



Northeast Site Solutions  
Denise Sabo  
4 Angela's Way, Burlington CT 06013  
203-435-3640  
denise@northeastsitesolutions.com

February 21, 2023

Members of the Siting Council  
Connecticut Siting Council  
Ten Franklin Square  
New Britain, CT 06051

RE: Tower Share Application  
350 Burr Mountain Road, Torrington, CT 06790  
Latitude: 41.873256  
Longitude: -73.088405  
Site # BOHVN00203A – SBA – DISH

Dear Ms. Bachman:

This letter and attachments are submitted on behalf of Dish Wireless LLC. Dish Wireless LLC plans to install antennas and related equipment to the tower site located at 350 Burr Mountain Road (a/k/a 3345 Winsted Rd), Torrington Connecticut.

Dish Wireless LLC proposes to install three (3) 600/1900 MHz 5G antennas and six (6) RRUs, at the 145-foot level of the existing 196-foot tower, one (1) Fiber cable will also be installed. Dish Wireless LLC equipment cabinets will be placed within a 7' x 5' lease area within the fenced compound. Included are plans by B+T, dated February 13, 2023, Exhibit C. Also included is a structural analysis prepared by TES, stamped January 27, 2023, confirming that the existing tower is structurally capable of supporting the proposed equipment. Attached as Exhibit D. The facility was approved by the Connecticut Siting Council, Docket No. 277 on April 26, 2004. Please see attached Exhibit A.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies 16-50aa, of Dish Wireless LLC intent to share a telecommunications facility pursuant to R.C.S.A. 16-50j-88. In accordance with R.C.S.A., a copy of this letter is being sent to Mayor Elinor Carbone and Jeremy Leifert, City Planner for the City of Torrington, as well as the tower owner and property owner.

The planned modifications of the facility fall squarely within those activities explicitly provided for in R.C.S.A. 16-50j-89.

1. The proposed modification will not result in an increase in the height of the existing structure. The top of the existing tower is 196-feet and the Dish Wireless LLC antennas will be located at a center line height of 145-feet.
2. The proposed modifications will not result in an increase of the site boundary as depicted on the attached site plan.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed local and state criteria. The incremental effect of the proposed changes will be negligible.



4. The operation of the proposed antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard. The combined site operations will result in a total power density of 9.67% as evidenced by Exhibit F.

Connecticut General Statutes 16-50aa indicates that the Council must approve the shared use of a telecommunications facility provided it finds the shared use is technically, legally, environmentally, and economically feasible and meets public safety concerns. As demonstrated in this letter, Dish Wireless LLC respectfully submits that the shared use of this facility satisfies these criteria.

A. Technical Feasibility. The existing monopole has been deemed structurally capable of supporting Dish Wireless LLC proposed loading. The structural analysis is included as Exhibit D.

B. Legal Feasibility. As referenced above, C.G.S. 16-50aa has been authorized to issue orders approving the shared use of an existing tower such as this tower in Torrington. Under the authority granted to the Council, an order of the Council approving the requested shared use would permit Dish Wireless LLC to obtain a building permit for the proposed installation. Further, a Letter of Authorization is included as Exhibit G, authorizing Dish Wireless LLC to file this application for shared use.

C. Environmental Feasibility. The proposed shared use of this facility would have a minimal environmental impact. The installation of Dish Wireless LLC equipment at the 145-foot level of the existing 196-foot tower would have an insignificant visual impact on the area around the tower. Dish Wireless LLC ground equipment would be installed within the existing facility compound. Dish Wireless LLC shared use would therefore not cause any significant alteration in the physical or environmental characteristics of the existing site. Additionally, as evidenced by Exhibit F, the proposed antennas would not increase radio frequency emissions to a level at or above the Federal Communications Commission safety standard.

D. Economic Feasibility. Dish Wireless LLC will be entering into an agreement with the owner of this facility to mutually agreeable terms. As previously mentioned, the Letter of Authorization has been provided by the owner to assist Dish Wireless LLC with this tower sharing application.

E. Public Safety Concerns. As discussed above, the tower is structurally capable of supporting Dish Wireless LLC proposed loading. Dish Wireless LLC is not aware of any public safety concerns relative to the proposed sharing of the existing tower. Dish Wireless LLC intentions of providing new and improved wireless service through the shared use of this facility is expected to enhance the safety and welfare of local residents and individuals traveling through Torrington.

Sincerely,

*Denise Sabo*

Denise Sabo  
Mobile: 203-435-3640  
Fax: 413-521-0558  
Office: 4 Angela's Way, Burlington CT 06013  
Email: [denise@northeastsitesolutions.com](mailto:denise@northeastsitesolutions.com)



**NSS**

**NORTHEAST**  
SITE SOLUTIONS

*Turnkey Wireless Development*

Attachments

Cc: Mayor Elinor Carbone  
City of Torrington  
140 Main Street Torrington, CT 06790

Jeremy Leifert, City Planner  
140 Main Street - Room 324 Torrington, CT 06790

O & G Industries Inc. - Property Owner  
112 Wall Street Torrington, CT 06790

SBA –Tower Owner

# Exhibit A

## **Original Facility Approval**

# Connecticut Siting Council <sup>(/CSC)</sup>

[CT.gov Home](#) [\(/\)](#) [Connecticut Siting Council](#) [\(/CSC\)](#) DO 277 Torrington Decision and Order

<b>DOCKET NO. 277</b> – Sprint Spectrum, L.P. application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility in Torrington, Connecticut.	}	Connecticut
	}	Siting
	}	Council
		April 26, 2004

## Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to Sprint Spectrum, L.P. d/b/a Sprint PCS for the construction, maintenance and operation of a wireless telecommunications facility at Candidate A, located off Burr Mountain Road, Torrington, Connecticut. The Council denies certification of Candidate B located at Jordan Lane and Laurelton Drive, Torrington, Connecticut.

The facility shall be constructed, operated, and maintained substantially as specified in the Council's record in this matter, and subject to the following conditions:

1. The tower shall be constructed no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of Sprint and other entities, both public and private, but such tower, including all appurtenances attached thereto, shall not exceed a height of 198 feet above ground level and shall be designed with a yield point to reduce the area of the setback radius so that it shall be contained within the property of O&G Industries.
2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be submitted to and approved by the Council prior to the commencement of facility construction and shall include:
  - a. a final site plan(s) of site development to include specifications for the tower, tower foundation, antennas, equipment building, access road, utility line, and landscaping; and
  - b. construction plans for site clearing, water drainage, and erosion and sedimentation control consistent with the [2002 Connecticut Guidelines for Soil Erosion and Sediment Control](#), as amended.
3. The Certificate Holder shall, prior to the commencement of operation, provide the Council worst-case modeling of electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall ensure a recalculated report of electromagnetic radio frequency power density is submitted to the Council if and when circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.
4. Upon the establishment of any new State or federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.

5. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.

6. The Certificate Holder shall provide reasonable space on the tower for no compensation for any municipal antennas, provided such antennas are compatible with the structural integrity of the tower.

7. If the facility does not initially provide wireless services within one year of completion of construction or ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.

8. Any antenna that becomes obsolete and ceases to function shall be removed within 60 days after such antennas become obsolete and cease to function.

9. Unless otherwise approved by the Council, this Decision and Order shall be void if the facility authorized herein is not operational within one year of the effective date of this Decision and Order or within one year after all appeals to this Decision and Order have been resolved.

Pursuant to General Statutes § 16-50p, we hereby direct that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in the Waterbury Republican American and the Torrington Register Citizen.

By this Decision and Order, the Council disposes of the legal rights, duties, and privileges of each party named or admitted to the proceeding in accordance with Section 16-50j-17 of the Regulations of Connecticut State Agencies.

The parties and intervenors to this proceeding are:

<p><b><u>Applicant</u></b></p> <p>Sprint Spectrum, L.P. d/b/a Sprint PCS</p>	<p><b><u>Its Representative</u></b></p> <p>Thomas J. Regan, Esq. Brown Rudnick Berlack Israels CityPlace 1 185 Asylum Street Hartford, CT 06103</p>
<p><b><u>Intervenor</u></b></p> <p>Cellco Partnership d/b/a Verizon Wireless</p>	<p><b><u>Its Representative</u></b></p> <p>Kenneth C. Baldwin, Esq. Robinson &amp; Cole LLP 280 Trumbull Street Hartford, CT 06103-3597 (860) 275-8200</p>

# Exhibit B

## **Property Card**

The Assessor's office is responsible for the maintenance of records on the ownership of properties. Assessments are computed at 70% of the estimated market value of real property at the time of the last revaluation which was 2019.



Information on the Property Records for the Municipality of Torrington was last updated on 8/24/2022.



### Parcel Information

Location:	3345 WINSTED RD	Property Use:	Vacant Land	Primary Use:	Commercial Vacant Land
Unique ID:	8172	Map Block Lot:	242/001/005	Acres:	193.6100
490 Acres:	132.98	Zone:	I	Volume / Page:	0444/0497
Developers Map / Lot:	5417/5554	Census:	3107-0N		

### Value Information

	Appraised Value	Assessed Value
Land	4,598,238	1,019,140
Buildings	0	0
Detached Outbuildings	0	0



	Appraised Value	Assessed Value
Total	4,598,238	1,019,140

## Owner's Information

Owner's Data
O & G INDUSTRIES INC 112 WALL ST TORRINGTON, CT 06790

## Owner History - Sales

Owner Name	Volume	Page	Sale Date	Deed Type	Sale Price
O & G INDUSTRIES INC	0444	0497	09/23/1988		\$2,104,500

## Building Permits

Permit Number	Permit Type	Date Opened	Reason
19-530	Building	04/01/2019	REM & REPL 6 NEW ANTENNAS/RADIO UNITS
19-439	Building	03/19/2019	MODIFY AT&T FACILITY/REPL 6 ANTENNAS & RADIO UNITS
19-401 Z	Commercial	03/14/2019	CELL TOWER UPGRADE
19-337	Certificate of Completion	03/04/2019	CERT OF COMPL- GENERATOR
18-974	Electrical	06/13/2018	GENERATOR INSTALLED
17-1669	Certificate of Completion	09/06/2017	CERT OF COMPL- 3 NEWER CELL ANTENNAS & ASSOCIATED EQUIP= PP
17-1081	Certificate of Completion	06/14/2017	CERT OF COMPL- MODIFY AT&T ANTENNA & REPL RADIO HEADS
17-679	Building	05/02/2017	UPGRADES TO EXISTING CELL SITE/3 ANTENNAS & EQUIP
17-544 Z	Commercial	04/17/2017	UPGARDE 3 CELL ANTENNAS & EQUIP

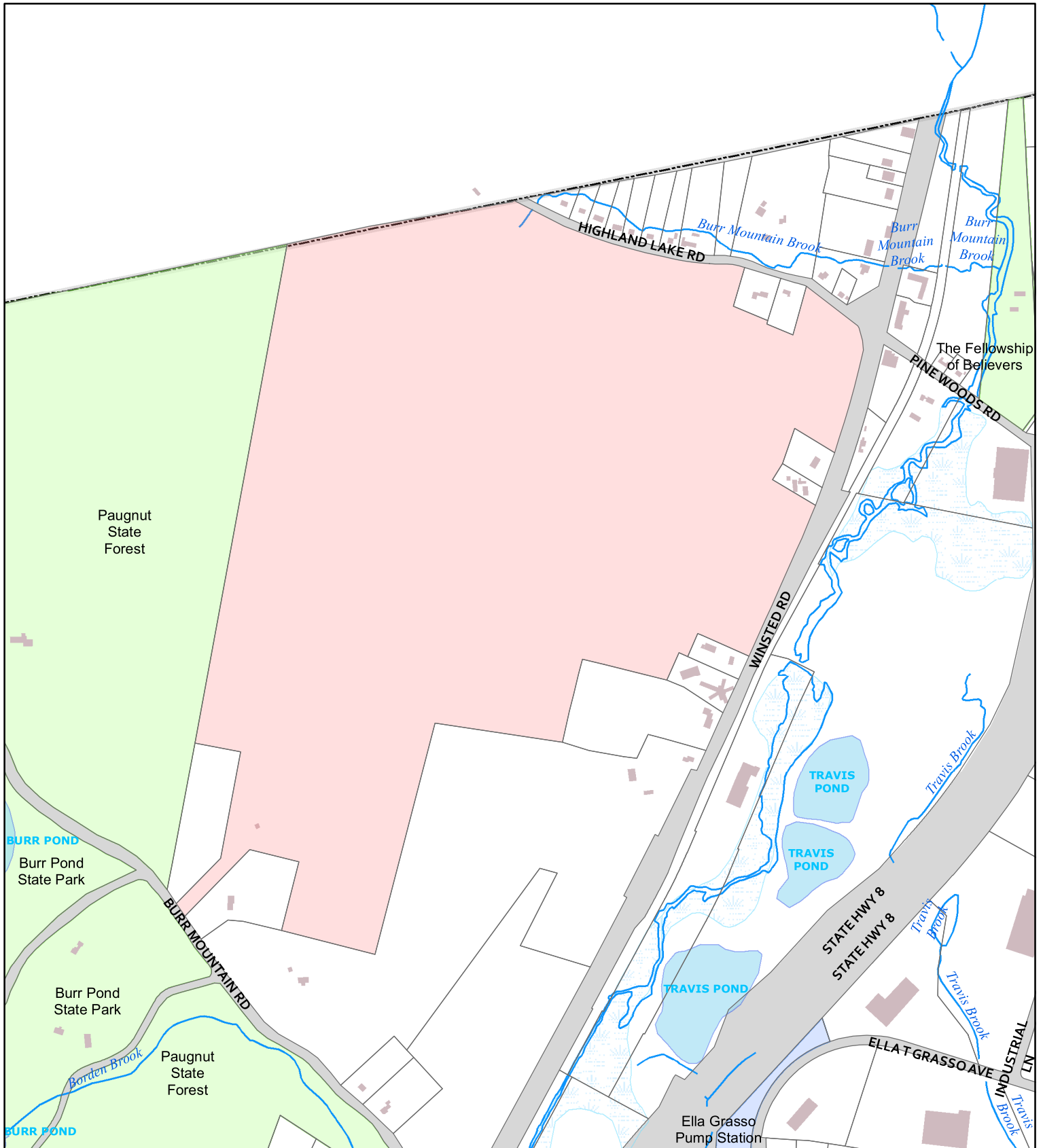
Permit Number	Permit Type	Date Opened	Reason
17-323	Building	03/08/2017	MODIFY AT&T ANTENNA SITE/3 REMOTE RADIO UNITS
17-263 Z	Commercial	02/27/2017	CELL TOWER- AT& T ANTENNA MODIFICATION
14-1368	Building	07/11/2014	ADD 3 CELL ANTENNAS & ASSOC EQUIP = PP
14-711	Building	04/24/2014	CABINET/8 KW GENERATOR/MICO DISH FOR PD = PP
14-397	Building	03/06/2014	TELECOMMUNICATION SITE ALTERATION=PP
13-5987	Certificate of Completion	10/10/2013	CERT OF COMPL- 3 MEW ANTENNAD W/SUPPORT EQUIP
13-5813	Building	09/11/2013	MODIFICATIONS TO CELL SITE= PP
12-3424	Building	01/24/2013	ADD 3 NEW ANTENNAS & CABINET TO EXISTING PLATFORM
12-2303	Building	09/20/2012	REPL 6 ANTENNA
11-199	Certificate of Completion	03/17/2011	CERT OF COMPL/PANEL ANTENNAS/COAX & RELATED EQUIP
10-1852	Commercial	10/21/2010	INSTALL PANEL ANTENNAS/PP
08-2511	Commercial	12/08/2008	ADDING ANTENNAS TO EXISTING STRUCTURE AND RELATED GROUND EQUIPMENT. NO CHANGE IN FOOTPRINT.
08-1729	Commercial New	09/09/2008	DOOR CANOPY
08-1545	Commercial New	08/13/2008	DOOR CANOPY
08-533	Commercial New	04/11/2008	NEW TRUCK SCALE
05-192	Commercial New	05/25/2005	CELL ANTENNAE & PRE-FAB SHELTER
04-591	Commercial New	12/08/2004	12'X30' EQUIP SHELTER&ANT
04-541	Commercial New	11/05/2004	EQUIP BLDG & CELLULAR ANTENNAS
04-437	Commercial New	09/07/2004	NEW 195' CELL TOWER

Information Published With Permission From The Assessor

# City of Torrington, Connecticut - Assessment Parcel Map

Map/Block/Lot 242/001/005

Address: 242/001/005



Approximate Scale: 1 inch = 699 feet

Disclaimer: This map is for informational purposes only. All information is subject to verification by any user. The City of Torrington and its mapping contractors assume no legal responsibility for the information contained herein.

