



SITE ID: DN06196A

APPROVAL SIGNATURE BLOCK		
<p>THE FOLLOWING PARTIES HAVE REVIEWED THESE DOCUMENTS.</p> <p>ALL DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL ZONING/BUILDING DEPARTMENTS AND MAY IMPOSE CHANGES OR MODIFICATIONS.</p>		
_____	_____	<input type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED
PROJECT MANAGER (PRINT)	PROJECT MANAGER	DATE _____
_____	_____	<input type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED
RF ENGINEER (PRINT)	RF ENGINEER	DATE _____
_____	_____	<input type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED
SITE ACQUISITION (PRINT)	SITE ACQUISITION	DATE _____
_____	_____	<input type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED
CONSTRUCTION MANAGER (PRINT)	CONSTRUCTION MANAGER	DATE _____
_____	_____	<input type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED
OPERATIONS (PRINT)	OPERATIONS	DATE _____



SITE ID: DN63XC027
 SITE ID NUMBER: DN06196A
 SITE ADDRESS: 19201 EAST MAINSTREET
 PARKER, CO 80134
 SITE COORDINATES: 39.51970000, -104.76582000
 MOD TYPE: L600_L600 COVERAGE

SHEET INDEX	
SHEET	DESCRIPTION
T1.0	COVER SHEET
T2.0	OVERALL SITE PLAN
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PRESENTED BY:

15660 MIDWEST RD. SUITE 140 OAKBROOK TERRACE, IL 60181

SITE NAME:
 DN63XC027
 SITE ADDRESS:
 19201 EAST MAINSTREET
 PARKER, CO 80134
 SITE COUNTY:
 DOUGLAS COUNTY

SITE INFORMATION	
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SITE ID:	DN63XC027
SITE ID NUMBER:	DN06196A
SITE ADDRESS:	19201 EAST MAINSTREET PARKER, CO 80134
COUNTY:	DOUGLAS COUNTY
JURISDICTION:	TOWN OF PARKER
ASSESSOR'S PARCEL #	2233-222-00-036
LATITUDE:	39.51970000
LONGITUDE:	-104.76582000
STRUCTURE TYPE:	ROOFTOP
STRUCTURE HEIGHT:	30'
POWER PROVIDER:	PENDING
FIBER PROVIDER:	ZAYO

PROJECT DESCRIPTION
<p>MODIFICATION OF AN EXISTING "NON-INHABITABLE" T-MOBILE TELECOMMUNICATIONS SITE CONSISTING OF:</p> <p>REMOVING</p> <ul style="list-style-type: none"> (3) EXISTING ANTENNAS (3) EXISTING SYSTEM MODULES <p>INSTALLING</p> <ul style="list-style-type: none"> (3) NEW ANTENNAS (3) NEW RRU'S (7) NEW SYSTEM MODULES <p>ON AN EXISTING ROOFTOP WITHIN THE EXISTING LEASE AREA.</p>
<p>INSTALLATION IS UNMANNED AND NOT FOR HUMAN HABITATION PUBLIC ACCESS IS RESTRICTED A.D.A. ACCESSIBILITY NOT REQUIRED.</p>

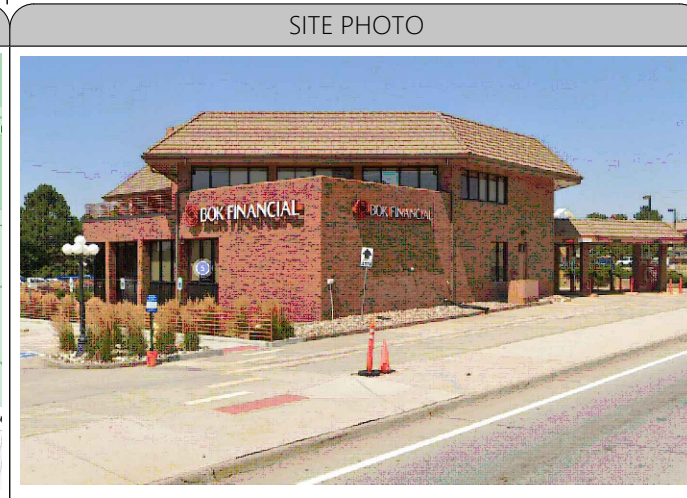
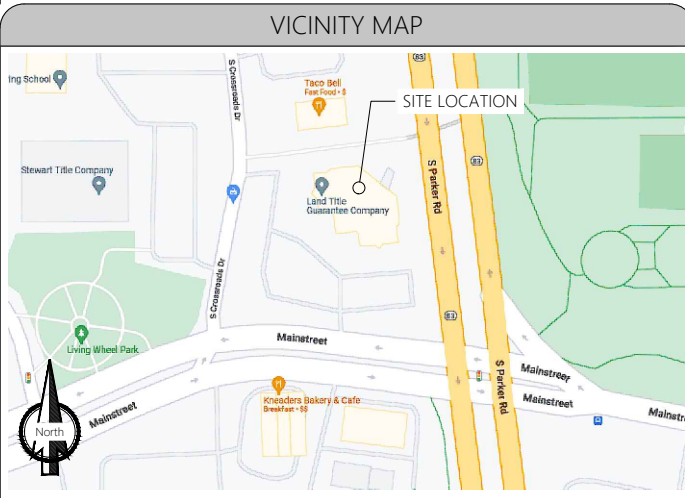
PROJECT TEAM
<p>PROPERTY OWNER: BOK FINANCIAL 19201 EAST MAINSTREET PARKER, CO 80134</p> <p>APPLICANT T-MOBILE 18400 E. 22ND AVE. AURORA, CO 80216</p> <p>SITE ACQUISITION CONSULTANT INSITE INC. 15660 MIDWEST RD. SUITE 140 OAKBROOK TERRACE, IL 60181 CHARLIE AUGELLO PH: 720.236.9199 E-MAIL: AUGELLO@INSITE-INC.COM</p> <p>A&E PROJECT MANAGER INSITE INC. 15660 MIDWEST RD. SUITE 140 OAKBROOK TERRACE, IL 60181 GARY WATTS PH: 303.815.8296 E-MAIL: WATTS@INSITE-INC.COM</p>
<p>ENGINEER ON RECORD TELEMtn ENGINEERING PO BOX 19188 GOLDEN, CO 80402 KHRIS SCOTT, PE PH: 303.596.6804 EMAIL: KSCOTT@TELEMtn.COM</p>

DRIVING DIRECTIONS
<p>FROM T-MOBILE OFFICE 18400 E. 22ND AVE:</p> <p>DEPART EAST ON E. 22ND AVE. TURN RIGHT ON TOWER RD. TURN LEFT ON E. COLFAX AVE. MERGE ONTO E-470 SOUTH. TAKE EXIT 5 AND TURN LEFT ON SOUTH PARKER ROAD. TURN RIGHT ON MAINSTREET. FOLLOW TO SITE ON THE RIGHT.</p> <p>ESTIMATED DISTANCE: 21.5 MILES ESTIMATED TIME: 24 MINUTES</p>

REVISIONS			
Rev.	Date	Description	By:
0	09/14/22	PRELIMINARY	MC
1	10/19/22	REV PRELIM	MC
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APPLICABLE CODES
<p>ALL CONSTRUCTION, ALTERATION, OR DEMOLITION SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES TO INCLUDE COMPLIANCE WITH THE LATEST FEDERAL STATE, AND LOCAL AMENDMENTS, REGULATIONS AND ORDINANCES.</p> <p>GOVERNING CODES AS APPLICABLE: 2021 IBC, 2020 NEC.</p>
<p>MANDATORY: CONTRACTOR TO CALL TO VERIFY UTILITIES, AT LEAST TWO WORKING DAYS PRIOR TO DIGGING. BEFORE YOU DIG, CALL: 1-800-922-1987 HTTP://CALL811.COM/MAP-PAGE/COLORADO</p>
<p>THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO T-MOBILE SERVICES IS STRICTLY PROHIBITED.</p>

Know what's below.
Call before you dig.



REFERENCE DOCUMENTS	
DOCUMENT NAME	DATE
RFDS	09/12/2022
EX. CONSTRUCTION DRAWINGS BY ZYMR.CO	09/16/2021

THIS WORK WAS PREPARED BY MYSELF OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ALL SCALES ARE SET FOR 11"x17"

STAMPING SIGNATURE:

SHEET TITLE:
 COVER SHEET

SHEET NUMBER:
 T1.0

DRAWN BY:	CHK BY:	APV BY:
MC	CM	KS

C:\Users\mcarlozzi\TeleMtn Engineering LLC\Documents\Dev\T-Mobile\CO\DN06196A\600\CAD\DN06196A-A and E.CDs_L600_101922_Prelim Rev_T_Insite.dwg PLOT DATE: 10/19/2022 BY:Mcarlozzi

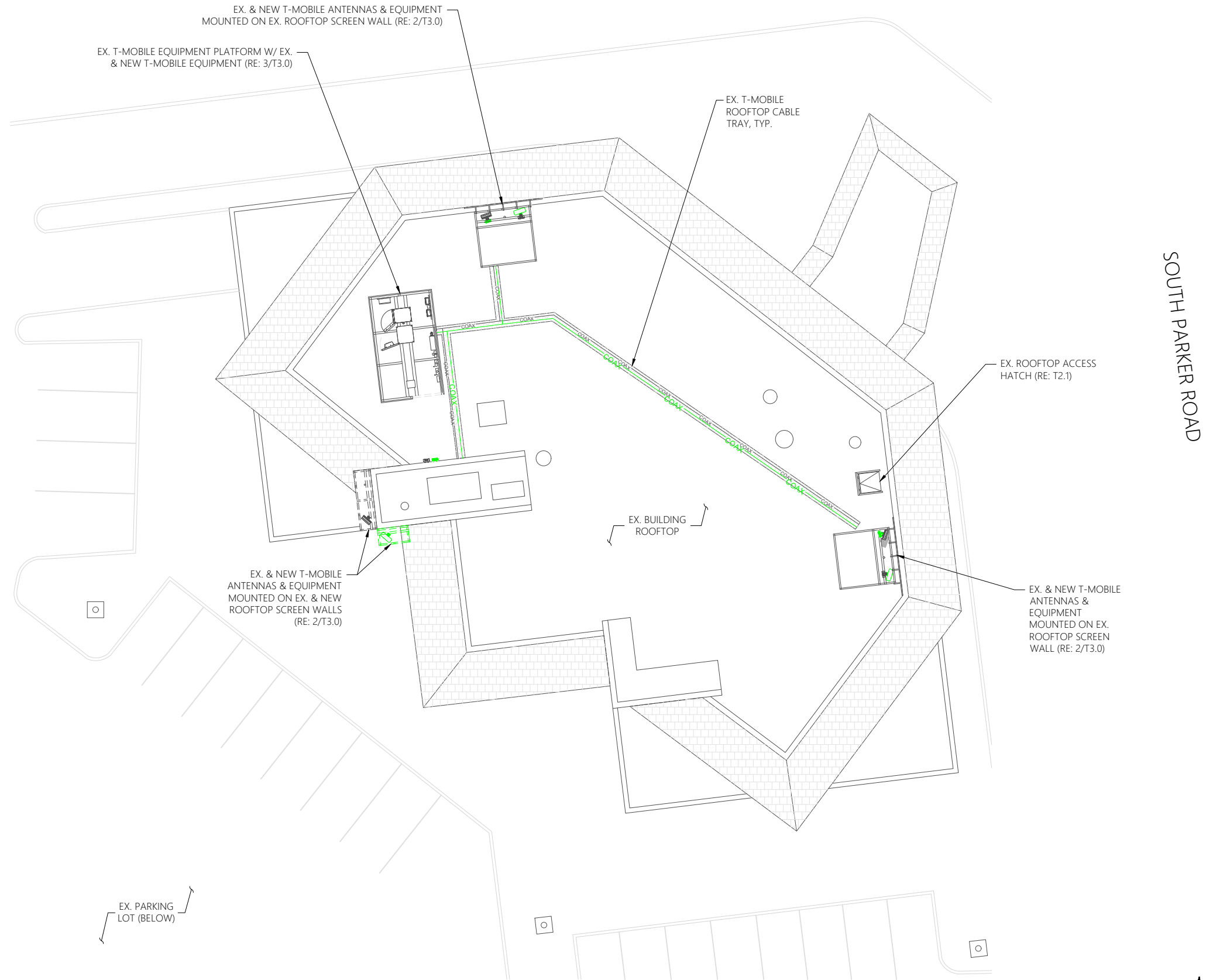


1 T-MOBILE LEASE AREA PHOTO

SOUTH CROSSROADS DRIVE

THIS DRAWING SET WAS PREPARED WITHOUT THE BENEFIT OF A CURRENT SURVEY. OVERALL SITE PLAN AND LAND INFORMATION DERIVED FROM EXISTING CONSTRUCTION DRAWINGS, GIS, AERIAL IMAGES AND SITE PHOTOS.

