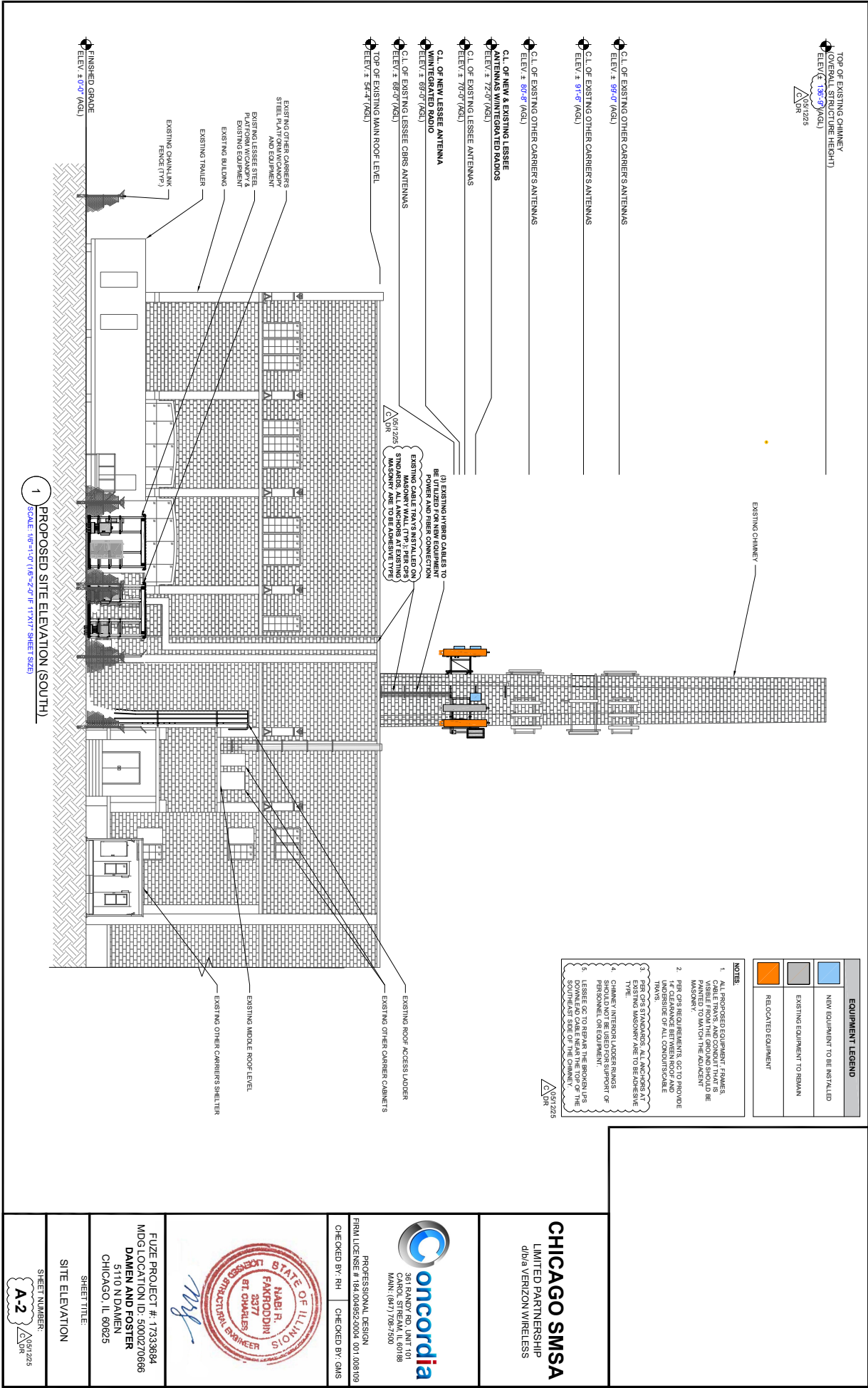
