



SITE NUMBER: DN06195A
SITE NAME: DN63XC023
SITE TYPE: MONOPOLE
TOWER HEIGHT: 80'-3"



BUSINESS UNIT #: 877069
SITE ADDRESS: 6135 TEMPLETON GAP RD
COUNTY: EL PASO
 COLORADO SPRINGS, CO 80922

PCD File No. COM21038

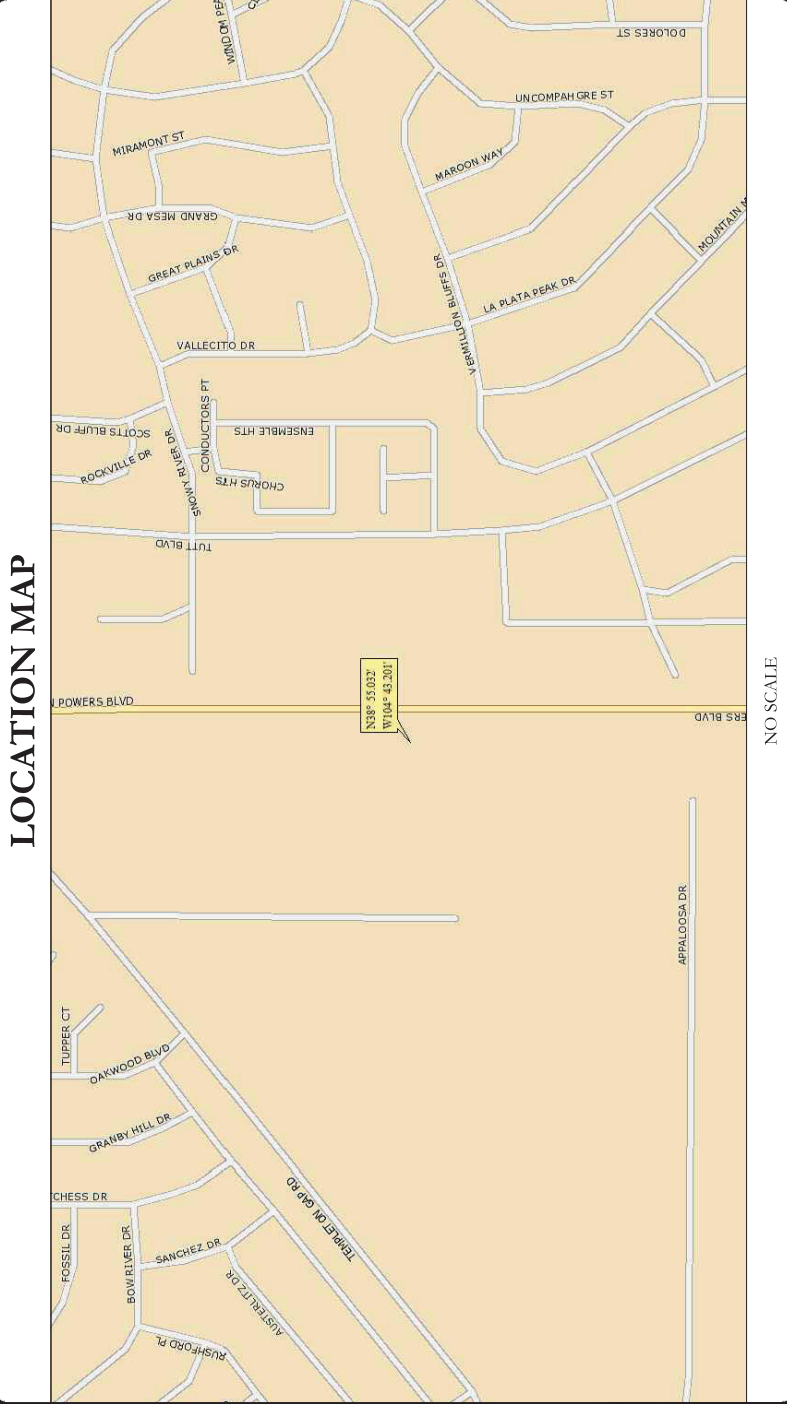
SITE INFORMATION	
CROWN CASTLE USA INC.	F5/FILL-IN/COLORADO SPGS/CSP18
SITE NAME:	6135 TEMPLETON GAP RD
SITE ADDRESS:	COLORADO SPRINGS, CO 80922
COUNTY:	EL PASO
MAP/PARCEL #:	6313000045
AREA OF CONSTRUCTION:	EXISTING
LATITUDE:	38° 55' 01.94"
LONGITUDE:	-104° 43' 12.08"
LAT/LONG TYPE:	NAD83
GROUND ELEVATION:	6,814 FT
CURRENT ZONING:	RR-5
JURISDICTION:	EL PASO COUNTY
OCCUPANCY CLASSIFICATION:	U
TYPE OF CONSTRUCTION:	IIB
A.D.A. COMPLIANCE:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION
PROPERTY OWNER:	BRUCE M. COTTRELL & SKYE M. STEVENS
TOWER OWNER:	CROWN CASTLE 2000 CORPORATE DRIVE CANONSBURG, PA 15317
CARRIER/APPLICANT:	T-MOBILE 2323 DELGANY STREET DENVER, CO 80216
ELECTRIC PROVIDER:	MOUNTAIN VIEW ELECTRIC (800) 388-9881
TELCO PROVIDER:	UNKNOWN

DRAWING INDEX	
SHEET #	SHEET DESCRIPTION
T-1	TITLE SHEET
T-2	GENERAL NOTES
C-1-1	SITE SURVEY
C-1-2	EXISTING EQUIPMENT LAYOUT
C-1-3	NEW EQUIPMENT LAYOUT
C-2	TOWER ELEVATIONS
C-3	ANTENNA PLANS
C-4	FINAL EQUIPMENT SCHEDULE
C-5-1	EQUIPMENT SPECS
C-5-2 & 5.3	EQUIPMENT SPECS
E-1	ELECTRICAL DETAILS
E-2	ELECTRICAL DETAILS
E-3	ELECTRICAL DETAILS
G-1	GROUNDING DETAILS
ATTACHED RF CABLING DIAGRAM	
ALL DRAWINGS CONTAINED HEREIN ARE FORMATTED FOR FULL SIZE. 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.	

CALL COLORADO ONE CALL (800) 922-1987
 CALL 5 WORKING DAYS BEFORE YOU DIG!

PROJECT TEAM	
A&E FIRM:	TOWER ENGINEERING PROFESSIONALS 4710 E ELWOOD ST, STE 9 PHOENIX, AZ 85040 OFFICE: (480) 285-0036
CROWN CASTLE USA INC. DISTRICT CONTACTS:	200 SPECTRUM CENTER DRIVE, SUITE 1700 & 1800 IRVINE, CA 92618 BRYCE NORTHCUTT - PROJECT MANAGER BRYCE.NORTHCUTT@CROWNCASTLE.COM KEITH HAHN - A&E SPECIALIST KEITH.HAHN@CROWNCASTLE.COM (314) 372-2836

PROJECT DESCRIPTION	
THE PURPOSE OF THIS PROJECT IS TO ENHANCE BROADBAND CONNECTIVITY AND CAPACITY TO THE EXISTING ELIGIBLE WIRELESS FACILITY.	
TOWER SCOPE OF WORK:	<ul style="list-style-type: none"> REMOVE EXISTING MOUNT REMOVE ALL SPRINT EQUIPMENT ON TOWER INSTALL PLATFORM MOUNT MC-PM12M-AP4 w/ MT-195-12HD, PVS-050B-U INSTALL (6) ANTENNAS <ul style="list-style-type: none"> (3) ANDREW/HBXX-6517DS-A2M (3) NOKIA/AEHC INSTALL (2) 6x12 HCS HYBRID CABLES INSTALL (3) RADIOS <ul style="list-style-type: none"> (3) NOKIA AHFG INSTALL (2) PENDANTS REMOVE ALL UNUSED EQUIPMENT
GROUND SCOPE OF WORK:	<ul style="list-style-type: none"> ADD (2) ASISs, (2) ASISs, (1) FSMF, (2) ABILAs, (5) ABILs (2) AMIAs ADD (1) VOLTAGE BOOSTER ADD (1) EXTRA BOOSTER AMPLIFIER ADD (2) HCS 2.0 JUNCTION BOXES ADD (1) GENERIC 600A CABINET ADD (1) GENERIC BATTERY CABINET FOR 600A SSC ADD E5-LINK (ENTER CABINET CONNECTION) ADD (1) UTILITY METER ADD (1) DISCONNECT SWITCH REMOVE ALL UNUSED EQUIPMENT



APPLICABLE CODES/REFERENCE DOCUMENTS	
ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES:	
CODE TYPE	CODE
BUILDING	2015 IBC
MECHANICAL	2015 IMC
ELECTRICAL	2014 NEC
REFERENCE DOCUMENTS:	
STRUCTURAL ANALYSIS:	B+T GROUP
DATED:	04/20/2021
MOUNT ANALYSIS:	PENDING
DATED:	PENDING
RFDS REVISION:	01
DATED:	01/25/2021
ORDER ID:	543959
REVISION:	2
NOTE: PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN NOC AT (800) 788-7011 & CROWN CONSTRUCTION MANAGER.	

T-Mobile
 2323 DELGANY STREET
 DENVER, CO 80216

CROWN CASTLE
 200 SPECTRUM CENTER DRIVE,
 SUITE 1700 & 1800
 IRVINE, CA 92618

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 4710 E ELWOOD ST, STE 9
 PHOENIX, AZ 85040
 OFFICE: (480) 285-0036
 www.tepgroup.net

T-MOBILE SITE NUMBER:
 DN06195A (SPRINT KEEP)
BU #: 877069
F5/FILL-IN/COLORADO SPGS/CSP18
 6135 TEMPLETON GAP RD
 COLORADO SPRINGS,
 CO 80922
 EXISTING 80'-3" MONOPOLE

ISSUED FOR:				
REV	DATE	DRWN	DESCRIPTION	DES./Q/A
0	05/05/21	VBP	CONSTRUCTION	JFJ
1	05/25/21	VBP	CONSTRUCTION	JFJ
2	06/09/21	AOW	CONSTRUCTION	JFJ
3	07/01/21	SBC	CONSTRUCTION	JFJ
4	07/19/21	JEM	CONSTRUCTION	JFJ

07/19/21

Andrew R. Berglund, P.E.
 Professional Engineer License: #58272

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SHEET NUMBER: T-1
REVISION: 4

T-Mobile
 2323 DELGANY STREET
 DENVER, CO 80216

CROWN CASTLE
 200 SPECTRUM CENTER DRIVE,
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SPGS/CSP18
 6135 TEMPLETON GAP RD
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 CO 80922
 EXISTING 80'-3" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DIES/QA
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1	05/25/21	VBP	CONSTRUCTION	JFJ
2	06/09/21	AOW	CONSTRUCTION	JFJ
3	07/01/21	SBC	CONSTRUCTION	JFJ
4	07/19/21	JEM	CONSTRUCTION	JFJ

FOR REFERENCE

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SHEET NUMBER: **C-1.1**
 REVISION: **4**

