Development Review Committee
1020 East Pioneer Road
Draper, UT 84020

STAFF REPORT
January 27, 2022

To: Jennifer Jastremsky, Zoning Administrator

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: 2022.02.04 14:57:55-07'00'

Approved Date

From: Todd A. Draper, Planner III
801-576-6335, todd.draper@draperutah.gov

Re: **SAL Coke Plant Verizon Upgrade – Permitted Use Request**

Application No.:	USE-0199-2021
Applicant:	Troy Benson, representing Verizon Wireless and W. Properties, LLC.
Project Location:	Approximately 12277 S. 700 W.
Current Zoning:	CC (Community Commercial) Zone
Acreage:	Approximately 0.56 Acres (Approximately 24,394 ft^2)
Request:	Request for approval of a Permitted Use Permit in the CC zone regarding approval to allow for an equipment upgrade on an existing Verizon Wireless Facility.

SUMMARY AND BACKGROUND

This application is a request for approval of a Permitted Use for approximately 0.56 acres located on the west side of 700 West (Exhibit B), at approximately 12277 S. 700 W. The property is currently zoned CC. The applicant is requesting that a Permitted Use be approved to allow for an equipment upgrade on an existing Wireless Facility.

To keep up with the changes in wireless communication technology, Verizon Wireless is upgrading many of its facilities nationwide. The current application pertains to the existing Wireless Facility known as SAL Coke Plant on property leased from W. Properties LLC. There is a commercial building located on the property that was built in 1981 that is utilized as part of used car sales operation by the Wade Auto Group.

The subject monopole was approved in 2017 as a permitted use. The application was PUP-0209-2016 and Verizon was the applicant. The monopole has been in continuous use since approval and construction of the tower.

ANALYSIS

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

Neighborhood Commercial

LAND USE DESCRIPTION	
CHARACTERISTICS	• Small-scale commercial land uses that serve local residents in adjacent neighborhoods • Minimal impact in predominantly residential areas • Well-landscaped street frontages • Limited traffic access points and pedestrian access from surrounding residential areas • Don't overcrowd commercial lots; i.e., require adequate setback and landscape buffers • Screened parking and adequate ingress and egress to parking areas • Adequate drainage • Low noise standards
LAND USE MIX	• Small-scale commercial • Planned retail • Office
COMPATIBLE ZONING	• Neighborhood Commercial (CN) • Institutional Care (IC) • Commercial Services (CS)
LOCATION	• Adjacent to neighborhood • Along local roads

The property has been assigned the CC zoning classification (Exhibit D). According to Draper City Municipal Code (DCMC) Section 9-8-020 the purpose of the CC zone is to *"provide areas where commercial uses may be established which are generally oriented toward local residents rather than out of town patrons. Uses typical of this zone include planned retail and office development."* The subject property is surrounded by the CC Zoning to the north, east, and south. To the west of the property on the other side of 700 West is the RM2 zone (Multiple-family Residential, 4,000 ft^2 lot minimum) zone.

Requested Modification. The applicant is requesting to upgrade the equipment on the existing facility. The application requests that an additional one-foot (1') of height and approximately six-inches (6") in overall width 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.

...

(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 additional height exceeds the typically allowable height of sixty-feet (60') listed in the DCMC by one-foot (1') and the overall width by four-inches (4"). Per DCMC Section 9-41-050(E)(2)(a) additional height can be permitted if necessary to accommodate a permitted use. The minimal expansion of the overall size is not considered to be substantial under the FCC regulations and the request complies with listed standards to be considered as an eligible facilities request. The following changes to the tower appurtenances are proposed:

Monopole work:

- Continued use of concealfab low-pim antenna and cable mounting hardware
- Remove 6 existing antennas
- Remove 1 existing OVP
- Remove 1 existing CPRI
- Install new VSK-MHD Kit, P 2.5 STE x44' LG W/ MSK-1 Plates and replace position 3 pipe mounts with P2.5 STE W/ MSK 1
- Install MSK 2 Plates per RKS Mount Mod Drawings
- Install 9 new antennas (3 per sector)
- Install 9 new RRHs (3 per sector)
- Install 1 new VZ 6648 BBU
- Install 1 new VZ 6630 BBU
- Install 1 new upconverter
- Install 4 new Rectifiers
- Install 1 new OVP
- Install three (3) AIR6449 B77 Antennas
- Install one (1) DBB1-6C-12AB-OZ OVP (surge protector)

Ground Work:

- Remove 1 existing OVP
- Install 1 new OVP
- Install new 12 x 24 Hybrid

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 expansion of the overall height and width of the facility related to the installation of proposed appurtenances not conform to all other applicable requirements of the code under 9-5-070(E)(6), however FCC issued regulations preclude city enforcement of those aspects.

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.

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 and the Building Division for this upgrade.

DEVELOPMENT REVIEW COMMITTEE ACKNOWLEDGEMENT

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

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: 2022.01.31 09:15:32 -07'00'

Draper City Public Works Department

Jennifer Jastremsky
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DN: C=US, E=jennifer.jastremsky@draperutah.gov, O=Planning Division, OU=Draper City, CN=Jennifer Jastremsky
Date: 2022.01.31 12:20:25-07'00'

Draper City Planning Division

Don Buckley
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Date: 2022.01.28 12:11:26-07'00'

Draper City Fire Department

Mike Barker
Digitally signed by Mike Barker
Date: 2022.01.28 11:49:57 -07'00'

Draper City Legal Counsel

Keith Collier
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Date: 2022.01.31 08:17:56-07'00'

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.

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

EXHIBIT C
LAND USE MAP

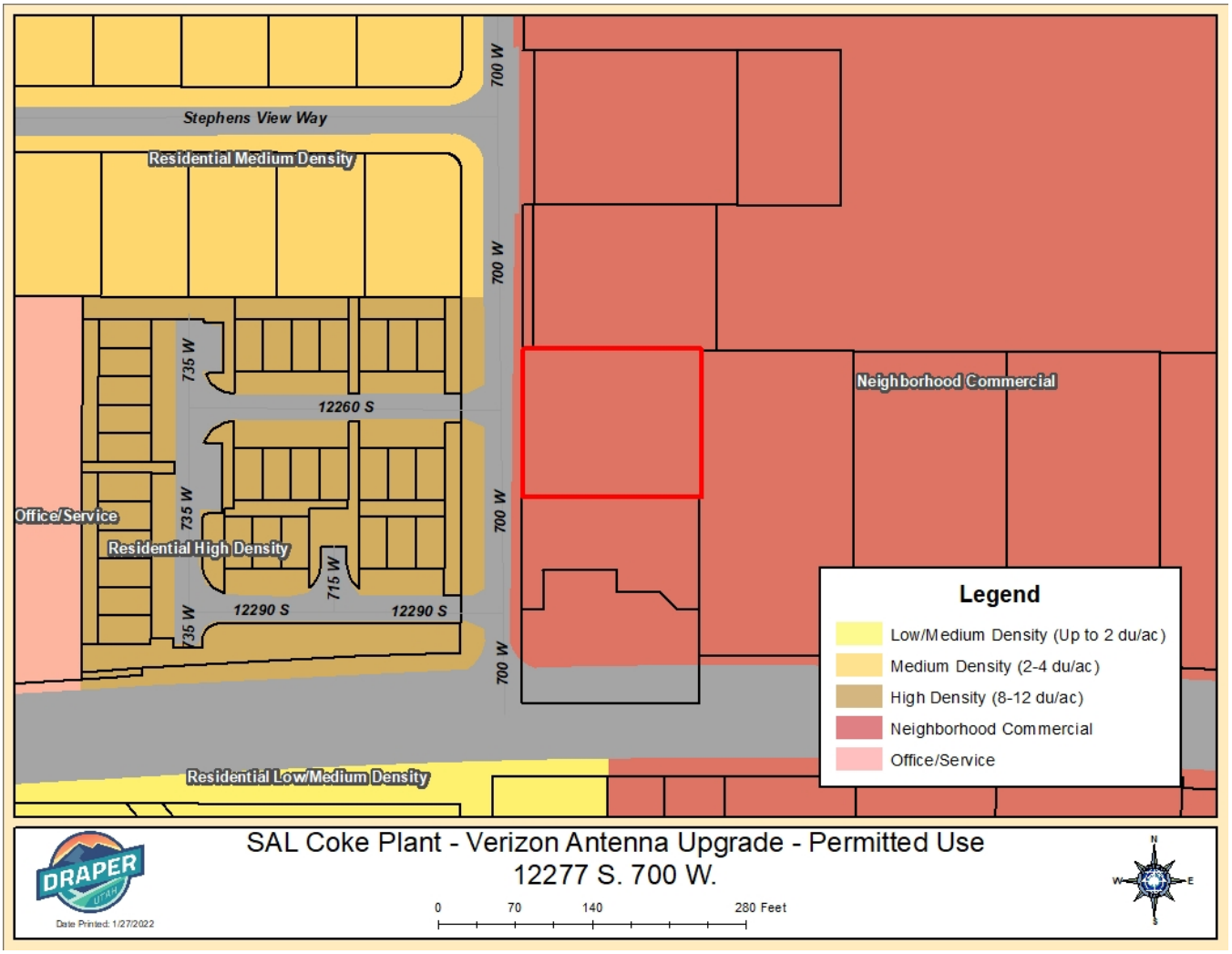

EXHIBIT D
ZONING MAP

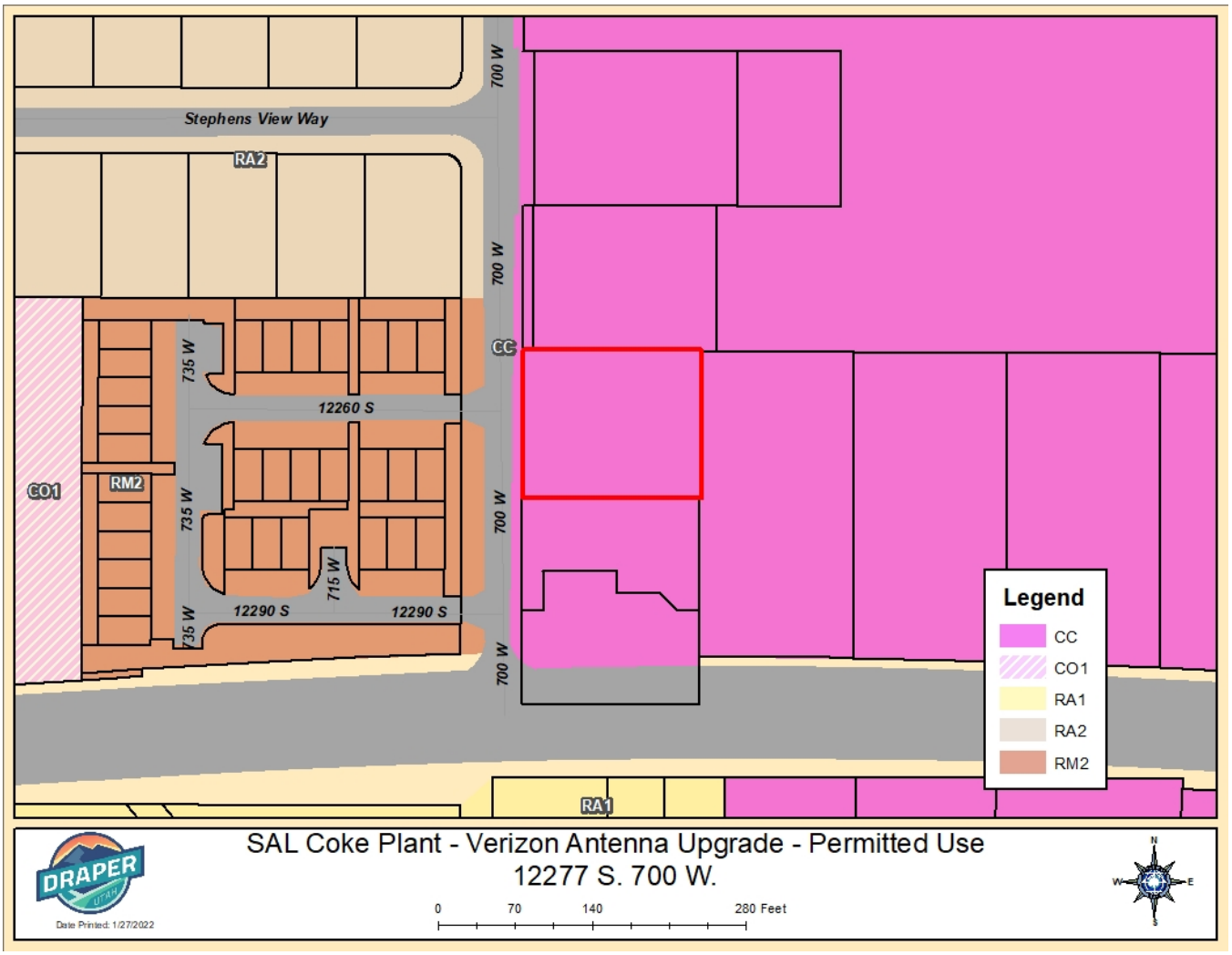

EXHIBIT E
PLANS AND DRAWINGS

SITE INFORMATION

SITE ADDRESS:
12277 S 700 W
DRAPER, UT 84020

LATITUDE AND LONGITUDE:
40° 31' 39.78" N, 111° 54' 35.05" W

ZONING:
CU-COMMERCIAL URBAN

POWER COMPANY:
ROCKY MOUNTAIN POWER, 1-888-221-7070

HANDICAP REQUIREMENTS:
FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION, HANDICAP ACCESS REQUIREMENT(S) DO NOT APPLY

PROJECT DESCRIPTION

- USE CONCEALFAB LOW-PIM ANTENNA AND CABLE MOUNTING HARDWARE
- INSTALL NEW VSK-MHD KIT, P 2.5 STD X 44' LG W/ MSK-1 PLATES AND REPLACE POSITION 3 PIPE MOUNTS WITH P2.5 STD W/ MSK 1 & MSK 2 PLATES PER RKS MOUNT MOD DRAWINGS, DATED 08/12/2021
- INSTALL (9) NEW ANTENNAS (3 PER SECTOR)
- REMOVE (6) ANTENNAS (2 PER SECTOR)
- REMOVE (2) EXISTING OVP (1) @ TOWER & (1) @ EQUIPMENT AREA)
- REMOVE (1) EXISTING CPRI
- INSTALL (9) NEW RRHs (3 PER SECTOR)
- INSTALL (1) NEW VZ 6648 BBU
- INSTALL (1) NEW VZ 6630 BBU
- INSTALL (1) NEW UPCONVERTER
- INSTALL (4) NEW RECTIFIERS
- INSTALL (1) NEW OVP @ ANTENNA AREA
- INSTALL (1) NEW OVP @ EQUIPMENT AREA
- INSTALL (1) NEW 12 X 24 HYBRID

CONTACT INFORMATION

APPLICANT:
VERIZON WIRELESS
9656 SOUTH PROSPERITY ROAD
WEST JORDAN, UT 84088

ARCHITECTURE & ENGINEERING:
TECHNOLOGY ASSOCIATES EC, INC
7896 SOUTH HIGHLAND DRIVE, SUITE 200
COTTONWOOD HEIGHTS, UT 84121
CONTACT: JOEL R. HARTMAN
OFFICE: (801) 463-1020 X 2107
EMAIL: joel.hartman@taec.net

RF ENGINEER:
VERIZON WIRELESS
9656 PROSPERITY ROAD
WEST JORDAN, UT 84081
CONTACT: JEFF JOCKUMSEN
OFFICE: (801) 573-0013
EMAIL: jeffrey.jockumsen@verizonwireless.com

SITE ACQUISITION:
TECHNOLOGY ASSOCIATES EC, INC
7896 SOUTH HIGHLAND DRIVE, SUITE 200
COTTONWOOD HEIGHTS, UT 84121
CONTACT: TROY BENSON
OFFICE: (801) 608-7042
EMAIL: troy.benson@taec.net

CONSTRUCTION ENGINEER:
VERIZON WIRELESS
9656 PROSPERITY ROAD
WEST JORDAN, UT 84081
CONTACT: CLIFF HEIB
OFFICE: (208) 251-7500
EMAIL: cliff.hiebjr@verizonwireless.com

PROJECT MANAGER:
TECHNOLOGY ASSOCIATES EC, INC
7896 SOUTH HIGHLAND DRIVE, SUITE 200
COTTONWOOD HEIGHTS, UT 84121
CONTACT: MIKE STRAND
OFFICE: (801) 663-6441
EMAIL: michael.strand@taec.net

DO NOT SCALE DRAWINGS

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

UNDERGROUND SERVICE ALERT, CALL 'DIG ALERT' OF UTAH @ 811 OR 1-800-662-4111
THREE WORKING DAYS BEFORE YOU DIG

NOTE: THE ORIGINAL SIZE OF THIS PLAN IS 24" X 36". SCALE RATIO IS NOT VALID FOR REDUCED OR ENLARGED SHEET SIZES

verizon

SAL COKE PLANT

PROJECT ID-P: 16496996

PS LOCATION CODE: 288667

12277 S 700 W

DRAPER, UT 84020

5G L-SUB6-CARRIER ADD

VICINITY MAP

STARTING FROM VERIZON OFFICE-9656 SOUTH PROSPERITY ROAD, WEST JORDAN, UTAH 84088 :

1. HEAD SOUTH TOWARD 6200 W/S PROSPERITY RD
2. TAKE UT-85/MOUNTAIN VIEW, 11800 S/MYERS LN AND UT-71 N TO S 700 W IN DRAPER
3. TURN RIGHT ONTO 6200 W/S PROSPERITY RD
4. TURN LEFT ONTO W 10200 S
5. CONTINUE ONTO W 9665 S/W 9665 SOUTH RD
6. TURN RIGHT ONTO UT-85/MOUNTAIN VIEW
7. TURN LEFT ONTO 11800 S/MYERS LN
8. TURN RIGHT ONTO 3600 W
9. TURN LEFT ONTO UT-71 N/W 12600 S
10. TURN LEFT ONTO S 550 W/GALENA PARK BLVD
11. TURN LEFT ONTO S 700 W