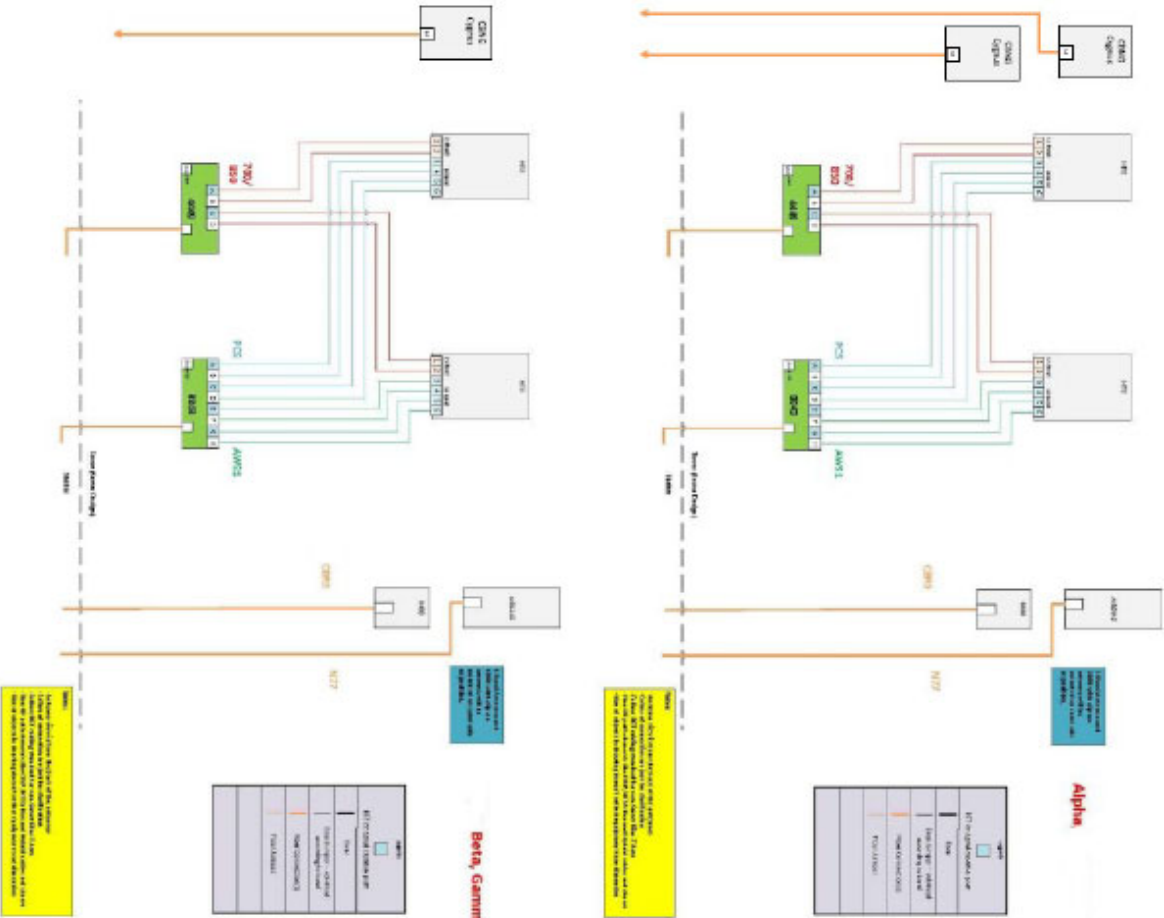




