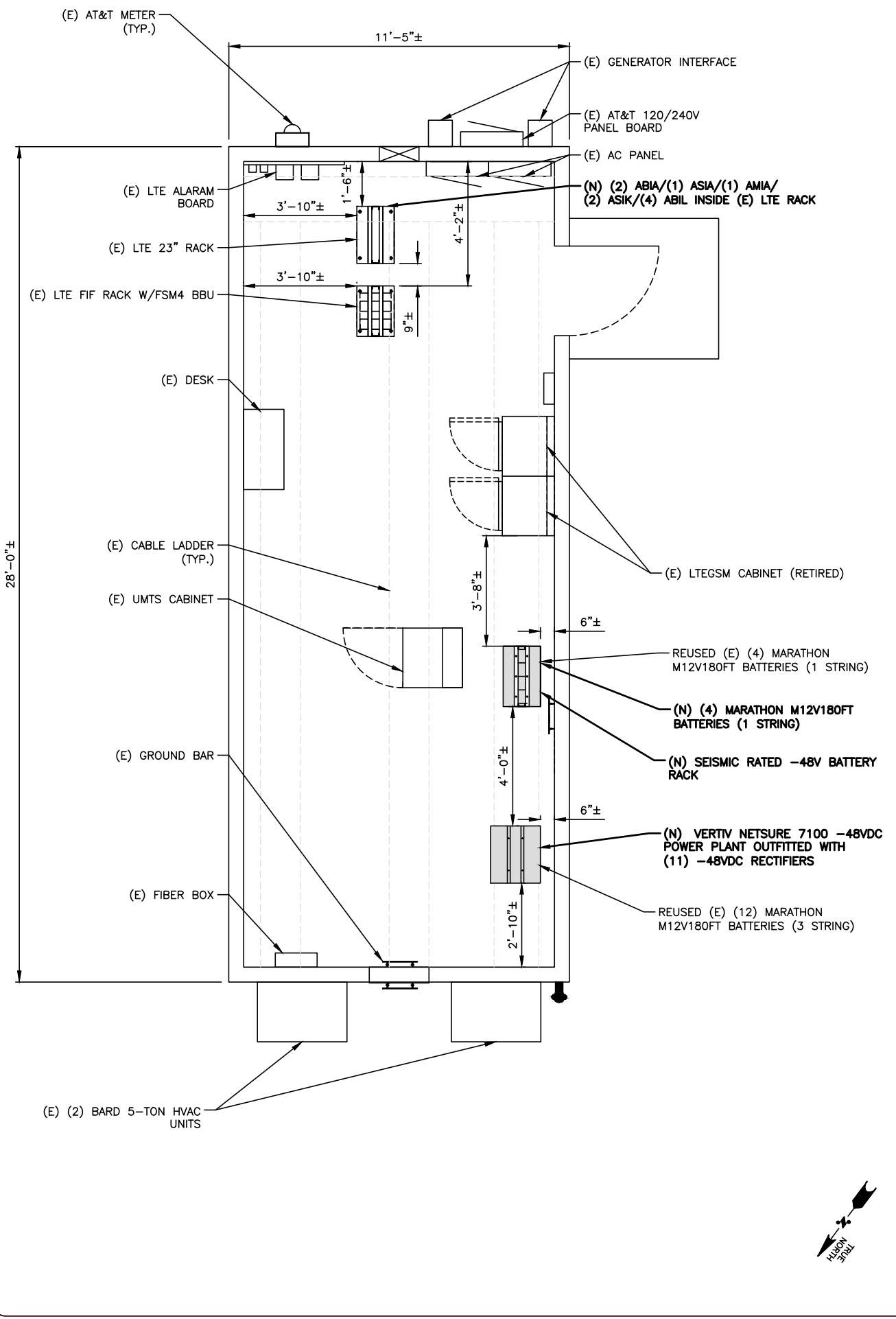
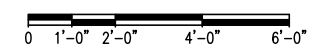
A-2



1 ENLARGED SITE PLAN
A-2 SCALE (11" X 17"): 1" = 1/4" 0 2'-0" 4'-0" 8'-0" 12'-0"



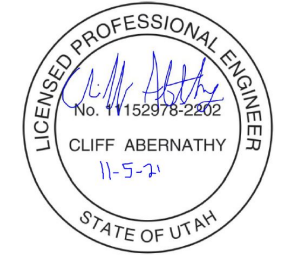
1 EXISTING EQUIPMENT SHELTER PLAN
A-3 SCALE (11" X 17"): 1" = 1/2"



2 PROPOSED EQUIPMENT SHELTER PLAN
A-3 SCALE (11" X 17"): 1" = 1/2"



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RFDS NAME:
UTL02188

SITE NAME:
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SITE ADDRESS:
11901 SOUTH 700 EAST
DRAPER, UT 84020

SHEET DESCRIPTION

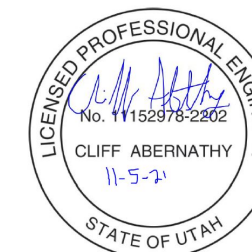
EXISTING & PROPOSED
EQUIPMENT SHELTER PLANS

SHEET No.

A-3



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C	10/25/21	90% CD	SUA
D	11/01/21	100% CD	SUA

SITE INFORMATION

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UTL02188

RFDS NAME:
UTL02188

SITE NAME:
DOWNTOWN DRAPER

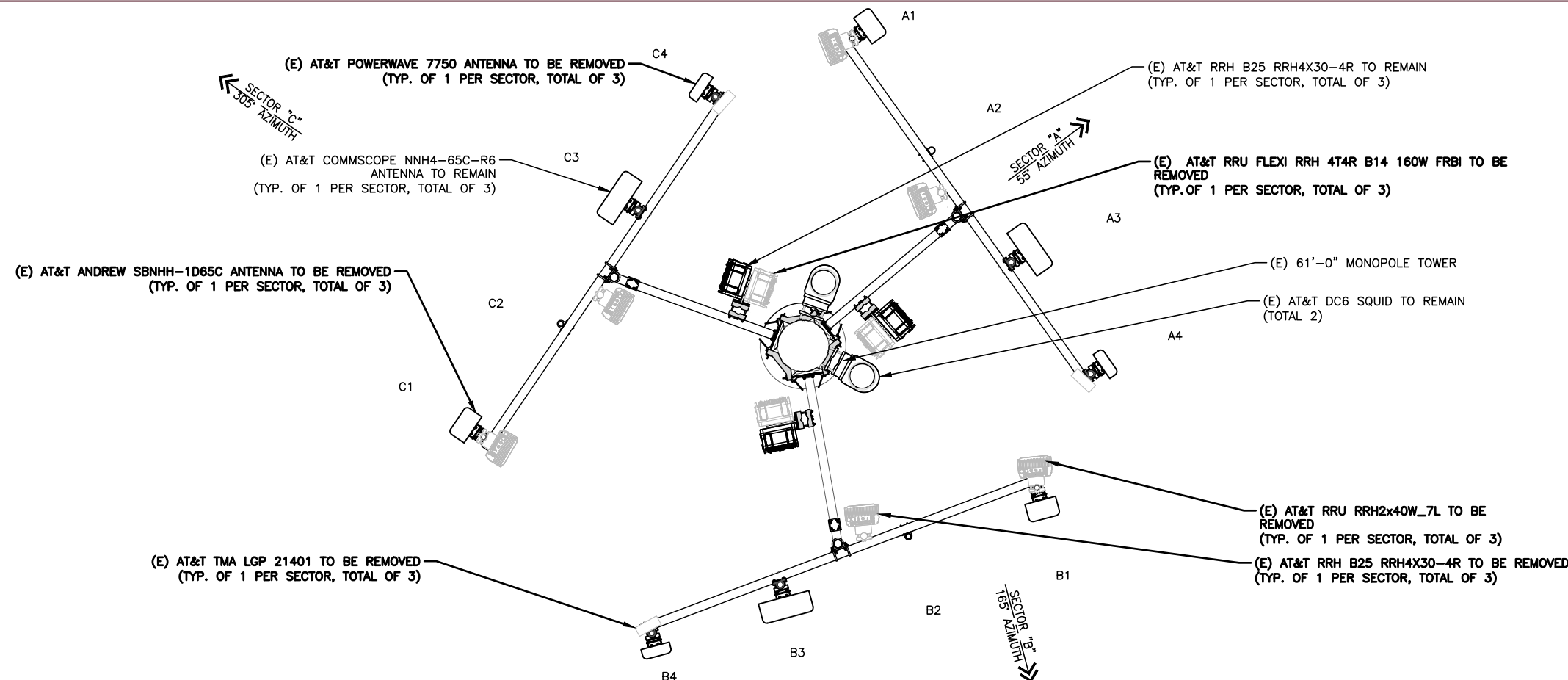
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DRAPER, UT 84020

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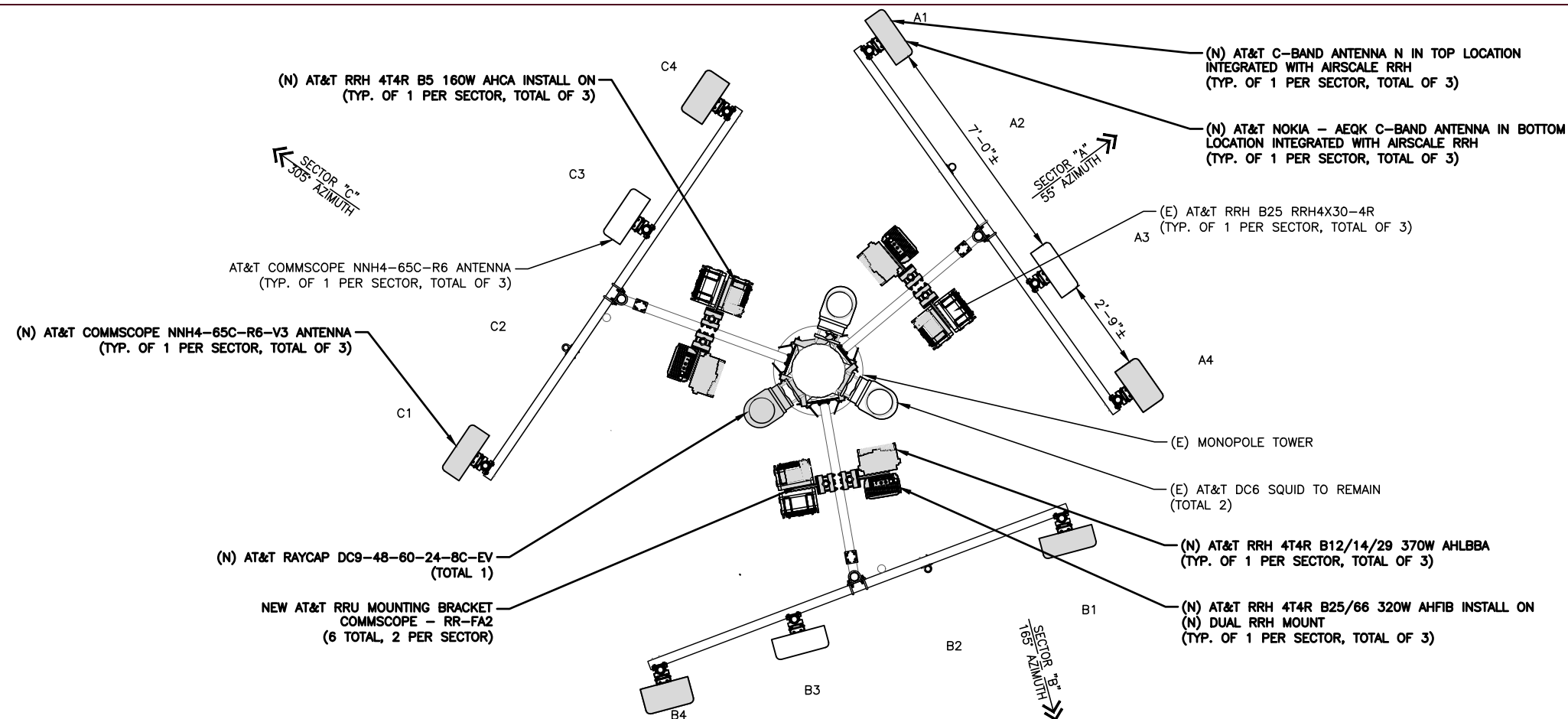
EXISTING & PROPOSED
ANTENNA PLANS

SHEET No.

