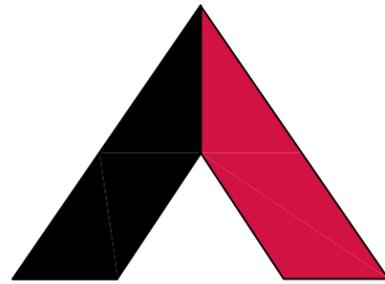


VICINITY MAP



AMERICAN TOWER®

ATC SITE NAME: MORLEY 2
 ATC SITE NUMBER: 383496
 T-MOBILE SITE NAME: DN04253A
 T-MOBILE SITE NUMBER: DN04253A
 SITE ADDRESS: 15743 PHANTOM CANYON VIEW
 COLORADO SPRINGS, CO 80926
 SITE CLASS: SELF SUPPORT



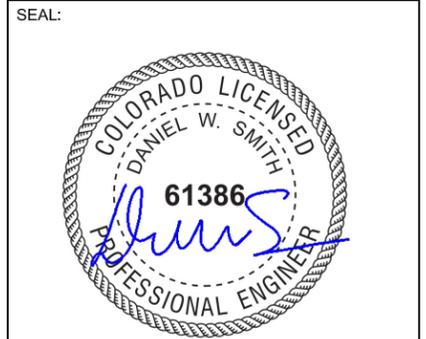
LOCATION MAP



1100 E. WOODFIELD ROAD, SUITE 500
 SCHAUMBURG, ILLINOIS 60173
 TEL: 847-908-8400
 www.fullerton-us.com

REV.	DESCRIPTION	BY	DATE
△	PRELIM	AH	04/09/24
△	FINAL	RV	04/16/24
△	REV. 1	RV	04/22/24
△			
△			

ATC SITE NUMBER:
383496
 ATC SITE NAME:
MORLEY 2
 T-MOBILE SITE NAME:
DN04253A
 SITE ADDRESS:
 15743 PHANTOM CANYON VIEW
 COLORADO SPRINGS, CO 80926



ATC PROJ. #:	14764980_G0
CUST. ID:	DN04253A
CUST. #:	DN04253A

TITLE SHEET

SHEET NUMBER: G-001	REVISION: 1
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T-MOBILE MICROWAVE PLAN
 DN04253A-0002048735

COMPLIANCE CODE	PROJECT SUMMARY	PROJECT DESCRIPTION	SHEET INDEX				
ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES. 1. 2018 INTERNATIONAL BUILDING CODE (IBC) 2. 2020 NATIONAL ELECTRICAL CODE (NEC) 3. LOCAL BUILDING CODE 4. CITY/COUNTY ORDINANCES	<u>SITE ADDRESS:</u> 15743 PHANTOM CANYON VIEW COLORADO SPRINGS, CO 80926 COUNTY: EL PASO <u>GEOGRAPHIC COORDINATES:</u> LATITUDE: 38.61252 LONGITUDE: -104.935115 GROUND ELEVATION: 7924' AMSL	THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW: REMOVE (1) EXISTING ABANDONED MOUNT AT ELEV. 80' INSTALL (1) VHLP3-11WA MW DISH ANTENNA AT ELEV 80', (1) CERAGON FIBEAIR IP-20D-HP ODU, (1) MOUNTING PIPE, (1) MOUNT, (1) 3/8" FIBER CABLE AND (1) 5/8" POWER CABLE GROUND EXISTING T-MOBILE EQUIPMENT TO REMAIN	SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
	<u>PROJECT TEAM</u> <u>TOWER OWNER:</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801 <u>ENGINEER:</u> FULLERTON ENGINEERING CONSULTANTS, LLC 1100 E. WOODFIELD ROAD, SUITE 500 SCHAUMBURG, IL 60173 <u>PROPERTY OWNER:</u> PN LL NO VENDOR 15743 PHANTOM CANYON VIEW COLORADO SPRINGS, CO 80926	PROJECT NOTES 1. THE FACILITY IS UNMANNED. 2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE. 3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE. 4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED. 5. HANDICAP ACCESS IS NOT REQUIRED. 6. THE PROJECT DEPICTED IN THESE PLANS QUALIFIES AS AN ELIGIBLE FACILITIES REQUEST ENTITLED TO EXPEDITED REVIEW UNDER 47 U.S.C. § 1455(A) AS A MODIFICATION OF AN EXISTING WIRELESS TOWER THAT INVOLVES THE COLLOCATION, REMOVAL, AND/OR REPLACEMENT OF TRANSMISSION EQUIPMENT THAT IS NOT A SUBSTANTIAL CHANGE UNDER CFR § 1.61000 (B)(7).					
<u>UTILITY COMPANIES</u> POWER COMPANY: TBD PHONE: TBD TELEPHONE COMPANY: TBD PHONE: TBD	<u>PROJECT LOCATION DIRECTIONS</u> TURN RIGHT ONTO TURKEY CANON RANCH ROAD FROM HWY 115 1.3 MILES TURN LEFT ONTO HENRY RIDE HTS 1.3 MILES YOU WILL COME TO GATE, PUNCH IN COMBO PROVIDED BY ATC 1.9 MILES TURN RIGHT ONTO PHANTOM CANYON VW .5 MILES TO TOWERS AT THE TOP. OBEY ALL SPEED LIMITS AT ALL TIMES AS THERE ARE HIDDEN DRIVEWAYS AND BLIND CURVES ALONG THE ROAD						



GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, T-MOBILE "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
 - A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)
 - B. AC/TELCO INTERFACE BOX (PPC)
 - C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
 - D. TOWERS, MONOPOLES
 - E. TOWER LIGHTING
 - F. GENERATORS & LIQUID PROPANE TANK
 - G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING
 - H. ANTENNAS (INSTALLED BY OTHERS)
 - I. TRANSMISSION LINE
 - J. TRANSMISSION LINE JUMPERS
 - K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS
 - L. TRANSMISSION LINE GROUND KITS
 - M. HANGERS
 - N. HOISTING GRIPS
 - O. BTS EQUIPMENT
2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF T-MOBILE TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSII/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE T-MOBILE REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE T-MOBILE REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE T-MOBILE REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE T-MOBILE CONSTRUCTION MANAGER.
15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE T-MOBILE REP AND ENGINEER OF RECORD IMMEDIATELY.
17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20. CONTRACTOR SHALL FURNISH T-MOBILE AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.