Map Produced: August 2022

# Exhibit C

## **Construction Drawings**



DISH Wireless L.L.C. SITE ID:  
**BOHVN00203A**

DISH Wireless L.L.C. SITE ADDRESS:  
**350 BURR MOUNTAIN ROAD  
TORRINGTON, CT 06790**

SCOPE OF WORK
THIS IS NOT AN ALL INCLUSIVE LIST. CONTRACTOR SHALL UTILIZE SPECIFIED EQUIPMENT PART OR ENGINEER APPROVED EQUIVALENT. CONTRACTOR SHALL VERIFY ALL NEEDED EQUIPMENT TO PROVIDE A FUNCTIONAL SITE. THE PROJECT GENERALLY CONSISTS OF THE FOLLOWING:
TOWER SCOPE OF WORK: <ul style="list-style-type: none"> <li>• INSTALL (3) PROPOSED PANEL ANTENNAS (1 PER SECTOR)</li> <li>• INSTALL (1) PROPOSED ANTENNA PLATFORM MOUNT</li> <li>• INSTALL PROPOSED JUMPERS</li> <li>• INSTALL (6) PROPOSED RRUs (2 PER SECTOR)</li> <li>• INSTALL (1) PROPOSED OVER VOLTAGE PROTECTION DEVICE (OVP)</li> <li>• INSTALL (1) PROPOSED HYBRID CABLE</li> </ul>
GROUND SCOPE OF WORK: <ul style="list-style-type: none"> <li>• INSTALL (1) PROPOSED ICE BRIDGE</li> <li>• INSTALL (1) PROPOSED PPC CABINET</li> <li>• INSTALL (1) PROPOSED EQUIPMENT CABINET</li> <li>• INSTALL (1) PROPOSED POWER CONDUIT</li> <li>• INSTALL (1) PROPOSED TELCO CONDUIT</li> <li>• INSTALL (1) PROPOSED TELCO-FIBER BOX</li> <li>• INSTALL (1) PROPOSED GPS UNIT</li> <li>• INSTALL (1) PROPOSED FIBER NID (IF REQUIRED)</li> </ul>

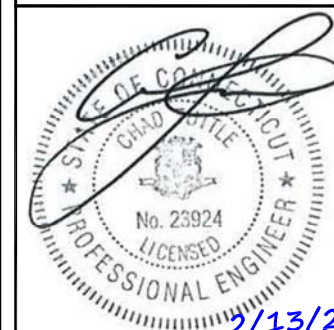
SITE INFORMATION	PROJECT DIRECTORY
PROPERTY OWNER: O & G INDUSTRIES INC ADDRESS: 112 WALL ST TORRINGTON, CT 06790	APPLICANT: DISH Wireless L.L.C. 5701 SOUTH SANTA FE DRIVE LITTLETON, CO 80120
TOWER TYPE: MONOPOLE	TOWER OWNER: SBA COMMUNICATIIONS CORP. 8051 CONGRESS AVENUE BOCA RATON, FL 33487 (800) 487-7483
TOWER CO SITE ID: CT46138-A	SITE DESIGNER: B+T GROUP 1717 S. BOULDER AVE, SUITE 300 TULSA, OK 74119 (918) 587-4630
TOWER APP NUMBER: 169202	SITE ACQUISITION: JEAN COTTRELL jean.cottrell@dish.com
COUNTY: LITCHFIELD	CONST. MANAGER: JAVIER SOTO javier.soto@dish.com
LATITUDE (NAD 83): 41° 52' 23.72" N 41.873256 N	RF ENGINEER: SYED ZAIDI syed.zaidi@dish.com
LONGITUDE (NAD 83): 73° 05' 18.26" W 73.088406 W	
ZONING JURISDICTION: CITY OF TORRINGTON	
ZONING DISTRICT: I	
PARCEL NUMBER: 242/001/005	
OCCUPANCY GROUP: U	
CONSTRUCTION TYPE: II-B	
POWER COMPANY: EVERSOURCE	
TELEPHONE COMPANY: FRONTIER	



5701 SOUTH SANTA FE DRIVE  
LITTLETON, CO 80120



1717 S. BOULDER  
SUITE 300  
TULSA, OK 74119  
PH: (918) 587-4630  
www.btgrp.com



MTS ENGINEERING P.L.L.C.  
BER:2386985  
Expires 3/31/23

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.

DRAWN BY: MEH CHECKED BY: RMC APPROVED BY: RMC

RFDS REV #: 1

**CONSTRUCTION DOCUMENTS**

SUBMITTALS		
REV	DATE	DESCRIPTION
A	9/28/21	ISSUED FOR REVIEW
0	3/7/22	ISSUED FOR CONSTRUCTION
1	2/13/23	ISSUED FOR CONSTRUCTION

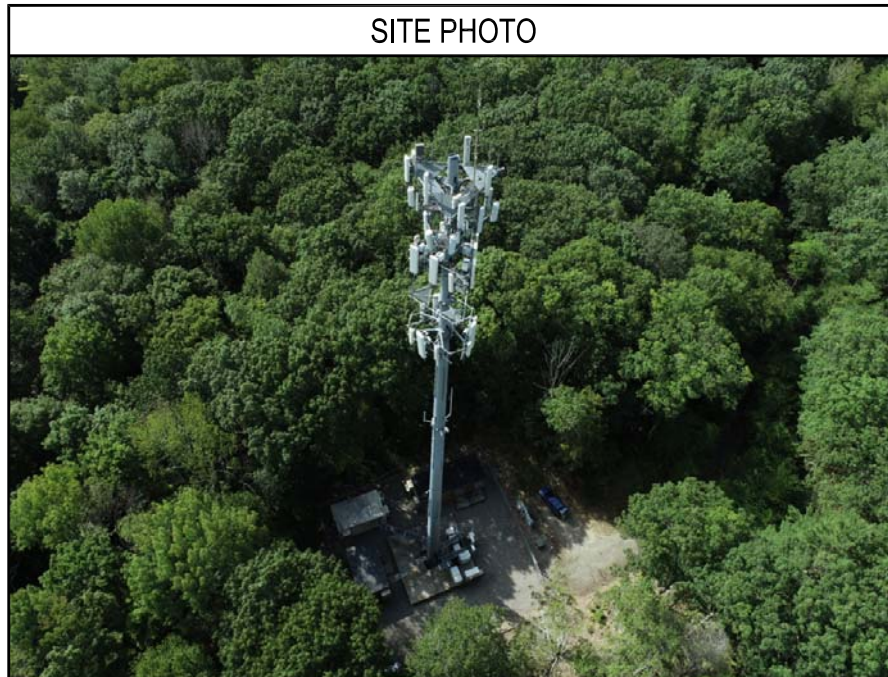
A&E PROJECT NUMBER  
**149546.001.01**

DISH Wireless L.L.C.  
PROJECT INFORMATION

**BOHVN00203A**  
350 BURR MOUNTAIN RD  
TORRINGTON, CT 06790

SHEET TITLE  
**TITLE SHEET**

SHEET NUMBER  
**T-1**



**UNDERGROUND SERVICE ALERT CBYD 811**  
UTILITY NOTIFICATION CENTER OF CONNECTICUT  
(800) 922-4455  
WWW.CBYD.COM

CALL 2 WORKING DAYS UTILITY NOTIFICATION PRIOR TO CONSTRUCTION

**GENERAL NOTES**

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE. NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.

**11"x17" PLOT WILL BE HALF SCALE UNLESS OTHERWISE NOTED**

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

**DIRECTIONS**

DIRECTIONS FROM BRADLEY INTERNATIONAL AIRPORT:  
HEAD NORTH TOWARD BRADLEY INTERNATIONAL AIRPORT. SLIGHT LEFT ONTO BRADLEY INTERNATIONAL AIRPORT. CONTINUE STRAIGHT. CONTINUE ONTO BRADLEY INTERNATIONAL AIRPORT CON. TAKE THE CT-20 W EXIT TOWARD E GRANBY/GRANBY. CONTINUE ONTO CT-20 W. SLIGHT LEFT ONTO CT-20 W/W GRANBY RD. CONTINUE TO FOLLOW CT-20 W. TURN LEFT ONTO CT-219 S. TURN LEFT ONTO CT-179 S/CT-219 S. CONTINUE TO FOLLOW CT-219 S. SLIGHT RIGHT ONTO CT-318 W. TURN LEFT ONTO CT-181 S/CT-318 W. CONTINUE TO FOLLOW CT-318 W. TURN RIGHT ONTO US-44 W/NEW HARTFORD RD. TURN LEFT ONTO CT-8 S. TAKE EXIT 46 FOR PINWOODS RD TOWARD BURRVILLE. TURN RIGHT ONTO PINWOODS RD. TURN LEFT ONTO WINSTED RD. TURN RIGHT ONTO BURR MOUNTAIN RD. TURN RIGHT ONTO ACCESS ROAD AND ARRIVE AT BOHVN00203A.



**CONNECTICUT CODE OF COMPLIANCE**

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	2022 CT STATE BUILDING CODE/2021 IBC W/ CT AMENDMENTS
MECHANICAL	2022 CT STATE BUILDING CODE/2021 IMC W/ CT AMENDMENTS
ELECTRICAL	2022 CT STATE BUILDING CODE/2020 NEC W/ CT AMENDMENTS

**SHEET INDEX**

SHEET NO.	SHEET TITLE
T-1	TITLE SHEET
LS-1	SITE SURVEY
A-1	OVERALL AND ENLARGED SITE PLAN
A-2	ELEVATION, ANTENNA LAYOUT AND SCHEDULE
A-3	EQUIPMENT PAD AND H-FRAME DETAILS
A-4	EQUIPMENT DETAILS
A-5	EQUIPMENT DETAILS
A-6	EQUIPMENT DETAILS
E-1	ELECTRICAL/FIBER ROUTE PLAN AND NOTES
E-2	ELECTRICAL DETAILS
E-3	ELECTRICAL ONE-LINE, FAULT CALCS & PANEL SCHEDULE
G-1	GROUNDING PLANS AND NOTES
G-2	GROUNDING DETAILS
G-3	GROUNDING DETAILS
RF-1	RF CABLE COLOR CODE
GN-1	LEGEND AND ABBREVIATIONS
GN-2	GENERAL NOTES
GN-3	GENERAL NOTES
GN-4	GENERAL NOTES





LOCATION MAP  
SCALE: 1"=1000'

**GENERAL NOTES:**

- Existing conditions shown on this plan are from the result of a field survey conducted in February 2003.
- Ledge outcrops and rock formations not located due to snow cover at time of survey.
- This parcel is identified as Map 245, Block 1, Lot 1A recorded in Vol. 432 Pg. 18 in the Town of Eastford Land Records.
- The owner of this parcel is Dennis Vail and is located at 1805 Torrington W. St., Torrington CT 06790. The Parcel is located in Litchfield county, in the state of Connecticut.
- The project site number is CT33XC079 currently not under construction at this time.
- Bearings are based on 1927 North American Datum (NAD27). Elevations are based on 1929 National Geodetic Vertical Datum (NGVD29). Monopole coordinates provided in 1983 North American Datum (NAD83).

Datum based on control point:  
 CGS Station 76 24 B= 305,088.22, Y= 388875.10 FT  
 CGS Station 76 35 B= 305132.72, Y= 370875.45 FT

- Underground utility, structure and facility locations depicted and noted herein have been compiled, in part, from mapping supplied by the respective utility companies or governmental agencies, from parcel testimony and from other sources. These locations must be considered as approximate in nature. Additionally other such features may exist on the site, the existence of all such features must be field determined and verified by the appropriate authorities prior to construction. Call before you dig 1-800-955-4455.
- This parcel is located in Flood Zone C as shown on "Flood Insurance Rate Map Town of Torrington, Connecticut Panel 9 of 14 Community Flood Number 050201 0209 9 Revised date: April 4, 1983

**MONOPOLE LOCATION TABLE**

1983 NORTH AMERICAN DATUM (NAD 83)

NORTHING= 869485.33	LATITUDE= 41°30'48.71"
EASTING= 906923.27	LONGITUDE= 73°05'29.78"

1988 NORTH AMERICAN VERTICAL DATUM (NAVD 88)

ELEVATION= 1007 FT ± @ GROUND (PROPOSED)

**REC. REFERENCES**

- Connecticut State Highway Department Construction Maps of Torrington, Project No. 143-78, "Recreation of Route 87, Sheet nos 42 and 43
- Survey of Property to be conveyed by The Connecticut National Bank, Trustee (Jan H. Zink Trust) to Dennis S. Vail, Torrington, Connecticut, State 1°-107, July 22, 1988. By Deeds Litch L.S. 13303 Town Clerk Map #2058
- Map showing land to be acquired by Glen and Staple Vail from Dennis Vail, Jordan (a. Torrington, Conn., Scale 1°-50', Dated Dec. 1988, by Peter E. Keefe, Surveyor, Winsted Conn. Sheet 1 of 2. Town Clerk Map #2012
- Plan of Resubdivision, Land of Dennis S. Vail, to be Acquired by Dennis Vail & Rita Kesterman Lovelace (a. Torrington, CT, Scale 1°-50', Jan. 1990, by Peter E. Keefe, Surveyor, Winsted, CT, Town Clerk Map #2120

**Sprint PCS**
  
 SITE NO. CT33XC079

**SURVEY NOTES:**

- This map has been prepared pursuant to the Regulations of Connecticut State Agencies Sections 20-300b-1 through 20-300b-20 and the "Standards for Surveys and Maps in the State of Connecticut" as adopted by the Connecticut Association of Land Surveyors, Inc. on September 28, 1994.
- It is a Improvement Location Survey conforming to Horizontal Class D and Vertical Class T-2 Standards of Accuracy as defined in the above regulations, intended to be used for existing conditions, easement and lease dedication.
- This map was prepared from record research, other maps, limited field measurements and other sources. It is not to be construed as a Property/Boundary or Limited Property/Boundary Survey and is subject to such facts as said surveys may disclose.

**ZONING INFORMATION**  
 District: 4-28 (S1)

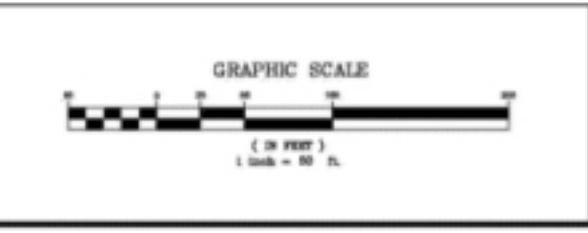
ITEM	REQUIRED	PROPOSED
MIN. LOT AREA	10,000 sq. ft.	1,161,828 sq. ft. (46.7 ac)
MIN. FRONT YARD SETBACK	15 ft.	15 ft.
MIN. SIDE YARD SETBACK	5 ft.	5 ft.
MIN. REAR YARD SETBACK	5 ft.	5 ft.
MIN. FRONT SETBACK	15 ft.	15 ft.
MIN. SIDE SETBACK	5 ft.	5 ft.
MIN. REAR SETBACK	5 ft.	5 ft.

**FAA 2C SURVEY CERTIFICATION**

I hereby certify that the latitude, longitude and elevations presented herein meet the requirements of the FAA with the following accuracies:

± TWENTY (20) FEET VERTICALLY  
 ± FIFTY (50) FEET HORIZONTALLY

Kenneth Herbert  
 Kenneth Herbert L.L.S. #8498 DATE: 3/21/2003



To my knowledge and belief this map is substantially correct as noted herein.