A-4

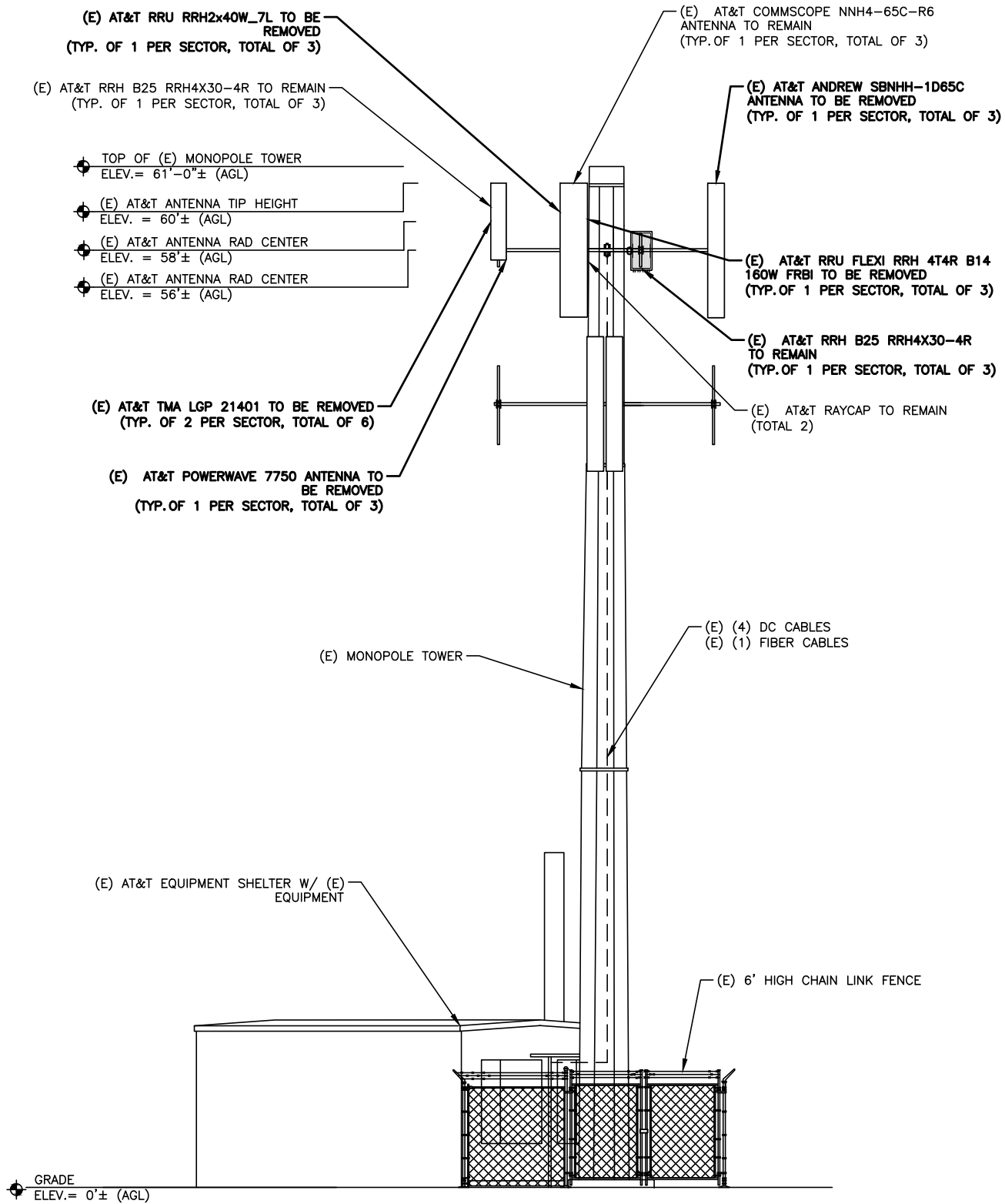


1 EXISTING ANTENNA PLAN
A-4 SCALE: NTS

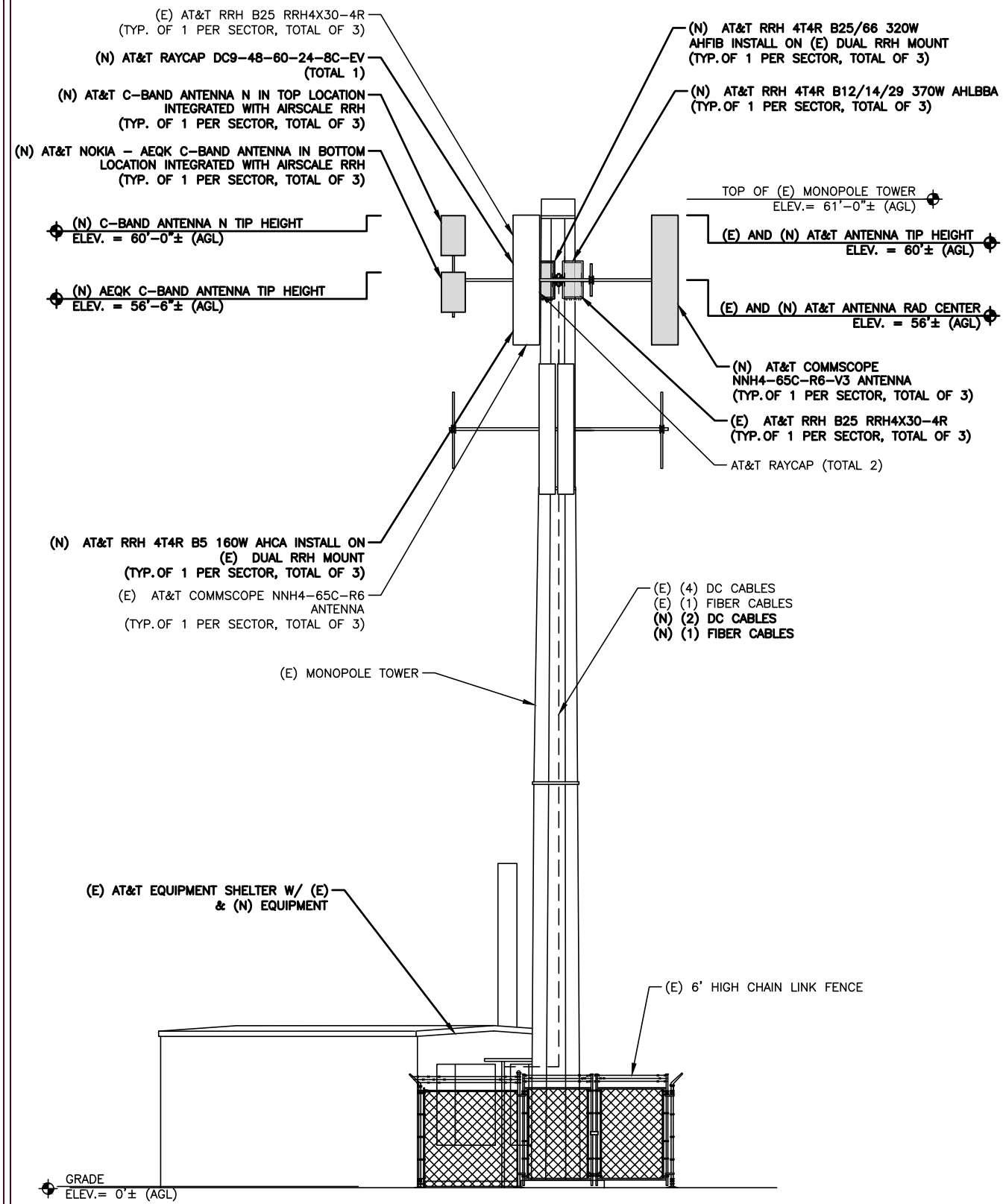


2 PROPOSED ANTENNA PLAN
A-4 SCALE: NTS

KEY
* = OR SIMILAR



1 EXISTING ELEVATION
A-5 SCALE: NTS



2 PROPOSED ELEVATION
A-5 SCALE: NTS



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IRVING, TEXAS 75038
1-855-669-5421



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11901 SOUTH 700 EAST
DRAPER, UT 84020

SHEET DESCRIPTION

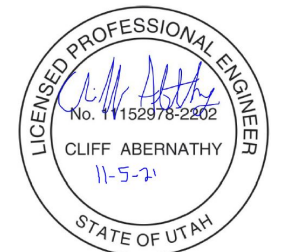
EXISTING & PROPOSED
TOWER ELEVATIONS

SHEET No.

A-5



1825 W. WALNUT HILL LANE, SUITE 120
IRVING, TEXAS 75038
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UTL02188 ANTENNA AND EQUIPMENT SCHEDULE UTL02188										
SECTOR	TECH	AZIMUTH	ANTENNA					RADIO/TMAs	HYBRID CABLES	
			MANUFACTURER	MODEL NO. (PORT)	SIZE & WEIGHT	STATUS	RAD CENTER			
SECTOR '1'	1	LTE 700/1900	55°	ANDREW	SBNHH-1D65C	96.4"x11.9"x7.1" (49.6 lbs)	EXISTING	56°-0"	(1) RRH2x40W_7L (1) B25 RRH4X30-4R	(1) (E) FIBER CABLE (4) (E) DC POWER CABLE
	2	EMPTY	-	-	-	-	-	-		
	3	LTE 700/1900	55°	COMMSCOPE	NNH4-65C-R6	96"x19.6"x7.8" (99.2 lbs)	EXISTING	56°-0"	(1) FLEXI RRH 4T4R B14 160W FRBI (1) B25 RRH4X30-4R	
	4	UMTS/850/1900	55°	POWERWAVE	7750.00	55"x11"x4" (39 lbs)	EXISTING	58°-0"	(2) LGP 21903* (2) LGP 21401	
SECTOR '2'	1	LTE 700/1900	165°	ANDREW	SBNHH-1D65C	96.4"x11.9"x7.1" (49.6 lbs)	EXISTING	56°-0"	(1) RRH2x40W_7L (1) B25 RRH4X30-4R	
	2	EMPTY	-	-	-	-	-	-		
	3	LTE 700/1900	165°	COMMSCOPE	NNH4-65C-R6	96"x19.6"x7.8" (99.2 lbs)	-	56°-0"	(1) FLEXI RRH 4T4R B14 160W FRBI (1) B25 RRH4X30-4R	
	4	UMTS/850/1900	165°	POWERWAVE	7750.00	55"x11"x4" (39 lbs)	EXISTING	58°-0"	(2) LGP 21903* (2) LGP 21401	
SECTOR '3'	1	LTE 700/1900	305°	ANDREW	SBNHH-1D65C	96.4"x11.9"x7.1" (49.6 lbs)	EXISTING	56°-0"	(1) RRH2x40W_7L (1) B25 RRH4X30-4R	
	2	EMPTY	-	-	-	-	-	-		
	3	LTE 700/1900	305°	COMMSCOPE	NNH4-65C-R6	96"x19.6"x7.8" (99.2 lbs)	EXISTING	56°-0"	(1) FLEXI RRH 4T4R B14 160W FRBI (1) B25 RRH4X30-4R	
	4	UMTS/850/1900	305°	POWERWAVE	7750.00	55"x11"x4" (39 lbs)	EXISTING	58°-0"	(2) LGP 21903* (2) LGP 21401	

* - DENOTES EQUIPMENT ON GROUND

EXISTING ANTENNA SCHEDULE

SCALE: 1
N.T.S.

DRAWING SCALES ARE INTENDED FOR 11"x17" SIZE PRINTED MEDIA ONLY.