CROWN CASTLE

PROJECT INFORMATION:
 BUN: 877069
 6135 TEMPLETON GAP ROAD
 COLORADO SPRINGS, CO 80922

ORIGINAL ISSUE DATE: **03/23/15**

REV.	DATE	DESCRIPTION	BY
0	03/23/15	SUBMITTAL	CK

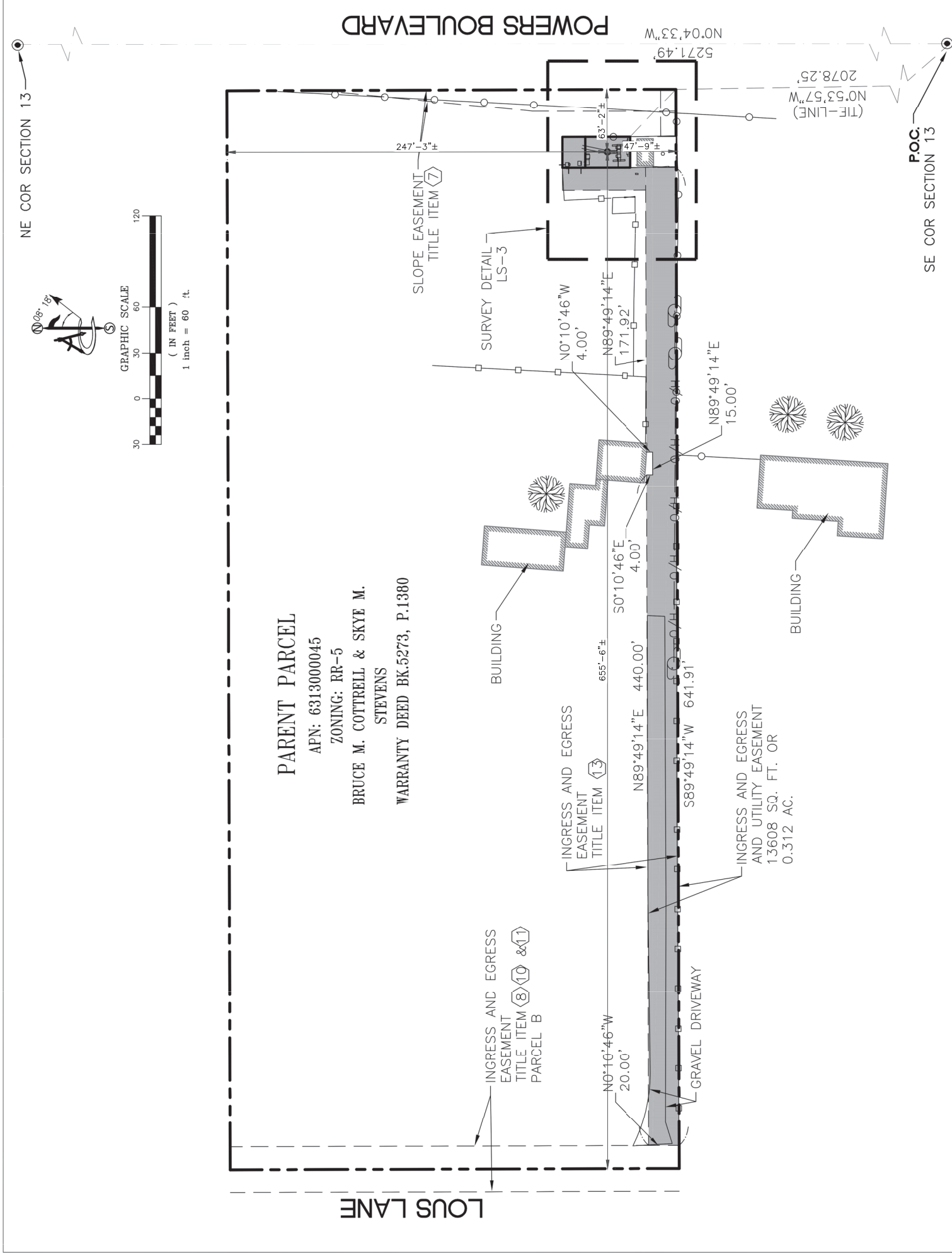
PLANS PREPARED BY: _____

CONSULTANT:
Ambit
 412 EAST SOUTHERN AVENUE
 TEMPE, ARIZONA 85282 (602)463-0472

DRAWN BY: _____ CHK.: _____ APV.: _____
 CK: _____ NS: _____ WS: _____
 LICENSE: _____

SHEET TITLE: **OVERALL DETAIL**

SHEET NUMBER: **LS-2**



1 SITE SURVEY
 SCALE: NO SCALE



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BU #: 877069
**F5/FILL-IN/COLORADO
SPGS/CSP18**

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COLORADO SPRINGS,
CO 80922

EXISTING 80'-3" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DIES/QA
0	05/05/21	VRP	CONSTRUCTION	JFJ
1	05/25/21	VBP	CONSTRUCTION	JFJ
2	06/09/21	AOW	CONSTRUCTION	JFJ
3	07/01/21	SBC	CONSTRUCTION	JFJ



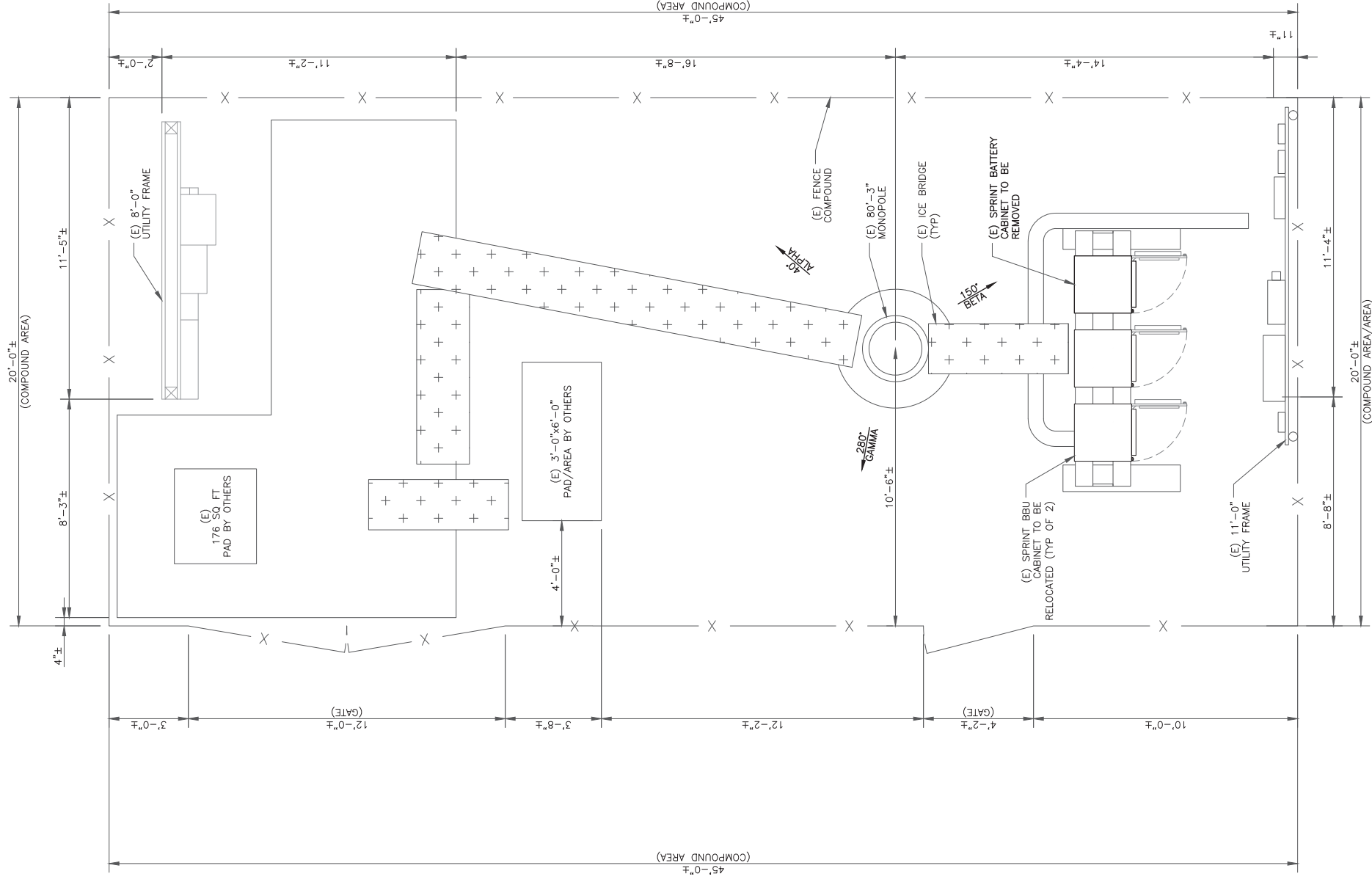
07/01/21

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SHEET NUMBER: **C-1.2** REVISION:

3



1 EXISTING EQUIPMENT LAYOUT

SCALE: 2" = 1'-0" (FULL SIZE)
3/16" = 1'-0" (11x17)
5/16" = 1'-0" (11x17)



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**T-MOBILE SITE NUMBER:
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BU #: 877069

**F5/FILL-IN/COLORADO
SPGS/CSP18**

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EXISTING 80'-3" MONOPOLE

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1	05/25/21	VBP	CONSTRUCTION	JFJ
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3	07/01/21	SBC	CONSTRUCTION	JFJ

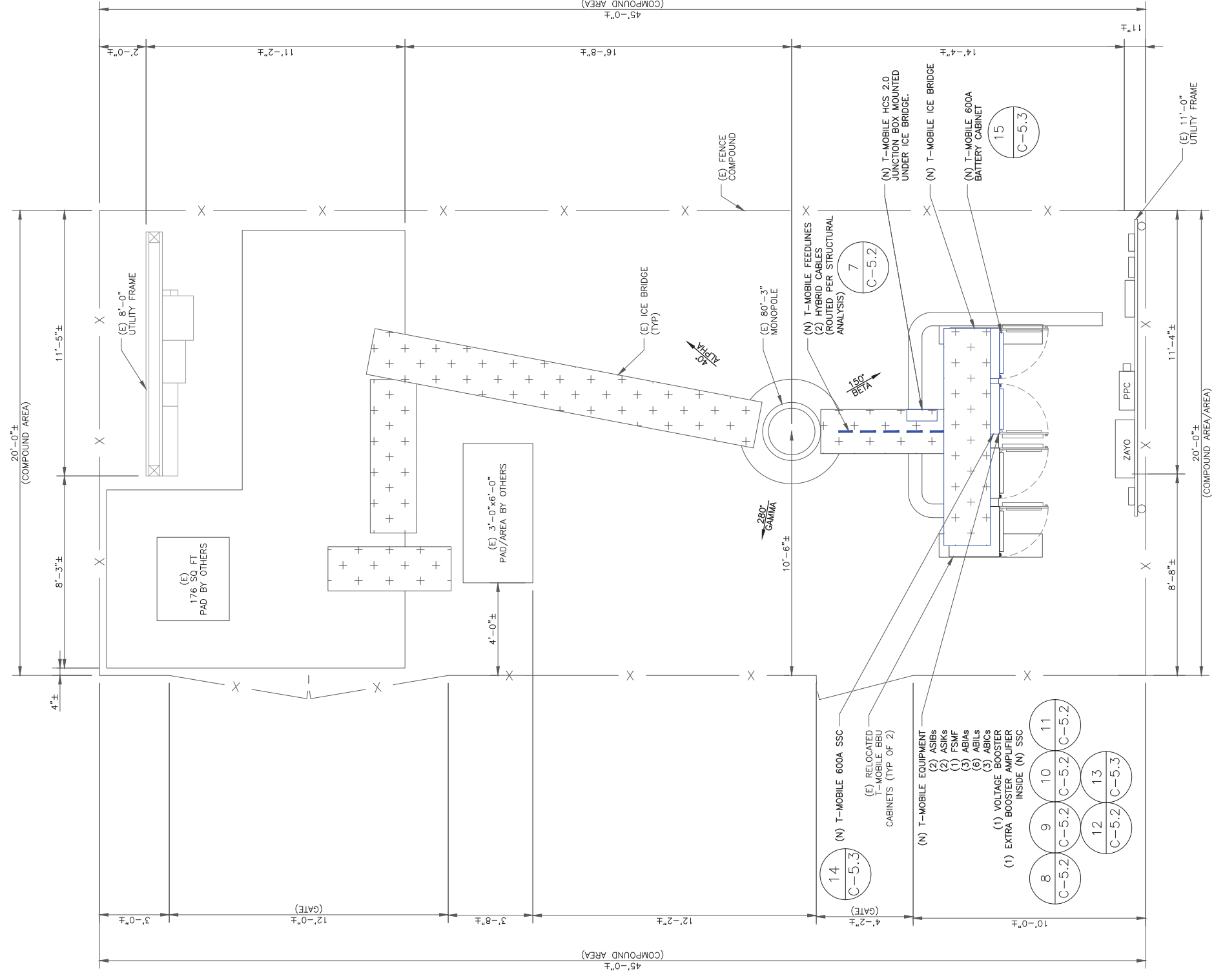
07/01/21

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SHEET NUMBER:
C-1.3

REVISION:
3



1 NEW EQUIPMENT LAYOUT

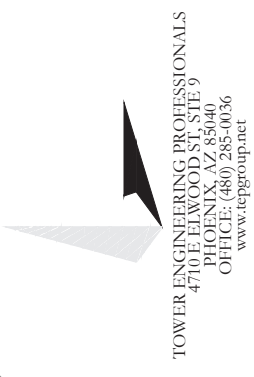
SCALE: $\frac{3/8"=1'-0"}{2}$ (FULL SIZE)
 $\frac{3/16"=1'-0"}{2}$ (1x1/2)