RF EMISSIONS REPORT REQUIRED
☒ YES ☐ NO
DATE OF REPORT: 12/16/2024



CHICAGO SMSA
LIMITED PARTNERSHIP
d/b/a VERIZON WIRELESS

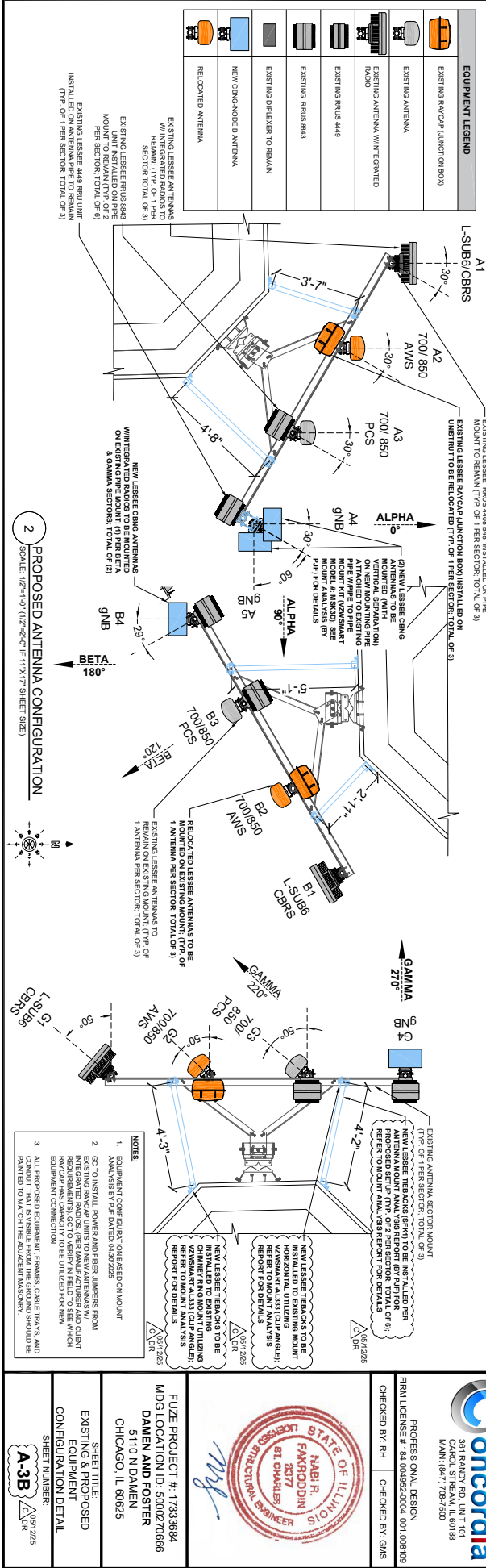
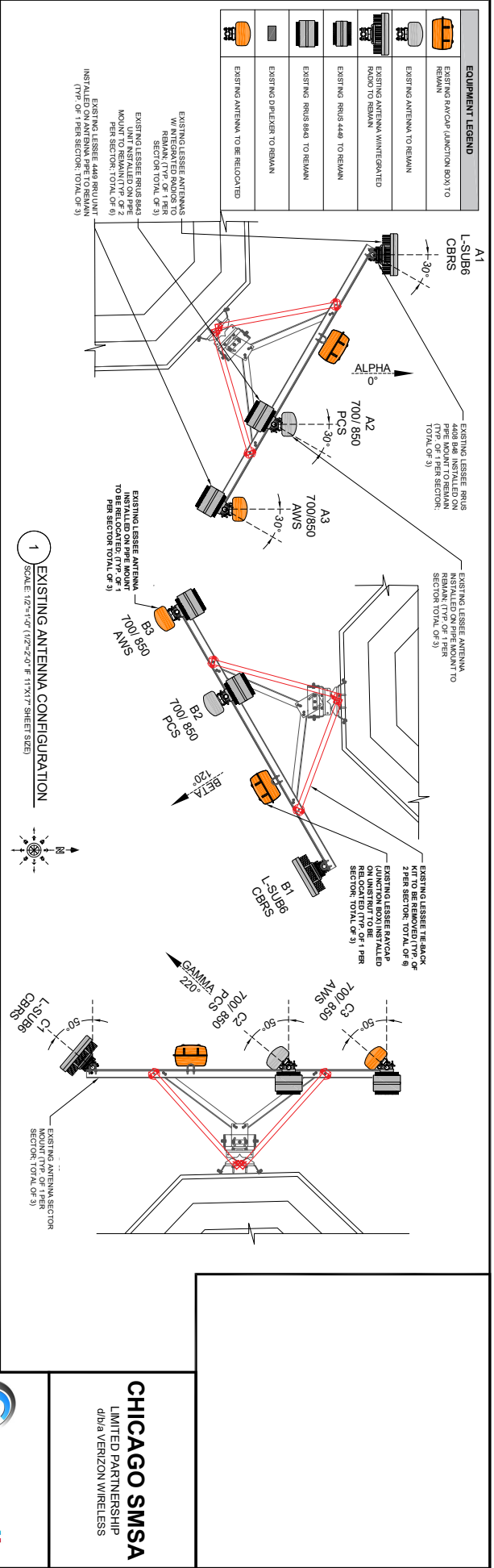