DRIVING DIRECTIONS

SHEET INDEX

SHEET	DESCRIPTION	SHEET	DESCRIPTION
T-1	TITLE SHEET		MASER MOUNT DESIGN DRAWINGS
A-1	OVERALL SITE PLAN	ST-1	TITLE SHEET
A-2	EQUIPMENT PLAN	SBOM-1	BILL OF MATERIALS
A-3	ANTENNA PLANS	SGN-1	MODIFICATION NOTES
A-4	ELEVATIONS	SCF-1	MODIFICATION NOTES
A-5	DETAILS	SS-1	GEOMETRY VERIFICATION SKETCHES
A-6	DIAGRAMS & RECOMMENDATIONS	SS-2	GEOMETRY VERIFICATION SKETCHES
A-7	SITE PHOTOS	SS-3	MOUNT PHOTOS
			SPECIFICATION SHEET
			SPECIFICATION SHEET
			SPECIFICATION SHEET

Contactor PMI Requirements

PMI Accessed At	http://pmi.vzwsmart.com
Smart Tool Vendor Project Number	10094556
VzW Location Code (PSLC)	288667

*** PMI and Requirements also embedded in Mount Analysis Report

VzW APPROVED SMART KIT VENDORS

Refer to Mount Modification Drawings Page for VzQ SMART KIT Approved Venders

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9656 SOUTH PROSPERITY ROAD
WEST JORDAN, UT 84088

Technology Associates
MOUNTAIN REGION OFFICE
7896 SOUTH HIGHLAND DRIVE
SUITE 200
COTTONWOOD, UT 84121

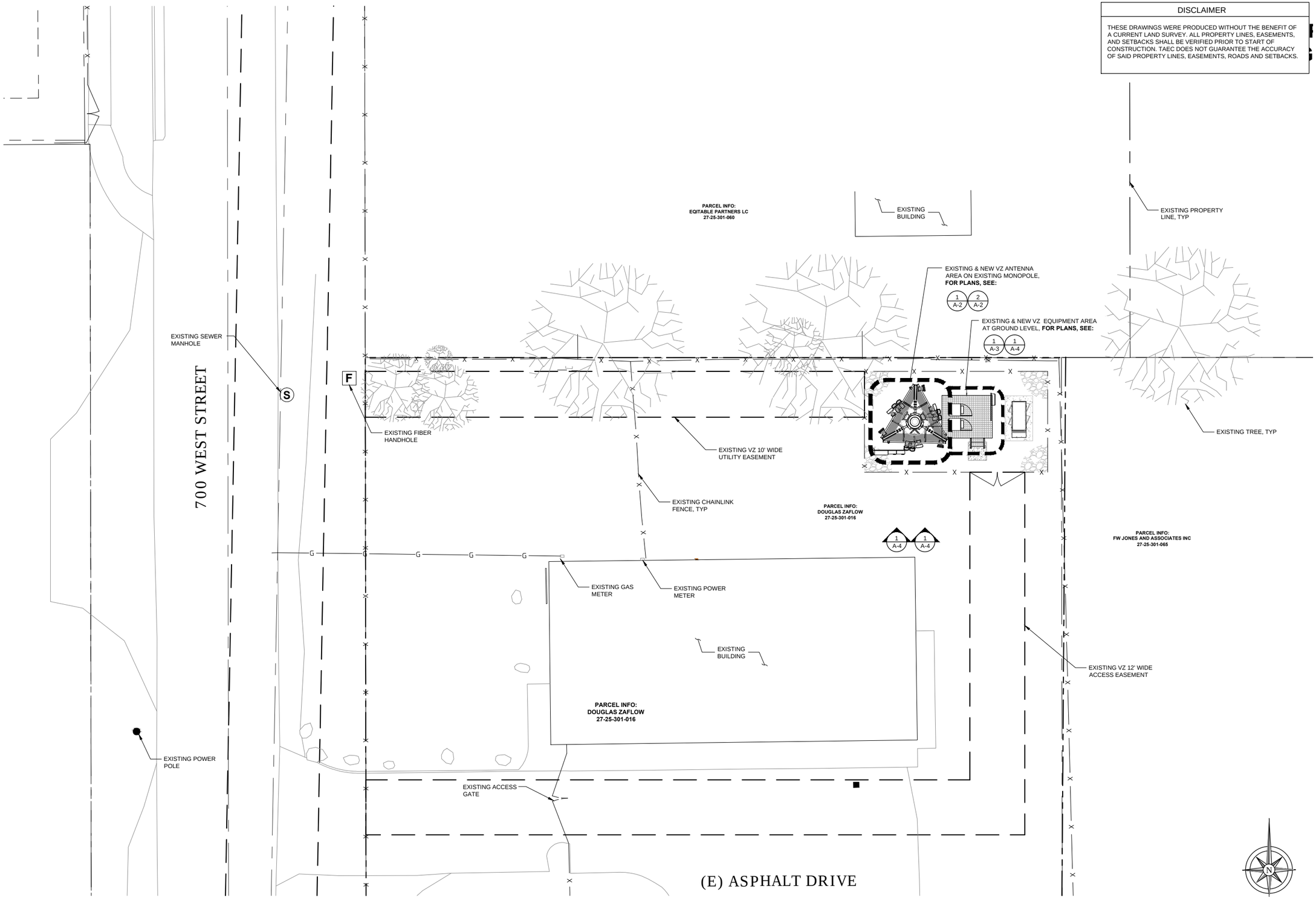
REV	DATE	DESCRIPTION	BY
0	10/18/2021	ISSUED FOR FINAL CD	CMB
B	10/06/2021	ISSUED FOR FINAL CD REVIEW	TS
A	09/24/2021	ISSUED FOR CD REVIEW	TS

PROFESSIONAL STRUCTURAL ENGINEER
No. 10196393-2203
JOEL R. HARTMAN
STATE OF UTAH
10.18.21

SAL COKE PLANT
12277 S 700 W
DRAPER, UT 84020
MONOPOLE

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1



NOTE: THE ORIGINAL SIZE OF THIS PLAN IS 24" X 36". SCALE RATIO IS NOT VALID FOR REDUCED OR ENLARGED SHEET SIZES

OVERALL SITE PLAN

10' 0' 5' 10'

SCALE: 1" = 10'-0" (24x36)
(OR) 1/2" = 10'-0" (11x17)

1

DISCLAIMER

THESE DRAWINGS WERE PRODUCED WITHOUT THE BENEFIT OF A CURRENT LAND SURVEY. ALL PROPERTY LINES, EASEMENTS, AND SETBACKS SHALL BE VERIFIED PRIOR TO START OF CONSTRUCTION. TAEC DOES NOT GUARANTEE THE ACCURACY OF SAID PROPERTY LINES, EASEMENTS, ROADS AND SETBACKS.

verizon

9656 SOUTH PROSPERITY ROAD
WEST JORDAN, UT 84088

Technology Associates

MOUNTAIN REGION OFFICE
7896 SOUTH HIGHLAND DRIVE
SUITE 200
COTTONWOOD, UT 84121

REV	DATE	DESCRIPTION	BY
0	10/18/2021	ISSUED FOR FINAL CD	CMB
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STATE OF UTAH
10.18.21

SAL COKE PLANT

12277 S 700 W
DRAPER, UT 84020

MONOPOLE

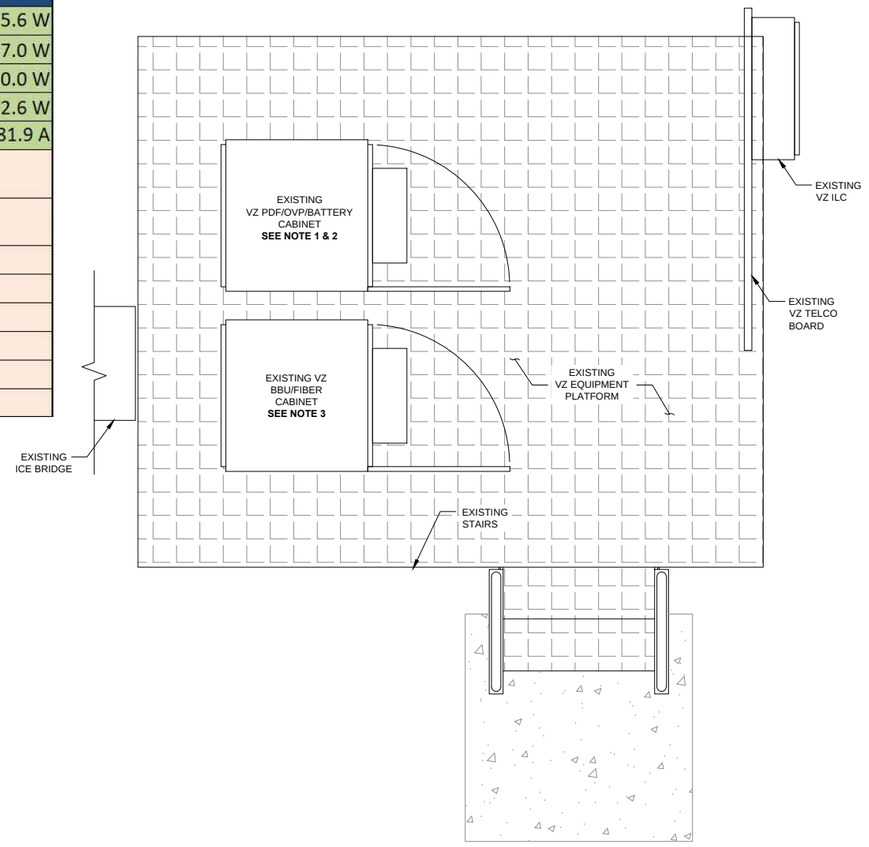
SHEET TITLE
OVERALL SITE PLAN

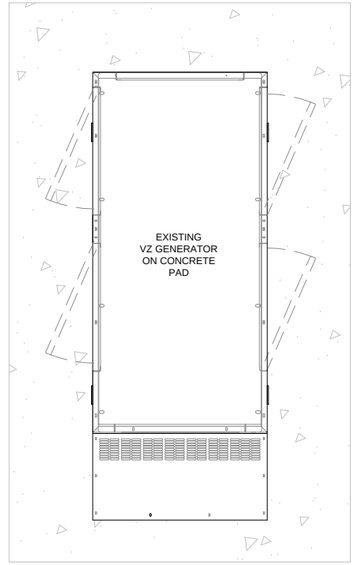
SHEET NUMBER
A-1

CABINET NOTES:

1. PDF LINEAGE (AS OF 07-15-21 WALK)
   - PDF
   - GE INFINITY S SYSTEM
   - CC150022649
   - (4) NE050AC48ATEZ RECTIFIERS
   - +26.00 @ 104.3A
   - - 54.01 VDC2 @ 83.3 AMPS
   - **INSTALL (4) NEW RECTIFIERS**
   - **INSTALL (1) NEW UPCONVERTER UNIT**
2. BATTERY(IN OVP CABINET)
   - DEKA FAHRENHEIT
   - HT-170ET
   - 8 BATTERIES
3. BBU/FIBER RACK
   - (1) EXISTING VZ 6630 BBU
   - (2) EXISTING VZ BBUs
   - **INSTALL (1) NEW VZ 6630 BBU**
   - **INSTALL (1) NEW VZ 6648 BBU**
   - **INSTALL (1) NEW VZ OVP**

OVERALL RESULTS	
Existing Load	4395.6 W
Future Additional Load	5427.0 W
Add'l Cabinet HVAC Load	0.0 W
Total New Plant Float Load	9822.6 W
Total New 48V DC Amps	181.9 A
Min. 48V 50A Rectifier Count	6
AC Load if 120/240V 1Ø	71.3 A
Min 1 Ø 240 V Utility Size	200 A
AC Load if 120/208V 3Ø	47.6 A
Min 3 Ø 208 V Utility Size	200 A
Generator Peak Loads	17.1 kW
Generator (Diesel Size)	30 kW
Generator (LP/NG)	48/50 kW



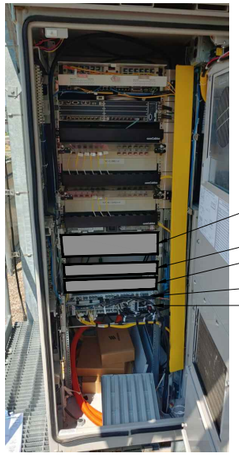


EXISTING EQUIPMENT PLAN

0 3"6" 1'

SCALE: 3/4 = 1'-0" (24x36)
(OR) 3/8" = 1'-0" (11x17)

1



NOTE:

(1) EXISTING CPRI PANEL CAN BE REMOVED AS OVP HAS A BUILT-IN CPRI PANEL

INSTALL (1) NEW VZ 12x24 OVP

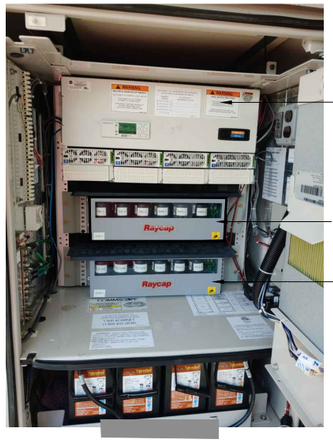
INSTALL (1) NEW VZ 6630 BBU

INSTALL (1) NEW VZ 6648 BBU

EXISTING (1) VZ 6630 BBU

EXISTING (2) VZ BBUs

EXISTING BBU/FIBER CABINET



PDF
PDF LINEAGE (AS OF 07-15-21 WALK)
GE INFINITY S SYSTEM
CC150022649
(4) NE050AC48ATEZ RECTIFIERS
+26.00 @ 104.3A
- 54.01 VDC2 @ 83.3 AMPS
INSTALL (4) NEW RECTIFIERS

REMOVE (1) EXISTING OVP AND INSTALL (1) NEW UPCONVERTER

EXISTING (1) VZ OVP

EXISTING PDF/OVP/BATTERY CABINET

EXISTING EQUIPMENT

SCALE N.T.S.

2

NOTE: THE ORIGINAL SIZE OF THIS PLAN IS 24" X 36". SCALE RATIO IS NOT VALID FOR REDUCED OR ENLARGED SHEET SIZES

verizon

9656 SOUTH PROSPERITY ROAD
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No. 10196393-2203
JOEL R. HARTMAN
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10.18.21

SAL COKE PLANT

12277 S 700 W
DRAPER, UT 84020

MONOPOLE

SHEET TITLE
EQUIPMENT PLAN

SHEET NUMBER
A-2

NOTES:

1. ALL AZIMUTHS ARE TO BE ESTABLISHED CLOCKWISE FROM THE TRUE NORTH HEADING.

2. CONTRACTOR SHALL VERIFY ANTENNA CENTERLINE, MECHANICAL DOWNTILT, ORIENTATION, AND CABLE LENGTHS PRIOR TO INSTALLATION. REFER TO SITE MODIFICATION CHANGE ORDER FOR ADDITIONAL INFORMATION.