TELEMTN ENGINEERING, LLC (TELEMTN) HAS NOT PERFORMED A STRUCTURAL ANALYSIS FOR THIS PROJECT. PRIOR TO THE INSTALLATION OF THE PROPOSED EQUIPMENT OR MODIFICATION OF THE EXISTING STRUCTURE, A STRUCTURAL ANALYSIS/DESIGN WILL BE PERFORMED BY THE OWNER'S AGENT (OTHERS, A LICENSED ENGINEER) TO CERTIFY THAT THE EXISTING/PROPOSED COMMUNICATION STRUCTURE AND COMPONENTS ARE STRUCTURALLY ADEQUATE TO SUPPORT ALL EXISTING AND PROPOSED ANTENNAS, COAXIAL CABLES, AND OTHER APPURTENANCES. THE OWNER'S AGENT SHALL FURNISH A CERTIFICATION LETTER/REPORT SEALED BY A REGISTERED PROFESSIONAL ENGINEER STATING THAT THIS STRUCTURAL ANALYSIS WAS PREPARED IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS. THESE DRAWINGS ARE NOT AND SHOULD NOT BE CONSTRUED AS STRUCTURAL QUALIFICATION OF THE MAIN STRUCTURE OR COMPONENTS.



0' 10' 20' 40'
SCALE: 1" = 20'-0" (11 X 17) - SCALE: 1" = 40'-0" (22 X 34)

PRESENTED BY:



SITE NAME:

DN63XC027

SITE ADDRESS:
19201 EAST MAINSTREET
PARKER, CO 80134
SITE COUNTY:
DOUGLAS COUNTY

SITE ID:

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SHEET TITLE:

OVERALL SITE PLAN

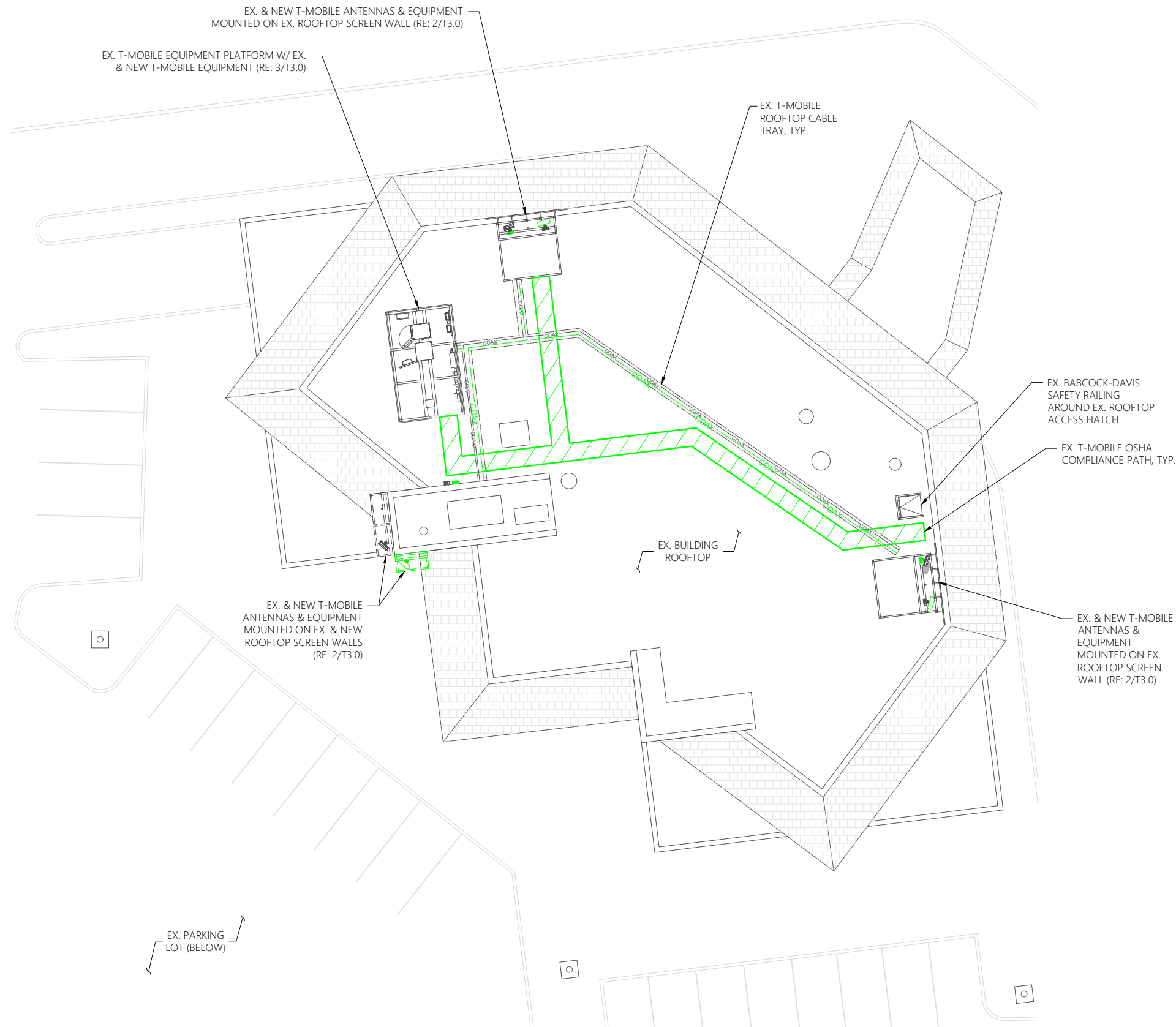
SHEET NUMBER:

T2.0

DRAWN BY:	CHK BY:	APV BY:
MC	CM	KS



1 ROOFTOP ACCESS HATCH



OSHA COMPLIANCE LEGEND

- PROPOSED OSHA COMPLIANCE PATH
- 6 FT. FROM ROOFTOP UNPROTECTED EDGE
- PROPOSED OSHA SAFETY HANDRAIL
- 15 FT. FROM ROOFTOP UNPROTECTED EDGE

NOTE:
 GAMMA SECTOR ANTENNAS DO NOT MEET THE OSHA REQUIREMENTS FOR FIELD OPERATIONS ACCESS. **TOWER CREW ACCESS ONLY.**
 ALPHA & BETA ANTENNAS, ALL SECTOR RADIOS AND ADDITIONAL EQUIPMENT MEET OSHA REQUIREMENTS FOR FIELD OPERATIONS ACCESS.
 PARAPET MEASURED TO BE 48" TALL.

SOUTH PARKER ROAD

PRESENTED BY:



Insite inc.
 Wireless Consulting Services
 15660 MIDWEST RD. SUITE 140 OAKBROOK TERRACE, IL 60181



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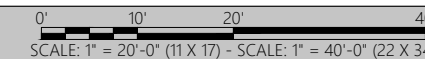
ROOFTOP SAFETY PLAN

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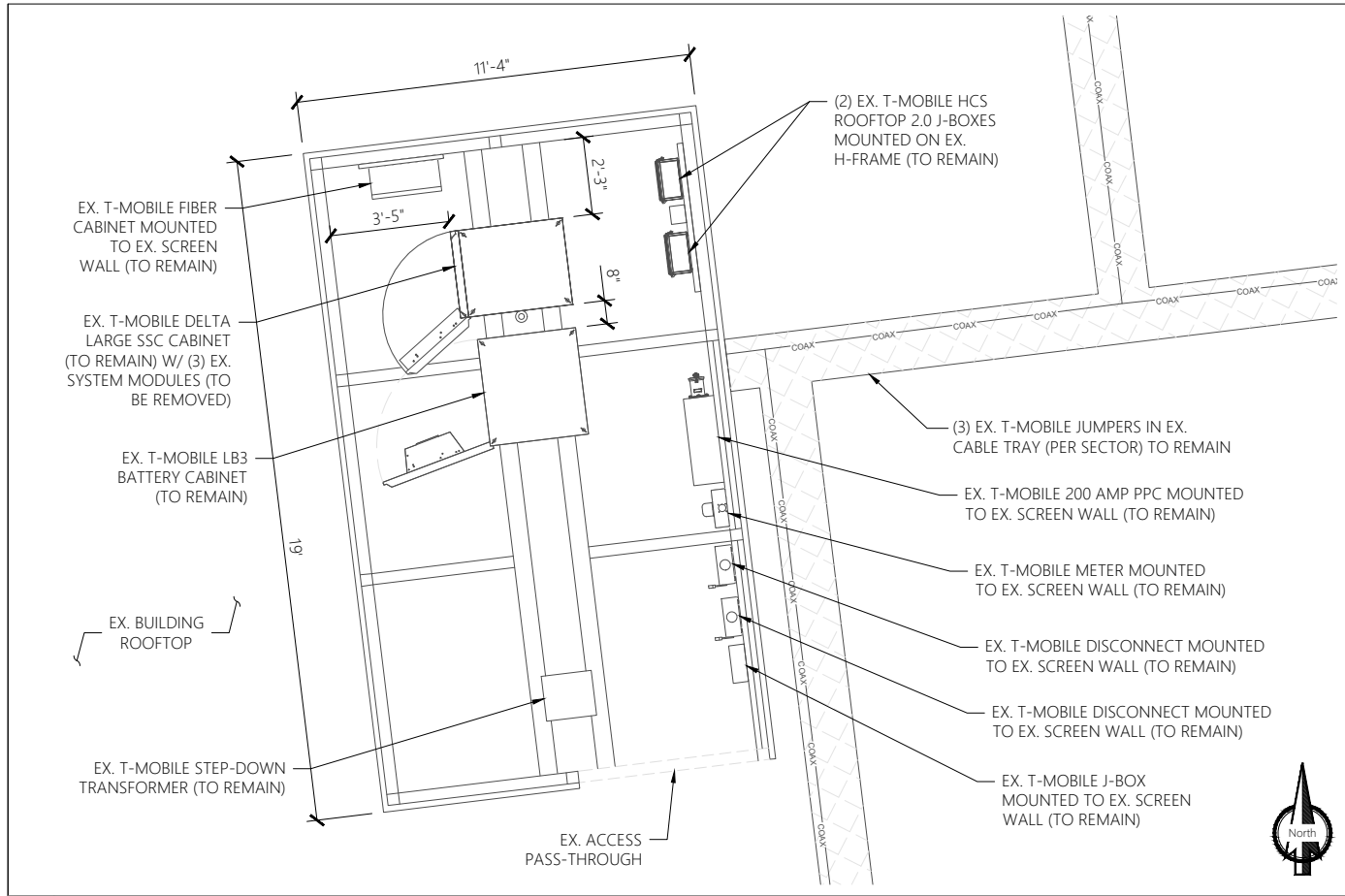
T2.1