UTL02188 ANTENNA AND EQUIPMENT SCHEDULE UTL02188										
SECTOR	TECH	AZIMUTH	ANTENNA					RADIO/TMAs	HYBRID CABLES	
			MANUFACTURER	MODEL NO. (PORT)	SIZE & WEIGHT	STATUS	RAD CENTER			
SECTOR '1'	1	LTE 700/1900	55°	COMMSCOPE	NNH4-65C-R6-V3	96"x19.6"x7.8" (99.2 lbs)	NEW	56°-0"	(1) RRH4T4R B12/14/29 370W AHLBBA (1) RRH 4T4R B25/66 320W AHFIB	(1) (E) FIBER CABLE (4) (E) DC POWER CABLE (2) (N) DC CABLE (1) (N) FIBER CABLE
	2	EMPTY	-	-	-	-	-	-		
	3	LTE 1900/5G/850	55°	COMMSCOPE	NNH4-65C-R6	96"x19.6"x7.8" (99.2 lbs)	EXISTING	56°-0"	(1) RRH 4T4R B5 160W AHCA (1) RRH B25 RRH4X30-4R	
	4	5G	55°	NOKIA	C-BAND ANTENNA N AEQK	59"x17.7"x9.5" (198.4 lbs)	NEW	58°-9"	INTEGRATED	
SECTOR '2'	1	LTE 700/1900	165°	COMMSCOPE	NNH4-65C-R6-V3	96"x19.6"x7.8" (99.2 lbs)	NEW	56°-0"	(1) RRH4T4R B12/14/29 370W AHLBBA (1) RRH 4T4R B25/66 320W AHFIB	
	2	EMPTY	-	-	-	-	-	-		
	3	LTE 1900/5G/850	165°	COMMSCOPE	NNH4-65C-R6	96"x19.6"x7.8" (99.2 lbs)	EXISTING	56°-0"	(1) RRH 4T4R B5 160W AHCA (1) RRH B25 RRH4X30-4R	
	4	5G	165°	NOKIA	C-BAND ANTENNA N AEQK	59"x17.7"x9.5" (198.4 lbs)	NEW	58°-9"	INTEGRATED	
SECTOR '3'	1	LTE 700/1900	305°	COMMSCOPE	NNH4-65C-R6-V3	96"x19.6"x7.8" (99.2 lbs)	NEW	56°-0"	(1) RRH4T4R B12/14/29 370W AHLBBA (1) RRH 4T4R B25/66 320W AHFIB	
	2	EMPTY	-	-	-	-	-	-		
	3	LTE 1900/5G/850	305°	COMMSCOPE	NNH4-65C-R6	96"x19.6"x7.8" (99.2 lbs)	EXISTING	56°-0"	(1) RRH 4T4R B5 160W AHCA (1) RRH B25 RRH4X30-4R	
	4	5G	305°	NOKIA	C-BAND ANTENNA N AEQU	59"x17.7"x9.5" (198.4 lbs)	NEW	58°-9"	INTEGRATED	

NEW ANTENNA SCHEDULE

SCALE: 2
N.T.S.

SUBMITTALS			
REV	DATE	DESCRIPTION	BY
A	09/23/21	90% CD	DHR
B	10/21/21	90% CD	DHR
C	10/25/21	90% CD	SUA
0	11/01/21	100% CD	SUA

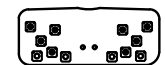
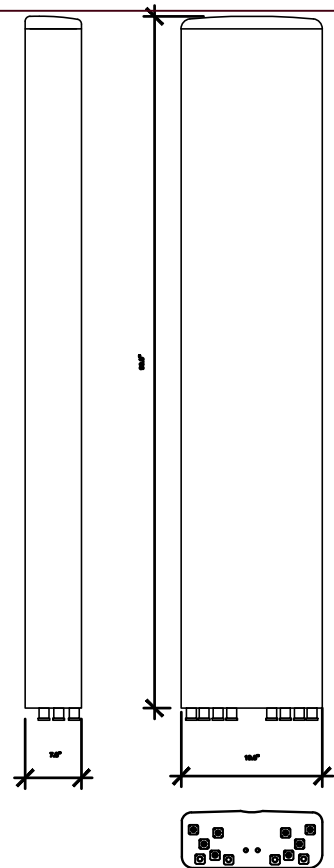
SITE INFORMATION	
SITE ID:	UTL02188
RFDS NAME:	UTL02188
SITE NAME:	DOWNTOWN DRAPER
SITE ADDRESS:	11901 SOUTH 700 EAST DRAPER, UT 84020

SHEET DESCRIPTION	
ANTENNA AND EQUIPMENT SCHEDULE	

SHEET No.	
A-6	

COMMSCOPE ANTENNAS – NNH4-65C-R6-V3

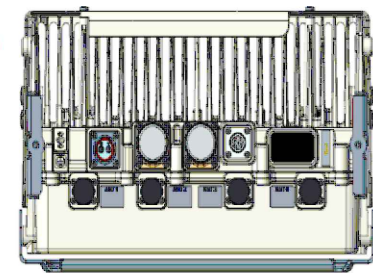
DIMENSIONS, HXWXD: 96.0"X19.6"X7.8"
 SURVIVAL WIND SPEED: >124 MPH
 WEIGHT, WITHOUT MOUNTING: 102.1 LBS.
 CONNECTOR: 8-PIN DIN FEMALE
 8-PIN DIN MALE
 CONNECTOR POSITION: BOTTOM
 MOUNTING POLE: 2.4-4.5 INCHES



1 PROPOSED ANTENNA NNH4-65C-R6-V3 DETAIL
 A-7 SCALE: NTS

**AirScale Dual RRH 4T4R B12/14/B29 370W
 AHLBBA – 475082A GA in FL19B in 1Q 2020**

AHLBBA	
Supported Frequency bands	3GPP Band 12, Band 14, Band 29
Frequencies	Band 12: 8X 909 MHz – 714 MHz, TX 729 MHz – 744 MHz Band 14: 8X 788 MHz – 798 MHz, TX 758 MHz – 768 MHz Band 29: TX 718 – 728 MHz
Number of TX/RX ports/pipes	4 ports 4T/4R/8X B12/B14 + 2TX/2R/829, 829 on Ant1 and Ant4 only
Instantaneous Bandwidth ISW	Full Band (LTE)
Occupied Bandwidth OSW	Full Band
Output Power	2x150W (B12/B14/B29) + 2x50W (B12/B14) Max 370W per RRH
RF Sharing	Band 12: LTE + NB-IoT + NR Band 14: LTE + NB-IoT + NR Band 29: LTE + NR
Supply Voltage / Voltage Range	DC-48 V / -40 V to -60 V, Circular connector
Typical Power Consumption	1100 W (EIS) Busy Hour Load at 4 Ant + 92.5W (Both Bands Active)
Antenna Ports	4 ports, 4.3-10
Optical Ports	2xRP3-01CPR1 9.8Gbps
ALD Control Interfaces	AISG-D from ANT1, 2, 3, 4 and RET Power supply ANT1 and ANT3
Other Interfaces	External Alarm MDR-26 Serial connector (4 inputs, 1 Output) DC Circular Power Connector

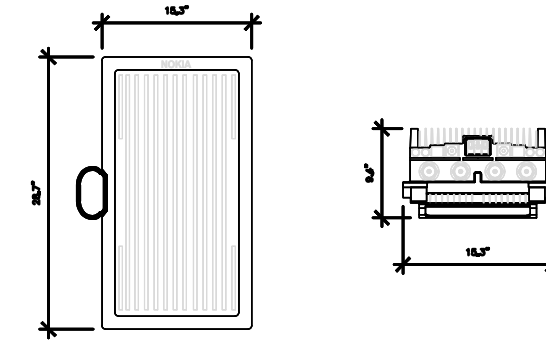


Operational Temperature Range	-40°C to 55°C (with no solar load)
Dimensions (mm) Core Height x width x depth	558x10x199
Volume (liters)	Standard W/W Heat Shield = 50 / 44
Weight (kg)	W/WO mounting bracket = 46 / 43
Ingress protection class	IP65
Installation options	Pole or Wall, Vertical or Horizontal Back Mount
Surge protection	Class 1 SIA

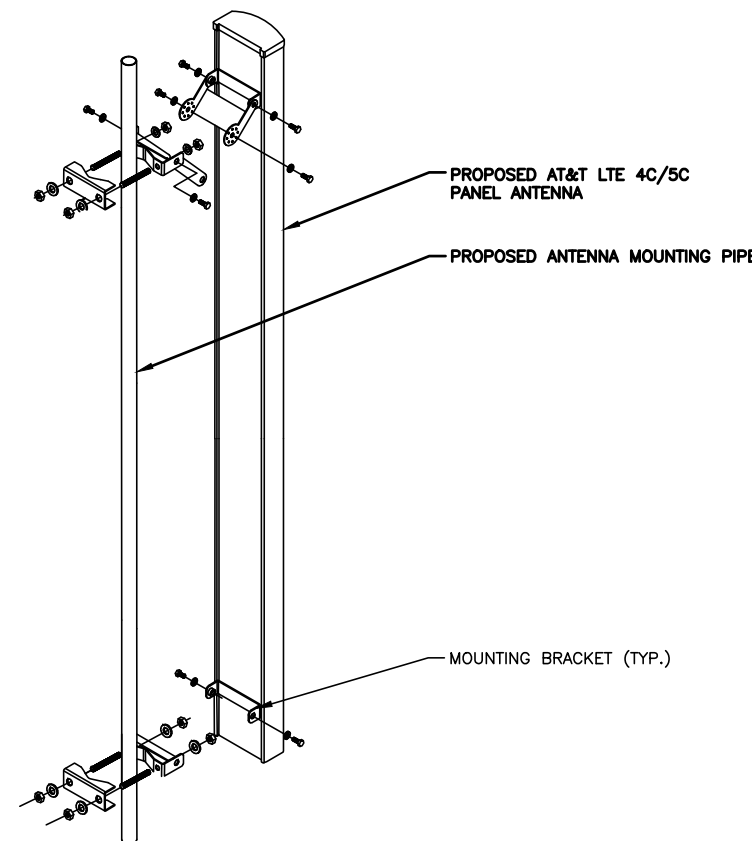
2 PROPOSED RRU AHLBBA DETAIL
 A-7 SCALE: NTS

NOKIA AIRSCALE DUAL RRH 4T4R B25/66 320W AHFIB

DIMENSIONS, HxWxD: 560 X 308 X 149 (MM) (CORE)
 28.7" X 15.3" X 9.4" (CORE)
 730 X 390 X 240 (MM)
 (OVERALL NOT-TO-EXCEED WITH COVER AND BRACKET)
 28.7" X 15.3" X 9.4"
 (OVERALL NOT-TO-EXCEED WITH COVER AND BRACKET)
 WEIGHT: < 40 (kg)
 < 88.2 lbs
 (OVERALL NOT-TO-EXCEED WITH COVER AND BRACKET)

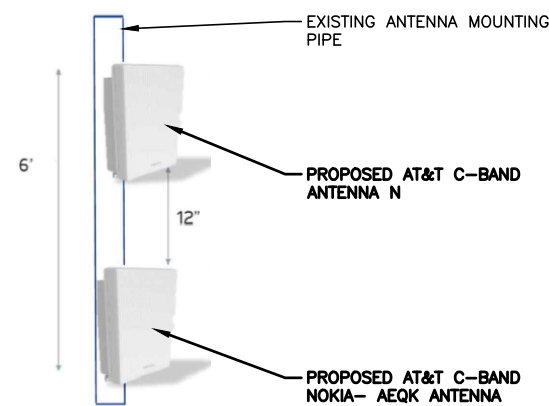


3 PROPOSED RRU AHFIB DETAIL
 A-7 SCALE: NTS



4 ANTENNA MOUNTING DETAIL
 A-7 SCALE: NTS

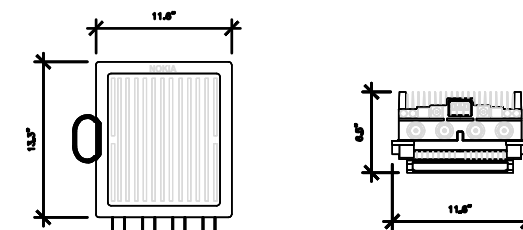
C-band and DoD – Vertical mounting on a pole



5 C-BAND STACK MOUNTING INSTRUCTION AND SEPRATION
 A-7 SCALE: NTS

NOKIA NOKIA AIRSCALE RRH 4T4R B5 160W AHCA

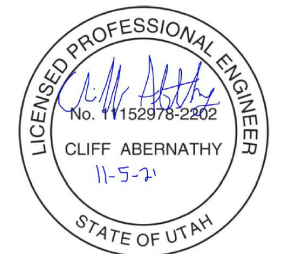
DIMENSIONS, HXWXD: 337 X 295 X 165 (MM)
 13.3" X 11.6" X 6.5"
 WEIGHT: 16.7 (kg)
 36.8 lbs



6 PROPOSED RRU AHCA DETAIL
 A-7 SCALE: NTS



1825 W. WALNUT HILL LANE, SUITE 120
 IRVING, TEXAS 75038
 1-855-669-5421



DRAWING SCALES ARE INTENDED FOR 11"x17" SIZE PRINTED MEDIA ONLY.