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**T-MOBILE SITE NUMBER:
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**F5/FILL-IN/COLORADO
SPGS/CSP18**

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CO 80922

EXISTING 80'-3" MONOPOLE

ISSUED FOR:

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0	05/05/21	VBP	CONSTRUCTION	JFJ
1	05/25/21	VBP	CONSTRUCTION	JFJ

05/25/21

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SHEET NUMBER: C-2

REVISION: 1

EXISTING LIGHTING ROD
ELEV. = 86'-2"

HEIGHT OF STRUCTURE
ELEV. = 80'-3"

NEW T-MOBILE ACL
ELEV. = 80'-0"

NEW T-MOBILE MCL
ELEV. = 78'-0"

EXISTING MCL
ELEV. = 60'-0"

EXISTING MCL
ELEV. = 40'-0"

(N) PLATFORM MOUNT - MC-PM12M-AP4
W/ MT-195-12HD, PVS-050B-U

(N) T-MOBILE EQUIPMENT
(3) COMMSCOPE/HBXX-6517DS-A2M_TMO
(3) NOKIA/AEHC
(3) NOKIA/AHFG
(2) HCS 2.0 PENDANTS
MOUNTED TO NEW MOUNTS

- 1 C-5.1
- 2 C-5.1
- 4 C-5.1
- 6 C-5.1

MOUNT ANALYSIS NOTES:

- THE DESIGN DEPICTED IN THESE DRAWINGS IS VALID WHEN ACCOMPANIED BY A CORRESPONDING PASSING MOUNT ANALYSIS. CONSTRUCTION MANAGER/ GENERAL CONTRACTOR SHALL REQUIRE MOUNT ANALYSIS FOR ANY CONDITIONS PRIOR TO INSTALLATION.
- ANY REQUIRED MOUNT MODIFICATION DESIGN OR MOUNT REPLACEMENT SHALL BE APPROVED BY EOR.

7
C-5.2

(N) T-MOBILE FEEDLINES
(2) HYBRID CABLES
(ROUTED PER STRUCTURAL ANALYSIS)

(E) 80'-3" MONOPOLE

EXISTING LIGHTING ROD
ELEV. = 86'-2"

HEIGHT OF STRUCTURE
ELEV. = 80'-3"

EXISTING SPRINT ACL
ELEV. = 80'-0"

EXISTING SPRINT MCL
ELEV. = 78'-0"

EXISTING MCL
ELEV. = 60'-0"

EXISTING MCL
ELEV. = 40'-0"

(E) T-ARM MOUNT
TO BE REMOVED

(E) SPRINT EQUIPMENT TO BE REMOVED
(6) ANTENNAS
(6) RRHs
MOUNTED TO EXISTING MOUNTS

(E) 80'-3" MONOPOLE

1 EXISTING NORTH ELEVATION

SCALE: 3/16"=1'-0" (FULL SIZE)
3/32"=1'-0" (11x17)

2 NEW NORTH ELEVATION

SCALE: 3/16"=1'-0" (FULL SIZE)
3/32"=1'-0" (11x17)

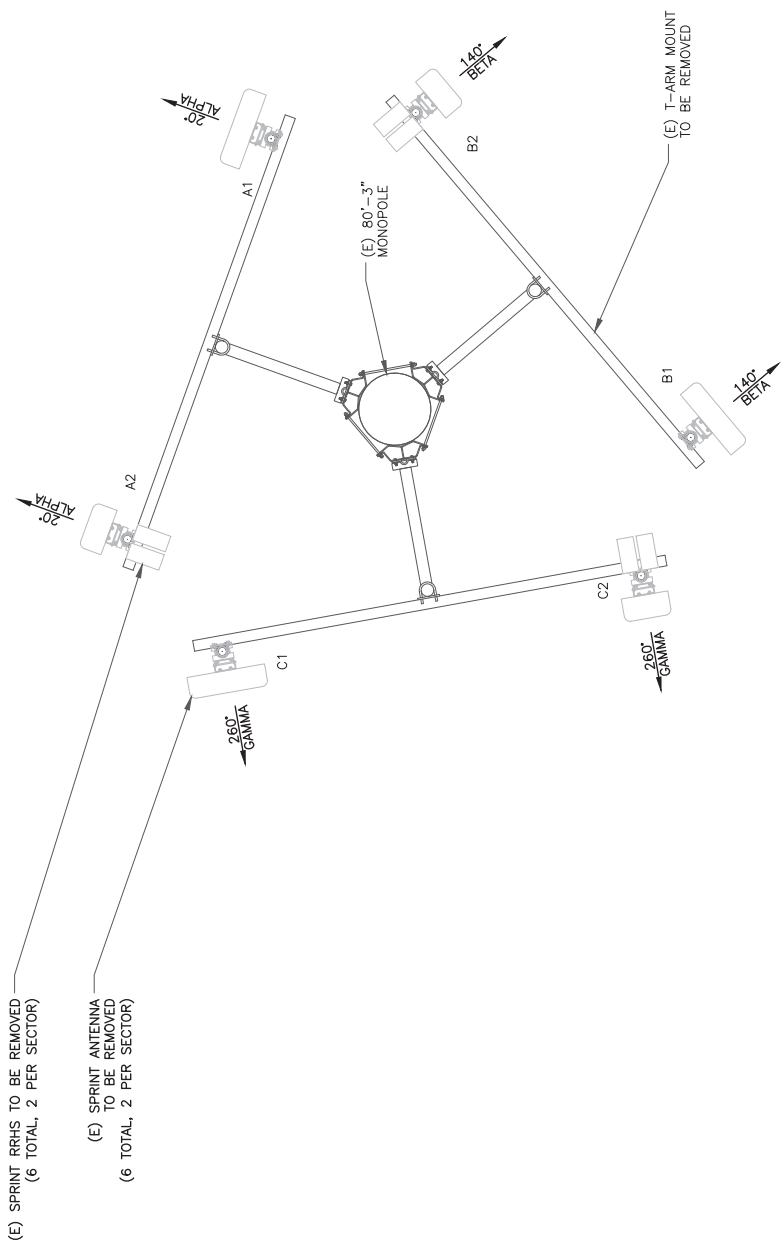
ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
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1	05/25/21	VBP	CONSTRUCTION	JFJ

05/25/21

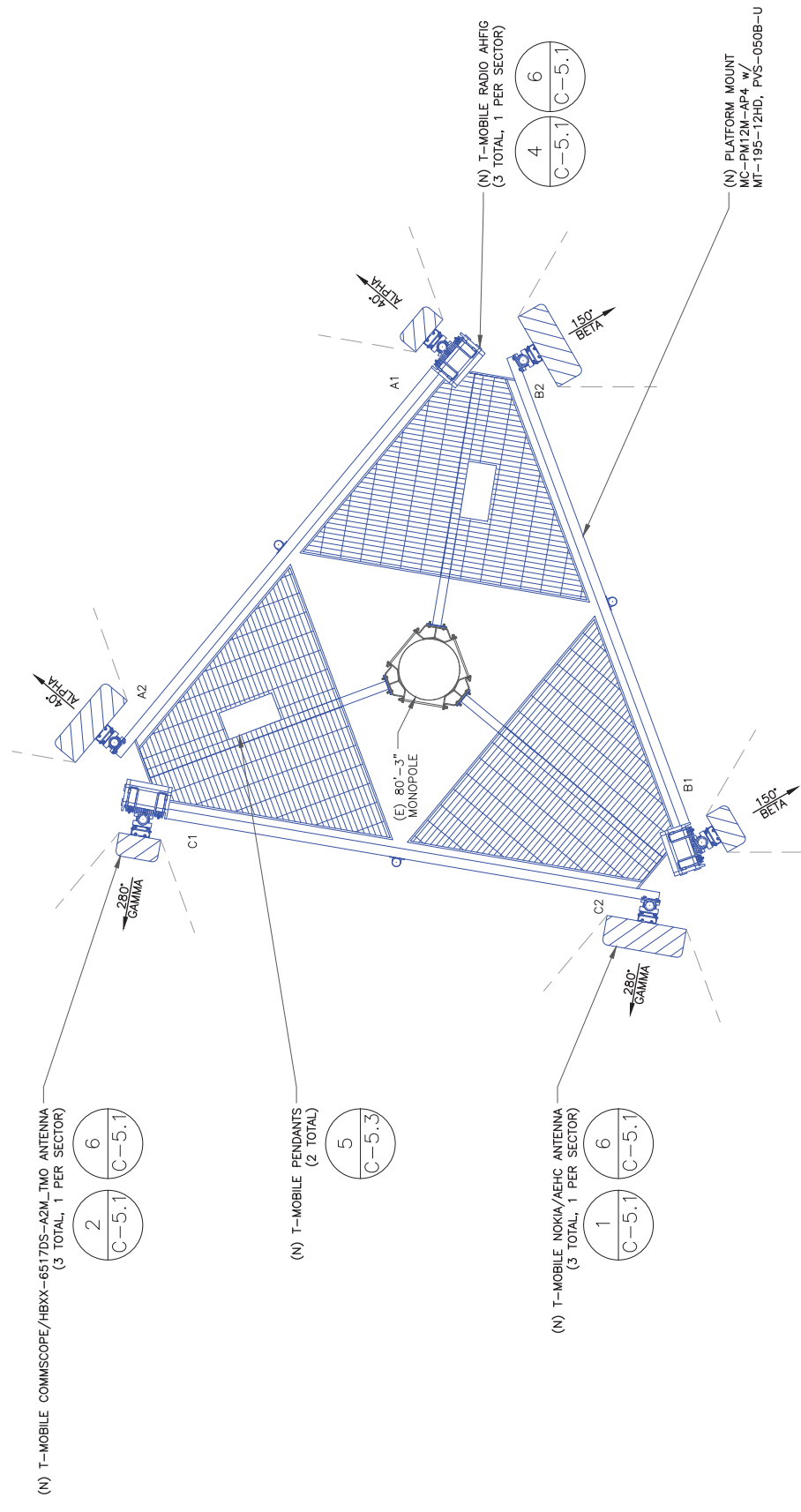
Andrew R. Repland, P.E.
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1 EXISTING ANTENNA PLAN
SCALE: 1/2"=1'-0" (FULL SIZE)
1/4"=1'-0" (1:1x17)

NOTES:
1. ROTATE T-ARMS TO ACCOMMODATE AZIMUTHS



2 NEW ANTENNA PLAN
SCALE: 1/2"=1'-0" (FULL SIZE)
1/4"=1'-0" (1:1x17)

"LOOK UP" - CROWN CASTLE USA, INC.
SAFETY CLIMB REQUIREMENT:

THE INTEGRITY OF THE SAFETY CLIMB AND ALL COMPONENTS OF THE CLIMBING FACILITY SHALL BE CONSIDERED DURING ALL STAGES OF DESIGN, INSTALLATION, AND INSPECTION. TOWER MODIFICATION, MOUNT REINFORCEMENTS, AND/OR EQUIPMENT REPLACEMENT SHALL NOT COMPROMISE THE INTEGRITY ORS FUNCTIONS USE OF THE SAFETY CLIMB OR ANY COMPONENTS OF THE CLIMBING FACILITY ON THE STRUCTURE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: PINCHING OF THE WIRE ROPE, BENDING OF THE WIRE ROPE FROM ITS SUPPORTS, DIRECT CONTACT OR CLOSE PROXIMITY TO THE WIRE ROPE WHICH MAY CAUSE FRICTIONAL WEAR, IMPACT TO THE ANCHORAGE POINTS IN ANY WAY, OR TO IMPEDE/BLOCK ITS INTENDED USE. ANY COMPROMISED SAFETY CLIMB, INCLUDING EXISTING EQUIPMENT, SHALL BE IMMEDIATELY REPORTED TO YOUR CROWN CASTLE USA, INC. POC OR CALL THE NOC TO GENERATE A SAFETY CLIMB MAINTENANCE AND CONTRACTOR NOTICE TICKET.