PROFESSIONAL DESIGN
FIRM LICENSE # 184-004922-0004 1001.008109
CHECKED BY: RH | CHECKED BY: GMS



FLUZE PROJECT #: 17333684
MDG LOCATION ID: 5000270666
DAMEN AND FOSTER
5110 N DAMEN
CHICAGO, IL 60625

SHEET TITLE:
RFDS DIAGRAMS
SHEET NUMBER
A-3A



CHICAGO SMSA
LIMITED PARTNERSHIP
d/b/a VERIZON WIRELESS

PROFESSIONAL DESIGN
FIRM LICENSE # 164-004922-0004 1001-0028109
CHECKED BY: RH CHECKED BY: GMS

concordia
361 RANDY RD. UNIT 101
CAROL STREAM, IL 60188
MAIL: (847) 709-7500

STATE OF ILLINOIS
NABIR FAKROODI
3377
BT OHAUS
REGISTERED PROFESSIONAL ENGINEER

FLUZE PROJECT #: 17333694
MDG LOCATION ID: 5000270666
DAHEN AND FOSTER
5110 N DAVEN
CHICAGO, IL 60625

SHEET TITLE:
EXISTING & PROPOSED
EQUIPMENT
CONFIGURATION DETAIL
SHEET NUMBER
A-3B

NOTE:
ALL RF NOTICE TAGS TO BE ACQUIRED AS SPECIFIED
ON PLANS PER RF E REPORT DATED 12/16/2024

NOTE:
THE METALLIC TAGS ON THE ROOF HANDRAIL NEED TO BE ATTACHED
WITH COATED WIRE.
IF THE TAGS ARE ATTACHED TO THE HANDRAIL, A MINIMUM OF TWO CONNECTION POINTS FOR
EACH TAG IS REQUIRED. ONE OF THE CONNECTION POINTS NEEDS TO BE ON A
VERTICAL MEMBER AND ONE OF THE CONNECTION POINTS NEEDS TO
BE ON A HORIZONTAL MEMBER. THIS CONFIGURATION WILL PREVENT
THE SIGNS FROM MOVING AROUND ON THE HANDRAIL AND DAMAGING
THE EXISTING COATING

NOTICE

General Radio Frequency (RF)

Safety Guidelines

Until ALL applicable antennas have been deactivated, please observe the following:

- Obey all posted signs.
- Assume all antennas are transmitting.
- Do not touch any antenna.
- Do not stand in front of any antenna.
- Do not walk in front of any antenna.
- Do not walk beyond any signs, barriers, or visual markers toward any antenna.
- Contact antenna owner or property owner if there are any questions or concerns.

verizon

1 RF SAFETY GUIDELINES SIGN DETAIL
N.T.S.

INFORMATION

This is an ACCESS POINT to an
area with transmitting antennas.

Obey all postings and boundaries beyond this point.

Call Verizon at 1-800-264-6620 for more information

STATE: _____ SWITCH: _____

SITE ID/PSLC: _____

verizon

2 RF NOC INFORMATION SIGN DETAIL
N.T.S.

CHICAGO SMSA
LIMITED PARTNERSHIP
d/b/a VERIZON WIRELESS

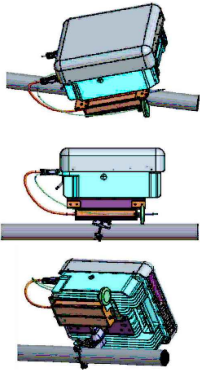
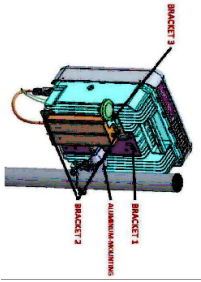
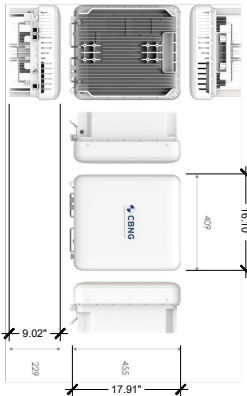
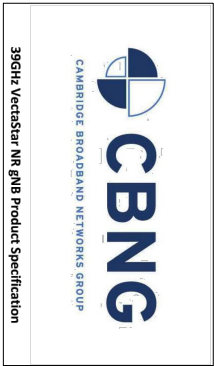