DRAWN BY: CHK BY: APV BY:

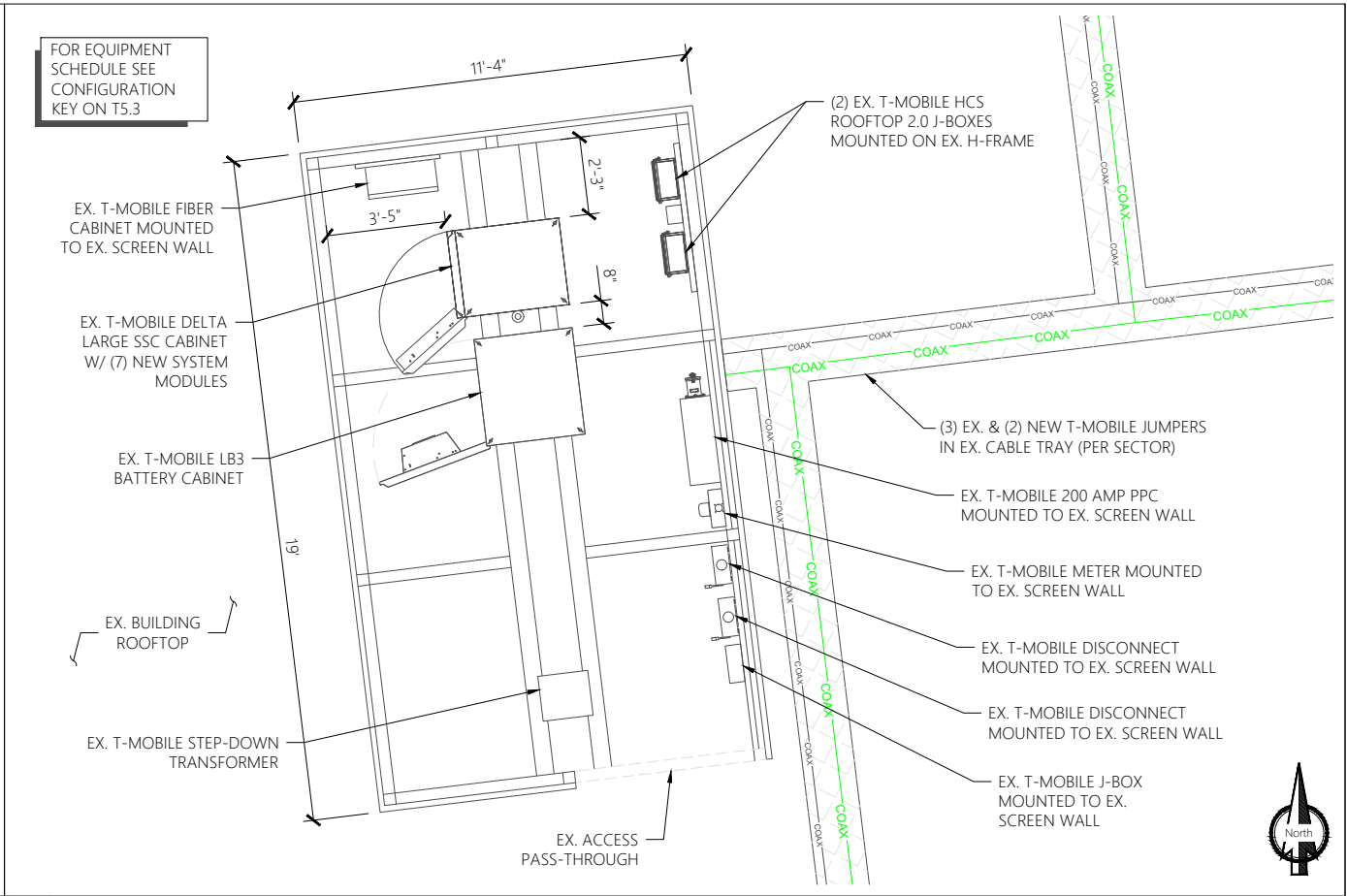
MC CM KS



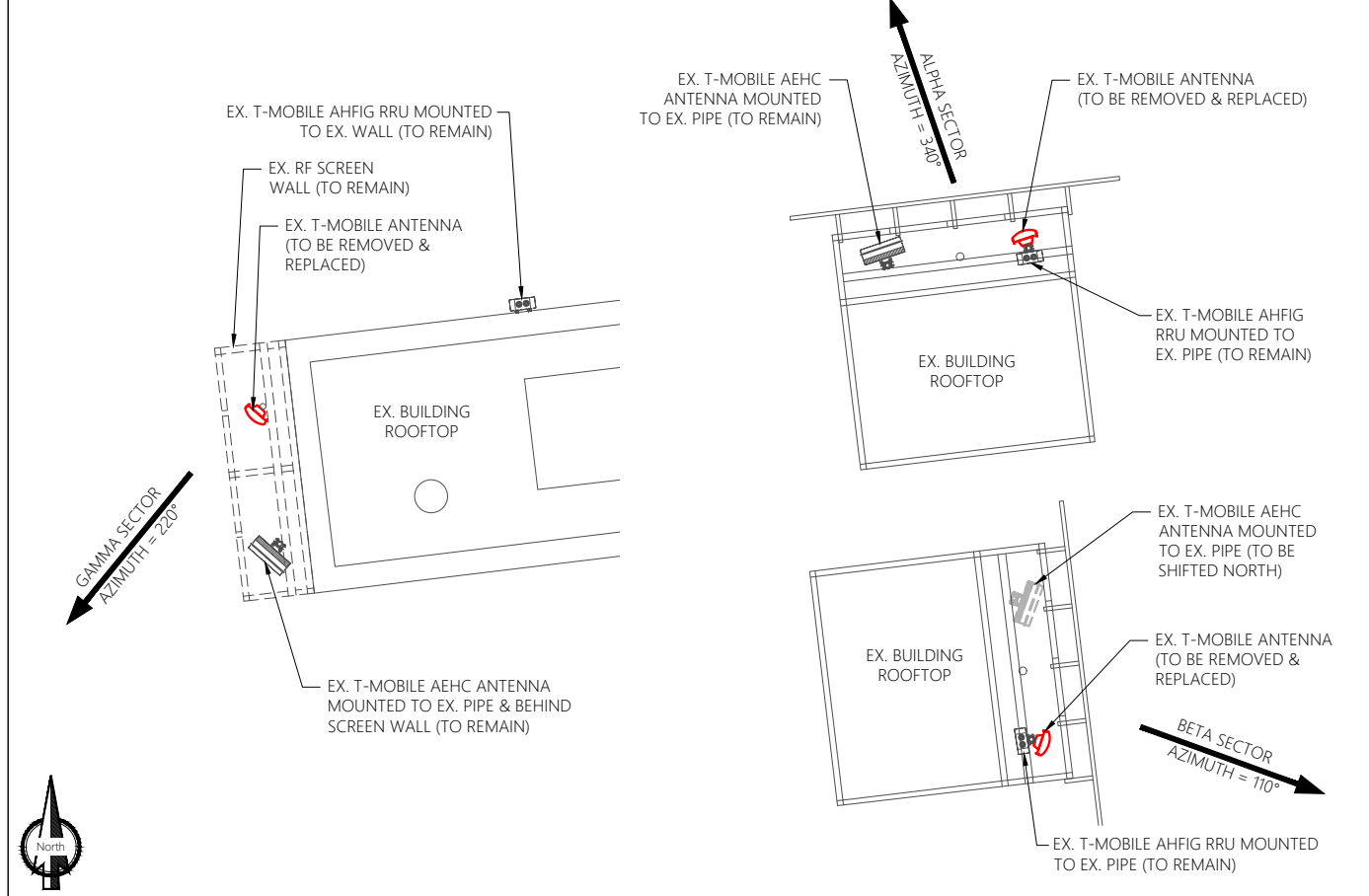
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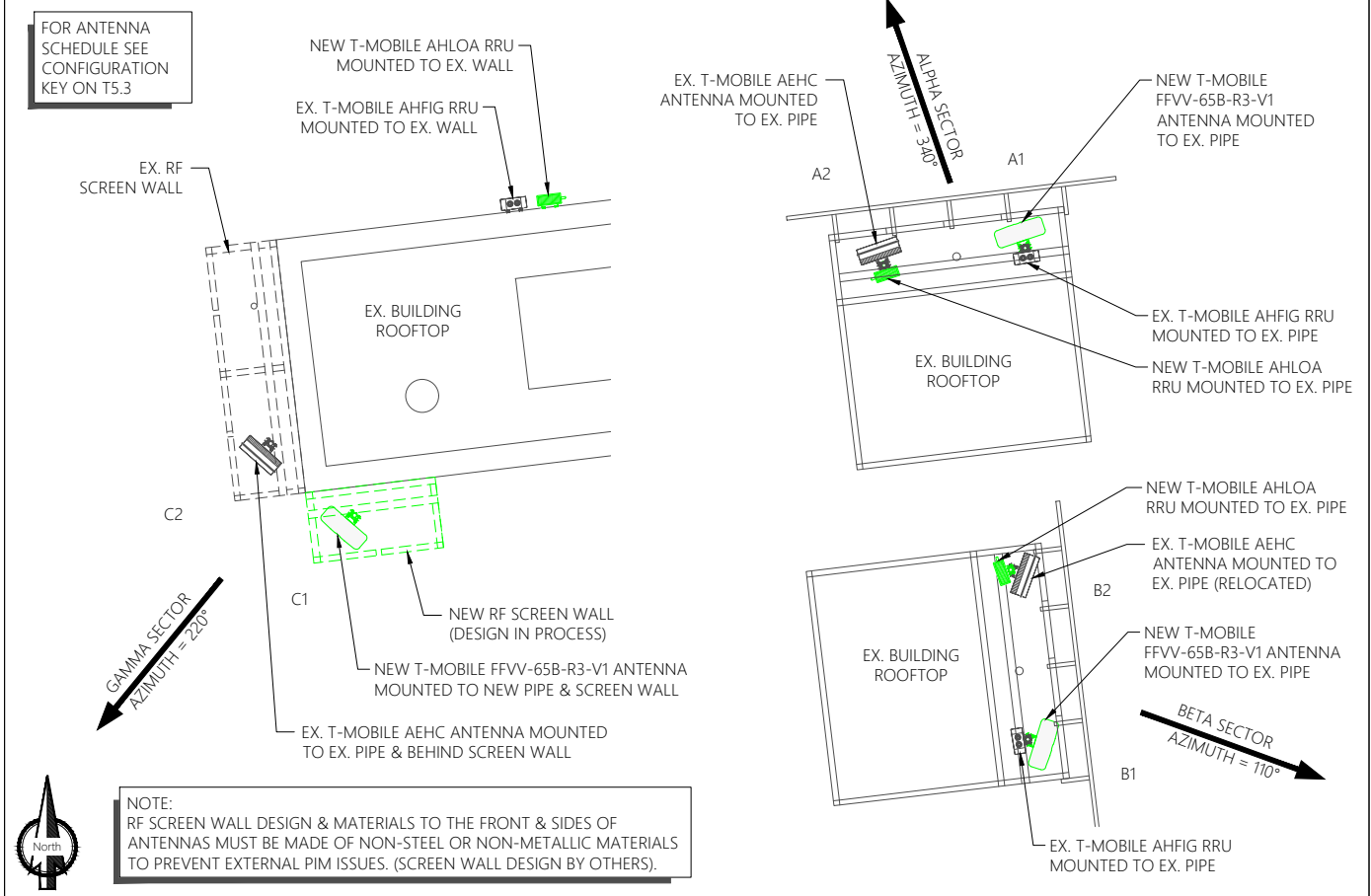
1 EX. EQUIPMENT LAYOUT
 SCALE: 3/16" = 1'-0" (11 X 17) - SCALE: 3/8" = 1'-0" (22 X 34)