- NOTES:
- REFERENCE C-4 FOR FINAL EQUIPMENT SCHEDULE
 - REFERENCE C-5.1 & C-5.2 FOR NEW EQUIPMENT SPECIFICATIONS.
 - CONTRACTOR TO VERIFY ALL ANTENNA TIP HEIGHTS DO NOT EXCEED BEACON BASE HEIGHT.

- MOUNT ANALYSIS NOTES:
- THE DESIGN DEPICTED IN THESE DRAWINGS IS VALID WHEN ACCOMPANIED BY A CORRESPONDING PASSING MOUNT ANALYSIS. CONTRACTOR SHALL REVIEW THE MOUNT ANALYSIS FOR ANY CONDITIONS PRIOR TO INSTALLATION. ANY REQUIRED MOUNT MODIFICATION DESIGN OR MOUNT REPLACEMENT SHALL BE APPROVED BY EOR.



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EXISTING 80'-3" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
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1	05/25/21	VBP	CONSTRUCTION	JFJ



05/25/21

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SHEET NUMBER: C-4

REVISION: 1

FINAL EQUIPMENT SCHEDULE
(VERIFY WITH CURRENT RFDS)

ALPHA	ANTENNA			RADIO		DIPLEXER		TMA		SURGE PROTECTION		CABLES		JUMPERS			
	TECH.	STATUS/MANUFACTURER MODEL	AZIMUTH	RAD CENTER	QTY.	STATUS/MODEL	LOCATION	QTY.	STATUS	QTY.	STATUS/MODEL	QTY.	STATUS/TYPE	SIZE	LENGTH	TYPE	QTY.
A1	L2100 L1900 G1900 N1900 N2100	(N) COMMSCOPE HBXX-6517DS-A2M_TMO	40°	80'-0"	1	(N) AHFIG	TOWER	-	-	1	(N) HCS 2.0	1	(N) 6x12 HYBRID	1-1/2"	201'-0"	-	-
A2	L2500 N2500	(N) NOKIA AEHC	40°	80'-0"	-	-	-	-	-	-	-	-	-	-	-	-	-
BETA																	
B1	L2100 L1900 G1900 N1900 N2100	(N) COMMSCOPE HBXX-6517DS-A2M_TMO	150°	80'-0"	1	(N) AHFIG	TOWER	-	-	1	(N) HCS 2.0	1	(N) 6x12 HYBRID	1-1/2"	201'-0"	-	-
B2	L2500 N2500	(N) NOKIA AEHC	150°	80'-0"	-	-	-	-	-	-	-	-	-	-	-	-	-
GAMMA																	
C1	L2100 L1900 G1900 N1900 N2100	(N) COMMSCOPE HBXX-6517DS-A2M_TMO	280°	80'-0"	1	(N) AHFIG	TOWER	-	-	-	-	-	-	-	-	-	-
C2	L2500 N2500	(N) NOKIA AEHC	280°	80'-0"	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTE:
(E) - EXISTING
(N) - NEW

1 FINAL EQUIPMENT SCHEDULE
SCALE: NOT TO SCALE



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1	05/25/21	VBP	CONSTRUCTION	JFJ

05/25/21

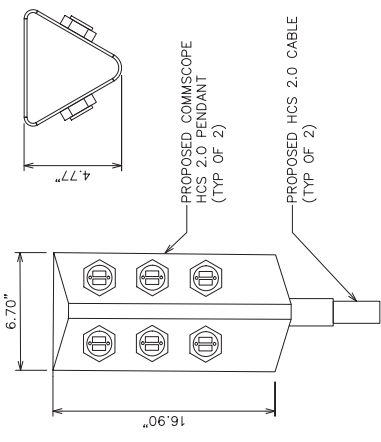
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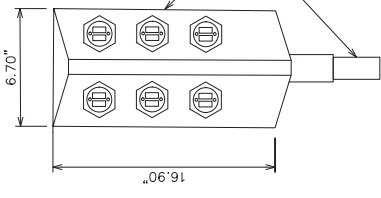
SHEET NUMBER:
C-5.1

REVISION:
1

TOP



FRONT

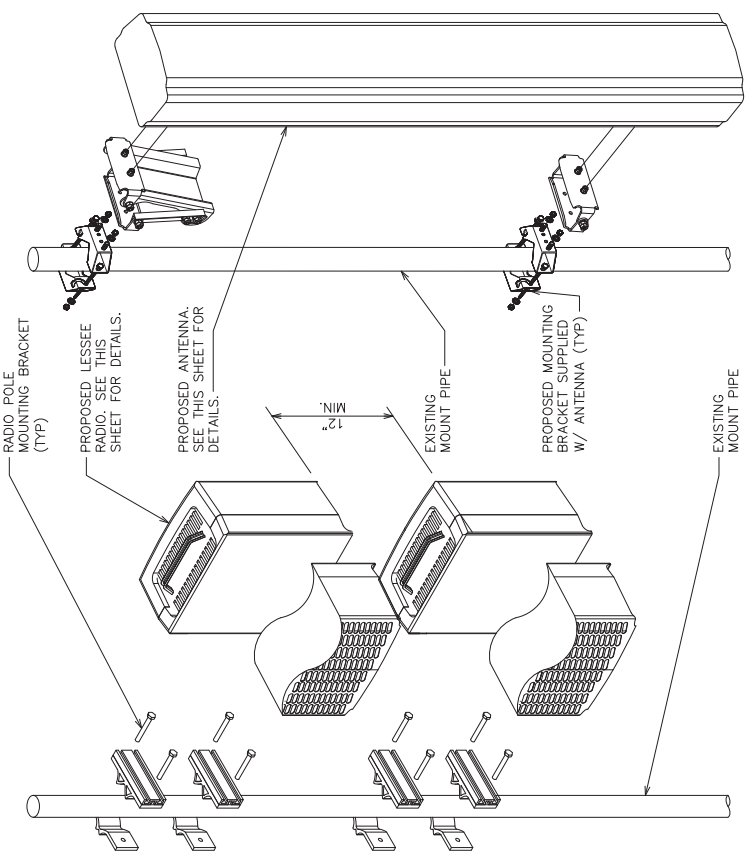


COMMSCOPE HCS 2.0 PENDANT

COMP MAKE: COMMSCOPE
COMP MODEL: HCS 2.0 PART 3
DIMENSIONS, HxWxD: 16.90"x6.70"x4.77"
WEIGHT: 16.39 lbs

3 COMMSCOPE HCS 2.0 PENDANT DETAIL
SCALE: NOT TO SCALE

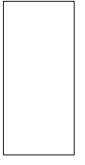
ANTENNA



RADIO

6 RADIO & ANTENNA MOUNTING
SCALE: NOT TO SCALE

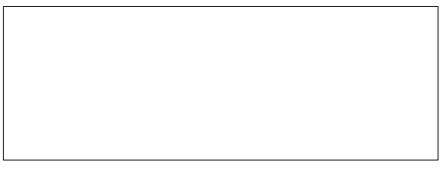
TOP



SIDE



FRONT

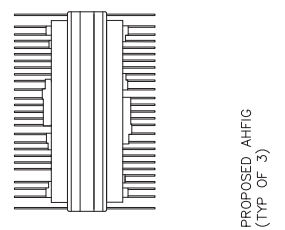


COMMSCOPE - HBXX-6517DS-A2M-TMO

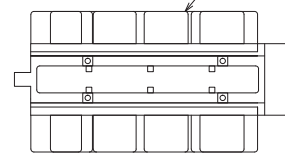
ANTENNA MAKE: COMMSCOPE
ANTENNA MODEL: HBXX-6517DS-A2M-TMO
DIMENSIONS, HxWxD: 74.9"x12.2"x6.5"
WEIGHT: 43.00 LBS

2 COMMSCOPE - HBXX-6517DS-A2M-TMO
SCALE: NOT TO SCALE

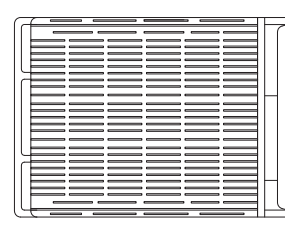
TOP



SIDE



FRONT



NOKIA AHFG

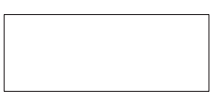
RADIO, AHFG
DIMENSIONS, HxWxD: 28.74"x12.87"x5.59"
WEIGHT: 70.55 LBS

4 NOKIA AHFG
SCALE: NOT TO SCALE

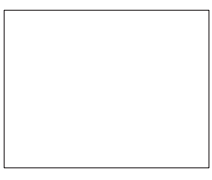
TOP



SIDE



FRONT



NOKIA AEHC

ANTENNA MAKE: NOKIA
ANTENNA MODEL: AEHC
DIMENSIONS, HxWxD: 35.43"x22.83"x8.26"
WEIGHT: 99.20 LBS

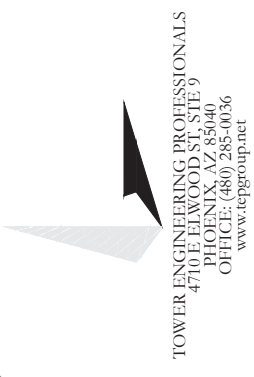
1 NOKIA - AEHC
SCALE: NOT TO SCALE



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PHOENIX, AZ 85040
OFFICE: (480) 285-0036
www.tepgroup.net

T-MOBILE SITE NUMBER:
DN06195A (SPRINT KEEP)

BU #: 877069
**F5/FILL-IN/COLORADO
SPGS/CSP18**

6135 TEMPLETON GAP RD
COLORADO SPRINGS,
CO 80922

EXISTING 80'-3" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	05/05/21	VBP	CONSTRUCTION	JFJ
1	05/25/21	VBP	CONSTRUCTION	JFJ

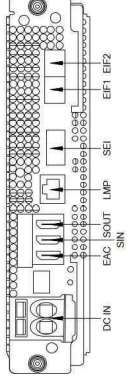
05/25/21

Andrew R. Repland, P.E.
Professional Engineer License #58272

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SHEET NUMBER: **C-5.2**
REVISION: **1**

SIGNAL INTERFACES	REF	CONNECTOR	DESCRIPTION
DC IN	1	DC TERMINAL 48V DC INPUT	
EAC	1	HDM	EXTERNAL ALARM & CONTROL & ALARMS
SIN	1	HDM	SYNCHRONIZATION INPUT GNSS INTERFACE
SOUT	1	HDM	SYNCHRONIZATION OUTPUT
LMP	1	RJ45	LOCAL MANAGEMENT PORT, 10/100/1000 ETHERNET
EIF	2	SFP28	BACKHAL/HIGHER LAYER FRONT-HAL INTERFACE UP TO 25GE PER PORT, SUPPORT FOR SINC EEE158
SEI	1	OSFP+	SYSTEM EXTENSION INTERFACE 4X 10GE
RESET	1		PLUG IN RESET BUTTON
SERVICE	1		STATUS/RESET
LEDS	7		VISUAL INDICATION OF STATUS