PROFESSIONAL DESIGN
FIRM LICENSE # 164-004922-0004 1001.0028109
CHECKED BY: RH | CHECKED BY: GMS



FLUZE PROJECT #: 17333684
MDG LOCATION ID: 5000270666
DAMEN AND FOSTER
5710 N DAMEN
CHICAGO, IL 60625

SHEET TITLE:
RF NOTICE TAG DETAILS
SHEET NUMBER
A-3C

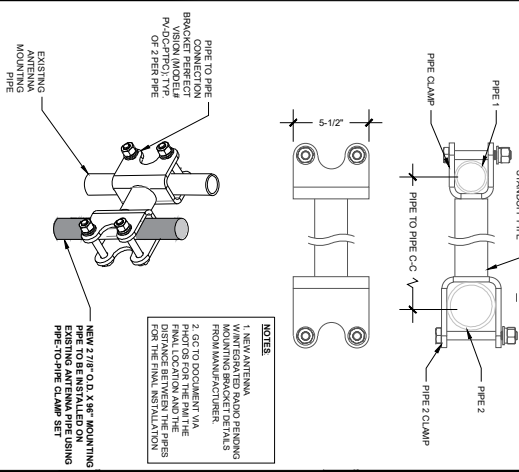


Description	Specification	Notes
RF Performance		
Frequency Range 1	37-40 GHz	n260 FR2 Band
EIRP	+64dBm ± 3dB	
Antenna Type	Phased array	
Antenna Beam Width	>4.5°	Half Power Beam width
Antenna Scan Range	Azimuth ±45°, Elevation ±10°	
Antenna Scan Loss	3dB max @ ±45°	
Main Beam Sidelobes	20dBc	
Features		
Channel Bandwidth	100, 200, 400, 800MHz	Contiguous
# of Layers	2	Horizontal & Vertical Antenna Polarization, 2x2 MIMO
Carrier Aggregation	Up to 8CC	800MHz aggregated BW per layer
Component Carrier Bandwidth	100, 200, 400MHz	800MHz aggregated BW per layer
Modulation UL & DL	QPSK, 16QAM, 64QAM, 256QAM	
Duplex Mode	TDD	
Time Sync	IEEE 1588 PTP v2, Microchip PLL GPS with External Antenna Holdover - 8hrs	Holdover occurs when IEEE 1588 Grandmaster and GPS unavailable
MIMO	2T2R	
Interfaces		
Back Haul	2x10GbE Fiber (SFP+)	
Power	DC 54V (Option with External AC Adapter, 100-240 VAC, 54V 45% 6.48A)	Peak Power consumption ~320W
Led Indicators	System & Front Haul	
Environmental/Certification		
Operating Temperature Range	-40° to +55°C	
Operating Humidity Range	5% to 95% RH	
IP Rating	IP67	
Certification	UL, FCC, 3GPP compliant, RoHS and WEEE	
Weight	gNB 18 kg (39.68 lbs) AC/DC Power Adapter 3.2 kg (7.05 lbs) Mounting Bracket 2.6 kg (5.73 lbs) Total 23.8 kg (52.47 lbs)	
Dimensions (H x W x D)	455 mm x 409 mm x 229 mm (17.91 in x 16.10 in x 9.02 in)	
Software		
Management	HTTP/S, Netconf	
Firmware Upgrade	IEEE 802.1Q-1998 / IEEE 802.1AD (VLAN, QinQ) IEEE 802.1P (QoS) IP v4/IP v6 Dual Stack NAPT, DNS Proxy, Port Forwarding, VPN Pass-through, DHCP Server/Client, MAC/IP Packer Filtering, Stateless Firewall	PDU Type Ethernet supported
LAN		

NEW CBNG ANTENNA
(39 GHz VectraStar NR gNB)
1 SCALE N.T.S.