3. USE CONCEALFAB LOW-PIM ANTENNA AND CABLE MOUNTING HARDWARE.

4. GC TO CONFIRM IF VZ WANTS TO REPLACE EXISTING 3315 OVP'S WITH (1) 6627 OVP, OR INSTALL 3315-ALM-RS548 RETROFIT BOARDS

HYBRIFLEX LENGTHS:

1. FROM THE EQUIPMENT ROOM (N) RACK MOUNT OVP TO THE ANTENNA CENTERLINE (N) OVP BOX WILL REQUIRE (2) RUN OF 6x12 HYBRIFLEX BE INSTALLED, LENGTH = 125'-0"

2. FROM THE ANTENNA CENTERLINE OVP BOX TO EACH RRH WILL REQUIRE (1) RUN OF 1x1 HYBRIFLEX BE INSTALLED, LENGTH = 15'

ANTENNA KEY

SECTOR	STATUS	AZIMUTH	POSITION	QTY.	MFG.	MODEL	SERVICE	RAD CENTER
ALPHA	REMOVED	320°	(A2)(A3)	2	ANDREW	SBNHH-1D45B	LTE	±57'-0"
	PROPOSED	320°	(A3)	2	COMMSCOPE	NHHSS-65C-R2B	LTE	±57'-0"
	PROPOSED	320°	(A1)	1	ERICSSON	AIR 6449 B77D/L-SUB6	5G	±57'-0"
BETA	REMOVED	70°	(B2)(B3)	2	ANDREW	SBNHH-1D45B	LTE	±57'-0"
	PROPOSED	80°	(B3)	2	COMMSCOPE	NHHSS-65C-R2B	LTE	±57'-0"
	PROPOSED	80°	(B1)	1	ERICSSON	AIR 6449 B77D/L-SUB6	5G	±57'-0"
GAMMA	REMOVED	170°	(C2)(C3)	2	ANDREW	SBNHH-1D45B	LTE	±57'-0"
	PROPOSED	190°	(C3)	2	COMMSCOPE	NHHSS-65C-R2B	LTE	±57'-0"
	PROPOSED	190°	(C1)	1	ERICSSON	AIR 6449 B77D/L-SUB6	5G	±57'-0"
RAYCAP OVP	EXISTING	N/A	TOWER	1	RAYCAP	RHSDC-3315-PF-48	-	±57'-0"
RAYCAP OVP	REMOVED	N/A	TOWER	1	RAYCAP	RHSDC-3315-PF-48	-	±57'-0"
RAYCAP OVP	PROPOSED	N/A	TOWER	1	RAYCAP	RHSDC-6627-PF-48	-	±57'-0"

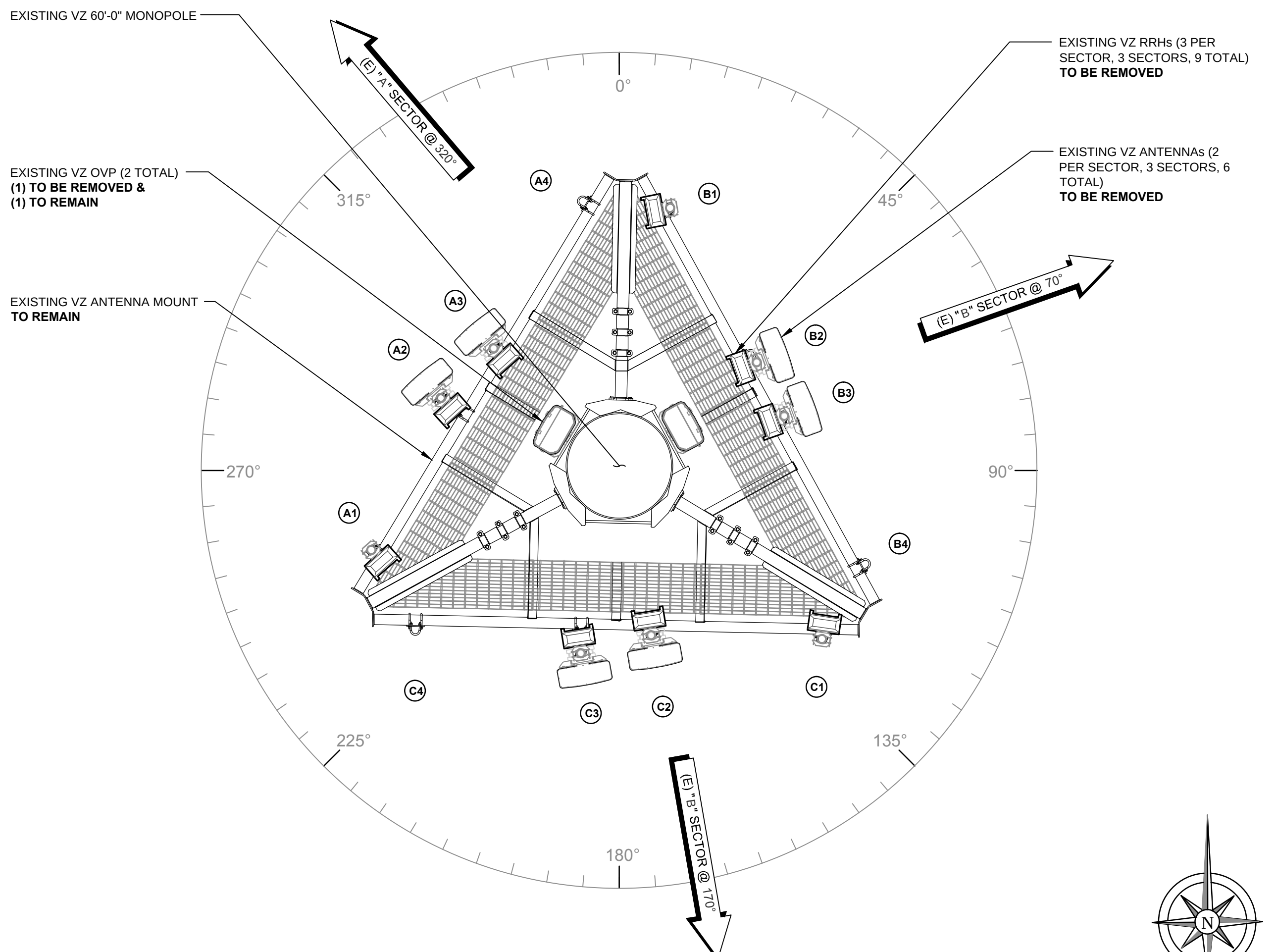
HYBRID KEY / RRH KEY

SECTOR	STATUS	QTY.	TYPE	DIELECTRIC	DIAMETER	RUN	RRH STATUS	RRH QTY.	RRH MFG.	RRH MODEL
ALPHA	PROPOSED	4/1	JUMPER	-	1/2"	15'	PROPOSED	1	ERICSSON	4449 B13 B5 DUAL BAND RADIO
	PROPOSED	8/1	JUMPER	-	1/2"	15'	PROPOSED	1	ERICSSON	8843 B2 B66A DUAL BAND RADIO
	PROPOSED	2	JUMPER	1 X 1 FIBER		15'	PROPOSED	1	ERICSSON	CBRS RADIO 4408
	PROPOSED	2	JUMPER	1 X 1 FIBER		15'	PROPOSED	1	ERICSSON	AIR 6449 B77D/L-SUB6
BETA	PROPOSED	4/1	JUMPER	-	1/2"	15'	PROPOSED	1	ERICSSON	4449 B13 B5 DUAL BAND RADIO
	PROPOSED	8/1	JUMPER	-	1/2"	15'	PROPOSED	1	ERICSSON	8843 B2 B66A DUAL BAND RADIO
	PROPOSED	2	JUMPER	1 X 1 FIBER		15'	PROPOSED	1	ERICSSON	CBRS RADIO 4408
	PROPOSED	2	JUMPER	1 X 1 FIBER		15'	PROPOSED	1	ERICSSON	AIR 6449 B77D/L-SUB6
GAMMA	PROPOSED	4/1	JUMPER	-	1/2"	15'	PROPOSED	1	ERICSSON	4449 B13 B5 DUAL BAND RADIO
	PROPOSED	8/1	JUMPER	-	1/2"	15'	PROPOSED	1	ERICSSON	8843 B2 B66A DUAL BAND RADIO
	PROPOSED	2	JUMPER	1 X 1 FIBER		15'	PROPOSED	1	ERICSSON	CBRS RADIO 4408
	PROPOSED	2	JUMPER	1 X 1 FIBER		15'	PROPOSED	1	ERICSSON	AIR 6449 B77D/L-SUB6
	EXISTING	1	SHARED	HYBRID CABLE	6 X 12	±125'				
	REMOVED	1	SHARED	HYBRID CABLE	6 X 12	±125'				
	PROPOSED	1	SHARED	HYBRID CABLES	12 X 24	±125'				

NOTE: POSITIONS (A2)(B2)(C2)(A4)(B4)(C4) ARE EMPTY.

PROPOSED ANTENNA/COAX/RRH KEY

SCALE N.T.S. 1



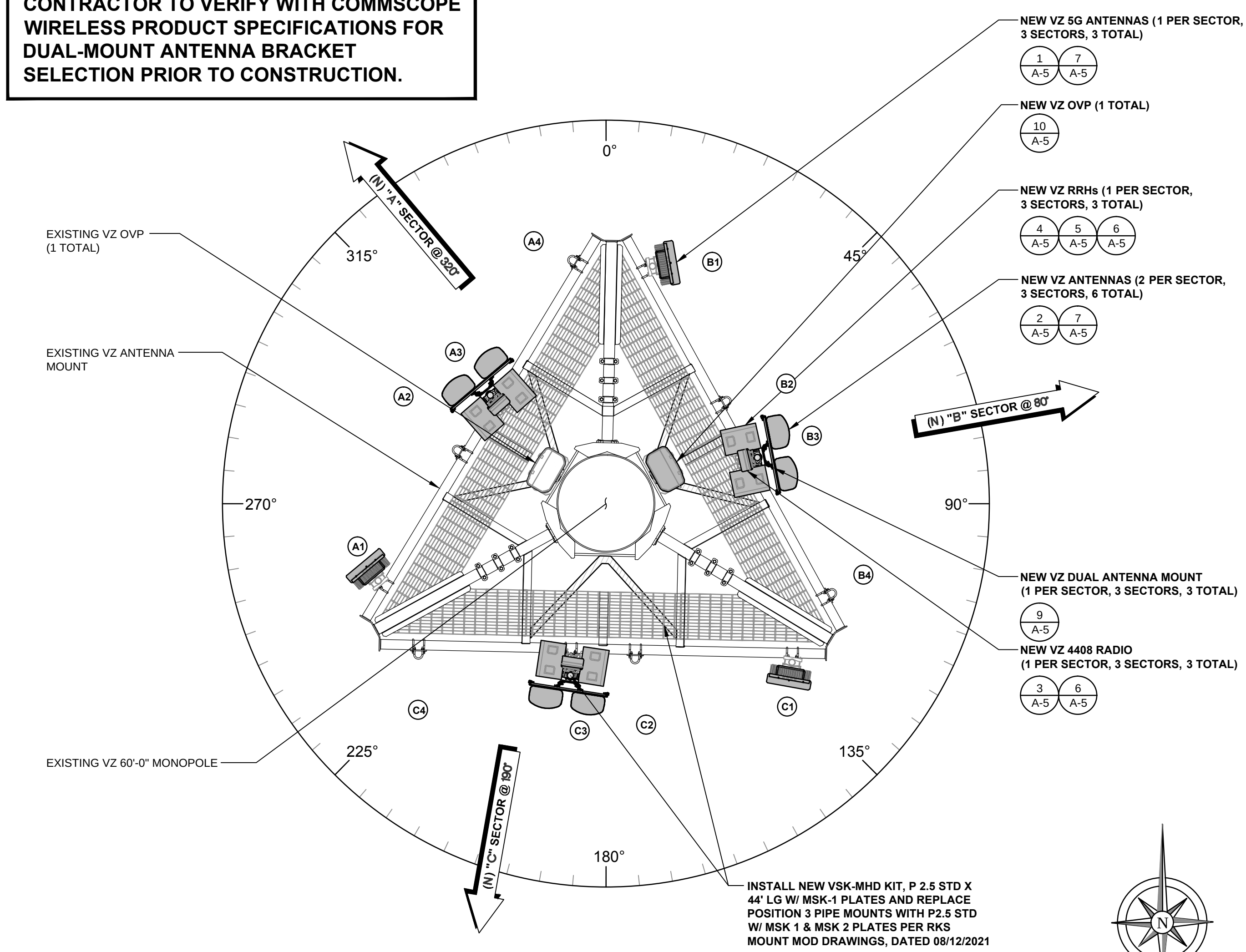
EXISTING ANTENNA PLAN

0 1' 2' 3'

SCALE: 3/8" = 1'-0" (24x36)
(OR) 3/16" = 1'-0" (11x17)

2

CONTRACTOR TO VERIFY WITH COMMSCOPE WIRELESS PRODUCT SPECIFICATIONS FOR DUAL-MOUNT ANTENNA BRACKET SELECTION PRIOR TO CONSTRUCTION.



NEW ANTENNA PLAN

0 1' 2' 3'

SCALE: 3/8" = 1'-0" (24x36)
(OR) 3/16" = 1'-0" (11x17)

3

NOTE: THE ORIGINAL SIZE OF THIS PLAN IS 24" X 36". SCALE RATIO IS NOT VALID FOR REDUCED OR ENLARGED SHEET SIZES

verizon

9656 SOUTH PROSPERITY ROAD
WEST JORDAN, UT 84088

Technology Associates

MOUNTAIN REGION OFFICE
7896 SOUTH HIGHLAND DRIVE
SUITE 200
COTTONWOOD, UT 84121

REV	DATE	DESCRIPTION	BY
0	10/18/2021	ISSUED FOR FINAL CD	CMB
B	10/06/2021	ISSUED FOR FINAL CD REVIEW	TS
A	09/24/2021	ISSUED FOR CD REVIEW	TS

PROFESSIONAL STRUCTURAL ENGINEER
No. 10196393-2203
JOEL R. HARTMAN
STATE OF UTAH
10.18.21

SAL COKE PLANT

12277 S 700 W
DRAPER, UT 84020

MONOPOLE

SHEET TITLE

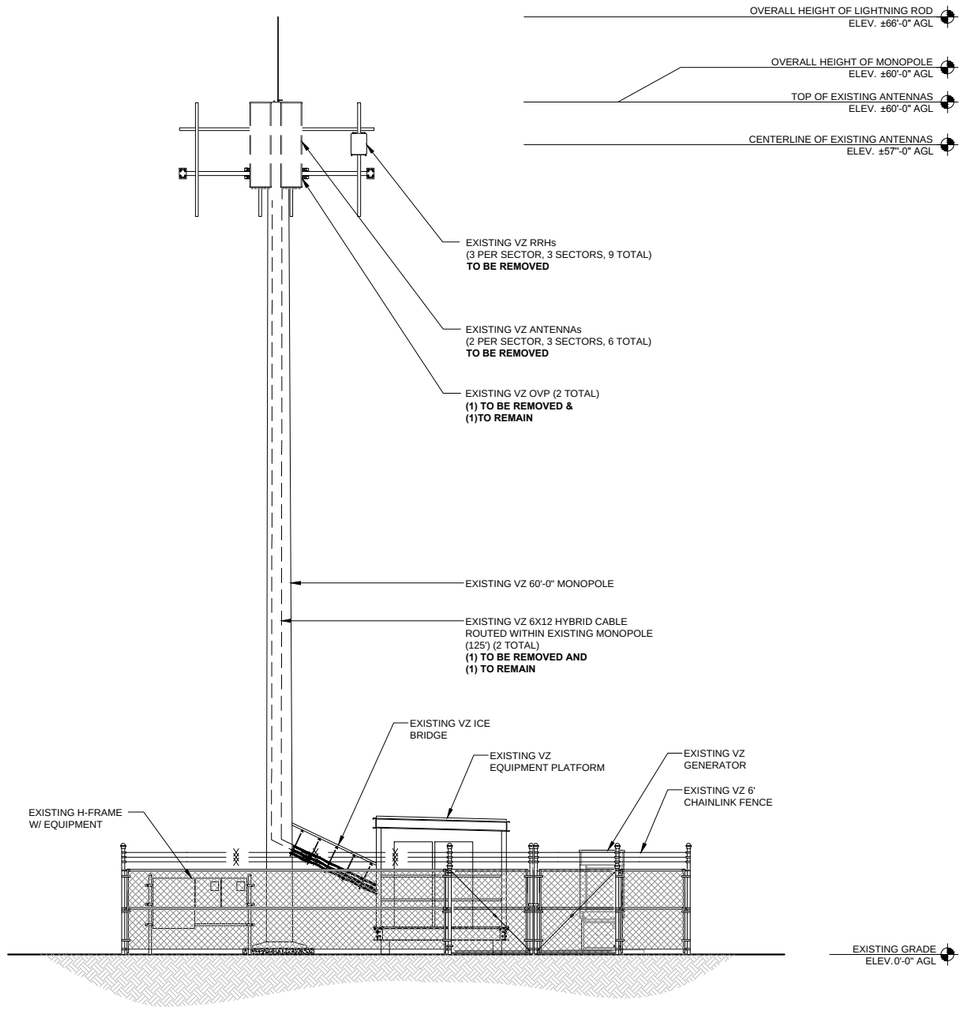
ANTENNA PLANS

SHEET NUMBER

A-3

NOTE:

1. INSTALLERS TO VERIFY LATEST RF DATA SHEET & PLUMBING / WIRING DIAGRAMS, PRIOR TO INSTALLATION.
2. USE CONCEALFAB LOW-PIM ANTENNA AND CABLE MOUNTING HARDWARE.