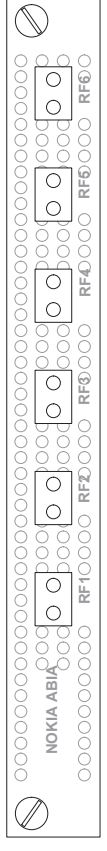


9 ABIA DETAIL
SCALE: NOT TO SCALE

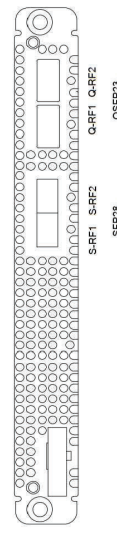
Flexi Multiradio BTS System Module FSMF

- < 15 liters
- < 15 kg
- 3 height units
- IP65
- 35 to +55 °C

12 FSMF DETAIL
SCALE: NOT TO SCALE

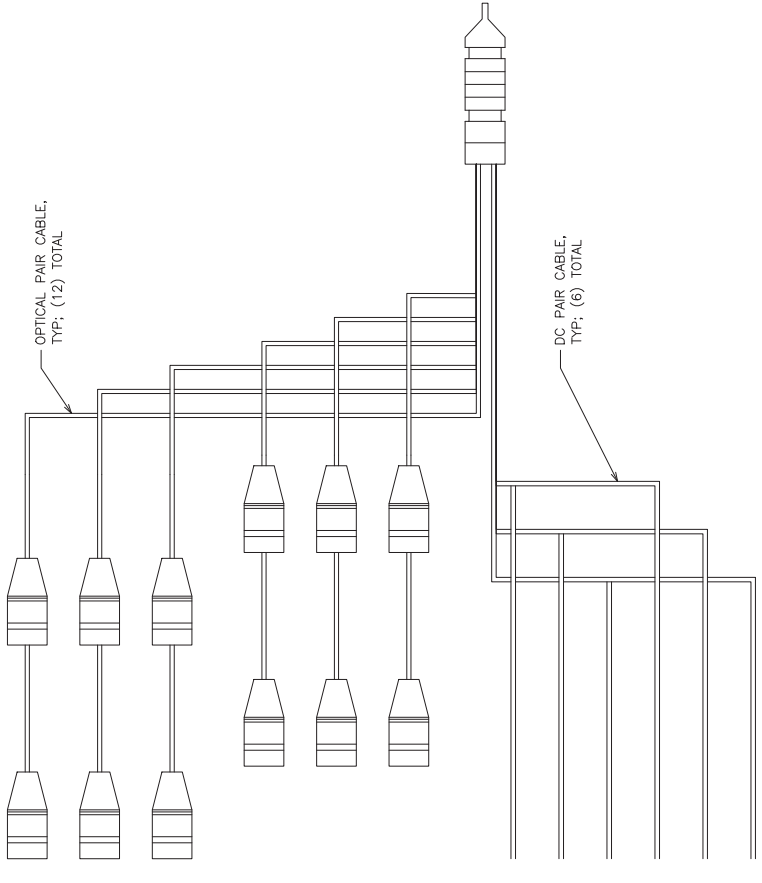


8 ABIA DETAIL
SCALE: NOT TO SCALE



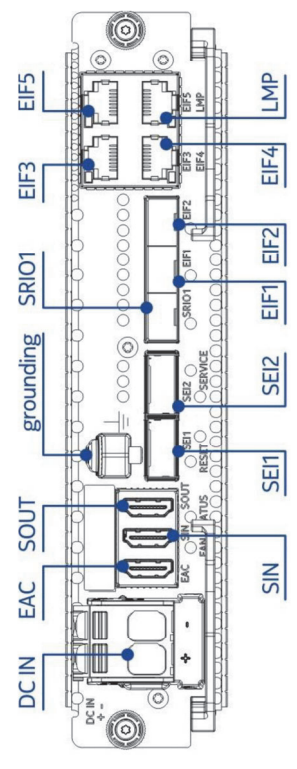
SIGNAL INTERFACES	CONNECTOR	DESCRIPTION
G-RF1	OSFP28	4 X 25/10 Gbps PER EACH CONNECTOR, SUPPORTS 10GE AND 25GE ETHERNET PROTOCOLS
S-RF1	SFP28	1 X 25/10 Gbps PER EACH CONNECTOR, SUPPORTS 10GE AND 25GE ETHERNET PROTOCOLS
LEDS	5	VISUAL INDICATION OF STATUS

11 ASIK DETAIL
SCALE: NOT TO SCALE



ERICSSON - HCS 6X12
WEIGHT: 1.7 LBS/FT
DIAMETER: 1.38" (±.1")
COAX EQUIVALENT: 1 1/8"

7 HCS DETAIL
SCALE: NOT TO SCALE



Property	ASIB
Nokia product code	473764A
Ingress protection class	IP 20
Weight (without packaging)	2.9 kg (6.4 lb)
Introduced by feature	LTE3178: AirScale Common ASIB and SR002002: AirScale Common ASIB PIU SBTS support

10 ASIB DETAIL
SCALE: NOT TO SCALE

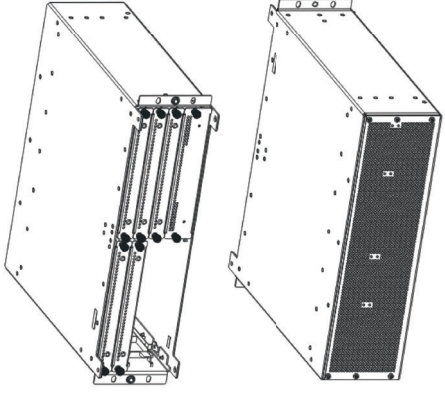
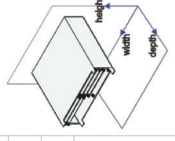


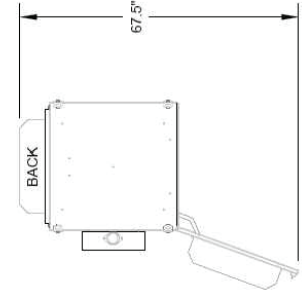
Table: AMMA dimensions and weight

Property	Value
Height	128.6 mm (5.1 in.)
Depth	400 mm (15.7 in.)
Width	447 mm (17.6 in.)

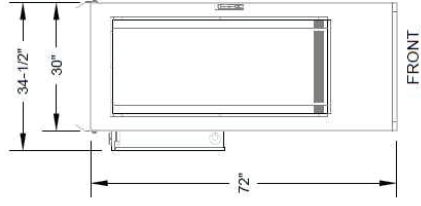
Dimensions orientation



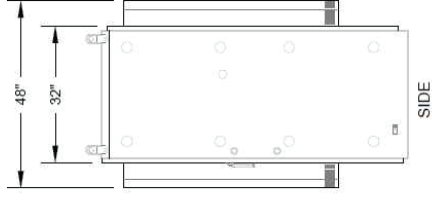
13 NOT USED
SCALE: NOT TO SCALE



PLAN VIEW



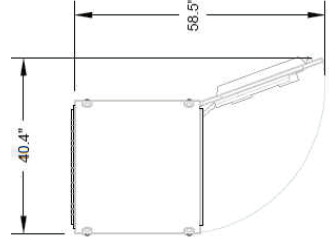
FRONT



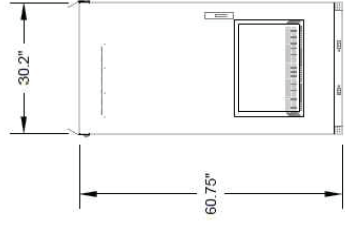
SIDE

PROPERTY	VALUE	PROPERTY
HEIGHT	72 in (876 mm)	BASIC CABINET ENCLOSURE, DC POWER PLANT W/OUT LIFTING BRACKETS
WIDTH	30 in	BASIC CABINET ENCLOSURE, DC POWER PLANT
WIDTH/MAC LOAD CENTER	34-1/2 in (835 mm)	BASIC CABINET ENCLOSURE, DC POWER PLANT W/AC CASE MOUNTED LOAD CENTER
DEPTH	32 in	BASIC CABINET ENCLOSURE, DC POWER PLANT
DEPTH WITH SHROUDS	48 in (1219 mm)	BASIC CABINET ENCLOSURE, W/ FRONT AND REAR DAC SHROUDS
EST. WEIGHT	650 lbs	BASIC CABINET WEIGHT WITH TOTAL OF 7 SUBRACKS INCLUDED

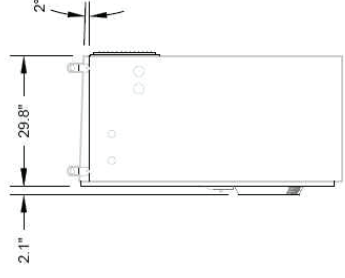
14 600A SSC
SCALE: NOT TO SCALE



PLAN VIEW



FRONT



SIDE

PROPERTY	VALUE
HEIGHT	60.75 in (1543.00 mm)
WIDTH	30.2 in (768.17 mm)
DEPTH W/DAC	31.9 in (810.37 mm)
DEPTH	29.8 in (757.54 mm)
DOOR OPENING WIDTH	26.5 in (673.12 mm)
DOOR OPENING HEIGHT	55.6 in (1411.93 mm)
EST. WEIGHTS	540 lbs (EMPTY) 2700 lbs (4 BATTERY STRINGS)

15 BATTERY CABINET
SCALE: NOT TO SCALE

T-Mobile
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DENVER, CO 80216

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T-MOBILE SITE NUMBER:
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BU #: 877069
F5/FILL-IN/COLORADO
SPGS/CSP18

6135 TEMPLETON GAP RD
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CO 80922

EXISTING 80'-3" MONOPOLE

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1	05/25/21	VBP	CONSTRUCTION	JFJ