22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY T-MOBILE MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH T-MOBILE SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO T-MOBILE FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO T-MOBILE SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
26. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
27. CONTRACTOR SHALL NOTIFY T-MOBILE REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
28. WHEN THE PROJECT SCOPE REQUIRES THE USE OF THE SAFETY CLIMB, THE GENERAL CONTRACTOR SHALL ENSURE THE SAFETY CLIMB IS FREE OF OBSTRUCTIONS, NOT RUBBING ON OR TRAPPED BY ANY INSTALLED CUSTOMER EQUIPMENT, IS VISUALLY TAUT, MEETS MANUFACTURER INSTALLATION SPECIFICATIONS, AND IS FIRMLY SECURED AT ALL CABLE GUIDE LOCATIONS UPON PROJECT COMPLETION.
29. COMPLETION OF PROJECT SHALL NOT OBSTRUCT, TRAP, LOOSEN, OR OTHERWISE CAUSE FAILURE TO MEET MANUFACTURER INSTALLATION REQUIREMENTS FOR THE SAFETY CLIMB.
30. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
31. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
32. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE T-MOBILE REP. ANY WORK FOUND BY THE T-MOBILE REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
33. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.
34. T-MOBILE FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE T-MOBILE WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
35. T-MOBILE OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO T-MOBILE OR THEIR ARCHITECT/ENGINEER.

SPECIAL CONSTRUCTION

ANTENNA INSTALLATION NOTES:

1. WORK INCLUDED:
 - A. ANTENNA AND COAXIAL/HYBRID CABLES ARE FURNISHED BY T-MOBILE UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL.
 - B. INSTALL ANTENNAS AS INDICATED ON DRAWINGS AND T-MOBILE SPECIFICATIONS.
 - C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS.
 - D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE.
 - E. INSTALL COAXIAL/HYBRID CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL/HYBRID CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.
2. ANTENNA AND COAXIAL/HYBRID CABLE GROUNDING:
 - A. ALL EXTERIOR #6 GREEN GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR EQUAL.

- B. ALL COAXIAL/HYBRID CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL/HYBRID CABLE (NOT WITHIN BENDS)

ALL DISCREPANCIES FROM WHAT IS SHOWN ON THESE CONSTRUCTION DRAWINGS SHALL BE COMMUNICATED TO ATC ENGINEERING IMMEDIATELY FOR CORRECTION OR RE-DESIGN. FAILURE TO COMMUNICATE DIRECTLY WITH ATC ENGINEERING OR ANY CHANGES FROM THE DESIGN CONDUCTED WITHOUT PRIOR APPROVAL FROM ATC ENGINEERING SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.



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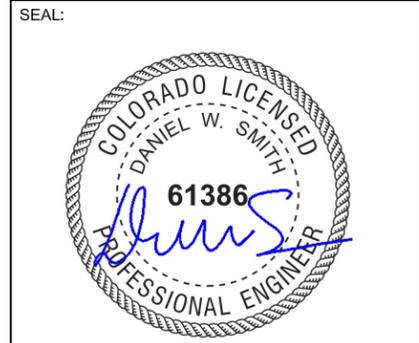
REV.	DESCRIPTION	BY	DATE
△	PRELIM	AH	04/09/24
△	FINAL	RV	04/16/24
△	REV. 1	RV	04/22/24
△			
△			

ATC SITE NUMBER:
383496

ATC SITE NAME:
MORLEY 2

T-MOBILE SITE NAME:
DN04253A

SITE ADDRESS:
15743 PHANTOM CANYON VIEW
COLORADO SPRINGS, CO 80926



ATC PROJ. #:	14764980_GO
CUST. ID:	DN04253A
CUST. #:	DN04253A

GENERAL NOTES

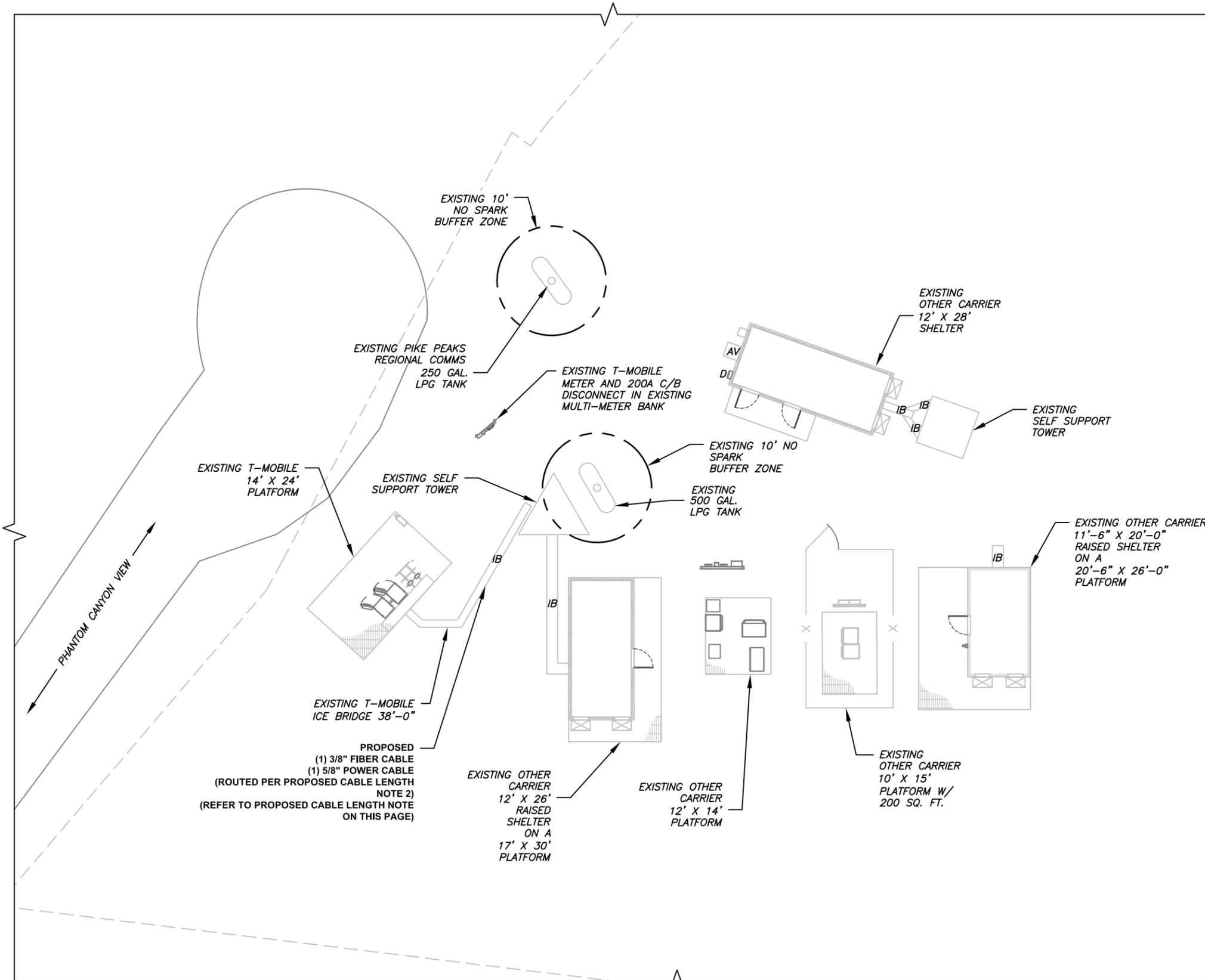
SHEET NUMBER: G-002	REVISION: 1
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SITE PLAN NOTES:

- THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.
- ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.
- NO ELECTRICAL SCOPE IS INCLUDED IN THIS PROJECT.