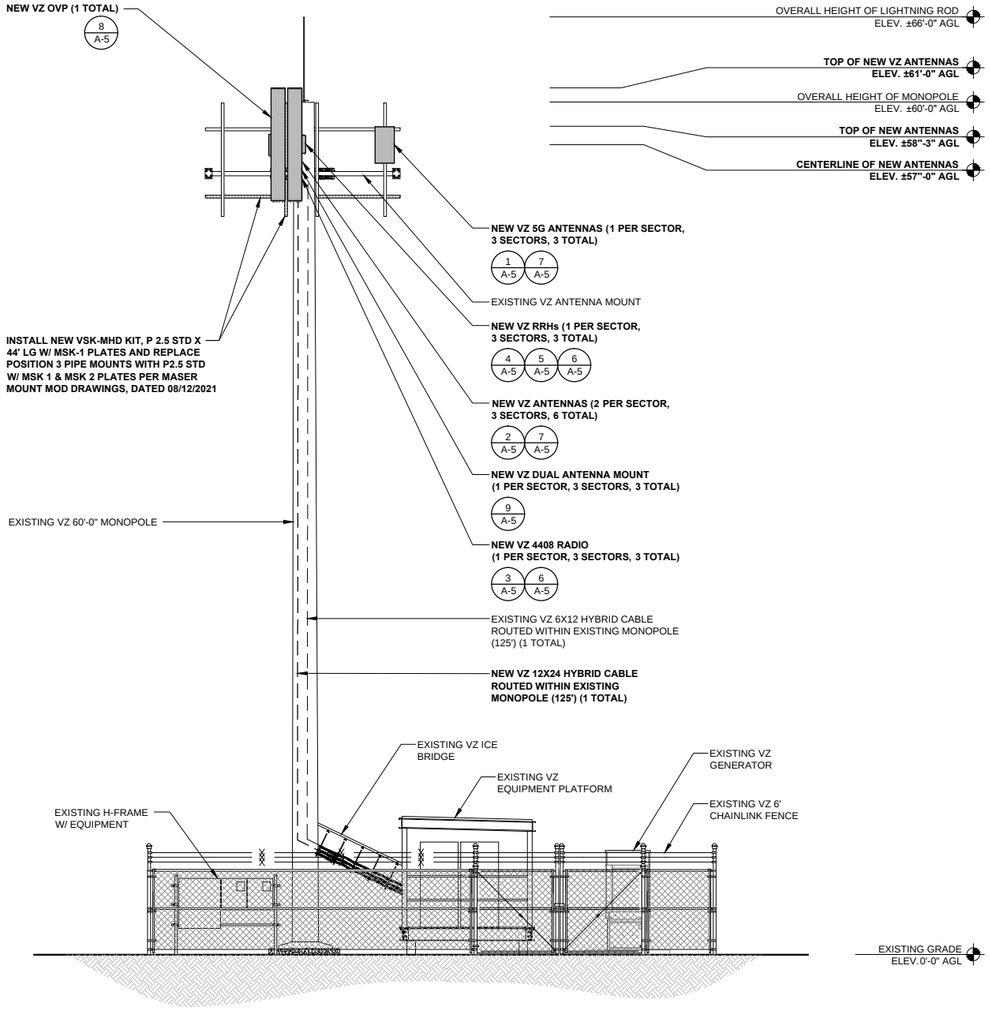


EXISTING ELEVATION

0 1.5' 3' 5'

SCALE: 3/16" = 1'-0" (24x36)
(OR) 3/32" = 1'-0" (11x17)

1



NEW ELEVATION

0 1.5' 3' 5'

SCALE: 3/16" = 1'-0" (24x36)
(OR) 3/32" = 1'-0" (11x17)

2

NOTE: THE ORIGINAL SIZE OF THIS PLAN IS 24" X 36". SCALE RATIO IS NOT VALID FOR REDUCED OR ENLARGED SHEET SIZES

verizon

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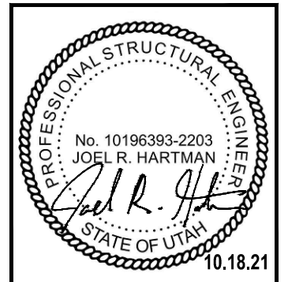


SAL COKE PLANT

12277 S 700 W
DRAPER, UT 84020

MONOPOLE

SHEET TITLE

ELEVATIONS

SHEET NUMBER

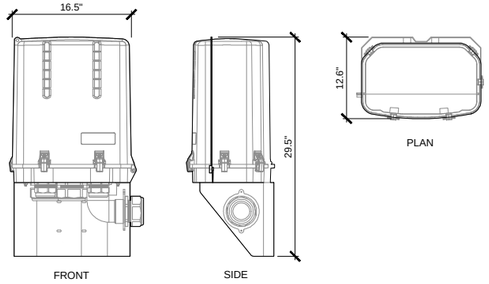
A-4

COMMSCOPE RAYCAP RCMDC 6627-PF-48

DIMENSIONS: 12.6" X 29.5" X 16.5"

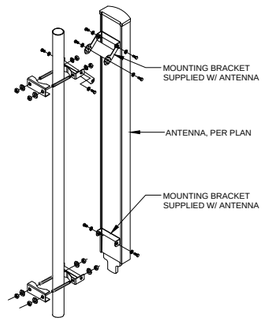
WEIGHT: 14.51 kg (32.0 lbs)

COLOR: GRAY



RAYCAP SPECIFICATIONS

SCALE N.T.S. | 10



ANTENNA MOUNTING

SCALE N.T.S. | 7

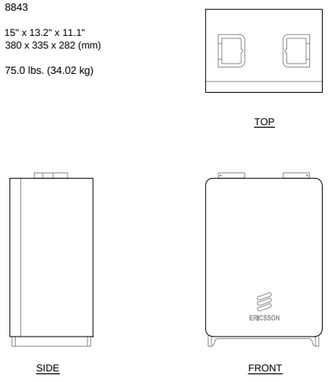
ERICSSON 8843

MANUFACTURER: ERICSSON

MODEL: 8843

RRU DIMENSIONS (HxWxD): 15" x 13.2" x 11.1"
380 x 335 x 282 (mm)

WEIGHT: 75.0 lbs. (34.02 kg)



RRH SPECIFICATIONS

SCALE N.T.S. | 4

ERICSSON - AIR 6449 B77D/ C-BAND

SPECTRUM	n77D C-BAND (3.7 - 3.98 GHz)
OpBW	280 MHz
IBW/CBW	200 MHz
MU-MIMO LAYERS	16 DL / 8 UL
OUTPUT POWER / EIRP	UP TO 320 W / 79 dBm
ANTENNA	ACTIVE ANTENNA SYSTEM (AAS)
BRANCHES / ELEMENTS	64Tx/64Rx WITH 192 ANTENNA ELEMENTS

SIZE AND WEIGHT:

AIR 6449 B77D/ C-BAND	HEIGHT	WIDTH	DEPTH	WEIGHT
W/O PROTRUDING ITEMS	30.4 in (772 mm)	15.9 in (403 mm)	8.1 in (205 mm)	88.0 in (39.9 kg)
W/ PROTRUDING ITEMS	30.8 in (783 mm)	16.1 in (408 mm)	10.8 in (273 mm)	

#CPRI PORTS: 4x25 GBPS eCPRI, (COMPATIBLE TO 10G - eCPR SFP28

POWER INPUT: -48 VDC

OPERATIONAL CONDITIONS: -40 TO +55 °C. (INCL. SOLAR LOAD)

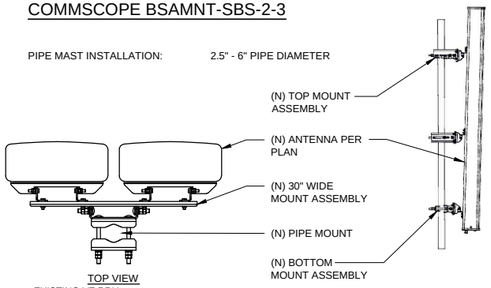
POWER: < 1540 W MAX

ANTENNA SPECIFICATIONS

SCALE N.T.S. | 1

COMMSCOPE BSAMNT-SBS-2-3

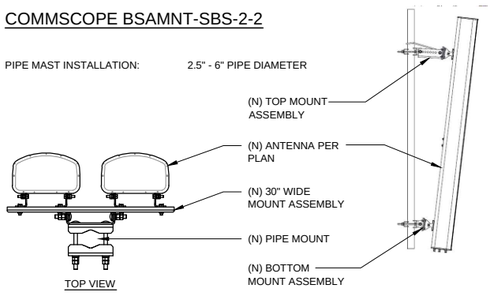
PIPE MAST INSTALLATION: 2.5" - 6" PIPE DIAMETER



EXISTING VZ RRU
(2 PER SECTOR, 3 SECTORS, 6 TOTAL)

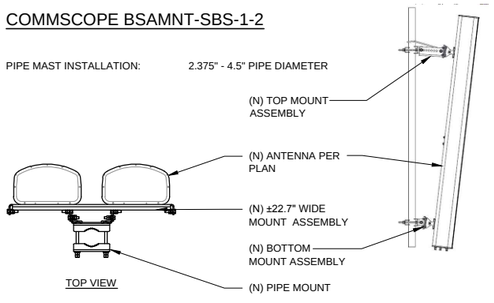
COMMSCOPE BSAMNT-SBS-2-2

PIPE MAST INSTALLATION: 2.5" - 6" PIPE DIAMETER



COMMSCOPE BSAMNT-SBS-1-2

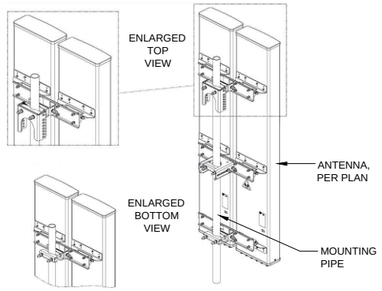
PIPE MAST INSTALLATION: 2.375" - 4.5" PIPE DIAMETER

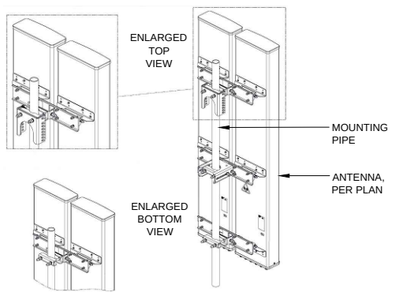


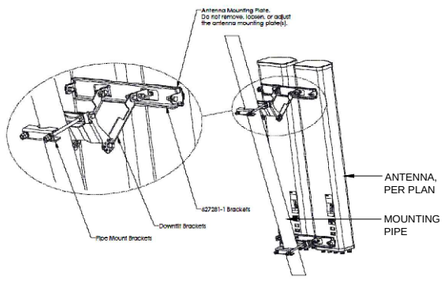
***SEE COMMSCOPE PRODUCT SELECTION GUIDE FOR DUAL MOUNT BRACKET SELECTION

SIDE-BY-SIDE ANTENNA MOUNTING

SCALE N.T.S. | 9







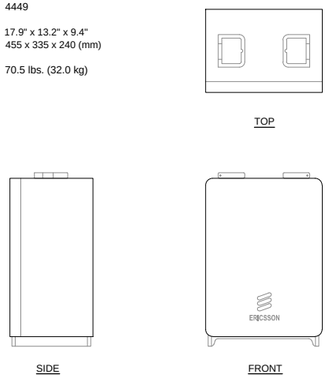
ERICSSON 4449

MANUFACTURER: ERICSSON

MODEL: 4449

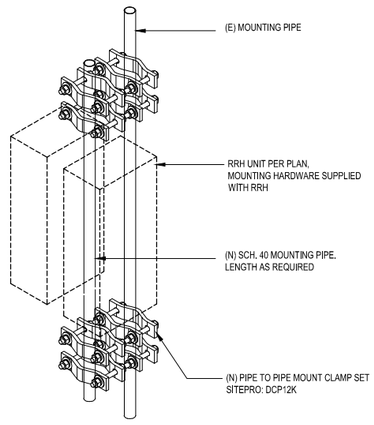
RRU DIMENSIONS (HxWxD): 17.9" x 13.2" x 9.4"
455 x 335 x 240 (mm)

WEIGHT: 70.5 lbs. (32.0 kg)



RRH SPECIFICATIONS

SCALE N.T.S. | 5



RRH MOUNTING

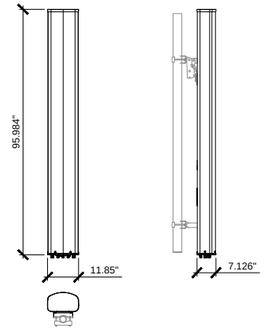
SCALE N.T.S. | 6

COMMSCOPE - NHHSS-65C-R2BT0

DIMENSIONS, HXWXD: 95.984" X 11.85" X 7.126"

WEIGHT: 61.729 LB

RET CONNECTOR: 4 - 4.3-10 FEMALE I BOTTOM



ANTENNA SPECIFICATIONS

SCALE N.T.S. | 2

ERICSSON RADIO 4408

DIMENSIONS, HxWxD: 8.41" x 7.88" x 4.13"

WEIGHT: 10.14 lbs.

CAPACITY AND SPECIFICATIONS:

- 4TX/4RX
- UP TO 4x5W
-120MHz IBW
- INTEGRATED OR EXTERNAL ANTENNA
- IP65, -40 TO +55°C
- 6 LTE CARRIERS
- 2x10:1 GPS CPRI
- AC OR -48 VDC
- 2 EXTERNAL ALARM

ANTENNA SPECIFICATIONS

SCALE N.T.S. | 3

NOTE: THE ORIGINAL SIZE OF THIS PLAN IS 24" X 36". SCALE RATIO IS NOT VALID FOR REDUCED OR ENLARGED SHEET SIZES

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Technology Associates

MOUNTAIN REGION OFFICE
7896 SOUTH HIGHLAND DRIVE
SUITE 200
COTTONWOOD, UT 84121

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B	10/06/2021	ISSUED FOR FINAL CD REVIEW	TS
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PROFESSIONAL STRUCTURAL ENGINEER
No. 10196393-2203
JOEL R. HARTMAN
STATE OF UTAH
10.18.21

SAL COKE PLANT

12277 S 700 W
DRAPER, UT 84020

MONOPOLE

SHEET TITLE

DETAILS

SHEET NUMBER

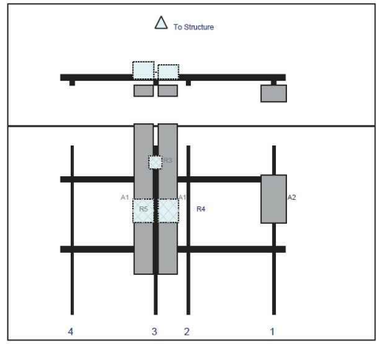
A-5

NOTE:

ANTENNAS AND RRHs TO BE MOUNTED PER RKS DESIGN & ENGINEERING POST-MOD ANTENNA MOUNT ANALYSIS REPORT DATED 08.12.2021

Plan View

Front View
Looking at Structure

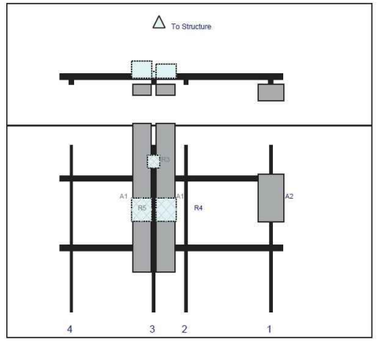


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A2	AIR 6449	30.8	16.1	136.5	1	a	Front	33.96	0	Added	
A1	NHHSS-65C-R2B	96	11.9	60.8	3	a	Front	33.96	7.55	Added	
A1	NHHSS-65C-R2B	96	11.9	60.8	3	b	Front	33.96	-7.55	Added	
R3	4408	8.4	7.9	60.8	3	b	Behind	10.44	0	Added	
R4	4449	15	13.2	60.8	3	b	Behind	41.52	8	Added	
R5	8843	15	13.2	60.8	3	b	Behind	41.52	-8	Added	

SECTOR A

Plan View

Front View
Looking at Structure

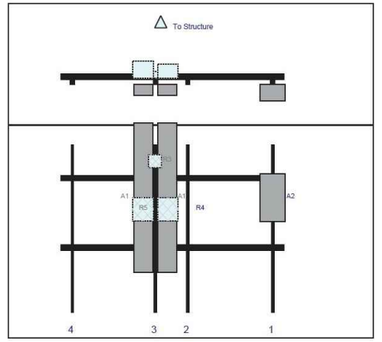


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A2	AIR 6449	30.8	16.1	136.5	1	a	Front	33.96	0	Added	
A1	NHHSS-65C-R2B	96	11.9	60.8	3	a	Front	33.96	7.55	Added	
A1	NHHSS-65C-R2B	96	11.9	60.8	3	b	Front	33.96	-7.55	Added	
R3	4408	8.4	7.9	60.8	3	b	Behind	10.44	0	Added	
R4	4449	15	13.2	60.8	3	b	Behind	41.52	8	Added	
R5	8843	15	13.2	60.8	3	b	Behind	41.52	-8	Added	

SECTOR B

Plan View

Front View
Looking at Structure

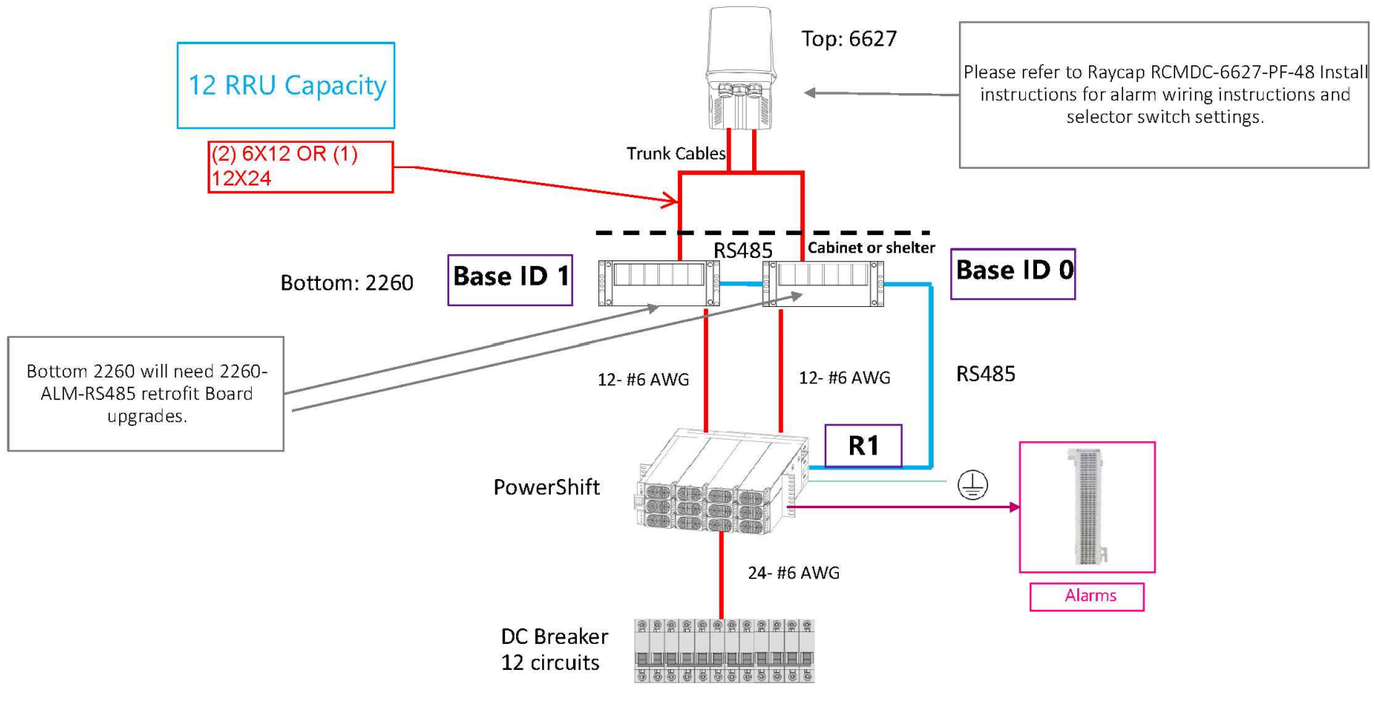


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A2	AIR 6449	30.8	16.1	136.5	1	a	Front	33.96	0	Added	
A1	NHHSS-65C-R2B	96	11.9	60.8	3	a	Front	33.96	7.55	Added	
A1	NHHSS-65C-R2B	96	11.9	60.8	3	b	Front	33.96	-7.55	Added	
R3	4408	8.4	7.9	60.8	3	b	Behind	10.44	0	Added	
R4	4449	15	13.2	60.8	3	b	Behind	41.52	8	Added	
R5	8843	15	13.2	60.8	3	b	Behind	41.52	-8	Added	