Kenneth Herbert L.L.S.#8498  
 3/21/2003



REV.	DATE	DESCRIPTION	BY

**McFARLAND - JOHNSON, INC.**  
 400 BAYVIEW AVENUE SUITE 80 NEW LONDON, CT 06460  
 PHONE 846 447-0446 FAX 846 447-0445

**TORRINGTON**  
 LAURELTON DRIVE TORRINGTON, CT

**EXISTING CONDITIONS & EASEMENT PLAN**

SCALE: 1"=50'	DESIGN: [blank]	SHEET: [blank]
DRAWN: 09/JCD	PROJECT: 15805.57	
CHECKED: [blank]	DATE: MAR. 18, 2003	

**C-1**

NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL PROPOSED UNDERGROUND UTILITY CONDUIT ROUTE.
2. ANTENNAS AND MOUNTS OMITTED FOR CLARITY.

NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. CONTRACTOR SHALL MAINTAIN A 10'-0" MINIMUM SEPARATION BETWEEN THE PROPOSED GPS UNIT, TRANSMITTING ANTENNAS AND EXISTING GPS UNITS.
3. ANTENNAS AND MOUNTS OMITTED FOR CLARITY.

**dish**  
wireless.

5701 SOUTH SANTA FE DRIVE  
LITTLETON, CO 80120

**B+T GRP**

1717 S. BOULDER  
SUITE 300  
TULSA, OK 74119  
PH: (918) 587-4630  
www.btgrp.com



MTS ENGINEERING P.L.L.C.  
BER:2386985  
Expires 3/31/23

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.

DRAWN BY: MEH  
CHECKED BY: RMC  
APPROVED BY: RMC

RFDS REV #: 1

CONSTRUCTION DOCUMENTS

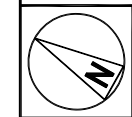
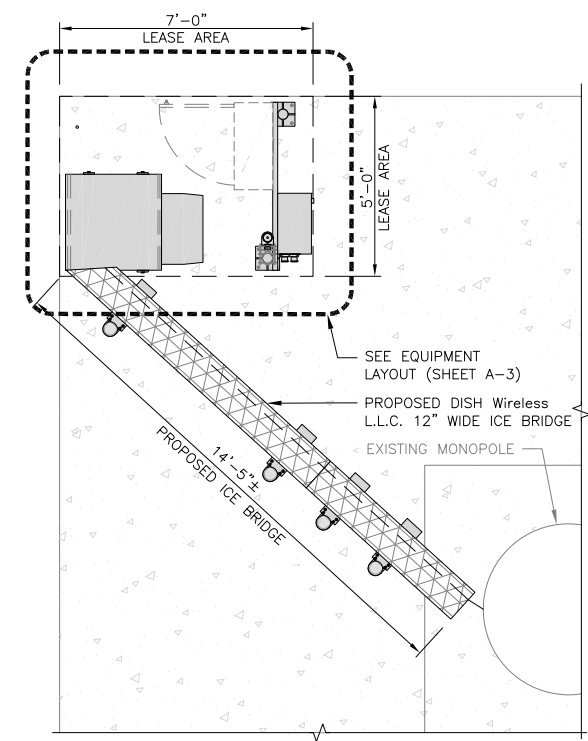
SUBMITTALS		
REV	DATE	DESCRIPTION
A	9/28/21	ISSUED FOR REVIEW
0	3/7/22	ISSUED FOR CONSTRUCTION
1	2/13/23	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER  
**149546.001.01**

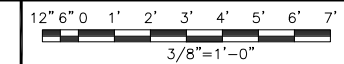
DISH Wireless L.L.C.  
PROJECT INFORMATION  
**BOHVN00203A**  
350 BURR MOUNTAIN RD  
TORRINGTON, CT 06790

SHEET TITLE  
**OVERALL AND ENLARGED SITE PLAN**

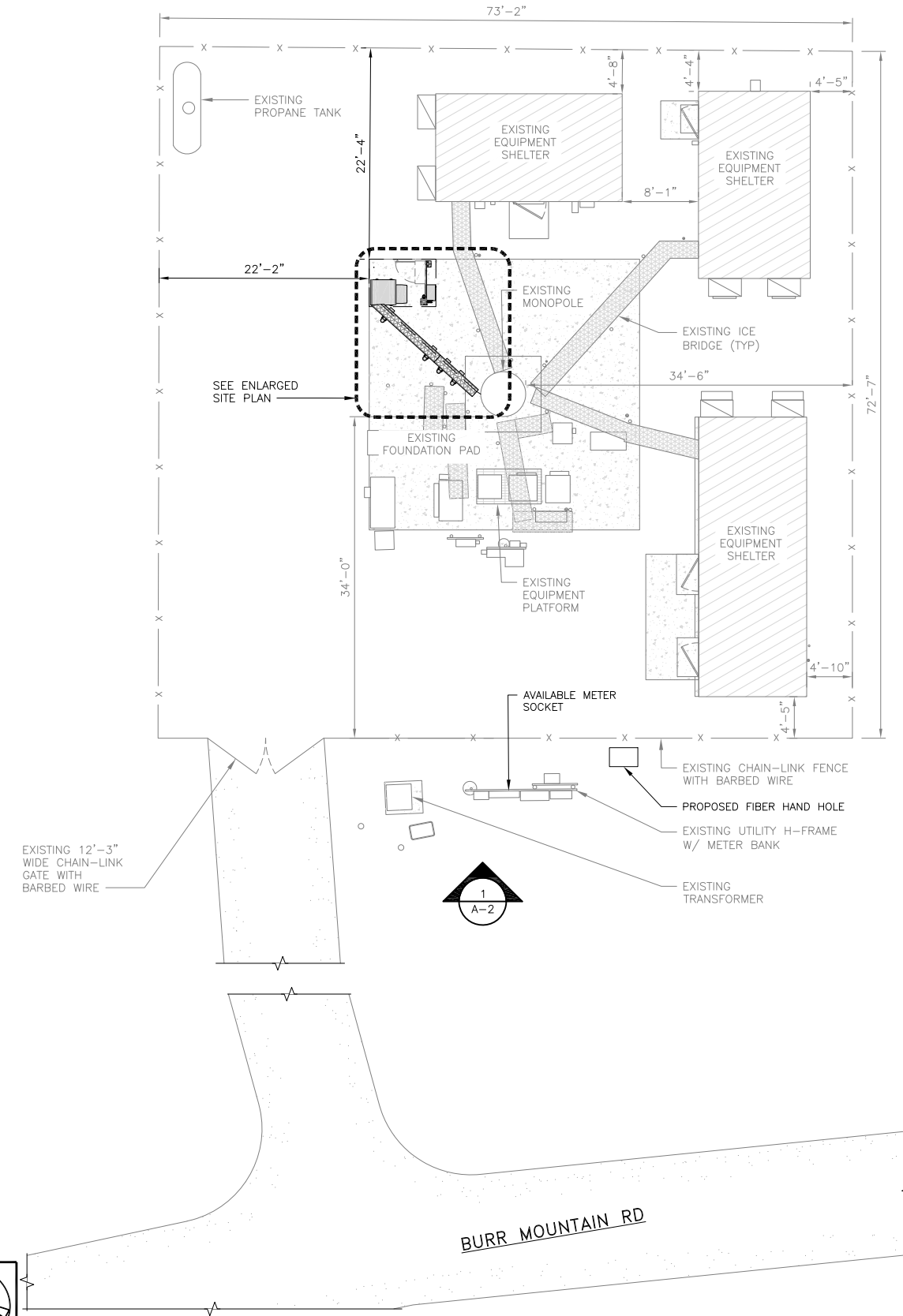
SHEET NUMBER  
**A-1**



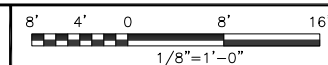
ENLARGED SITE PLAN



2



OVERALL SITE PLAN



1

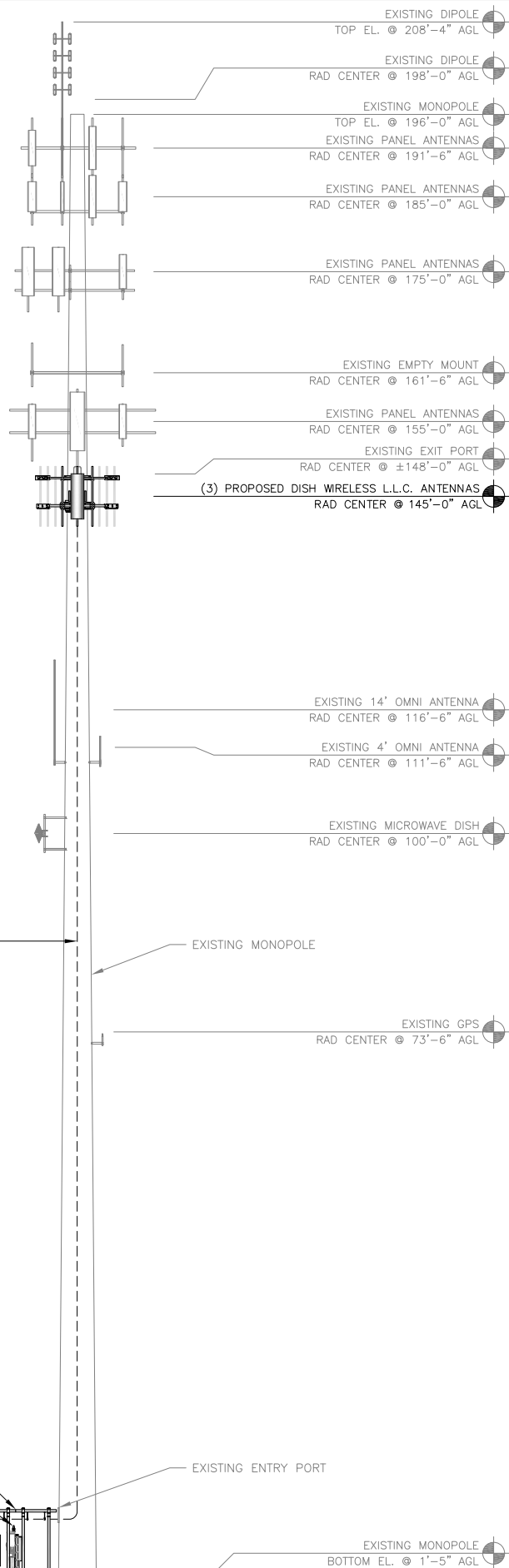
NOT USED

NO SCALE

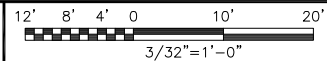
3

**NOTES**

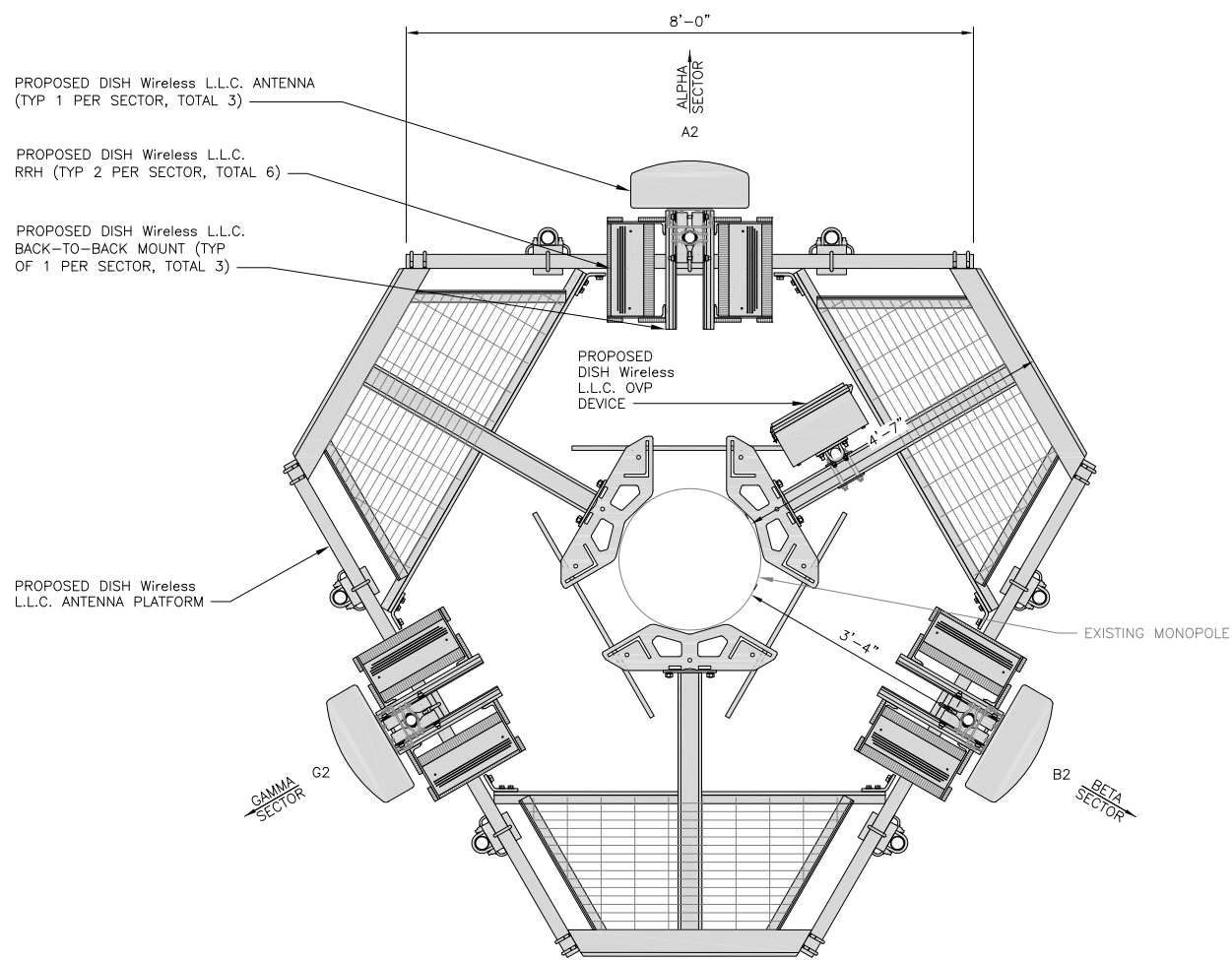
1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. ANTENNA AND MW DISH SPECIFICATIONS REFER TO ANTENNA SCHEDULE AND TO FINAL CONSTRUCTION RFDS FOR ALL RF DETAILS
3. EXISTING EQUIPMENT AND FENCE OMITTED FOR CLARITY.



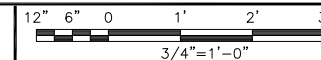
**PROPOSED WEST ELEVATION**



**1**



**ANTENNA LAYOUT**



**2**

SECTOR POS.	ANTENNA					TRANSMISSION CABLE	RRH			OVP
	EXISTING OR PROPOSED	MANUFACTURER - MODEL NUMBER	TECH	AZIMUTH	RAD CENTER		FEED LINE TYPE AND LENGTH	MANUFACTURER - MODEL NUMBER	TECH	
A1	--	--	--	--	--	(1) HIGH-CAPACITY HYBRID CABLE (185' LONG)	FUJITSU - TA08025-B604	5G	A2	(1) RAYCAP RDIDC-9181-PF-48
A2	PROPOSED	JMA - MX08FRO665-21	5G	0°	145'-0"		FUJITSU - TA08025-B605	5G	A2	
A3	--	--	--	--	--		--	--	--	
B1	--	--	--	--	--	SHARED W/ALPHA	FUJITSU - TA08025-B604	5G	B2	SHARED W/ALPHA
B2	PROPOSED	JMA - MX08FRO665-21	5G	120°	145'-0"		FUJITSU - TA08025-B605	5G	B2	
B3	--	--	--	--	--		--	--	--	
C1	--	--	--	--	--	SHARED W/ALPHA	FUJITSU - TA08025-B604	5G	C2	SHARED W/ALPHA
C2	PROPOSED	JMA - MX08FRO665-21	5G	240°	145'-0"		FUJITSU - TA08025-B605	5G	C2	
C3	--	--	--	--	--		--	--	--	

**NOTES**

1. CONTRACTOR TO REFER TO FINAL CONSTRUCTION RFDS FOR ALL RF DETAILS.
2. ANTENNA AND RRH MODELS MAY CHANGE DUE TO EQUIPMENT AVAILABILITY. ALL EQUIPMENT CHANGES MUST BE APPROVED AND REMAIN IN COMPLIANCE WITH THE PROPOSED DESIGN AND STRUCTURAL ANALYSES.

