



operates a call center and the Taxbit Inc software company. This facility is known as UTL02003 and is located on property leased from LD Bowerman Investments LLC. AT&T added the wireless antennas and equipment structure to the roof of the building in 2006.

The wireless facility appears to have been in continuous use since its construction in approximately 2006. A conditional use permit for a USWest wireless facility at this location was approved May 29, 1998 under application 98-054, however those antenna arrays were shorter, were located in different locations on the roof, and based on aerial photography were removed in approximately 2011. The applicant provided a copy of the original approval for the installation of the subject wireless facility appurtenances in 2006 (Exhibit F). File #PUP-0231-2017 requesting modifications to the wireless facility was approved in 2017, and file #USE-0917-2019 for modifications and upgrades was the most recent application approved by the Zoning Administrator on February 3, 2020. Based on the plans submitted with this application additional antennas and equipment appear to have been modified or added to the structure between the most recent approval and the present day, without having first obtained the requisite approvals and permits from Draper City.

## **ANALYSIS**

General Plan and Zoning. The Land Use Map of the General Plan calls for the Community/ Neighborhood Commercial land use designation for the subject property (Exhibit C). These categories are characterized as follows:



### Community Commercial

| LAND USE DESCRIPTION     |   |
|--------------------------|---|
| <b>CHARACTERISTICS</b>   | <ul style="list-style-type: none"> <li>• Includes the full scope of commercial land uses that require and utilize exposure to the freeway</li> <li>• Intended to be traveler-or commuter-oriented and should provide lodging, food, personal services and other similar uses</li> <li>• Frontage roads</li> <li>• Deeper setbacks for landscaping and enhancements</li> <li>• Limited traffic access points</li> <li>• Visual unity</li> <li>• Uniform design standards and aesthetics</li> <li>• Access to individual properties should be provided only from frontage roads</li> <li>• Well landscaped street frontages</li> <li>• Limited traffic access points for the site</li> <li>• Common off-street traffic circulation and parking areas</li> <li>• Pedestrian access from surrounding residential areas</li> </ul> |
| <b>LAND USE MIX</b>      | <ul style="list-style-type: none"> <li>• Large-scale, master-planned commercial centers</li> <li>• Big-box stores and offices</li> </ul>  |
| <b>COMPATIBLE ZONING</b> | <ul style="list-style-type: none"> <li>• Community Commercial (CC)</li> <li>• General Commercial (CG)</li> <li>• Interchange Commercial (CI)</li> <li>• Institutional Care (IC)</li> </ul>  |
| <b>LOCATION</b>          | <ul style="list-style-type: none"> <li>• Strategically placed along high-traffic corridors with convenient points of traffic access to and from residential areas</li> </ul>  |

### Neighborhood Commercial

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

The property has been assigned the CO2 zoning classification (Exhibit D). According to Draper City Municipal Code (DCMC) Section 9-8-020 the purpose of the CO2 zone is to “provide locations primarily along arterial or major collector streets which will accommodate offices or laboratories for professional persons and other related uses. The zone is intended to provide availability of professional services conveniently to all neighborhoods in the city. Two (2) CO zones are provided: CO1 and CO2. CO1 zones are intended to allow office and related uses on relatively small tracts of land so they can be conveniently and compatibly located adjacent to residential areas. CO2 zones allow larger office and related use developments adjacent to commercial areas and away from residential areas. Typical uses in this zone include offices for doctors, dentists, accountants, and other similar professions, medical and dental laboratories, and pharmacies.” The subject property abuts the CO2 zone to the north and east and the CBP (Business Manufacturing Park) zone to the south. The I-15 Freeway is directly west of the subject property.

Requested modifications. The applicant is requesting to remove old antennas and equipment from the facility and replace them with new antennas and equipment. The applicant 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 existing height of the building at the top of the parapet wall is 45 feet and the existing antennas exceed the ten foot (10') height limit above the parapet wall by an additional one

foot (1') The additional height of the existing antennas, including those added to the facility without prior approval, violate the height standards contained within the DCMC, however eligible support structures, including rooftop antenna mounts, under the Federal Spectrum Act can add additional height equal to the greater of 10% or 10 feet in height. According to the submitted drawings additional antenna replacements have occurred without having first received the requisite City approval. These unauthorized modifications include:

- Installation of 3 UMTS units (1 per sector), all of which are proposed to be removed with this application.
- Installation of 6 RRHS units (2 per sector), all of which are proposed to be removed with this application
- Installation off 6 LTE Antennas (2 per sector), all of which are proposed to remain.

As the original antenna were approved to be eight feet (8') above any parapet wall and the building parapet wall was known to be three feet (3') in height, the overall height of the support structure was eleven feet (11') as measured from the roof deck to the top of all antennas. All of the currently unauthorized modifications to the site are reportedly no higher than eleven feet (11') above the parapet wall and represent a one foot (1') increase in height over the maximum permissible under the DCMC, but comply with the allowable additional height of up to ten feet (10') above the original support structure height of eleven feet (11') afforded an eligible facilities request. The new proposed AEQU C-Band antennas are proposed to exceed the permitted use height limits of the DCMC by one foot six inches (1'-6"), but are also within the allowable height limits afforded to an eligible facilities request. All other proposed additions and modifications to the wireless facility are not considered to be substantial under the FCC regulations.

The following changes to the rooftop appurtenances are proposed:

Rooftop antenna mounts:

- Remove 3 UMTS units (1 per sector)
- Remove 6 RRHS units (2 per sector)
- Install 3 AHLBBA RRHS units (1 per sector)
- Install AEQU C-Band Antennas in Top location (1 per sector)
- Install AEQK C-Band Antennas in Bottom Location (1 per sector)
- Install (1) 12 x 24 Hybrid Cable

Equipment Level:

- Remove Existing 1xAVIL/ 1 ASIK from LTE
- Add proposed 1 ASIL/ 3x ABIO To LTE
- Add (16) proposed 190H Batteries
- Add (2) proposed Vertive Rectifiers

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 DCMC. 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 modifications to the wireless site generally comply with 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 Division Review. The Draper City Engineering Division has completed their review of the Permitted Use Permit submission. Comments from this division, 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.

## **STAFF RECOMMENDATION**

Staff finds that the application meets requirements for consideration as an Eligible Facilities request under FCC regulations and applicable requirements of 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. The applicant shall obtain all applicable permits from Draper City Fire, the Engineering Division, and the Building Division for this installation.
2. That the wireless facility operator make no additional changes or modifications to the wireless facility without first obtaining written City approval for the proposed changes.



## 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.

**Brien Maxfield**

Digitally signed by Brien Maxfield  
DN: cn=Brien Maxfield, o=Draper City,  
ou=PW - Engineering,  
email=brien.maxfield@draperutah.gov, c=US  
Date: 2022.03.09 08:18:46 -07'00'

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Draper City Public Works Department

**Jennifer Jastremsky**

Digitally signed by Jennifer Jastremsky  
DN: C=US, E=jennifer.jastremsky@draperutah.gov,  
O=Planning Division, OU=Draper City, CN=Jennifer  
Jastremsky  
Date: 2022.03.14 09:34:05-06'00'

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Draper City Planning Division

**Don Buckley**

Digitally signed by Don Buckley  
DN: C=US, E=don.buckley@draper.ut.us,  
O=Draper City Fire ", OU=Fire Marshal,  
CN=Don Buckley  
Date: 2022.03.10 19:53:46-07'00'

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Draper City Fire Department

**Mike Barker**

Digitally signed by Mike Barker  
Date: 2022.03.09 08:31:40  
-07'00'

---

Draper City Legal Counsel

**Keith Collier**

Digitally signed by Keith Collier  
DN: C=US, E=keith.collier@draperutah.gov,  
O=Draper City, OU=Building Official, CN=Keith  
Collier  
Date: 2022.03.09 06:51:56-07'00'

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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.

1. No additional comments.

### Engineering Division Review.

1. No additional comments

### 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.

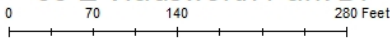


**EXHIBIT B  
AERIAL MAP**



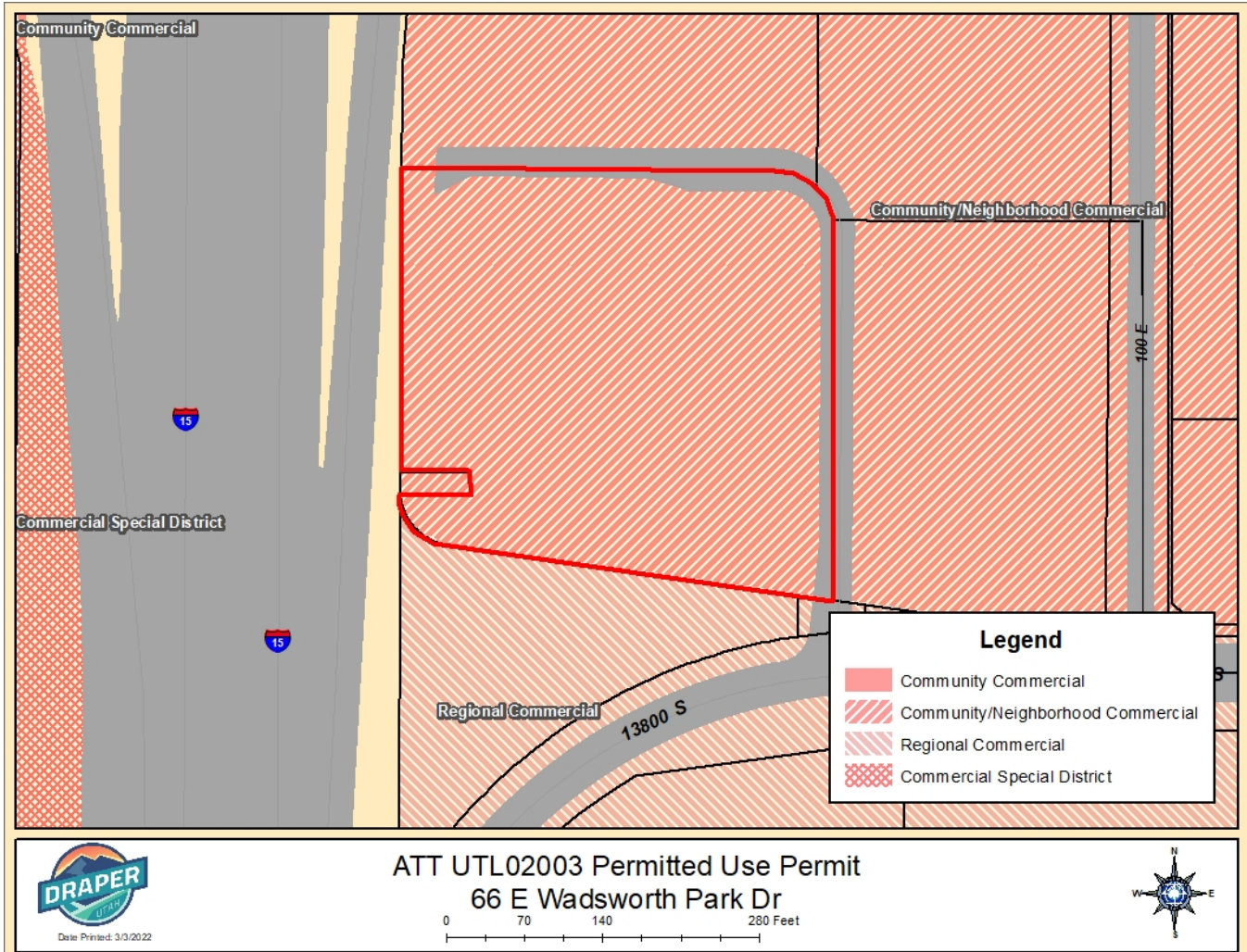
Date Printed: 3/3/2022

ATT UTL02003 Permitted Use Permit  
66 E Wadsworth Park Dr

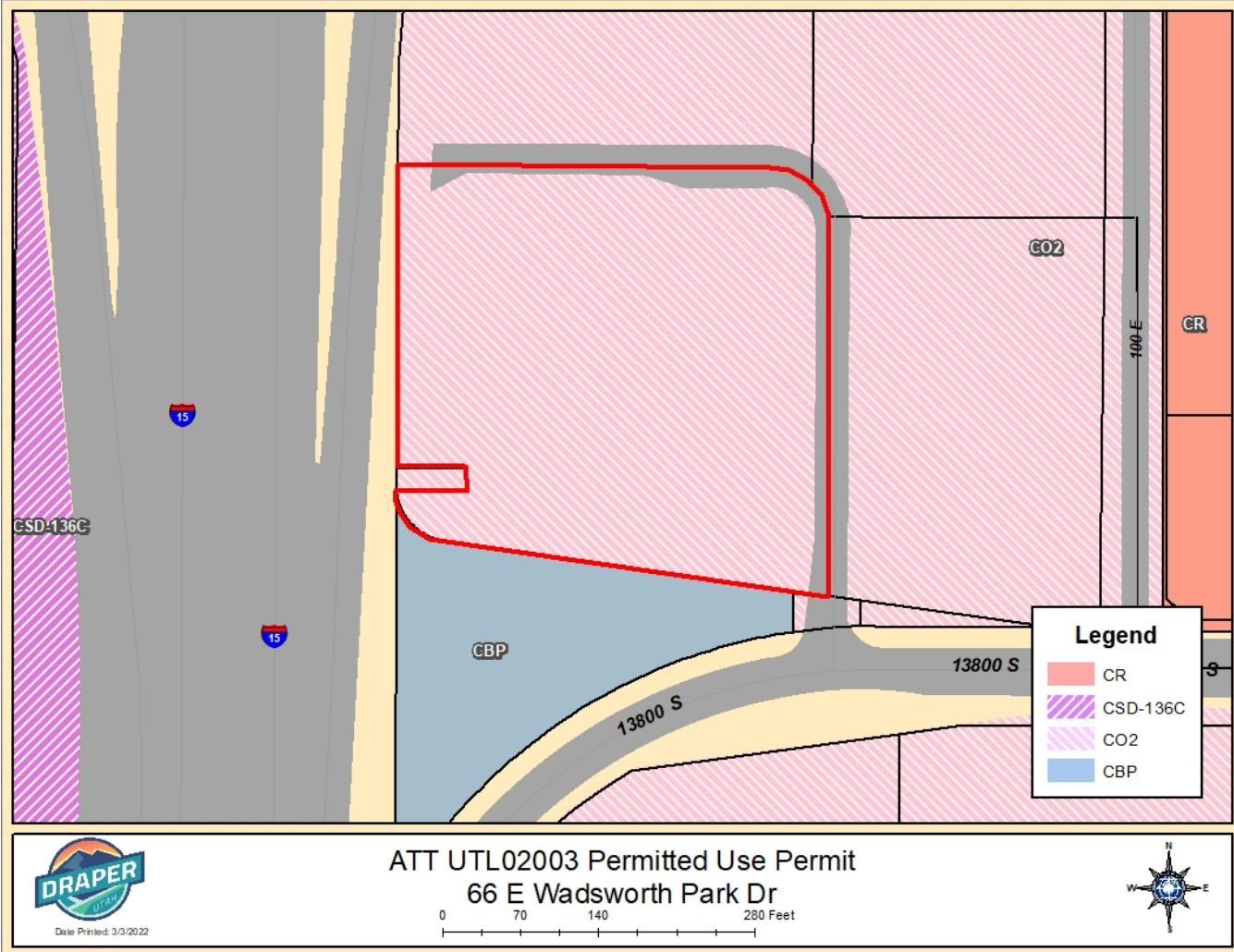




# EXHIBIT C LAND USE MAP

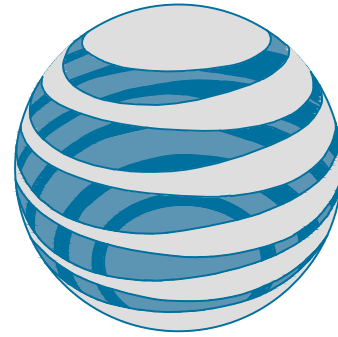


# EXHIBIT D ZONING MAP



**EXHIBIT E**  
**PLANS AND DRAWINGS**





# at&t

## UTL02003

### 14300 SOUTH & 1-15

### FA#: 10103878

### PTN#: 3752A0Z7F6/3752A0Z7EY/3752A1064M

### PACE ID: MRUTH045495/MRUTH045425/MRUTH046530

### 45'-0" ROOFTOP

### 2022 5G NR RADIO / 5G NR 1SR CBAND / 4TXRX ANTENNA RETROFIT

**NOTE:**  
THIS PAGE CONTAINS CONFIDENTIAL,  
PROPRIETARY OR TRADE SECRET  
INFORMATION EXEMPT FROM  
DISCLOSURE UNDER APPLICABLE LAW.



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PHONE | 314-997-8111 FAX | 314-992-9888

682538

REVISIONS

| REV | DATE     | DESCRIPTION           | INT |
|-----|----------|-----------------------|-----|
| 0   | 10/04/21 | ISSUED FOR REVIEW 90% | JG  |
| 0   | 12/10/21 | ISSUED FOR FINAL      | JG  |
| 1   | 12/16/21 | ISSUED FOR FINAL      | JG  |
| 2   | 01/10/22 | ISSUED FOR FINAL      | JG  |



#### SITE INFORMATION

TOWER OWNER: DRAPER LAND LIMITED PARTNERSHIP NO.2 & 66 EAST WADSWORTH PARK DRIVE, LLC

SITE NUMBER-NAME: UTL02003-14300 SOUTH & 1-15

SITE ADDRESS: 66 E. WADSWORTH PARK DRIVE DRAPER, UT 84020

COUNTY: SALT LAKE

LATITUDE: 40.5012222 (40° 30' 04.4" N)

LONGITUDE: -111.8896667 (111° 53' 22.8" W)

GROUND ELEVATION: 4438' AMSL

OCCUPANCY TYPE: UNMANNED

ZONING JURISDICTION: DRAPER CITY

ZONING CODE: CO2

PARCEL NUMBER: 3406152011

POWER PROVIDER: N/A

TELCO PROVIDER: N/A

#### CONTACT INFORMATION

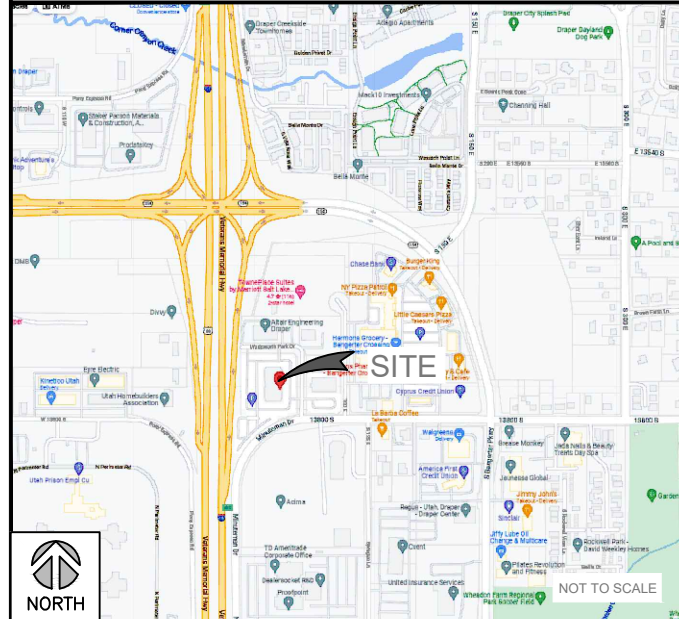
A&E SERVICES:  
TRILEAF CORPORATION  
1821 WALDEN OFFICE SQUARE  
SUITE 500  
SCHAMBURG, IL 60173  
CONTACT: ROGER ZIMMER  
PHONE: (630) 227-0202  
EMAIL: r.zimmer@trileaf.com

SITE ACQUISITION SERVICES:  
SMARTLINK GROUP, LLC  
1997 ANNAPOLIS EXCH. PKWY  
SUITE 200  
ANNAPOLIS, MD 21401  
CONTACT: TAMARA SHIVELEY  
PHONE: (801) 230-4877

#### APPLICABLE CODES

BUILDING CODE 2018 IBC  
ELECTRICAL CODE 2017 NEC  
TIA-222-H

#### VICINITY MAP



#### DRIVING DIRECTIONS

TAKE I-15 EXIT 289 AND GO EAST ON BANGERTEY HIGHWAY WHICH CURVES AROUND TO 13800 SOUTH. TURN RIGHT AND GO WEST ON 13800 SOUTH. SITE IS ON THE RIGHT JUST AS 13800 SOUTH CURVES SOUTH. 3 FLOOR OFFICE BUILDING WITH 800 CONTACT SIGN ON THE OUTSIDE. LADDER TO ROOF HATCH IS IN ELECTRICAL ROOM ON 3RD FLOOR

#### 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.

#### SITE PHOTO



#### DRAWING INDEX

| SHEET NO. | DESCRIPTION                    | REV |
|-----------|--------------------------------|-----|
| T-1       | TITLE SHEET                    | 1   |
| GN-1      | GENERAL NOTES                  | 1   |
| C-1       | ROOF PLAN                      | 1   |
| C-2       | EQUIPMENT PLAN                 | 1   |
| C-3       | TOWER ELEVATIONS               | 1   |
| C-4       | ANTENNA PLANS                  | 1   |
| C-5       | RF WARNING & EQUIPMENT DETAILS | 1   |
| C-6       | EQUIPMENT DETAILS              | 1   |
| E-1       | ELECTRICAL DIAGRAM             | 1   |
| G-1       | GROUNDING DETAILS              | 1   |

#### SCOPE OF WORK

RFDS VERSION: 1.00 DATE UPDATED: 8/2/2021

- EQUIPMENT LEVEL**
- REMOVE EXISTING 1xABIL / 1xASIK FROM LTE
  - ADD PROPOSED 1xASIL / 3xABIO TO LTE
  - ADD (16) PROPOSED 190AH BATTERIES
  - ADD (2) PROPOSED VERTIVE RECTIFIERS

- ANTENNA LEVEL**
- REMOVE (3) EXISTING UMTS ANTENNAS
  - REMOVE (6) EXISTING RRH UNITS
  - INSTALL AEQU C-BAND ANTENNAS IN TOP LOCATION (1 PER SECTOR)
  - INSTALL AEQK C-BAND ANTENNAS IN BOTTOM LOCATION (1 PER SECTOR)
  - INSTALL (3) PROPOSED AHLBBA RRH UNITS

#### SITE INFORMATION

**SITE #: UTL02003**  
**SITE NAME: 14300 SOUTH & 1-15**  
**FA #: 10103878**

**66 E. WADSWORTH PARK DRIVE**  
**DRAPER, UT 84020**

#### SHEET TITLE:

**TITLE SHEET**

#### SHEET NUMBER:

**T-1**

**GENERAL CONSTRUCTION NOTES:**

1. FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:  
GENERAL CONTRACTOR: TBD  
SUBCONTRACTOR: TBD
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 HIMSELF 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 OTHER WISE, 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 BE 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 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 LOCAL JURISDICTION.
11. GENERAL CONTRACTOR SHALL COORDINATE WORK AND SCHEDULE WORK ACTIVITIES WITH OTHER DISCIPLES.
12. ERECTION SHALL BE DONE IN A WORK MANLIKE MANNER BY COMPETENT EXPERIENCED 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. SUB CONTRACTOR 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. SUB CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR OF ANY EXISTING CONDITIONS THAT DEVIATE FROM THE DRAWING PRIOR TO THE BEGINNING CONSTRUCTION.
15. SUBCONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO THE CONSTRUCTION MANAGER 48 HOURS PRIOR TO THE COMMENCEMENT OF WORK.
16. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTORS 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 GOOD CONDITION ONE COMPLETE SET OF PLANS WITH ALL REVISION, ADDENDA, AND CHANGES ORDERS ON THE PREMISES AT ALL TIMES.
21. CONTRACTOR 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.
22. THE SUBGRADE SHALL BE BROUGHT TO A SMOOTH GRADE AND COMPACTED TO 95 PERCENT STANCE 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.
23. ALL NECESSARY RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A LAWFUL MANNER.