SECTOR C

ANTENNA MOUNTING RECOMMENDATIONS

SCALE N.T.S. 1



UPCONVERTER PLUMBING DIAGRAM

SCALE N.T.S. 2

NOTE: THE ORIGINAL SIZE OF THIS PLAN IS 24" X 36". SCALE RATIO IS NOT VALID FOR REDUCED OR ENLARGED SHEET SIZES

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Technology Associates

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PROFESSIONAL STRUCTURAL ENGINEER
No. 10196393-2203
JOEL R. HARTMAN
STATE OF UTAH
10.18.21

SAL COKE PLANT

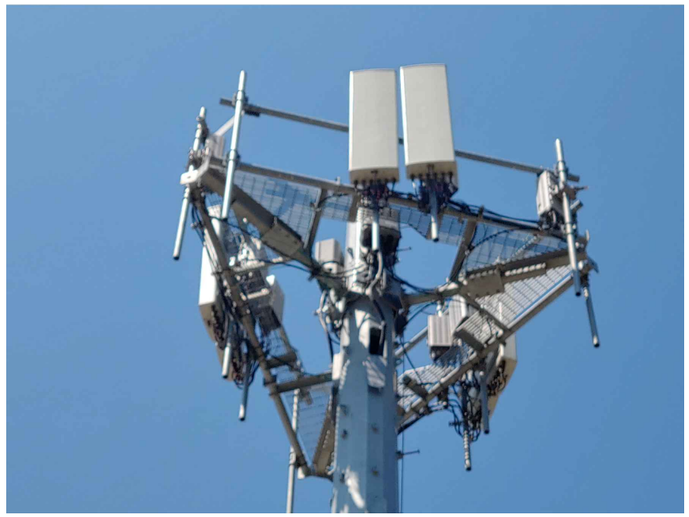
12277 S 700 W
DRAPER, UT 84020

MONOPOLE

SHEET TITLE
DIAGRAMS & RECOMMENDATIONS

SHEET NUMBER
A-6

VIEW OF EXISTING SITE ELEVATION



VIEW OF EXISTING ANTENNAS

EXISTING BATTERIES

EXISTING EQUIPMENT

NOTE: THE ORIGINAL SIZE OF THIS PLAN IS 24" X 36", SCALE RATIO IS NOT VALID FOR REDUCED OR ENLARGED SHEET SIZES

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SAL COKE PLANT

12277 S 700 W
DRAPER, UT 84020

MONOPOLE

SHEET TITLE
SITE PHOTOS

SHEET NUMBER
A-7

MOUNT MODIFICATION DRAWINGS
EXISTING 13-FT PLATFORM

TOWER OWNER: N/A
TOWER SITE NUMBER: N/A
CARRIER SITE NAME: COKE PLANT
CARRIER SITE #:288667-VZW / COKE PLANT
12277 S 700 W
Draper, Utah 84020
Salt Lake County

PROJECT INFORMATION

SITE INFORMATION

LATITUDE	**40.52771666° N**
LONGITUDE	**-111.9097361° W**
JURISDICTION	***Salt Lake County***

APPLICANT LESSEE

COMPANY:	**VERIZON WIRELESS**

PROJECT MANAGER:

COMPANY:	**RKS DESIGN & ENGINEERING LLC**
CONTACT:	**Aaron Boonstra P.E**
EMAIL:	***Aboonstra@rksde.com***

SHEET INDEX

CONTRACTOR PMI REQUIREMENTS

PMI LOCATION:	HTTPS://PMI.VZWSMART.COM	FAILING SMART TOOL PROJECT #:	10084225
SMART TOOL PROJECT #:	10094556	FAILING MOUNT ANALYSIS REPORT:	21.2107-240
VZW LOCATION CODE (PSLC):	288667	RKS PROJECT #:	21.2189-263
FUZE ID:	16496996	ANALYSIS DATE:	6/22/2021

DESIGN & ENGINEERING

RKS Design & Engineering LLC
8774 Yates Dr., Ste.140
Westminster, CO, 80031
720-272-5772
www.rksde.com

288667-VZW / COKE PLANT
COKE PLANT
12277 S 700 W
Draper, Utah 84020
Salt Lake County

REV	DATE	DESCRIPTION
0	8/12/21	FOR CONSTRUCTION

SEAL:

PROFESSIONAL ENGINEER
No. 11195814
AARON R.
BOONSTRA
8/12/21
STATE OF UTAH

SHEET TITLE
TITLE SHEET

SHEET #
ST-1

RKS JOB# 21.2189-263

BILL OF MATERIALS						
VZWSMART KITS						
QTY.	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WT.	WEIGHT
13	VZWSMART	VZWSMART MSK-1	Crossover plate with hardware. Connects 2.375 inch 2.875 inch OD pipe to 2.375 inch 2.875 inch OD pipe		14	182
3		VZWSMART MSK-2	Crossover plate with hardware. Connects 2.375 inch 2.875 inch OD pipe to 3.5 inch 4.0 inch OD pipe		15	45
OTHER REQUIRED PARTS						
3	-	-	P 2.5 STD X 144" LG PIPE		66	198
3	-	-	P 2.5 STD X 108" LG PIPE		50	150
1	SITE PRO1	VSK-MHD	V STYLE MONOPOLE REINFORCEMENT KIT.		525	525
				TOTAL	670	1100

VZWSMART KITS - APPROVED VENDORS

COMMSCOPE

CONTACT	SALVADOR ANGUIANO
PHONE	(817) 304-7492
EMAIL	SALVADOR.ANGUIANO@COMMSCOPE.COM
WEBSITE	WWW.COMMSCOPE.COM

METROSITE FABRICATORS, LLC

CONTACT	KENT RAMEY
PHONE	(706) 335-7045 (O), (706) 982-9788 (M)
EMAIL	KENT@METROSITELLC.COM
WEBSITE	METROSITEFABRICATORS.COM

PERFECTVISION

CONTACT	WIRELESS SALES
PHONE	(844) 887-6723
EMAIL	WIRELESSSALES@PERFECT-VISION.COM
WEBSITE	WWW.PERFECT-VISION.COM

SABRE INDUSTRIES, INC.

CONTACT	ANGIE WELCH
PHONE	(866) 428-6937
EMAIL	AKWELCH@SABREINDUSTRIES.COM
WEBSITE	WWW.SABRESITESOLUTIONS.COM

SITE PRO 1

CONTACT	PAULA BOSWELL
PHONE	(972) 236-9843
EMAIL	PAULA.BOSWELL@VALMONT.COM
WEBSITE	WWW.SITEPRO1.COM

NOTE:
1. ALL MATERIALS REQUIRED FOR THE DESIGNED MODIFICATIONS BUT NOT LISTED IN THIS SHEET ARE ASSUMED TO BE PROVIDED BY THE CONTRACTOR.
2. WHEN SPECIFIED, VZWSMART KITS SHALL BE REQUIRED AND WILL BE VERIFIED DURING THE DESKTOP PMI.

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BILL OF MATERIALS

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SBOM-1

RKS JOB# 21.2189-263

GENERAL NOTES

THESE MODIFICATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE GOVERNING PROVISIONS OF THE TELECOMMUNICATIONS INDUSTRY STANDARD TIA-222-H. MATERIALS AND SERVICES PROVIDED BY THE CONTRACTOR SHALL CONFORM TO THE ABOVE MENTIONED CODES.

2. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT DAMAGE TO EXISTING STRUCTURES. ANY DAMAGE TO EXISTING STRUCTURES AS A RESULT OF THE CONTRACTOR'S WORK OR FROM DAMAGE DUE TO OTHER CAUSES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.

3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS BEFORE BEGINNING WORK, ORDERING MATERIAL, AND PREPARING OF SHOP DRAWINGS. ANYDISCREPANCIES BETWEEN FIELD CONDITIONS AND THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER. IF THE CONTRACTOR DISCOVERS ANY EXISTING CONDITIONS THAT ARE NOT REPRESENTED ON THESE DRAWINGS, OR ANY CONDITIONS THAT WOULD INTERFERE WITH THE INSTALLATION OF THE MODIFICATIONS, NOTIFY THE ENGINEER IMMEDIATELY.

4. IT IS ASSUMED THAT ANY STRUCTURAL MODIFICATION WORK SPECIFIED ON THESE PLANS WILL BE ACCOMPLISHED BY KNOWLEDGEABLE WORKMEN WITH TOWER CONSTRUCTION EXPERIENCE.

5. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION METHODS, MEANS, TECHNIQUES, SEQUENCES, AND PROCEDURES.

6. ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET ANSI/TIA-322 (LATEST EDITION), OSHA, AND GENERAL INDUSTRY STANDARDS. ALL RIGGING PLANS SHALL ADHERE TO ANSI/TIA-322 (LATEST EDITION) INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION.

7. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PROGRAMS IN ACCORDANCE WITH APPLICABLE SAFETY CODES.

8. WORK SHALL ONLY BE PERFORMED DURING CALM DRY DAYS (WINDS LESS THAN 30-MPH). THE STRUCTURE SHOWN ON THE DRAWINGS IS STRUCTURALLY SOUND ONLY

IN THE COMPLETED FORM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STRENGTH AND STABILITY OF THE STRUCTURE DURING ERECTION. CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORT, SHORING, BRACING AND ANY OTHER
STRUCTURAL SYSTEMS AS REQUIRED TO RESIST ALL FORCES THAT MAY OCCUR DURING HANDLING AND ERECTION UNTIL THE STRUCTURE IS FULLY COMPLETED. TEMPORARY SUPPORTS, BRACING AND OTHER STRUCTURAL SYSTEMS REQUIRED
DURING CONSTRUCTION SHALL REMAIN THE CONTRACTOR'S PROPERTY AFTER THEIR USE.

9. ALL INSTALLATIONS PERFORMED ON THIS STRUCTURE SHALL BE COMPLETED IN ACCORDANCE WITH THE GOVERNING PROVISIONS OF THE STANDARD FOR INSTALLATION, ALTERATION AND MAINTENANCE OF ANTENNA SUPPORTING
STRUCTURES AND ANTENNAS, ANSI/TIA-322.

10. CONTRACTOR SHALL SECURE SITE BACK TO EXISTING CONDITION UNDER SUPERVISION OF OWNER. ALL FENCE, STONE, GEOFABRIC, GROUNDING, AND SURROUNDING GRADE SHALL BE REPLACED AND REPAIRED AS REQUIRED TO ACHIEVE OWNER APPROVAL. POSITIVE DRAINAGE AWAY FROM TOWER SITE SHALL BE MAINTAINED.

11. CONNECTIONS BETWEEN ITEMS SUPPORTED BY THE STRUCTURE AND THE STRUCTURE NOT SPECIFICALLY DETAILED IN THE CONTRACT DOCUMENTS ARE THE RESPONSIBILITY OF THE CONTRACTOR. SUCH CONNECTIONS SHALL BE DESIGNED, COORDINATED AND INSPECTED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF THE PROJECT. SUBMIT SIGNED AND SEALED CALCULATIONS DURING SHOP DRAWING REVIEW.

12. DO NOT SCALE DRAWINGS.

13. DO NOT USE THESE DRAWINGS FOR ANY OTHER SITE.

14. ALL MATERIAL UTILIZED FOR THIS PROJECT MUST BE NEW AND FREE OF ANY DEFECTS. ANY MATERIAL SUBSTITUTIONS, INCLUDING BUT NOT LIMITED TO ALTERED SIZE AND/OR STRENGTHS, MUST BE APPROVED BY THE OWNER AND ENGINEER IN WRITING.

15. THE MOUNT UNDER NO CIRCUMSTANCES SHOULD BE USED AS A TIE OFF POINT.

DESIGN LOADS

1. WIND LOADS:
a. BASIC WIND SPEED (3 SECOND GUST), V = 103 MPH
b. EXPOSURE CATEGORY C
c. TOPOGRAPHIC CATEGORY 1
d. MEAN BASE ELEVATION (AMSL) = 4409.97 ft
2. ICE LOADS:
a. ICE WIND SPEED (3 SECOND GUST), V = 40 MPH
b. ICE THICKNESS = 0.25 IN
3. SEISMIC LOADS:
a. SHORT TERM MCER GROUND MOTION, SS = 1.378
b. LONG TERM MCER GROUND MOTION, S1 = 0.498

STRUCTURAL STEEL NOTES

1. DESIGN, DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING PUBLICATIONS EXCEPT AS SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS.

a. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION (15TH EDITION)
b. SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS
c. AISC CODE OF STANDARD PRACTICE

2. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING UNLESS OTHERWISE SHOWN:

CHANNELS, ANGLES, PLATES, ETC.	ASTM A36 (GR 36)
STEEL PIPE	ASTM A53 (GR 35)
BOLTS	ASTM A325
NUTS	ASTM A563
LOCK WASHERS	LOCKING STRUCTURAL GRADE

3. ALL SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE APPROVED IN WRITING BY THE ENGINEER. CONTRACTOR SHALL PROVIDE DOCUMENTATION TO ENGINEER FOR VERIFYING THE SUBSTITUTE IS SUITABLE FOR USE AND MEETS ORIGINAL DESIGN CRITERIA. DIFFERENCES FROM THE ORIGINAL DESIGN, INCLUDING MAINTENANCE, REPAIR AND REPLACEMENT, SHALL BE NOTED. ESTIMATES OF COSTS/CREDITS ASSOCIATED WITH THE SUBSTITUTION (INCLUDING RE-DESIGN COSTS AND COSTS TO SUB-CONTRACTORS) SHALL BE PROVIDED TO THE ENGINEER. CONTRACTOR SHALL PROVIDE ADDITIONAL DOCUMENTATION AND/OR SPECIFICATIONS
TO THE ENGINEER AS REQUESTED.

4. PROVIDE STRUCTURAL STEEL SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR
TO FABRICATION.
a. SUBMIT SHOP DRAWINGS TO ABOONSTRA@RKSDE.COM
b. PROVIDE RKS PROJECT # AND PROJECT ENGINEER CONTACT IN THE BODY OF THE EMAIL.

5. DRILL NO HOLES IN ANY NEW OR EXISTING STRUCTURAL STEEL MEMBERS OTHER THAN
THOSE SHOWN ON STRUCTURAL DRAWINGS WITHOUT THE APPROVAL OF THE ENGINEER OF RECORD.

6. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.

7. ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. IN ADDITION ALL NEW STEEL SHALL BE PAINTED TO MATCH EXISTING STEEL. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.

8. ALL BOLT ASSEMBLIES FOR STRUCTURAL MEMBERS REPRESENTED IN THIS DRAWING
REQUIRE LOCKING DEVICES TO BE INSTALLED IN ACCORDANCE WITH TIA-222-H SECTION 4.9.2 REQUIREMENTS.

9. WHERE CONNECTIONS ARE NOT FULLY DETAILED ON THESE DRAWINGS, FABRICATOR
SHALL DESIGN CONNECTIONS TO RESIST LOADS AND FORCES WHERE SHOWN ON DRAWINGS AND AS OUTLINED IN SPECIFICATIONS.

10. FOR MEMBERS BEING REPLACED, PROVIDE NEW BOLTS AND MATCH EXISTING SIZE AND GRADE. MAINTAIN AISC REQUIREMENTS FOR MINIMUM BOLT DISTANCE AND SPACING.

11. ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH SUCH THAT THE END OF THE BOLT IS AT LEAST FLUSH WITH THE FACE OF THE NUT. IT IS NOT PERMITTED FOR THE BOLT END TO BE BELOW THE FACE OF THE NUT AFTER TIGHTENING IS COMPLETED.

12. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.

13. ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.

14. ALL EXISTING PAINTED/GALVANIZED SURFACES DAMAGED DURING REHAB INCLUDINGAREAS UNDER STIFFENER PLATES SHALL BE WIRE BRUSHED CLEAN, REPAIRED BY COLD GALVANIZING (ZINGA OR ZINC COTE), AND REPAINTED TO MATCH THE EXISTING FINISH (IF APPLICABLE).

15. ALL HOLES IN STEEL MEMBERS SHALL BE SIZED 1/16" LARGER THAN THE BOLT DIAMETER. STANDARD HOLES SHALL BE USED UNLESS NOTED OTHERWISE.

PROJECT NOTES

1. SEE MODIFICATION NOTES

2. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITY COMPANIES OR OTHER PUBLIC/GOVERNING AUTHORITIES.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY OR MUNICIPAL AUTHORITIES.

4. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE AS A RESULT OF CONSTRUCTION OF THIS FACILITY AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.

6. THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS PROJECT. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

7. THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING THE BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND
CONSTRUCTION DRAWINGS.

8. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THESE DRAWINGS MUST BE VERIFIED. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.

9. SINCE THE CELL SITE MAY BE ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE REQUIRED TO BE WORN TO ALERT OF ANY POTENTIALLY DANGEROUS EXPOSURE LEVELS.

10. NO NOISE, SMOKE, DUST OR ODOR WILL RESULT FROM THIS FACILITY AS TO CAUSE A NUISANCE.

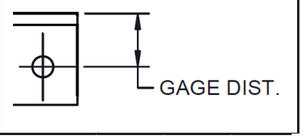
11. THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION (NO HANDICAP ACCESS IS REQUIRED).