LEGEND

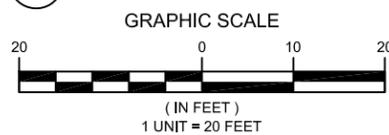
⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACLE
HH, V	HAND HOLE, VAULT
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
M	METER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
—	CHAINLINK FENCE



PROPOSED CABLE NOTES:

- ESTIMATED LENGTH OF PROPOSED CABLE IS 140'. ESTIMATED LENGTH OF CABLE WAS PROVIDED BY CUSTOMER OR CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES). CDS DEFER TO GREATEST CABLE LENGTH.
- ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. WHERE POSSIBLE UTILIZE EXISTING CABLE SUPPORT STRUCTURES AS PROVIDED FOR CARRIER TO ADEQUATELY SECURE CABLES, USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER. OTHERWISE, ATTACH CABLES TO HORIZONTAL OR DIAGONAL TOWER MEMBERS USING PROPOSED STAINLESS STEEL ADAPTERS (DO NOT ATTACH TO TOWER LEG).

1 DETAILED SITE PLAN



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REV.	DESCRIPTION	BY	DATE
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△	REV. 1	RV	04/22/24
△			
△			

ATC SITE NUMBER:

383496

ATC SITE NAME:

MORLEY 2

T-MOBILE SITE NAME:

DN04253A

SITE ADDRESS:

15743 PHANTOM CANYON VIEW
COLORADO SPRINGS, CO 80926

SEAL:



ATC PROJ. #: 14764980_GO

CUST. ID: DN04253A

CUST. #: DN04253A

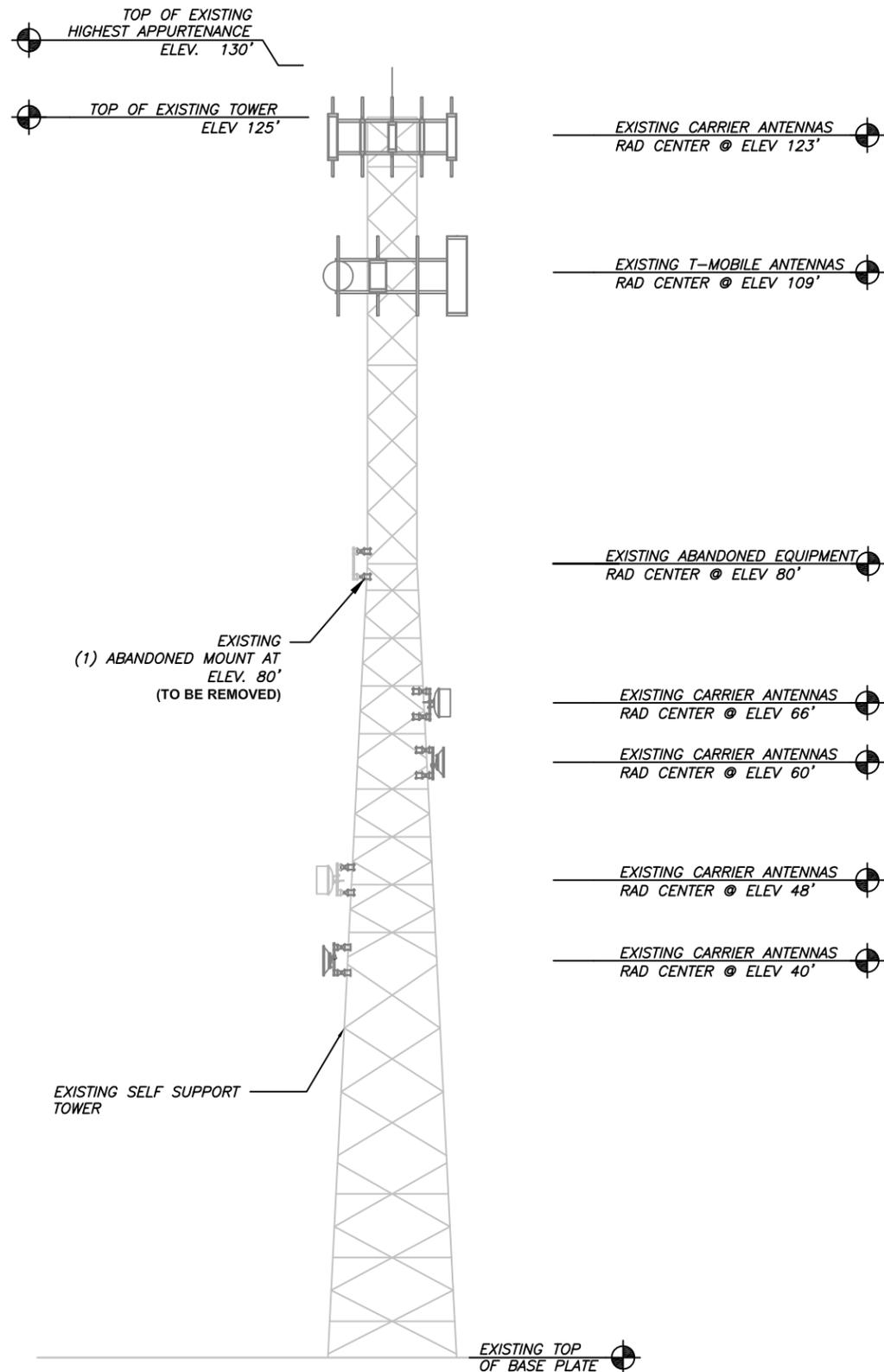
DETAILED SITE PLAN

SHEET NUMBER:

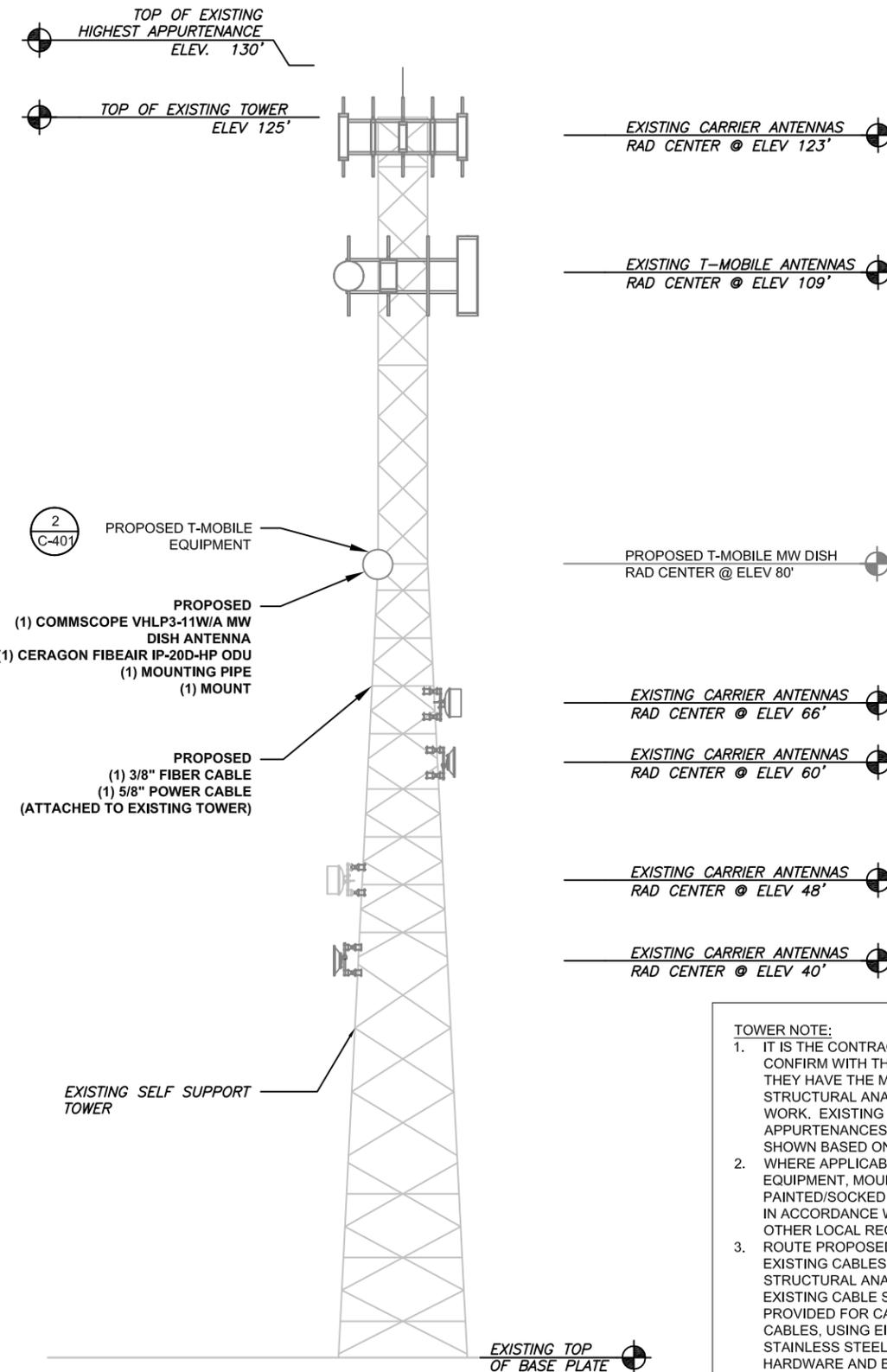
C-101

REVISION:

1



1 EXISTING TOWER ELEVATION
SCALE: N.T.S.



2 PROPOSED TOWER ELEVATION
SCALE: N.T.S.

PER STRUCTURAL ANALYSIS COMPLETED BY ATC, DATED 04/15/2024, THE EXISTING TOWER CAN ADEQUATELY SUPPORT THE PROPOSED LOADING

TOWER NOTE:

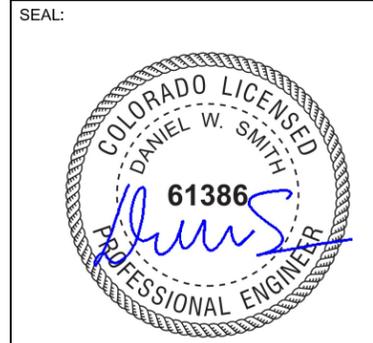
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE PROJECT MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
- WHERE APPLICABLE, ALL NEW ANTENNAS, EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE PAINTED/SOCKED TO MATCH EXISTING EQUIPMENT IN ACCORDANCE WITH FAA, JURISDICTION, AND/OR OTHER LOCAL REQUIREMENTS.
- ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. WHERE POSSIBLE UTILIZE EXISTING CABLE SUPPORT STRUCTURES AS PROVIDED FOR CARRIER TO ADEQUATELY SECURE CABLES, USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER. OTHERWISE, ATTACH CABLES TO HORIZONTAL OR DIAGONAL TOWER MEMBERS USING PROPOSED STAINLESS STEEL ADAPTERS (DO NOT ATTACH TO TOWER LEG).
- TOWER ELEVATION DEPICTION MAY NOT REFLECT ALL EQUIPMENT INCLUDED IN STRUCTURAL ANALYSIS. REFER TO STRUCTURAL ANALYSIS FOR FULL TOWER LOADING.