**ELECTRICAL GROUNDING SPECIFICATIONS:**

1. GROUNDING SHALL COMPLY WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE CURRENTLY IN EFFECT FOR THE AUTHORITY HAVING JURISDICTION.
2. ALL GROUNDING DEVICE SHALL BE U.L. LISTED FOR THEIR INTENDED USE.
3. GROUND WIRES SHALL BE TINNED #2 AWG BARE SOLID COPPER UNLESS OTHERWISE NOTED.
4. CONNECTIONS OF ALL GROUND WIRES TO THE GROUND RING SHALL BE EXOTHERMIC (CAD-WELDED), UNLESS OTHERWISE NOTED AND SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND AT&T WIRELESS BROADBAND STANDARDS.
5. GROUNDING CONDUCTORS SHALL BE ROUTED ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE WHEN REQUIRED. GROUND LEADS SHALL BE BENT TO A MINIMUM OF 8' RADIUS.
6. WHERE GROUND WIRES ARE ROUTED FROM ANY CONNECTION ABOVE GRADE TO THE GROUND RING, INSTALL WIRE IN 3/4" HEAVY WALL LIQUID TIGHT FLEXIBLE CONDUIT FROM CONNECTION POINT TO 5' BELOW GRADE AND SEAL THE TOP WITH SILICONE SEALANT.
7. ALL GROUND BARS SHALL BE TINNED COPPER, SECTOR BARS 2", COLLECTOR AND MGB BARS 4", OF SUFFICIENT LENGTH TO ACCOMMODATE ALL REQUIRED CONNECTIONS WITHOUT DOUBLING LIGS, AND EACH INSTALLED WITH ISOLATORS. WHEN CONNECTING GROUND BARS (WITHIN 10 FEET OF GRADE) DIRECTLY TO THE GROUND RING, 2 EA. #2 SOLID DOWNLEADS SHALL BE CAD-WELDED TO THE GROUNDING, 1 AT EACH OPPOSITE BOTTOM CORNER, AND EACH SHALL RUN IN 3/4" HEAVY WALL LIQUID TIGHT FLEXIBLE CONDUIT FROM GROUND BAR DOWN TO THE GROUND RING, WHEN CONNECTING SECTOR GROUND BARS, DAISY-CHAIN THE GROUND BARS AND RUN 1 EA. #2 AWG STRANDED COPPER WIRE WITH THWN INSULATION FROM THE MIDDLE GROUND BAR TO THE GROUND RING AND CAD-WELD TO THE RING.
8. WHEN ATTACHING STRANDED GROUND LEADS TO THE GROUND BARS, 2 HOLE COMPRESSION LUGS SHALL BE USED, PROTECT WITH WEATHERPROOF HEAT SHRINK, AND WITH A THIN COAT OF "KOP'R SHIELD" OR EQUIVALENT PROPERLY APPLIED AND ATTACHED ONLY WITH STAINLESS STEEL HARDWARE.
9. WHEN GROUNDING EQUIPMENT ENCLOSURES, PANELS, FRAMES, AND OTHER METAL APPARATUS, A #6 AV/G STRANDED COPPER WIRE WITH THWN INSULATION SHALL BE ATTACHED UTILIZING A 2 HOLE COMPRESSION TYPE LUG, PROTECTED WITH WEATHERPROOF HEAT A CLEAN AND CORROSION FREE METALLIC SURFACE UTILIZING STAINLESS STEEL SELF-TAPPING SCREWS AS NOTED IN NOTE 10 BELOW.
10. PREPARE ALL BONDING SURFACES FOR GROUND CONNECTIONS BY REMOVING ANY AND ALL PAINT AND CORROSION TO SHINY METAL. CAD-WELDED CONNECTIONS TO NON-GOPPER SURFACES, APPLY ONE COAT OF ANY ANTI-OXIDIZING PAINT, "COLD GALV" OR EQUIVALENT.
11. GROUND RODS SHALL BE COPPER-CLAD STEEL 5/8"x10', SPACED NO LESS THAN 10' ON CENTER.
12. ALL GROUND SYSTEM CONDUCTORS AND CONDUITS SHALL BE SECURED UTILIZING ONLY NONMETALLIC, NON-CONDUCTIVE, UV RATED CLAMPS, BRACKET, AND OR SUPPORTS.
13. WHEN REQUIRED, THE CONTRACTOR SHALL ENGAGE THE SERVICES OF AN INDEPENDENT TESTING FIRM TO VERIFY, UTILIZING A MEGGER TEST, THAT THE RESISTANCE TO EARTH OF THE NEW GROUND SYSTEM IS EQUAL TO OR LESS THAN 5 (OHMS). A COPY OF THE COMPLETE TESTING REPORT SHALL BE PROVIDED TO THE AT&T REPRESENTATIVE.
14. ALL MATERIALS AND HARDWARE SHALL BE INSTALLED IN A WORKMAN-LIKE MANNER IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, AND DEFINED IN NFPA-70.
15. ALL RRRH GROUND WIRES SHALL BE #2 GREEN STRANDED.
16. ALL GROUND LUGS SHALL BE 2-HOLE LONG BARRELL.
17. OUTDOOR GROUNDS SHALL BE BLACK HEAT SHRINK W/O INSPECTION HOLES.
18. INDOOR GROUNDS SHALL BE CLEAR HEAT SHRINK W/ INSPECTION HOLES.

**ANTENNA PIPE MOUNTS:**

1. PROPOSED OR REPLACEMENT ANTENNA PIPE MOUNTS SHALL BE 2-3/8" (O.D.)X10', SCH. 80 PIPE, UNLESS NOTED OTHERWISE.



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**682538**

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| 0   | 12/10/21 | ISSUED FOR FINAL      | JG  |
| 1   | 12/16/21 | ISSUED FOR FINAL      | JG  |
| 2   | 01/10/22 | ISSUED FOR FINAL      | JG  |
|     |          |                       |     |
|     |          |                       |     |
|     |          |                       |     |
|     |          |                       |     |



**SITE INFORMATION**

**SITE #: UTL02003**  
**SITE NAME: 14300 SOUTH & 1-15**  
**FA #: 10103878**  
  
**66 E. WADSWORTH PARK DRIVE**  
**DRAPER, UT 84020**

**SHEET TITLE:**

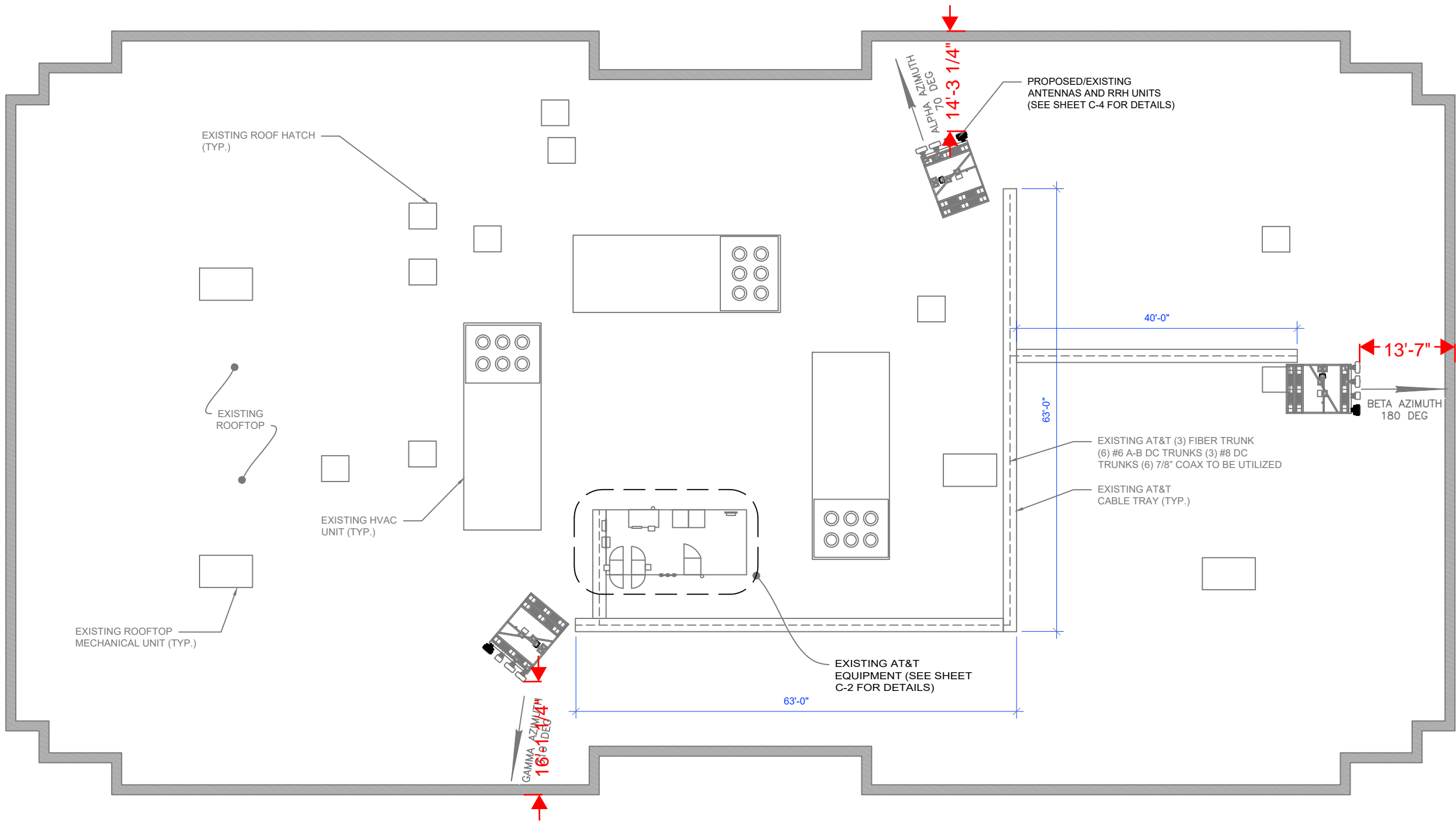
**GENERAL NOTES**

**SHEET NUMBER:**

**GN-1**



NOTE:  
THESE DRAWINGS WERE PREPARED BASED  
ON EXISTING DRAWINGS AND INFORMATION  
PROVIDED BY OTHERS. ALL EXISTING  
CONDITIONS SHOULD BE FIELD VERIFIED  
PRIOR TO CONSTRUCTION.



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|           |          |                       |     |
|           |          |                       |     |
|           |          |                       |     |



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66 E. WADSWORTH PARK DRIVE  
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SHEET TITLE:

**ROOF PLAN**

SHEET NUMBER:

**C-1**

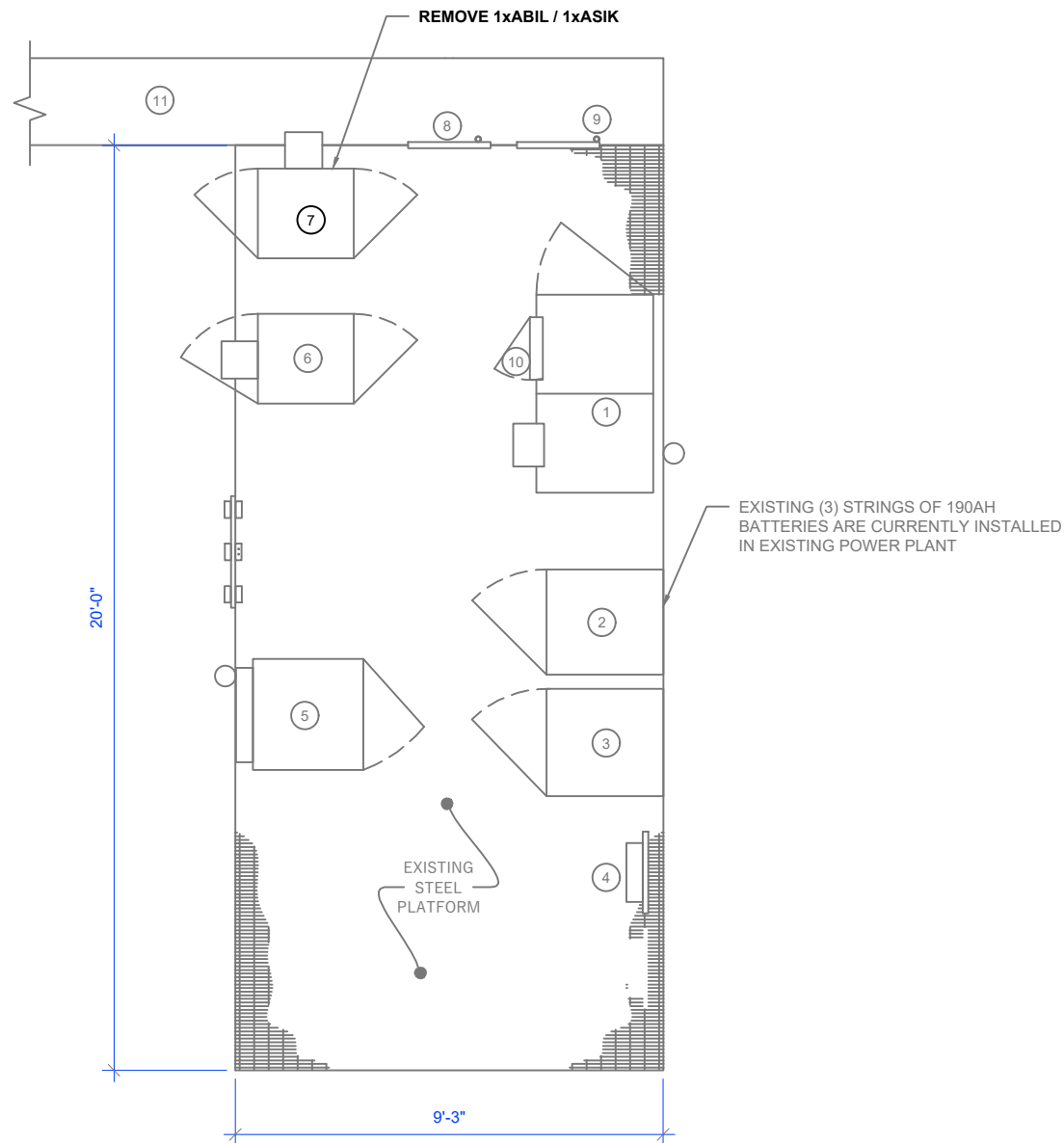


THE UTILITIES AS SHOWN ON THIS SET OF DRAWINGS WERE DEVELOPED FROM THE INFORMATION AVAILABLE. THE INFORMATION PROVIDED IS NOT IMPLIED NOR INTENDED TO BE A COMPLETE INVENTORY OF THE UTILITIES IN THIS AREA. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES (WHETHER SHOWN OR NOT) AND PROTECT SAID UTILITIES FROM ANY DAMAGE CAUSED BY CONTRACTOR'S ACTIVITIES.



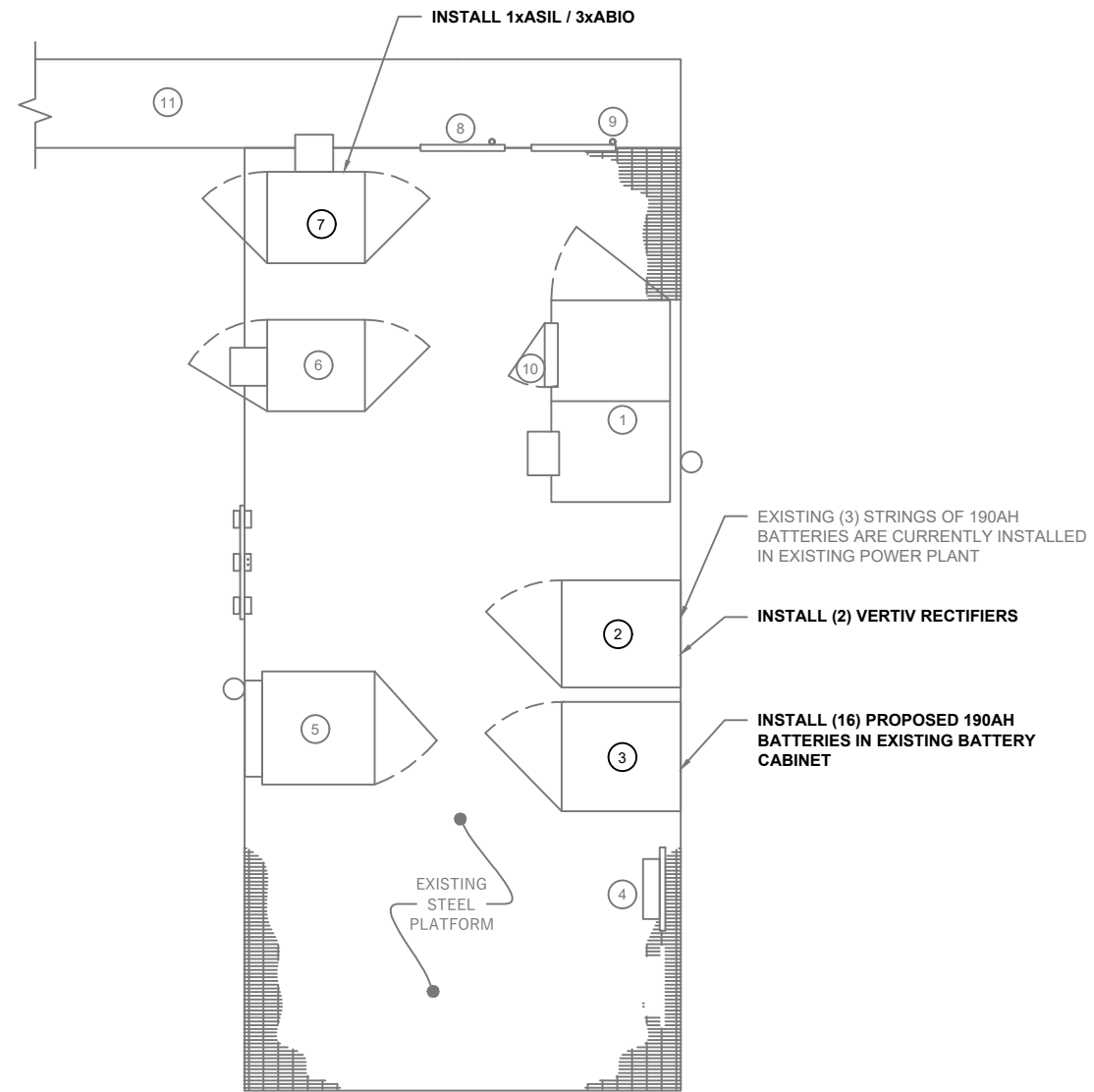
**KEY NOTES:**

- ① EXISTING EMERSON CABINET W/ BATTERY SHELVES
- ② EXISTING -48VDC CABINET
- ③ EXISTING BATTERY CABINET
- ④ EXISTING CIENA / FIBER BOX ON H-FRAME
- ⑤ EXISTING UMTS CABINET
- ⑥ EXISTING AT&T CABINET  
**REMOVE 1xABIL / 1xASIK**
- ⑦ EXISTING LTE CABINET
- ⑧ EXISTING H-FRAME
- ⑨ EXISTING AT&T GPS ANTENNA
- ⑩ EXISTING AC PANEL
- ⑪ EXISTING CABLE TRAY



**KEY NOTES:**

- ① EXISTING EMERSON CABINET W/ BATTERY SHELVES
- ② EXISTING -48VDC CABINET  
**INSTALL (2) VERTIV RECTIFIERS**
- ③ EXISTING BATTERY CABINET, **INSTALL (16) PROPOSED 190AH BATTERIES**
- ④ EXISTING CIENA / FIBER BOX ON H-FRAME
- ⑤ EXISTING UMTS CABINET
- ⑥ EXISTING AT&T CABINET
- ⑦ EXISTING LTE CABINET  
**INSTALL 1xASIL / 3xABIO**
- ⑧ EXISTING H-FRAME
- ⑨ EXISTING AT&T GPS ANTENNA
- ⑩ EXISTING AC PANEL
- ⑪ EXISTING CABLE TRAY



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**FA #:** 10103878

66 E. WADSWORTH PARK DRIVE  
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SHEET TITLE:

**EQUIPMENT PLAN**

SHEET NUMBER:

**C-2**



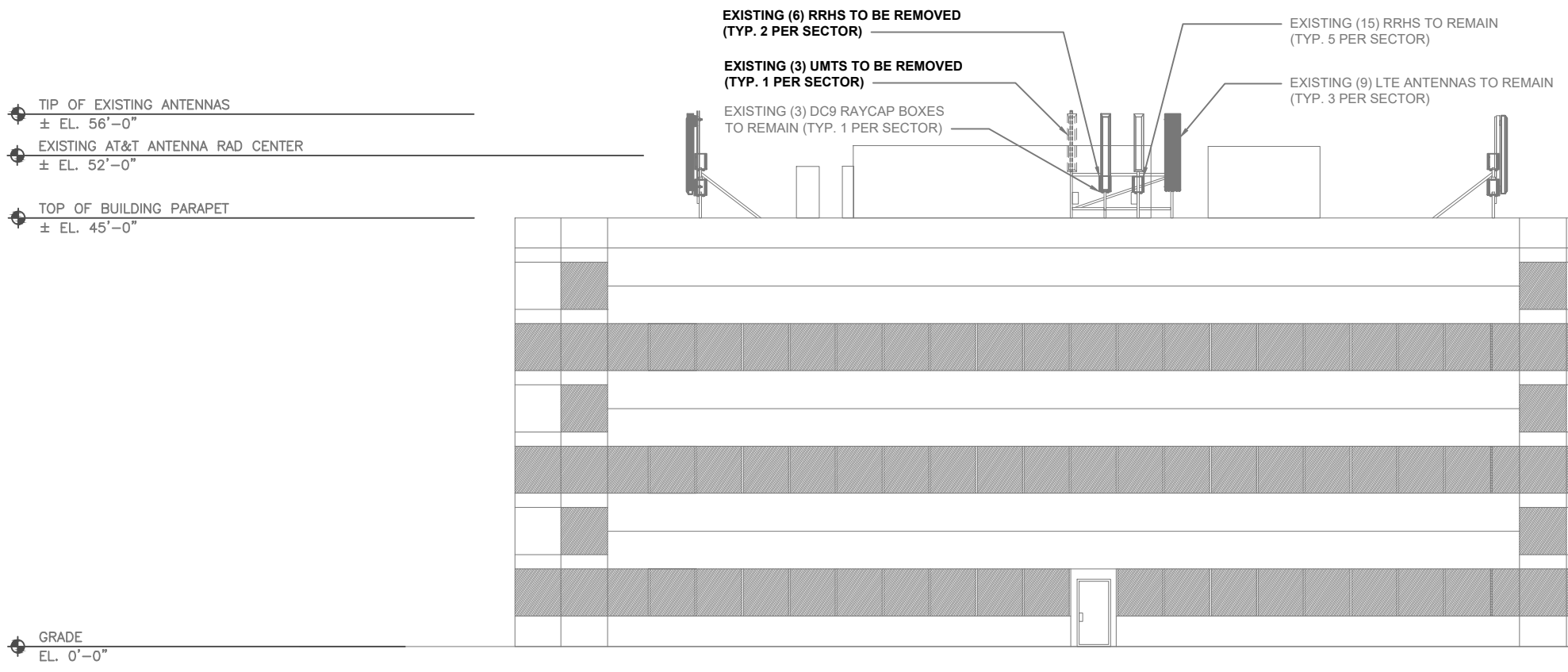
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(OR) 1/4" = 1'-0" (11x17)



SCALE: 1/2" = 1'-0" (24x36)  
(OR) 1/4" = 1'-0" (11x17)





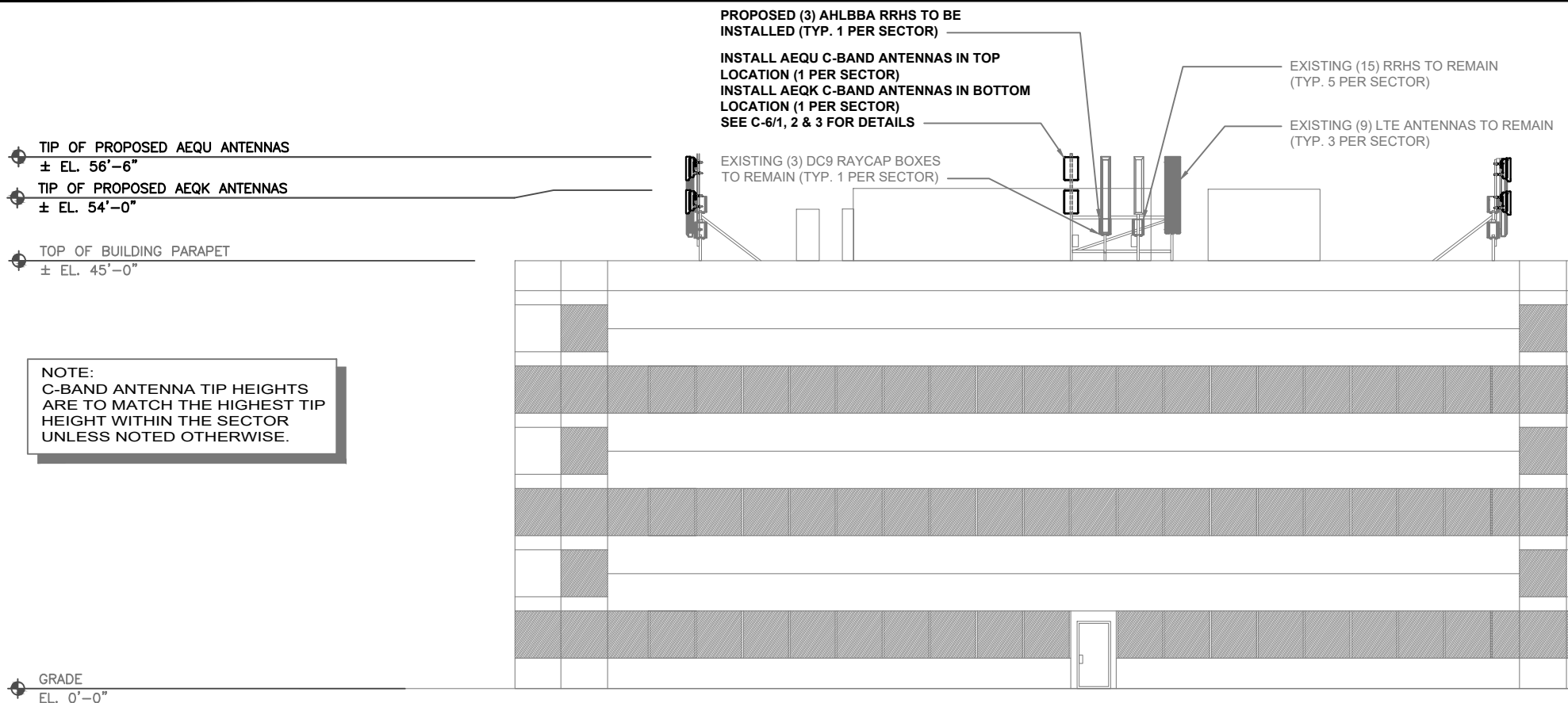


<https://www.federalregister.gov/documents/2020/07/27/2020-13951/accelerating-wireless-and-wireline-broadband-deployment-by-removing-barriers-to-infrastructure>

EXISTING ELEVATION

8' 0 4' 8' SCALE: 1/8" = 1'-0" (24x36)  
(OR) 1/16" = 1'-0" (11x17)

1



NOTE: STRUCTURAL ANALYSIS MUST BE PERFORMED BEFORE THE INSTALLATION OF NEW ANTENNAS, RRH UNITS, ETC.

NOTE: C-BAND ANTENNA TIP HEIGHTS ARE TO MATCH THE HIGHEST TIP HEIGHT WITHIN THE SECTOR UNLESS NOTED OTHERWISE.

NOTE: THIS PAGE CONTAINS CONFIDENTIAL, PROPRIETARY OR TRADE SECRET INFORMATION EXEMPT FROM DISCLOSURE UNDER APPLICABLE LAW.