SUBMITTALS			
REV	DATE	DESCRIPTION	BY
A	09/23/21	90% CD	DHR
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C	10/25/21	90% CD	SUA
D	11/01/21	100% CD	SUA

SITE INFORMATION

SITE ID:
 UTLO2188
 RFDS NAME:
 UTLO2188
 SITE NAME:
 DOWNTOWN DRAPER
 SITE ADDRESS:
 11901 SOUTH 700 EAST
 DRAPER, UT 84020

SHEET DESCRIPTION

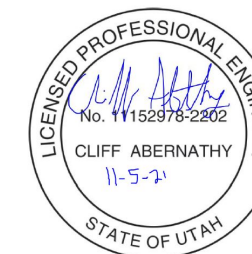
EQUIPMENT DETAILS

SHEET No.

A-7



1825 W. WALNUT HILL LANE, SUITE 120
IRVING, TEXAS 75038
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SITE INFORMATION

SITE ID:
UTL02188

RFDS NAME:
UTL02188

SITE NAME:
DOWNTOWN DRAPER

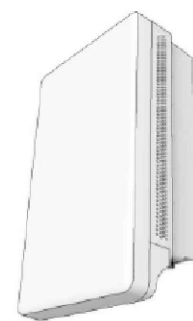
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11901 SOUTH 700 EAST
DRAPER, UT 84020

SHEET DESCRIPTION

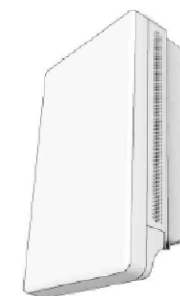
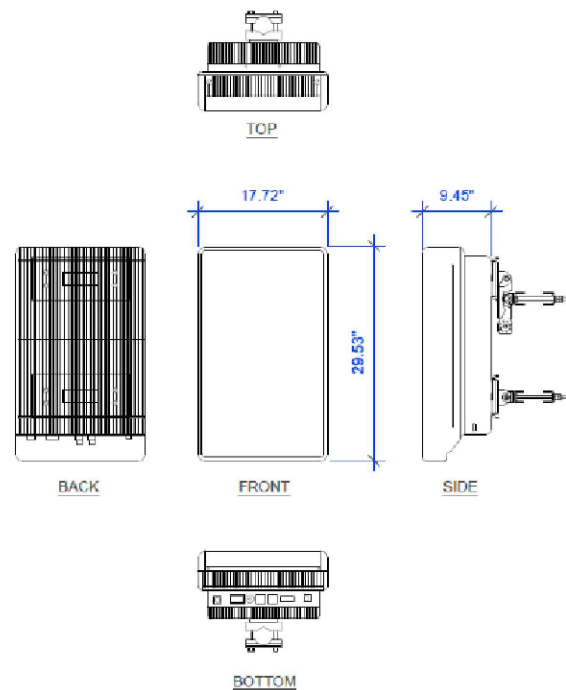
EQUIPMENT DETAILS

SHEET No.

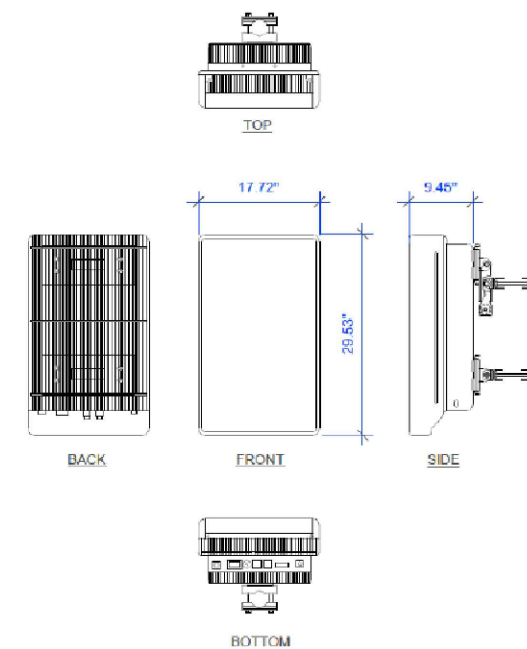
A-8



MANUFACTURER	NOKIA
MODEL #	C-BAND ANTENNA N
DIMENSIONS (HxWxD)	29.53" x 17.72" x 9.45"
NET WEIGHT	<99 lbs (WITHOUT MOUNTING BRACKETS)
OPTICAL PORTS	2 x SFP28, 10/25GE eCPRI
FREQUENCY	



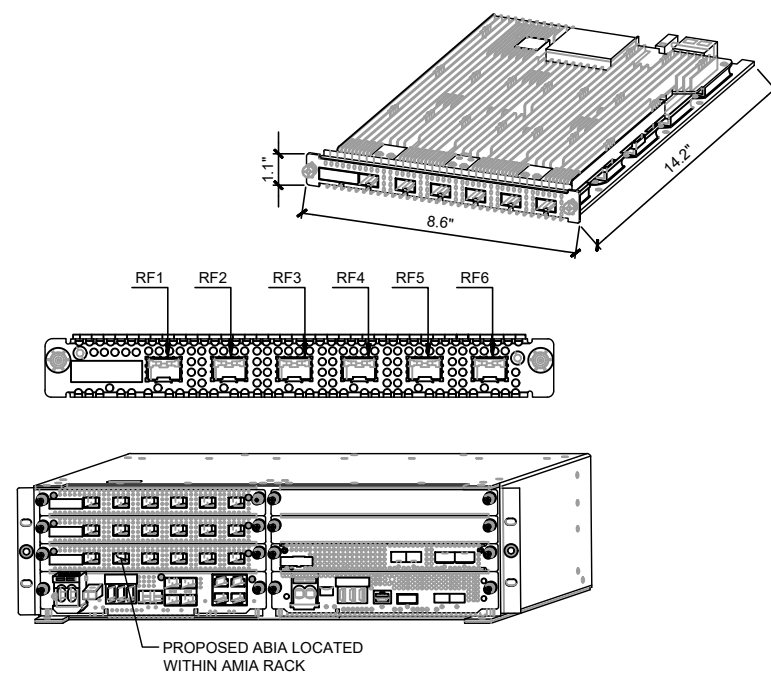
MANUFACTURER	NOKIA
MODEL #	AEQK
DIMENSIONS (HxWxD)	29.53" x 17.72" x 9.45"
NET WEIGHT	<99 lbs (WITHOUT MOUNTING BRACKETS)
OPTICAL PORTS	2 x SFP28, 10/25GE eCPRI
FREQUENCY	



1 PROPOSED C-BAND ANTENNA N DETAIL
A-8 SCALE: NTS

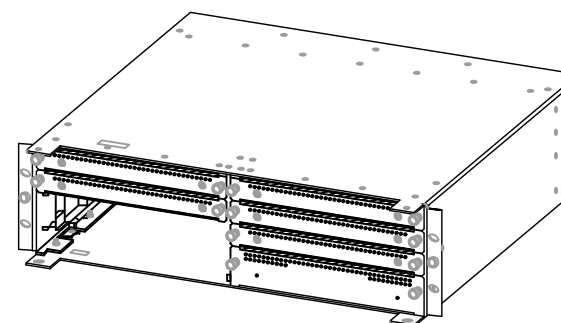
2 PROPOSED AEQK C-BAND ANTENNA DETAIL
A-8 SCALE: NTS

MANUFACTURER:	NOKIA
MODEL:	ABIA
WEIGHT:	4.6 LBS
DIMENSIONS:	8.6"x14.2"x1.1"



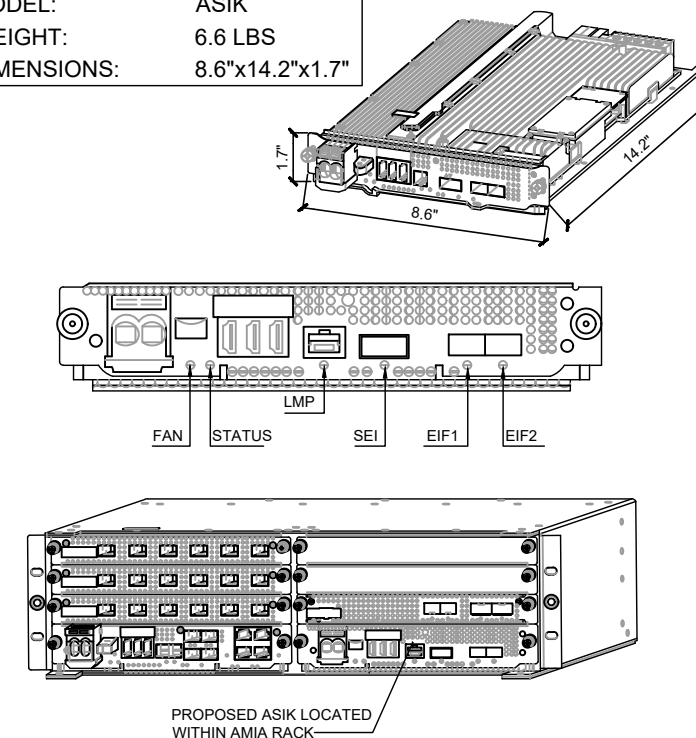
2 ABIA DETAIL
A-8 SCALE: NTS

MANUFACTURER:	NOKIA
MODEL:	AMIA
WEIGHT:	11.2 LBS (UNIT ONLY)
DIMENSIONS:	5.1"x15.7"x17.6"



3 AMIA DETAIL
A-8 SCALE: NTS

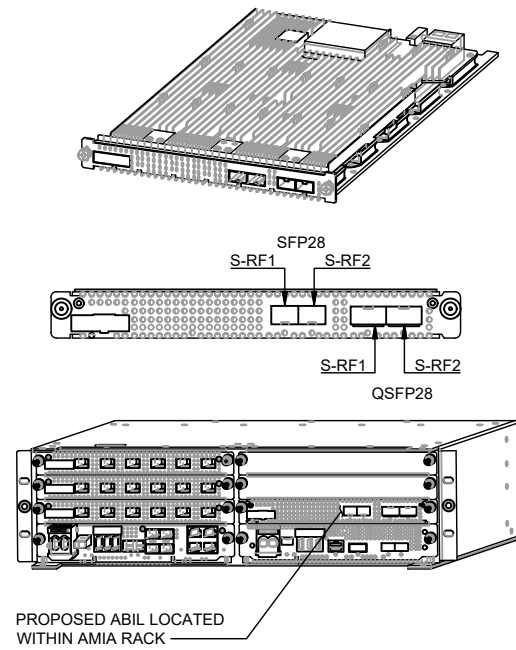
MANUFACTURER:	NOKIA
MODEL:	ASIK
WEIGHT:	6.6 LBS
DIMENSIONS:	8.6"x14.2"x1.7"



4 ASIK DETAIL
A-8 SCALE: NTS

DRAWING SCALES ARE INTENDED FOR 11"x17" SIZE PRINTED MEDIA ONLY.