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REV.	DESCRIPTION	BY	DATE
A	PRELIM	AH	04/09/24
B	FINAL	RV	04/16/24
1	REV. 1	RV	04/22/24

ATC SITE NUMBER:
383496
ATC SITE NAME:
MORLEY 2
T-MOBILE SITE NAME:
DN04253A
SITE ADDRESS:
15743 PHANTOM CANYON VIEW
COLORADO SPRINGS, CO 80926



ATC PROJ. #: 14764980_G0
CUST. ID: DN04253A
CUST. #: DN04253A

ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:
C-201
REVISION:
1

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REV.	DESCRIPTION	BY	DATE
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ATC SITE NUMBER:
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COLORADO SPRINGS, CO 80926

SEAL:

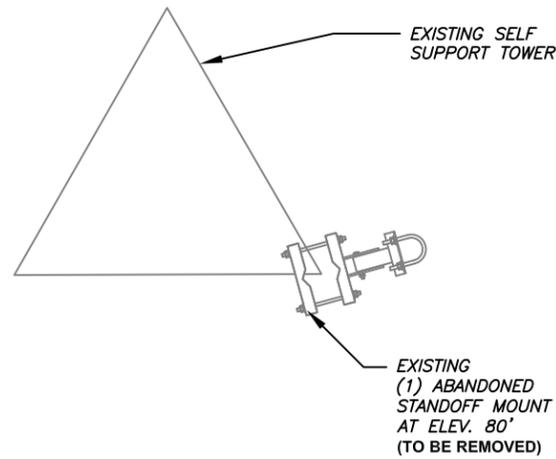


ATC PROJ. #: 14764980_GO
CUST. ID: DN04253A
CUST. #: DN04253A

ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:
C-401
REVISION:
1

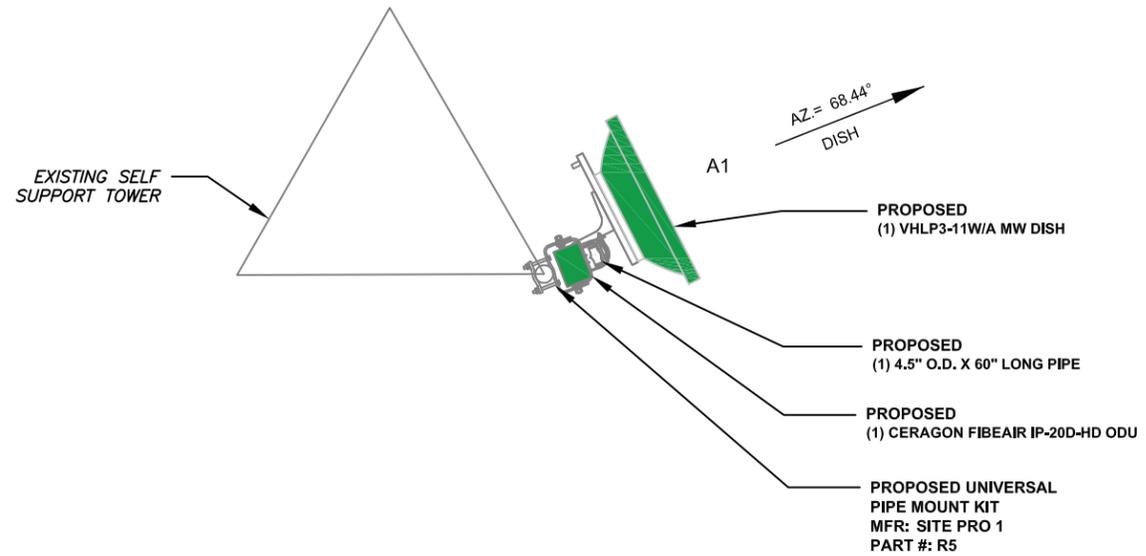
PER STRUCTURAL ANALYSIS COMPLETED BY ATC, DATED 04/15/2024, THE EXISTING TOWER CAN ADEQUATELY SUPPORT THE PROPOSED LOADING



1 EXISTING ANTENNA PLAN
SCALE: N.T.S.



LEGEND	
■	EXISTING EQUIPMENT TO BE REMOVED



2 FINAL ANTENNA PLAN
SCALE: N.T.S.



LEGEND	
■	PROPOSED EQUIPMENT TO BE INSTALLED

EXISTING ANTENNA SCHEDULE

LOCATION		ANTENNA SUMMARY						NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
-	80'	-	-	STAND OFF MOUNT	-	-	RMV	-	-

FINAL ANTENNA SCHEDULE

LOCATION		ANTENNA SUMMARY						NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	80'	68.44 °	A1	VHLP3-11W/A	-	-	ADD	(1) CERAGON FIBEAIR IP-20D-HP ODU	ADD

3 EQUIPMENT SCHEDULES

FINAL FIBER DISTRIBUTION/OVP BOX		FINAL CABLING SUMMARY		
MODEL NUMBER	STATUS	POWER	FIBER	STATUS
-	-	(1) 5/8"	(1) 3/8"	ADD

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1100 E. WOODFIELD ROAD, SUITE 500
 SCHAUMBURG, ILLINOIS 60173
 TEL: 847-908-8400
 www.fullerton-us.com

REV.	DESCRIPTION	BY	DATE
△	PRELIM	AH	04/08/24
△	FINAL	RV	04/16/24
△	REV. 1	RV	04/22/24
△			
△			

ATC SITE NUMBER:

383496

ATC SITE NAME:

MORLEY 2

T-MOBILE SITE NAME:

DN04253A

SITE ADDRESS:

15743 PHANTOM CANYON VIEW
 COLORADO SPRINGS, CO 80926

SEAL:



ATC PROJ. #: 14764980_G0

CUST. ID: DN04253A

CUST. #: DN04253A

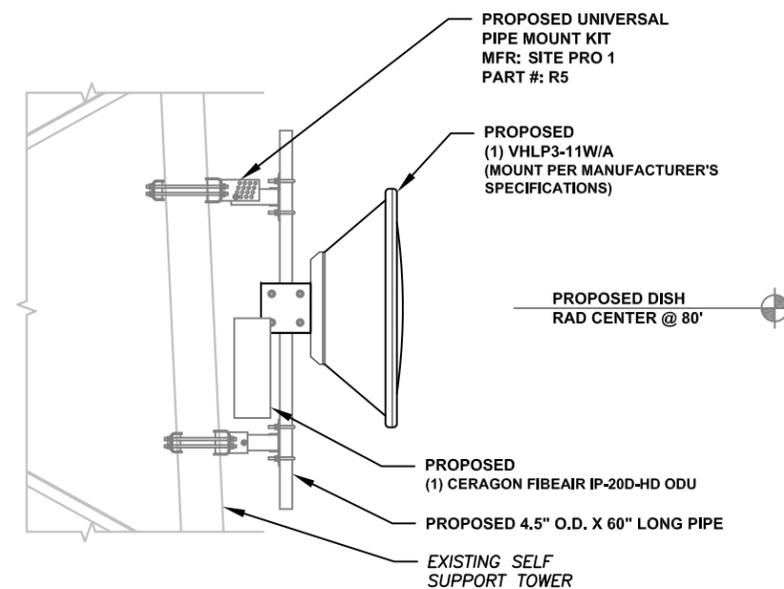
CONSTRUCTION
 DETAILS

SHEET NUMBER:

C-501

REVISION:

1



1 PROPOSED DISH & ODU MOUNTING DETAIL
 SCALE: N.T.S.

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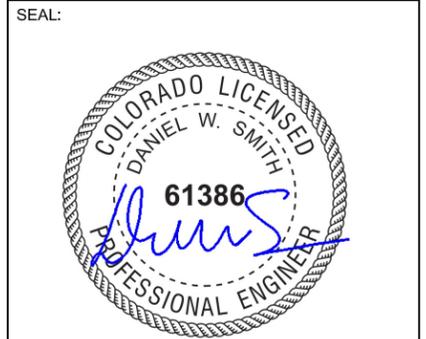
REV.	DESCRIPTION	BY	DATE
△	PRELIM	AH	04/08/24
△	FINAL	RV	04/16/24
△	REV. 1	RV	04/22/24
△			
△			

ATC SITE NUMBER:
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ATC SITE NAME:
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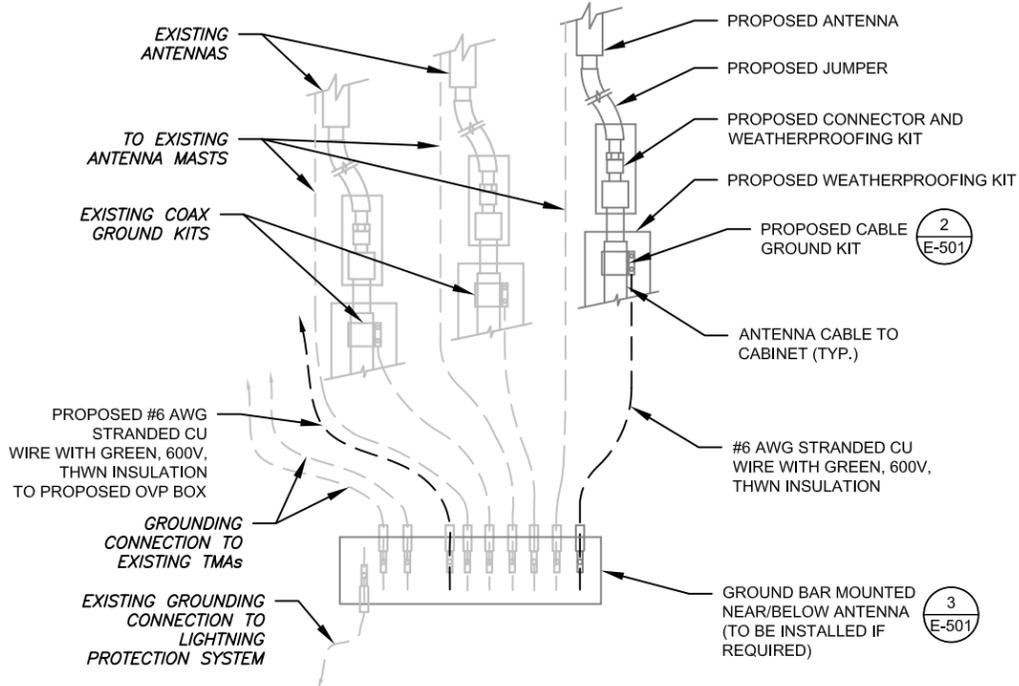
SITE ADDRESS:
15743 PHANTOM CANYON VIEW
COLORADO SPRINGS, CO 80926



ATC PROJ. #:	14764980_G0
CUST. ID:	DN04253A
CUST. #:	DN04253A

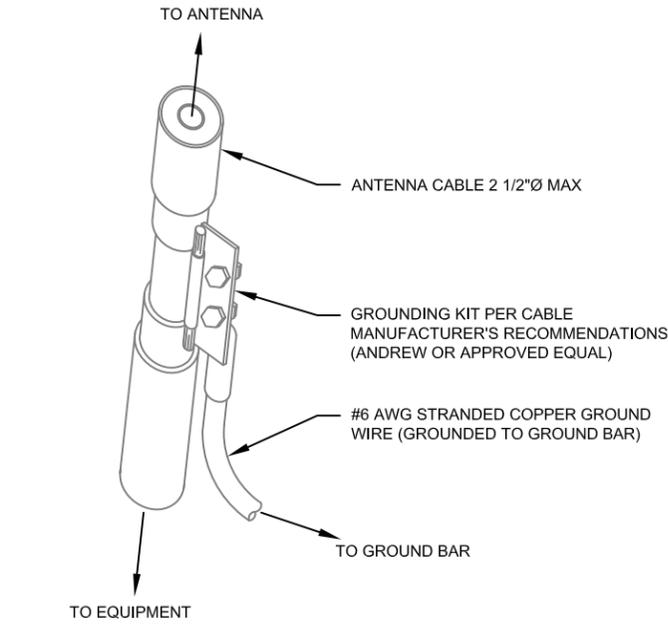
GROUNDING DETAILS

SHEET NUMBER:	REVISION:
E-501	1



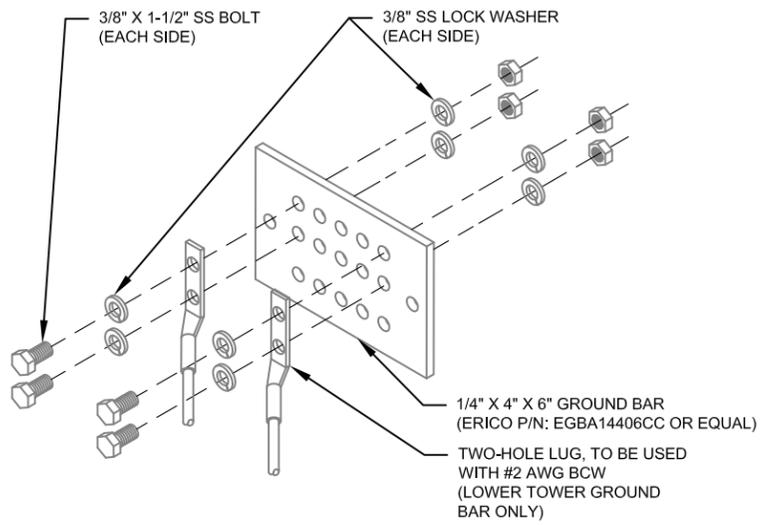
- NOTES:**
- THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
 - SITE GROUNDING SHALL COMPLY WITH T-MOBILE GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH T-MOBILE GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN.

1 TYPICAL ANTENNA GROUNDING DIAGRAM
SCALE: N.T.S.



- GROUND KIT NOTES:**
- DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
 - CONTRACTOR SHALL PROVIDE WEATHERPROOFING KIT (ANDREW PART NUMBER 221213) AND INSTALL/TAPE PER MANUFACTURER'S SPECIFICATIONS.