PROPOSED ELEVATION

8' 0 4' 8' SCALE: 1/8" = 1'-0" (24x36)  
(OR) 1/16" = 1'-0" (11x17)

2



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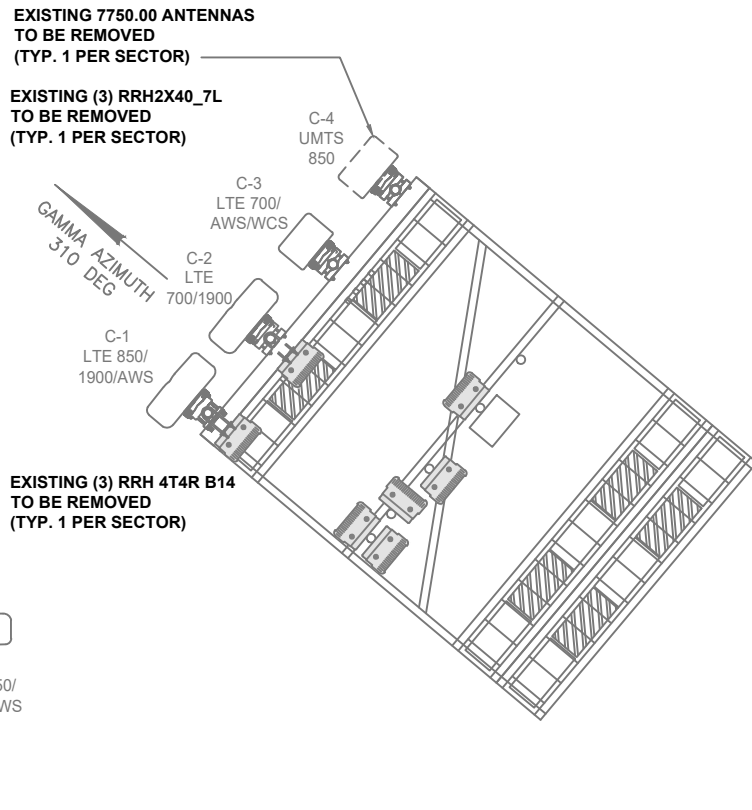
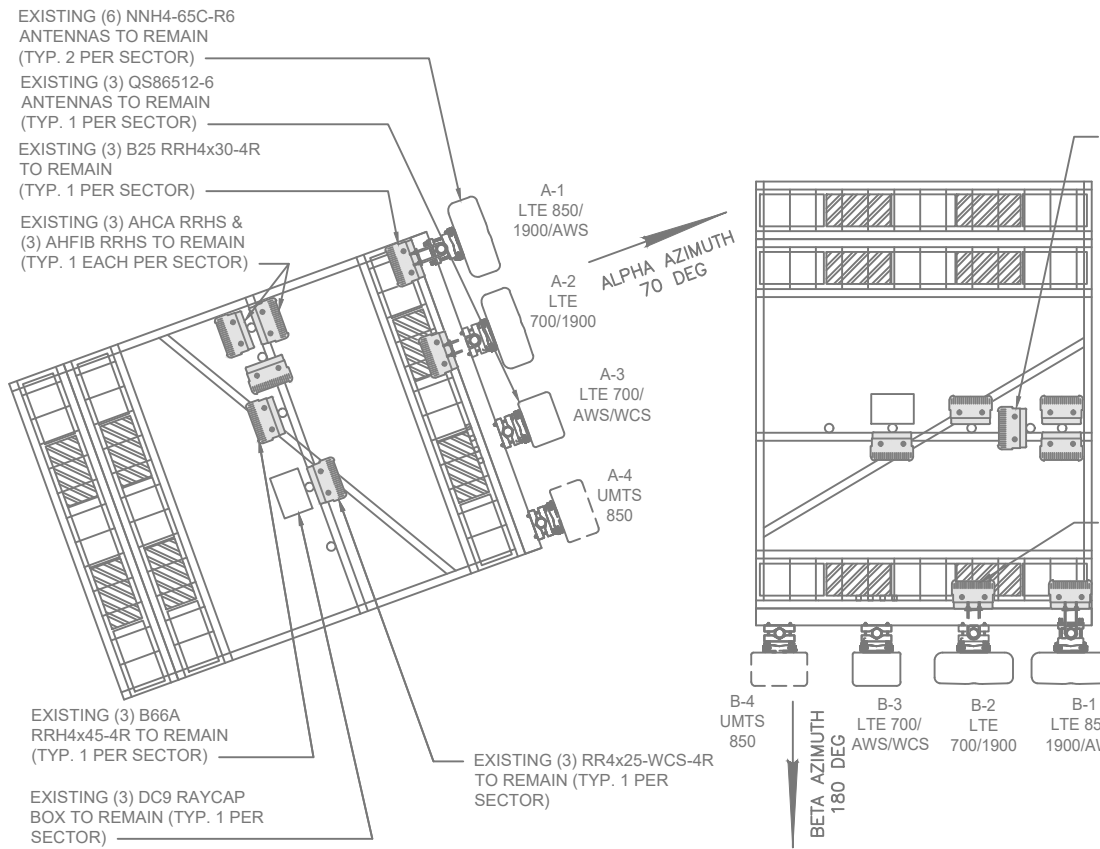


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FA #: 10103878  
66 E. WADSWORTH PARK DRIVE  
DRAPER, UT 84020

SHEET TITLE:  
TOWER ELEVATIONS

SHEET NUMBER:  
C-3



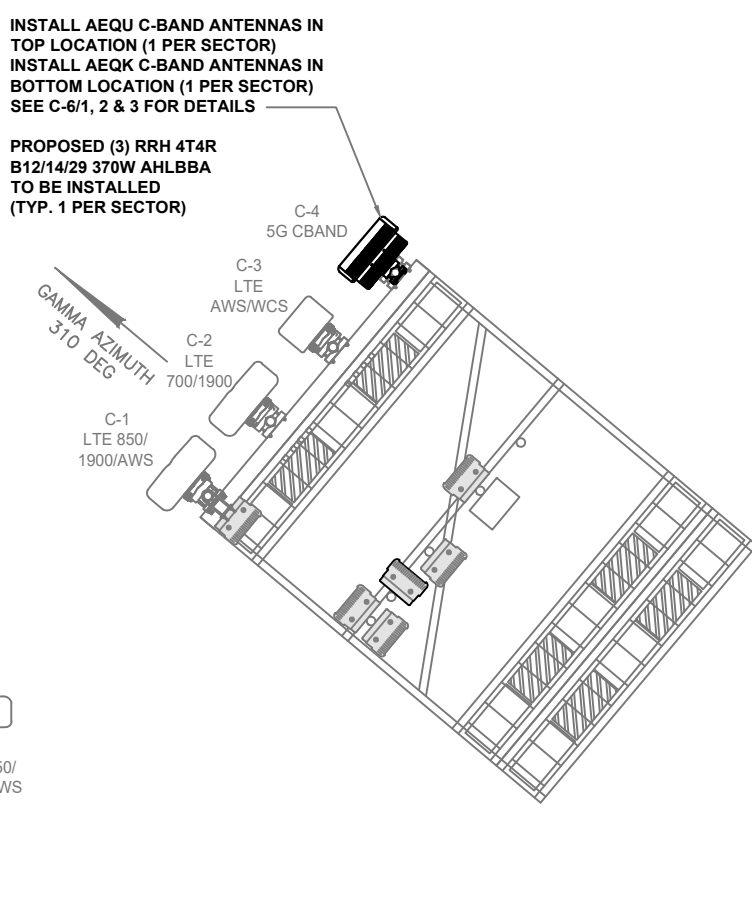
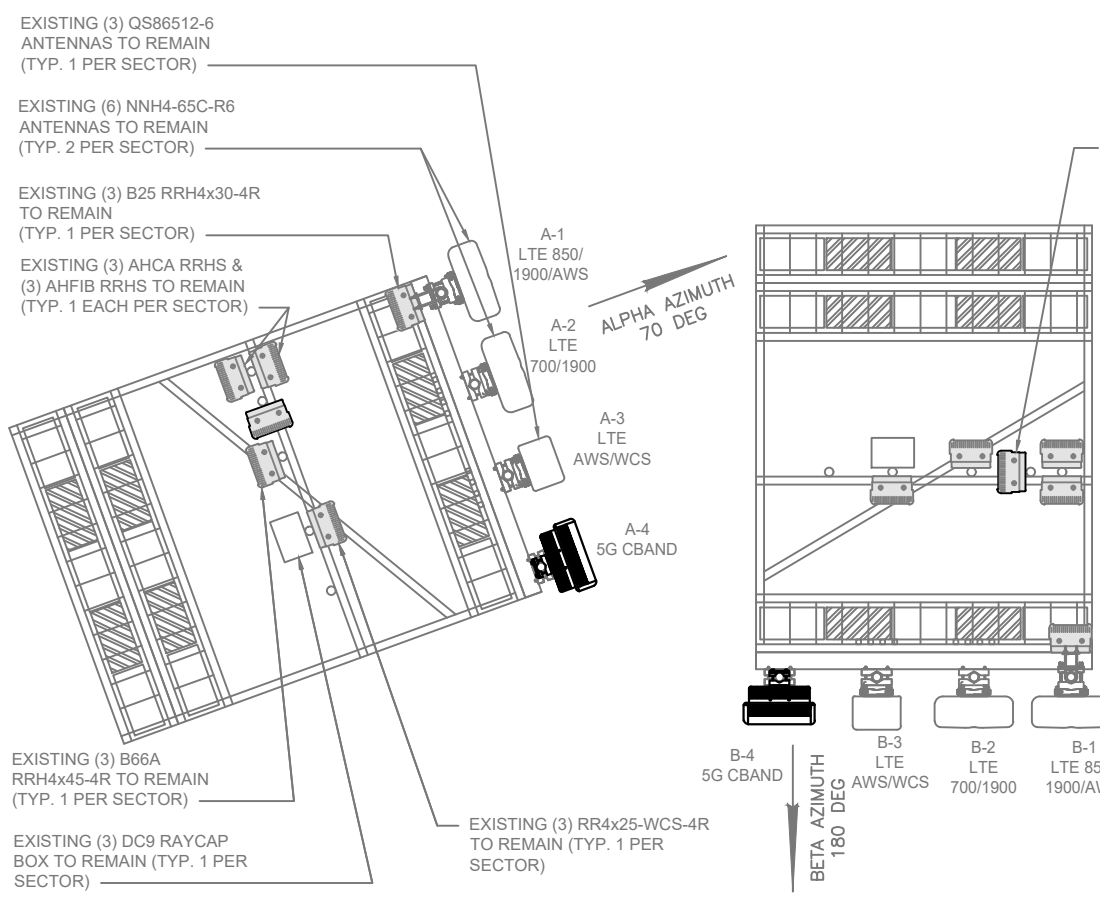
| EXISTING ANTENNA AND TRANSMISSION CABLE REQUIREMENT |              |             |                  |                    |        |      |       |
|---|--------------|-------------|------------------|--------------------|--------|------|-------|
| SECTOR RAD CTR                                      | ANTENNA TYPE | TECHNOLOGY  | ANTENNA AZIMUTH  | TRANSMISSION CABLE |        |      |       |
|   |              |             |                  | QTY                | LENGTH | TYPE |       |
| ALPHA, 52-0°  | A1           | NNH4-65C-R6 | LTE 850/1900/AWS | 70°                | -      | 160' | FIBER |
|   | A2           | NNH4-65C-R6 | LTE 700/1900     | 70°                | -      | 160' | FIBER |
|   | A3           | QS86512-6   | LTE 700/AWS/WCS  | 70°                | -      | 160' | FIBER |
|   | A4           | 7750.00     | UMTS 850         | 70°                | -      | 160' | COAX  |
| BETA, 52-0°   | B1           | NNH4-65C-R6 | LTE 850/1900/AWS | 180°               | -      | 160' | FIBER |
|   | B2           | NNH4-65C-R6 | LTE 700/1900     | 180°               | -      | 160' | FIBER |
|   | B3           | QS86512-6   | LTE 700/AWS/WCS  | 180°               | -      | 160' | FIBER |
|   | B4           | 7750.00     | UMTS 850         | 180°               | -      | 185' | COAX  |
| GAMMA, 52-0°  | C1           | NNH4-65C-R6 | LTE 850/1900/AWS | 310°               | -      | 160' | FIBER |
|   | C2           | NNH4-65C-R6 | LTE 700/1900     | 310°               | -      | 160' | FIBER |
|   | C3           | QS86512-6   | LTE 700/AWS/WCS  | 310°               | -      | 160' | FIBER |
|   | C4           | 7750.00     | UMTS 850         | 310°               | -      | 45'  | COAX  |

**NOTE:**  
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EXISTING ANTENNA PLAN

SCALE: NTS 1



| PROPOSED ANTENNA AND TRANSMISSION CABLE REQUIREMENT |              |                   |                  |                    |        |      |       |
|---|--------------|-------------------|------------------|--------------------|--------|------|-------|
| SECTOR RAD CTR                                      | ANTENNA TYPE | TECHNOLOGY        | ANTENNA AZIMUTH  | TRANSMISSION CABLE |        |      |       |
|   |              |                   |                  | QTY                | LENGTH | TYPE |       |
| C-BAND ANTENNA RAD CENTER 53.5° (ALPHA)             | A1           | NNH4-65C-R6       | LTE 850/1900/AWS | 70°                | -      | 160' | FIBER |
|   | A2           | NNH4-65C-R6       | LTE 700/1900     | 70°                | -      | 160' | FIBER |
|   | A3           | QS86512-6         | LTE AWS/WCS      | 70°                | -      | 160' | FIBER |
|   | A4           | AEQK+AEQU STACKED | 5G CBAND         | 70°                | -      | -    | -     |
| C-BAND ANTENNA RAD CENTER 53.5° (BETA)              | B1           | NNH4-65C-R6       | LTE 850/1900/AWS | 180°               | -      | 160' | FIBER |
|   | B2           | NNH4-65C-R6       | LTE 700/1900     | 180°               | -      | 160' | FIBER |
|   | B3           | QS86512-6         | LTE AWS/WCS      | 180°               | -      | 160' | FIBER |
|   | B4           | AEQK+AEQU STACKED | 5G CBAND         | 180°               | -      | -    | -     |
| C-BAND ANTENNA RAD CENTER 53.5° (GAMMA)             | C1           | NNH4-65C-R6       | LTE 850/1900/AWS | 310°               | -      | 160' | FIBER |
|   | C2           | NNH4-65C-R6       | LTE 700/1900     | 310°               | -      | 160' | FIBER |
|   | C3           | QS86512-6         | LTE AWS/WCS      | 310°               | -      | 160' | FIBER |
|   | C4           | AEQK+AEQU STACKED | 5G CBAND         | 310°               | -      | -    | -     |

**NOTE TO CONTRACTOR:**  
 1. ANTENNA CLEARANCE AND MOUNTING TO BE FIELD VERIFIED PRIOR TO CONSTRUCTION WITH FINAL ANTENNA SPECIFICATIONS MOUNTING HARDWARE AND RF DESIGN. ANTENNA PIPE MOUNT MODIFICATION MAY BE REQUIRED.  
 2. CONTRACTOR TO VERIFY FINAL ANTENNA CONFIGURATION FROM FINAL RFDS.  
 3. CONTRACTOR SHALL VERIFY A MINIMUM OF 4 FEET SEPARATION BETWEEN ALL ANTENNAS.  
 4. STRUCTURAL ANALYSIS MUST BE PERFORMED ON ALL ROOFTOPS, FLAGPOLES, LIGHT POLES, AND TOWER SITES BEFORE INSTALLATION OF NEW ANTENNAS, RRR UNITS, ETC.



PROPOSED ANTENNA PLAN

SCALE: NTS 2



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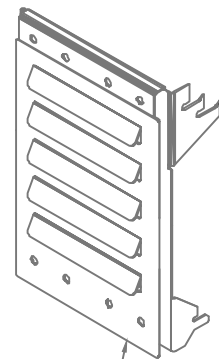
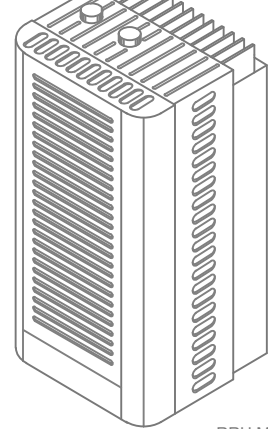
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SHEET TITLE:  
**ANTENNA PLANS**

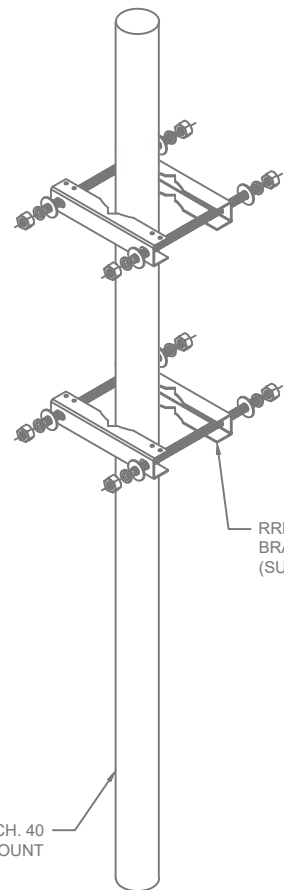
SHEET NUMBER:  
**C-4**



PROPOSED RRH UNIT



RRH MOUNTING PLATE  
(AS REQUIRED)



RRH MOUNTING  
BRACKET & HARDWARE  
(SUPPLIED W/ RRH)

2-3/8" (O.D.), SCH. 40  
PIPE MOUNT

RRH MOUNTING DETAILS

SCALE:  
NTS 5

NOT USED

SCALE:  
NTS 6



| AIRSCALE DUAL RRH                    | WIDTH | DEPTH | HEIGHT W/O CABLE MANAGEMENT COVER | WEIGHT W/O BRACKET |
|--------------------------------------|-------|-------|-----------------------------------|--------------------|
| RRH 4T4R<br>B12/14/29 370W<br>AHLBBA | 24"   | 7.8"  | 14"                               | 94.79 LBS          |

NOTE:  
DIMENSIONS INCLUDE SOLAR SHIELD BUT NOT MOUNTING BRACKET.

RRH SPECIFICATIONS

SCALE:  
NTS 2

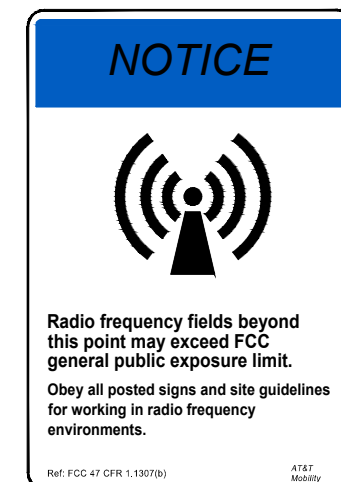
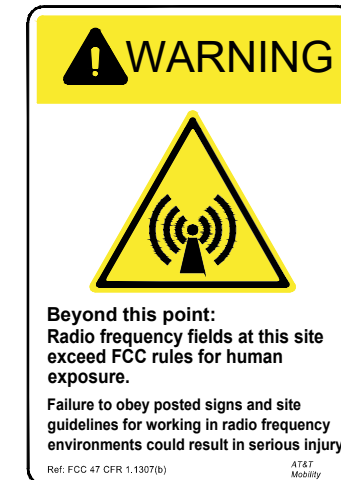
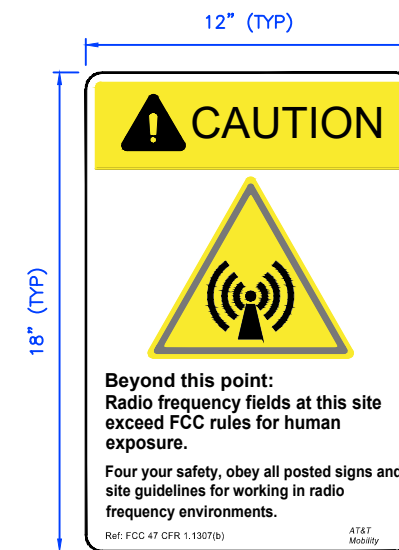
NOT USED

SCALE:  
NTS 3

NOT USED

SCALE:  
NTS 4

RF WARNING SIGNAGE



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SHEET TITLE:

RF WARNING &  
EQUIPMENT DETAILS

SHEET NUMBER:

C-5

SCALE:  
NTS 1



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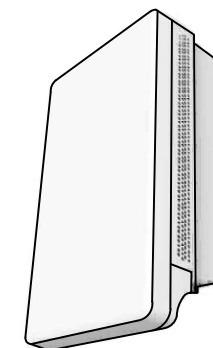
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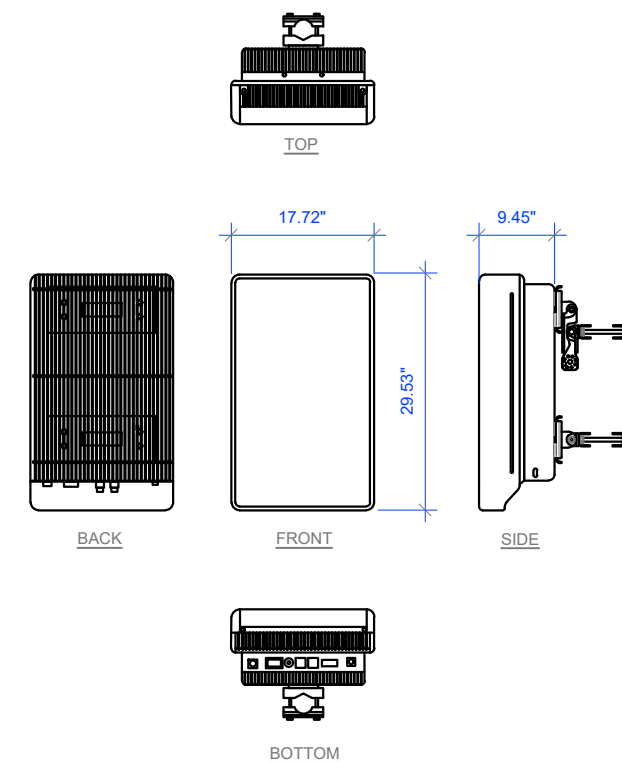
**EQUIPMENT DETAILS**

SHEET NUMBER:

**C-6**



|                    |                                     |
|--------------------|-------------------------------------|
| 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          |                                     |



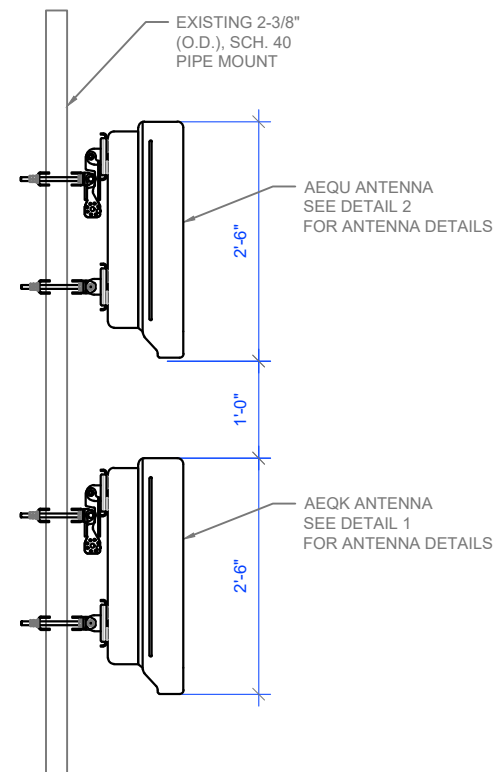
NOT USED

SCALE: 4  
NTS

ANTENNA INFORMATION

SCALE: 1  
NTS

**NOTE:**  
**THIS PAGE CONTAINS CONFIDENTIAL, PROPRIETARY OR TRADE SECRET INFORMATION EXEMPT FROM DISCLOSURE UNDER APPLICABLE LAW.**

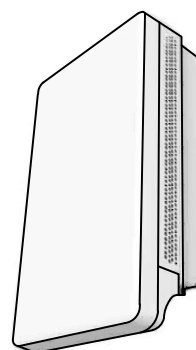


C-BAND ANTENNA STACKED DETAIL

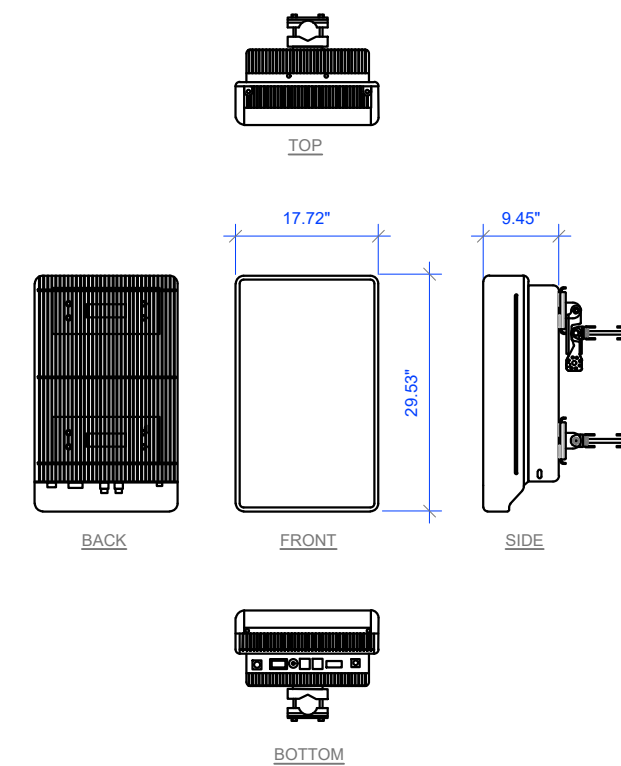
SCALE: 3  
NTS

ANTENNA INFORMATION

SCALE: 2  
NTS



|                    |                                     |
|--------------------|-------------------------------------|
| MANUFACTURER       | NOKIA                               |
| MODEL #            | AEQU                                |
| 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          |                                     |





**Smartlink LLC**  
 1997 Annapolis Exch.Pkwy # 200  
 Annapolis, MD 21401  
 Tel: 410-263-LINK (5465)  
 Fax: 410-263-5470  
 www.smartlinkllc.com



**TRILEAF**  
 architecture | engineering  
 1515 DES PERES ROAD, STE 200  
 SAINT LOUIS, MISSOURI 63131  
 PHONE | 314-997-8111 FAX | 314-992-9888