05/25/21

Andrew R. Bejpland, P.E.
Professional Engineer License #58272

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SHEET NUMBER:
C-5.3

REVISION:
1

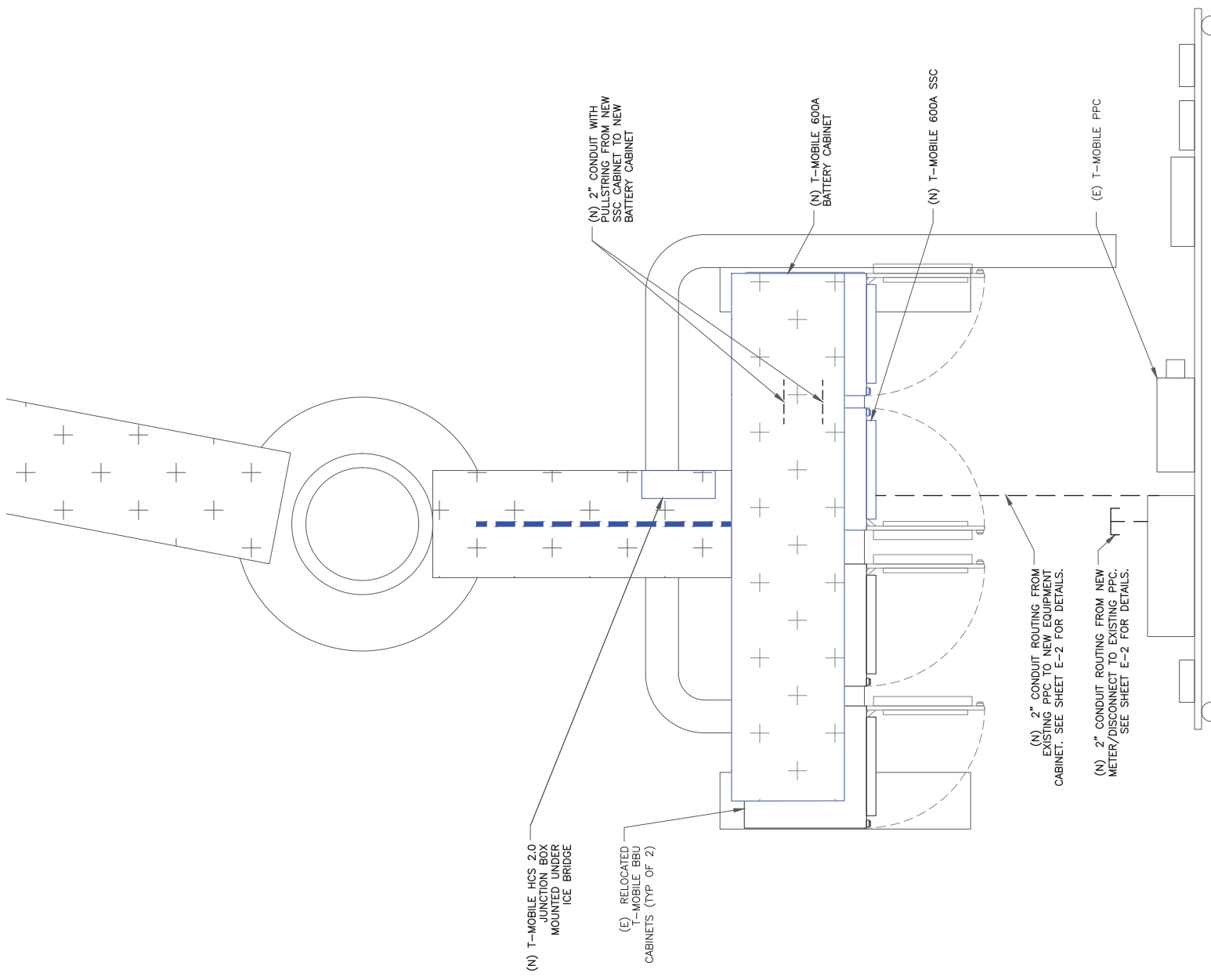
16 NOT USED
SCALE: NOT TO SCALE

17 NOT USED
SCALE: NOT TO SCALE

18 NOT USED
SCALE: NOT TO SCALE

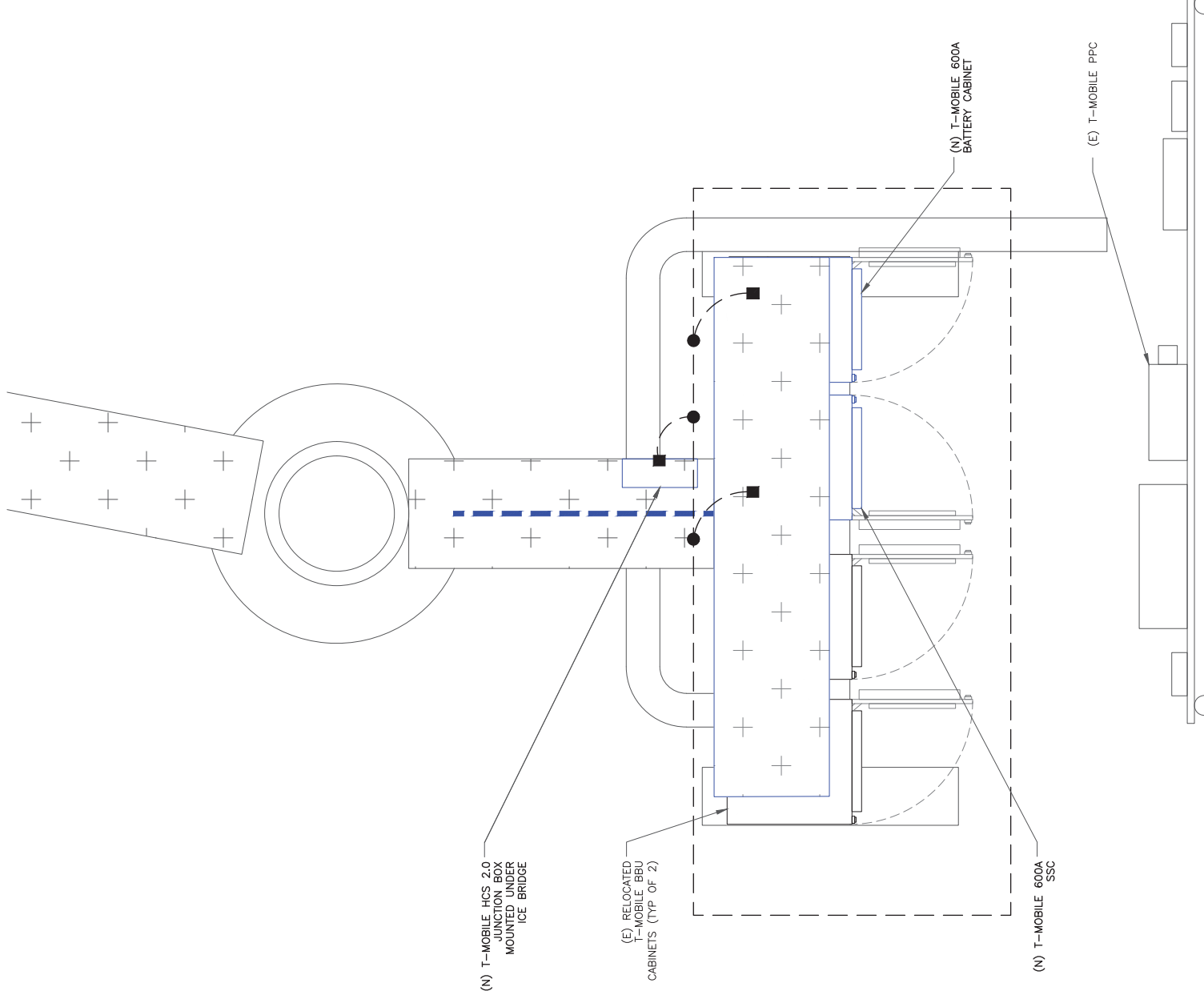
ELECTRICAL DETAILS NOTES:

1. EXISTING EQUIPMENT LAYOUT WAS MADE USING INFORMATION PROVIDED BY CROWN CASTLE. CONTRACTOR TO VERIFY ALL EXISTING INFORMATION IS AS INDICATED ON SITE PLAN. CONTRACTOR IS TO ESTABLISH THE EXISTENCE AND LOCATION OF ALL EXISTING OVERHEAD AND UNDERGROUND UTILITIES. IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER OF ANY DISCREPANCIES.
2. CONTRACTOR TO ENSURE THAT ALL T-MOBILE EQUIPMENT IS INSTALLED INSIDE T-MOBILE'S LEASE AREA, INCLUDING BUT NOT LIMITED TO, EQUIPMENT CABINETS, UTILITY CABINETS, H-FRAMES, ETC.
3. CONTRACTOR TO VERIFY THAT ALL T-MOBILE EQUIPMENT IS INSTALLED TO MEET THE WORKING CLEARANCE REQUIREMENTS OF NEC 110.26



ELECTRICAL DETAILS NOTES:

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3. CONTRACTOR TO VERIFY THAT ALL T-MOBILE EQUIPMENT IS INSTALLED TO MEET THE WORKING CLEARANCE REQUIREMENTS OF NEC 110.26
4. CONTRACTOR TO VERIFY CONDITION AND LOCATION OF ALL EXISTING GROUNDING EQUIPMENT PRIOR TO CONSTRUCTION. TEP DID NOT CONFIRM EXISTING SITE CONDITIONS INCLUDING, BUT NOT LIMITED TO, GROUND RINGS, GROUND RODS, AND GROUND BARS.



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200 SPECTRUM CENTER DRIVE,
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T-MOBILE SITE NUMBER:
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BU #: 877069

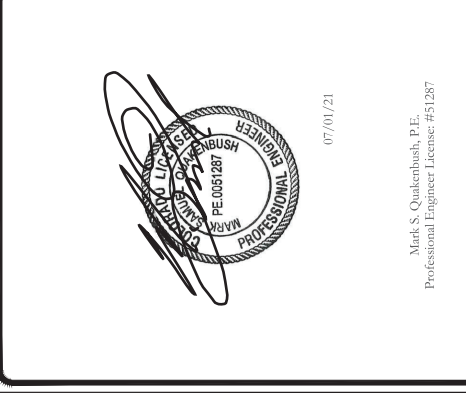
F5/FILL-IN/COLORADO
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EXISTING 80'-3" MONOPOLE

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2	06/09/21	AOW	CONSTRUCTION	JFJ
3	07/01/21	SBC	CONSTRUCTION	JFJ



07/01/21

Mark S. Qualenbush, P.E.
Professional Engineer License: #51267

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SHEET NUMBER: **E-1**

REVISION: **3**



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**F5/FILL-IN/COLORADO
SPGS/CSP18**

6135 TEMPLETON GAP RD
COLORADO SPRINGS,
CO 80922

EXISTING 80'-3" MONOPOLE

ISSUED FOR:

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0	05/05/21	VBP	CONSTRUCTION	JFJ
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2	06/09/21	AOW	CONSTRUCTION	JFJ
3	07/01/21	SBC	CONSTRUCTION	JFJ

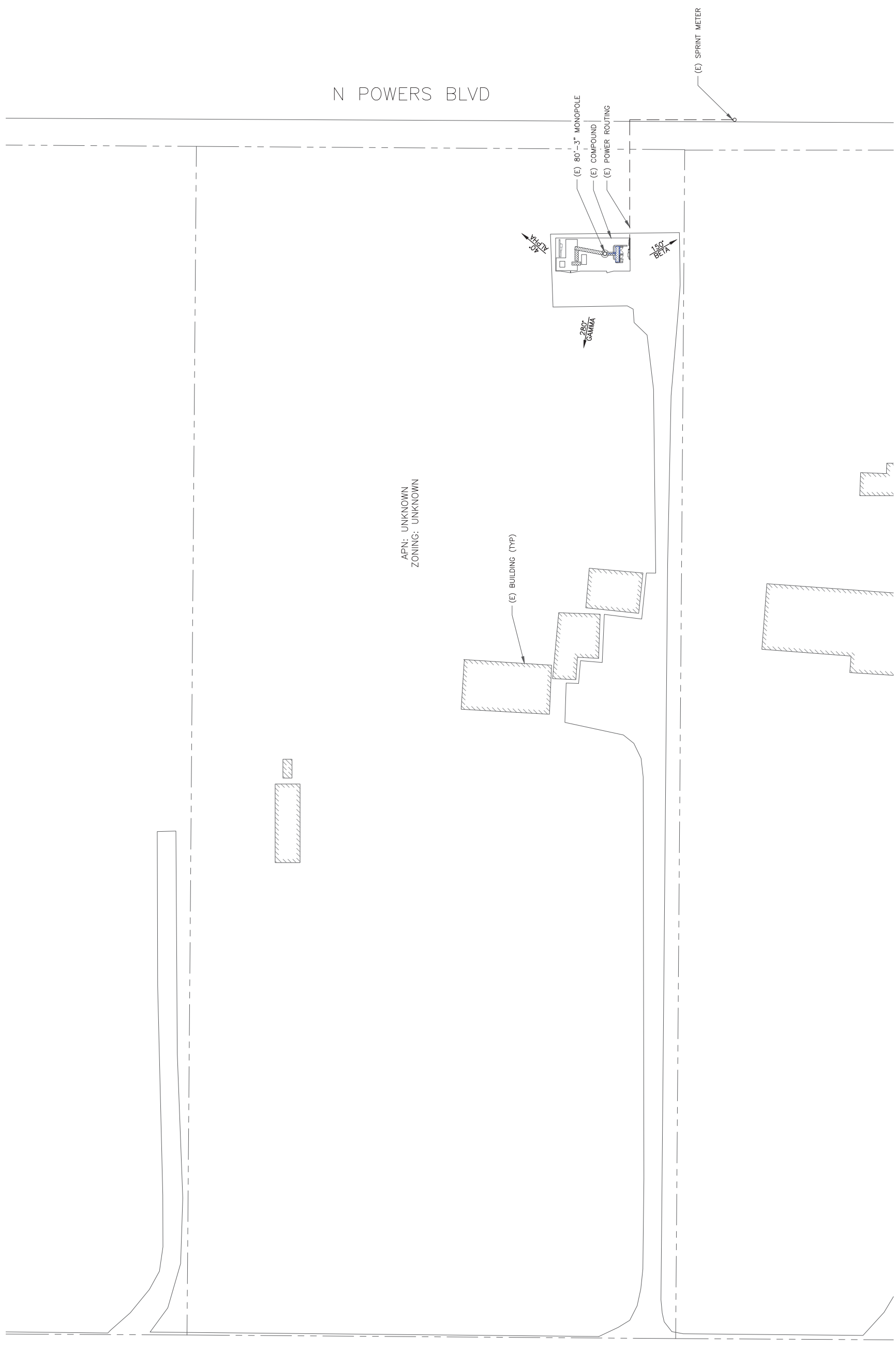
07/01/21

Mark S. Qualkenbush, P.E.
Professional Engineer License: #51287

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SHEET NUMBER: **E-2** REVISION: **3**

SITE PLAN DISCLAIMER:
PROPERTY LINES AND STRUCTURES HAVE BEEN DIGITIZED FROM PREVIOUS PLAN SHEETS. TOWER ENGINEERING PROFESSIONALS HAS NOT COMPLETED A SITE SURVEY AND THEREFORE MAKES NO CLAIMS AS TO THE ACCURACY OF INFORMATION DEPICTED ON THIS SHEET.