MANUFACTURER: NOKIA
 MODEL: ABIL
 WEIGHT: 4.4 LBS
 DIMENSIONS: 8.6"x14.2"x1.1"



1 ABIL DETAIL
 A-9 SCALE: NTS

N/A

2 AMIA DETAIL
 A-9 SCALE: NTS

3 NOT USED
 A-9 SCALE: NTS



1825 W. WALNUT HILL LANE, SUITE 120
 IRVING, TEXAS 75038
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SUBMITTALS

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C	10/25/21	90% CD	SUA
D	11/01/21	100% CD	SUA

SITE INFORMATION

SITE ID:
 UTLO2188

RFDS NAME:
 UTLO2188

SITE NAME:
 DOWNTOWN DRAPER

SITE ADDRESS:
 11901 SOUTH 700 EAST
 DRAPER, UT 84020

SHEET DESCRIPTION

EQUIPMENT DETAILS

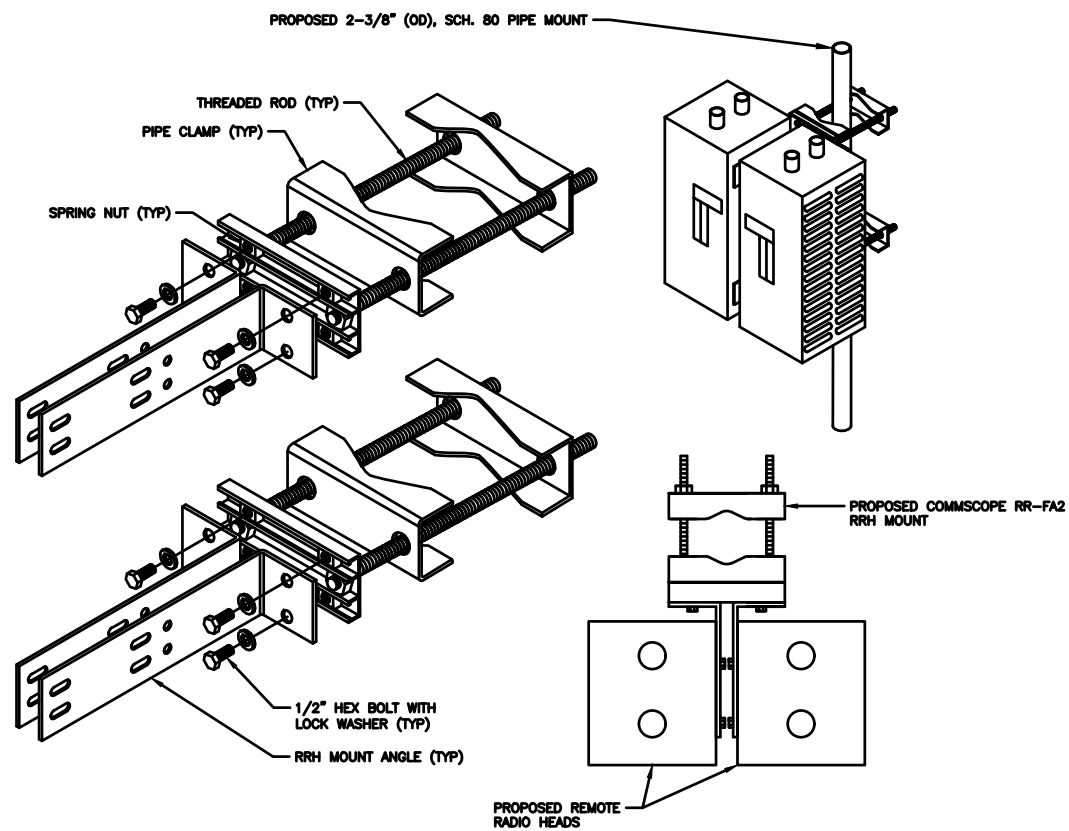
SHEET No.

A-9

4 NOT USED
 A-9 SCALE: NTS

5 NOT USED
 A-9 SCALE: NTS

6 NOT USED
 A-9 SCALE: NTS



1 RRU MOUNTING DETAIL
A-10 SCALE: NTS



Dimensions

Height	416.56 mm 16.4 in
Width	218.44 mm 8.6 in
Length	457.2 mm 18 in
Mounting Diameter 2, maximum	142.24 mm 5.6 in
Mounting Diameter 2, minimum	0 mm 0 in
Mounting Diameter, maximum	142.24 mm 5.6 in
Mounting Diameter, minimum	0 mm 0 in

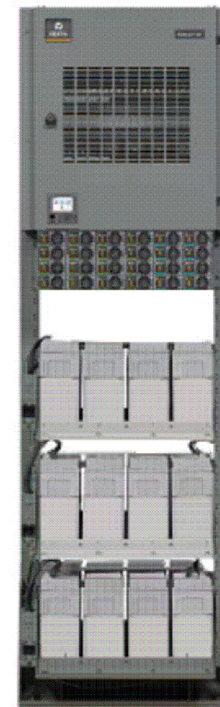
Material Specifications

Material Type Hot dip galvanized steel

Packaging and Weights

Included	Clamps Hardware
Packaging quantity	2
Weight, net	16.329 kg 36 lb

2 COMMSCOPE - RR-FA2 BRACKET DETAIL
A-10 SCALE: NTS



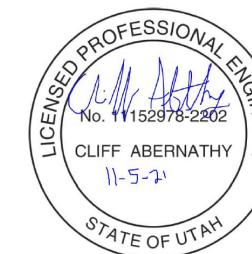
Technical Specifications

SYSTEM FEATURES	
DC Output Voltage	-48 VDC (nominal)
AC Input Voltage	208/240 VAC single phase (nominal)
RATED OUTPUT CAPACITY	
System	1000 amps at -48 VDC, 520 amps at +24 VDC
Shelf	250 amps at -48 VDC, 187.5 amps at +24 VDC
Distribution Panel	600 amps at -48 VDC, 520 amps at +24 VDC
PHYSICAL CHARACTERISTICS	
Framework Type	Relay rack
Width	25.5 inches
Depth	22 inches
Height	84 inches
Access	Front access for installation, operation and maintenance
ENVIRONMENTAL	
Operating	-40 °F to 104 °F (-40 °C to 40 °C) continuous operation
Storage	-40 °F to 185 °F (-40 °C to 85 °C)
Humidity	0% to 95% relative humidity, non-condensing
Ventilation	Rectifiers/converters are fan-cooled front to rear
EMI/RFI Suppression	Conforms to FCC rules Part 15, Subpart B, Class B and EN55022 Class B, radiated and conducted
Safety Compliance	UL Listed to 1801, cUL, NEBS Level 3 Certified

3 PROPOSED NETSURE 7100 POWER PLANT DETAIL
A-10 SCALE: NTS



1825 W. WALNUT HILL LANE, SUITE 120
IRVING, TEXAS 75038
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0	11/01/21	100% CD	SUA

SITE INFORMATION

SITE ID:
UTL02188

RFDS NAME:
UTL02188

SITE NAME:
DOWNTOWN DRAPER

SITE ADDRESS:
11901 SOUTH 700 EAST
DRAPER, UT 84020

SHEET DESCRIPTION

EQUIPMENT DETAILS

SHEET No.

A-10

MARATHON

MARATHON

From the World Leader in VRLA Battery Technology
 Designed for durability in Telecommunications and Electric Utility applications, the GNB Industrial Power MARATHON® M12V180FT Battery provides high performance and reliability in long duration discharge applications. The location of the terminals on the front (vs. the top) of the battery greatly facilitates the installation and maintenance of the product when placed in a cabinet enclosure or on standard relay rack tray. The MARATHON® M12V180FT Battery highlights another example of GNB Industrial Power's extensive experience and world wide leadership in VRLA technology.

"Designed in" Quality Manufacturing
 Quality manufacturing processes for the MARATHON® M12V180FT Battery incorporates the industry's most advanced technologies including: an automated helium leak detection system, a computer controlled "fill by weight" acid filler, and a temperature controlled water bath formation process. Each and every unit is capacity tested.

High Performance MARATHON® M12V180FT Features

- Patented "Diamond Side-Wall" Design maintains structural integrity in higher operating temperatures
- Durable Flame Retardant Polypropylene Container and Cover complies with UL94 V-0, 25% L.D.I.
- Carry Handles facilitates ease of installation
- High-Compression Absorbent Glass Mat (AGM) Technology ensures greater than 99% recombination efficiency
- Integrated Flash Arrestor ultrasonically welded into cover for secure and safe protection
- 10 Year Design Life in float applications @ 25°C (77°F); 12 year @ 20°C (68°F)
- Superior Lead-Tin-Calcium Positive Alloy helps to resist corrosion
- Higher Vent Opening Pressure minimizes unnecessary gassing; one-way self resealing device
- Front Accessible Copper Alloy, 6 mm, Female Terminals ensures low resistance, high integrity connections
- "Easy On/Easy Off" Terminal Post Protector provides added safety
- Wider Bushing allows access for larger probes
- Footprint Ready fits in all standard 23" Relay Rack Applications
- Compliance: Designed in accordance with IEC 60896-21-22
- No Transport Restrictions: Complies with IATA/ICAO Special Provision A67; DOT-CFR Title 49; IMDG Amendment 34-08

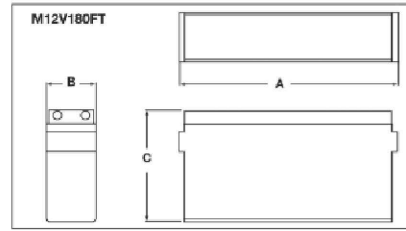
Applications

The MARATHON® M12V180FT Battery incorporates GNB Industrial Power's advanced VRLA technology designed for long life and high performance in:

- Telecommunications
- Distributed Power
- PCS
- Cellular
- Broadband
- Electric Utility
- Switchgear Control Power
- Communications



Model Number	Voltage	Capacity (AH)		Nominal Dimensions						Nominal Weight	
		6 hr to 1.75 VPC @ 25°C	10 hr to 1.80 VPC @ 20°C	Inches			Millimeters			lbs.	Kg
				A	B	C	A	B	C		
M12V180FT	12	180	175	22.00	4.90	12.50	959	124	318	133	90



Float Voltage & Charging

Constant Voltage charging is recommended
 Recommended float voltage: 2.27 VPC @ 25°C (77°F)
 Float Voltage Range: 2.25 to 2.30 VPC @ 25°C (77°F)
 Equalize Voltage: 2.35 VPC for 24 Hours or 2.40 VPC for 12 Hours

Marathon® M12V180FT Electrical Data

Model Number	Short Circuit Current Amps	Internal Resistance (mOhms)
M12V180FT	4147	3.0

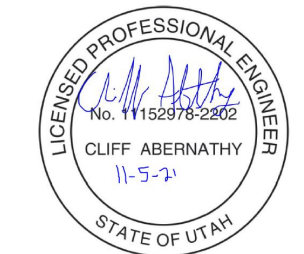
Marathon M12V180FT Performance Specifications
 Amps @ 25° (77° F)

Rate Voltage Per Cell	Time															
	24 hr	20 hr	12 hr	10 hr	8 hr	8 hr	7 hr	6 hr	5 hr	4 hr	3 hr	2.5 hr	2 hr	1.5 hr	1 hr	0.5 hr
1.94 Final Volts Per Cell	6.4	7.8	12.2	14.4	15.0	17.7	20.0	22.5	26.1	31.2	39.4	45.8	54.8	65.1	80.0	134.6
1.92 Final Volts Per Cell	6.8	8.0	12.9	15.3	16.0	18.9	21.1	23.8	27.8	33.1	41.9	48.8	59.3	72.1	90.1	144.6
1.90 Final Volts Per Cell	7.1	8.4	13.6	16.1	17.0	19.9	22.0	24.8	29.0	34.8	44.0	51.2	61.3	76.0	100.7	154.6
1.87 Final Volts Per Cell	7.5	8.8	14.0	16.9	18.0	21.0	23.5	26.5	30.8	36.5	45.5	52.9	63.0	78.0	102.7	157.8
1.85 Final Volts Per Cell	7.7	9.1	14.6	17.9	19.1	21.5	24.1	27.1	31.0	37.4	47.1	54.4	65.0	81.2	112.7	175.2
1.82 Final Volts Per Cell	7.9	9.3	14.9	17.9	19.5	21.7	24.6	27.6	31.9	38.2	48.0	55.8	66.5	83.8	115.9	181.6
1.81 Final Volts Per Cell	7.9	9.4	15.1	17.9	19.7	22.0	24.9	27.9	32.2	38.7	48.8	56.5	67.8	85.5	118.2	184.4
1.80 Final Volts Per Cell	8.0	9.4	15.2	18.0	19.8	22.1	25.0	28.0	32.3	38.9	49.1	56.9	68.5	86.5	118.1	186.9
1.78 Final Volts Per Cell	8.0	9.5	15.3	18.1	20.0	22.3	25.2	28.2	32.7	39.3	49.5	57.4	69.7	88.7	120.3	191.9
1.76 Final Volts Per Cell	8.1	9.6	15.4	18.3	20.2	22.5	25.4	28.4	33.0	39.6	49.8	57.9	69.9	92.6	121.7	194.6