682538

REVISIONS

| REV | DATE     | DESCRIPTION           | INT |
|-----|----------|-----------------------|-----|
| 0   | 10/04/21 | ISSUED FOR REVIEW 90% | JG  |
| 0   | 12/10/21 | ISSUED FOR FINAL      | JG  |
| 1   | 12/16/21 | ISSUED FOR FINAL      | JG  |
| 2   | 01/10/22 | ISSUED FOR FINAL      | JG  |
|     |          |                       |     |
|     |          |                       |     |
|     |          |                       |     |
|     |          |                       |     |



SITE INFORMATION

**SITE #: UTL02003**  
**SITE NAME: 14300 SOUTH & 1-15**  
**FA #: 10103878**  
 66 E. WADSWORTH PARK DRIVE  
 DRAPER, UT 84020

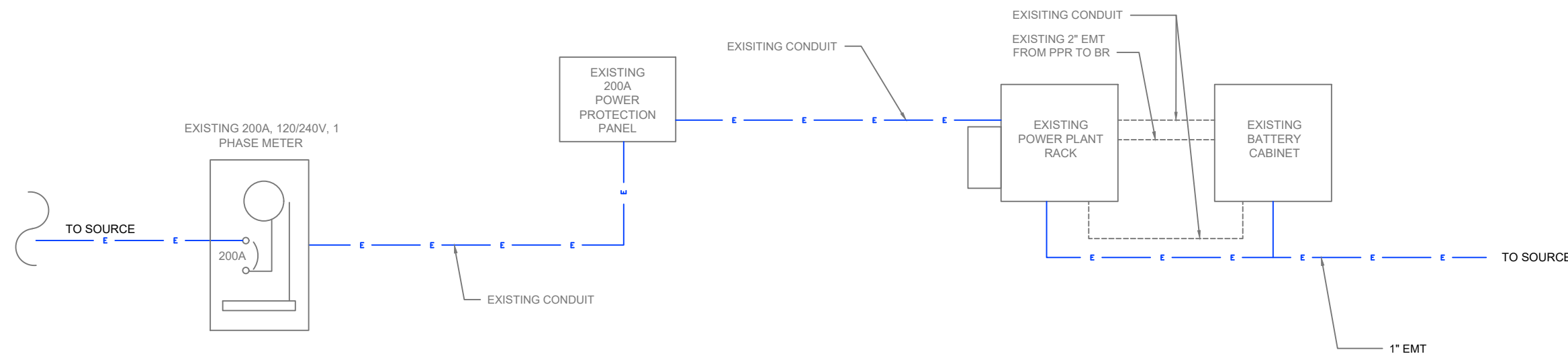
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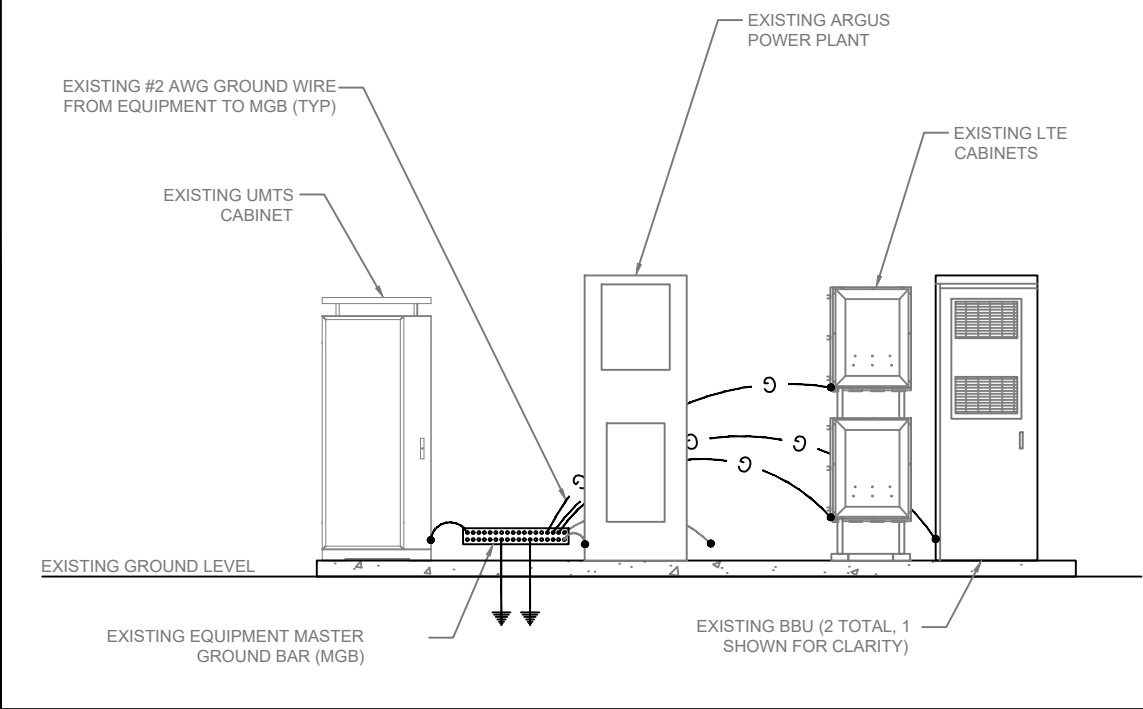
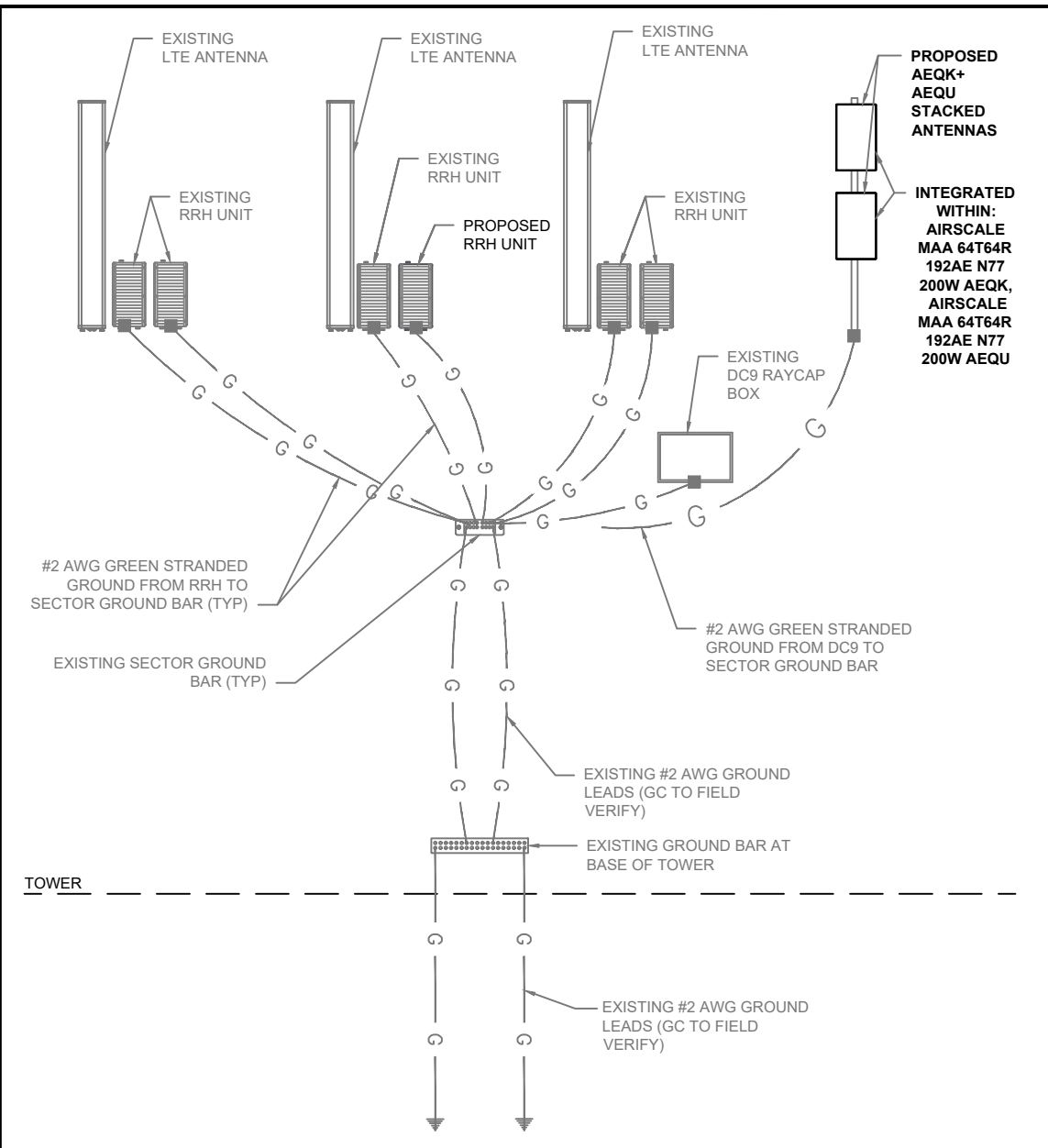
**ELECTRICAL DIAGRAM**

SHEET NUMBER:

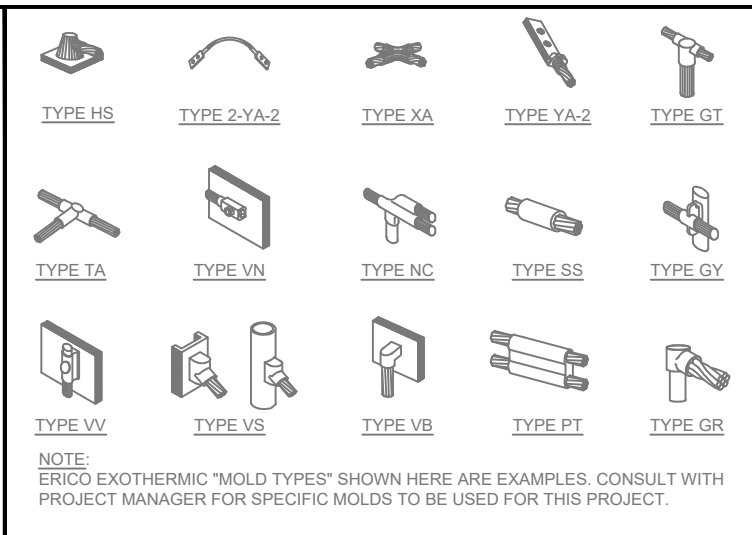
**E-1**

**CONDUCTOR NOTES:**  
 1. ALL CONDUCTOR SHALL BE COPPER.  
 2. ALL WIRING SHALL BE COPPER WITH THHN/THWN DUAL RATED 600 VOLTS INSULATION.  
 3. CONDUCTORS SHALL BE 12 AWG MINIMUM UNLESS SPECIFICALLY NOTED OTHERWISE.  
 4. GROUNDING CONDUCTORS SHALL BE SOLID TINNED COPPER UNLESS OTHERWISE NOTED.

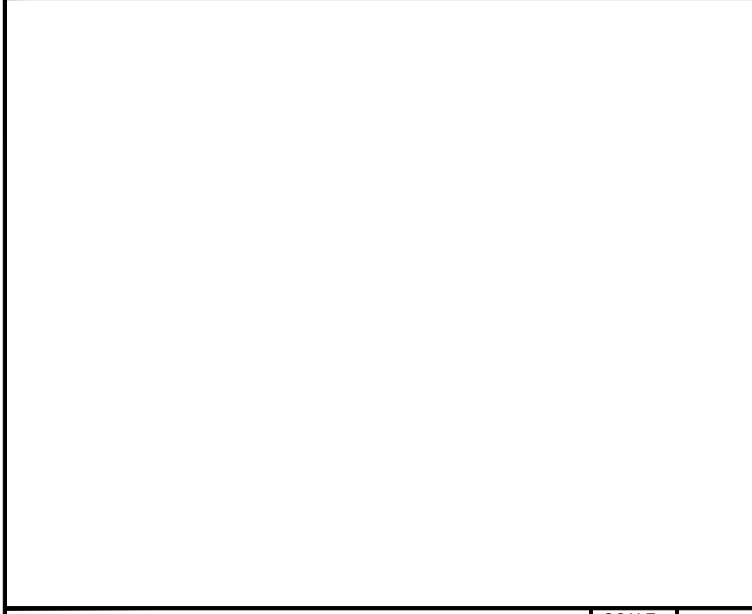




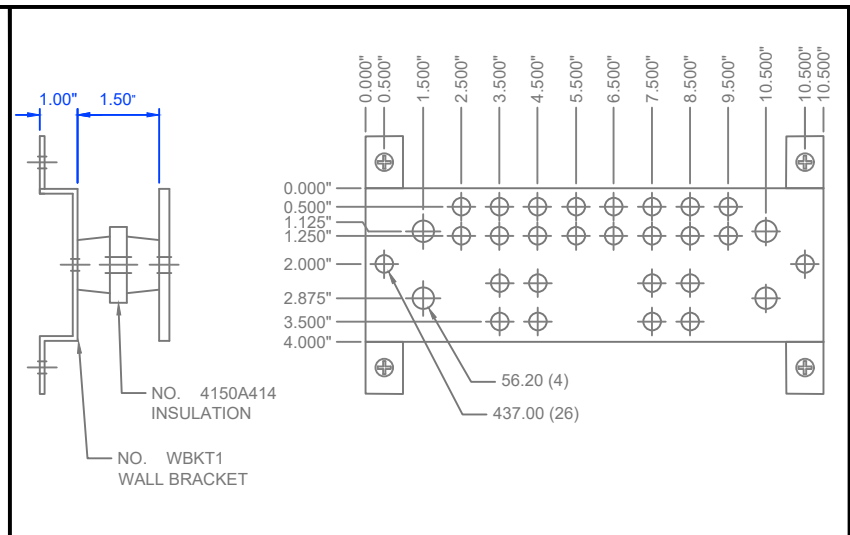
TYPICAL GROUNDING SCHEMATIC SCALE: NTS 7



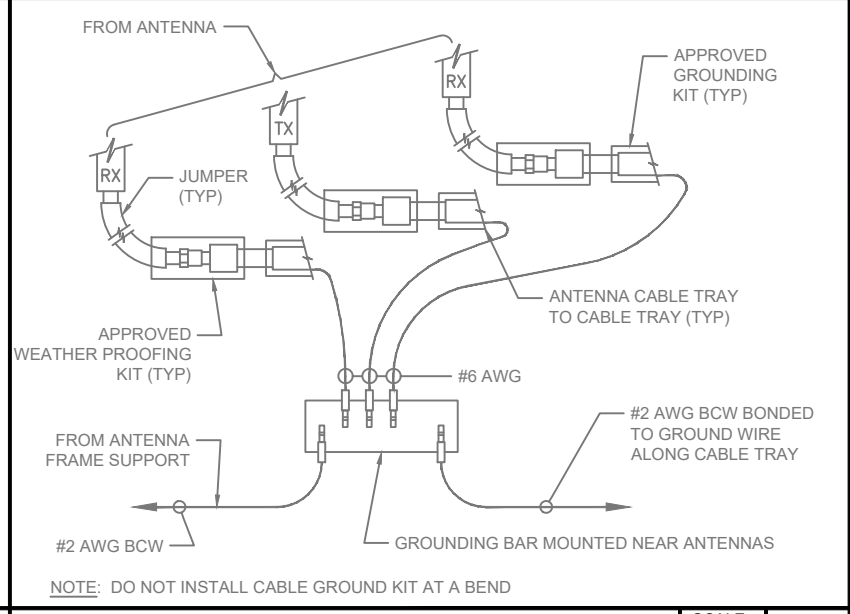
EXOTHERMIC WELDING SCALE: NTS 4



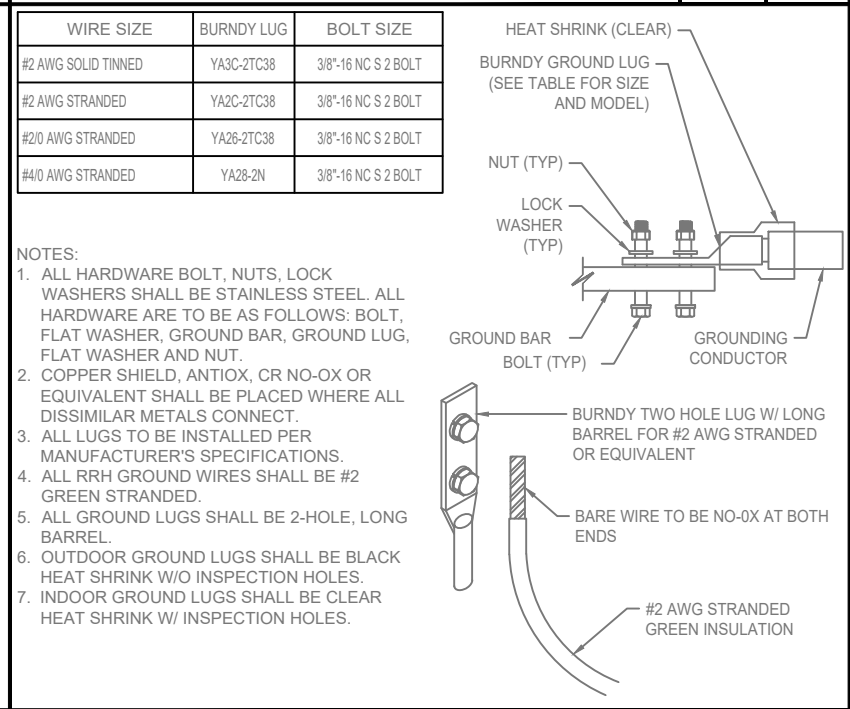
NOT USED SCALE: NTS 5



12" & 18" GROUND BARS SCALE: NTS 1



COAX GROUNDING DETAIL SCALE: NTS 2



MECHANICAL LUG CONNECTION SCALE: NTS 3

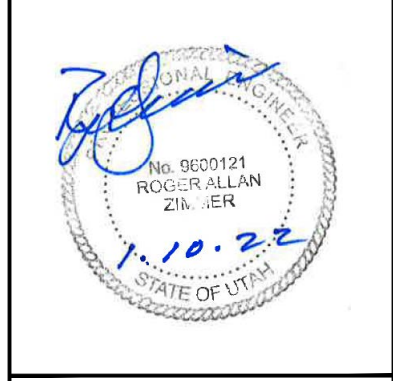


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SITE INFORMATION

**SITE #: UTL02003**  
**SITE NAME: 14300 SOUTH & 1-15**  
**FA #: 10103878**

**66 E. WADSWORTH PARK DRIVE**  
**DRAPER, UT 84020**

SHEET TITLE:  
**GROUNDING DETAILS**

SHEET NUMBER:  
**G-1**

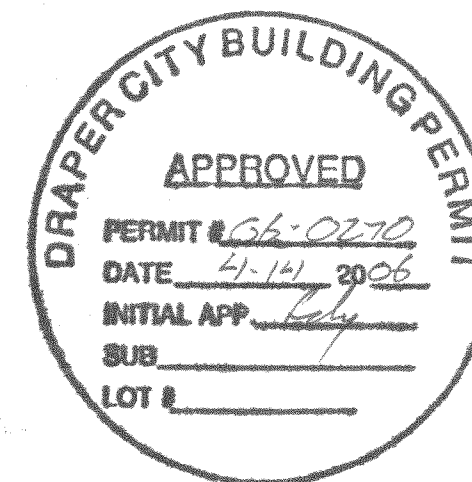
**EXHIBIT F**  
**ORIGINAL SUPPORT STRUCTURE APPROVAL**



# JURISDICTION APPROVED DRAWINGS



## CINGULAR WIRELESS SERVICES SITE NUMBER: SLKCUT2003 SITE NAME: 14300 S & I-15



| DRAWING INDEX  | REV.   | DIRECTIONS  | PROJECT INFORMATION  |  |      |         |        |     |                   |                  |                |     |              |                   |                |    |                |                  |                |             |             |                  |                |          |           |                             |                |
|----------------|--|---|--|--|------|---------|--------|-----|-------------------|------------------|----------------|-----|--------------|-------------------|----------------|----|----------------|------------------|----------------|-------------|-------------|------------------|----------------|----------|-----------|-----------------------------|----------------|
| SLKCUT2003-T01 | TITLE SHEET                                      | 0   | <p><b>SITE TYPE:</b> ROOFTOP ANTENNAS ON EXISTING BUILDING. OUTDOOR RF EQUIPMENT ON EQUIPMENT PLATFORM ON ROOF.</p> <p>3 ANTENNA SECTORS ON ROOFTOP ANTENNA SKIDS. AN UNMANNED TELECOMMUNICATIONS FACILITY.</p> <p><b>SITE ADDRESS:</b> 66 E. WADSWORTH PARK DR<br/>DRAPER, UT 84020</p> <p><b>PROPERTY OWNER:</b> DRAPER LAND LTD PARTNERSHIP #2<br/>13782 S. MINUTEMAN DR.<br/>DRAPER, UT 84020</p> <p><b>CONTACT PERSON:</b> ERIC KECK<br/>(801) 553-1661</p> <p><b>APPLICANT:</b> GENERAL DYNAMICS WIRELESS SERVICES<br/>960 WEST LEVY DR<br/>SALT LAKE CITY, UT 84123</p> <p><b>CONTACT PERSON:</b> DON SHIVELEY<br/>(801) 550-7739</p> <p><b>LATITUDE:</b> 40.50135°<br/><b>LONGITUDE:</b> -111.89000°<br/><b>LAT/LONG TYPE:</b> NAD83<br/><b>ELEVATION:</b> 4426' (GARMIN GPS)</p> <p><b>JURISDICTION:</b> DRAPER CITY</p> <p><b>CURRENT USE:</b> OFFICE BUILDING<br/><b>PROPOSED USE:</b> UNMANNED ROOFTOP TELECOMMUNICATIONS FACILITY</p> <p><b>BUILDING CODE:</b> 2003 IBC<br/>2005 NEC</p> <p><b>WATER SUPPLY:</b> NONE<br/><b>WASTE WATER:</b> NONE<br/><b>PLUMBING:</b> NONE<br/><b>ELECTRICAL:</b> UTAH POWER (PACIFICORP)<br/><b>TELEPHONE:</b> QWEST</p> <p><b>DESIGN CRITERIA</b><br/>SEISMIC ZONE: CATEGORY E<br/>SNOW LOAD: 30 LB./SQ.FT.<br/>WIND LOAD: 90 MPH<br/>3 SEC. GUST</p> |  |      |         |        |     |                   |                  |                |     |              |                   |                |    |                |                  |                |             |             |                  |                |          |           |                             |                |
| SLKCUT2003-A01 | SITE PLAN, ENLARGED SITE PLAN                    | 0   |  |  |      |         |        |     |                   |                  |                |     |              |                   |                |    |                |                  |                |             |             |                  |                |          |           |                             |                |
| SLKCUT2003-A02 | SITE ELEVATIONS, ANTENNA PLAN                    | 0   |  |  |      |         |        |     |                   |                  |                |     |              |                   |                |    |                |                  |                |             |             |                  |                |          |           |                             |                |
| SLKCUT2003-A03 | GENERAL NOTES, DETAILS                           | 0   |  |  |      |         |        |     |                   |                  |                |     |              |                   |                |    |                |                  |                |             |             |                  |                |          |           |                             |                |
| SLKCUT2003-E01 | ELECTRICAL SINGLE LINE DIAGRAM                   | 0   |  |  |      |         |        |     |                   |                  |                |     |              |                   |                |    |                |                  |                |             |             |                  |                |          |           |                             |                |
| SLKCUT2003-E02 | GROUNDING SCHEMATIC,<br>CABINET ARRANGEMENT PLAN | 0   |  |  |      |         |        |     |                   |                  |                |     |              |                   |                |    |                |                  |                |             |             |                  |                |          |           |                             |                |
| SLKCUT2003-E03 | ELECTRICAL DETAILS                               | 0   |  |  |      |         |        |     |                   |                  |                |     |              |                   |                |    |                |                  |                |             |             |                  |                |          |           |                             |                |
| SLKCUT2003-E04 | TELCO DETAILS                                    | 0   |  |  |      |         |        |     |                   |                  |                |     |              |                   |                |    |                |                  |                |             |             |                  |                |          |           |                             |                |
| SLKCUT2003-E05 | ANTENNA SCHEMATIC & DETAILS                      | 0   |  |  |      |         |        |     |                   |                  |                |     |              |                   |                |    |                |                  |                |             |             |                  |                |          |           |                             |                |
| SLKCUT2003-S01 | STRUCTURAL - GENERAL ARRANGEMENT                 | 0   |  |  |      |         |        |     |                   |                  |                |     |              |                   |                |    |                |                  |                |             |             |                  |                |          |           |                             |                |
| SLKCUT2003-S02 | STRUCTURAL - ASSEMBLY PLAN                       | 0   |  |  |      |         |        |     |                   |                  |                |     |              |                   |                |    |                |                  |                |             |             |                  |                |          |           |                             |                |
| SLKCUT2003-S03 | STRUCTURAL - FABRICATION DETAILS                 | 0   |  |  |      |         |        |     |                   |                  |                |     |              |                   |                |    |                |                  |                |             |             |                  |                |          |           |                             |                |
| SLKCUT2003-S04 | STRUCTURAL - FABRICATION DETAILS                 | 0   |  |  |      |         |        |     |                   |                  |                |     |              |                   |                |    |                |                  |                |             |             |                  |                |          |           |                             |                |
| SLKCUT2003-S05 | STRUCTURAL - FABRICATION DETAILS                 | 0   |  |  |      |         |        |     |                   |                  |                |     |              |                   |                |    |                |                  |                |             |             |                  |                |          |           |                             |                |
|                |  | <p>TAKE I-15 EXIT 289 &amp; GO EAST ON BANGERTER HIGHWAY, WHICH CURVES AROUND TO 13800 SOUTH. TURN RIGHT &amp; GO WEST ON 13800 SOUTH. SITE IS ON THE RIGHT JUST AS 13800 SOUTH CURVES SOUTH. 3 FLOOR OFFICE BUILDING WITH "800 CONTACTS" SIGN ON OUTSIDE. LADDER TO ROOF HATCH IS IN ELECTRICAL ROOM ON 3RD FLOOR.</p> <p><b>VICINITY MAP<br/>DRAPER, UTAH</b></p> |  |  |      |         |        |     |                   |                  |                |     |              |                   |                |    |                |                  |                |             |             |                  |                |          |           |                             |                |
|                |  |   | <p><b>SITE QUALIFICATION PARTICIPANTS</b></p> <table border="1"> <thead> <tr> <th></th> <th>NAME</th> <th>COMPANY</th> <th>NUMBER</th> </tr> </thead> <tbody> <tr> <td>A/E</td> <td>MARTY WORTHINGTON</td> <td>WASATCH ELECTRIC</td> <td>(801) 487-4511</td> </tr> <tr> <td>SAC</td> <td>DON SHIVELEY</td> <td>SHIVELEY &amp; ASSOC.</td> <td>(801) 550-7739</td> </tr> <tr> <td>RF</td> <td>GERALD ZAPANTA</td> <td>GENERAL DYNAMICS</td> <td>(801) 313-8404</td> </tr> <tr> <td>CONST. MGT.</td> <td>RICK DEGREY</td> <td>GENERAL DYNAMICS</td> <td>(801) 580-8786</td> </tr> <tr> <td>LANDLORD</td> <td>ERIC KECK</td> <td>DRAPER LAND LTD PARTNERSHIP</td> <td>(801) 553-1661</td> </tr> </tbody> </table>   |  | NAME | COMPANY | NUMBER | A/E | MARTY WORTHINGTON | WASATCH ELECTRIC | (801) 487-4511 | SAC | DON SHIVELEY | SHIVELEY & ASSOC. | (801) 550-7739 | RF | GERALD ZAPANTA | GENERAL DYNAMICS | (801) 313-8404 | CONST. MGT. | RICK DEGREY | GENERAL DYNAMICS | (801) 580-8786 | LANDLORD | ERIC KECK | DRAPER LAND LTD PARTNERSHIP | (801) 553-1661 |
|                | NAME   | COMPANY   | NUMBER   |  |      |         |        |     |                   |                  |                |     |              |                   |                |    |                |                  |                |             |             |                  |                |          |           |                             |                |
| A/E            | MARTY WORTHINGTON                                | WASATCH ELECTRIC  | (801) 487-4511   |  |      |         |        |     |                   |                  |                |     |              |                   |                |    |                |                  |                |             |             |                  |                |          |           |                             |                |
| SAC            | DON SHIVELEY                                     | SHIVELEY & ASSOC.   | (801) 550-7739   |  |      |         |        |     |                   |                  |                |     |              |                   |                |    |                |                  |                |             |             |                  |                |          |           |                             |                |
| RF             | GERALD ZAPANTA                                   | GENERAL DYNAMICS  | (801) 313-8404   |  |      |         |        |     |                   |                  |                |     |              |                   |                |    |                |                  |                |             |             |                  |                |          |           |                             |                |
| CONST. MGT.    | RICK DEGREY                                      | GENERAL DYNAMICS  | (801) 580-8786   |  |      |         |        |     |                   |                  |                |     |              |                   |                |    |                |                  |                |             |             |                  |                |          |           |                             |                |
| LANDLORD       | ERIC KECK  | DRAPER LAND LTD PARTNERSHIP   | (801) 553-1661   |  |      |         |        |     |                   |                  |                |     |              |                   |                |    |                |                  |                |             |             |                  |                |          |           |                             |                |