1 ELECTRIC ROUTING PLAN

1" = 30'-0" (FULL SIZE)
1" = 60'-0" (11x17)

15' 30'

NEW PANEL: PPC
 LOCATION: PPC CABINET
 MOUNTING SURFACE

ELECTRICAL PANEL SCHEDULE
 65/10KAIC SERIES RATED

VOLTAGE: 240 / 120 V 1ϕ, 3ϕ
 MAINS: 200 A MCB
 BUS: 200 A CU

DESCRIPTION	NEW RATING: 3R			LOAD AMPS			CR	EMT COND	EMT COND	EMT COND	CU	PHASE	CR	NO. BRKR	NO. BRKR	NO. BRKR	NO. BRKR	NO. BRKR	NO. BRKR	NO. BRKR	
	CU	PHASE	NEUT	PHASE A	PHASE B	PHASE C															NO.
MISC	1"	10	6	0.0	0.0	0.0	1	80	15	12	12	3/4"									
(E) TVSS				0.0	0.0	0.0	3				12										
MISC				0.0	0.0	0.0	4				2										
RECEPTACLES	3/4"	12	12	1.5	1.5	1.5	5	1	70	4	8	1"									
(E) GFCI				0.0	0.0	0.0	6														
MISC	1-1/4"	8	3	0.0	0.0	0.0	7				4										
(E) MMBS / OFF				0.0	0.0	0.0	8														
MISC				0.0	0.0	0.0	9														
Cont.				0.0	0.0	0.0	10														
(N) T-MOBILE 600A SSC	2"	6	3/0	0.0	0.0	32.9	11	200													
MISC				32.9	0.0	0.0	13														
Cont.				0.0	0.0	0.0	14														
MISC				0.0	0.0	32.9	15														
Cont.				0.0	0.0	0.0	16														
MISC				32.9	0.0	0.0	17														
Cont.				0.0	0.0	0.0	18														
BUSSED SPACE				0.0	0.0	0.0	19														
BUSSED SPACE				0.0	0.0	0.0	20														
BUSSED SPACE				0.0	0.0	0.0	21														
BUSSED SPACE				0.0	0.0	0.0	22														
BUSSED SPACE				0.0	0.0	0.0	23														
BUSSED SPACE				0.0	0.0	0.0	24														
AMPS PER PHASE (CODE LOAD)				67.3	0.0	0.0															
CONTRACTOR TO INSTALL APPROVED HANDLE TIE ON ALL SHARED NEUTRAL CIRCUITS.																					

DESCRIPTION	AMPS	FEEDER	CONDUIT	CONDUIT SIZE
TO UTILITY SERVICE	(N) 200A, 240V 1ϕ	UTILITY METER		
	(N) (3) 3/0 CU THWN & (1) #6 CU GND, 2°C			
	(N) 200A, 240V 1ϕ	NBR 65KAIC DISCONNECT SWITCH		
	(N) (3) 3/0 CU THWN & (1) #6 CU GND, 2°C			
	(N) 200A GEN PLUG			
	(E) TVSS			
	(E) GFCI			
	(E) BBU			
	(E) MMBS			
	(E) 2.5 EXPANSION			
	(N) 200A/4P			
	(N) (2) #3/0 CU THWN & (1) #6 CU GND, 2°C			
	(N) SSC			
	(N) (2) 2" CONDUIT W/ PULLSTRING FROM NEW BATTERY CABINET TO NEW SSC			
	(N) BATTERY CABINET			

19.92 kVA @ 240 V 1ϕ
 8300 A @ 240 V 1ϕ

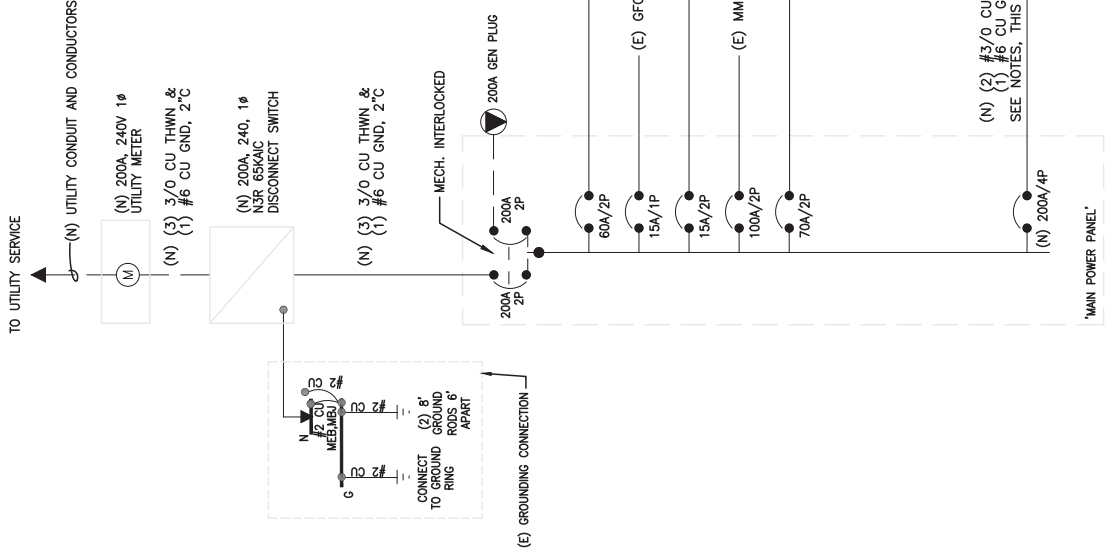
TOTAL VA

LEGEND:
 (E) - EXISTING
 (R) - RELABELED
 (N) - NEW

DC -48V FEEDER CABLING CHART

CALCULATIONS ARE BASED ON WORST CASE FULL LOAD AMPS AT 100% EFFICIENCY. NOT EXCEEDING 3% VOLTAGE DROP. IF FIELD CONDITIONS ARE DIFFERENT THAN INDICATED, CONTACT ENGINEER FOR REISED CALCULATIONS.

DISTANCE FROM EQUIP. CABINET	-48V, DC SINGLE CABLE	-48V, DC PHASE CABLE	CONDUIT SIZE
11'-70"	1-#1/0 CU. AWG		1-1/4"
71'-90"	1-#2/0 CU. AWG		1-1/2"
91'-110"	1-#3/0 CU. AWG		1-1/2"
111'-140"	1-#4/0 CU. AWG		2"
141'-175"	2-#2/0 CU. AWG		2"



NOTE: #6 COPPER WIRE AND GREATER SHALL BE (COPPER) THIN WIRE OR (COPPER) XHHW.

NOTE: TO RUNNING CONDUIT ROUTE - CONTRACTOR SHALL CONTACT THE T-MOBILE PROJECT MANAGER AND VERIFY THE EQUIPMENT CABINET LAYOUT CONFIGURATION AND ROUTE CONDUITS ACCORDINGLY.

NOTE: PRE-CONSTRUCTION MEETING AND ELECTRICAL EASEMENT REQUIRED.

NOTE: CONTRACTOR SHALL TAG EACH CIRCUIT CONDUCTOR AT EACH JUNCTION WITH THE CIRCUITS IDENTIFICATION.

NOTE: CONTRACTOR SHALL TAG EACH CIRCUIT CONDUCTOR AT EACH JUNCTION WITH THE CIRCUITS IDENTIFICATION.

NOTE: PROPOSED CONDUCTORS FROM PPC TO SSC CABINET EXCLUDE NEUTRAL CONDUCTOR AT THE DIRECTION OF T-MOBILE.

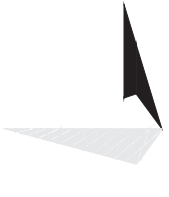
NOTE: ALL EQUIPMENT SHOWN IN THE ONE-LINE DIAGRAM AND PANEL SCHEDULE IN THESE DRAWINGS IS EXISTING UNLESS NOTED OTHERWISE. ONLY NEW EQUIPMENT SHALL BE SHOWN ON ONE-LINE DIAGRAM FOR CLARITY.



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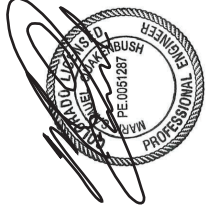
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06/09/21

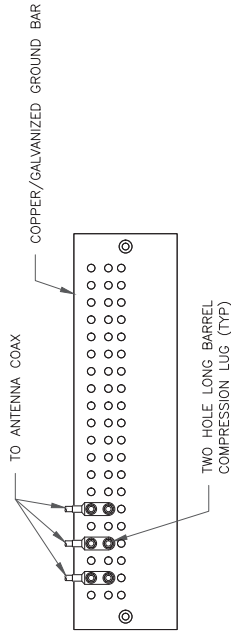
Mark S. Chalkenbush, P.E.
Professional Engineer License: #51287

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SHEET NUMBER: **E-3**

REVISION: **2**

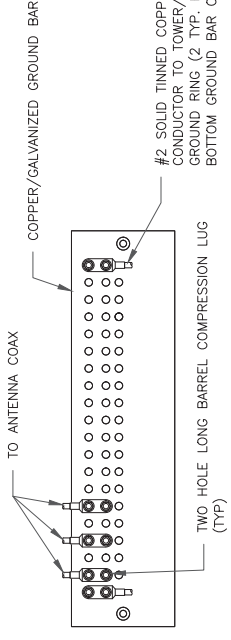
1 ELECTRICAL DETAILS
 SCALE: NOT TO SCALE



NOTES:

1. DOUBLING UP "OR STACKING" OF CONNECTIONS IS NOT PERMITTED.
2. EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
3. GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO TOWER STEEL.

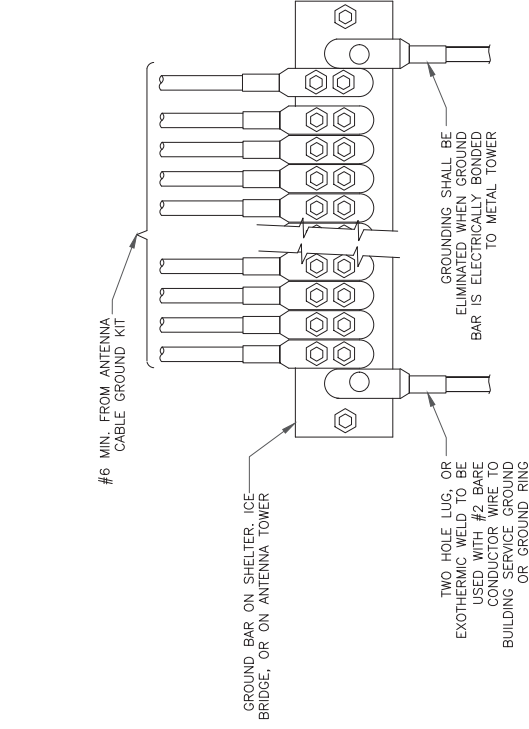
1 ANTENNA GROUND BAR DETAIL
SCALE: NOT TO SCALE



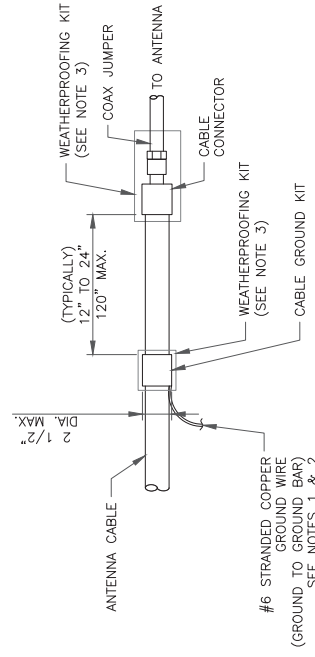
NOTES:

1. EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
2. GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO TOWER STEEL (TOWER ONLY).
3. GROUND BAR SHALL BE ISOLATED FROM BUILDING OR SHELTER.