**ANTENNA SCHEDULE**

NO SCALE

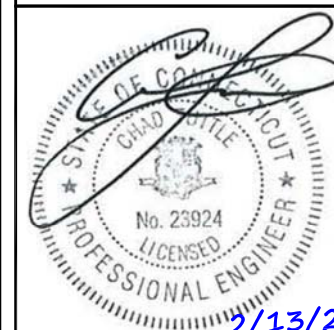
**3**



5701 SOUTH SANTA FE DRIVE  
LITTLETON, CO 80120



1717 S. BOULDER  
SUITE 300  
TULSA, OK 74119  
PH: (918) 587-4630  
www.btgrp.com



2/13/23

MTS ENGINEERING P.L.L.C.  
BER:2386985  
Expires 3/31/23

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.

DRAWN BY: MEH  
CHECKED BY: RMC  
APPROVED BY: RMC

RFDS REV #: 1

**CONSTRUCTION DOCUMENTS**

SUBMITTALS		
REV	DATE	DESCRIPTION
A	9/28/21	ISSUED FOR REVIEW
0	3/7/22	ISSUED FOR CONSTRUCTION
1	2/13/23	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER  
**149546.001.01**

DISH Wireless L.L.C.  
PROJECT INFORMATION  
**BOHVN00203A**  
350 BURR MOUNTAIN RD  
TORRINGTON, CT 06790

SHEET TITLE  
**ELEVATION, ANTENNA LAYOUT AND SCHEDULE**

SHEET NUMBER

**A-2**



## CONSTRUCTION DOCUMENTS

SUBMITTALS		
REV	DATE	DESCRIPTION
A	9/28/21	ISSUED FOR REVIEW
0	3/7/22	ISSUED FOR CONSTRUCTION
1	2/13/23	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER  
**149546.001.01**

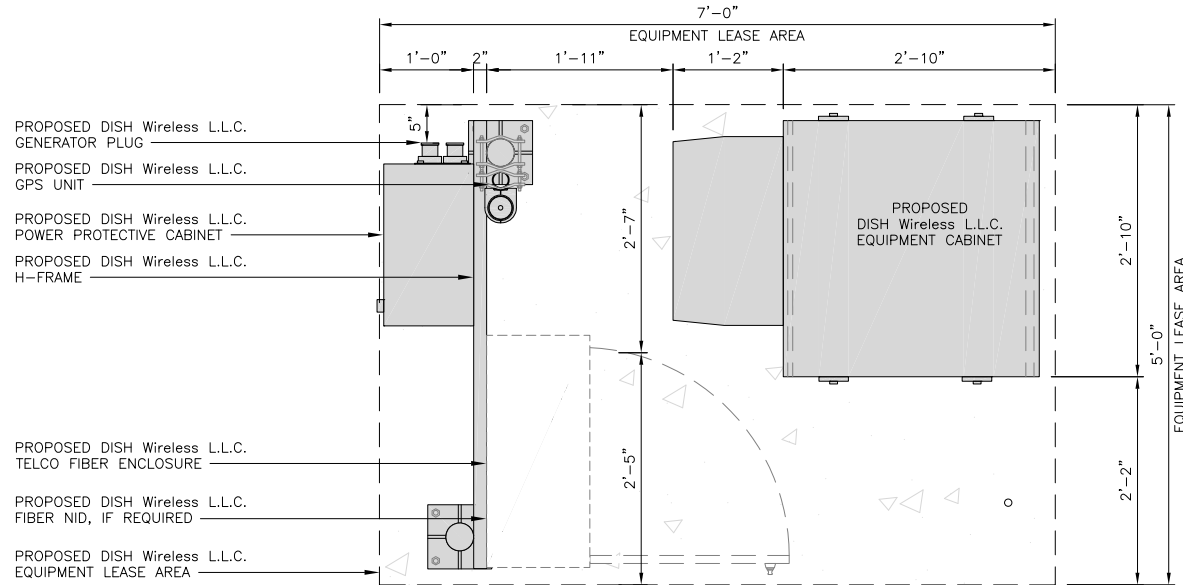
DISH Wireless L.L.C.  
PROJECT INFORMATION  
**BOHVN00203A**  
350 BURR MOUNTAIN RD  
TORRINGTON, CT 06790

SHEET TITLE  
**EQUIPMENT PAD AND H-FRAME DETAILS**

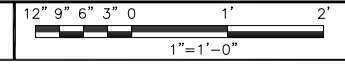
SHEET NUMBER  
**A-3**

### NOTES

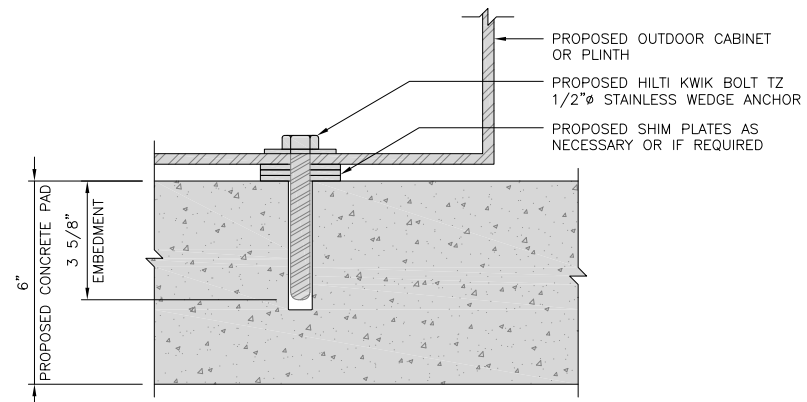
- CONTRACTOR TO BURY PLATFORM FEET WITH A MINIMUM OF 2" OF FILL PER EXISTING SITE SURFACE
- WEED BARRIER FABRIC TO BE ADDED AT DISCRETION OF DISH Wireless L.L.C. CONSTRUCTION MANAGER AT TIME OF CONSTRUCTION. ONE SHEET 8'x8' INSTALLED UNDER ALL FOUR FEET OF THE PLATFORM (4 MIL BLACK PLASTIC)
- EQUIPMENT CABINET OMITTED FOR CLARITY



PAD EQUIPMENT PLAN



1



TYPICAL OUTDOOR EQUIPMENT TO CONCRETE SLAB ANCHORAGE

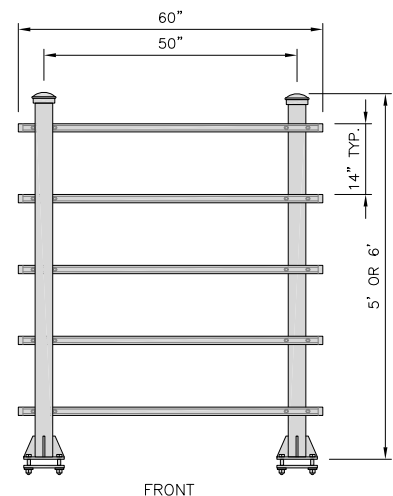
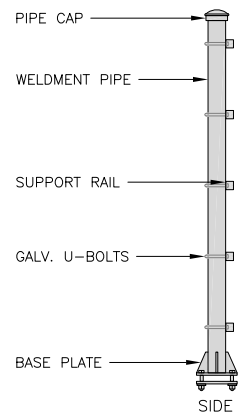
NO SCALE

2

COMMSCOPE MTC4045HFLD H-FRAME	
UNISTRUT/SUPPORT RAILS QTY	5
WEIGHT	59.74 lbs

NOTE: OR DISH Wireless L.L.C. APPROVED EQUIVALENT

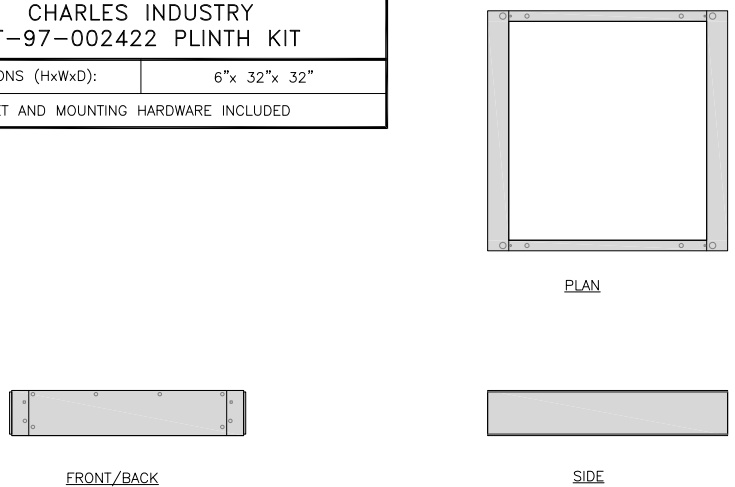
CHARLES INDUSTRY LT-97-002422 PLINTH KIT	
DIMENSIONS (HxWxD):	6"x 32"x 32"
NOTE: GASKET AND MOUNTING HARDWARE INCLUDED	