**Wasatch Electric**  
A Division of Dynalectric  
An EMCOR Company

1574 SOUTH WEST TEMPLE  
SALT LAKE CITY, UTAH  
(801) 487-4511 FAX (801) 487-5032

SITE NAME: 14300 S & I-15  
SITE NO.: SLKCUT2003  
66 E. WADSWORTH PARK DR  
DRAPER, UT 84020

**cingular**  
WIRELESS

CINGULAR WIRELESS SERVICES, INC.  
4393 SOUTH RIVERBOAT ROAD  
TAYLORSVILLE, UT 84123

| NO. | DATE    | REVISIONS                | BY | CHK | APP'D |
|-----|---------|--------------------------|----|-----|-------|
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| A   | 3/7/06  | ISSUED FOR CLIENT REVIEW | MW | MW  |       |

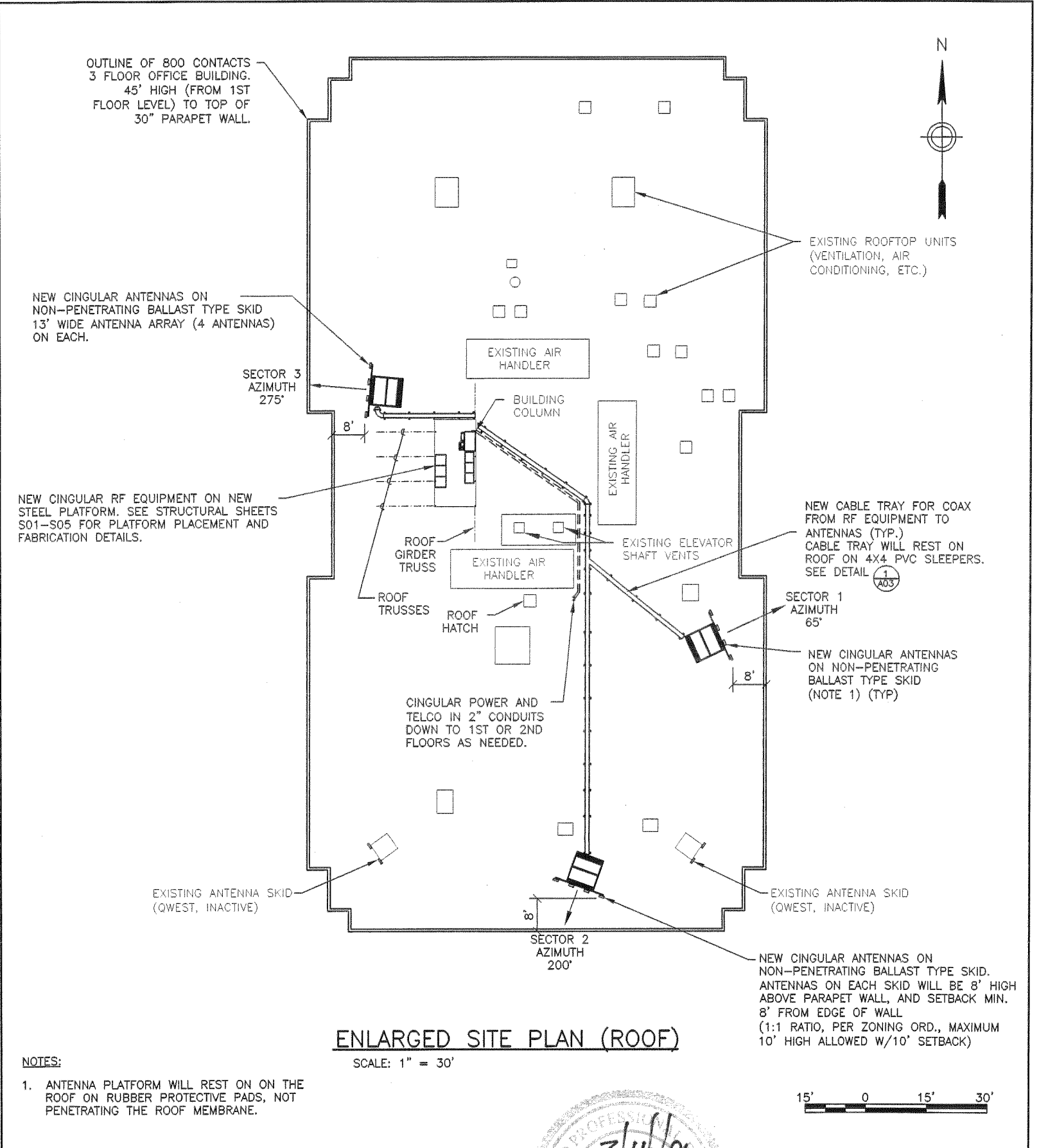
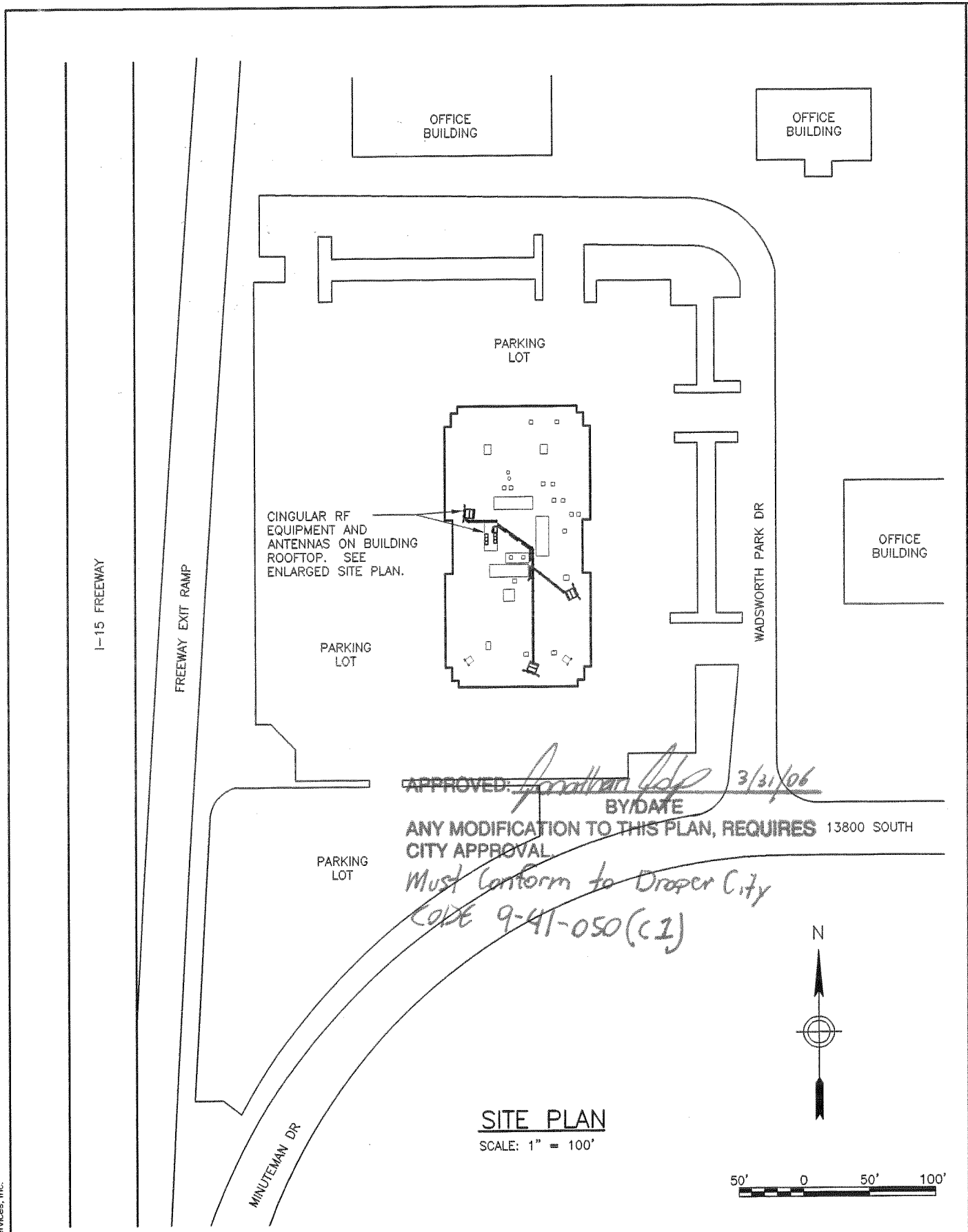
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LICENSED PROFESSIONAL ENGINEER  
STATE OF UTAH  
NO. 5713  
J. G. GOEBEL

SITE NAME: 14300 S & I-15  
TITLE SHEET

DRAWING NUMBER: SLKCUT2003-T01

**T01**



- NOTES:
1. ANTENNA PLATFORM WILL REST ON ON THE ROOF ON RUBBER PROTECTIVE PADS, NOT PENETRATING THE ROOF MEMBRANE.

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SALT LAKE CITY, UTAH  
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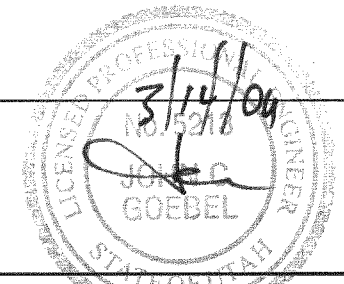
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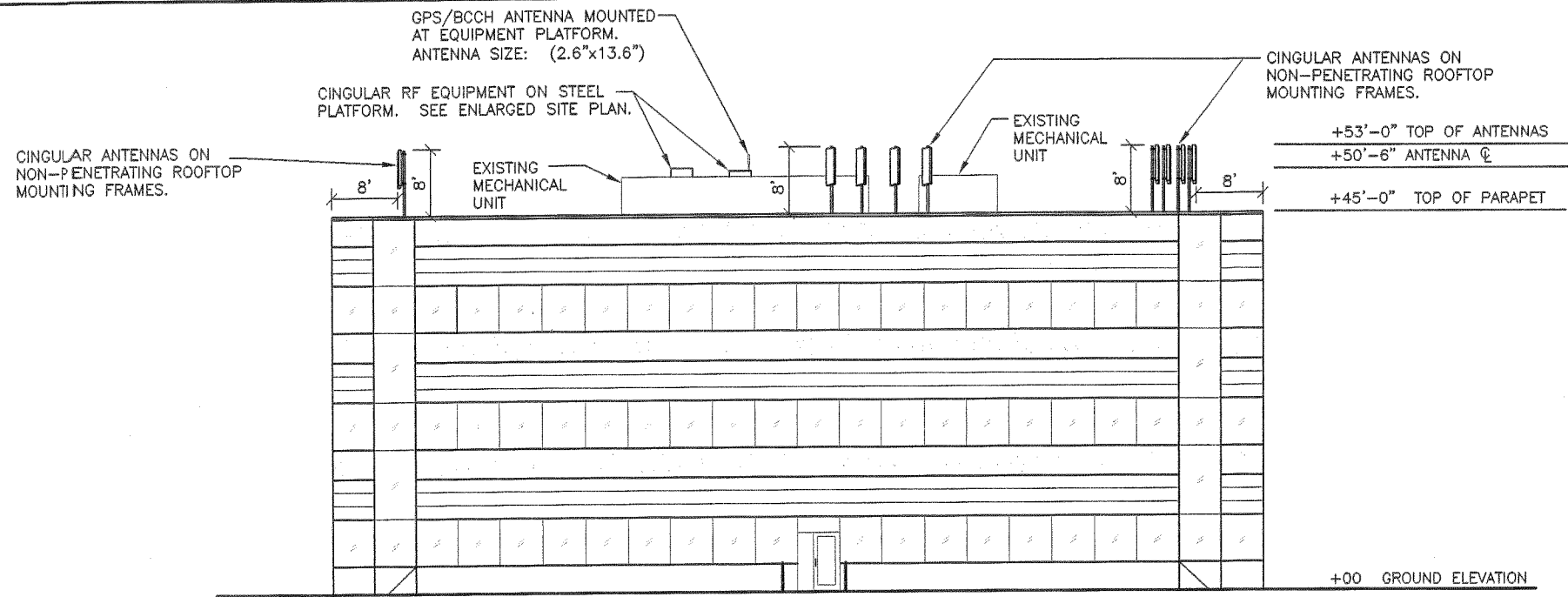
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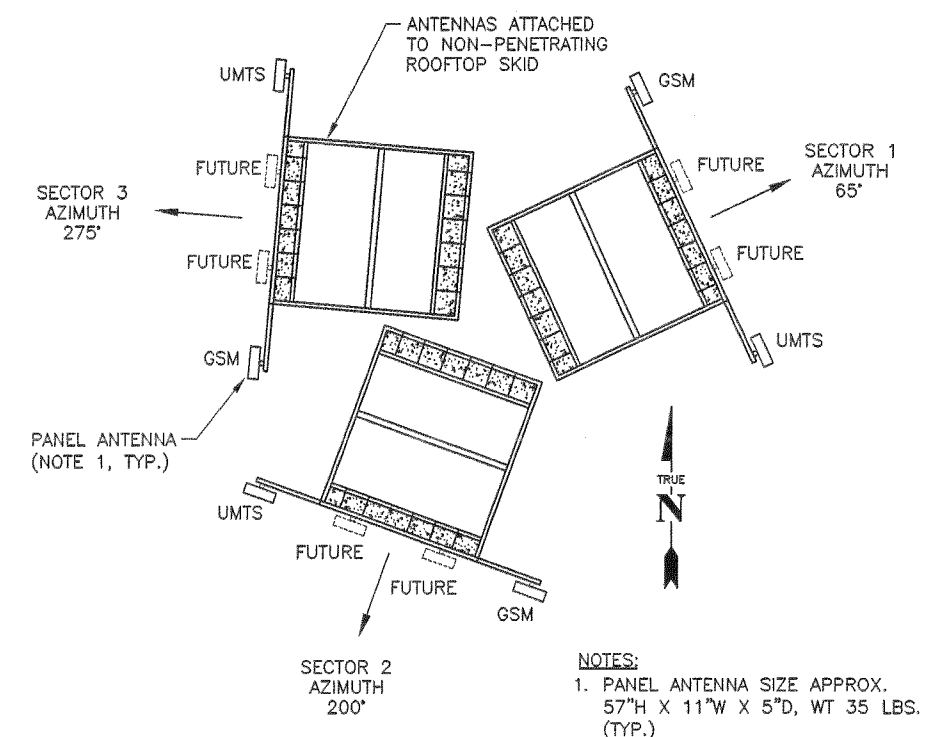
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SITE PLAN, ENLARGED SITE PLAN

DRAWING NUMBER: SLKCUT2003-A01

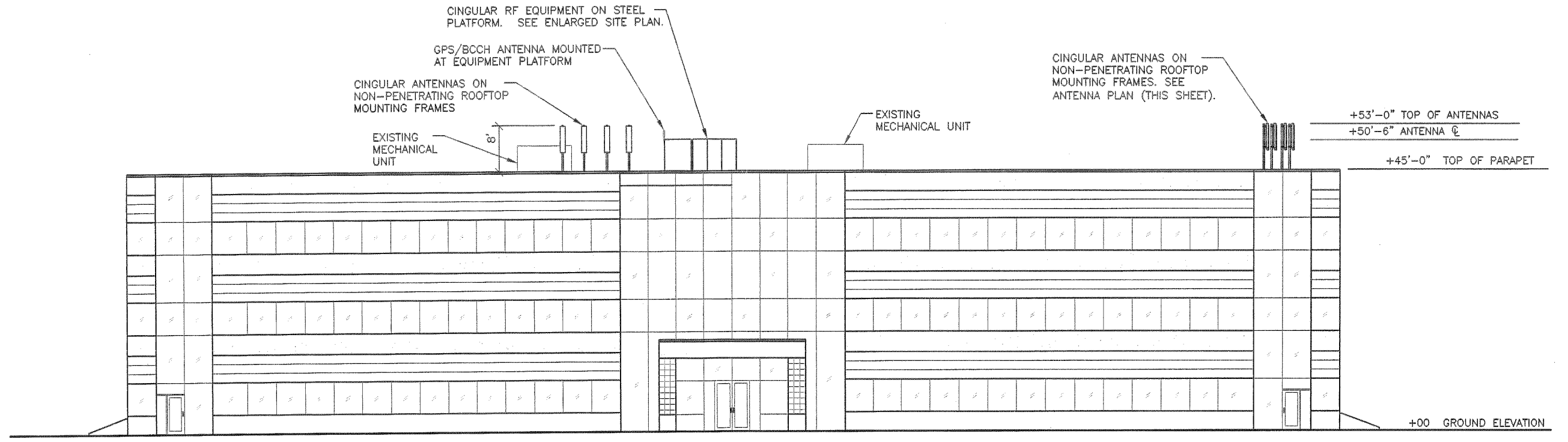
**A01**



1 SOUTH ELEVATION  
A02 SCALE: 1" = 20'



ANTENNA PLAN  
N.T.S.



2 WEST ELEVATION  
A02 SCALE: 1" = 20'



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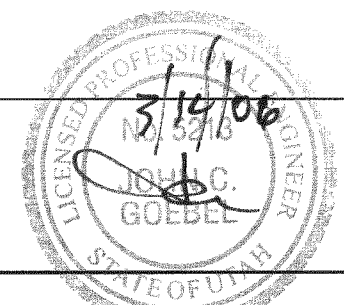
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| A   | 3/7/06  | ISSUED FOR CLIENT REVIEW | MW | MW  |       |

SCALE: AS SHOWN



SITE NAME: 14300 S & I-15  
SITE ELEVATIONS, ANTENNA PLAN  
DRAWING NUMBER: SLKCUT2003-A02  
**A02**

**GENERAL NOTES:**

- FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:  
 CONTRACTOR - GENERAL DYNAMICS  
 SUBCONTRACTOR - GENERAL CONTRACTOR (CONSTRUCTION)  
 OWNER - CINGULAR WIRELESS SERVICES.
- ALL SITE WORK SHALL BE COMPLETED AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.
- DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.
- ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY CONTRACTOR.
- THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
- THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
- ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING & EXCAVATION.

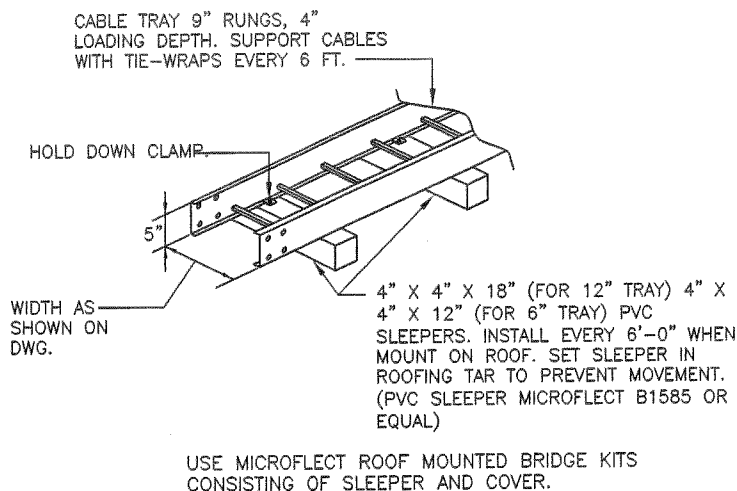
- ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, AS DIRECTED BY THE RESPONSIBLE ENGINEER, AND SUBJECT TO THE APPROVAL OF THE OWNER AND/OR LOCAL UTILITIES.
- 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.
- SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
- NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
- THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.
- IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
- THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE CINGULAR TECHNICAL SPECIFICATION FOR SITE SIGNAGE.
- SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
- THE FACILITY WILL BE UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SEWER SERVICE.
- THE FACILITY IS UNMANNED AND IS NOT FOR HUMAN HABITAT. (NO HANDICAP ACCESS IS REQUIRED).
- OCCUPANCY IS LIMITED TO PERIODIC MAINTENANCE AND INSPECTION, APPROXIMATELY 2 TIMES PER MONTH, BY CINGULAR TECHNICIANS.
- NO NOISE, SMOKE, DUST OR ODOR WILL RESULT FROM THIS PROPOSAL.
- OUTDOOR STORAGE AND SOLID WASTE CONTAINERS ARE NOT PROPOSED.
- INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FROM SITE VISITS AND DRAWINGS PROVIDED BY THE SITE OWNER. SUBCONTRACTOR SHALL NOTIFY CINGULAR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.

**CONCRETE AND REINFORCING STEEL NOTES:**

- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
- ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE.
- 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. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNLESS NOTED OTHERWISE.
- 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 OR NOT CAST AGAINST THE GROUND:  
 SLAB AND WALL .....3/4 IN.  
 BEAMS AND COLUMNS.....1 1/2 IN.
- A CHAMFER 3/4" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNLESS NOTED OTHERWISE, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
- INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD OR APPROVED EQUAL, UNLESS NOTED OTHERWISE. SPECIAL INSPECTIONS, WHEN REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS.

**STRUCTURAL STEEL NOTES:**

- ALL STEEL WORK SHALL BE PAINTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND IN ACCORDANCE WITH ASTM A36 UNLESS OTHERWISE NOTED.
- ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1. 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.
- BOLTED CONNECTIONS SHALL BE ASTM A325 BEARING TYPE (3/4"Ø) CONNECTIONS AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
- NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA. ASTM A 307 BOLTS UNLESS NOTED OTHERWISE.
- INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, WHEN REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS.