NOMINAL HOLE DIMENSIONS

BOLT DIAMETER	STANDARD HOLE	SHORT SLOT
1/2	9/16	9/16 X 11/16
5/8	11/16	11/16 X 7/8
3/4	13/16	13/16 X 1
7/8	15/16	15/16 X 1 1/8
1	1 1/16	1 1/16 X 1 5/16

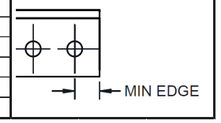
WORKABLE GAGE DISTANCES

LENGTH	GAGE
4	2 1/2
3 1/2	2
3	1 3/4
2 1/2	1 3/8
2	1 1/8
1 3/4	1

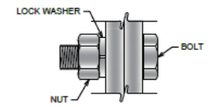


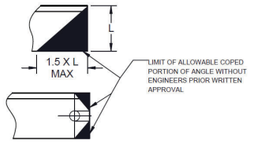
BOLT EDGE AND SPACING

BOLT DIAMETER	STANDARD HOLE	SPACING
1/2	7/8	1 1/2
5/8	1 1/8	1 7/8
3/4	1 1/4	2 1/4
7/8	1 1/2	2 5/8
1	1 3/4	3



TYPICAL BOLT ASSEMBLY





NOTES:

1. ALL DIMENSIONS REPRESENTED IN THE ABOVE TABLES ARE AISC MINIMUM REQUIREMENTS. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN FIELD AND NOTIFY ENGINEER IF DISTANCES ARE LESS THAN THOSE PROVIDED.
2. THE DIMENSIONS PROVIDED ARE MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS OF PROPOSED MEMBERS WITHIN THESE DRAWINGS MAY VARY FROM THE AISC MINIMUM REQUIREMENTS.
3. SHORT SLOT HOLES SHALL ONLY BE USED WHEN DEPICTED IN THE DRAWINGS
4. MATCH EXISTING GAGES WHEN APPLICABLE, UNLESS MINIMUM EDGE DISTANCES ARE COMPROMISED

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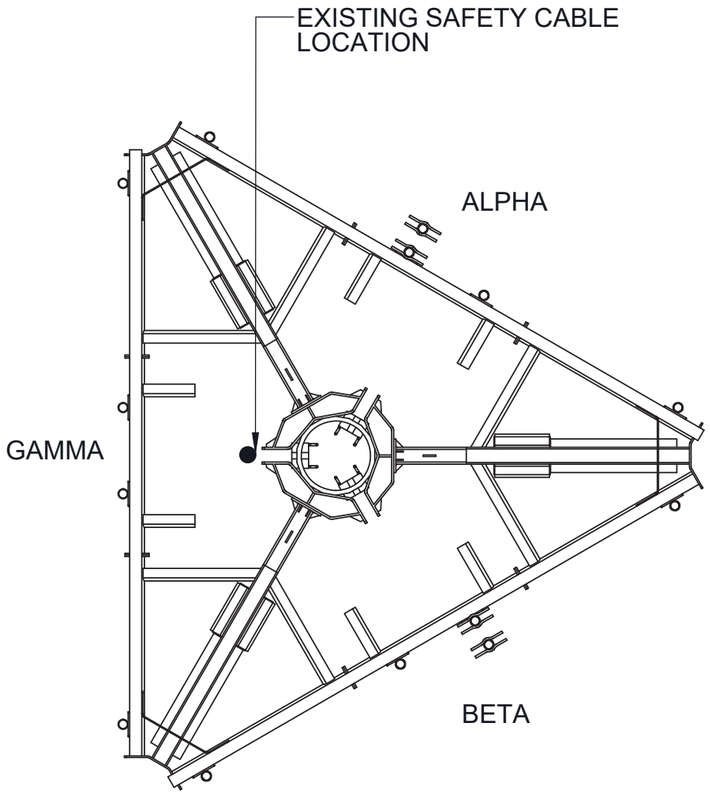
SHEET TITLE
MODIFICATION NOTES I

SHEET #
SGN-1

RKS JOB# 21.2189-263



CLIMBING FACILITY LOCATION

STRUCTURAL NOTES:

1. CONTRACTOR TO INSPECT CLIMBING FACILITIES AT SITE AND ENSURE THAT THE SAFETY CLIMB IS IN GOOD CONDITION AND THAT THE WIRE ROPE DOES NOT OR WILL NOT INTERFERE WITH THE EXISTING OR PROPOSED MOUNT CONNECTIONS. CONTRACTOR SHALL INSTALL SAFETY CLIMB WIRE ROPE GUIDED AROUND MOUNT CONNECTIONS AS NEEDED.

2. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB, OR ANY SYSTEM INSTALLED ON THE STRUCTURE. TIMELY NOTICE AND DOCUMENTATION SHALL BE PROVIDED BY CONTRACTORS TO THE EOR (OF STRUCTURAL DESIGN) IF AN OBSTRUCTION WAS REQUIRED TO MEET THE RF SYSTEM DESIGN REQUIREMENTS AND PERFORMANCES.

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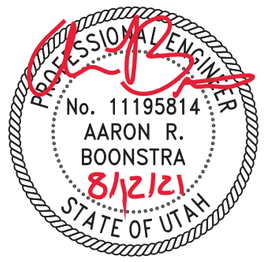
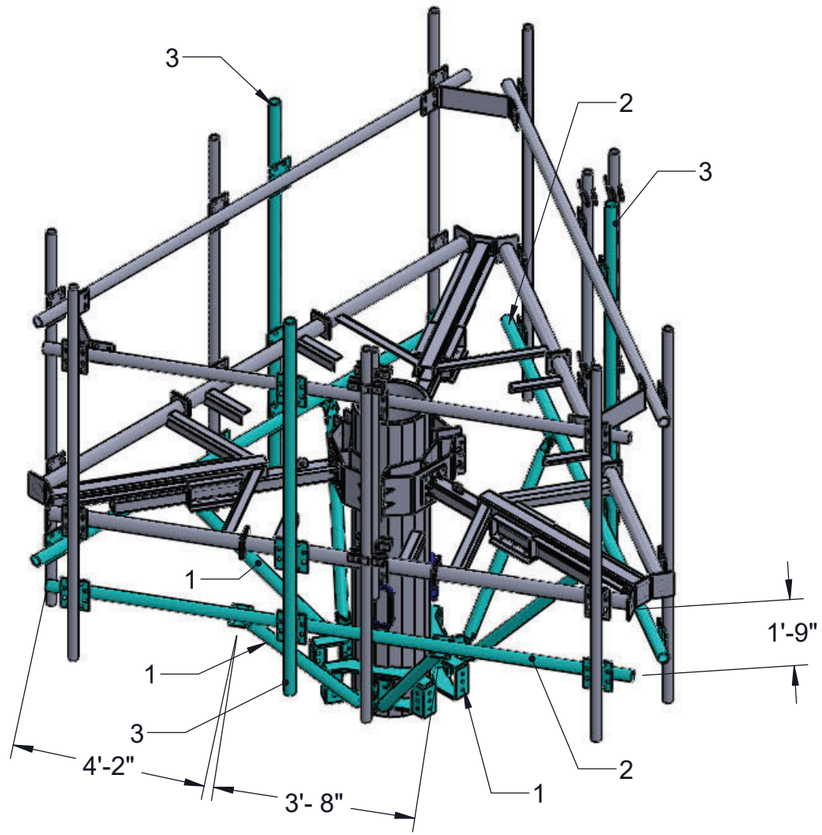


SHEET TITLE
CLIMBING FACILITY DETAILS

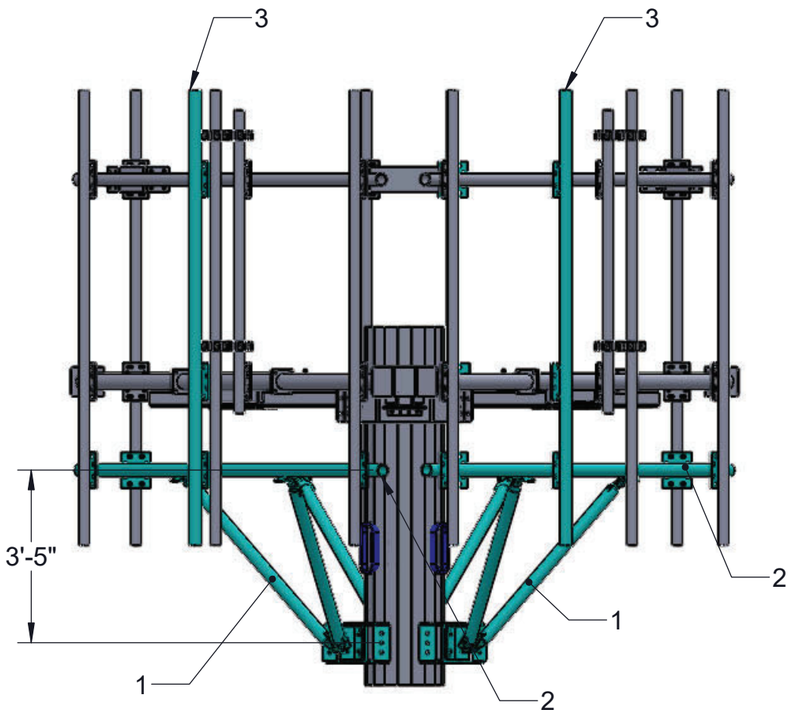
SHEET #
SCF-1

RKS JOB# 21.2189-263



PROPOSED MOUNT ISO VIEW

MOUNT MODIFICATION SCHEDULE			
ITEM#	ELEVATION	MOUNT MODIFICATION DESCRIPTION	REFERENCE SHEETS
1	53.96	INSTALL VSK-MHD KIT	SS-1
2		INSTALL P 2.5STD X 144' LG W/ MSK-1 PLATES	SS-1
3		REPLACE POSITION 3 PIPE MOUNTS WITH P2.5 STD W/ MSK-1 & MSK-2 PLATES	SS-1



PROPOSED MOUNT ELEVATION VIEW

MODIFICATION NOTES I

1. PER THE MOUNT MAPPING COMPLETED BY RKS DESIGN & ENGINERRING ON 05/19/2021, THE SAFETY CLIMB AND CLIMBING FACILITIES UP TO THE VERIZON MOUNT (ELEVATION 53.96') ARE IN GOOD CONDITION. RKS, LLC DOES NOT WARRANT THIS INFORMATION IF PROVIDED BY OTHER.

2. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB, OR ANY SYSTEM INSTALLED ON THE STRUCTURE. TIMELY NOTICE AND DOCUMENTATION SHALL BE PROVIDED BY CONTRACTORS TO THE EOR (OF STRUCTURAL DESIGN) IF AN OBSTRUCTION WAS REQUIRED TO MEET THE RF SYSTEM DESIGN REQUIREMENTS AND PERFORMANCES.

MODIFICATION NOTES II:

1. MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.
2. RADIO AND/OR TME POSITIONS SHALL BE ADJUSTED VERTICALLY AS NEEDED IN ORDER TO ACHIEVE INSTALLATION OF HORIZONTAL AS SHOWN. EOR SHALL BE NOTIFIED IF EQUIPMENT NEEDS TO BE RELOCATED TO ANOTHER MOUNT PIPE.
3. CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM ANGLE AND PIPE MEMBERAS AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL NOTES ON SHEET S-2.

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NOT APPLICABLE

EXISTING MOUNT GEOMETRY VERIFICATION FRONT ELEVATION VIEW

MODIFICATION NOTES II:

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3. CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM ANGLE AND PIPE MEMBERAS AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL NOTES ON SHEET S-2.

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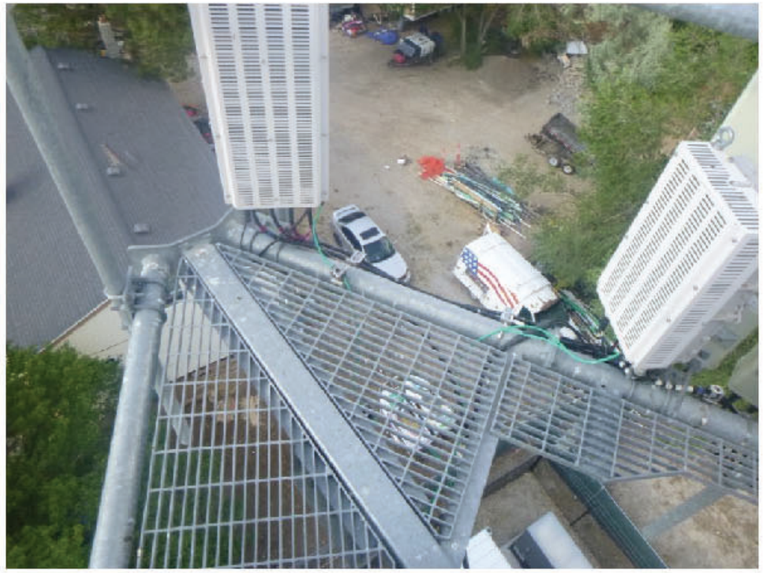
MOUNT PHOTO 1

MOUNT PHOTO 2

MOUNT PHOTO 3



MOUNT PHOTO 4

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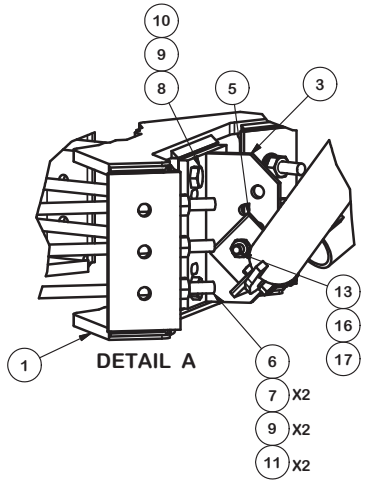
BOONSTRA
8/12/21
STATE OF UTAH

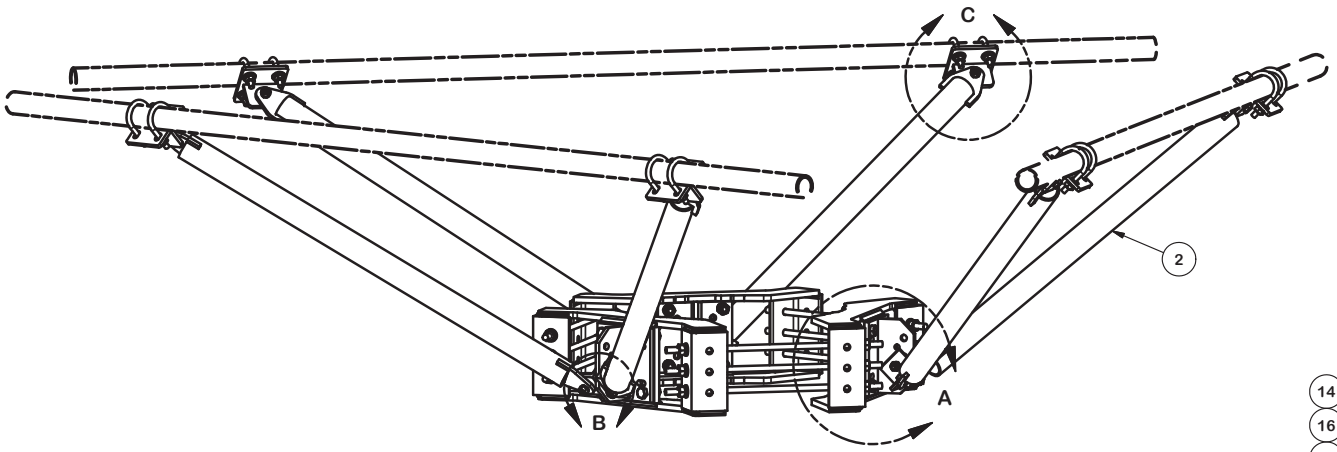
SHEET TITLE
PHOTOGRAPHS

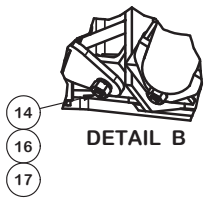
SHEET #
SS-3

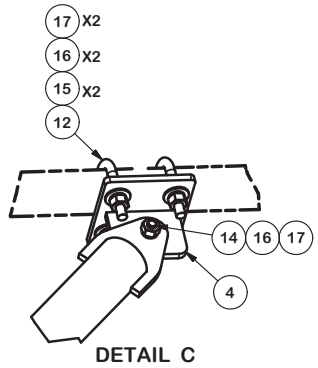
RKS JOB# 21.2189-263



PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	3	X-LWRM	RING MOUNT WELDMENT		68.81	206.42
2	6	X-VSK	SUPPORT WELDMENT FOR VSK REINFORCEMENTS		27.05	162.32
3	3	X-TBW	T-BRACKET WELDMENT		13.60	40.80
4	6	X-VSKBRKT	T-BRACKET WELDMENT FOR VSK REINFORCEMENTS		4.19	25.13
5	6	SHCM-T	CHAIN MOUNT TIGHTENER BRACKET	3 in	1.86	11.15
6	9	G58R-24	5/8" x 24" THREADED ROD (HDG.)		2.09	18.82
6	9	G58R-48	5/8" x 48" THREADED ROD (HDG.)		4.18	37.63
7	18	A58FW	5/8" HDG A325 FLATWASHER		0.03	0.61
8	12	A582114	5/8" x 2-1/4" HDG A325 HEX BOLT	2 1/4 in	0.31	3.75
9	30	G58LW	5/8" HDG LOCKWASHER		0.03	0.78
10	12	G58NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	1.56
11	18	A58NUT	5/8" HDG A325 HEX NUT		0.13	2.34
12	12	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" U-BOLT (HDG.)		0.60	7.17
13	3	G12212	1/2" x 2-1/2" HDG HEX BOLT GR5	2 1/2 in	0.20	0.61
14	12	G12112	1/2" x 1-1/2" HDG HEX BOLT GR5	1/2 in	0.15	1.77
15	24	G12FW	1/2" HDG USS FLATWASHER	3/32 in	0.03	0.82
16	39	G12LW	1/2" HDG LOCKWASHER	1/8 in	0.01	0.54
17	39	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	2.79
					TOTAL WT. #	525.02