2 NEW EQUIPMENT LAYOUT
 SCALE: 1/4" = 1'-0" (11 X 17) - SCALE: 1/2" = 1'-0" (22 X 34)



3 EX. ANTENNA LAYOUT
 SCALE: 1/8" = 1'-0" (11 X 17) - SCALE: 1/4" = 1'-0" (22 X 34)



4 NEW ANTENNA LAYOUT
 SCALE: 1/8" = 1'-0" (11 X 17) - SCALE: 1/4" = 1'-0" (22 X 34)

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 PARKER, CO 80134

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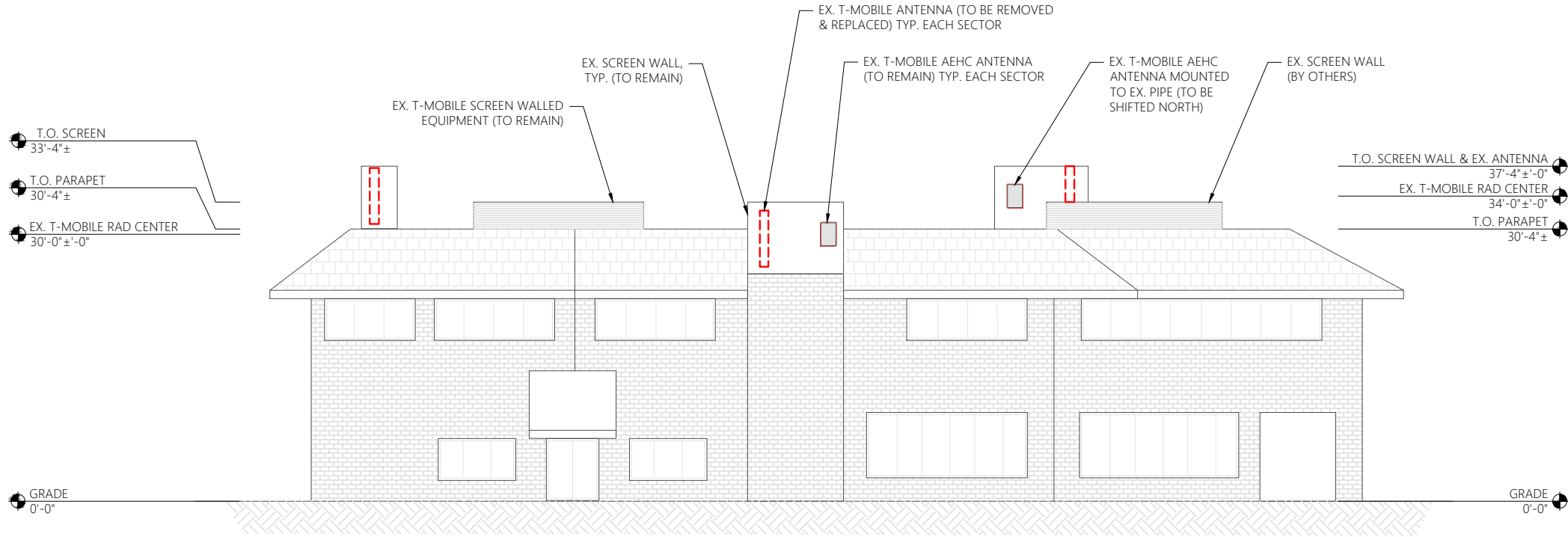
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SHEET TITLE:
 EX. & NEW EQUIPMENT & ANTENNA LAYOUTS

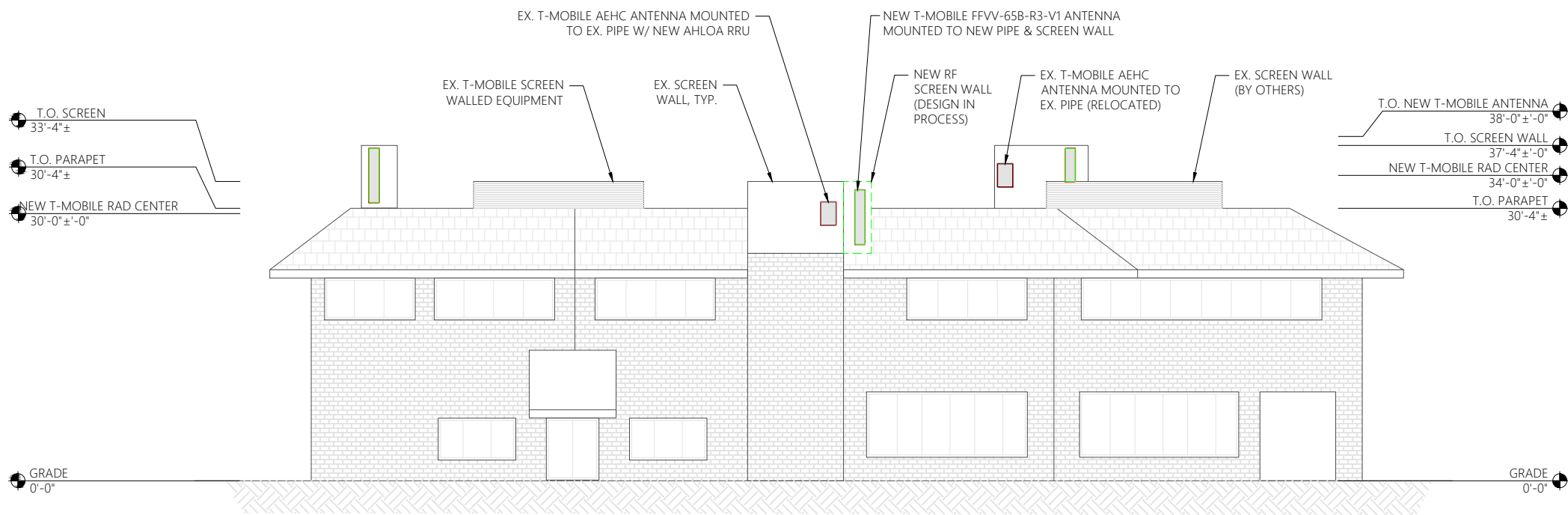
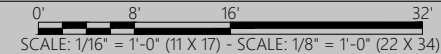
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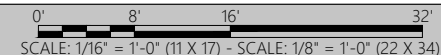
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1 EX. WEST ELEVATION



2 NEW WEST ELEVATION



PRESENTED BY:



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SITE ID:

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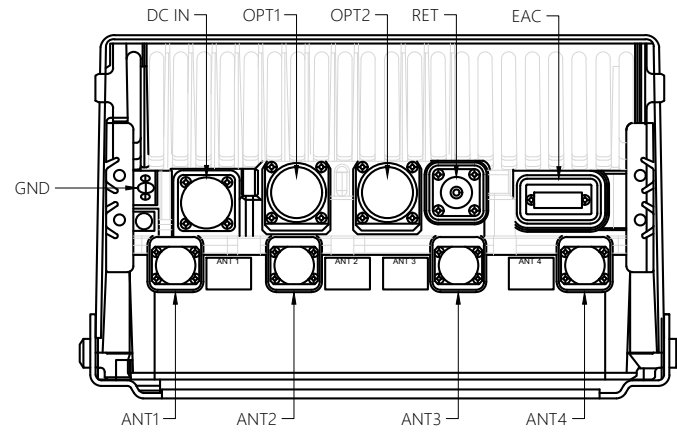
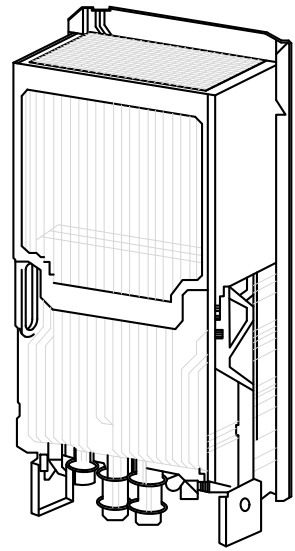
EX. & NEW ELEVATIONS

SHEET NUMBER:

T4.1

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MC	CM	KS

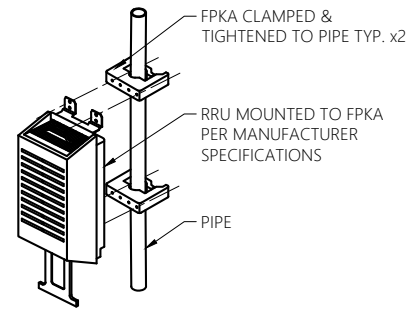
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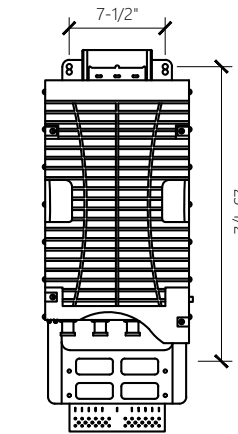
DIMENSION	VALUE
HEIGHT	22 INCHES (W/ BRACKET 26.6 INCHES)
WIDTH	12.1 INCHES (W/ BRACKET 12.9 INCHES)
DEPTH	7.4 INCHES (W/ BRACKET 8.1 INCHES)
WEIGHT	83.8 LBS

CHARACTERISTIC	AHLOA CAPABILITY
NOMINAL SUPPLY VOLTAGE	-48.0 VDC
NOMINAL INPUT VOLT RANGE	-40.5 TO -57.0 VDC
EXTENDED INPUT VOLT RAGE	-36.0 TO -40.5 VDC -57.0 TO -60.0 VDC
VOLTAGE	14.5 V
POWER SUPPLY	T.B.D.

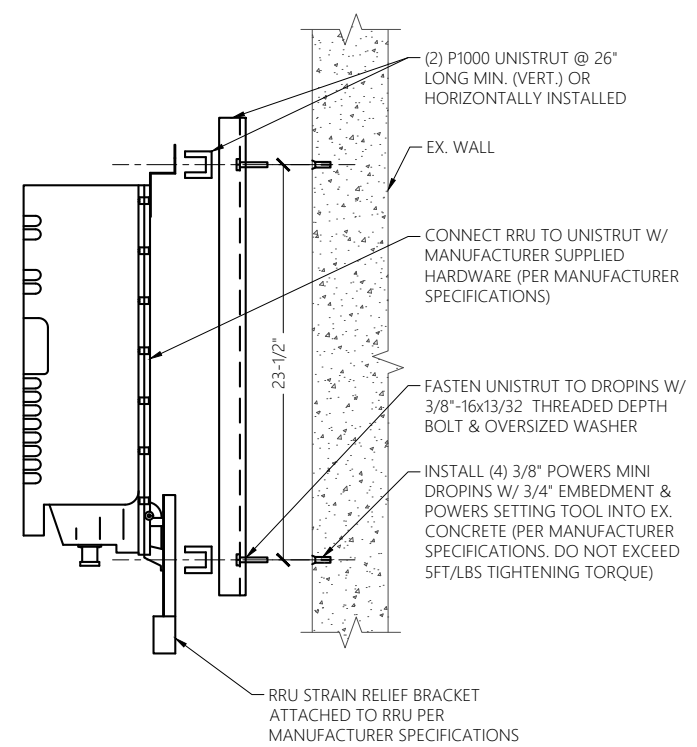
1 NEW NOKIA AHLOA RRU DETAIL



PIPE MOUNTED

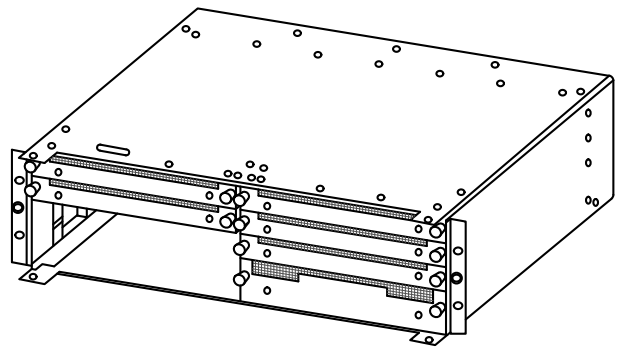


HOLE PLACEMENT



WALL / UNISTRUT MOUNTED

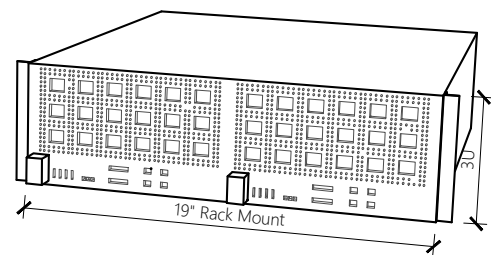
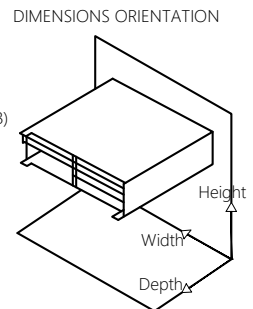
2 NEW NOKIA AHLOA RRU MOUNTING DETAILS