DETAIL 1 ROOF MOUNTED CABLE TRAY  
 A03 NTS

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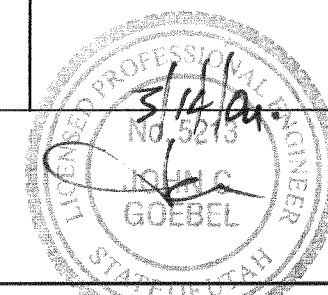


1574 SOUTH WEST TEMPLE  
 SALT LAKE CITY, UTAH  
 (801) 487-4511 FAX (801) 487-5032

SITE NAME: 14300 S & I-15  
 SITE NO.: SLKCUT2003  
 66 E. WADSWORTH PARK DR  
 DRAPER, UT 84020



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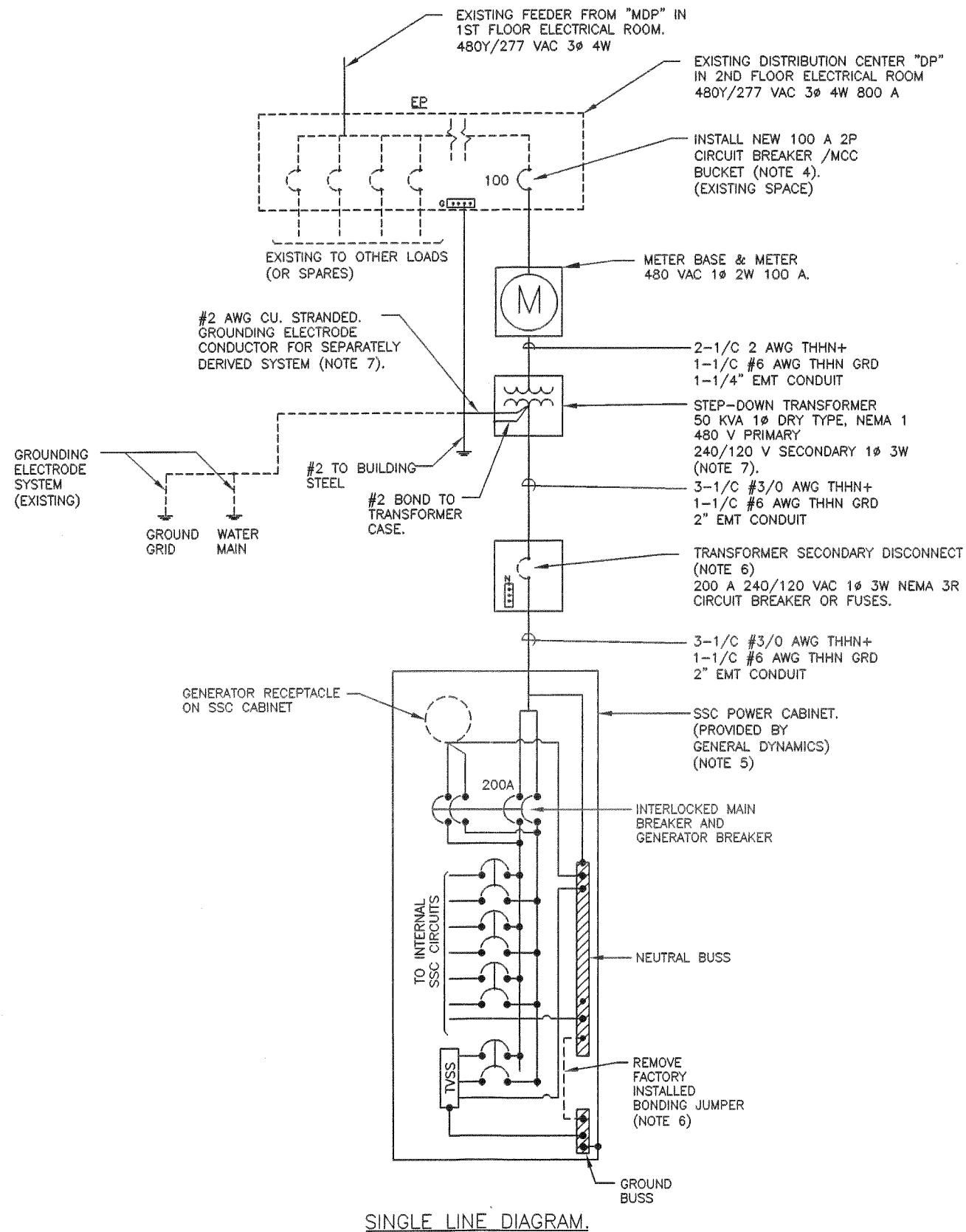
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 GENERAL NOTES, DETAILS

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 SLKCUT2003-A03

**A03**

**NOTES:**

- ELECTRICAL SERVICE TO SSC CABINET: 200AMP, SINGLE PHASE, 120/240 VAC, 60HZ
- ALL ELECTRICAL EQUIPMENT AND INSTALLATIONS SHALL COMPLY WITH THE N.E.C. AND LOCAL CODE REQUIREMENTS. UNLESS SPECIFICALLY INDICATED, CONDUIT TYPE SHALL BE SELECTED IN ACCORDANCE WITH CODE REQUIREMENTS.
- POWER, CONTROL AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#14 AWG AND LARGER), 600V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90°C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED.
- SUBCONTRACTOR SHALL PROVIDE MCC BUCKED W/100 AMP BREAKER WITH FAULT CURRENT RATINGS EQUAL TO THAT OF BREAKERS IN EXISTING BUCKETS. TRANSFORMER SECONDARY DISCONNECT RATING 10,000 AIC MIN.
- SSC POWER PANEL IS PROVIDED AS PART OF THE SSC CABINET. INTERNAL WIRING OF SSC CABINET IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY AND MAY VARY ACCORDING TO MANUFACTURER. SSC AC PANEL IS RATED AS SERVICE ENTRANCE EQUIPMENT.
- SUBCONTRACTOR SHALL REMOVE THE MAIN BONDING JUMPER IN THE SSC POWER PANEL.
- NOTE DELETED
- THE GROUNDING ELECTRODE FOR THE SEPARATELY DERIVED SYSTEM SHALL BE BONDED PER N.E.C. TO BUILDING STEEL NEAR THE TRANSFORMER, TO THE GROUND BAR IN DISTRIBUTION PANEL, AND IF PRACTICAL TO EXISTING GROUNDING ELECTRODE SYSTEM (WATER MAIN AND GROUND GRID) (PER NEC).
- FOR TELCO SINGLE LINE DIAGRAM, SEE DETAIL 1/E04.



**ALTERNATE DESIGN OPTION:**  
ELECTRICAL SERVICE MAY COME FROM 200 A FUSED DISCONNECT IN 120/208 V DISTRIBUTION PANEL "DP" ON FIRST FLOOR. WITH THIS OPTION, STEP-DOWN TRANSFORMER AND SECONDARY DISCONNECT ARE NOT REQUIRED.

METER, TRANSFORMER AND SECONDARY DISCONNECT SHALL BE LOCATED IN ELECTRICAL ROOM ON SECOND OR THIRD FLOOR. (COORDINATE LOCATION WITH BUILDING OWNER)  
DUE TO ROOF LOADING LIMITATIONS TRANSFORMER SHALL NOT BE LOCATED ON ROOFTOP EQUIPMENT PLATFORM.  
SEE ALTERNATE DESIGN OPTION.

SINGLE LINE DIAGRAM.

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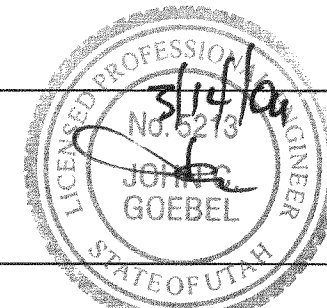
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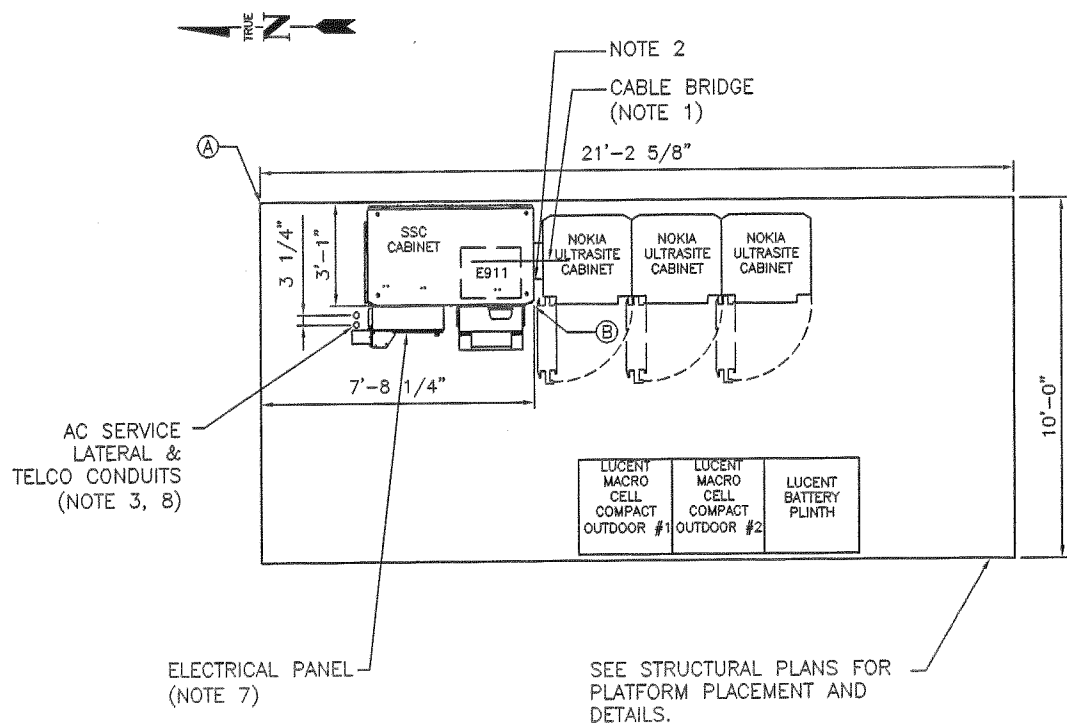


SITE NAME: 14300 S & I-15  
ELECTRICAL SINGLE LINE DIAGRAM

DRAWING NUMBER  
SLKCUT2003-E01

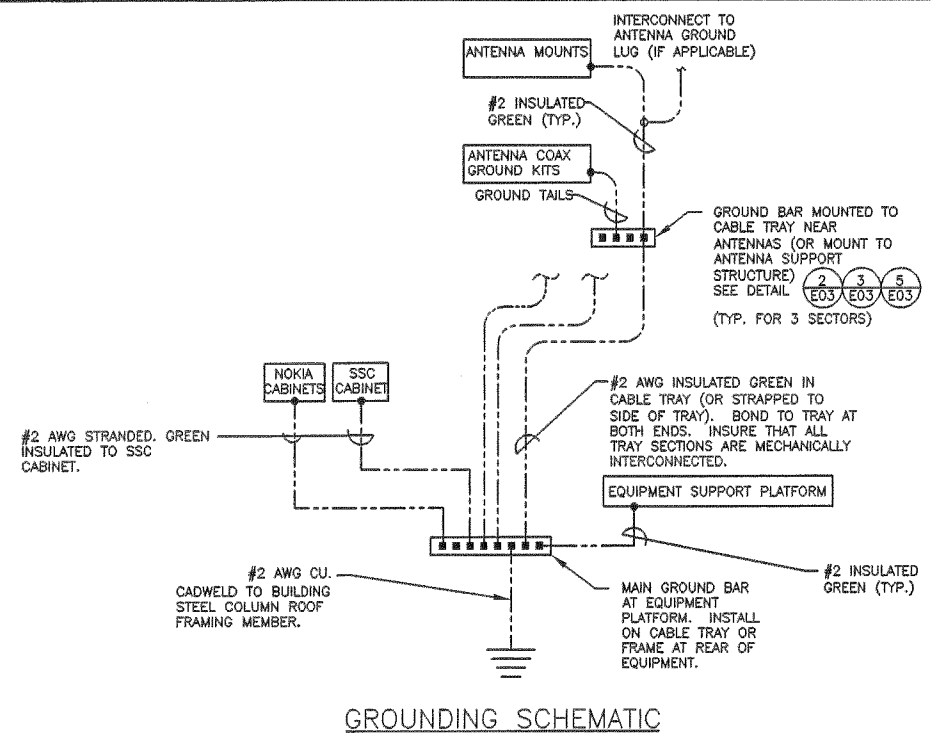
**E01**





- NOTES:
1. SITE SUPPORT CABINET (SSC) CABINET SHALL BE INSTALLED PRIOR TO INSTALLING THE BTS CABINETS. SSC TO BTS CABLE BRIDGE PROVIDED WITH SSC.
  2. BTS INSTALLER SHALL ALIGN CENTER OF ULTRASITE CABLE ENTRY PORT WITH CENTERLINE OF SSC CABLE ENTRY PORT.
  3. START SSC CABINET ALIGNMENT AT POINT B AS MEASURED FROM POINT A.
  4. EQUIPMENT ANCHOR EMBEDMENT SHALL NOT EXCEED 3" BELOW SLAB FINISHED SURFACE, IF INSTALLED ON CONCRETE SLAB.
  5. LEASE SPACE MAY BE ADJUSTED TO ACCOMODATE SITE CONDITIONS. SSC DIMENSIONS MAY VARY SLIGHTLY. (NOT TO IMPACT ZONING)
  6. 3'-0" CLEARANCE MUST BE MAINTAINED TO MEET NEC CODE REQUIREMENTS.
  7. GENERATOR RECEPTACLE POSITION ON AC SERVICE ENTRANCE PANEL MAY VARY BY MANUFACTURER.
  8. CONDUIT ABOVE GRADE SHALL BE RMC, IMC OR SCHEDULE 80 PVC. SSC TO BTS CABLE BRIDGE PROVIDED WITH SSC. OR EMT WITH RAIN TIGHT FITTINGS.
  9. ANTENNA COAX CABLES ENTERING THE SSC SHALL BE INSTALLED IN A MANNER THAT WILL PERMIT THE ADDITION OF FUTURE COAX CABLES AND PERMIT THE BATTERY COMPARTMENT DOOR TO OPEN WITHOUT INTERFERENCE.

DETAIL 1 E03 NTS CABINET ARRANGEMENT PLAN



ABBREVIATIONS:

|     |                               |     |                               |
|-----|-------------------------------|-----|-------------------------------|
| AWG | AMERICAN WIRE GAUGE           | MHA | MAST HEAD AMPLIFIER           |
| BCW | BARE COPPER WIRE              | PCS | PERSONAL COMMUNICATION SYSTEM |
| DWG | DRAWING                       | PTS | POWER TRANSFER SWITCH         |
| EMT | ELECTRICAL METALLIC TUBING    | PVC | RIGID (SCH. 40)               |
| GEN | GENERATOR                     | PVC | POLYVINYL CHLORIDE CONDUIT    |
| IGR | INTERIOR GROUND RING (HALO)   | RGS | RIGID GALVANIZED STEEL        |
| IMC | INTERMEDIATE METALLIC CONDUIT | RWY | RACEWAY                       |
| MGB | MASTER GROUND BAR             | TYP | TYPICAL                       |

ELECTRICAL SYMBOLS:

|   |                     |     |                             |
|---|---------------------|-----|-----------------------------|
| ⊗ | CHEMICAL GROUND ROD | ⚡   | CIRCUIT BREAKER             |
| ⊗ | GROUND ROD          | ■   | CADWELD TYPE CONNECTION     |
| □ | DISCONNECT SWITCH   | ●   | COMPRESSION TYPE CONNECTION |
| Ⓜ | METER               | --- | GROUNDING WIRE              |
|   |                     | XXX | ← REPRESENTS DETAIL NUMBER  |
|   |                     | XXX | ← REF. DRAWING NUMBER       |

ELECTRICAL & GROUNDING NOTES:

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND ALL APPLICABLE LOCAL CODES.
2. CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.
3. THE SUBCONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT.
4. COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC (CADWELD) CONNECTIONS.
5. NOTE DELETED
6. ALL GROUND CONNECTIONS BELOW GRADE SHALL BE EXOTHERMIC (CADWELD).
7. ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR & EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
8. ALL EXOTHERMIC CONNECTIONS TO THE GROUND RODS SHALL START AT THE TOP & HAVE A VERTICAL SEPARATION OF 6" FOR EVERY ADDITIONAL CONNECTION.
9. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
10. ALL EXTERIOR GROUND CONDUCTORS SHALL BE #2 AWG SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
11. CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED. BACK TO BACK CONNECTIONS ON OPPOSITE SIDES OF THE GROUND BUS ARE PERMITTED.
12. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
13. MAXIMUM RESISTANCE OF THE COMPLETED GROUND SYSTEM SHALL NOT EXCEED 5 OHMS. TESTING SHALL BE PERFORMED IN ACCORDANCE WITH PROJECT SPECIFICATION FOR FACILITY GROUNDING, USING FALL OF POTENTIAL METHOD.
14. CONDUIT TYPES SHALL CONFORM TO N.E.C. CONDUITS ABOVE GRADE SHALL BE RAIN TIGHT EMT OR IMC. CONDUITS BELOW GRADE SHALL BE SCH 40 PVC.
15. BOND ALL METALLIC OBJECTS WITHIN 6' OF MAIN GROUND WIRES WITH 1-#2 AWG TIN-PLATED COPPER GROUND CONDUCTOR

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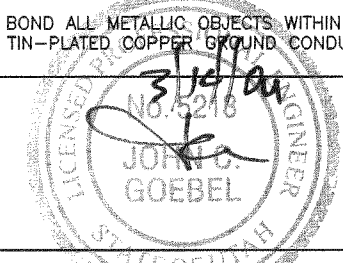
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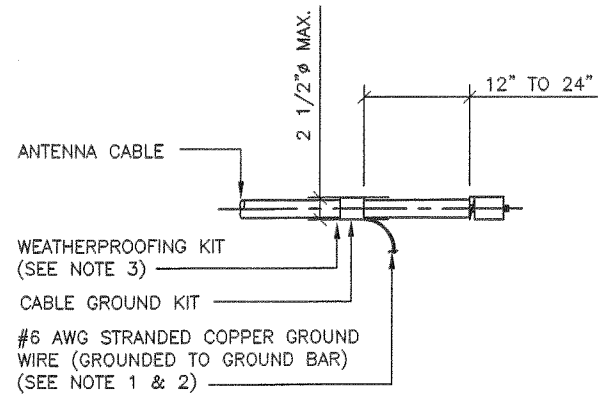
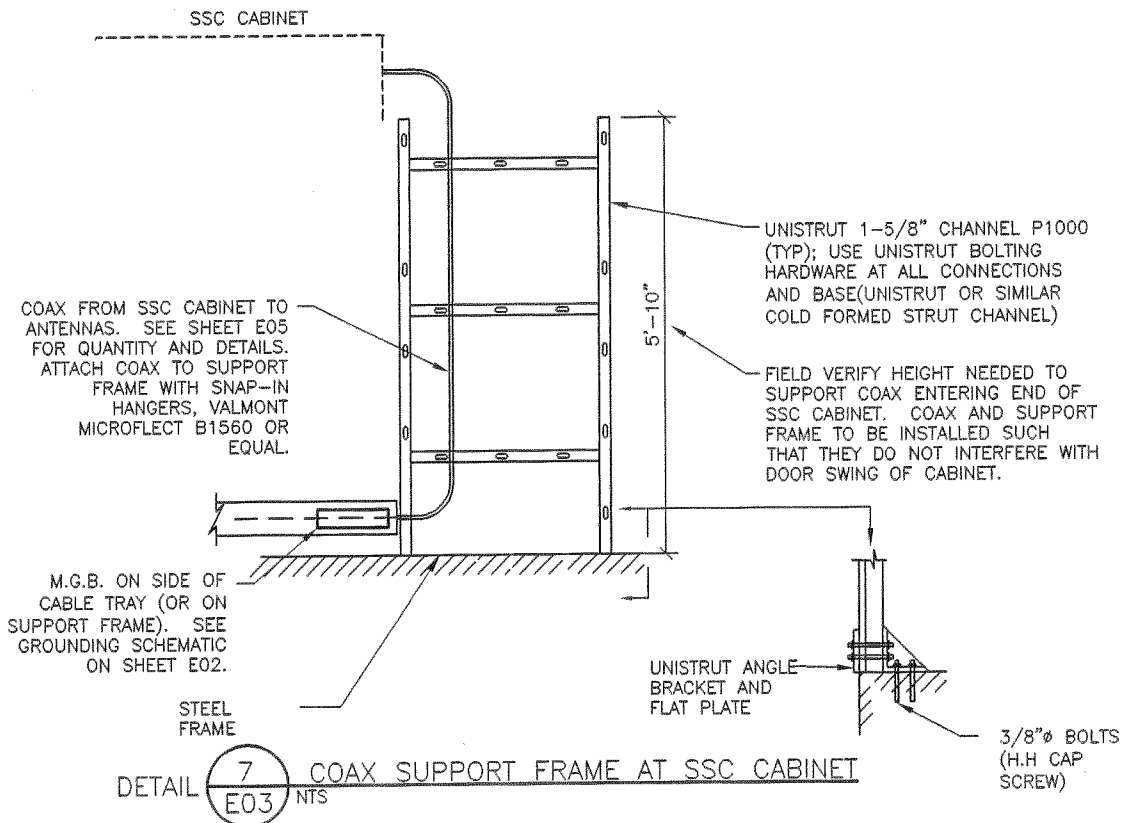
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SITE NAME: 14300 S & I-15  
GROUNDING SCHEMATIC,  
CABINET ARRANGEMENT PLAN

DRAWING NUMBER: SLKCUT2003-E02

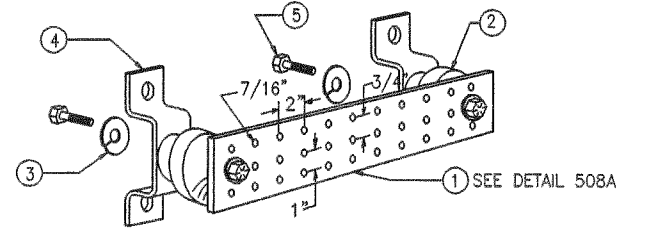
**E02**



NOTES:

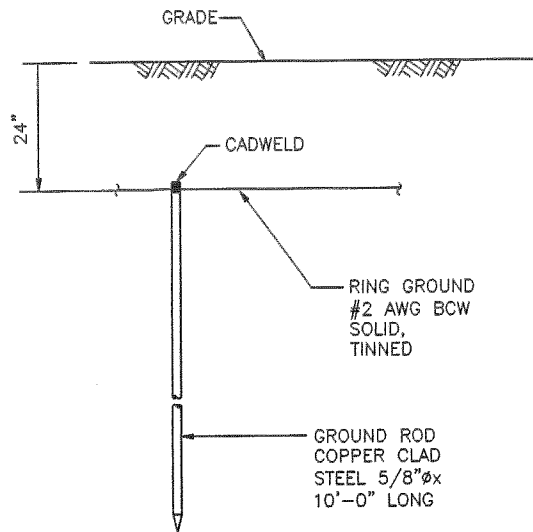
- DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
- GROUNING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
- WEATHER PROOFING SHALL BE TWO-PART TAPE KIT, COLD SHRINK SHALL NOT BE USED.

DETAIL 6 E03 NTS CONNECTION OF CABLE GROUND KIT TO ANTENNA CABLE

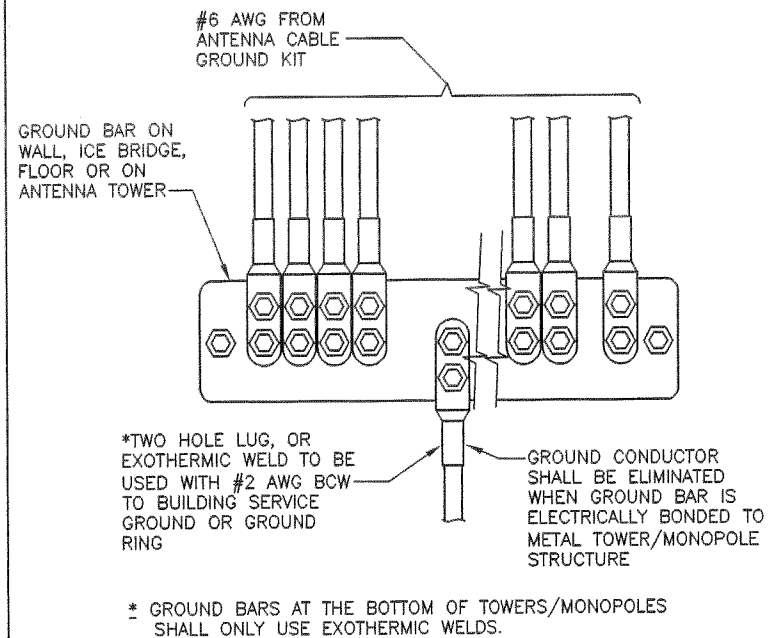


- COPPER GROUND BAR 1/4" X 4" X 20", NEWTON INSTRUMENT CO. CAT. NO. B-6142 OR EQUAL. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION. (ACTUAL GROUND BAR SIZE WILL VARY BASED ON NUMBER OF GROUND CONNECTIONS)
- INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4 OR EQUAL
- 5/8" LOCKWASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8 OR EQUAL
- WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT. NO. A-6056 OR EQUAL
- 5/8-11 X 1" HHCS BOLTS, NEWTON INSTRUMENT CO. CAT. NO. 3012-1 OR EQUAL
- INSULATORS SHALL BE ELIMINATED WHEN BONDING DIRECTLY TO TOWER/MONOPOLE STRUCTURE. CONNECTION TO TOWER/MONOPOLE STRUCTURE SHALL BE PER MANUFACTURERS RECOMMENDATIONS.