- PV-DC-PTPC**
- DUALCROSS - PIPE TO PIPE CONNECTION
RELATED DOCUMENTS:
AT-BNG-03 - FACE VIEW WITH PV-DC-PTPC BRACKETS
MATERIALS
- PIPE CLAMP
 - PIPES: ASTM A53
 - FINISH: ASTM A550 GR. C (SEE TABLE FOR SIZE)
 - HARDWARE: ASTM A193/A193M
 - HARDWARE: ASTM A325 HOC BOLT - Ø3/8"
 - ASTM A563M NUT
 - ASTM F434 HARDENED FLAT WASHER
 - HEAVY SPRING LOCK WASHER
 - GALVANNEED - ASTM A153/A153M

Part Number	CONMAT	Weight [lbs]	Pipe to Pipe C-C [in]	Pipe 1 Diameter [in]	Pipe 2 Diameter [in]
PV-DC-PTPC-2025-6	AM138856	13.8	6	Ø2.375	Ø2.875
PV-DC-PTPC-2025-12	AM138811	15.7	12	Ø2.375	Ø2.875
PV-DC-PTPC-2025-18	AM138822	17.5	18	Ø2.375	Ø2.875
PV-DC-PTPC-2025-6	AM138911	15.2	6	Ø2.875	Ø2.875
PV-DC-PTPC-2025-12	AM138823	18.0	12	Ø2.875	Ø2.875
PV-DC-PTPC-2025-18	AM138845	21.0	18	Ø2.875	Ø2.875



PIPE TO PIPE MOUNTING DETAIL
2 SCALE N.T.S.

CHICAGO SMSA
LIMITED PARTNERSHIP
d/b/a VERIZON WIRELESS



PROFESSIONAL DESIGN
FIRM LICENSE # 16402492-0004 / 001 008109
CHECKED BY: RH CHECKED BY: GMS



FUZE PROJECT #: 17333684
MDG LOCATION ID: 5000270666
DAMEN AND ROSTER
5110 N DAMEN
CHICAGO, IL 60625

SHEET TITLE:
NEW EQUIPMENT & MOUNTING DETAILS
SHEET NUMBER:
A-4

CADWELD CONNECTIONS OR APPROVED EQUAL	BURNDY CONNECTIONS OR APPROVED EQUAL
 PARALLEL HORIZONTAL CONNECTIONS OF HORIZONTAL CABLES TYPE PT	 HORIZONTAL STEEL SURFACE CONNECTIONS OF HORIZONTAL PIPES TYPE HS
 THROUGH CABLE TO GROUND ROD TYPE GT	 VERTICAL STEEL SURFACE CABLE DOWN AT 45° TO VERTICAL TYPE VS
 HORIZONTAL SPLICING OF HORIZONTAL CABLES TYPE HS	 SOLID ANNEALED FIELD FABRICATED CABLE DOWN AT 45° TO VERTICAL TYPE VS
 COPPER BUSSES TWO HOLES - LONG BARREL LENGTH TYPE M2	

1 CADWELD DETAILS
SCALE: N.T.S.

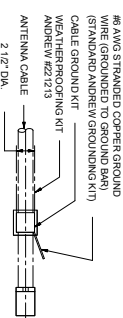
- NOTES:
- DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
 - THIS DETAIL IS TYPICAL. FOR EACH COAX CABLE WHERE IT IS SPECIFIED TO BE GROUND.
 - CABLE TO BE GROUND AT ANTENNA LEVEL AND PRIOR TO REACHING EQUIPMENT AND PANEL.
 - CABLE ALSO TO BE GROUND TO GROUND BAR AT TOWER BASE IF APPLICABLE.
 - USE ONLY VTN PLATED GROUNDING KITS.