3 MARATHON M12V180FT BATTERY DETAIL
 A-11 SCALE: NTS



1825 W. WALNUT HILL LANE, SUITE 120
 IRVING, TEXAS 75038
 1-855-669-5421



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SUBMITTALS

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SITE INFORMATION

SITE ID:
 UTLO2188

RFDS NAME:
 UTLO2188

SITE NAME:
 DOWNTOWN DRAPER

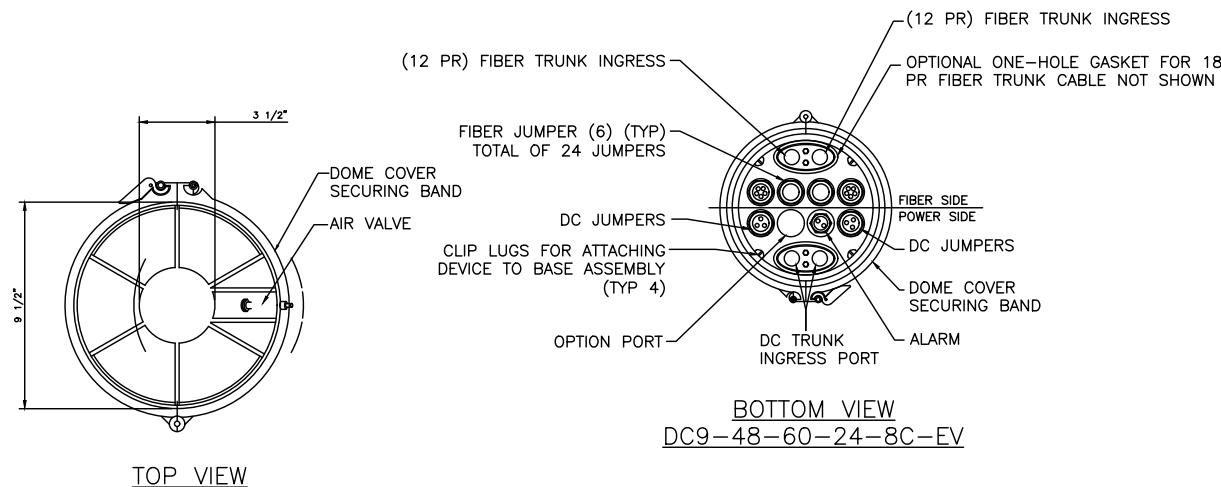
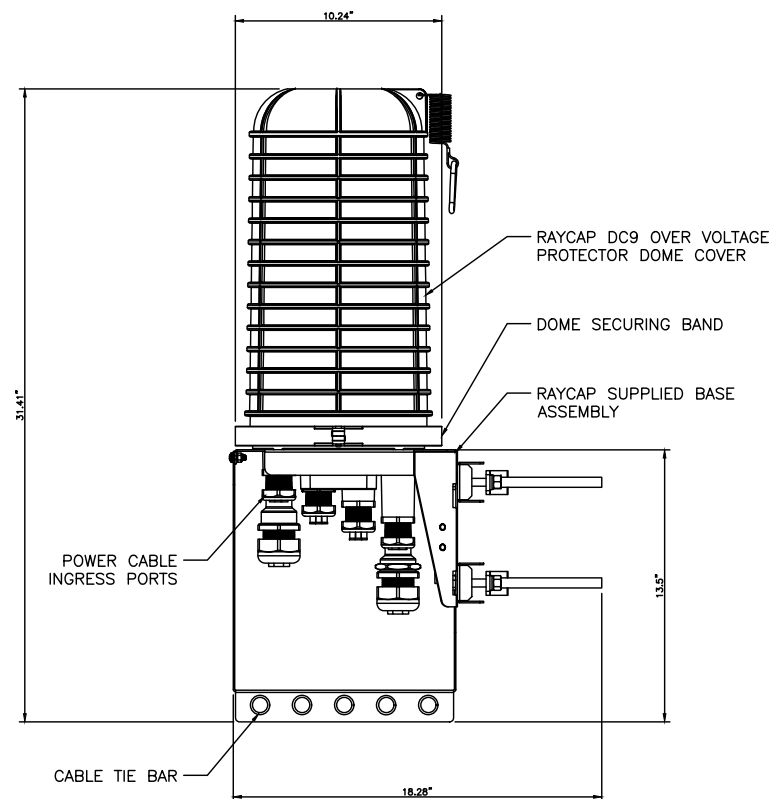
SITE ADDRESS:
 11901 SOUTH 700 EAST
 DRAPER, UT 84020

SHEET DESCRIPTION

EQUIPMENT DETAILS

SHEET No.

A-11

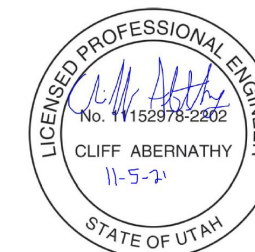


RAYCAP DC9 (SQUID)	
LENGTH (H)	18.28"
WIDTH (W)	10.24"
HEIGHT (D)	31.41"
WEIGHT:	
SYSTEM MOUNT	16.0 LBS
TOTAL:	26.2 LBS

2 DC9 DETAIL
 A-11 SCALE: NTS



1825 W. WALNUT HILL LANE, SUITE 120
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1-855-669-5421



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UTL02188

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SHEET DESCRIPTION

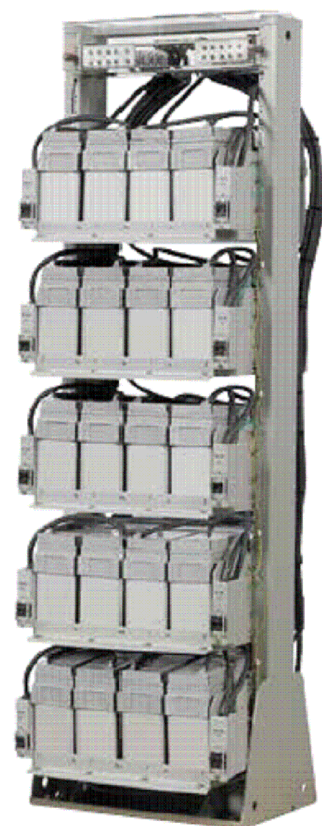
EQUIPMENT DETAILS

SHEET No.

A-12



+24V, Five-Tray (10 Strings) Battery Rack with NetSure® 700 DC Power System



Single-Bay Battery Rack

Technical Specifications

Rated Output Capacity

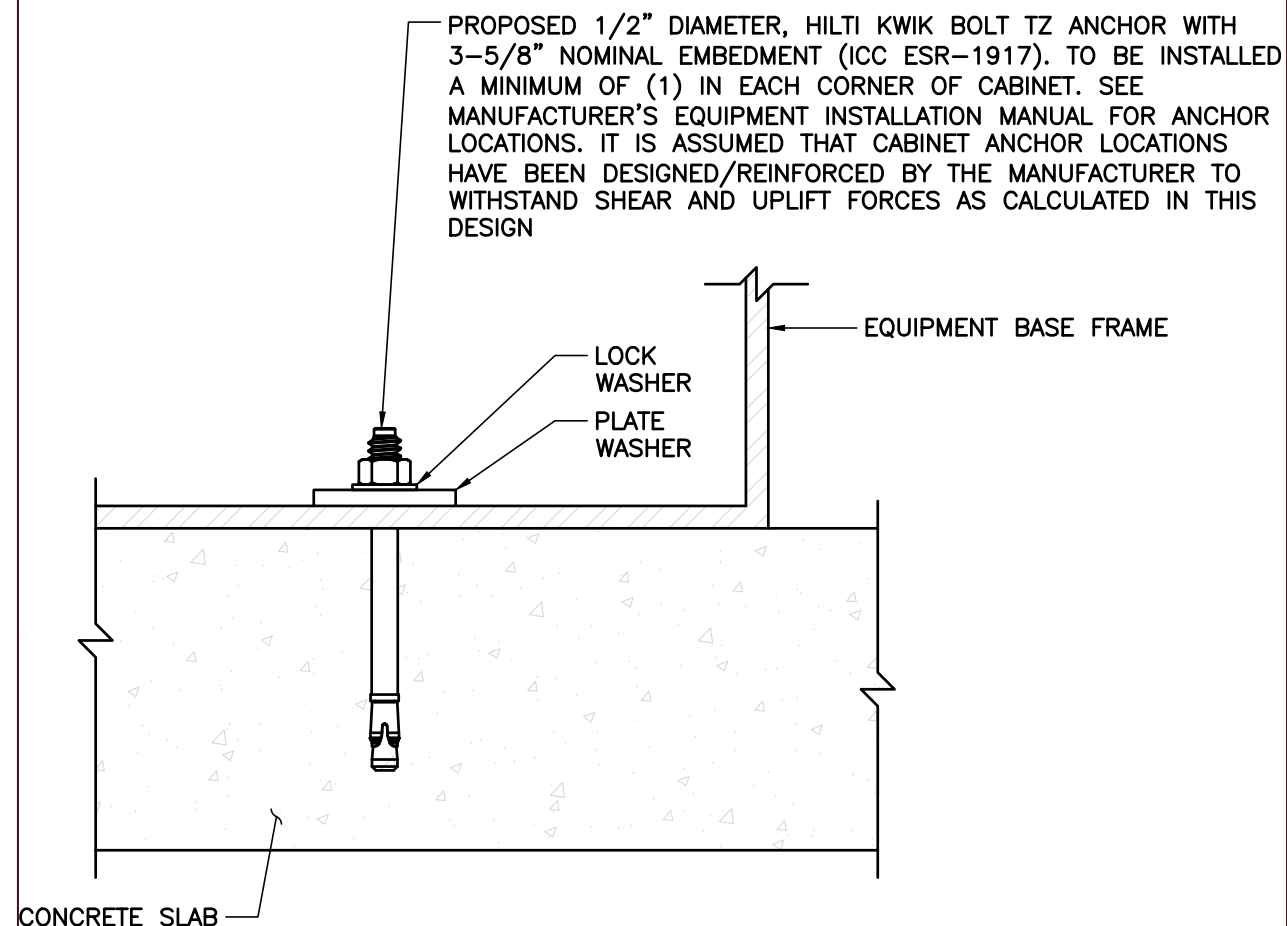
Output +24 Volts DC or -48 Volts DC
Capacity 1200 amps per bay

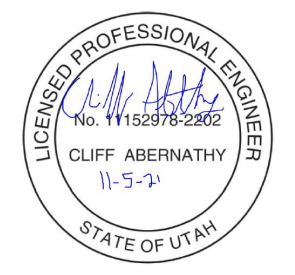
Physical Characteristics

Rack dimensions (H x W x D) 84' x 25.5' x 24.4'
Rack weight (without batteries) 600 lbs.

Environmental

Operating Temperature -40 °C to +40 °C (-40 °F to +104 °F)
Storage Range -40 °C to +85 °C (-40 °F to +185 °F)
Safety Compliance UL Listed and Seismic Zone 4 compliant





DRAWING SCALES ARE INTENDED FOR 11"x17" SIZE PRINTED MEDIA ONLY.