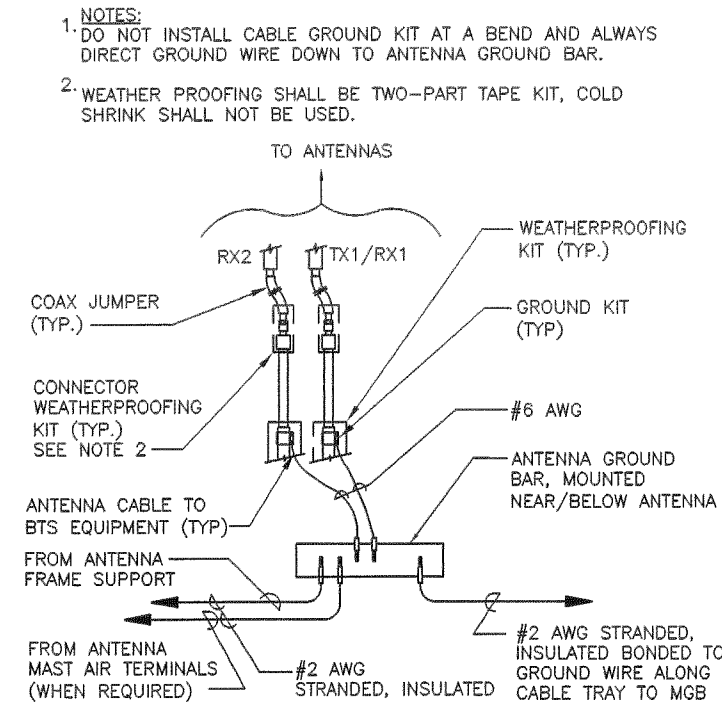
DETAIL 5 E03 NTS GROUND BAR DETAIL



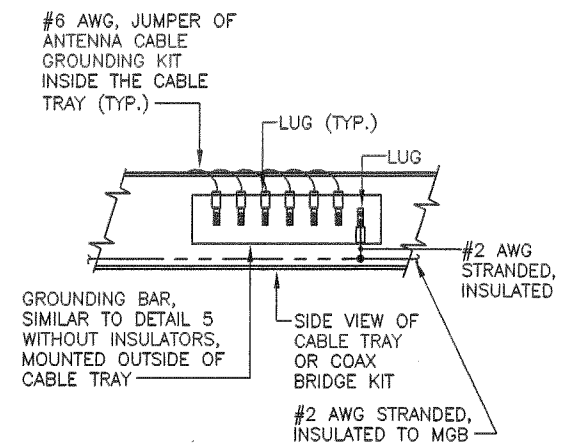
DETAIL 4 E03 NTS GROUND ROD



DETAIL 3 E03 NTS INSTALLATION OF GROUND WIRE TO GROUND BAR



DETAIL 2 E03 NTS CONNECTION OF GROUND WIRE TO GROUND BAR, ROOFTOP



DETAIL 1 E03 NTS GROUND BAR MOUNTED CABLE TRAY

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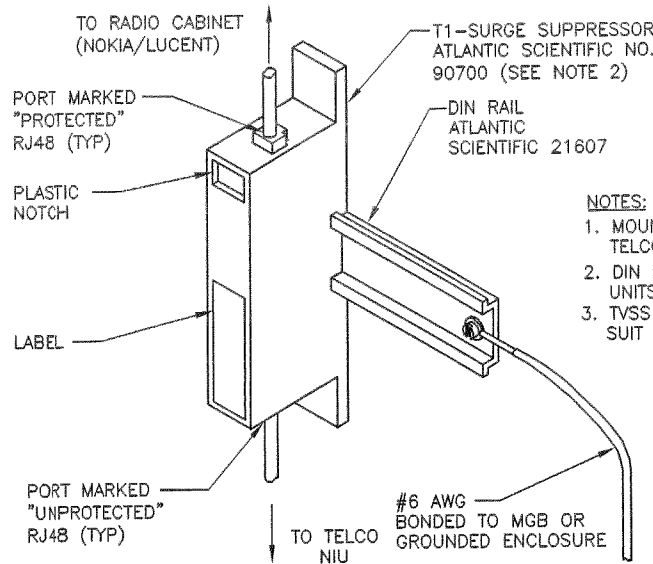


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ELECTRICAL DETAILS

DRAWING NUMBER  
SLKCUT2003-E03

**E03**



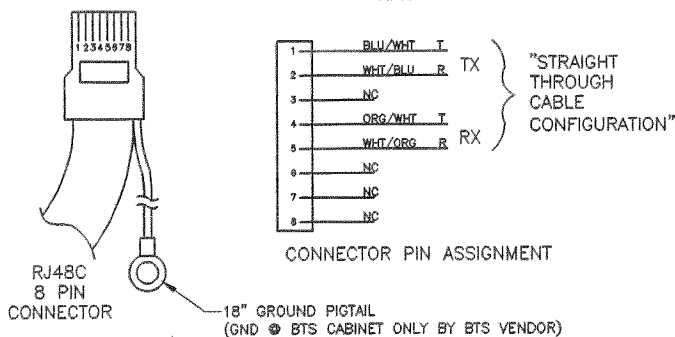


- NOTES:**
1. MOUNT DIN RAIL TO TELCO BOARD
  2. DIN RAIL HOLDS 1-4 UNITS
  3. TVSS MAY BE ORIENTED TO SUIT SITE REQUIREMENTS.

DETAIL **3** T1 SURGE SUPPRESSOR  
E04 NTS

| VENDOR                | CDS DATACOM INC.<br>214-340-9199 | ATLANTA CABLE SALES INC.(ACS)<br>800-241-9881 |
|-----------------------|----------------------------------|---|
| OUTDOOR DOUBLED ENDED | P# C00411484-XXX                 | P# 010717-1-XXX                               |
| INDOOR DOUBLED ENDED  | P# C00411467-XXX                 | P# 010716-1-XXX                               |
| OUTDOOR SINGLE ENDED  | P# C00411483-XXX                 | P# 010717-XXX                                 |
| INDOOR SINGLE ENDED   | P# C00411450-XXX                 | P# 010716-XXX                                 |

XXX = LENGTH IN FEET



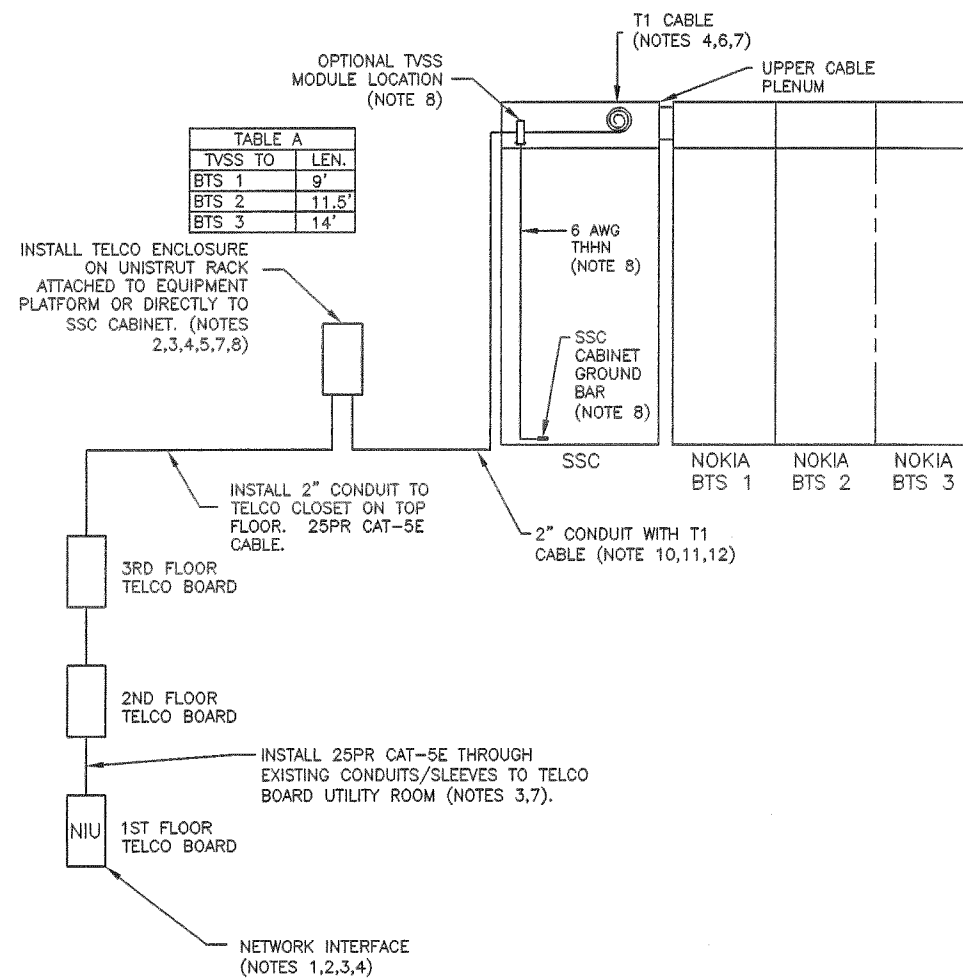
**NOTES:**

1. CABLE IS A NOKIA SPECIFIC DESIGN. WIRING IS UNIQUE AND SHALL BE USED FOR NOKIA ULTRASITE INSTALLATIONS ONLY.
2. SELECTED CABLE MUST BE FROM A VENDOR LISTED IN THE ABOVE TABLE (NO SUBSTITUTIONS ARE PERMITTED)
3. DOUBLE ENDED CABLES ARE STANDARD. SINGLE ENDED OPTIONAL TO MEET UNIQUE SITE REQUIREMENTS.
4. CABLE IS A STRAIGHT-THROUGH WITH IDENTICAL CONNECTOR PIN-OUT ON BOTH ENDS.
5. CABLE END WITH 18" GROUND PIGTAIL SHALL BE INSTALLED AT NOKIA BTS.
6. ORDER LENGTH (XXX) AND TYPE (OUTDOOR, INDOOR) AS APPROPRIATE FOR SITE REQUIREMENTS

DETAIL **2** T1 CABLE AND CONNECTION PIN-OUT  
E04 NTS

**NOTES:**

1. NETWORK INTERFACE (NIU) TO BE INSTALLED IN EXISTING BUILDING TELCO DEMARK LOCATION.
2. INSTALL (1) 66 BLOCK NEAR NIU, AND (1) IN TELCO ENCLOSURE ON OR NEAR SSC CABINET.
3. INSTALL (1) 25PR CAT5E CABLE BETWEEN THE (2) 66 BLOCKS. FIELD ROUTE THROUGH EXISTING CONDUITS AND/OR SLEEVES FROM NIU LOCATION TO TOP FLOOR TELCO CLOSET, AND FROM THERE TO NEW TELCO ENCLOSURE IN NEW 2" CONDUIT.
4. FOR EACH T1, INSTALL (1) 4PR CAT-5E CABLE FROM NIU TO 66 BLOCK, AND (1) FROM TELCO ENCLOSURE 66 BLOCK TO SSC CABINET.
5. INSTALL ONE TVSS MODULE PER T1 CIRCUIT AND ONE TVSS DIN RAIL PER FOUR TVSS MODULES (DETAIL 3/E04). (INSTALLED IN TELCO ENCLOSURE NEAR SSC CABINET). TVSS MODULES TO BE GROUNDED WITH #6 CU.
6. AT SSC CABINET UPPER PLENUM, T1 CABLES TO BE COILED WITH LENGTH PER TABLE A FOR CONNECTION TO BTS CABINETS BY VENDOR.
7. ALL CABLES, INSTALLATION, AND TERMINATION BY SUBCONTRACTOR EXCEPT THE TERMINATION AT BTS CABINET.
8. ON SITES WHERE TELCO ENCLOSURE IS NOT INSTALLED, THE TVSS MAY BE INSTALLED IN THE SSC CABINET UPPER PLENUM. THE TVSS MODULE(S) AND ASSOCIATED DIN RAIL TO BE MOUNTED IN A MANNER THAT WILL NOT ADVERSELY IMPACT THE WEATHER TIGHT INTEGRITY OF THE CABINET AND POSITIONED TO PREVENT INTERFERENCE WITH COAX JUMPERS, CABLES OR COMPONENTS. THE TVSS GROUND CONDUCTOR WOULD BE CONNECTED TO THE SSC GROUND BAR, GROUND CONDUCTOR SHALL NOT BE ROUTED NEAR POWER OR SIGNAL CABLES OR COMPONENTS. POSITION OF GROUND BAR ILLUSTRATIVE ONLY. REFER TO MANUFACTURERS DOCUMENTATION FOR EXACT LOCATION.



DETAIL **1** TELCO SINGLE LINE DIAGRAM  
E04 NTS

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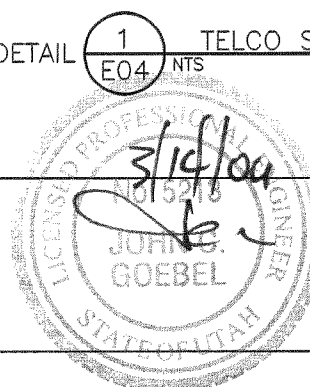
1574 SOUTH WEST TEMPLE  
SALT LAKE CITY, UTAH  
(801) 487-4511 FAX (801) 487-5032

SITE NAME: 14300 S & I-15  
SITE NO.: SLKCUT2003  
86 E. WADSWORTH PARK DR  
DRAPER, UT 84020

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TAYLORSVILLE, UT 84123

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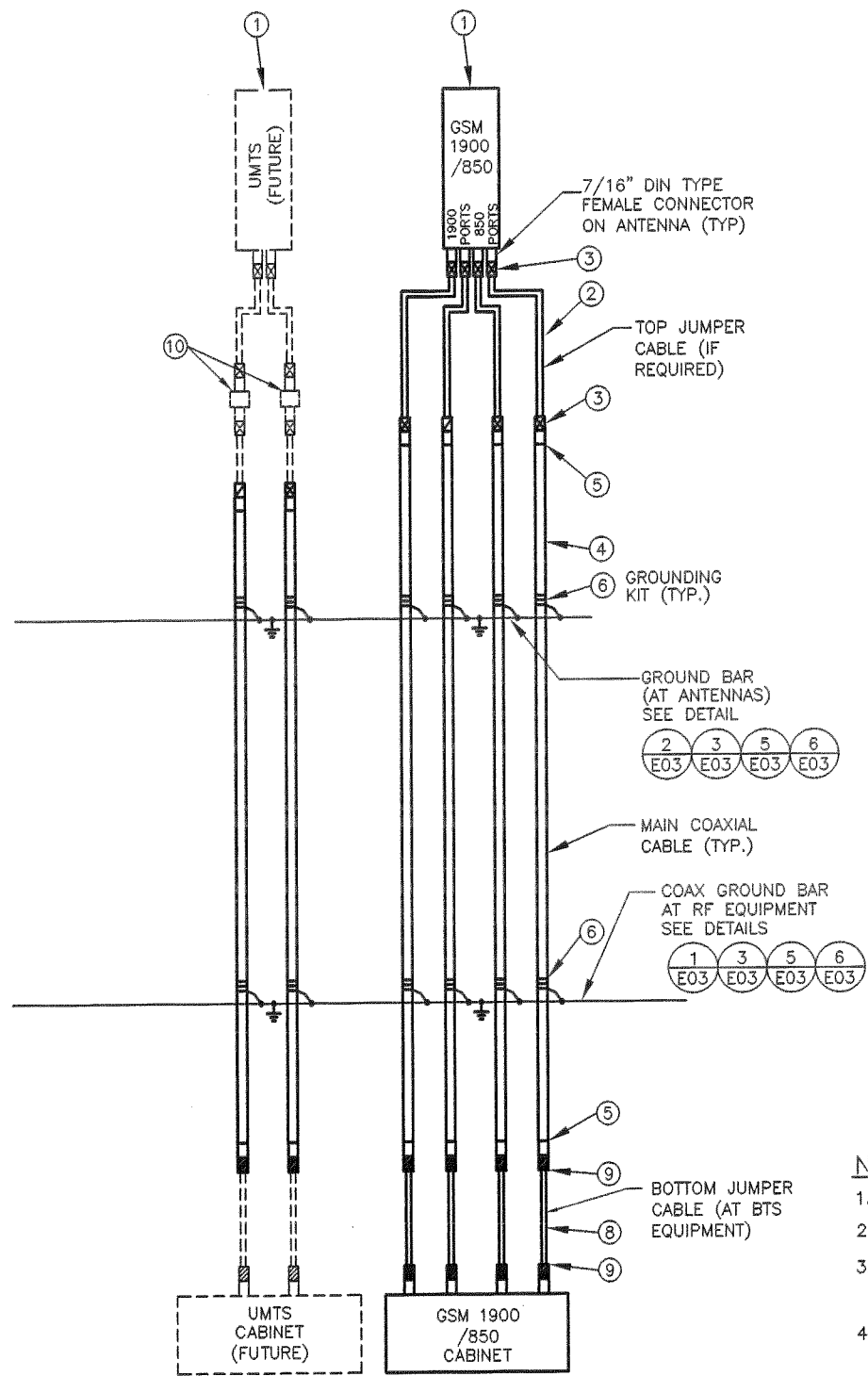
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SITE NAME: 14300 S & I-15  
TELCO DETAILS

DRAWING NUMBER  
SLKCUT2003-E04

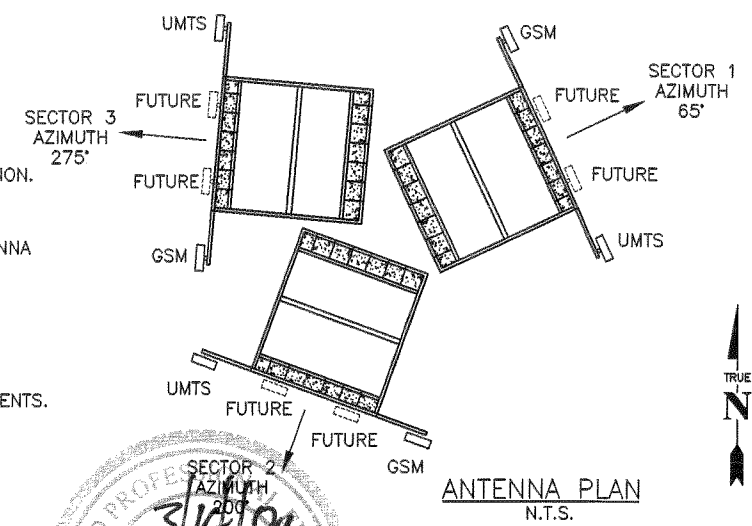
**E04**



ANTENNA SCHEMATIC  
SECTORS 1 & 2

| ITEM NO. | ITEM DESCRIPTION   | SECTOR SYSTEM | SECTOR-1 AZIMUTH 65° |                      |                      | SECTOR-2 AZIMUTH 200° |                       |                       | SECTOR-3 AZIMUTH 275° |                      |                      | MATERIAL REQ'D TOTAL QUANTITY |
|----------|--|---------------|----------------------|----------------------|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|----------------------|-------------------------------|
|          |  |               | GSM 850              | GSM 1900             | UMTS 1900            | GSM 850               | GSM 1900              | UMTS 1900             | GSM 850               | GSM 1900             | UMTS 1900            |                               |
| 1        | ANTENNA  |               | POWERWAVE 7750       |                      |                      | POWERWAVE 7750        |                       |                       | POWERWAVE 7750        |                      |                      | 3                             |
|          | DOWNTILT (E=ELECTRICAL) (M=MECHANICAL)                                 |               | 4E                   | 0E                   | FUTURE               | 4E                    | 0E                    | FUTURE                | 4E                    | 0E                   | FUTURE               | -                             |
| 2        | ANTENNA JUMPER (1/2" COAX) (FIELD CUT LENGTH TO FIT) (ANDREW) LDF4-50A |               | (2) - 6'             | (2) - 6'             | FUTURE               | (2) - 6'              | (2) - 6'              | FUTURE                | (2) - 6'              | (2) - 6'             | FUTURE               | 72'                           |
| 3        | USE APPROPRIATE CONNECTOR (ANDREW) L4PDM-RC                            |               | 4                    | 4                    | FUTURE               | 4                     | 4                     | FUTURE                | 4                     | 4                    | FUTURE               | 24                            |
| 4        | MAIN COAX (LENGTH) (ANDREW) AVA7-50                                    |               | (2) 1-5/8" (85' EA.) | (2) 1-5/8" (85' EA.) | (2) 1-5/8" (85' EA.) | (2) 1-5/8" (125' EA.) | (2) 1-5/8" (125' EA.) | (2) 1-5/8" (125' EA.) | (2) 1-5/8" (35' EA.)  | (2) 1-5/8" (35' EA.) | (2) 1-5/8" (35' EA.) | 1470'                         |
| 5        | UNATTACHED FEMALE DIN CONNECTOR (ANDREW) A7PDF-RPC                     |               | 4                    | 4                    | 4                    | 4                     | 4                     | 4                     | 4                     | 4                    | 4                    | 36                            |
| 6        | COAX GROUND KIT (ANDREW) SGL7-15B4                                     |               | 4                    | 4                    | 4                    | 4                     | 4                     | 4                     | 4                     | 4                    | 4                    | 36                            |
| 7        | USE APPROPRIATE COAX SURGE ARRESTOR                                    |               | TBD                  | TBD                  | FUTURE               | TBD                   | TBD                   | FUTURE                | TBD                   | TBD                  | FUTURE               | -                             |
| 8        | COAX JUMPER (1/2" COAX) (FIELD CUT LENGTH TO FIT) (ANDREW) LDF4-50A    |               | (2) - 6'             | (2) - 6'             | FUTURE               | (2) - 6'              | (2) - 6'              | FUTURE                | (2) - 6'              | (2) - 6'             | FUTURE               | 72'                           |
| 9        | UNATTACHED MALE DIN CONNECTOR (ANDREW) F4PDM-V2-C                      |               | 4                    | 4                    | FUTURE               | 4                     | 4                     | FUTURE                | 4                     | 4                    | FUTURE               | 24                            |
| 10       | MHA  |               | N                    | N                    | (2) FUTURE           | N                     | N                     | (2) FUTURE            | N                     | N                    | (2) FUTURE           | -                             |

THE DESIGN IS BASED ON RF DATA DESIGN VERSION 2 DATED 13-MAR-06.



NOTES:

- ALL MATERIALS ON THE ABOVE TABLE SHALL BE PROVIDED BY THE CONTRACTOR TO THE SUBCONTRACTOR FOR INSTALLATION.
- SUBCONTRACTOR SHALL AS-BUILT CABLE LENGTHS AND PROVIDE ANTENNA SERIAL NUMBERS ON RED-LINED DRAWINGS.
- ANTENNAS SHALL BE PROCURED AND INSTALLED WITH DOWNTILT BRACKETS AND HEAVY DUTY CLAMPS SUPPLIED BY ANTENNA MANUFACTURER.
- COLOR CODE ALL MAIN CABLES AT TWO LOCATIONS USING COLORED TAPE:  
NEAR ANTENNAS  
NEAR EQUIPMENT  
COLOR CODING OF COAXIAL CABLE FOR LINE IDENTIFICATION SHALL BE IN ACCORDANCE WITH LOCAL CINGULAR REQUIREMENTS.
- ANDREW COAX GROUND KITS, ANDREW COAX WEATHER PROOFING, ANDREW SNAP-IN HANGER CLAMPS, AND ANDREW HOISTING GRIPS SHALL BE PROVIDED BY THE CONTRACTOR TO THE SUBCONTRACTOR FOR INSTALLATION.

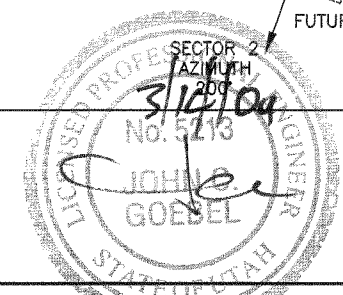
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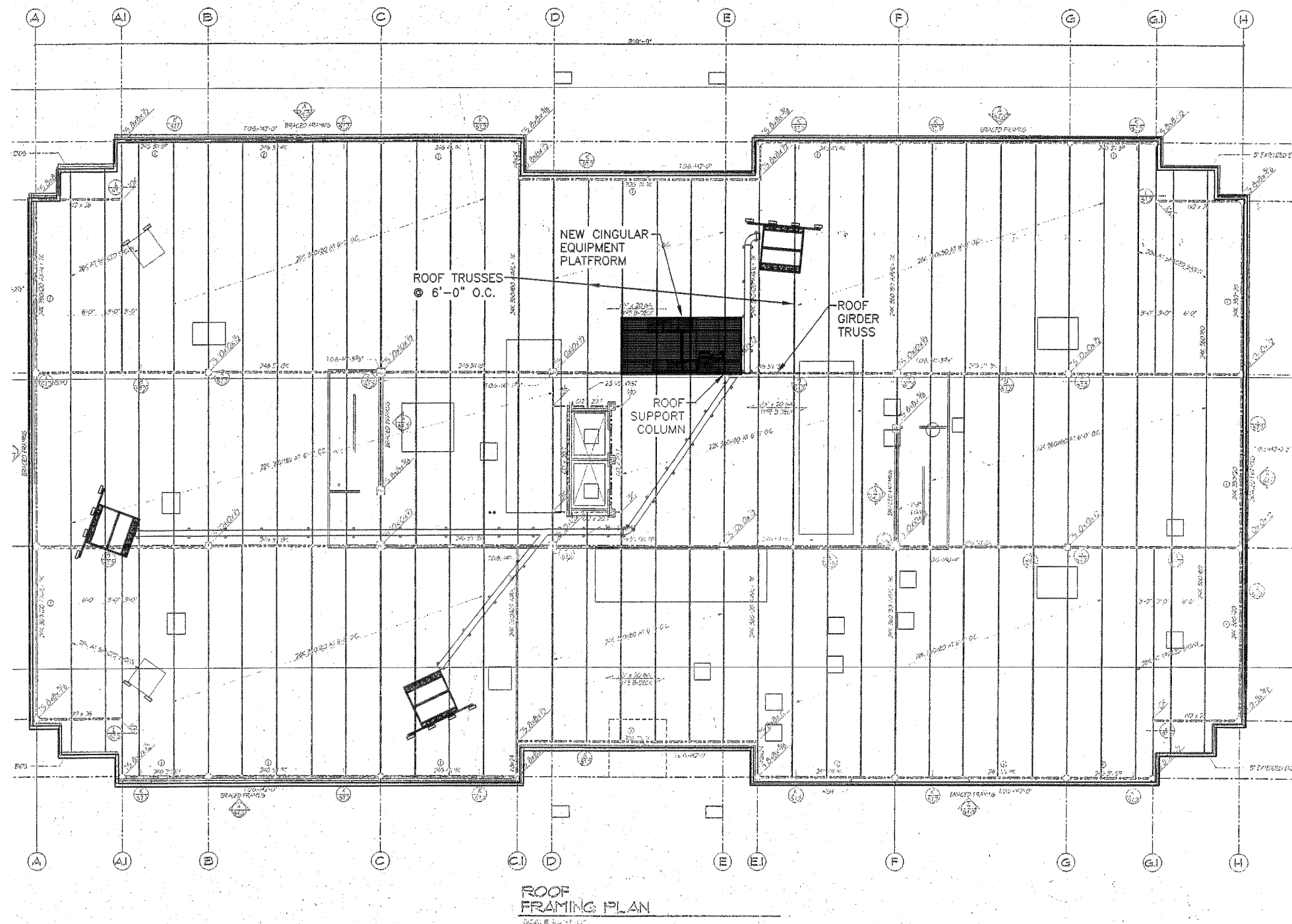
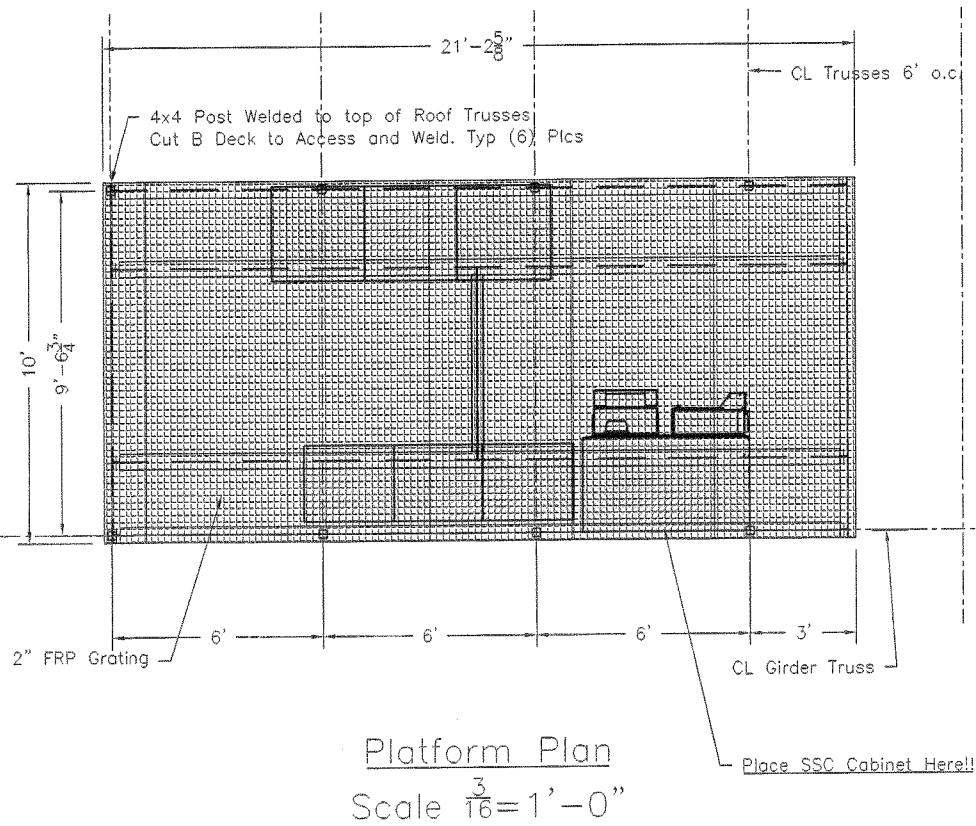
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SITE NAME: 14300 S & I-15  
ANTENNA SCHEMATIC

DRAWING NUMBER  
SLK CUT2003-E05

E05



Important!!