H-FRAME DETAIL

NO SCALE

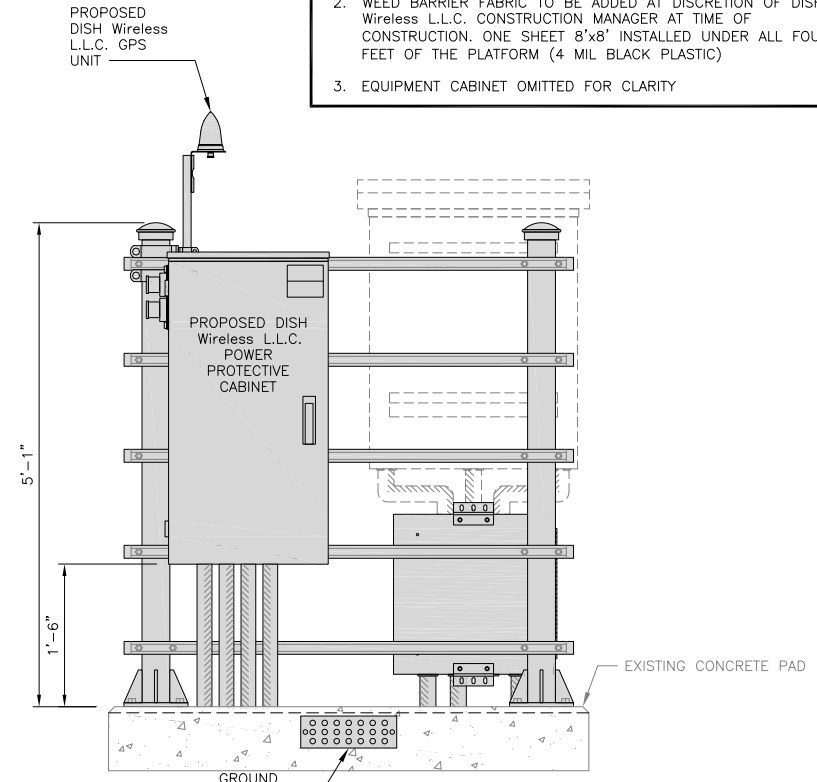
3



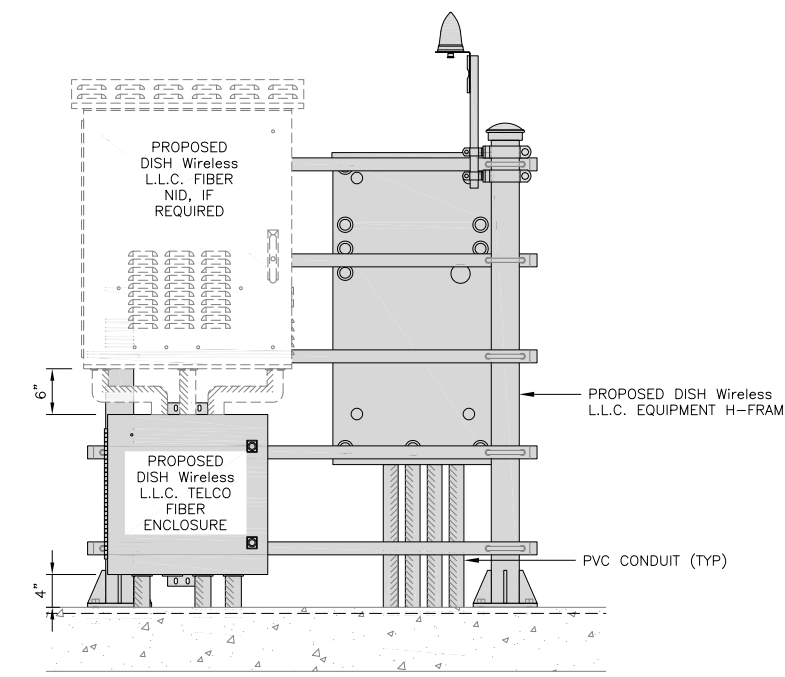
PLINTH DETAIL

NO SCALE

4

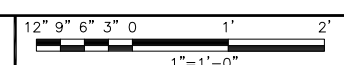


FRONT ELEVATION

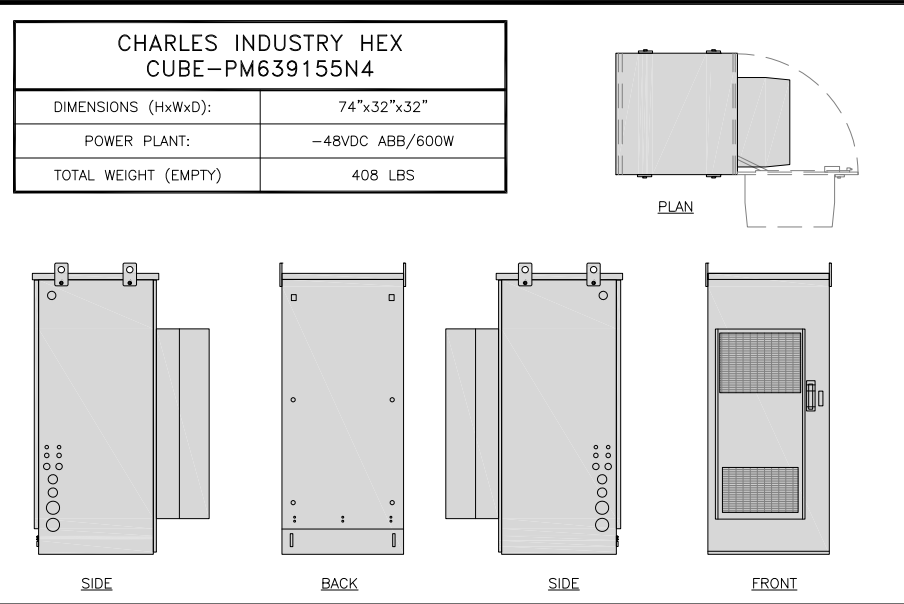


BACK ELEVATION

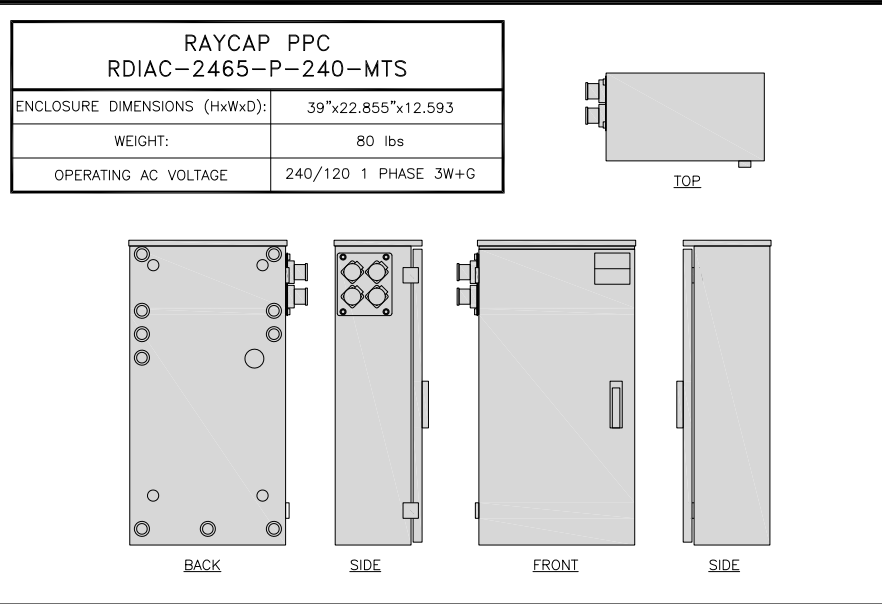
H-FRAME EQUIPMENT ELEVATION



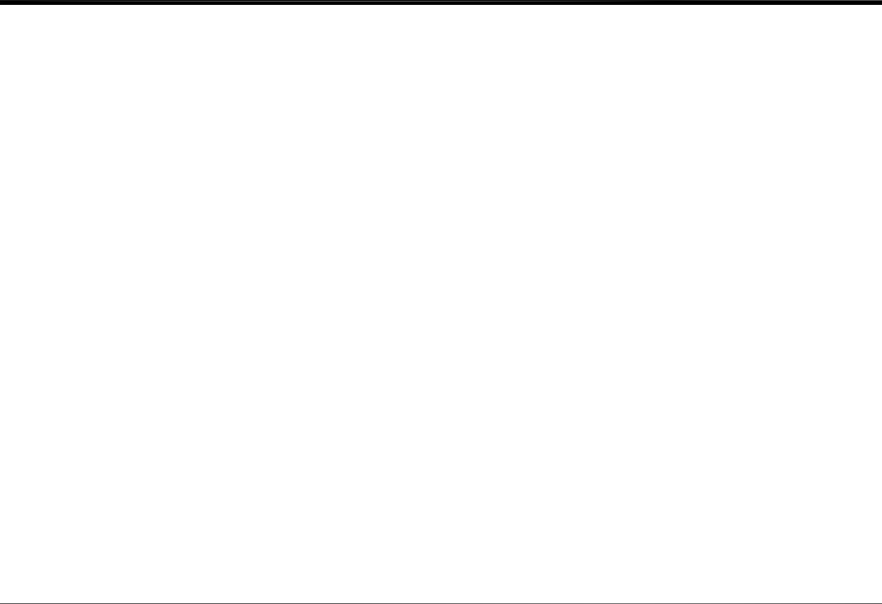
5



CABINET DETAIL      NO SCALE      1



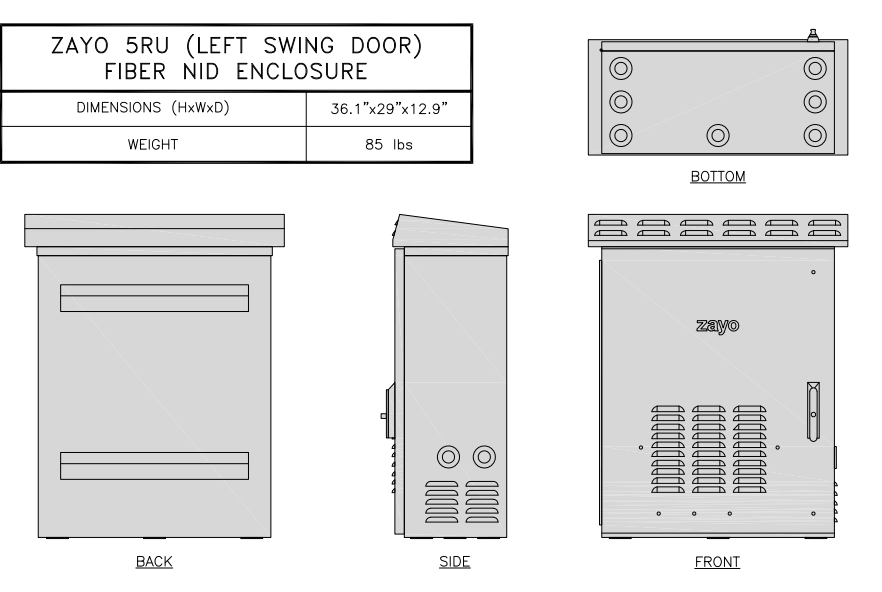
POWER PROTECTION CABINET (PPC) DETAIL      NO SCALE      2



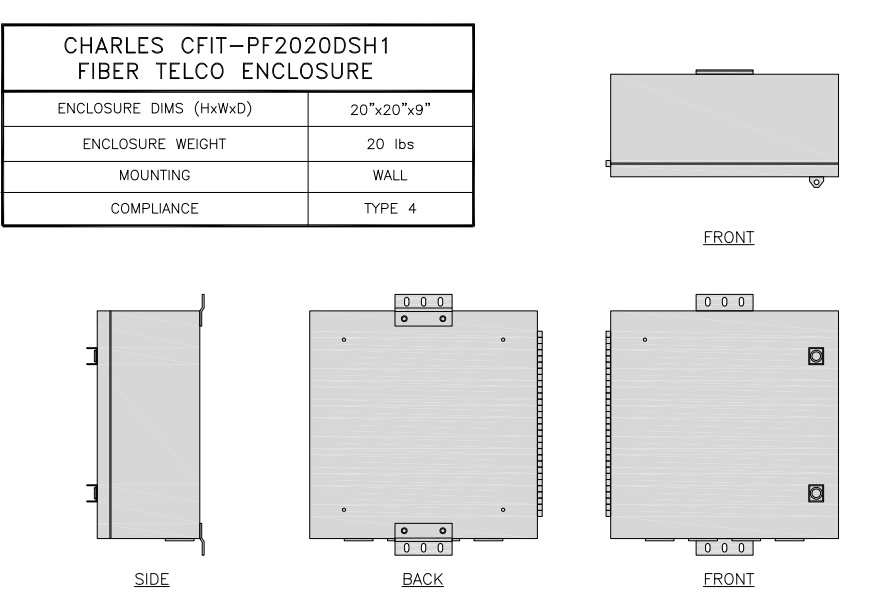
NOT USED      NO SCALE      3



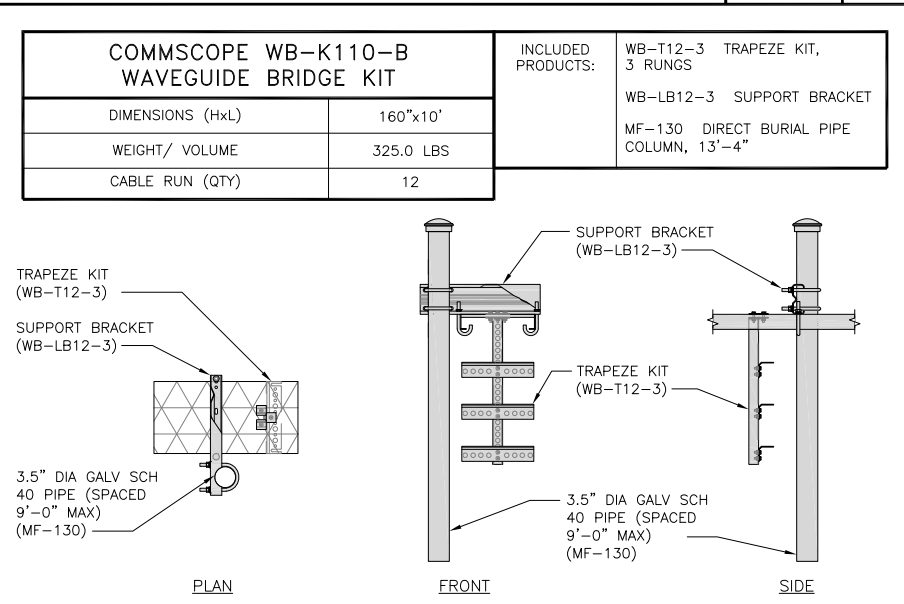
NOT USED      NO SCALE      4



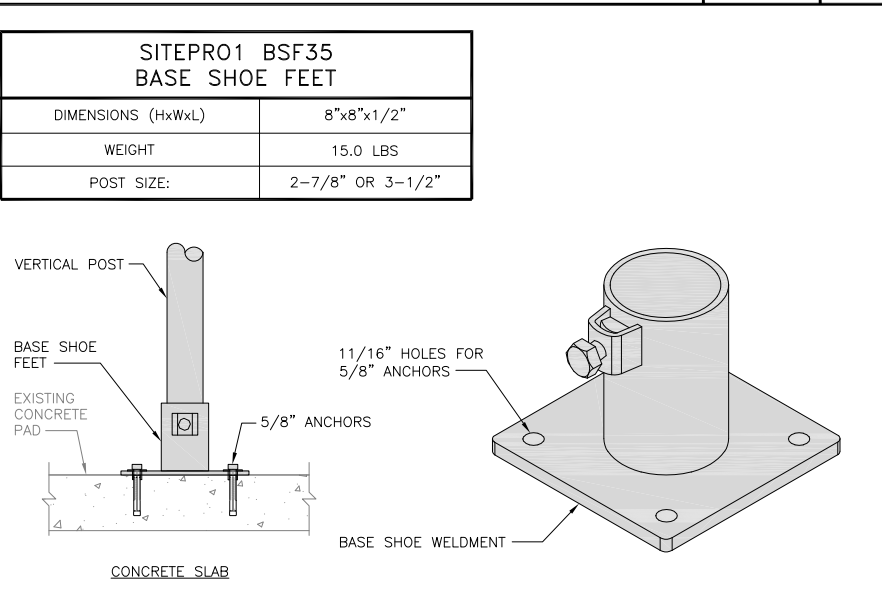
FIBER NID ENCLOSURE DETAIL      NO SCALE      5



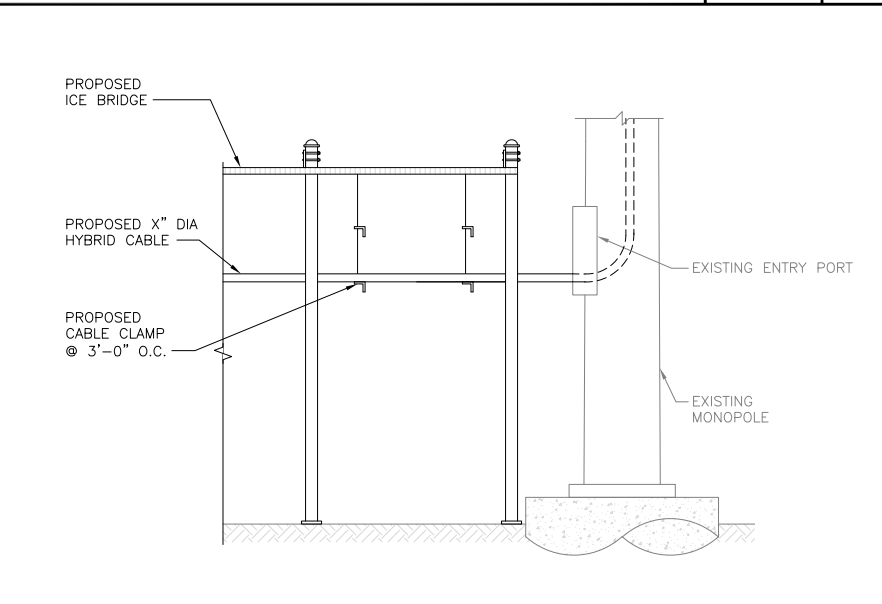
FIBER TELCO ENCLOSURE DETAIL      NO SCALE      6



ICE BRIDGE DETAIL      NO SCALE      7



ICE BRIDGE PIPE MOUNT DETAIL      NO SCALE      8



HYBRID CABLE RUN      NO SCALE      9

5701 SOUTH SANTA FE DRIVE  
LITTLETON, CO 80120

1717 S. BOULDER  
SUITE 300  
TULSA, OK 74119  
PH: (918) 587-4630  
www.btgrp.com

2/13/23

MTS ENGINEERING P.L.L.C.  
BER:2386985  
Expires 3/31/23

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.

DRAWN BY:	CHECKED BY:	APPROVED BY:
MEH	RMC	RMC
RFDS REV #:		1

### CONSTRUCTION DOCUMENTS

SUBMITTALS		
REV	DATE	DESCRIPTION
A	9/28/21	ISSUED FOR REVIEW
0	3/7/22	ISSUED FOR CONSTRUCTION
1	2/13/23	ISSUED FOR CONSTRUCTION

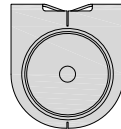
A&E PROJECT NUMBER  
**149546.001.01**

DISH Wireless L.L.C.  
PROJECT INFORMATION  
**BOHVN00203A**  
350 BURR MOUNTAIN RD  
TORRINGTON, CT 06790

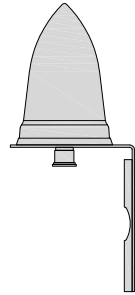
SHEET TITLE  
**EQUIPMENT DETAILS**

SHEET NUMBER  
**A-4**

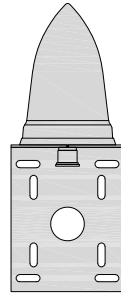
<b>PCTEL</b> <b>GPSGL-TMG-SPI-40NCB</b>	
DIMENSIONS (DIAxH) MM/INCH	81x184mm 3.2"x7.25"
WEIGHT W/ACCESSORIES	075 lbs
CONNECTOR	N-FEMALE
FREQUENCY RANGE	1590 ± 30MHz



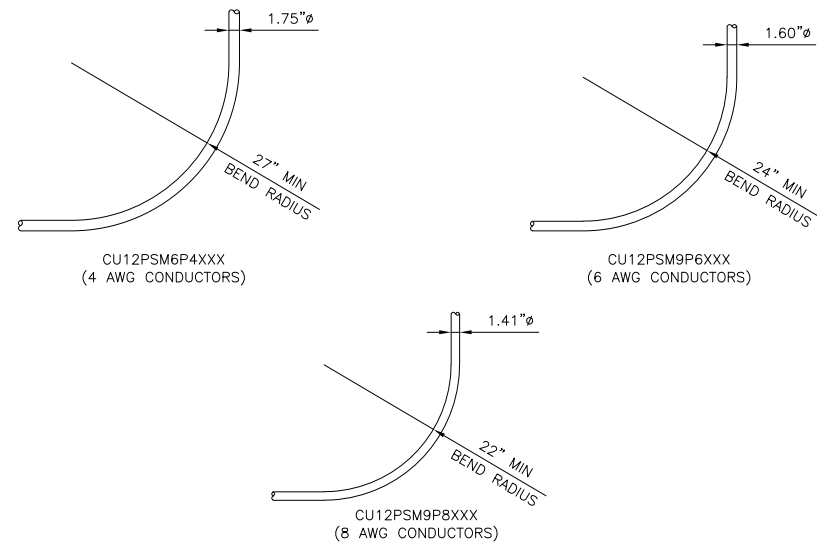
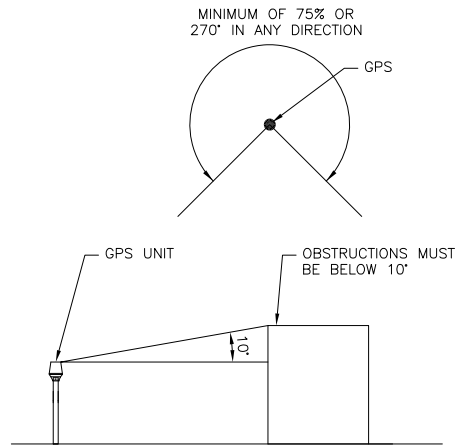
TOP



BACK



SIDE



**dish**  
wireless.

5701 SOUTH SANTA FE DRIVE  
LITTLETON, CO 80120



1717 S. BOULDER  
SUITE 300  
TULSA, OK 74119  
PH: (918) 587-4630  
www.btgrp.com



MTS ENGINEERING P.L.L.C.  
BER:2386985  
Expires 3/31/23

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.