AMIA IS PRIMARY FOR INDOOR SITES (ENVIRONMENTALLY CONTROLLED) OR SITE SUPPORT CABINETS

- ONE NOKIA AIRSCALE SUBRACK (AMIA), INCLUDING BACKPLANE FOR HIGH BANDWIDTH CONNECTIVITY BETWEEN PROCESSING PLUG-IN UNITS
- ONE OR TWO NOKIA AIRSCALE COMMON (ASIA) PLUG-IN UNITS FOR TRANSPORT INTERFACING AND FOR CENTRALIZED PROCESSING
- UP TO SIX NOKIA AIRSCALE CAPACITY (ABIA) PLUG-IN UNITS FOR BASEBAND PROCESSING AND FOR OPTICAL INTERFACES WITH RADIO UNITS

PROPERTY	VALUE
HEIGHT	128.5 mm (5.1 in)
DEPTH	400 mm (15.7 in)
WIDTH	447 mm (17.6 in)
WEIGHT	EMPTY: 5.1 kg (11.2 lb) WITH DUMMY PANELS: 6.8 kg (15 LB) WITH ALL UNITS: 23.9 kg (52.7 lb)



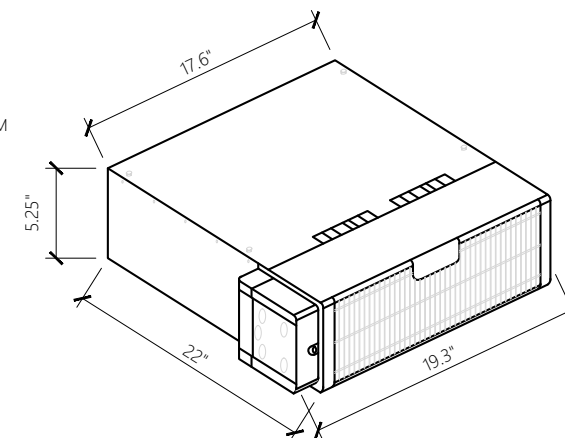
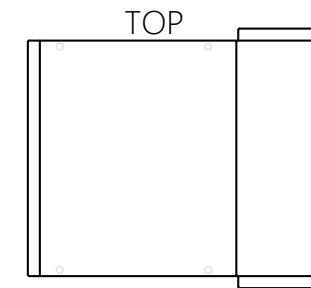
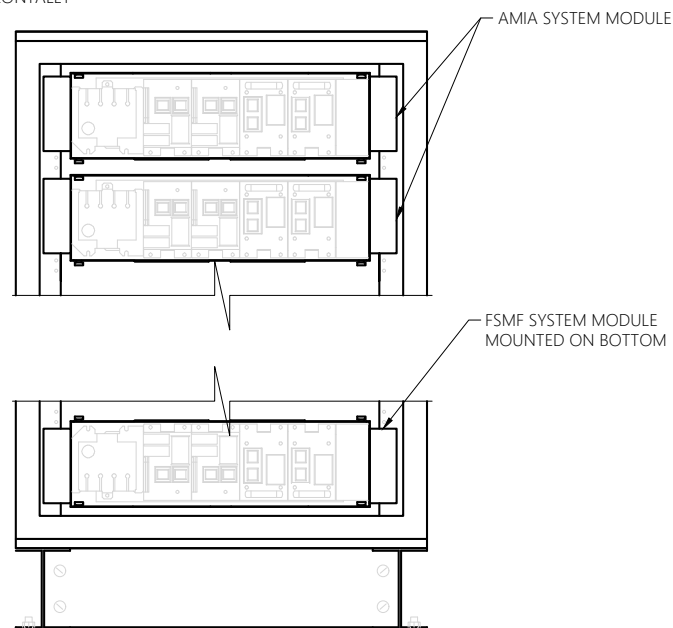
3 NEW NOKIA AMIA AIRSCALE DETAIL

SCALE: NTS
SCALE: NTS

SYSTEM/RADIO MODULES MOUNTED IN SSC FSMF

CLEARANCES: FRONT: 23.6"
BACK: 8"
TOP: 1.2"
SIDES: 4"
44 lbs

WEIGHT:
ADDITIONAL NOTE: MODULE CAN BE INSTALLED VERTICALLY & HORIZONTALLY



4 RADIO MODULE MOUNTING DETAIL

SCALE: NTS
SCALE: NTS

PRESENTED BY:



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SHEET TITLE:

EQUIPMENT DETAILS

SHEET NUMBER:

T5.0

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EQUIPMENT DETAILS

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T5.1

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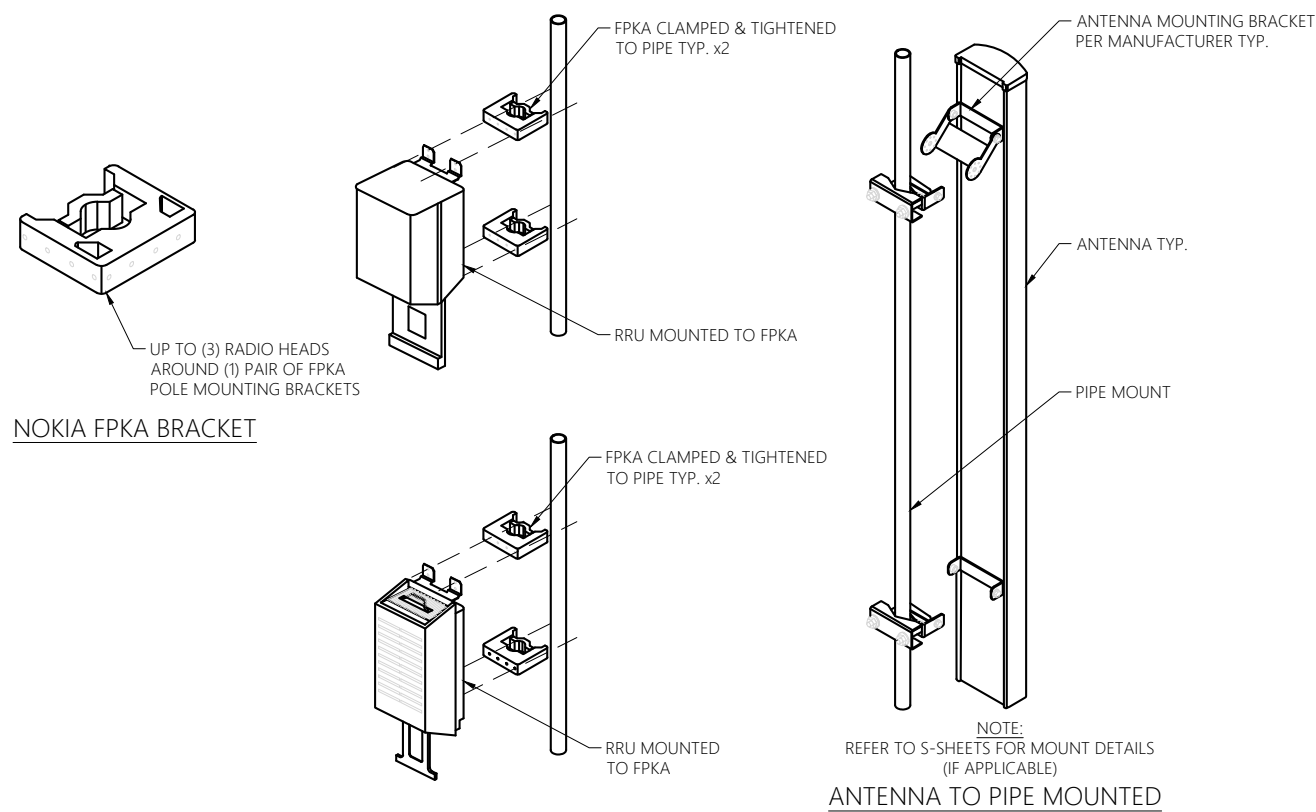
MC CM KS

1 NOT USED

SCALE: NTS
SCALE: NTS

2 NOT USED

SCALE: NTS
SCALE: NTS



3 NOT USED

SCALE: NTS
SCALE: NTS

4 RRU AND ANTENNA MOUNTING DETAIL

SCALE: NTS
SCALE: NTS

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FFVV-65B-R3-V1



8-port sector antenna, 4x 617-894 and 4x 1695-2690 MHz, 65° HPBW, 3x RET

General Specifications

Antenna Type	Sector
Band	Multiband
Color	Light gray
Grounding Type	RF connector inner conductor and body grounded to reflector and mounting bracket
Performance Note	Outdoor usage
Radome Material	Fiberglass, UV resistant
Radiator Material	Low loss circuit board
Reflector Material	Aluminum
RF Connector Interface	4.3-10 Female
RF Connector Location	Bottom
RF Connector Quantity, high band	4
RF Connector Quantity, low band	4
RF Connector Quantity, total	8

Remote Electrical Tilt (RET) Information

RET Interface	8-pin DIN Female 8-pin DIN Male
RET Interface, quantity	1 female 1 male
Input Voltage	10-30 Vdc
Internal RET	High band (2) Low band (1)
Power Consumption, idle state, maximum	2 W
Power Consumption, normal conditions, maximum	10 W
Protocol	3GPP/AISG 2.0 (Single RET)

FFVV-65B-R3-V1

PIM, 3rd Order, 2 x 20 W, dBc	-150	-153	-153	-153	-153	-153	-153
Input Power per Port at 50°C, maximum, watts	250	250	200	200	200	200	200

Electrical Specifications, BASTA

Frequency Band, MHz	617-698	698-894	1695-1880	1850-1990	1920-2200	2300-2500	2500-2690
Gain by all Beam Tilts, average, dBi	14	14.3	17.4	17.7	18.1	18.4	18.3
Gain by all Beam Tilts Tolerance, dB	±0.4	±0.7	±0.4	±0.5	±0.7	±0.5	±0.4
Gain by Beam Tilt, average, dBi	2° 14.1 6° 14.1 14° 13.9	2° 14.8 8° 14.8 14° 14.2	2° 17.3 6° 17.8 12° 17.4	2° 17.6 6° 17.8 12° 17.8	2° 17.9 6° 18.4 12° 18.3	2° 18.3 6° 18.7 12° 18.3	2° 18.2 6° 18.6 12° 18.3
Beamwidth, Horizontal Tolerance, degrees	±4.3	±6	±2.9	±3.9	±5.8	±7.9	±7.1
Beamwidth, Vertical Tolerance, degrees	±1.1	±1.5	±0.2	±0.3	±0.4	±0.3	±0.2
USLS, beampeak to 20° above beampeak, dB	20	18	15	17	18	16	15
Front-to-Back Total Power at 180° ± 30°, dB	23	22	29	32	29	28	29
CPR at Bore-sight, dB	16	16	21	25	20	17	21
CPR at Sector, dB	8	8	6	6	6	6	7