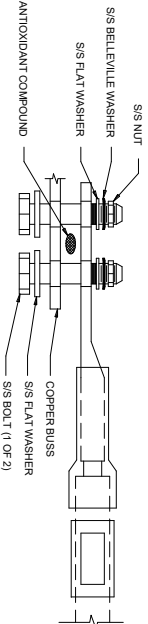
CONTACTOR SHALL VERIFY ALL PLANS AND FIELD CONDITIONS PRIOR TO ANY WORK. THE ENGINEER IN WRITING OF ANY DISCREPANCY SHALL BE RESPONSIBLE FOR SAME. OF SHALL CONTACT THE A&P FIRM PRIOR TO BID TAKING AND CONSTRUCTION START TO CONFIRM THAT DRAWINGS ARE THE MOST RECENT SET.

Call DIGGER before you dig.
811 OR 312.744.7000

Know what's below.



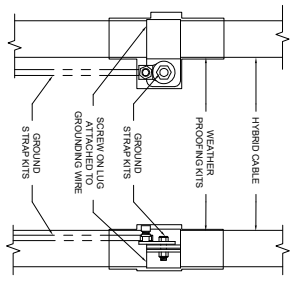
4 STANDARD CONNECTION OF CABLE GROUND KIT TO ANTENNA CABLE
SCALE: N.T.S.



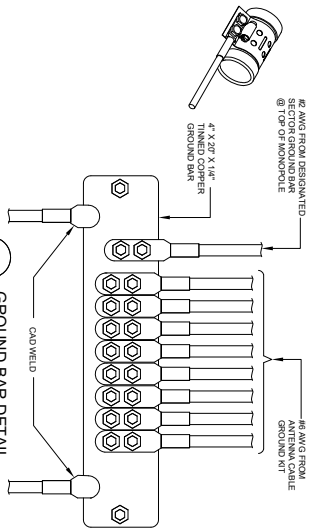
- NOTES:
- ALL HARDWARE (1/4" STAINLESS STEEL INCLUDING BELLEVILLES) COAT ALL SURFACES WITH KOPR-SHIELD BEFORE MATING.
 - FOR GROUND BOND TO STEEL ONLY, INSERT A DRAGON TOOTH WASHER BETWEEN LUG AND STEEL. COAT ALL SURFACES WITH KOPR-SHIELD.

6 STANDARD LUG CONNECTION OF GROUND LEADS TO GROUND BAR DETAIL
SCALE: N.T.S.

2 COAX/HYBRID GROUND KIT DETAIL
SCALE: N.T.S.

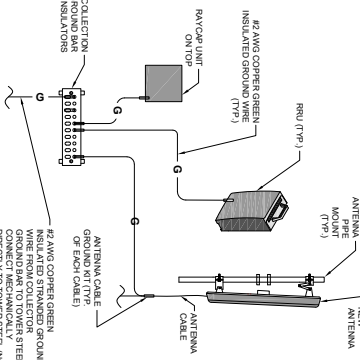


3 GROUND BAR DETAIL
SCALE: N.T.S.



NOTE: ANTENNA CABLES SHALL BE ANTENNA HEIGHT OR TOWER

5 GROUNDING DETAIL DIAGRAM
SCALE: N.T.S.



NOTE: ALL TOWER GROUNDING CONNECTIONS TO BE #2 AWG PER LISTED SPECIFICATIONS.

GROUNDING NOTES:

- GROUND RODS WILL BE 1/4" X 10' FOOT COPPER CLAD NOT LESS THAN 10 FOOT OR MORE THAN 10 FOOT APART. ALL CONNECTIONS TO THE GROUND RING AND GROUND RODS SHALL BE MADE BY THE FOLLOWING PROCESSES (UNLESS OTHERWISE SPECIFIED). ALL WIRING USED IN THE GROUND RING SHALL BE #2 SOLID TINNED COPPER (UNLESS OTHERWISE SPECIFIED).
- NOTE: CONTRACTOR SHALL REVIEW SOIL RESISTIVITY REPORT FOR SPECIFIC GROUNDING SYSTEM RECOMMENDATIONS (E.G. XT GROUND REQUIREMENTS).
- COPPER CLAD GROUND RODS AS SPECIFIED ABOVE.
 - GROUND RODS SHALL BE 1/4" X 10' FOOT COPPER CLAD NOT LESS THAN 10 FOOT OR MORE THAN 10 FOOT APART. ALL CONNECTIONS TO THE GROUND RING AND GROUND RODS SHALL BE MADE BY THE FOLLOWING PROCESSES (UNLESS OTHERWISE SPECIFIED). ALL WIRING USED IN THE GROUND RING SHALL BE #2 SOLID TINNED COPPER (UNLESS OTHERWISE SPECIFIED).
 - CONNECTIONS FOR POWER CABLES AND BITS - PROVIDE 1 LEAD FOR EACH CABLE AND NOT LESS THAN 4 FEET AND NOT MORE THAN 4 FEET LONG - COULDED HEAVILY WEAR FUTURE BITS POSITION AFTER STRANDED GROUND WIRE IS REMOVED AND TO DESIGNATED SECTOR GROUND BAR AT TOP OF TOWER.
 - FOR WOOD FENCE APPLICATIONS NO GATE OR CORNER POST GROUNDS ARE REQUIRED.