2 CABLE GROUND KIT CONNECTION DETAIL
SCALE: N.T.S.



- GROUND BAR NOTES:**
- GROUND BAR KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
 - GROUND BAR TO BE BONDED DIRECTLY TO TOWER.

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



Standards

MEF

Carrier Ethernet 2.0 (CE 2.0)

Supported Ethernet Standards

10/100/1000base-T/X (IEEE 802.3)

Ethernet VLANs (IEEE 802.3ac)

Virtual LAN (VLAN, IEEE 802.1Q)

Class of service (IEEE 802.1p)

Provider bridges (QinQ – IEEE 802.1ad)

Link aggregation (IEEE 802.3ad)

Auto MDI/MDIX for 1000baseT

RFC 1349: IPv4 TOS

RFC 2474: IPv4 DSCP

RFC 2460: IPv6 Traffic Classes

Security

Radio Encryption – AES 256

Secured protocols:

- HTTPS
- SNMPv3
- SSH
- SFTP

RADIUS authentication and authorization

Standards Compliance

Radio Spectral Efficiency: EN 302 217-2-2

EMC: EN 301 489-1, EN 301 489-4, Class B (Europe), FCC 47 CFR, part 15, class B (US), ICES-003, Class B (Canada), TEC/EMI/TEL-001/01, Class B (India)

Surge: EN61000-4-5, Class 4 (for PWR and ETH1 ports)

Safety: EN 60950-1, IEC 60950-1, UL 60950-1, CSA-C22.2 No. 60950-1, EN 60950-22, UL 60950-22, CSA C22.2.60950-22

Storage: ETSI EN 300 019-1-1 Class 1.2

Transportation: ETSI EN 300 019-1-2 Class 2.

Technical Specifications

Mechanical Specifications

Dimensions – 12.4”(H), 11.2”(W), 4.2”(D), 26.5 lbs. (includes diplexer or OCU unit)

Pole Diameter Range (for Remote Mount Installation) – 3.5” – 4.5”

Environmental Specifications

-27°F to +131°F (-49°F to +140°F extended)

Power Input Specifications

Standard Input: -48 VDC

DC Input range: -40 to -60 VDC

Separate DC feed

Power Consumption Specifications

Maximum Power Consumption (Multi-Core Operation):

135W

Maximum Power Consumption (1+0 Operation):

81W

Physical View

IP-20D-HP



SUPPLEMENTAL

SHEET NUMBER:

R-601

REVISION:

1

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VHLP3-11W/A



0.9m | 3 ft ValuLine® High Performance Low Profile Antenna, single-polarized, 10.125–11.700 GHz

Product Classification

Product Type Microwave antenna
Product Brand ValuLine®

General Specifications

Antenna Type VHLP - ValuLine® High Performance Low Profile Antenna, single-polarized
Polarization Single
Side Struts, Included 0
Side Struts, Optional 1 inboard

Dimensions

Diameter, nominal 0.9 m | 3 ft

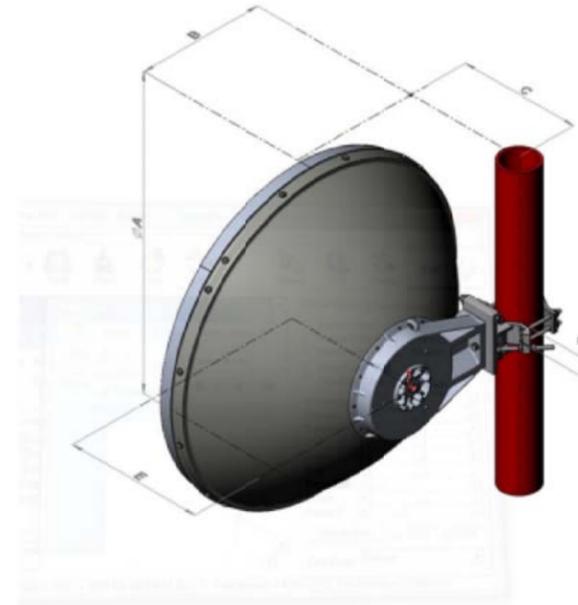
Electrical Specifications

Operating Frequency Band 10.125 – 11.700 GHz
Gain, Low Band 37.8 dBi
Gain, Mid Band 38.4 dBi
Gain, Top Band 39 dBi
Boresite Cross Polarization Discrimination (XPD) 30 dB
Front-to-Back Ratio 64 dB
Beamwidth, Horizontal 2°
Beamwidth, Vertical 2°
Return Loss 17.7 dB
VSWR 1.3
Radiation Pattern Envelope Reference (RPE) 7164A | 7166A
Electrical Compliance Brazil Anatel Class 2 | Canada SRSP 310.5 | ETSI 302 217 Class 3 | US FCC Part 101A @ 10.55–10.7 GHz | US FCC Part 101A @ 10.7–11.7 GHz | US FCC Part 101B @ 10.125–11.7 GHz

Page 1 of 5

VHLP3-11W/A

Antenna Dimensions and Mounting Information



Antenna size, ft (m)	Dimension in inches (mm)				
	A	B	C	D	E
3 (1.0)	39.3 (999)	16 (407)	15.2 (387)	2.4 (60)	17.2 (437)

Wind Forces at Wind Velocity Survival Rating

Axial Force (FA) 2903 N | 652.621 lbf
Angle α for MT Max 0°
Side Force (FS) 1439 N | 323.5 lbf
Twisting Moment (MT) 1179 N-m | 10,435.029 in lb
Zcg without Ice 135 mm | 5.315 in
Zcg with 1/2 in (12 mm) Radial Ice 84 mm | 3.307 in
Weight with 1/2 in (12 mm) Radial Ice 46 kg | 101.413 lb