Mechanical Specifications

Wind Loading @ Velocity, frontal	765.0 N @ 150 km/h (172.0 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	251.0 N @ 150 km/h (56.4 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	1,032.0 N @ 100 mph (232.0 lbf @ 100 mph)
Wind Loading @ Velocity, rear	788.0 N @ 150 km/h (177.1 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h 149.75 mph

Packaging and Weights

Width, packed	752 mm 29.606 in
Depth, packed	387 mm 15.236 in
Length, packed	1982 mm 78.032 in
Weight, gross	62.5 kg 137.789 lb

PRESENTED BY:

T-Mobile

Insite inc.
Wireless Consulting Services
15660 MIDWEST RD. SUITE 140 OAKBROOK TERRACE, IL 60181



SITE NAME:

DN63XC027

SITE ADDRESS:
19201 EAST MAINSTREET
PARKER, CO 80134

SITE COUNTY:
DOUGLAS COUNTY

SITE ID:

DN06196A

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SHEET TITLE:

EQUIPMENT DETAILS

SHEET NUMBER:

T5.2

DRAWN BY:	CHK BY:	APV BY:
MC	CM	KS

ANTENNA NOTES:

- ANTENNA CONTRACTOR SHALL INSURE THAT ALL ANTENNA MOUNTING PIPES ARE PLUMB.
- FEEDLINE LENGTHS INDICATED ARE APPROXIMATE.
- ANTENNA COAXIAL FEEDERS & ANTENNA JUMPERS SHALL BE COLOR CODED PER T-MOBILE REQUIREMENTS.
- IN ADDITION TO THE COLOR CODE THE FOLLOWING ANTENNA SECTOR COLOR STRIPE SHALL BE ADDED TO EACH ANTENNA SECTOR FEEDLINE & JUMPER.
ALPHA - RED STRIPE
BETA - BLUE STRIPE
GAMMA - WHITE STRIPE
DELTA - GREEN STRIPE
EPSILON - GRAY STRIPE
ZETA - BROWN STRIPE
HYBRID - GRAY STRIPE
- MULTI PORT ANTENNAS: TERMINATE UNUSED ANTENNA PORTS WITH CONNECTOR CAP & WEATHERPROOF THOROUGHLY. JUMPERS FROM TMA'S MUST TERMINATE TO OPPOSITE POLARIZATIONS IN EACH SECTOR.
- CONTRACTOR MUST FOLLOW ALL MANUFACTURERS' RECOMMENDATIONS REGARDING THE INSTALLATION OF FEEDLINES, CONNECTORS, AND ANTENNAS.
- MINIMUM BEND RADIUS:
LDF4-50A (1/2" HARD LINE) = 5"
FSJ4-50B (1/2" SUPER FLEX) = 1 1/4"
AVA5-50A (7/8" HARD LINE) = 10"
AVA7-50A (1-5/8" HARD LINE) = 15"
LDF7-50A (1-5/8" HARD LINE) = 20"
- CONTRACTOR SHALL RECORD THE SERIAL #, SECTOR, AND POSITION OF EACH ACTUATOR INSTALLED AT THE ANTENNAS AND PROVIDE THE INFORMATION TO T-MOBILE.
- WEATHERPROOF ALL ANTENNA CONNECTORS WITH SELF AMALGAMATING TAPE.
- ANTENNA CONTRACTOR SHALL PERFORM A "TAPE DROP" MEASUREMENT TO CONFIRM/ VALIDATE ANTENNA CENTERLINE (ACL) HEIGHT. CONTRACTOR SHALL SUBMIT A COMPLETED HEIGHT VERIFICATION FORM TO THE CONSTRUCTION MANAGER.
- ALL FIBER RUNS CONTAINED IN ONE COMMSCOPE HYBRID DC-FIBER CABLE (MODEL# HCS 2.0 TRUNK CABLE 12#6AWG24 SM FIBER PR) FROM LOWER COVP TO UPPER COVP, HYBRID CABLE SHALL BE COLOR CODED PER T-MOBILE REQUIREMENTS.



ANTENNA KEY														
STATUS	ANTENNA NUMBER / SERVICED TECH	COLOR CODE (SEE SNOTE 3)		ANTENNA VENDER	MODEL #	AZIMUTH	ELECT. DOWN TILT	MECH DOWNTILT	ANTENNA CENTERLINE	TECH.	COAXIAL FEEDER		HYBRID FEEDER	
		SECTOR COLOR/#									(QTY) SIZE	COLOR CODE	QUANTITY	COLOR CODE
PROPOSED	A-1 L700, L600, N600, L1900, L2100, G1900, N1900, N2100	RED 4	RED 3	COMMSCOPE	FFVV-65B-R3-V1	340°	2,2,3,3	0°	34'-0"	L700, L600, N600, L1900, L2100, G1900, N1900, N2100	-	-	(2) EX. JUMPERS & (2) NEW JUMPERS	GREY 1
EXISTING	A-2 LTE 2500, N2500	RED 1		NOKIA	AEHC	340°	3	0°	34'-0"	L2500, N2500	-	-	(1) EX. JUMPER	-
PROPOSED	B-1 L700, L600, N600, L1900, L2100, G1900, N1900, N2100	BLUE 4	BLUE 3	COMMSCOPE	FFVV-65B-R3-V1	110°	2,2,3,3	0°	34'-0"	L700, L600, N600, L1900, L2100, G1900, N1900, N2100	-	-	(2) EX. JUMPERS & (2) NEW JUMPERS	GREY 1
EXISTING	B-2 LTE 2500, N2500	BLUE 1		NOKIA	AEHC	110°	3	0°	34'-0"	L2500, N2500	-	-	(1) EX. JUMPER	-
PROPOSED	C-1 L700, L600, N600, L1900, L2100, G1900, N1900, N2100	WHITE 4	WHITE 3	COMMSCOPE	FFVV-65B-R3-V1	220°	2,2,3,3	0°	30'-0"	L700, L600, N600, L1900, L2100, G1900, N1900, N2100	-	-	(2) EX. JUMPERS & (2) NEW JUMPERS	GREY 1
EXISTING	C-2 LTE 2500, N2500	WHITE 1		NOKIA	AEHC	220°	3	0°	30'-0"	L2500, N2500	-	-	(1) EX. JUMPER	-

EQUIPMENT PAD / EQUIPMENT KEY						
LOCATION	VENDOR	EQUIPMENT	MODEL NUMBER	TECH.	QTY.	STATUS
MULTI SECTOR	NOKIA	JBOX	ROOFTOP HCS 2.0	-	2	EXISTING
SSC	NOKIA	SYSTEM MODULE	ASIB	L600, L700, L1900, L2100	1	PROPOSED
SSC	NOKIA	SYSTEM MODULE	FSMF	G1900	1	EXISTING
SSC	NOKIA	SYSTEM MODULE	ABIA	L600, L700	1	PROPOSED
SSC	NOKIA	SYSTEM MODULE	ABIA	L1900, L2100	2	EXISTING
SSC	NOKIA	SYSTEM MODULE	ABIL	N1900, N2100 (DARK)	2	PROPOSED
SSC	NOKIA	SYSTEM MODULE	ASIL	N600, N1900, N2100 (DARK)	1	PROPOSED
SSC	NOKIA	SYSTEM MODULE	ABIL	N600	1	PROPOSED
SSC	NOKIA	SYSTEM MODULE	ASIL	N2500	1	PROPOSED
SSC	NOKIA	SYSTEM MODULE	ABIO	N2500	1	EXISTING
SSC	NOKIA	SYSTEM MODULE	AMIA	-	2	EXISTING
CABINET	NOKIA	TRANSPORT SYSTEM	CSR IXRe V2 GEN2	-	1	EXISTING


ROOFTOP EQUIPMENT KEY							
LOCATION	VENDOR	EQUIPMENT	MODEL NUMBER	TECHNOLOGY	QTY.	STATUS	
1 PER SECTOR	NOKIA	RRU	AHFIG	N1900, N2100 (DARK), L1900, L2100, G1900	3	EXISTING	
1 PER SECTOR	NOKIA	RRU	AHLOA	L600, L700, N600	3	PROPOSED	

EQUIPMENT FEEDLINE KEY							
LOCATION	VENDOR	EQUIPMENT	MODEL NUMBER	TECHNOLOGY	QTY.	STATUS	
ALPHA	NSN	JUMPER CABLE	50' ± HCS 2.0 JUMPER CABLE - #6AWG 2PR	-	2	PROPOSED	
ALPHA	NSN	JUMPER CABLE	50' ± HCS 2.0 JUMPER CABLE - #6AWG 2PR	-	3	EXISTING	
BETA	NSN	JUMPER CABLE	100' ± HCS 2.0 JUMPER CABLE - #6AWG 2PR	-	2	PROPOSED	
BETA	NSN	JUMPER CABLE	100' ± HCS 2.0 JUMPER CABLE - #6AWG 2PR	-	3	EXISTING	
GAMMA	NSN	JUMPER CABLE	50' ± HCS 2.0 JUMPER CABLE - #6AWG 2PR	-	2	PROPOSED	
GAMMA	NSN	JUMPER CABLE	50' ± HCS 2.0 JUMPER CABLE - #6AWG 2PR	-	3	EXISTING	

PRESENTED BY:

15660 MIDWEST RD. SUITE 140 OAKBROOK TERRACE, IL 60181



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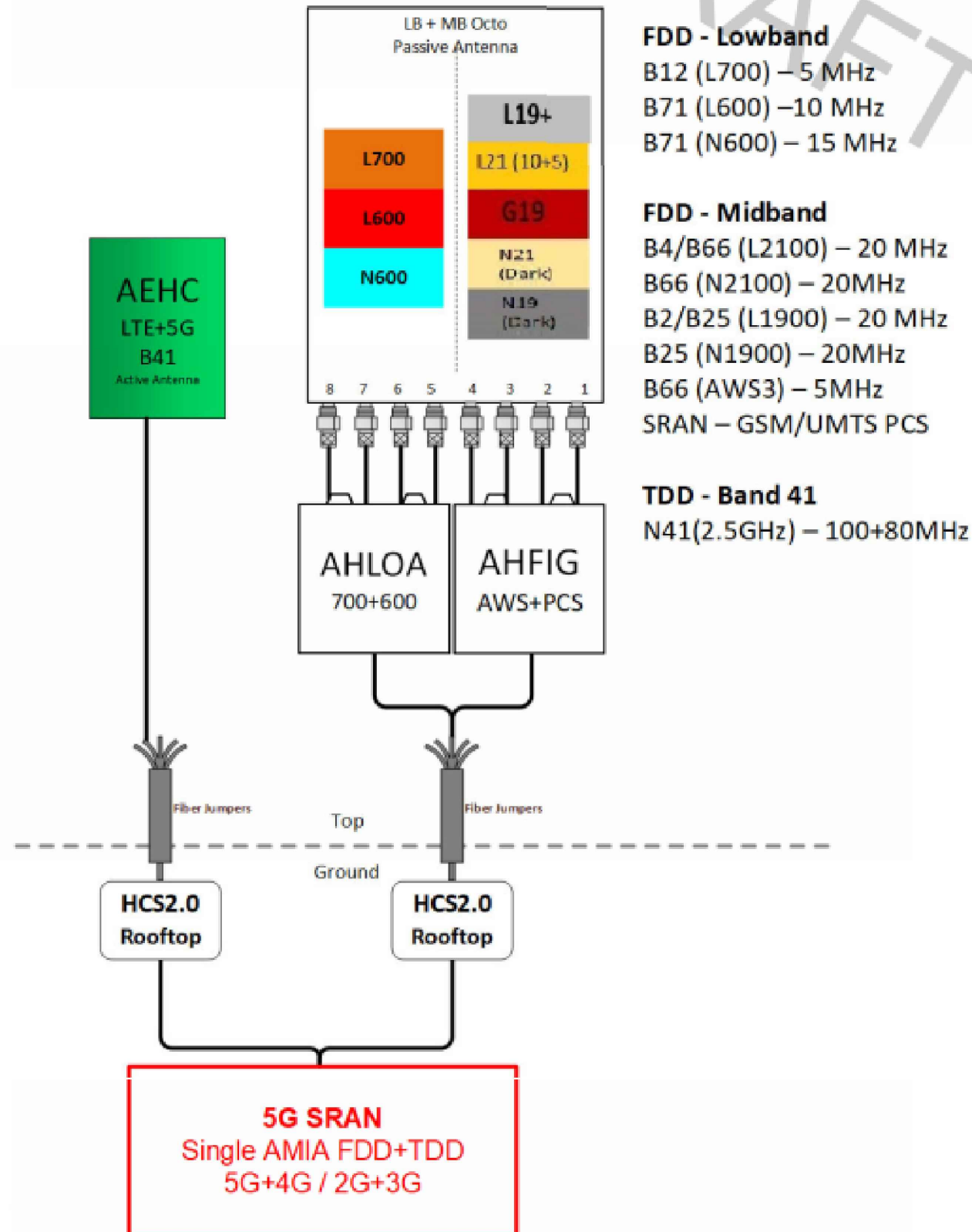
SHEET NUMBER:
T5.3