2 TOWER/SHELTER GROUND BAR DETAIL
SCALE: NOT TO SCALE



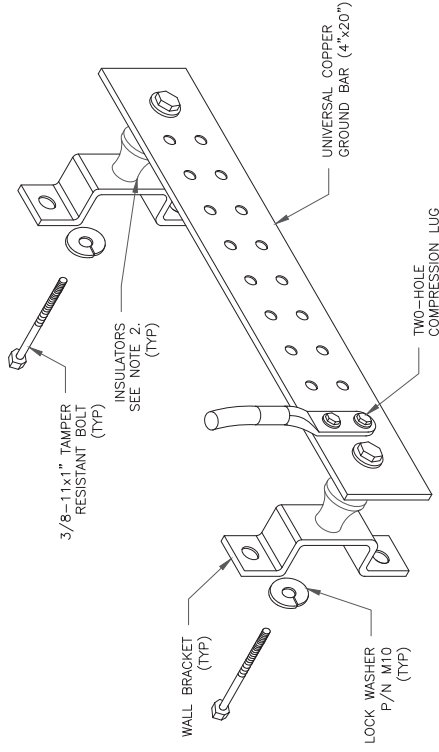
4 GROUNDWIRE INSTALLATION
SCALE: NOT TO SCALE



NOTES:

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

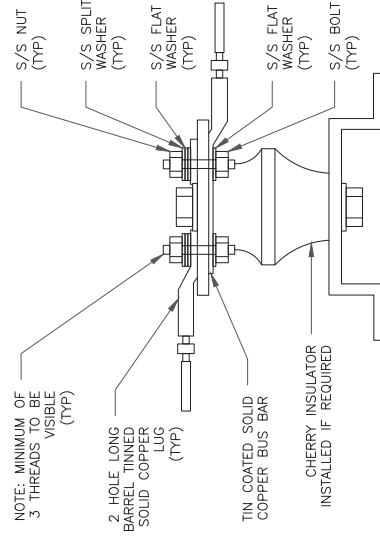
6 CABLE GROUND KIT CONNECTION
SCALE: NOT TO SCALE



NOTES:

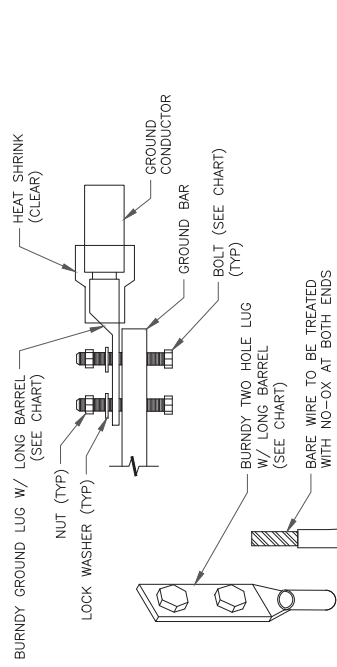
1. DOWN LEAD (HOME RUN) CONDUCTORS ARE NOT TO BE INSTALLED ON CROWN CASTLE USA INC. TOWER. PER THE GROUNDING/DOWN CONDUCTOR POLICY GAS-STD-10091. NO MODIFICATION OR DRILLING TO TOWER STEEL IS ALLOWED IN ANY FORM OR FASHION. CAD-WELDING ON THE TOWER AND/OR IN THE AIR ARE NOT PERMITTED.
2. OMIT INSULATOR WHEN MOUNTING TO TOWER STEEL OR PLATFORM STEEL USE INSULATORS WHEN ATTACHING TO BUILDING OR SHELTERS.

5 GROUND BAR DETAIL
SCALE: NOT TO SCALE



7 LUG DETAIL
SCALE: NOT TO SCALE

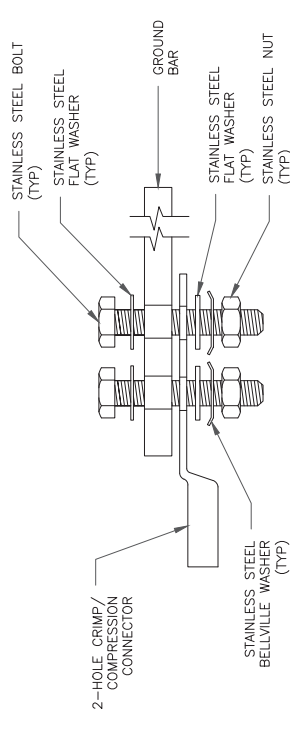
WIRE SIZE	BURNDY LUG	BOLT SIZE
#6 GREEN INSULATED	YA6C-2TC38	3/8" - 16 NC SS 2 BOLT
#2 SOLID TINNED	YA3C-2TC38	3/8" - 16 NC SS 2 BOLT
#2 STRANDED	YA2C-2TC38	3/8" - 16 NC SS 2 BOLT
#2/0 STRANDED	YA26-2TC38	3/8" - 16 NC SS 2 BOLT
#4/0 STRANDED	YA28-2N	1/2" - 16 NC SS 2 BOLT



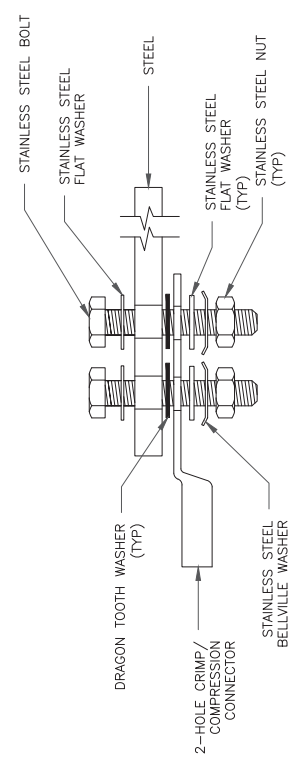
NOTE:

ALL GROUNDING LUGS ARE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. ALL HARDWARE BOLTS, NUTS, LOCK WASHERS SHALL BE STAINLESS STEEL. ALL HARDWARE ARE TO BE AS FOLLOWS: BOLT, FLAT WASHER, GROUND BAR, GROUND LUG, FLAT WASHER AND NUT.

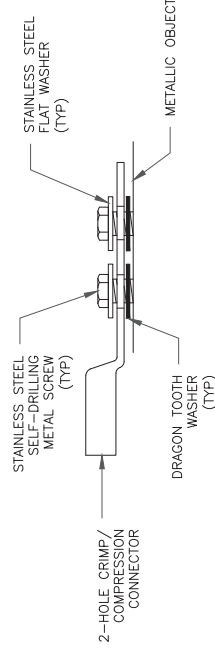
3 MECHANICAL LUG CONNECTION
SCALE: NOT TO SCALE



SINGLE CONNECTOR AT GROUND BARS



SINGLE CONNECTOR AT STEEL OBJECTS



SINGLE CONNECTOR AT METALLIC/STEEL OBJECTS

8 HARDWARE DETAIL FOR EXTERIOR CONNECTIONS
SCALE: NOT TO SCALE

T-Mobile
2323 DELGANY STREET
DENVER, CO 80216

CROWN CASTLE
200 SPECTRUM CENTER DRIVE,
SUITE 1700 & 1800
IRVINE, CA 92618

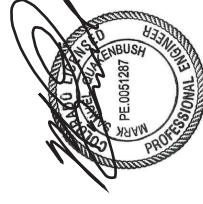
TOWER ENGINEERING PROFESSIONALS
4770 E. ELWOOD ST. STE. 9
PHOENIX, AZ 85040
OFFICE: (480) 285-0036
www.tepgroup.net

T-MOBILE SITE NUMBER:
DN06195A (SPRINT KEEP)
BU #: 877069
F5/FILL-IN/COLORADO
SPGS/CSP18
6135 TEMPLETON GAP RD
COLORADO SPRINGS,
CO 80922

EXISTING 80'-3" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	05/05/21	VBP	CONSTRUCTION	JFJ
1	05/25/21	VBP	CONSTRUCTION	JFJ



05/25/21

Mark S. Chalkenbush, P.E.
Professional Engineer License #51267

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

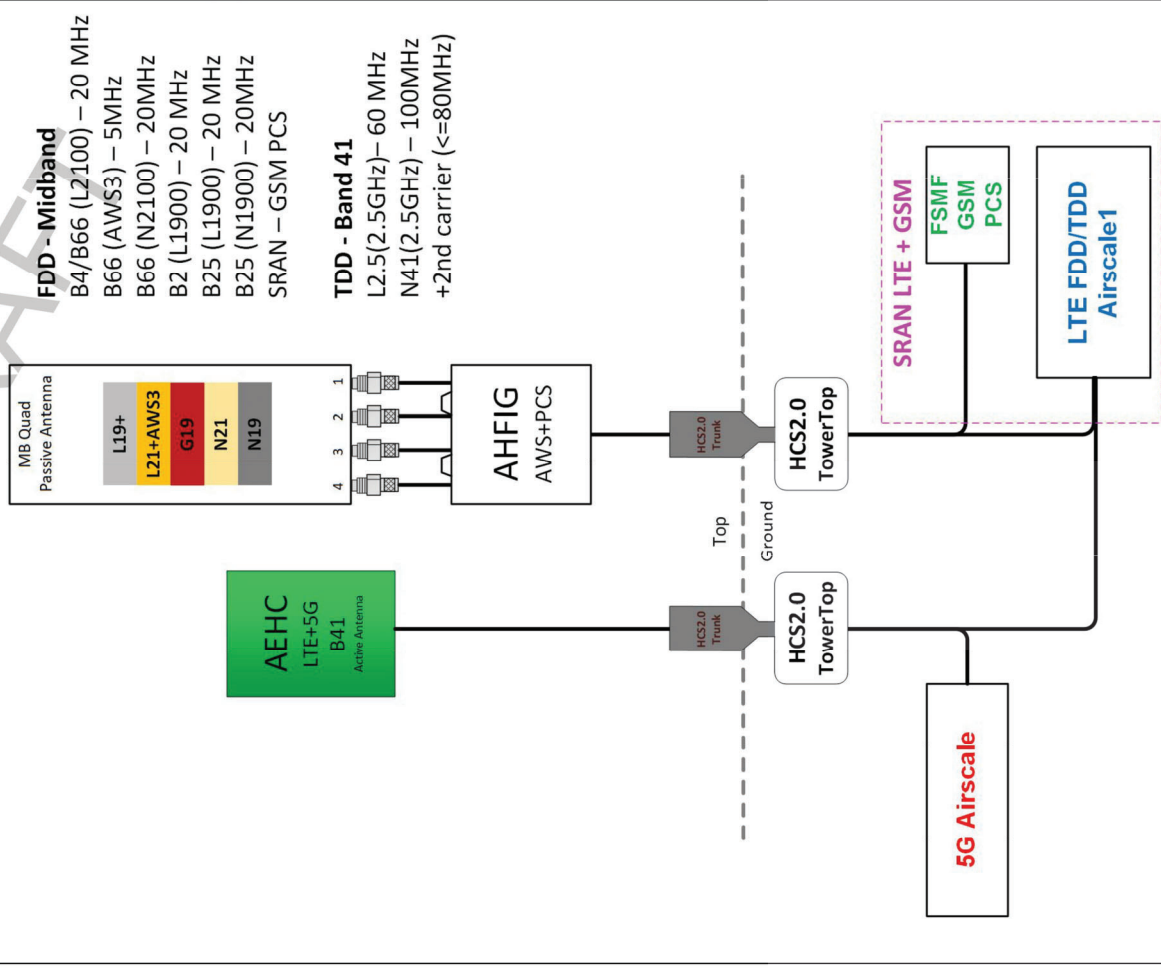
SHEET NUMBER:
G-1
REVISION:
1

Section 3 - Proposed Template Images

50090EZ_SR_T.jpg

Configuration 50090EZ_SR_T

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



Notes:

FOR REFERENCE ONLY