TOLERANCE NOTES

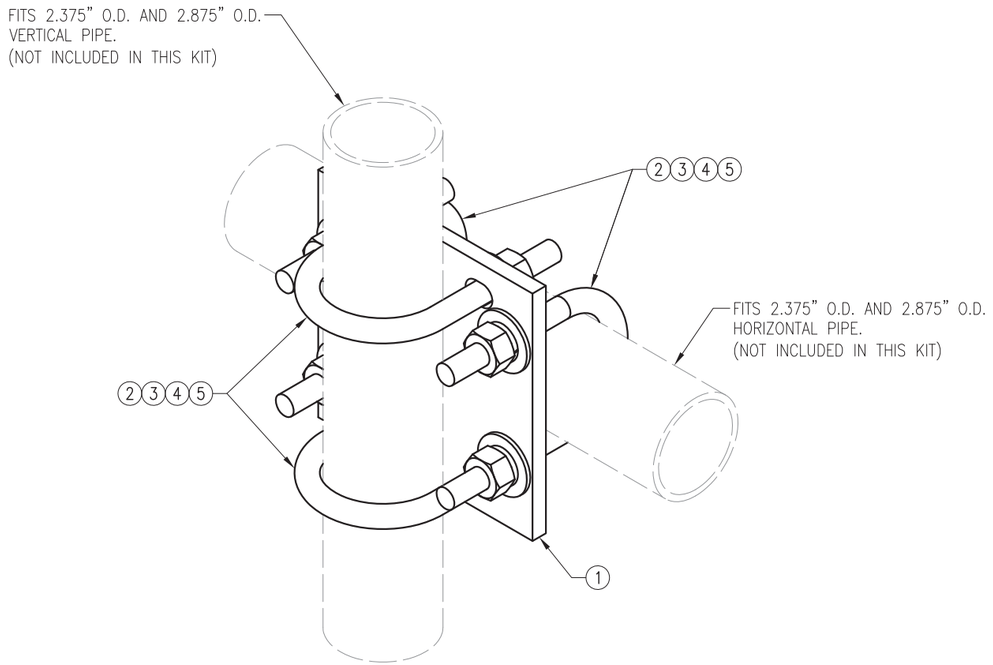
TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES *(± 0.030")*
DRILLED AND GAS CUT HOLES *(± 0.030")* - NO CONING OF HOLES
LASER CUT EDGES AND HOLES *(± 0.010")* - NO CONING OF HOLES
BENDS AND ANGLES ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

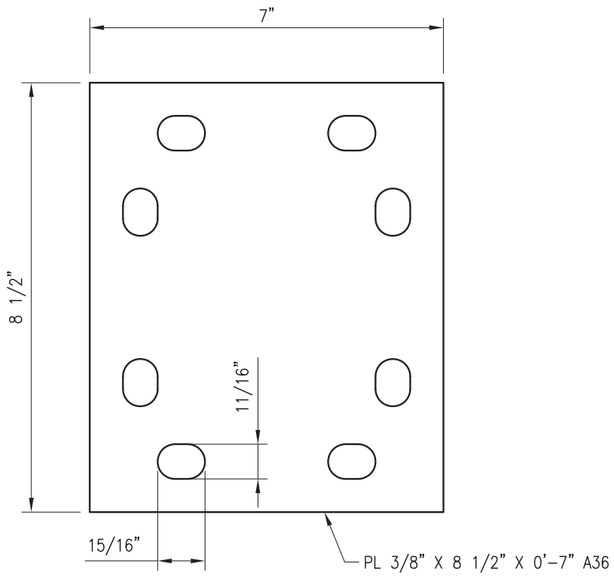
DESCRIPTION
V-STYLE MONOPOLE
REINFORCEMENT KITS

SITE PRO 1
A valmont COMPANY
Engineering Support Team:
1-888-753-7446
Locations:
New York, NY
Atlanta, GA
Los Angeles, CA
Plymouth, IN
Salem, OR
Dallas, TX
Tampa, FL

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.	PAGE
	CEK 8/28/2019		VSK-MHD	1 OF 1

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	01	CUSTOMER	BMC 8/29/2019	VSK-MHD





PL375-857

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

VZWSMART-MSK1 (CROSSOVER PLATE)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PL375-857	PL 3/8" X 8 1/2" X 0'-7" A36	MSK1-F1	6
2	4	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	RBC-1	5
3	8	FW-625	5/8" HDG USS FLAT WASHER	---	1
4	8	LW-625	5/8" HDG LOCK WASHER	---	0
5	8	NUT-625	5/8" HDG HEX NUT	---	1
				GALVANIZED WT	14

VzW SMART Tool© Vendor

verizon

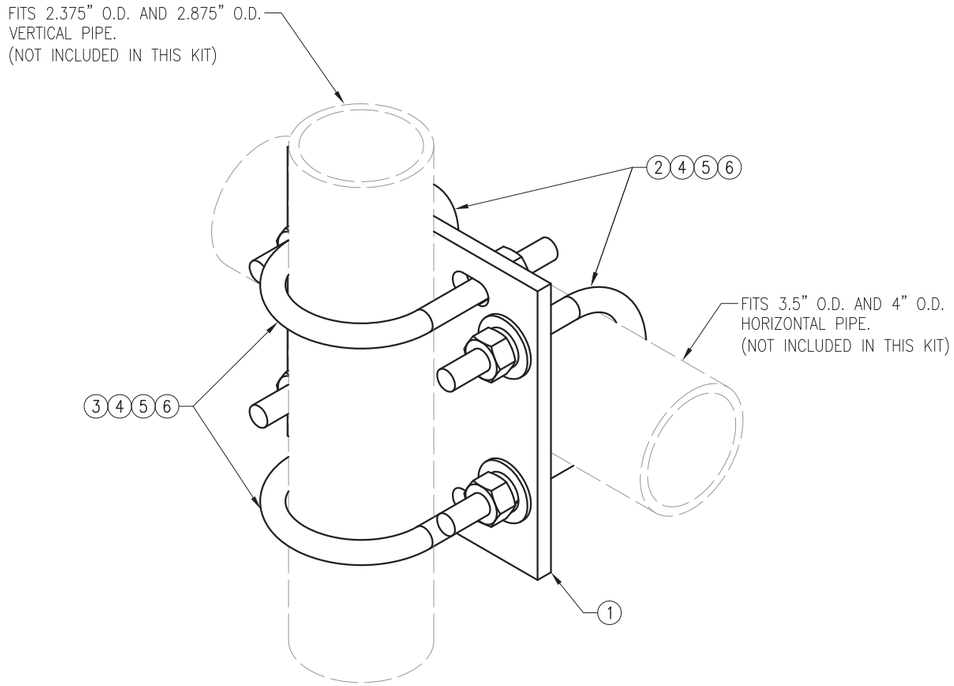
DRAWN BY: H.R | CHECKED BY: HMA

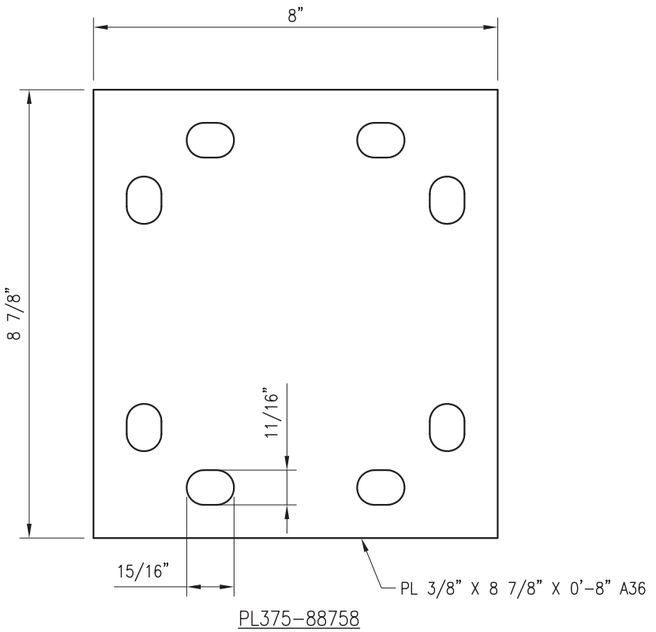
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	H.R	05/08/20

SHEET TITLE:
VZWSMART-MSK1
CROSSOVER PLATE

SHEET NUMBER: VZWSMART-MSK1

REV #: 0





PL375-88758

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

VZWSMART-MSK2 (CROSSOVER PLATE)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PL375-88758	PL 3/8" X 8 3/4" X 0'-8" A36	MSK2-F1	8
2	2	MS02-625-4125-600	RU-BOLT 5/8" X 4 1/8" I.W. X 6" I.L. A36 (OR EQUIV.)	RBC-1	3
3	2	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	RBC-1	3
4	8	FW-625	5/8" HDG USS FLAT WASHER	---	1
5	8	LW-625	5/8" HDG LOCK WASHER	---	0
6	8	NUT-625	5/8" HDG HEX NUT	---	1
				GALVANIZED WT	15

VzW SMART Tool© Vendor

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DRAWN BY: H.R | CHECKED BY: HMA

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	H.R	05/08/20

SHEET TITLE:
VZWSMART-MSK2
CROSSOVER PLATE

SHEET NUMBER: VZWSMART-MSK2

REV #: 0

verizon fuze | RFDS

WEST > Desert Mountain Plains > Mountain Plains > Salt Lake City > COKE PLANT

Jockumsen, Jeffrey - jeffrey.jockumsen@verizonwireless.com - 10/5/2021 8:46:37

Project Details

FUZE Project ID:	16496996
Project Name:	5G L-Sub6 - Carrier Add
Project Alt Name:	5G L-Sub6 - Carrier Add
Project Type:	Modification
Modification Type:	RF
Designed Sector Carrier 4G:	20
Designed Sector Carrier 5G:	3
Additional Sector Carrier 4G:	N/A
Additional Sector Carrier 5G:	N/A
FP Solution Type & Tech Type:	MODIFICATION;4G_850,4G_CBRS,5G_850,5G_L-Sub6-Prep
Carrier Aggregation:	false
MPT Id:	
eCIP-0:	false
Suffix:	

Location Information

Site ID:	5031240
E-NodeB ID:	0129082,0127082,312082,012082,612082
PSLC:	288667
Switch Name:	Aurora (2010) / Kearns (2011)
Tower Owner:	
Tower Type:	Monopole
Site Type:	MACRO
Site Sub Type:	TRADITIONAL
Street Address:	12277 S 700 W
City:	Draper
State:	UT
Zip Code:	84020
County:	Salt Lake
Latitude:	40.52771666 / 40° 31' 39.78" N
Longitude:	-111.9097361 / 111° 54' 35.05" W

RFDS Project Scope:

Ver:: 5 OCT 21 corrected the Antenna counts
Install C Band onto the Site will need 6648
Install all new Commscope antennas dual mounted with proper bracket
Add CBRS onto the Site, This will need an extra 6630

Antenna Summary

Added

700	850	1900	AWS	AWS3	CBRS	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity	Item ID
LTE	LTE 5G	LTE	LTE	LTE	LTE		CommScope	NHHSS-65C-R2BT0	57	61	80(02) 190(03) 320(01)	false	false	PHYSICAL	6	
						5G	Ericsson	AIR6449	57	58.3	80(0002) 190(0003) 320(0001)	false	false	PHYSICAL	3	

Removed

700	850	1900	AWS	AWS3	CBRS	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity	Item ID
LTE		LTE	LTE	LTE			ANDREW	SBNHH-1D45B	57	60	70(02) 170(03) 320(01)	false	false	PHYSICAL	6	

Retained

700	850	1900	AWS	AWS3	CBRS	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity	Item ID

No data available.

Added: 9 **Removed:** 6 **Retained:** 0

Equipment Summary

Added

Equipment Type	Location	700	850	1900	AWS	AWS3	CBRS	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity	Item ID
RRU	Tower						LTE		Ericsson	4408 B48 (w/out Antenna)			PHYSICAL	3	
RRU	Tower	LTE	LTE 5G						Ericsson	4449			PHYSICAL	3	KRC161749/1
RRU	Tower			LTE	LTE	LTE			Ericsson	8843			PHYSICAL	3	KRC161707/2
RRU	Tower							5G	Ericsson	AIR6449			PHYSICAL	3	
OVP Box	Tower							5G	N/A	12 OVP			PHYSICAL	1	
Hybrid Fiber	Tower							5G	n/a	12x24			PHYSICAL	1	

Removed

Equipment Type	Location	700	850	1900	AWS	AWS3	CBRS	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity	Item ID
RRU	Tower	LTE							Nokia	UHBA B13 RRH 4x30			PHYSICAL	3	
RRU	Tower			LTE					Nokia	UHFA B25 RRH 4x30			PHYSICAL	3	
RRU	Tower				LTE	LTE			Nokia	UHIE B66A RRH 4x45			PHYSICAL	3	

Retained

Equipment Type	Location	700	850	1900	AWS	AWS3	CBRS	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity	Item ID
OVP Box	Tower								N/A	6 OVP			PHYSICAL	1	
Hybrid Fiber	Tower								n/a	6x12			PHYSICAL	1	

Service Info

AWS3 LTE		0000			5GLS	
Sector	**01**	**02**	**03**	**01**	**02**	**03**
Azimuth	320	70	170	320	80	190
Cell / ENode B ID	012082	012082	012082	312082	312082	312082
Antenna Model	SBNHH-1D45B	SBNHH-1D45B	SBNHH-1D45B	NHHSS-65C-R2B	NHHSS-65C-R2B	NHHSS-65C-R2B
Antenna Make	ANDREW	ANDREW	ANDREW	COMMSCOPE	COMMSCOPE	COMMSCOPE
Antenna Centerline(Ft)	57	57	57	57	57	57
Mechanical Down-Tilt(Deg.)	2	2	2	0	0	0
Electrical Down-Tilt	1	2	3	3	2	4
Tip Height	60	60	60	61	61	61
Regulatory Power	171.73	172.52	174.52	129.89	128.7	130.79
DLEARFCN	67086	67086	67086	67086	67086	67086
Channel Bandwidth(MHz)	10	10	10	10	10	10
Total ERP (W)	942.09	946.44	957.4	712.57	706.04	717.51
TMA Make						
TMA Model						
RRU Make	Nokia	Nokia	Nokia	Ericsson	Ericsson	Ericsson
RRU Model	UHIE B66A RRH 4x45	UHIE B66A RRH 4x45	UHIE B66A RRH 4x45	8843	8843	8843
Number of Tx, Rx Lines	4,4	4,4	4,4	4,4	4,4	4,4
Position						
Transmitter Id	2623878	2623881	2625682	10146488	10146492	10146496
Source	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API

CBRS 3_5 GHz				5GLS		
Sector				**01**	**02**	**03**
Azimuth				320	80	190
Cell / ENode B ID				612082	612082	612082
Antenna Model				NHHSS-65C-R2BT0	NHHSS-65C-R2BT0	NHHSS-65C-R2BT0
Antenna Make				CommScope	CommScope	CommScope
Antenna Centerline(Ft)				57	57	57
Mechanical Down-Tilt(Deg.)				0	0	0
Electrical Down-Tilt				0	0	0
Tip Height				61	61	61
Regulatory Power				53.16	53.16	53.16
DLEARFCN				55990	55990	55990
Channel Bandwidth(MHz)				10	10	10
Total ERP (W)				72.9	72.9	72.9
TMA Make						
TMA Model						
RRU Make				Ericsson	Ericsson	Ericsson
RRU Model				4408 B48 (w/out Antenna)	4408 B48 (w/out Antenna)	4408 B48 (w/out Antenna)
Number of Tx, Rx Lines				4,4	4,4	4,4
Position						
Transmitter Id				10178721	10178719	10178720
Source				ATOLL_API	ATOLL_API	ATOLL_API

700 MHz LTE

	0000			5GLS		
Sector	**01**	**02**	**03**	**01**	**02**	**03**
Azimuth	320	70	170	320	80	190
Cell / ENode B ID	012082	012082	012082	012082	012082	012082
Antenna Model	SBNHH-1D45B	SBNHH-1D45B	SBNHH-1D45B	NHHSS-65C-R2B	NHHSS-65C-R2B	NHHSS-65C-R2B
Antenna Make	ANDREW	ANDREW	ANDREW	COMMSCOPE	COMMSCOPE	COMMSCOPE
Antenna Centerline(Ft)	57	57	57	57	57	57
Mechanical Down-Tilt(Deg.)	2	2	2	0	0	0
Electrical Down-Tilt	0	6	6	6	5	6
Tip Height	60	60	60	61	61	61
Regulatory Power	86.37	85.88	85.88	91.54	91.96	91.54
DLEARFCN	5230	5230	5230	5230	5230	5230
Channel Bandwidth(MHz)	10	10	10	10	10	10
Total ERP (W)	777.36	772.9	772.9	823.87	827.68	823.87
TMA Make						
TMA Model						
RRU Make	Nokia	Nokia	Nokia	Ericsson	Ericsson	Ericsson
RRU Model	UHBA B13 RRH 4x30	UHBA B13 RRH 4x30	UHBA B13 RRH 4x30	4449	4449	4449
Number of Tx, Rx Lines	4,4	4,4	4,4	4,4	4,4	4,4
Position						
Transmitter Id	2626728	2626732	2625599	10146485	10146489	10146493
Source	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API