DRAWN BY: MC CHK BY: CM APV BY: KS

C:\Users\mcarlozzi\TeleMtn Engineering LLC\TeleMtn Engineering - Documents\Dev\T-Mobile\CO\DN06196A\600\CAD\DN06196A-A and E.CDs_L600_10_19_22_Prelim Rev_T_Insite.dwg PLOT DATE: 10/19/2022 BY:Mcarlozzi

Configuration 56792EZ_SR

* For 5G and LTE Airscale BB dimensioning refer to Fiber Port matrices.
(Alpha, Beta & Gamma)



PRESENTED BY:



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SHEET TITLE:

RFDS CONFIGURATION
 DIAGRAM

SHEET NUMBER:

T5.4

DRAWN BY:	CHK BY:	APV BY:
MC	CM	KS

GENERAL CONSTRUCTION NOTES

- THE FACILITY IS AN UNOCCUPIED WIRELESS FACILITY.
- PLANS ARE NOT TO BE SCALED AND ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY, UNLESS NOTED OTHERWISE. THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- PRIOR TO THE SUBMISSION OF BIDS, THE CONTRACTORS SHALL VISIT THE JOB SITE AND BE RESPONSIBLE FOR ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS, AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE IMPLEMENTATION ENGINEER AND ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH THE WORK.
- THE CONTRACTOR SHALL RECEIVE, IN WRITING, AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.
- CONTRACTOR SHALL CONTACT LOCAL DIGGERS HOTLINE 48 HOURS PRIOR TO PROCEEDING WITH ANY EXCAVATION, SITE WORK OR CONSTRUCTION.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
- ALL WORK PERFORMED AND MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. MECHANICAL AND ELECTRICAL SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- THE GENERAL CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK, USING THE BEST SKILLS AND ATTENTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT INCLUDING CONTACT AND COORDINATION WITH THE CONSTRUCTION FIELD ENGINEER AND WITH THE LANDLORD'S AUTHORIZED REPRESENTATIVE.
- DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK.
- REPRESENTATIONS OF TRUE NORTH, OTHER THAN THOSE FOUND ON THE PLOT OF SURVEY DRAWING, SHALL NOT BE USED TO IDENTIFY OR ESTABLISH THE BEARING OF TRUE NORTH AT THE SITE. THE CONTRACTOR SHALL RELY SOLELY ON THE PLOT OF SURVEY DRAWING AND ANY SURVEYOR'S MARKINGS AT THE SITE FOR THE ESTABLISHMENT OF TRUE NORTH, AND SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH THE WORK IF ANY DISCREPANCY IS FOUND BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND THE TRUE NORTH ORIENTATION AS DEPICTED ON THE PLAT OF SURVEY. THE CONTRACTOR SHALL ASSUME SOLE LIABILITY FOR ANY FAILURE TO NOTIFY THE ARCHITECT/ENGINEER.

STRUCTURAL NOTES

GENERAL CONDITIONS

- DESIGN AND CONSTRUCTION OF ALL WORK SHALL CONFORM TO THE APPROVED EDITION OF THE IBC EDITION AND ALL OTHER APPLICABLE STATE CODES, ORDINANCES, AND REGULATIONS. IN CASE OF CONFLICT BETWEEN THE CODES, STANDARDS, AND REGULATIONS, GENERAL NOTES AND/OR MANUFACTURER'S REQUIREMENTS. USE THE MOST STRINGENT PROVISION.
- IT IS THE EXPRESS INTENT OF THE PARTIES INVOLVED IN THIS PROJECT THAT THE CONTRACTOR OR SUBCONTRACTOR OR INDEPENDENT CONTRACTOR OR THEIR RESPECTIVE EMPLOYEES SHALL EXCULPATE THE ARCHITECT, THE ENGINEER, THE CONSTRUCTION MANAGER, THE OWNER, AND THEIR AGENTS, FROM ANY LIABILITY WHATSOEVER AND HOLD THEM HARMLESS AGAINST LOSS, DAMAGES, LIABILITY OR ANY EXPENSE ARISING IN ANY MATTER FROM THE WRONGFUL OR NEGLIGENT ACT, OR FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, OR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OR FAILURE TO CONFORM TO THE STATE SCAFFOLDING ACT IN CONNECTION WITH THE WORK.
- DO NOT SCALE DRAWINGS.
- VERIFY ALL EQUIPMENT MOUNTING DIMENSIONS PER MANUFACTURER DRAWINGS.
- SUBMIT ONE SEPIA AND TWO PRINTS OF ALL STRUCTURAL SHOP DRAWINGS. MARKED UP SEPIA SHALL BE RETURNED.

STRUCTURAL STEEL NOTES:

- CHANNELS, ANGLES AND PLATES SHALL BE ASTM A36 MATERIAL, UNLESS NOTED OTHERWISE.
- SQUARE AND RECTANGULAR TUBE STEEL HSS SECTIONS SHALL BE ASTM A500, GRADE B (Fy = 46 ksi) MATERIAL.
- ROUND PIPE SECTIONS SHALL BE ASTM A53, GRADE B (Fy =35 ksi) MATERIAL.
- DESIGN, FABRICATION, AND ERECTION SHALL BE IN ACCORDANCE WITH THE "AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" , WITH COMMENTARY AND THE "CODE OF STANDARD PRACTICE" .
- ALL STEEL SHALL HAVE ONE COAT OF SHOP PRIMER. DO NOT PAINT AREAS WITHIN 3" OF BOLTS, WELDS OR HEADED STUDS.
- BOLTS SHALL BE HIGH STRENGTH BOLTS, A325, CONFORMING TO ASTM SPECIFICATIONS. ALL CONNECTIONS SHALL HAVE A MINIMUM OF 2 BOLTS.
- WELDING SHALL BE CONDUCTED BY CERTIFIED WELDERS AND SHALL CONFORM TO THE AWS CODES FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION.
- WELDS SHALL BE MADE USING E70XX ELECTRODES AND SHALL BE 3/16" MINIMUM UNLESS OTHERWISE NOTED.
- WELDING SHALL BE PERFORMED IN ACCORDANCE WITH A WELDED PROCEDURE SPECIFICATION (WPS) AS PER AWS D1.1 , D1.3 AND D1.4.
- ONLY PRE-QUALIFIED WELDING PROCEDURES SHALL BE USED.
- UNLESS SPECIFICALLY ADDRESSED IN THE SPECIFICATIONS OR THE DETAILS, ALL STEEL ITEMS PERMANENTLY EXPOSED TO EARTH OR WEATHER SHALL BE CORROSION-RESISTANT BY GALVANIZING OR BY THE USE OF STAINLESS STEEL.
- ALL FIELD WELDS ON GALVANIZED MATERIAL SHALL BE BRUSH-COATED WITH A ZINC-RICH PAINT.

FRP NOTES:

- ALL FRP MATERIAL SHALL BE EXTREN SERIES 500 OR EQUIVALENT, PRODUCED BY THE PULTRUSION METHOD.
- ALL ADHESIVE RESIN SHALL BE PLEXUS METHACRYLATE OR AN EQUIVALENT ADHESIVE RESIN THAT IS COMPATIBLE WITH THE RESIN MATRIX USED IN THE STRUCTURAL SHAPES.
- ALL FRP CONNECTIONS SHALL BE FULLY-BONDED AT EACH SIDE WITH A 1/4" PLATE AND A MINIMUM OF (2) 3/8" DIAMETER FLATHEAD FRP SCREWS PER MEMBER.
- ISOPLAST NUTS AND BOLTS SHALL BE TIGHTENED TO A SNUG-TIGHT FIT PLUS AN ADDITIONAL 1/2 TURN, PRIOR TO BEING LOCKED WITH EPOXY.
- ALL PANELS / SHEATHING SHALL BE FULLY BONDED WITH 3/8" FLATHEAD FRP SCREWS AT 12" O.C.
- ALL FIELD CUT AND DRILLED EDGES, HOLES AND ABRASIONS SHALL BE SEALED WITH A CATALYZED EPOXY RESIN COMPATIBLE WITH THE MANUFACTURER'S ORIGINAL RESIN.

STANDARDS FOR ALL CONCRETE WORK

- ALL CONCRETE WORK SHALL CONFORM WITH ACI. 318 OR LATEST. DETAIL REINFORCING IN CONFORMANCE WITH ACI. SP66 LATEST.
- NO SPLICES OF REINFORCEMENT SHALL BE MADE EXCEPT AS DETAILED OR AUTHORIZED BY THE STRUCTURAL ENGINEER. LAP SPLICES WHERE PERMITTED SHALL BE A MINIMUM OF 30 BAR DIAMETERS.
- PROVIDE ALL ACCESSORIES NECESSARY TO SUPPORT REINFORCING AT POSITIONS SHOW ON DRAWINGS.
- WIRE FABRIC REINFORCEMENT MUST LAP ONE FULL MESH AT SIDE AND END LAPS SHALL BE TIED TOGETHER.
- CURE AFTER FINISHING CONCRETE. KEEP MOIST FOR 7 DAYS AFTER POURING.
- COMPACT STRUCTURAL FILL 95% PROCTOR DENSITY PRIOR TO PLACING CONCRETE UNDER SLABS.
- 1/4" CHAMFER ON ALL CORNERS AND EDGES.
- ALL CONCRETE SHALL BE PORTLAND, TYPE 1 CEMENT WITH A MINIMUM OF 28 DAY STRENGTH OF 3000 PSI., 4" SLUMP AND A MINIMUM AIR ENTRAPMENT OF 4%.
- ALL REINFORCING STEEL SHALL BE GRADE 60. ALL REINFORCING MESH SHALL CONFORM TO ASTM A 185.