SUBMITTALS			
REV	DATE	DESCRIPTION	BY
A	09/23/21	90% CD	DHR
B	10/21/21	90% CD	DHR
C	10/25/21	90% CD	SUA
D	11/01/21	100% CD	SUA

SITE INFORMATION

SITE ID:
UTL02188

RFDS NAME:
UTL02188

SITE NAME:
DOWNTOWN DRAPER

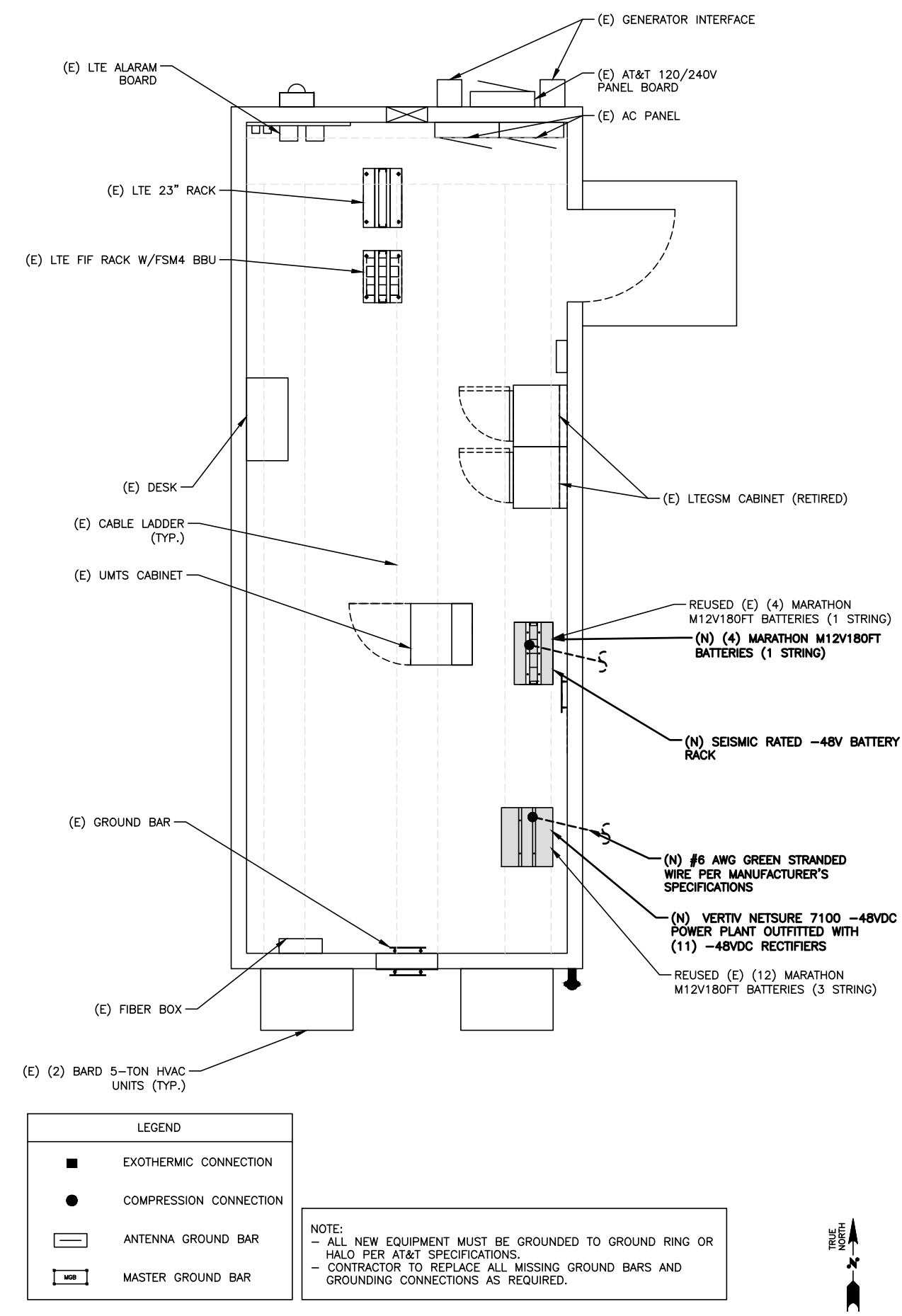
SITE ADDRESS:
11901 SOUTH 700 EAST
DRAPER, UT 84020

SHEET DESCRIPTION

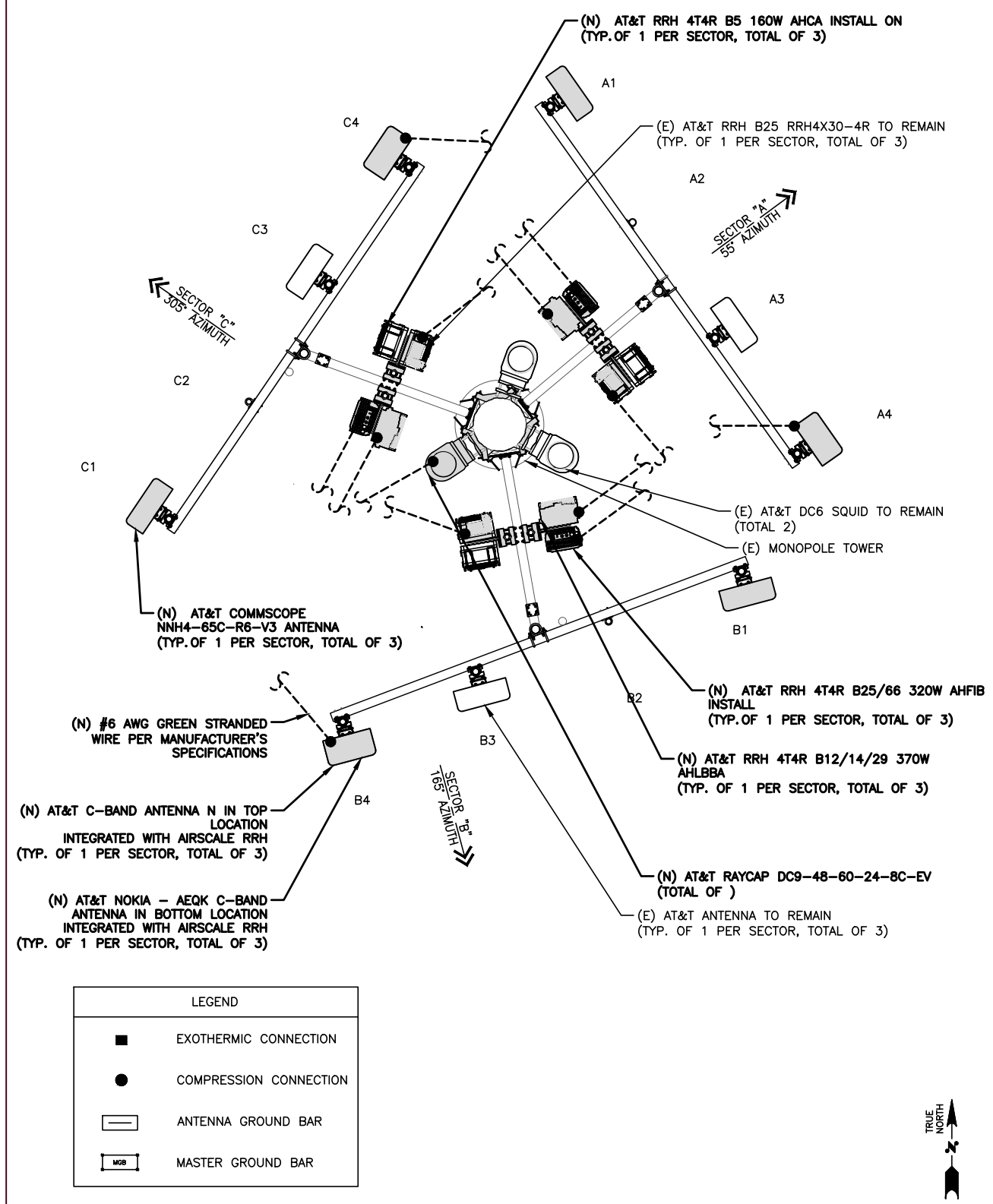
GROUNDING PLAN

SHEET No.

E-1



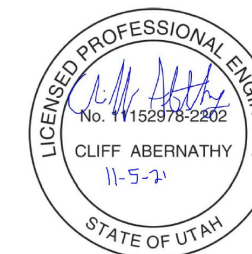
1 EQUIPMENT SHELTER GROUNDING PLAN
E-1 SCALE (11" X 17"): 1" = 0 16'-0" 32'-0" 64'-0" 96'-0"



2 ANTENNA MOUNT GROUNDING PLAN
E-1 SCALE: NTS



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IRVING, TEXAS 75038
1-855-669-5421



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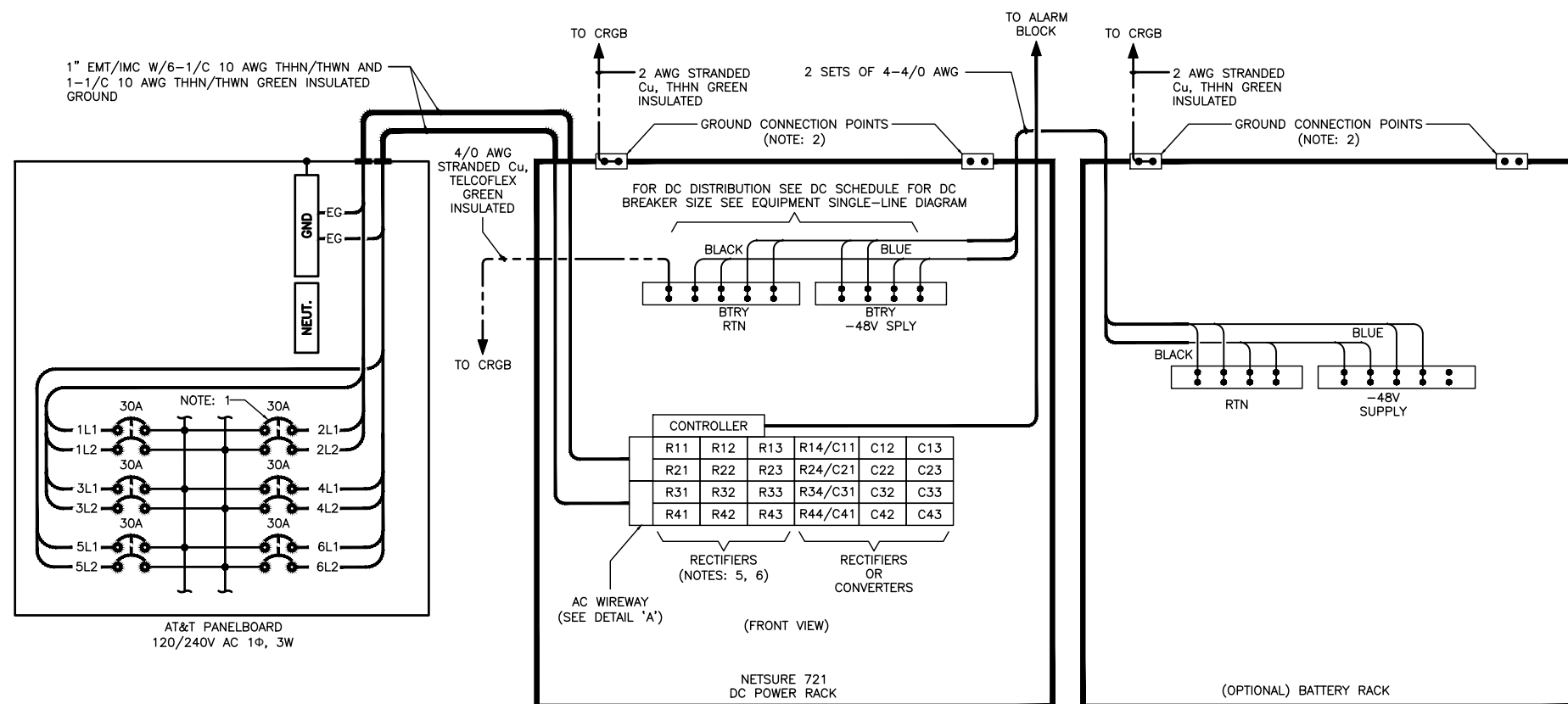
SITE ADDRESS:
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SHEET DESCRIPTION

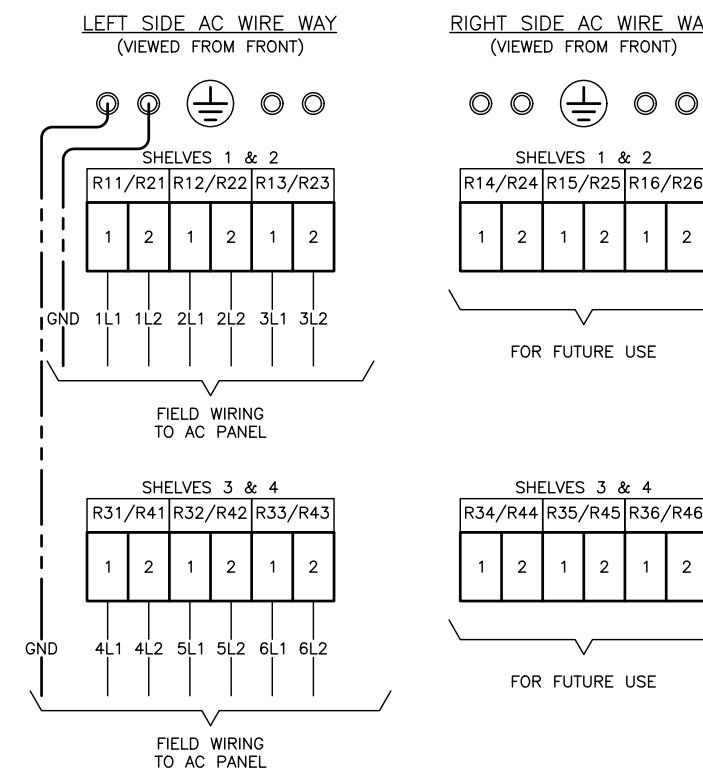
VERTIV DC POWER PLANT
SINGLE-LINE DIAGRAM

SHEET No.