850 MHz LTE

				5GLS		
Sector				**01**	**02**	**03**
Azimuth				320	80	190
Cell / ENode B ID				012082	012082	012082
Antenna Model				NHHSS-65C-R2B	NHHSS-65C-R2B	NHHSS-65C-R2B
Antenna Make				COMMSCOPE	COMMSCOPE	COMMSCOPE
Antenna Centerline(Ft)				57	57	57
Mechanical Down-Tilt(Deg.)				0	0	0
Electrical Down-Tilt				6	5	6
Tip Height				61	61	61
Regulatory Power				362.81	368.7	362.81
DLEARFCN				2560	2560	2560
Channel Bandwidth(MHz)				10	10	10
Total ERP (W)				816.32	829.58	816.32
TMA Make						
TMA Model						
RRU Make				Ericsson	Ericsson	Ericsson
RRU Model				4449	4449	4449
Number of Tx, Rx Lines				4,4	4,4	4,4
Position						
Transmitter Id				10156520	10156521	10156522
Source				ATOLL_API	ATOLL_API	ATOLL_API

850 MHz 5GNR

				5GLS		
Sector				**0001**	**0002**	**0003**
Azimuth				320	80	190
Cell / ENode B ID				0129082	0129082	0129082
Antenna Model				NHHSS-65C-R2B	NHHSS-65C-R2B	NHHSS-65C-R2B
Antenna Make				COMMSCOPE	COMMSCOPE	COMMSCOPE
Antenna Centerline(Ft)				57	57	57
Mechanical Down-Tilt(Deg.)				0	0	0
Electrical Down-Tilt				6	5	6
Tip Height				61	61	61
Regulatory Power				362.81	368.7	362.81
DLEARFCN				2560	2560	2560
Channel Bandwidth(MHz)				10	10	10
Total ERP (W)				816.32	829.58	816.32
TMA Make						
TMA Model						
RRU Make				Ericsson	Ericsson	Ericsson
RRU Model				4449	4449	4449
Number of Tx, Rx Lines				4,4	4,4	4,4
Position						
Transmitter Id				10156520	10156521	10156522
Source				ATOLL_API	ATOLL_API	ATOLL_API

1900 MHz LTE

		0000		5GLS		
Sector	**01**	**02**	**03**	**01**	**02**	**03**
Azimuth	320	70	170	320	80	190
Cell / ENode B ID	012082	012082	012082	312082	312082	312082
Antenna Model	SBNHH-1D45B	SBNHH-1D45B	SBNHH-1D45B	NHHSS-65C-R2B	NHHSS-65C-R2B	NHHSS-65C-R2B
Antenna Make	ANDREW	ANDREW	ANDREW	COMMSCOPE	COMMSCOPE	COMMSCOPE
Antenna Centerline(Ft)	57	57	57	57	57	57
Mechanical Down-Tilt(Deg.)	2	2	2	0	0	0
Electrical Down-Tilt	7	5	7	3	2	4
Tip Height	60	60	60	61	61	61
Regulatory Power	609.13	615.05	609.13	229.41	228.36	231
DLEARFCN	975	975	975	975	975	975
Channel Bandwidth(MHz)	5	5	5	5	5	5
Total ERP (W)	1670.79	1687.02	1670.79	629.26	626.37	633.62
TMA Make						
TMA Model						
RRU Make	Nokia	Nokia	Nokia	Ericsson	Ericsson	Ericsson
RRU Model	UHFA B25 RRH 4x30	UHFA B25 RRH 4x30	UHFA B25 RRH 4x30	8843	8843	8843
Number of Tx, Rx Lines	4,4	4,4	4,4	4,4	4,4	4,4
Position						
Transmitter Id	2626729	2625596	2625600	10146486	10146490	10146494
Source	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API

2100 MHz LTE

	0000			5GLS		
Sector	**01**	**02**	**03**	**01**	**02**	**03**
Azimuth	320	70	170	320	80	190
Cell / ENode B ID	012082	012082	012082	312082	312082	312082
Antenna Model	SBNHH-1D45B	SBNHH-1D45B	SBNHH-1D45B	NHHSS-65C-R2B	NHHSS-65C-R2B	NHHSS-65C-R2B
Antenna Make	ANDREW	ANDREW	ANDREW	COMMSCOPE	COMMSCOPE	COMMSCOPE
Antenna Centerline(Ft)	57	57	57	57	57	57
Mechanical Down-Tilt(Deg.)	2	2	2	0	0	0
Electrical Down-Tilt	1	2	3	3	2	4
Tip Height	60	60	60	61	61	61
Regulatory Power	171.73	172.52	174.52	129.89	128.7	130.79
DLEARFCN	2050	2050	2050	2050	2050	2050
Channel Bandwidth(MHz)	20	20	20	20	20	20
Total ERP (W)	1884.17	1892.87	1914.79	1425.15	1412.08	1435.03
TMA Make						
TMA Model						
RRU Make	Nokia	Nokia	Nokia	Ericsson	Ericsson	Ericsson
RRU Model	UHIE B66A RRH 4x45	UHIE B66A RRH 4x45	UHIE B66A RRH 4x45	8843	8843	8843
Number of Tx, Rx Lines	4,4	4,4	4,4	4,4	4,4	4,4
Position						
Transmitter Id	2626730	2625597	2625601	10146487	10146491	10146495
Source	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API

nL-Sub6

				5GLS		
Sector				**0001**	**0002**	**0003**
Azimuth				320	80	190
Cell / ENode B ID				0127082	0127082	0127082
Antenna Model				AIR6449	AIR6449	AIR6449
Antenna Make				Ericsson	Ericsson	Ericsson
Antenna Centerline(Ft)				57	57	57
Mechanical Down-Tilt(Deg.)				0	0	0
Electrical Down-Tilt				6	6	6
Tip Height				58.3	58.3	58.3
Regulatory Power				1776.91	1776.91	1776.91
DLEARFCN				648672	648672	648672
Channel Bandwidth(MHz)				60	60	60
Total ERP (W)				14621.77	14621.77	14621.77
TMA Make						
TMA Model						
RRU Make				Ericsson	Ericsson	Ericsson
RRU Model				AIR6449	AIR6449	AIR6449
Number of Tx, Rx Lines				4,4	4,4	4,4
Position						
Transmitter Id				10156526	10156527	10156528
Source				ATOLL_API	ATOLL_API	ATOLL_API

Service Comments

Callsigns Per Antenna

Sector	Antenna Ma	Antenna Mo	Ant CL Height AGL	Tip Height	Azimuth (TI	Electrical Tilt	Mechanical Tilt	Gain	Beamwidth	Regulatory Power	Callsigns						
											700	850	1900	2100	28 GHz	31 GHz	39 GHz
No data available.																	

Callsigns

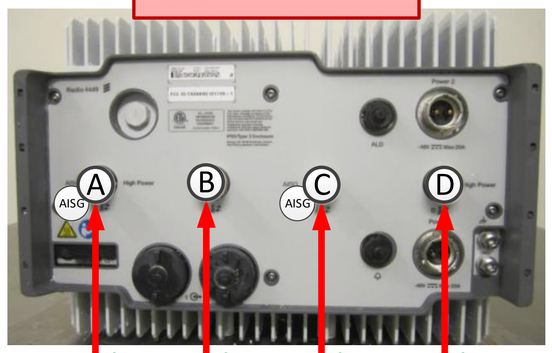
Callsign	Market	Radio Code	Market Number	Block	State	County	Licensee Name	Wholly Owned	Total MHZ	Freq Range 1	Freq Range 2	Freq Range 3	Freq Range 4	Regulatory Power	Threshold (W)	POPs/Sq Mi	Status	Action	Approved for Insvc
WQJQ694	West	WU	REA006	C	UT	Salt Lake	Cellco Partnership	Yes	22.000	746.000-757.000	776.000-787.000	.000-.000	.000-.000	91.96	1000	1387.15	Active	added	Yes
KNKA259	Salt Lake City-Ogden, UT	CL	CMA039	B	UT	Salt Lake	Cellco Partnership	Yes	25.000	835.000-845.000	880.000-890.000	846.500-849.000	891.500-894.000	368.7	400	1387.15	Active	added	Yes
KNLH696	Salt Lake City-Ogden, UT	CW	BTA399	E	UT	Salt Lake	Cellco Partnership	Yes	10.000	1885.000-1890.000	1965.000-1970.000	.000-.000	.000-.000	231	1640	1387.15	Active	added	Yes
WQVP220	Salt Lake City-Ogden, UT-ID	AT	BEA152	J	UT	Salt Lake	Cellco Partnership	Yes	20.000	1770.000-1780.000	2170.000-2180.000	.000-.000	.000-.000	130.79	1640	1387.15	Active	added	Yes
CBRS_CALL	UNLICENSE	3.5 GHz	UNLICENSE	UNLICENSE	UT	Salt Lake	UNLICENSE	UNLICENSE	UNLICENSE	UNLICENSE UNLICENSE	UNLICENSE UNLICENSE	UNLICENSE UNLICENSE	UNLICENSE UNLICENSE	53.16		1387.15	Active	added	No
WRLD859	D49035 - Salt Lake, UT	PL	D49035	0	UT	Salt Lake	Verizon Wireless Network Procuremer LP	Yes	100.000	3550.000-3650.000	.000-.000	.000-.000	.000-.000	53.16		.00	Active	added	Yes
WRLD858	D49035 - Salt Lake, UT	PL	D49035	0	UT	Salt Lake	Verizon Wireless Network Procuremer LP	Yes	100.000	3550.000-3650.000	.000-.000	.000-.000	.000-.000	53.16		.00	Active	added	Yes
WRLD857	D49035 - Salt Lake, UT	PL	D49035	0	UT	Salt Lake	Verizon Wireless Network Procuremer LP	Yes	100.000	3550.000-3650.000	.000-.000	.000-.000	.000-.000	53.16		.00	Active	added	Yes
WQGB278	Salt Lake City-Ogden, UT	AW	CMA039	A	UT	Salt Lake	Cellco Partnership	Yes	20.000	1710.000-1720.000	2110.000-2120.000	.000-.000	.000-.000	130.79	1640	1387.15	Active	added	Yes
WQGB214	Salt Lake City-Ogden, UT-ID	AW	BEA152	B	UT	Salt Lake	Cellco Partnership	Yes	20.000	1720.000-1730.000	2120.000-2130.000	.000-.000	.000-.000	130.79	1640	1387.15	Active	added	Yes
WPOH633	Salt Lake City-Ogden, UT	LD	BTA399	A	UT	Salt Lake	Straight Path Spectrum, LLC	Yes	300.000	29100.000-29250.000	31075.000-31225.000	.000-.000	.000-.000			1387.15	Active		No
WRBA230	Salt Lake City-Ogden, UT	UU	BTA399	L1	UT	Salt Lake	Straight Path Spectrum, LLC	Yes	425.000	27500.000-27925.000	.000-.000	.000-.000	.000-.000			1387.15	Active		Yes

WRBA231	Salt Lake City-Ogden, UT	UU	BTA399	L2	UT	Salt Lake	Straight Path Spectrum, LLC	Yes	425.000	27925.000-28350.000	.000-.000	.000-.000	.000-.000			1387.15	Active		Yes
WRHD903	Salt Lake City, UT	UU	PEA027	M1	UT	Salt Lake	Straight Path Spectrum, LLC	Yes	100.000	37600.000-37700.000	.000-.000	.000-.000	.000-.000			1387.15	Active		Yes
WRHD904	Salt Lake City, UT	UU	PEA027	M10	UT	Salt Lake	Straight Path Spectrum, LLC	Yes	100.000	38500.000-38600.000	.000-.000	.000-.000	.000-.000			1387.15	Active		Yes
WRHD905	Salt Lake City, UT	UU	PEA027	M2	UT	Salt Lake	Straight Path Spectrum, LLC	Yes	100.000	37700.000-37800.000	.000-.000	.000-.000	.000-.000			1387.15	Active		Yes
WRHD906	Salt Lake City, UT	UU	PEA027	M3	UT	Salt Lake	Straight Path Spectrum, LLC	Yes	100.000	37800.000-37900.000	.000-.000	.000-.000	.000-.000			1387.15	Active		Yes
WRHD907	Salt Lake City, UT	UU	PEA027	M4	UT	Salt Lake	Straight Path Spectrum, LLC	Yes	100.000	37900.000-38000.000	.000-.000	.000-.000	.000-.000			1387.15	Active		Yes
WRHD908	Salt Lake City, UT	UU	PEA027	M5	UT	Salt Lake	Straight Path Spectrum, LLC	Yes	100.000	38000.000-38100.000	.000-.000	.000-.000	.000-.000			1387.15	Active		Yes
WRHD909	Salt Lake City, UT	UU	PEA027	M6	UT	Salt Lake	Straight Path Spectrum, LLC	Yes	100.000	38100.000-38200.000	.000-.000	.000-.000	.000-.000			1387.15	Active		Yes
WRHD910	Salt Lake City, UT	UU	PEA027	M7	UT	Salt Lake	Straight Path Spectrum, LLC	Yes	100.000	38200.000-38300.000	.000-.000	.000-.000	.000-.000			1387.15	Active		Yes
WRHD911	Salt Lake City, UT	UU	PEA027	M8	UT	Salt Lake	Straight Path Spectrum, LLC	Yes	100.000	38300.000-38400.000	.000-.000	.000-.000	.000-.000			1387.15	Active		Yes
WRHD912	Salt Lake City, UT	UU	PEA027	M9	UT	Salt Lake	Straight Path Spectrum, LLC	Yes	100.000	38400.000-38500.000	.000-.000	.000-.000	.000-.000			1387.15	Active		Yes
WRNE782	Salt Lake City, UT	PM	PEA027	A1	UT	Salt Lake	Cellco Partnership	Yes	20.000	3700.000-3720.000	.000-.000	.000-.000	.000-.000			1387.15	Active		No
WRNE783	Salt Lake City, UT	PM	PEA027	A2	UT	Salt Lake	Cellco Partnership	Yes	20.000	3720.000-3740.000	.000-.000	.000-.000	.000-.000			1387.15	Active		No
WRNE784	Salt Lake City, UT	PM	PEA027	A3	UT	Salt Lake	Cellco Partnership	Yes	20.000	3740.000-3760.000	.000-.000	.000-.000	.000-.000			1387.15	Active		No
WRNE785	Salt Lake City, UT	PM	PEA027	A4	UT	Salt Lake	Cellco Partnership	Yes	20.000	3760.000-3780.000	.000-.000	.000-.000	.000-.000			1387.15	Active		No

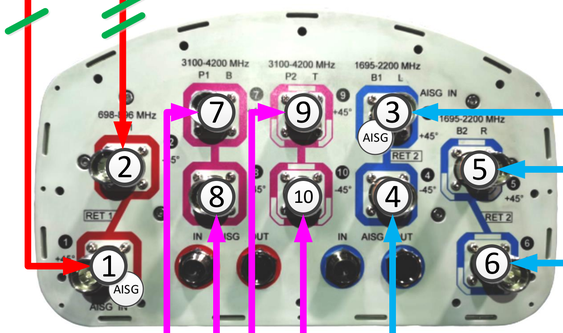
WRNE786	Salt Lake City, UT	PM	PEA027	A5	UT	Salt Lake	Cellco Partnership	Yes	20.000	3780.000-3800.000	.000-.000	.000-.000	.000-.000			1387.15	Active		No
WRNE787	Salt Lake City, UT	PM	PEA027	B1	UT	Salt Lake	Cellco Partnership	Yes	20.000	3800.000-3820.000	.000-.000	.000-.000	.000-.000			1387.15	Active		No
WRNE788	Salt Lake City, UT	PM	PEA027	B2	UT	Salt Lake	Cellco Partnership	Yes	20.000	3820.000-3840.000	.000-.000	.000-.000	.000-.000			1387.15	Active		No
WRNE789	Salt Lake City, UT	PM	PEA027	B3	UT	Salt Lake	Cellco Partnership	Yes	20.000	3840.000-3860.000	.000-.000	.000-.000	.000-.000			1387.15	Active		No

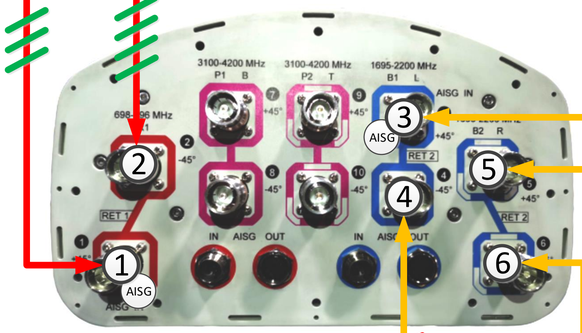
Andrew NHHSS-65A/B/C-R2B
2x 10-Port Antennas + 2x RRHs + 1x CBRS per sector

700 + 850 RRH
E/// Radio 4449



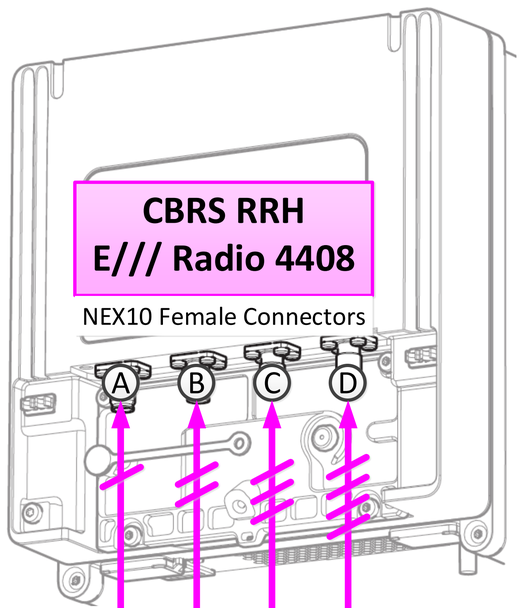
All coax:
Andrew LDF4-50A
or similar





CBRS RRH
E/// Radio 4408

NEX10 Female Connectors



AWS + PCS RRH
E/// Radio 8843