ELECTRICAL NOTES

- SUBMITTAL OF BID INDICATES CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED UNDER THIS CONTRACT. CONTRACTOR IS RESPONSIBLE FOR ALL FIELD VERIFICATION.
- THESE PLANS ARE DIAGRAMMATIC ONLY, AND NOT TO BE SCALED.
- ELECTRICAL CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION, CONSTRUCTION TOOLS, TRANSPORTATION, ETC. FOR A COMPLETE AND PROPERLY OPERATIVE SYSTEM ENERGIZED THROUGHOUT AND AS INDICATED ON DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.
- ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE OR GROUP OF EQUIPMENT. MATERIALS SHALL BE LISTED AND APPROVED BY UNDER-WRITER'S LABORATORY AND SHALL BEAR THE INSPECTION LABEL "I" WHERE SUBJECT TO SUCH APPROVAL MATERIALS SHALL MEET WITH APPROVAL OF THE DIVISION OF INDUSTRIAL SAFETY AND ALL GOVERNING BODIES HAVING JURISDICTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA AND NBFU.
- ALL CONDUIT INSTALLED SHALL BE SURFACE MOUNTED UNLESS OTHERWISE NOTED.
- ELECTRICAL CONTRACTOR SHALL CARRY OUT HIS WORK WITH ACCORDANCE WITH ALL GOVERNING STATE, COUNTY, LOCAL CODES AND O.S.H.A.
- ELECTRICAL CONTRACTOR SHALL SECURE ALL NECESSARY ELECTRICAL PERMITS, AND PAY ALL REQUIRED FEES.
- COMPLETE JOB SHALL BE GUARANTEED FOR A PERIOD OF NO LESS THAN ONE YEAR AFTER THE DATE OF JOB COMPLETION. ANY WORK, MATERIAL, OR EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE ELECTRICAL CONTRACTOR.
- ALL CONDUIT ONLY (C.O.) SHALL HAVE A PULL WIRE OR ROPE, AND TRUE TAPE.
- PROVIDE THE OWNER WITH ONE SET OF COMPLETE DIMENSIONS AND CIRCUITS, WITHIN 10 WORKING DAYS OF PROJECT COMPLETION. ELECTRICAL "AS BUILT" DRAWINGS, SHOWING ACTUAL LOCATION OF CONDUITS.
- ALL BROCHURES, OPERATING MANUALS, CATALOGS, SHOP DRAWINGS, ETC. SHALL BE TURNED OVER TO PROJECT MANAGER AT JOB COMPLETION.
- USE T-TAP CONNECTIONS ON ALL MULTI-CIRCUITS WITH COMMON NEUTRAL CONDUCTOR FOR LIGHTING FIXTURE. ALL CONDUCTORS SHALL BE COPPER.
- THE EXTERIOR GROUND RING SHALL BE TESTED PER CCI SPECIFICATIONS AND SHALL HAVE A RESISTANCE TO EARTH OF 5 OHMS OR LESS. IF NOT NOTIFY ENGINEER.
- ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING NOT LESS THAN THE MAXIMUM SHORT =CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED, AND A MINIMUM OF 10,000 A.I.C.
- THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY ALL APPLICABLE CODES.
- PATCH, REPAIR, AND PAINT ANY AREA THAT HAS BEEN DAMAGED IN THE COURSE OF THE ELECTRICAL WORK.
- IN DRILLING HOLES INTO CONCRETE (WHETHER FOR FASTENING OR ANCHORING PURPOSES OR PENETRATIONS THROUGH THE FLOOR FOR CONDUIT RUNS, PIPE RUNS, ETC.) IT MUST BE CLEARLY UNDERSTOOD THAT TENDONS AND RE-BARS WILL NOT BE DRILLED INTO, CUT, OR DAMAGED UNDER ANY CIRCUMSTANCES.
- LOCATION OF TENDONS AN RE-BARS ARE NOT DEFINITELY KNOWN AND THEREFORE MUST BE SEARCHED FOR BY APPROPRIATE METHODS AND EQUIPMENT VIA X-RAY, OR OTHER DEVICES THAT CAN ACCURATELY LOCATE THE REINFORCING STEEL TENDONS.
- PENETRATIONS IN FIRE RATED WALLS SHALL BE FIRE STOPPED IN ACCORDANCE WITH APPLICABLE LOCAL BUILDING CODES. USING U.L. RATED MATERIALS.
- ELECTRICAL CONTRACTOR IS TO COORDINATE WITH UTILITY COMPANY FOR CONNECTION OF TEMPORARY AND PERMANENT POWER TO THE SITE. THE TEMPORARY POWER AND ALL HOOK-UP COSTS SHALL BE PAID BY THE CONTRACTOR.
- ELECTRICAL CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND/OR CATALOG CUT-SHEETS ON ALL NON-SPECIFIED ORIGINAL MATERIALS AND EQUIPMENT, TO PROJECT MANAGER PRIOR TO COMMENCEMENT OF THE WORK.
- UPON COMPLETION OF WORK, CONDUCT CONTINUITY AND SHORT CIRCUIT, AS WELL AS, GROUNDING TEST, GROUNDING TEST SHALL BE PERFORMED BY INDEPENDENT TESTING AGENCY, WITH WRITTEN REPORT SUBMITTED TO THE PROJECT MANAGER FOR REVIEW AND APPROVAL.

- CLEAN PREMISES DAILY OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK PREMISES IN A COMPLETE AND UNDAMAGED CONDITION.
- ALL EXTERIOR WALL PENETRATIONS SHALL BE SEALED WITH POLYSEAM SEALANT.
- ALL #2 TINNED BARE COPPER DOWNLEADS TO BE PROTECTED BY 1/2" P.V.C. PIPE AND SECURED.
- COMPRESSION FITTINGS TO BE USED ON ALL CONDUITS (NO SET SCREWS).
- ALL #6 STRANDED COPPER WITH GREEN INSULATION TO BE ATTACHED WITH CRIMPED DOUBLE LUG, ATTACHED WITH NUTS, BOLTS AND STAR WASHERS TYPICAL AND NO-OX GREASE BETWEEN LUG AND BUS BAR.
- ALL ABOVE GROUND CONDUIT SHALL BE RIGID GALVANIZED CONDUIT WITH WEATHERPROOF FITTINGS.

GROUNDING

- ALL METALLIC PARTS OF ELECTRICAL EQUIPMENT WHICH DO NOT CARRY CURRENT SHALL BE GROUNDED IN ACCORDANCE WITH THE REQUIREMENTS OF THE BUILDING MANUFACTURER, T-MOBILE GROUNDING AND BONDING STANDARDS, AND THE NATIONAL ELECTRICAL CODE.
- PROVIDE ELECTRICAL GROUNDING AND BONDING SYSTEM INDICATED WITH ASSEMBLY OF MATERIALS, INCLUDING GROUNDING ELECTRODES, BONDING JUMPERS AND ADDITIONAL ACCESSORIES AS REQUIRED FOR A COMPLETE INSTALLATION.
- ALL GROUNDING CONDUCTORS SHALL PROVIDE A STRAIGHT DOWNWARD PATH TO GROUND WITH GRADUAL BEND AS REQUIRED. GROUNDING CONDUCTORS SHALL NOT BE LOOPED OR SHARPLY BENT. ROUTE GROUNDING CONNECTIONS AND CONDUCTORS TO GROUND IN THE SHORTEST AND STRAIGHTEST PATHS POSSIBLE TO MINIMIZE TRANSIENT VOLTAGE RISES. BUILDINGS AND/OR NEW TOWERS GREATER THAN 75 FEET IN HEIGHT AND WHERE THE MAIN
- GROUNDING CONDUCTORS ARE REQUIRED TO BE ROUTED TO GRADE, THE CONTRACTOR SHALL ROUTE TWO GROUNDING CONDUCTORS FROM THE ROOFTOP, TOWERS, AND WATER TOWERS GROUND RING, TO THE EXISTING GROUNDING SYSTEM. THE GROUNDING CONDUCTORS SHALL NOT BE SMALLER THAN #2 AWG COPPER. ROOFTOP GROUND RING SHALL BE BONDED TO THE EXISTING GROUNDING SYSTEM, THE BUILDING STEEL COLUMNS, LIGHTNING PROTECTION SYSTEM, AND BUILDING MAIN WATER LINE (FERROUS OR NONFERROUS METAL PIPING ONLY).
- TIGHTEN GROUNDING AND BONDING CONNECTORS, INCLUDING SCREWS AND BOLTS, IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED TORQUE TIGHTENING VALUES FOR CONNECTORS AND BOLTS. WHERE MANUFACTURER'S TORQUING REQUIREMENTS ARE NOT AVAILABLE, TIGHTEN CONNECTIONS TO COMPLY WITH TIGHTENING TORQUE VALUES SPECIFIED IN UL TO ASSURE PERMANENT AND EFFECTIVE GROUNDING. CONTRACTOR SHALL VERIFY THE LOCATIONS OF GROUNDING TIE-IN-POINTS TO THE EXISTING
- ALL UNDERGROUND GROUNDING CONNECTIONS SHALL BE MADE BY THE GROUNDING SYSTEM. EXOTHERMIC WELD PROCESS AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- ALL GROUNDING CONNECTIONS SHALL BE INSPECTED FOR TIGHTNESS. EXOTHERMIC WELDED CONNECTIONS SHALL BE APPROVED BY THE INSPECTOR HAVING JURISDICTION BEFORE BEING PERMANENTLY CONCEALED.
- APPLY CORROSION-RESISTANCE FINISH TO FIELD CONNECTIONS AND PLACES WHERE FACTORY APPLIED PROTECTIVE COATINGS HAVE BEEN DESTROYED.
- A SEPARATE, CONTINUOUS, INSULATED EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED IN ALL FEEDER AND BRANCH CIRCUITS.
- BOND ALL INSULATED GROUNDING BUSHINGS WITH A BARE 6 AWG GROUNDING CONDUCTOR TO A GROUND BUS.
- DIRECT BURIED GROUNDING CONDUCTORS SHALL BE INSTALLED AT A NOMINAL DEPTH OF 36" MINIMUM BELOW GRADE, OR 6" BELOW THE FROST LINE, USE THE GREATER OF THE TWO DISTANCES.
- ALL GROUNDING CONDUCTORS EMBEDDED IN OR PENETRATING CONCRETE SHALL BE INSTALLED IN SCHEDULE 40 PVC CONDUIT.
- THE INSTALLATION OF CHEMICAL ELECTROLYTIC GROUNDING SYSTEM IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. REMOVE SEALING TAPE FROM LEACHING AND BREATHER HOLES. INSTALL PROTECTIVE BOX FLUSH WITH GRADE.
- DRIVE GROUND RODS UNTIL TOPS ARE A MINIMUM DISTANCE OF 36" DEPTH OR 6" BELOW FROST LINE, USING THE GREATER OF THE TWO DISTANCES.
- IF COAX ON THE ICE BRIDGE IS MORE THAN 6 FT. FROM THE GROUND BAR AT THE BASE OF THE TOWER, A SECOND GROUND BAR WILL BE NEEDED AT THE END OF THE ICE BRIDGE, TO GROUND THE COAX CABLE GROUNDING KITS AND IN-LINE ARRESTORS
- CONTRACTOR SHALL REPAIR, AND/OR REPLACE, EXISTING GROUNDING SYSTEM COMPONENTS DAMAGED DURING CONSTRUCTION AT THE CONTRACTORS EXPENSE.

PRESENTED BY:

T-Mobile

Insite inc.
Wireless Consulting Services
15660 MIDWEST RD. SUITE 140 OAKBROOK TERRACE, IL 60181



SITE NAME:

DN63XC027

SITE ADDRESS:

19201 EAST MAINSTREET
PARKER, CO 80134

SITE COUNTY:

DOUGLAS COUNTY

SITE ID:

DN06196A

REVISIONS

Rev.	Date:	Description:	By:
0	09/14/22	PRELIMINARY	MC
1	10/19/22	REV PRELIM	MC
2			
3			
4			
5			
6			
7			

STAMPING SIGNATURE:

THIS WORK WAS PREPARED BY MYSELF OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ALL SCALES ARE SET FOR 11"x17"

SHEET TITLE:

GENERAL NOTES

SHEET NUMBER:

GN1.0

DRAWN BY:	CHK BY:	APV BY:
MC	CM	KS