DRAWN BY: MEH    CHECKED BY: RMC    APPROVED BY: RMC

RFDS REV #: 1

**CONSTRUCTION DOCUMENTS**

SUBMITTALS		
REV	DATE	DESCRIPTION
A	9/28/21	ISSUED FOR REVIEW
0	3/7/22	ISSUED FOR CONSTRUCTION
1	2/13/23	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER  
**149546.001.01**

DISH Wireless L.L.C.  
PROJECT INFORMATION  
**BOHVN00203A**  
350 BURR MOUNTAIN RD  
TORRINGTON, CT 06790

SHEET TITLE  
**EQUIPMENT DETAILS**

SHEET NUMBER  
**A-5**

GPS DETAIL

NO SCALE

1

GPS MINIMUM SKY VIEW REQUIREMENTS

NO SCALE

2

CABLES UNLIMITED HYBRID CABLE  
MINIMUM BEND RADIUSES

NO SCALE

3

NOT USED

NO SCALE

4

NOT USED

NO SCALE

5

NOT USED

NO SCALE

6

NOT USED

NO SCALE

7

NOT USED

NO SCALE

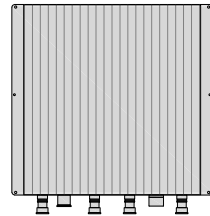
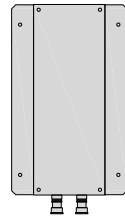
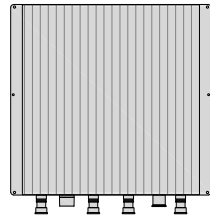
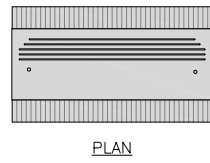
8

NOT USED

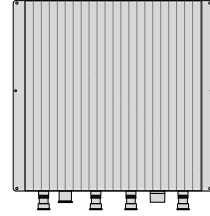
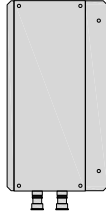
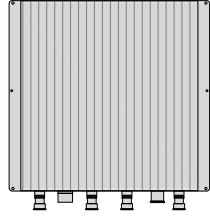
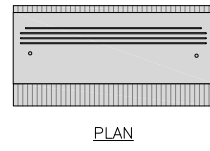
NO SCALE

9

FUJITSU TRIPLE BAND TA08025-B605	
DIMENSIONS (HxWxD)	14.9"x15.7"x9"
WEIGHT	74.95 lbs
CONNECTOR TYPE	4.3-10 RF CONNECTOR
POWER SUPPLY	DC -58~-36V

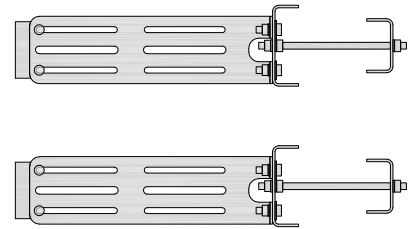


FUJITSU DUAL BAND TA08025-B604	
DIMENSIONS (HxWxD)	14.9"x15.7"x7.8"
WEIGHT	63.9 lbs
CONNECTOR TYPE	4.3-10 RF CONNECTOR
POWER SUPPLY	DC -58~-36V



COMMSCOPE RR-FA2 LARGE STABILIZER	
DIMENSIONS (HxWxD)	16.4"x8.5"x18"
WEIGHT	39.2 lbs

DESIGN NOTES:  
MOUNT WILL FIT LEGS UP TO:  
- 5.6" ROUND  
- 6.0" 60° ANGLE  
- 4.5" 90° ANGLE



NOTE:  
OR DISH Wireless L.L.C.  
APPROVED EQUIVALENT

RRH DETAIL

NO SCALE

1

RRH DETAIL

NO SCALE

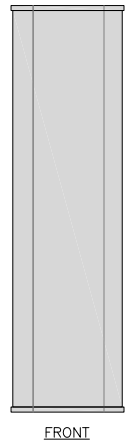
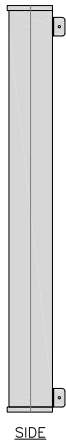
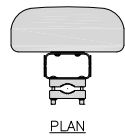
2

RRH MOUNT DETAIL

NO SCALE

3

JMA MX08FRO665-21	
DIMENSIONS (HxWxD)	72"x20.0"x8.0"
RF PORTS, CONNECTOR TYPE	8 x 4.3-10 FEMALE
WEIGHT	64.5 lbs
WEIGHT WITH BRACKETS	82.5 lbs



ANTENNA DETAIL

NO SCALE

4

NOT USED

NO SCALE

5

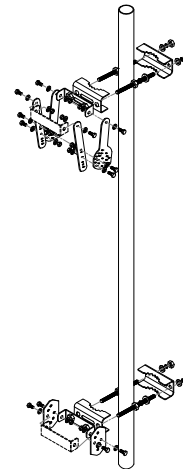
ANTENNA BRACKET DETAIL

NO SCALE

6

JMA ANTENNA MOUNT BRACKET #91900318	
TOTAL WEIGHT (WITH BRACKETS)	18 lbs (8.18 Kg)
POLE DIAMETER RANGE	2.5" TO 4.5"

NOTE:  
KIT #91900318: TOP AND BOTTOM BRACKETS  
FOR 4-, 6-, AND 8-FOOT ANTENNAS  
ANTENNA BRACKET NOT PART OF KIT



NOTE:  
OR DISH Wireless L.L.C.  
APPROVED EQUIVALENT



MTS ENGINEERING P.L.L.C.  
BER:2386985  
Expires 3/31/23

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.

DRAWN BY: CHECKED BY: APPROVED BY:

MEH RMC RMC

RFDS REV #: 1

CONSTRUCTION  
DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
A	9/28/21	ISSUED FOR REVIEW
0	3/7/22	ISSUED FOR CONSTRUCTION
1	2/13/23	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER  
149546.001.01

DISH Wireless L.L.C.  
PROJECT INFORMATION

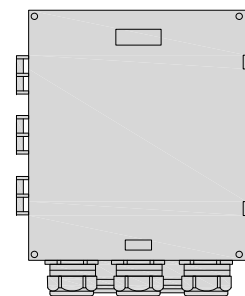
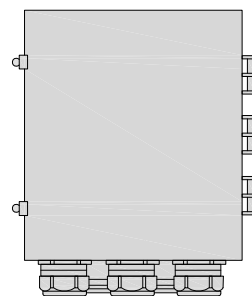
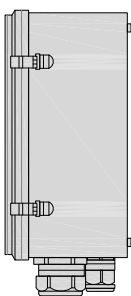
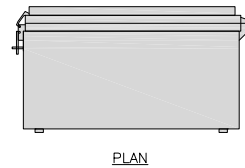
BOHVN00203A  
350 BURR MOUNTAIN RD  
TORRINGTON, CT 06790

SHEET TITLE  
EQUIPMENT DETAILS

SHEET NUMBER

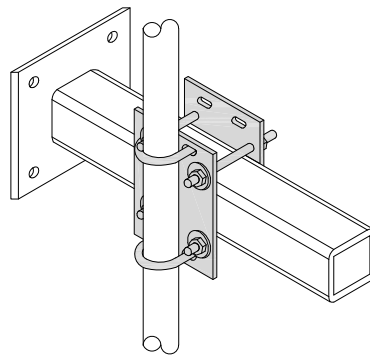
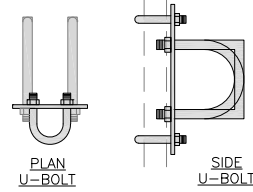
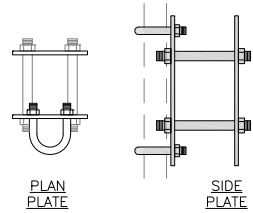
A-6

RAYCAP RDIDC-9181-PF-48 DC SURGE PROTECTION (OVP)	
DIMENSIONS (HxWxD)	18.98"x14.39"x8.15"
WEIGHT	21.82 LBS



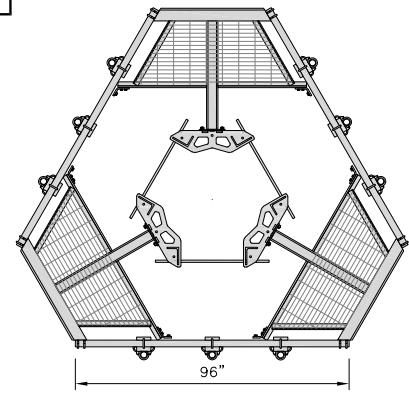
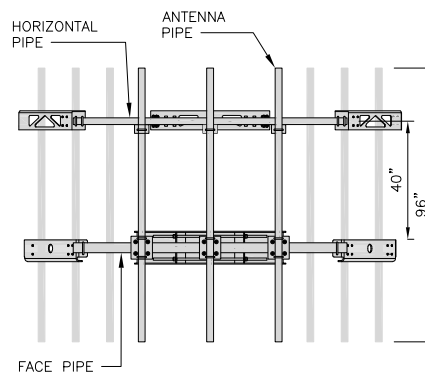
COMMSCOPE XP-2040 CROSSOVER PLATE	
DIMENSIONS (HxW)	10"x12"
WEIGHT	11 lbs

NOTE:  
OR DISH Wireless L.L.C.  
APPROVED EQUIVALENT



COMMSCOPE MC-PK8-DSH	
FACE WIDTH	96"
WEIGHT	1373.08 lbs
NOTE: 15" TO 38" O.D.	

NOTE:  
OR DISH Wireless L.L.C.  
APPROVED EQUIVALENT



SURGE SUPPRESSION DETAIL (OVP)

NO SCALE

7

RRH/OVP MOUNT DETAIL

NO SCALE

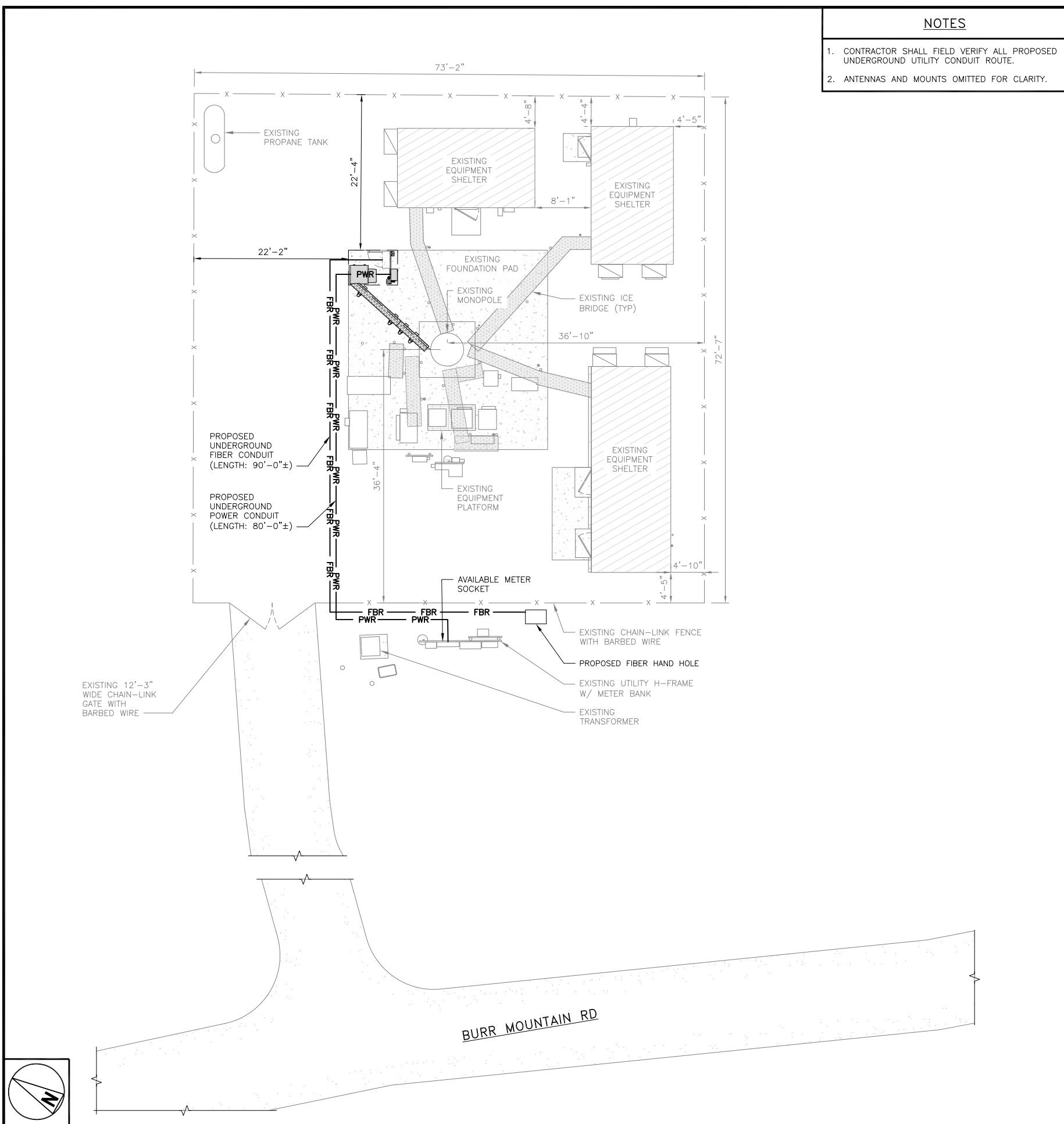
8

ANTENNA PLATFORM DETAIL

NO SCALE

9





**NOTES**

1. CONTRACTOR SHALL FIELD VERIFY ALL PROPOSED UNDERGROUND UTILITY CONDUIT ROUTE.
2. ANTENNAS AND MOUNTS OMITTED FOR CLARITY.

DC POWER WIRING SHALL BE COLOR CODED AT EACH END FOR IDENTIFYING +24V AND -48V CONDUCTORS. RED MARKINGS SHALL IDENTIFY +24V AND BLUE MARKINGS SHALL IDENTIFY -48V.

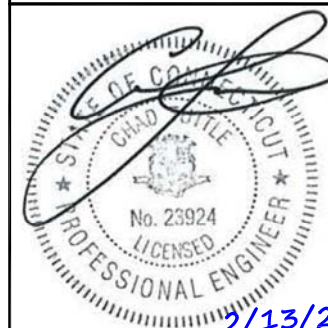
1. CONTRACTOR SHALL INSPECT THE EXISTING CONDITIONS PRIOR TO SUBMITTING A BID. ANY QUESTIONS ARISING DURING THE BID PERIOD IN REGARDS TO THE CONTRACTOR'S FUNCTIONS, THE SCOPE OF WORK, OR ANY OTHER ISSUE RELATED TO THIS PROJECT SHALL BE BROUGHT UP DURING THE BID PERIOD WITH THE PROJECT MANAGER FOR CLARIFICATION, NOT AFTER THE CONTRACT HAS BEEN AWARDED.
2. ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH CURRENT NATIONAL ELECTRICAL CODES AND ALL STATE AND LOCAL CODES, LAWS, AND ORDINANCES. PROVIDE ALL COMPONENTS AND WIRING SIZES AS REQUIRED TO MEET NEC STANDARDS.
3. LOCATION OF EQUIPMENT, CONDUIT AND DEVICES SHOWN ON THE DRAWINGS ARE APPROXIMATE AND SHALL BE COORDINATED WITH FIELD CONDITIONS PRIOR TO CONSTRUCTION.
4. CONDUIT ROUGH-IN SHALL BE COORDINATED WITH THE MECHANICAL EQUIPMENT TO AVOID LOCATION CONFLICTS. VERIFY WITH THE MECHANICAL EQUIPMENT CONTRACTOR AND COMPLY AS REQUIRED.
5. CONTRACTOR SHALL PROVIDE ALL BREAKERS, CONDUITS AND CIRCUITS AS REQUIRED FOR A COMPLETE SYSTEM.
6. CONTRACTOR SHALL PROVIDE PULL BOXES AND JUNCTION BOXES AS REQUIRED BY THE NEC ARTICLE 314.
7. CONTRACTOR SHALL PROVIDE ALL STRAIN RELIEF AND CABLE SUPPORTS FOR ALL CABLE ASSEMBLIES. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
8. ALL DISCONNECTS AND CONTROLLING DEVICES SHALL BE PROVIDED WITH ENGRAVED PHENOLIC NAMEPLATES INDICATING EQUIPMENT CONTROLLED, BRANCH CIRCUITS INSTALLED ON, AND PANEL FIELD LOCATIONS FED FROM.
9. INSTALL AN EQUIPMENT GROUNDING CONDUCTOR IN ALL CONDUITS PER THE SPECIFICATIONS AND NEC 250. THE EQUIPMENT GROUNDING CONDUCTORS SHALL BE BONDED AT ALL JUNCTION BOXES, PULL BOXES, AND ALL DISCONNECT SWITCHES, AND EQUIPMENT CABINETS.
10. ALL NEW MATERIAL SHALL HAVE A U.L. LABEL.
11. PANEL SCHEDULE LOADING AND CIRCUIT ARRANGEMENTS REFLECT POST-CONSTRUCTION EQUIPMENT.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR AS-BUILT PANEL SCHEDULE AND SITE DRAWINGS.
13. ALL TRENCHES IN COMPOUND TO BE HAND DUG



5701 SOUTH SANTA FE DRIVE  
LITTLETON, CO 80120



1717 S. BOULDER  
SUITE 300  
TULSA, OK 74119  
PH: (918) 587-4630  
www.btgrp.com



MTS ENGINEERING P.L.L.C.  
BER:2386985  
Expires 3/31/23

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.