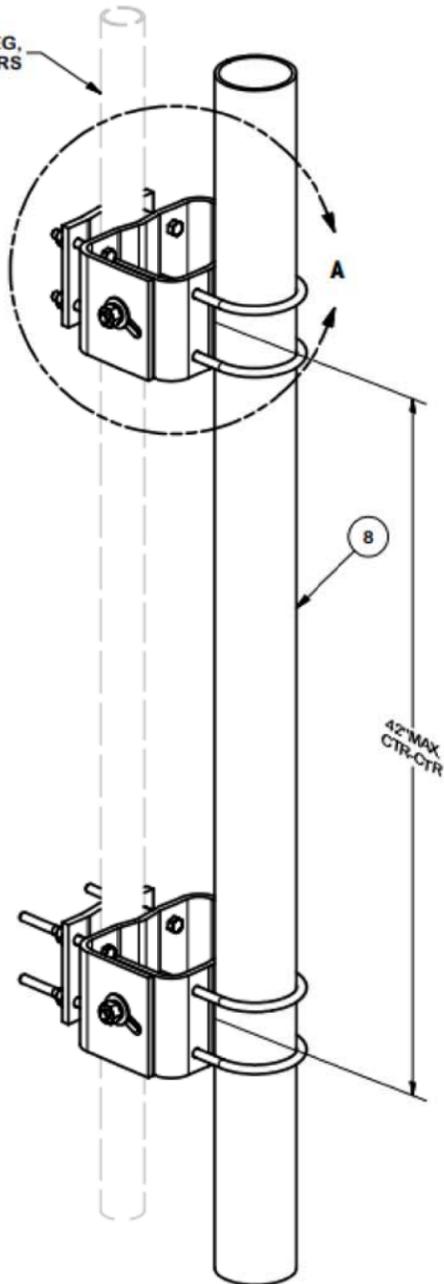
Page 3 of 5

SUPPLEMENTAL

SHEET NUMBER:
R-602

REVISION:
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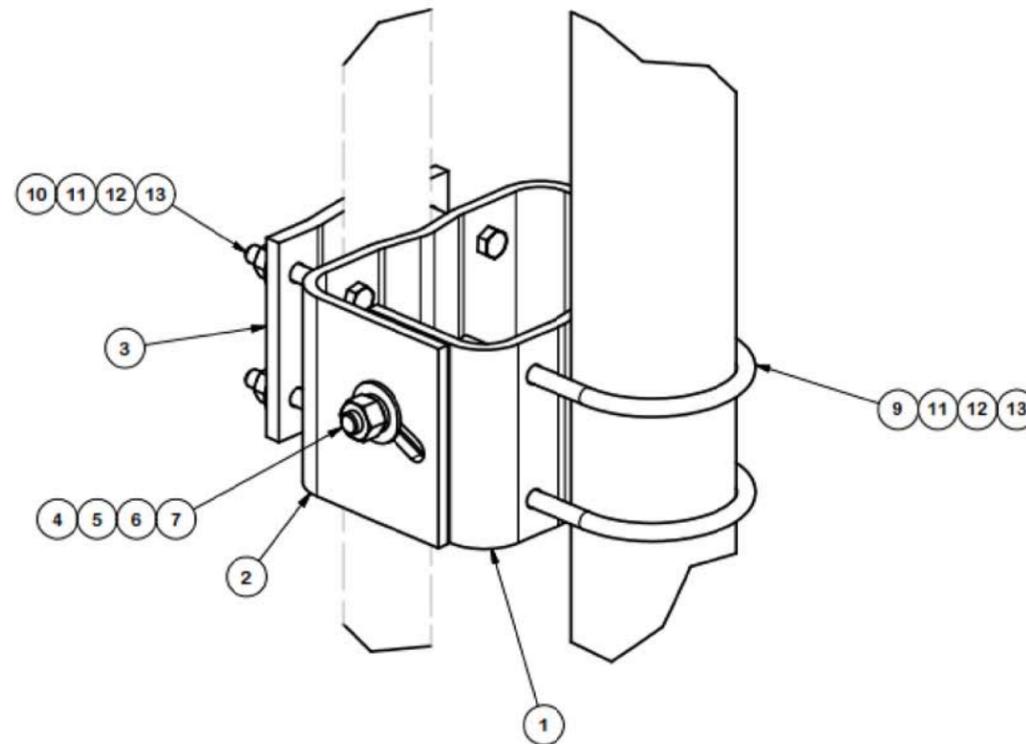
TOWER LEG,
1-1/2" to 4-1/2" O.D. MEMBERS



TAPER NOTE:
THE MAXIMUM TAPER ADJUSTMENT IS 5.7° BASED UPON
30" SPACING OF ADJUSTABLE MOUNTING BRACKETS.

THE MAXIMUM TAPER ADJUSTMENT IS 3.8° BASED UPON
45" SPACING OF ADJUSTABLE MOUNTING BRACKET.

PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	2	X-154463	UNIVERSAL PIPE MOUNTING PLATE (INNER)	16 11/32 in	10.52	21.03
2	2	X-155561	UNIVERSAL PIPE MOUNTING PLATE (OUTER)	20 9/32 in	13.16	26.31
3	2	X-159999	BACKING PLATE	6 9/16 in	5.73	11.46
4	4	G5802	5/8" x 2" HDG HEX BOLT GR5		0.27	1.08
5	4	G58FW	5/8" HDG USS FLATWASHER	1/8 in	0.07	0.28
6	4	G58LW	5/8" HDG LOCKWASHER	5/32 in	0.03	0.10
7	4	G58NUT	5/8" HDG HEAVY 2H HEX NUT	5/8 in	0.13	0.52
8	1	P472	4-1/2" X 72" SCH. 40 GALVANIZED PIPE		64.89	64.89
9	4	X-UB1458	1/2" X 4-5/8" X 7" X 3" GALV U-BOLT		0.97	3.89
10	8	G1204	1/2" x 4" HDG HEX BOLT GR5 FULL THREAD	4 in	0.27	2.16
10	8	G12065	1/2" x 6-1/2" HDG HEX BOLT GR5 FULL THREAD	6 1/2 in	0.41	3.28
11	16	G12FW	1/2" HDG USS FLATWASHER	3/32 in	0.03	0.55
12	16	G12LW	1/2" HDG LOCKWASHER	1/8 in	0.01	0.22
13	16	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	1.15
TOTAL WT. #						136.92



DETAIL A

TOLERANCE NOTES

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

PROPRIETARY NOTE:
 THE DATA AND TECHNIQUES CONTAINED IN THIS DRAWING ARE PROPRIETARY INFORMATION OF VALMONT INDUSTRIES AND CONSIDERED A TRADE SECRET. ANY USE OR DISCLOSURE WITHOUT THE CONSENT OF VALMONT INDUSTRIES IS STRICTLY PROHIBITED.

DESCRIPTION
**R5 UNIVERSAL PIPE MOUNT KIT
 WITH 4-1/2" PIPE**

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

CPD NO. 4718	DRAWN BY RH18 3/29/2010	ENG. APPROVAL	PART NO. R5	PAGE 1 OF 1
CLASS 81	SUB 01	DRAWING USAGE CUSTOMER	CHECKED BY BMC 11/12/2015	

SUPPLEMENTAL

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R-603

REVISION:
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