CHICAGO SMSA
LIMITED PARTNERSHIP
d/b/a VERIZON WIRELESS



PROFESSIONAL DESIGN
FIRM LICENSE # 184.004922-0004 1001.0028109
CHECKED BY: RH CHECKED BY: GMS



FLUZE PROJECT #: 17333684
MDG LOCATION ID: 5000270666
DAMEN AND FOSTER
5710 N DAMEN
CHICAGO, IL 60625

SHEET TITLE:
GROUNDING DETAILS
SHEET NUMBER:
G-1



Paul J. Ford and Company
250 East Broad Street Suite 600
Columbus, OH 43215
(614) 221-6679
PJFmount@pauljford.com

Post-Modification Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10274519

Paul J. Ford Project #: 24324-1517.005.5191_Rev 1

April 30, 2025

Site Information

Site ID: 5000270666-VZW / DAMEN AND FOSTER - A
Site Name: DAMEN AND FOSTER - A
Carrier Name: Verizon Wireless
Address: 5110 N Damen
Chicago, Illinois 60625, Cook County
Latitude: 41.975561°
Longitude: -87.680389°

Structure Information

Tower Type: 134-Ft Rooftop
Mount Type: 12.50-Ft Sector Frame

FUZE ID # 17333684

Analysis Results

12.50-Ft Sector Frame: 84.5% **Pass w/ Modifications***

***Antennas and equipment to be installed in compliance with PMI Requirements of this mount analysis.**

***Contractor PMI Requirements:

Included at the end of this MA report

Available & Submitted via portal at <https://pmi.vzwsmart.com>

For additional questions and support, please reach out to:

pmisupport@pauljford.com

Report Prepared By: Pam Smith
Design Firm No. 184.004531



05/09/25

Executive Summary:

The objective of this report is to summarize the analysis results of the antenna support mount including the proposed modifications at the subject facility for the final wireless telecommunications configuration, per the applicable codes and standards.

This analysis is inclusive of the mount structure only and does not address the structural capacity of the supporting structure. This mounting frame was not analyzed as an anchor attachment point for fall protection. All climbing activities are required to have a fall protection plan completed by a competent person.

Sources of Information:

Document Type	Remarks
Radio Frequency Data Sheet (RFDS)	Verizon RFDS, 17333684, dated August 6, 2024
Previous Mount Analysis Report	Paul J. Ford, Project # 24324-1517.004.5190 dated January 2, 2025
Mount Mapping Report	PJF, Project # 24324-1517.001.5911, dated September 11, 2024
Mount Specification	Perfect Vision, P/N # PV-SFA12
Proposed Mount Modification	Paul J. Ford, Project # 24324-1517.005.5191, dated January 16, 2025

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT} : 114 mph Ice Wind Speed (3-sec. Gust): 40 mph Design Ice Thickness: 1.50 in Risk Category: III Exposure Category: C Topographic Category: 1 Topographic Feature Considered: N/A Topographic Method: N/A Ground Elevation Factor, K_e : 0.979
Seismic Parameters:	S_s : 0.114 g S_1 : 0.062 g
Maintenance Parameters:	Wind Speed (3-sec. Gust): 30 mph Maintenance Live Load, L_v : 250 lbs. Maintenance Live Load, L_m : 500 lbs.
Analysis Software:	RISA-3D (V22.0.1)