DRAWN BY: MEH  
CHECKED BY: RMC  
APPROVED BY: RMC

RFDS REV #: 1

**CONSTRUCTION DOCUMENTS**

SUBMITTALS		
REV	DATE	DESCRIPTION
A	9/28/21	ISSUED FOR REVIEW
0	3/7/22	ISSUED FOR CONSTRUCTION
1	2/13/23	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER  
**149546.001.01**

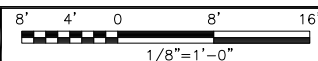
DISH Wireless L.L.C.  
PROJECT INFORMATION  
**BOHVN00203A**  
350 BURR MOUNTAIN RD  
TORRINGTON, CT 06790

SHEET TITLE  
**ELECTRICAL/FIBER ROUTE  
PLAN AND NOTES**

SHEET NUMBER

**E-1**

UTILITY ROUTE PLAN



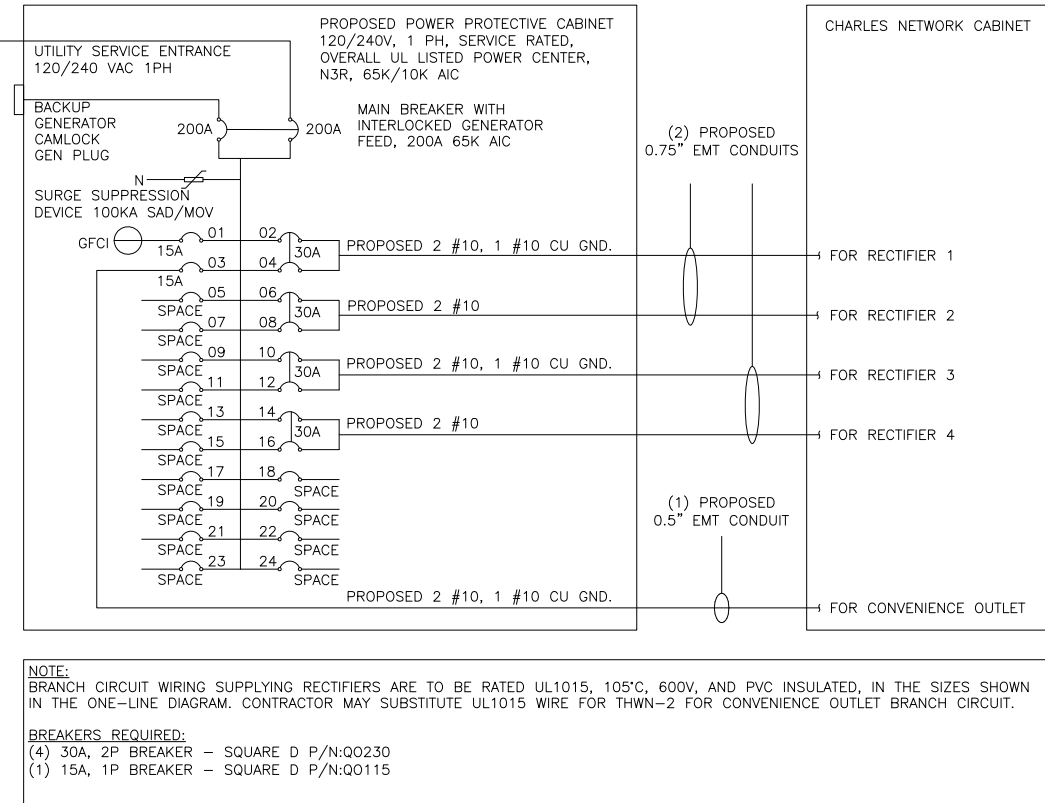
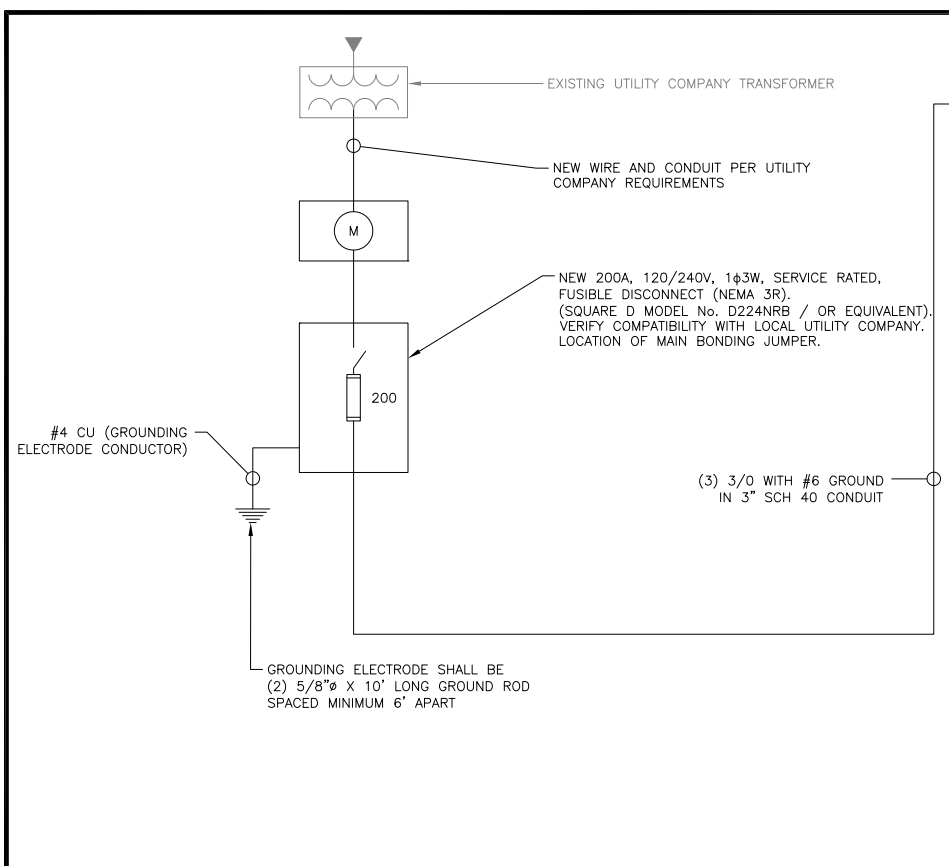
1

**ELECTRICAL NOTES**

NO SCALE

2





**NOTES**

THE (2) CONDUITS WITH (4) CURRENT CARRYING CONDUCTORS EACH, SHALL APPLY THE ADJUSTMENT FACTOR OF 80% PER 2014/17 NEC TABLE 310.15(B)(3)(a) OR 2020 NEC TABLE 310.15(C)(1) FOR UL1015 WIRE.

#12 FOR 15A-20A/1P BREAKER: 0.8 x 30A = 24.0A  
 #10 FOR 25A-30A/2P BREAKER: 0.8 x 40A = 32.0A  
 #8 FOR 35A-40A/2P BREAKER: 0.8 x 55A = 44.0A  
 #6 FOR 45A-60A/2P BREAKER: 0.8 x 75A = 60.0A

CONDUIT SIZING: AT 40% FILL PER NEC CHAPTER 9, TABLE 4, ARTICLE 358.  
 0.5" CONDUIT - 0.122 SQ. IN AREA  
 0.75" CONDUIT - 0.213 SQ. IN AREA  
 2.0" CONDUIT - 1.316 SQ. IN AREA  
 3.0" CONDUIT - 2.907 SQ. IN AREA

CABINET CONVENIENCE OUTLET CONDUCTORS (1 CONDUIT): USING THWN-2, CU.  
 #10 - 0.0211 SQ. IN X 2 = 0.0422 SQ. IN  
 #10 - 0.0211 SQ. IN X 1 = 0.0211 SQ. IN <GROUND  
 TOTAL = 0.0633 SQ. IN

0.5" EMT CONDUIT IS ADEQUATE TO HANDLE THE TOTAL OF (3) WIRES, INCLUDING GROUND WIRE, AS INDICATED ABOVE.

RECTIFIER CONDUCTORS (2 CONDUITS): USING UL1015, CU.  
 #10 - 0.0266 SQ. IN X 4 = 0.1064 SQ. IN  
 #10 - 0.0082 SQ. IN X 1 = 0.0082 SQ. IN <BARE GROUND  
 TOTAL = 0.1146 SQ. IN

0.75" EMT CONDUIT IS ADEQUATE TO HANDLE THE TOTAL OF (5) WIRES, INCLUDING GROUND WIRE, AS INDICATED ABOVE.

PPC FEED CONDUCTORS (1 CONDUIT): USING THWN, CU.  
 3/0 - 0.2679 SQ. IN X 3 = 0.8037 SQ. IN  
 #6 - 0.0507 SQ. IN X 1 = 0.0507 SQ. IN <GROUND  
 TOTAL = 0.8544 SQ. IN

3.0" SCH 40 PVC CONDUIT IS ADEQUATE TO HANDLE THE TOTAL OF (4) WIRES, INCLUDING GROUND WIRE, AS INDICATED ABOVE.

PPC ONE-LINE DIAGRAM

NO SCALE 1

**PROPOSED CHARLES PANEL SCHEDULE**

LOAD SERVED	VOLT AMPS (WATTS)		TRIP	CKT #	PHASE	CKT #	TRIP	VOLT AMPS (WATTS)		LOAD SERVED
	L1	L2						L1	L2	
PPC GFCI OUTLET	180	180	15A	1	A	2	30A	2880	2880	ABB/GE INFINITY RECTIFIER 1
CHARLES GFCI OUTLET			15A	3	B	4	30A	2880	2880	ABB/GE INFINITY RECTIFIER 2
--SPACE--				5	A	6	30A	2880	2880	ABB/GE INFINITY RECTIFIER 3
--SPACE--				7	B	8	30A	2880	2880	ABB/GE INFINITY RECTIFIER 4
--SPACE--				9	A	10				--SPACE--
--SPACE--				11	B	12				--SPACE--
--SPACE--				13	A	14				--SPACE--
--SPACE--				15	B	16				--SPACE--
--SPACE--				17	A	18				--SPACE--
--SPACE--				19	B	20				--SPACE--
--SPACE--				21	A	22				--SPACE--
--SPACE--				23	B	24				--SPACE--
VOLTAGE AMPS	180	180						11520	11520	
200A MCB, 1 $\phi$ , 24 SPACE, 120/240V				L1	L2					
MB RATING: 65,000 AIC				11700	11700					
				98	98					
				98						
				123						

PANEL SCHEDULE

NO SCALE 2

NOT USED

NO SCALE 3

5701 SOUTH SANTA FE DRIVE  
LITTLETON, CO 80120

1717 S. BOULDER SUITE 300  
TULSA, OK 74119  
PH: (918) 587-4630  
www.btgrp.com

2/13/23

MTS ENGINEERING P.L.L.C.  
BER:2386985  
Expires 3/31/23

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.

DRAWN BY: MEH CHECKED BY: RMC APPROVED BY: RMC

RFDS REV #: 1

**CONSTRUCTION DOCUMENTS**

SUBMITTALS

REV	DATE	DESCRIPTION
A	9/28/21	ISSUED FOR REVIEW
0	3/7/22	ISSUED FOR CONSTRUCTION
1	2/13/23	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER  
**149546.001.01**

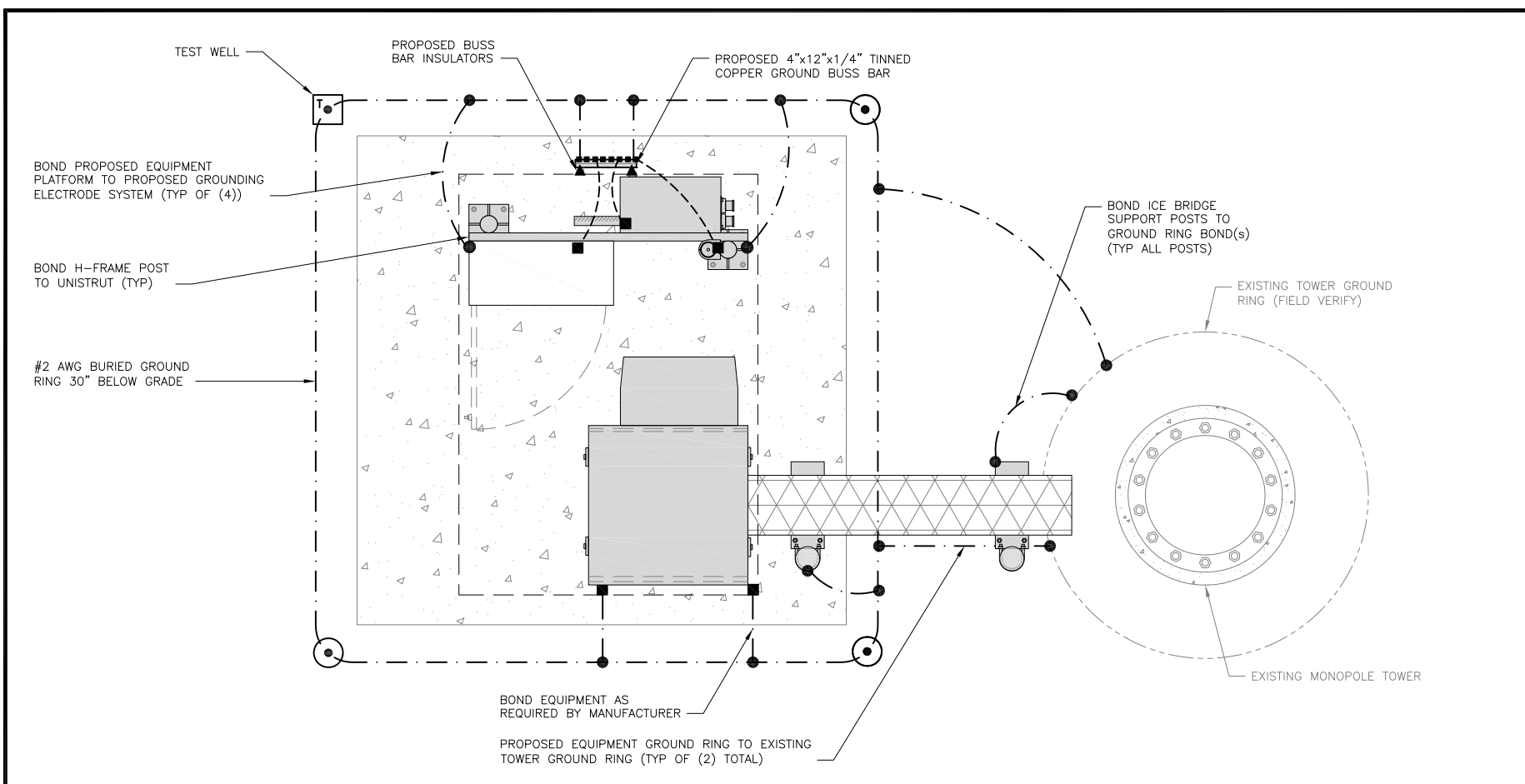
DISH Wireless L.L.C.  
PROJECT INFORMATION