E-3

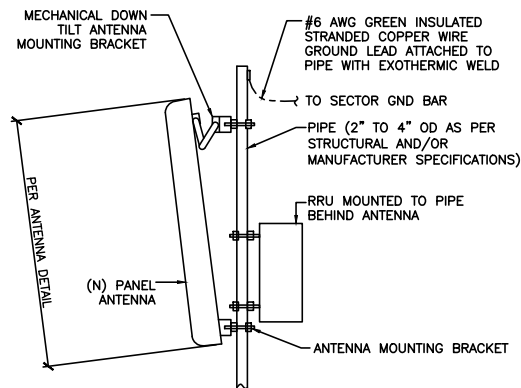


- NOTES:
- REFER TO AC PANEL SCHEDULE FOR CIRCUIT BREAKER REQUIREMENTS AND POSITION LOCATION.
 - GROUND CONNECTION POINT 1/4"-20, 5/8" C-C STUDS AND HARDWARE FOR 2-HOLE TERMINALS.
 - REFER TO MANUFACTURERS INSTALLATION GUIDES FOR MOUNTING AND CONNECTION INSTRUCTIONS.
 - R = RECTIFIERS
C = CONVERTER
FIRST DIGIT REPRESENTS SHELF NUMBER.
SECOND DIGIT REPRESENTS POSITION NUMBER.
 - PREFERRED INSTALLATION IS RECTIFIERS IN RECTIFIER POSITIONS 1 THRU 4 AND CONVERTERS IN CONVERTER POSITIONS 2 AND 3.

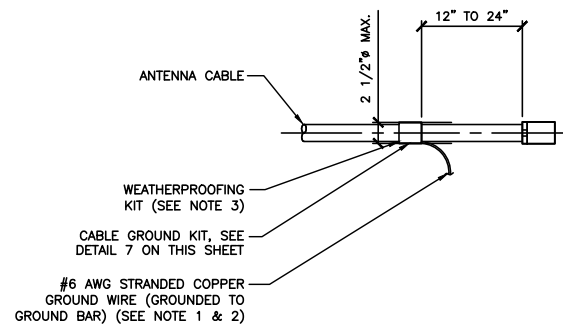


AC SINGLE-LINE DIAGRAM
FOR EMERSON NETSURE™ 7100 DUAL VOLTAGE POWER
AND OPTIONAL BATTERY RACK
(-48V PRIMARY/24V SECONDARY)

DETAIL 'A'
RECTIFIER AC INPUT CONNECTIONS

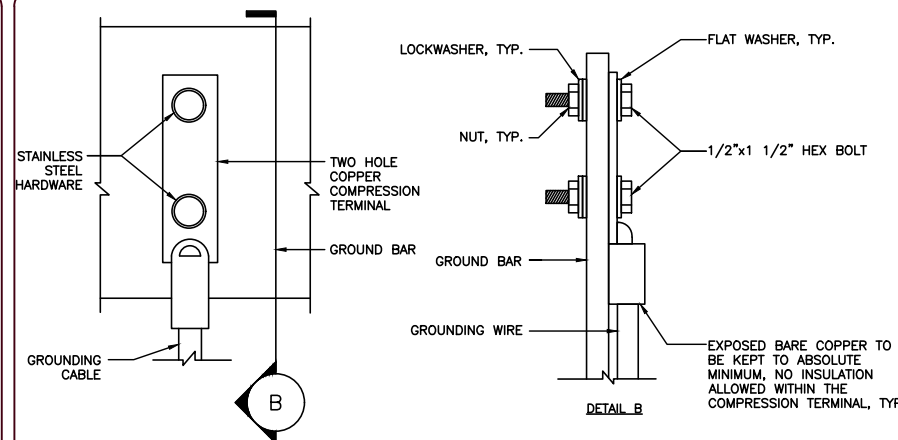


1 ANTENNA PIPE MOUNT GROUNDING DETAIL
E-4



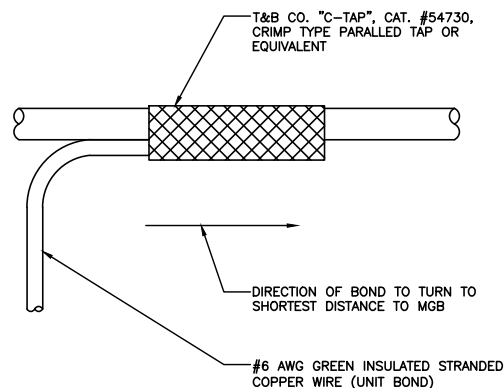
- NOTES:
- DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR
 - GROUNDING KIT SHALL BE ANDREW SUREGROUND TYPE KIT WITH TWO-HOLE LUG
 - WEATHER PROOFING SHALL BE ANDREW TWO-PART TAPE SUPPLIED WITH KIT. COLD SHRINK SHALL NOT BE USED

2 CABLE GROUND KIT DETAIL
E-4

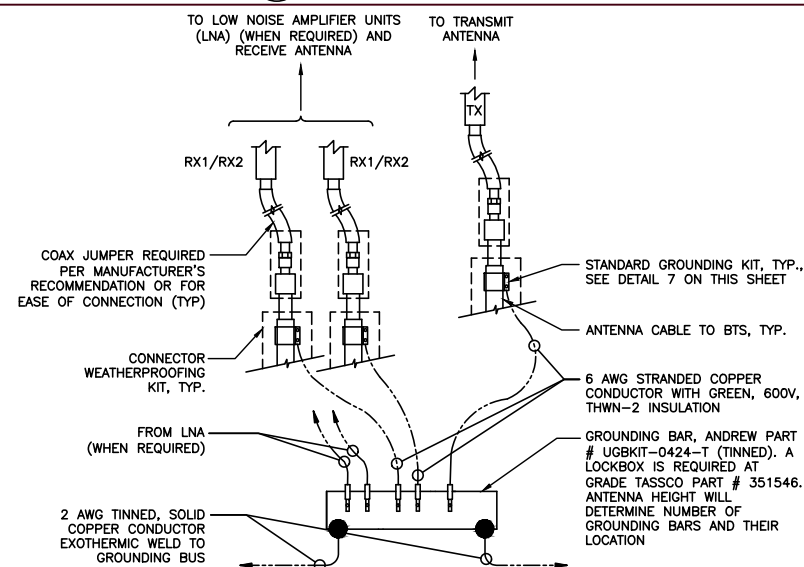


- NOTES:
- "DOUBLING UP" OR "STACKING" OF CONNECTIONS IS NOT PERMITTED.
 - OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS AND TO BE APPLIED PRIOR TO ADDING HARDWARE.

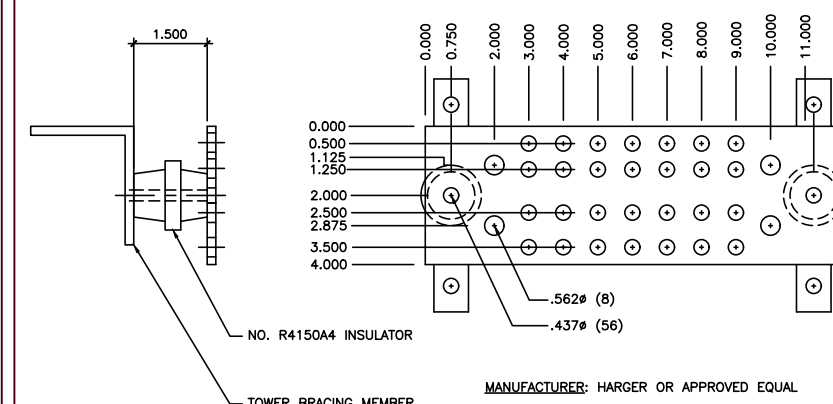
3 TYPICAL GROUND LUG CONNECTION DETAIL
E-4



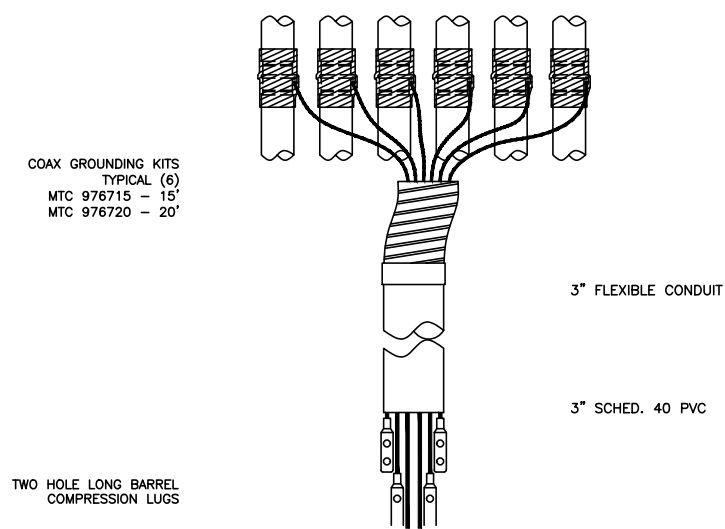
4 GROUNDING WIRE CONNECTION
E-4



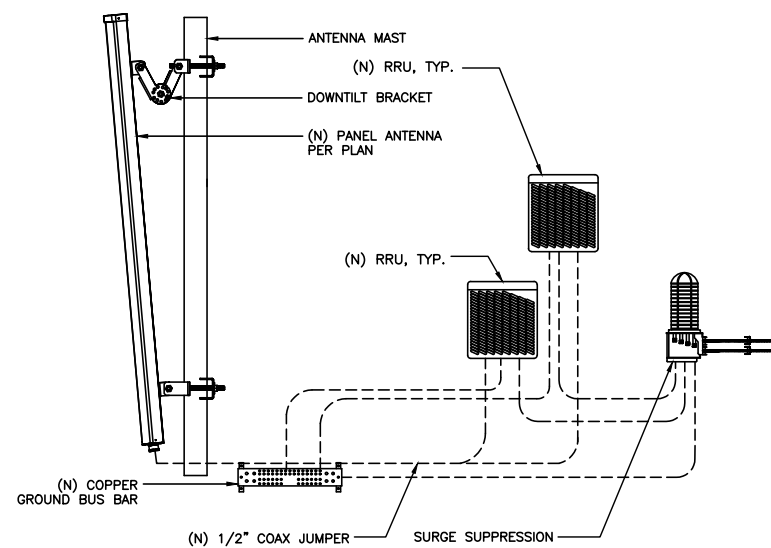
5 ANTENNA GROUNDING BAR CONNECTION DETAIL
E-4



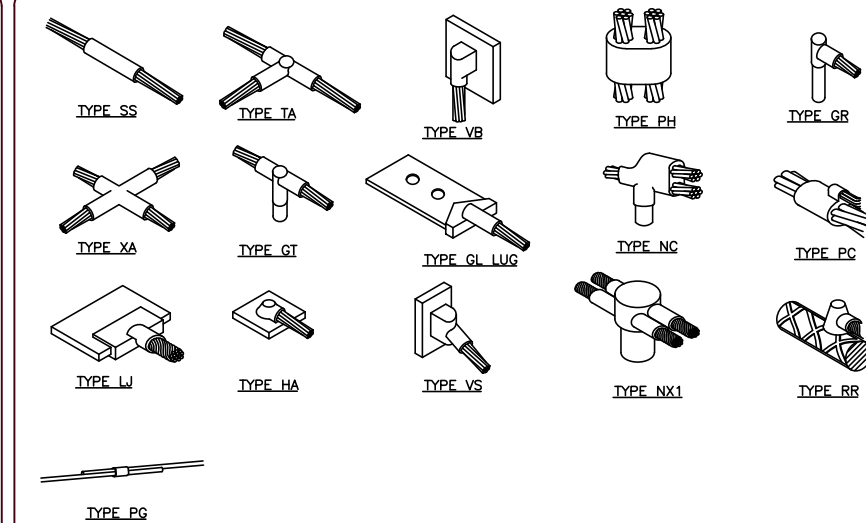
6 ANTENNA (12") GROUND BAR DETAIL
E-4



7 COAX GROUND KIT
E-4



8 RRU GROUNDING DETAIL
E-4



9 TYPICAL CADWELD TYPES
E-4



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SHEET DESCRIPTION

GROUNDING DETAILS

SHEET No.

E-4