- Do Not Drop Cabinets on Roof Deck.
- Do Not Set Cabinets on Roof Deck
- Do Not Concentrate loads on the roof.
- Cabinets must be placed on the platform as shown.

Field verify the location of the existing Roof Support Column and the Associated Roof Trusses before cutting roof.

Provide fire protection when welding. At Least (3) Fire Extinguishers spread around the work and (1) Fire Watch. Use Fire Blankets liberally.

General Arrangement Plan



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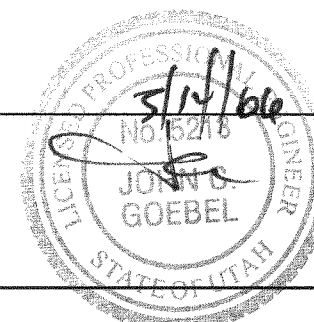
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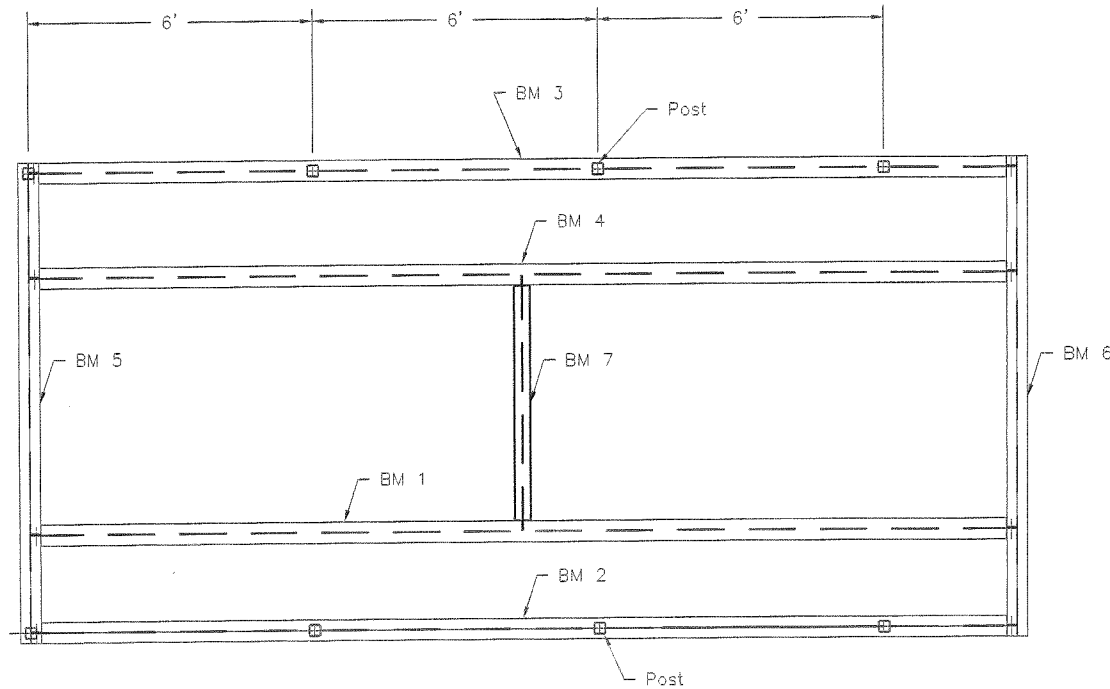


SITE NAME:  
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General Arrangement

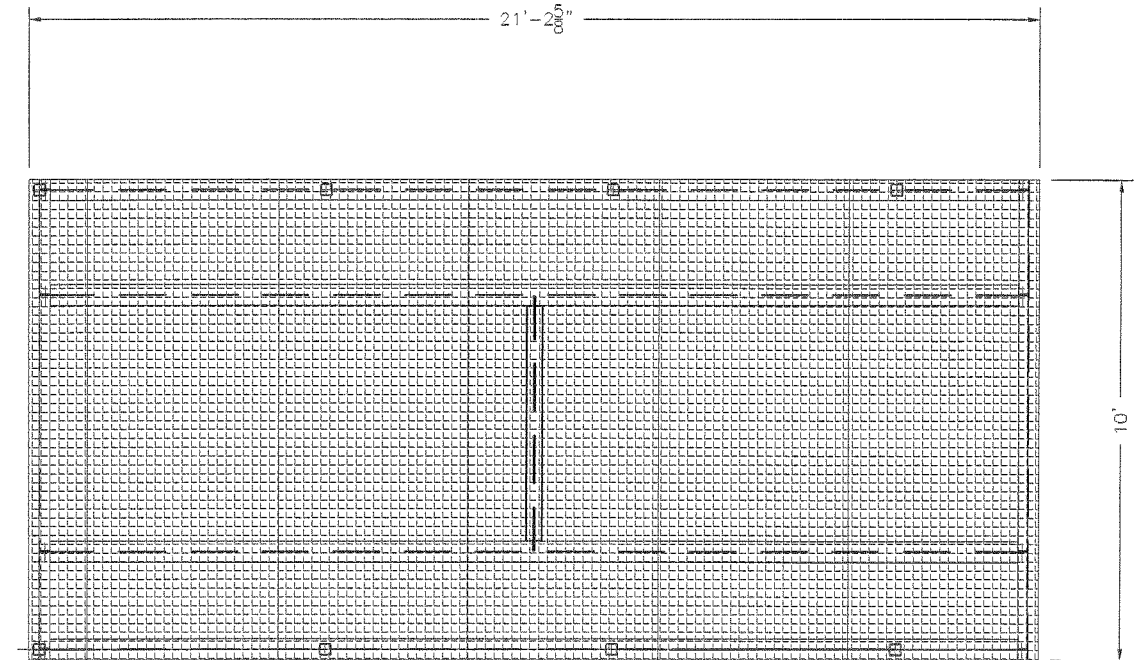
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SLKCUT2003-S01

**S01**

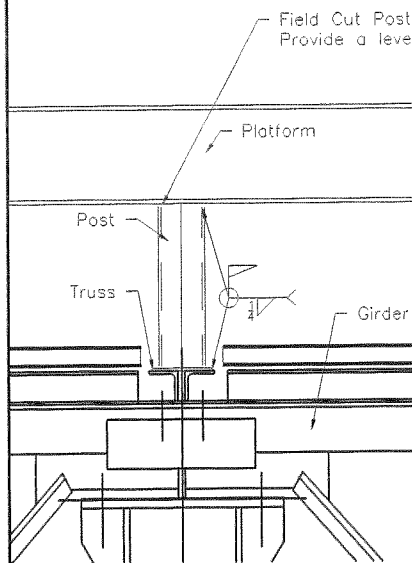
Note  
 Roof Deck Slopes. Compensate for slope by adjusting the height of the support posts in the field. Top of beams shall be level!!



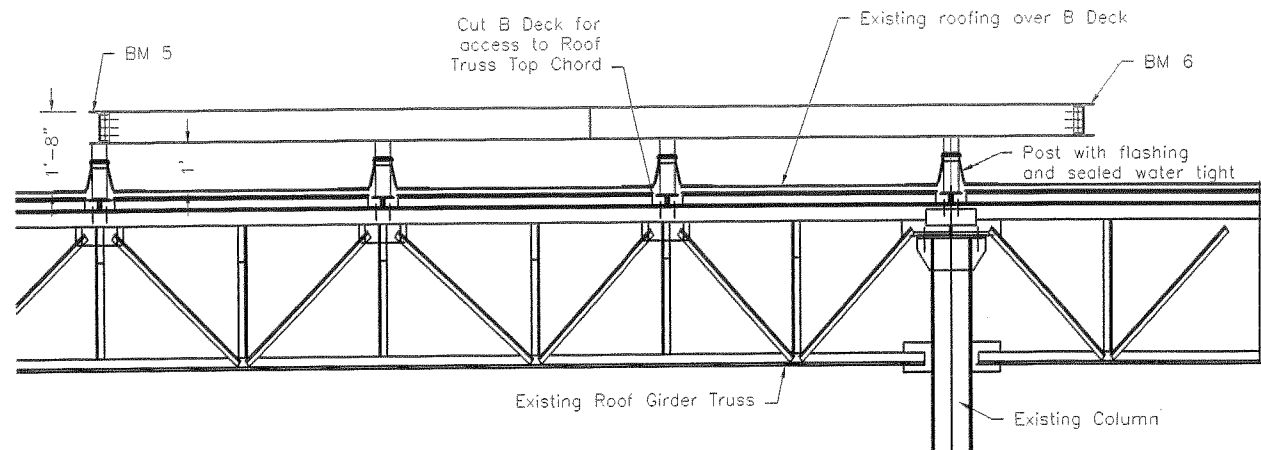
Frame Assembly



Plan with Grating



Post Installation Detail



Elevation

Assembly Plan  
 Scale 1/4"=1'-0"

Roofing damaged during construction shall be repaired by the building owners roofing contractor. The roof shall be warranted against leaks.

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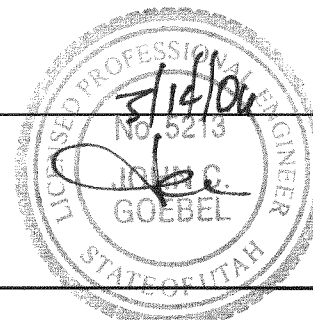
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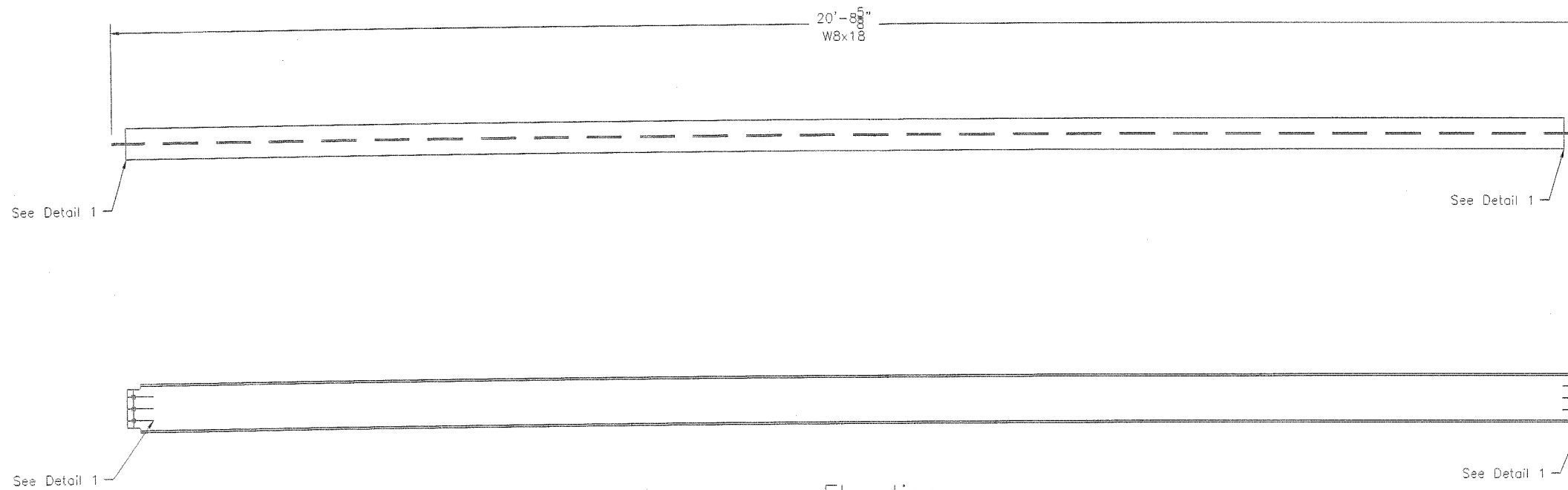
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 Assembly Plan

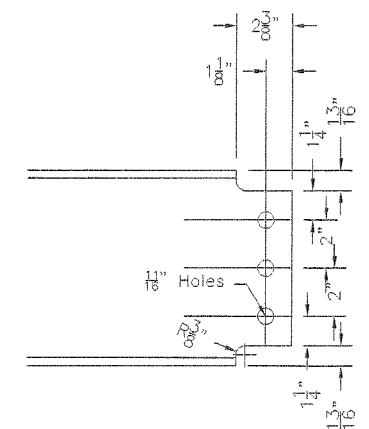
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**S02**

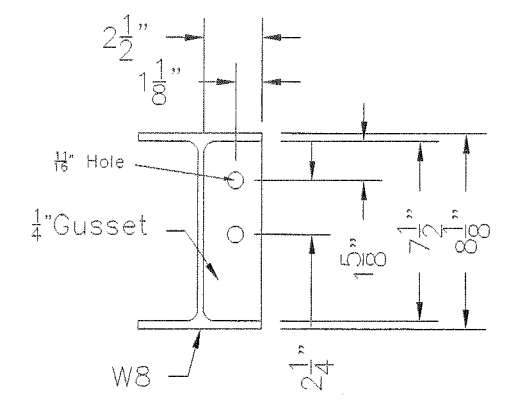
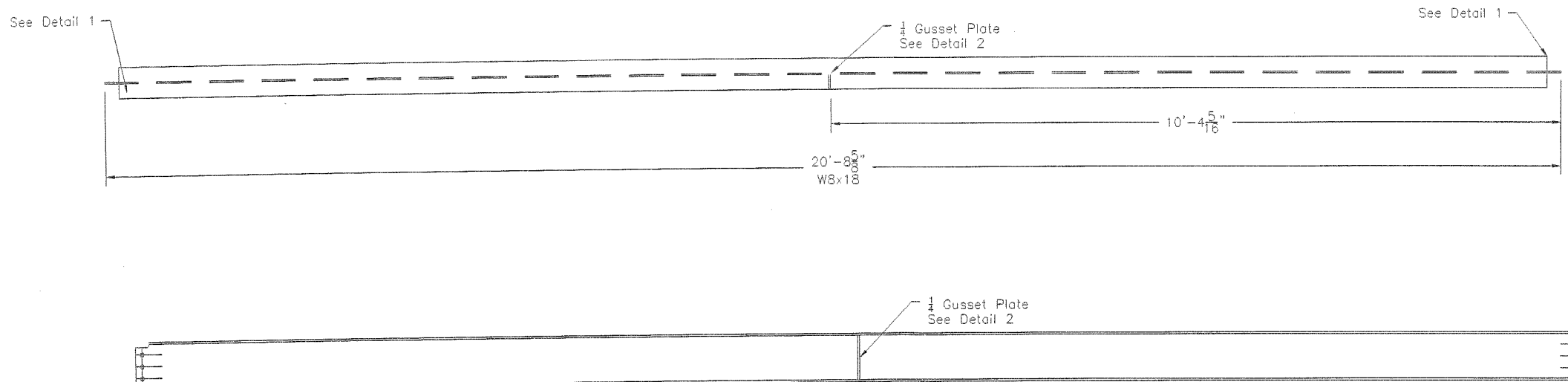


Elevation

BM 2 & 3  
(1) Each as Shown



Detail 1



Detail 2

BM 1&4  
(1) as Shown & (1) Opp Hand

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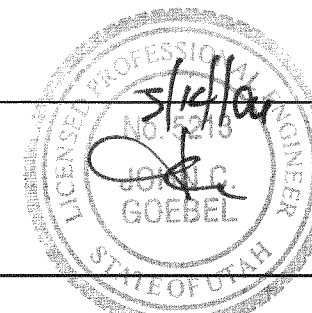
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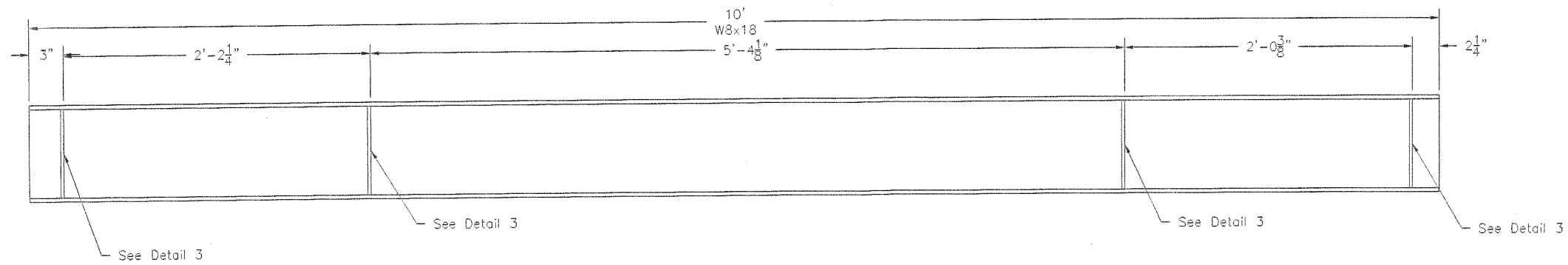
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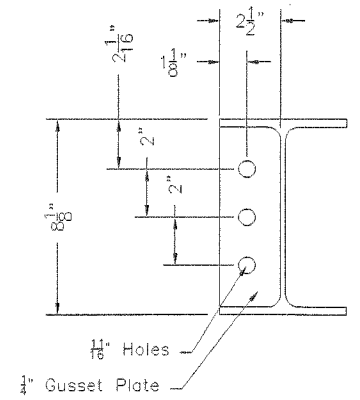
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Fabrication Details

DRAWING NUMBER  
SLKCUT2003-S03

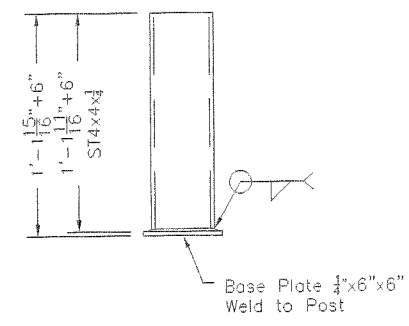
**S03**



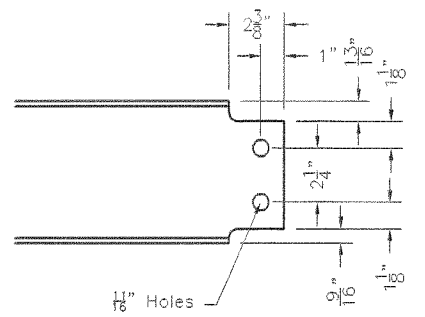
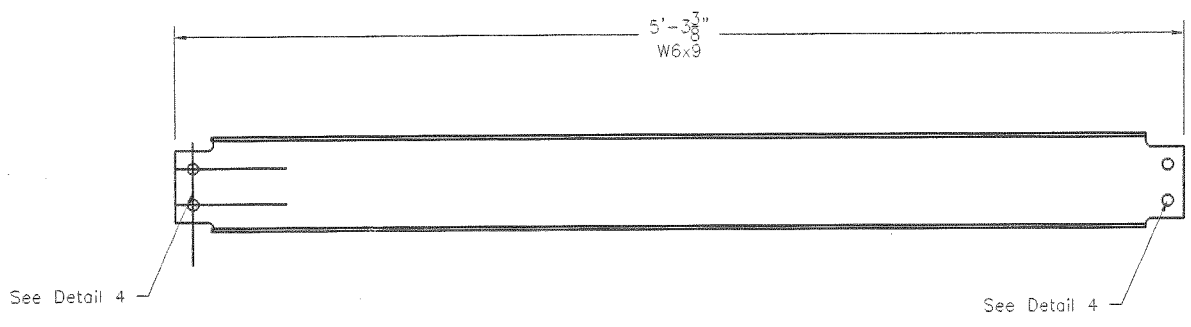
BM 5 as shown  
BM 6 Opp Hand  
(1) each required



Detail 3



Post  
(8) Required  
Field Cut to Height for Level Platform



Detail 4

BM 7 as shown  
(1) each required

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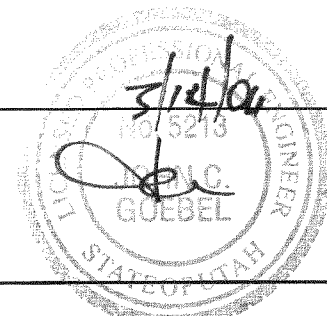
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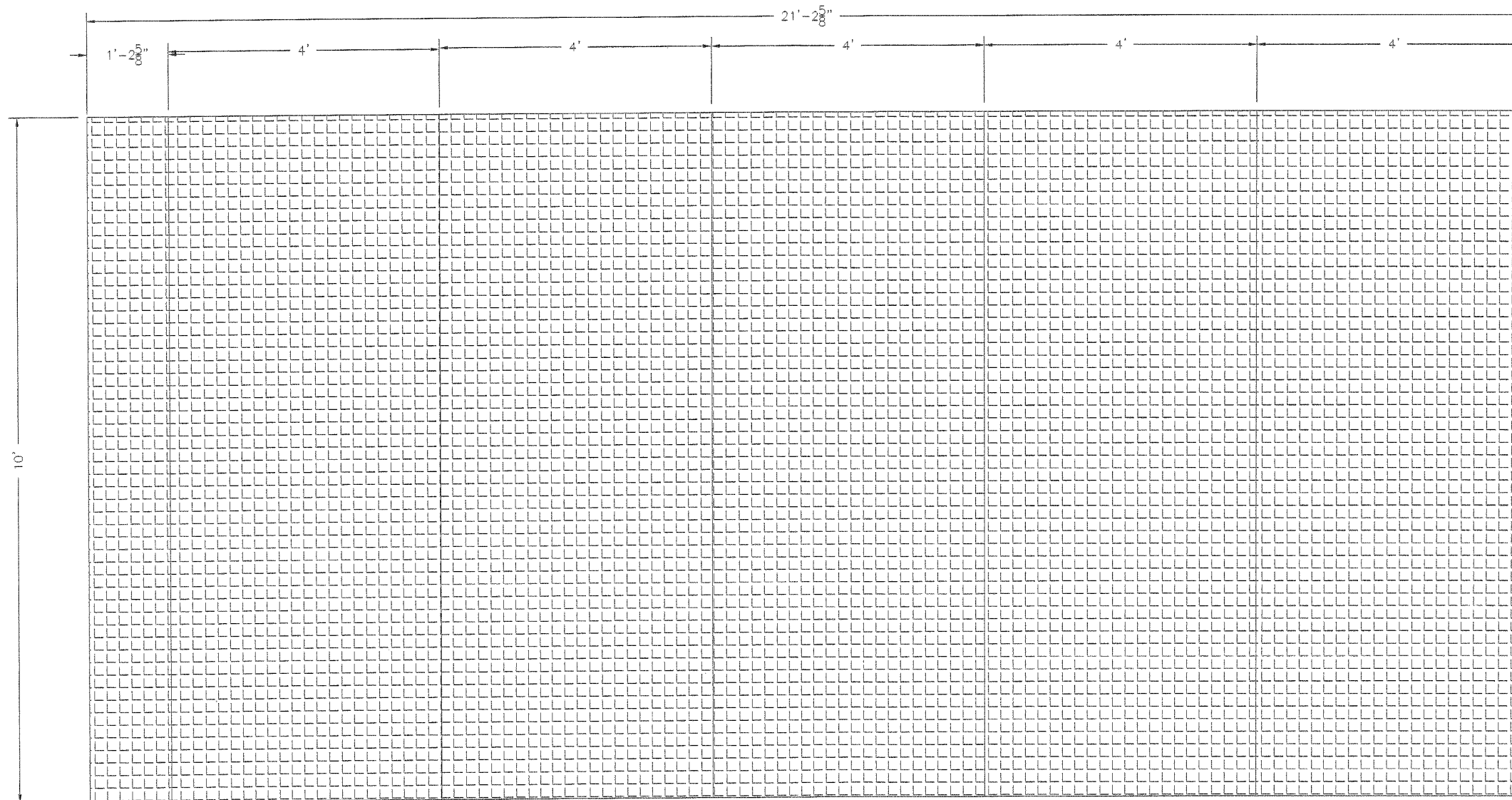


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Fabrication Details

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**S04**





Grating  
FRP 2" x 2" Mesh

Grating shall be Fibergrate Molded Grating.  
2" Deep, 2" Mesh. with non-slip surface.  
Vendor to provide with attachment clips  
and hardware to complete installation.  
Recommended Vendor: Grating Systems  
Ogden, UT (801)364-0102  
or Equal

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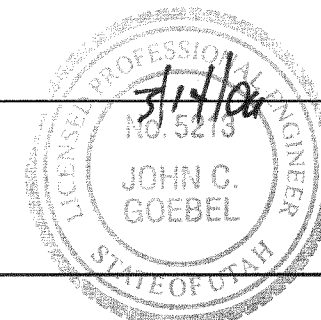
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SCALE: AS SHOWN



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Fabrication Details

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SLKCUT2003-S05

**S05**