BOHVN00203A  
350 BURR MOUNTAIN RD  
TORRINGTON, CT 06790

SHEET TITLE  
ELECTRICAL ONE-LINE, FAULT CALCS & PANEL SCHEDULE

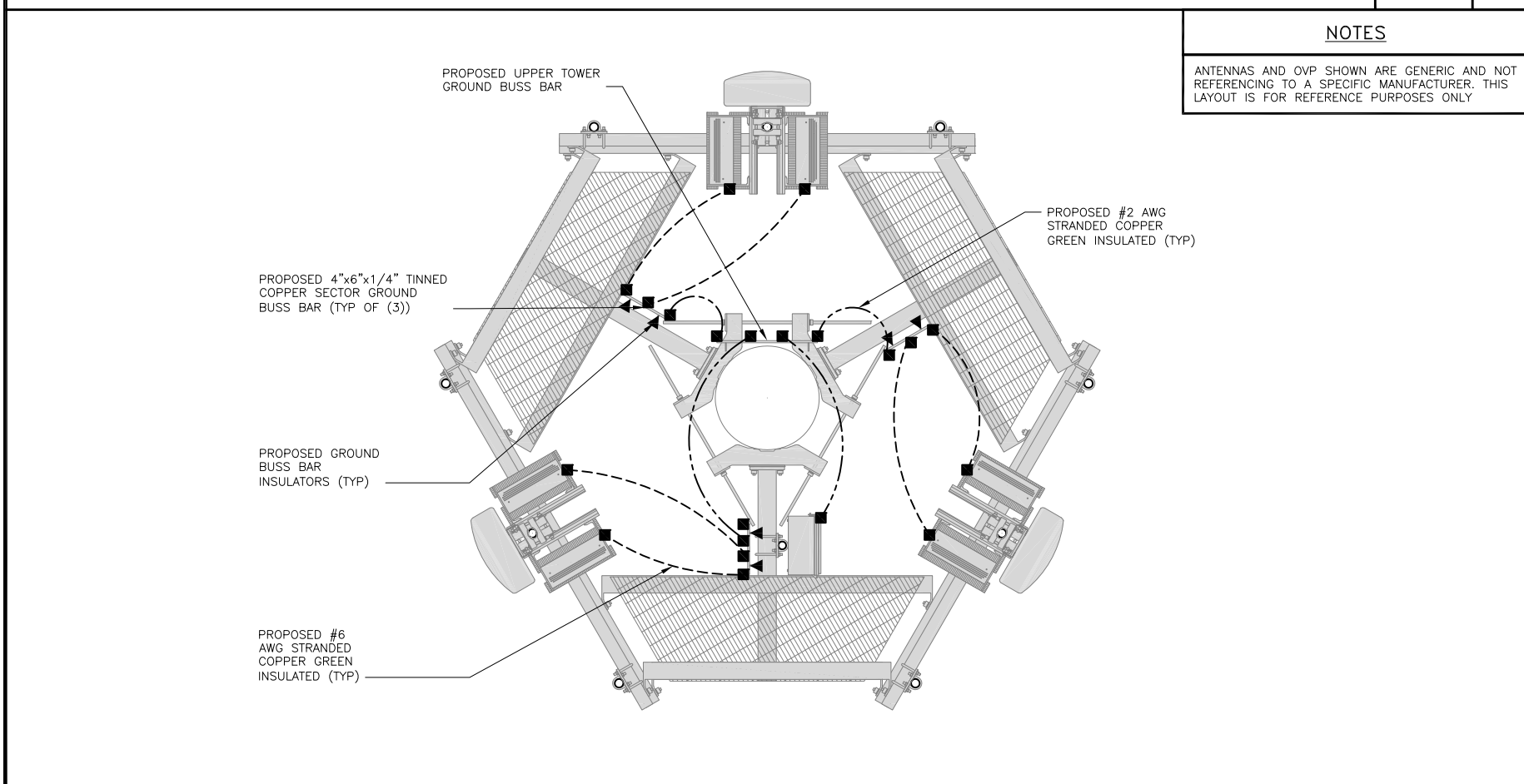
SHEET NUMBER  
**E-3**





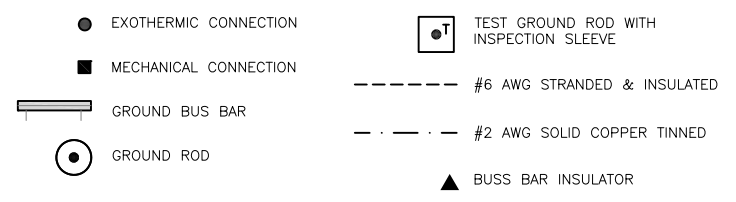
TYPICAL EQUIPMENT GROUNDING PLAN

NO SCALE 1



TYPICAL ANTENNA GROUNDING PLAN

NO SCALE 2



GROUNDING LEGEND

- GROUNDING IS SHOWN DIAGRAMMATICALLY ONLY.
- CONTRACTOR SHALL GROUND ALL EQUIPMENT AS A COMPLETE SYSTEM. GROUNDING SHALL BE IN COMPLIANCE WITH NEC SECTION 250 AND DISH Wireless L.L.C. GROUNDING AND BONDING REQUIREMENTS AND MANUFACTURER'S SPECIFICATIONS.
- ALL GROUND CONDUCTORS SHALL BE COPPER; NO ALUMINUM CONDUCTORS SHALL BE USED.

GROUNDING KEY NOTES

- (A) **EXTERIOR GROUND RING:** #2 AWG SOLID COPPER, BURIED AT A DEPTH OF AT LEAST 30 INCHES BELOW GRADE, OR 6 INCHES BELOW THE FROST LINE AND APPROXIMATELY 24 INCHES FROM THE EXTERIOR WALL OR FOOTING.
- (B) **TOWER GROUND RING:** THE GROUND RING SYSTEM SHALL BE INSTALLED AROUND AN ANTENNA TOWER'S LEGS, AND/OR GUY ANCHORS. WHERE SEPARATE SYSTEMS HAVE BEEN PROVIDED FOR THE TOWER AND THE BUILDING, AT LEAST TWO BONDS SHALL BE MADE BETWEEN THE TOWER RING GROUND SYSTEM AND THE BUILDING RING GROUND SYSTEM USING MINIMUM #2 AWG SOLID COPPER CONDUCTORS.
- (C) **INTERIOR GROUND RING:** #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTOR EXTENDED AROUND THE PERIMETER OF THE EQUIPMENT AREA. ALL NON-TELECOMMUNICATIONS RELATED METALLIC OBJECTS FOUND WITHIN A SITE SHALL BE GROUNDED TO THE INTERIOR GROUND RING WITH #6 AWG STRANDED GREEN INSULATED CONDUCTOR.
- (D) **BOND TO INTERIOR GROUND RING:** #2 AWG SOLID TINNED COPPER WIRE PRIMARY BONDS SHALL BE PROVIDED AT LEAST AT FOUR POINTS ON THE INTERIOR GROUND RING, LOCATED AT THE CORNERS OF THE BUILDING.
- (E) **GROUND ROD:** UL LISTED COPPER CLAD STEEL. MINIMUM 1/2" DIAMETER BY EIGHT FEET LONG. GROUND RODS SHALL BE INSTALLED WITH INSPECTION SLEEVES. GROUND RODS SHALL BE DRIVEN TO THE DEPTH OF GROUND RING CONDUCTOR.
- (F) **CELL REFERENCE GROUND BAR:** POINT OF GROUND REFERENCE FOR ALL COMMUNICATIONS EQUIPMENT FRAMES. ALL BONDS ARE MADE WITH #2 AWG UNLESS NOTED OTHERWISE STRANDED GREEN INSULATED COPPER CONDUCTORS. BOND TO GROUND RING WITH (2) #2 SOLID TINNED COPPER CONDUCTORS.
- (G) **HATCH PLATE GROUND BAR:** BOND TO THE INTERIOR GROUND RING WITH TWO #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTORS. WHEN A HATCH-PLATE AND A CELL REFERENCE GROUND BAR ARE BOTH PRESENT, THE CRGB MUST BE CONNECTED TO THE HATCH-PLATE AND TO THE INTERIOR GROUND RING USING (2) TWO #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTORS EACH.
- (H) **EXTERIOR CABLE ENTRY PORT GROUND BARS:** LOCATED AT THE ENTRANCE TO THE CELL SITE BUILDING. BOND TO GROUND RING WITH A #2 AWG SOLID TINNED COPPER CONDUCTORS WITH AN EXOTHERMIC WELD AND INSPECTION SLEEVE.
- (I) **TELCO GROUND BAR:** BOND TO BOTH CELL REFERENCE GROUND BAR OR EXTERIOR GROUND RING.
- (J) **FRAME BONDING:** THE BONDING POINT FOR TELECOM EQUIPMENT FRAMES SHALL BE THE GROUND BUS THAT IS NOT ISOLATED FROM THE EQUIPMENTS METAL FRAMEWORK.
- (K) **INTERIOR UNIT BONDS:** METAL FRAMES, CABINETS AND INDIVIDUAL METALLIC UNITS LOCATED WITH THE AREA OF THE INTERIOR GROUND RING REQUIRE A #6 AWG STRANDED GREEN INSULATED COPPER BOND TO THE INTERIOR GROUND RING.
- (L) **FENCE AND GATE GROUNDING:** METAL FENCES WITHIN 7 FEET OF THE EXTERIOR GROUND RING OR OBJECTS BONDED TO THE EXTERIOR GROUND RING SHALL BE BONDED TO THE GROUND RING WITH A #2 AWG SOLID TINNED COPPER CONDUCTOR AT AN INTERVAL NOT EXCEEDING 25 FEET. BONDS SHALL BE MADE AT EACH GATE POST AND ACROSS GATE OPENINGS.
- (M) **EXTERIOR UNIT BONDS:** METALLIC OBJECTS, EXTERNAL TO OR MOUNTED TO THE BUILDING, SHALL BE BONDED TO THE EXTERIOR GROUND RING. USING #2 TINNED SOLID COPPER WIRE.
- (N) **ICE BRIDGE SUPPORTS:** EACH ICE BRIDGE LEG SHALL BE BONDED TO THE GROUND RING WITH #2 AWG BARE TINNED COPPER CONDUCTOR. PROVIDE EXOTHERMIC WELDS AT BOTH THE ICE BRIDGE LEG AND BURIED GROUND RING.
- (O) DURING ALL DC POWER SYSTEM CHANGES INCLUDING DC SYSTEM CHANGE OUTS, RECTIFIER REPLACEMENTS OR ADDITIONS, BREAKER DISTRIBUTION CHANGES, BATTERY ADDITIONS, BATTERY REPLACEMENTS AND INSTALLATIONS OR CHANGES TO DC CONVERTER SYSTEMS IT SHALL BE REQUIRED THAT SERVICE CONTRACTORS VERIFY ALL DC POWER SYSTEMS ARE EQUIPPED WITH A MASTER DC SYSTEM RETURN GROUND CONDUCTOR FROM THE DC POWER SYSTEM COMMON RETURN BUS DIRECTLY CONNECTED TO THE CELL SITE REFERENCE GROUND BAR.
- (P) TOWER TOP COLLECTOR BUSS BAR IS TO BE MECHANICALLY BONDED TO PROPOSED ANTENNA MOUNT COLLAR. REFER TO DISH Wireless L.L.C. GROUNDING NOTES.

GROUNDING KEY NOTES

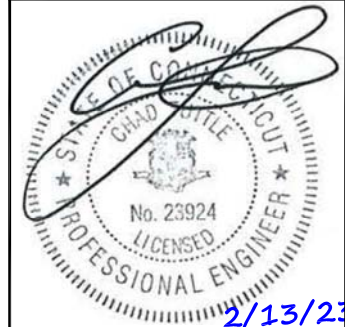
NO SCALE 3



5701 SOUTH SANTA FE DRIVE  
LITTLETON, CO 80120



1717 S. BOULDER  
SUITE 300  
TULSA, OK 74119  
PH: (918) 587-4630  
www.btgrp.com



MTS ENGINEERING P.L.L.C.  
BER:2386985  
Expires 3/31/23

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.

DRAWN BY:	CHECKED BY:	APPROVED BY:
MEH	RMC	RMC

RFDS REV #: 1

CONSTRUCTION DOCUMENTS

SUBMITTALS		
REV	DATE	DESCRIPTION
A	9/28/21	ISSUED FOR REVIEW
0	3/7/22	ISSUED FOR CONSTRUCTION
1	2/13/23	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER  
149546.001.01

DISH Wireless L.L.C.  
PROJECT INFORMATION  
BOHVN00203A  
350 BURR MOUNTAIN RD  
TORRINGTON, CT 06790

SHEET TITLE  
GROUNDING PLANS  
AND NOTES

SHEET NUMBER

G-1







**RF JUMPER COLOR CODING**

3/4" TAPE WIDTHS WITH 3/4" SPACING

LOW-BAND RRH -  
(600MHz N71 BASEBAND) +  
(850MHz N26 BAND) +  
(700MHz N29 BAND) - OPTIONAL PER MARKET

ADD FREQUENCY COLOR TO SECTOR BAND  
(CBRS WILL USE YELLOW BANDS)

ALPHA RRH				BETA RRH				GAMMA RRH			
PORT 1 + SLANT	PORT 2 - SLANT	PORT 3 + SLANT	PORT 4 - SLANT	PORT 1 + SLANT	PORT 2 - SLANT	PORT 3 + SLANT	PORT 4 - SLANT	PORT 1 + SLANT	PORT 2 - SLANT	PORT 3 + SLANT	PORT 4 - SLANT
RED	RED	RED	RED	BLUE	BLUE	BLUE	BLUE	GREEN	GREEN	GREEN	GREEN
ORANGE	ORANGE	RED	RED	ORANGE	ORANGE	BLUE	BLUE	ORANGE	ORANGE	GREEN	GREEN
	WHITE (-) PORT	ORANGE	ORANGE		WHITE (-) PORT	ORANGE	ORANGE		WHITE (-) PORT	ORANGE	ORANGE
			WHITE (-) PORT				WHITE (-) PORT				WHITE (-) PORT

MID-BAND RRH -  
(AWS BANDS N66+N70)

ADD FREQUENCY COLOR TO SECTOR BAND  
(CBRS WILL USE YELLOW BANDS)

RED	RED	RED	RED	BLUE	BLUE	BLUE	BLUE	GREEN	GREEN	GREEN	GREEN
PURPLE	PURPLE	RED	RED	PURPLE	PURPLE	BLUE	BLUE	PURPLE	PURPLE	GREEN	GREEN
	WHITE (-) PORT	PURPLE	PURPLE		WHITE (-) PORT	PURPLE	PURPLE		WHITE (-) PORT	PURPLE	PURPLE
			WHITE (-) PORT				WHITE (-) PORT				WHITE (-) PORT

**HYBRID/DISCREET CABLES**

INCLUDE SECTOR BANDS BEING SUPPORTED  
ALONG WITH FREQUENCY BANDS

EXAMPLE 1 - HYBRID, OR DISCREET, SUPPORTS  
ALL SECTORS, BOTH LOW-BANDS AND MID-BANDS

EXAMPLE 2 - HYBRID, OR DISCREET, SUPPORTS  
CBRS ONLY, ALL SECTORS

EXAMPLE 1	EXAMPLE 2	EXAMPLE 3
RED	RED	RED
BLUE	BLUE	
GREEN	GREEN	ORANGE
ORANGE	YELLOW	PURPLE
PURPLE		

CONTRACTOR TO REFER TO FINAL  
CONSTRUCTION RFDS FOR ALL RD DETAILS.  
FINAL RFDS IS IN NEXSYSONE.

**FIBER JUMPERS TO RRHs**

LOW-BAND RRH FIBER CABLES HAVE SECTOR  
STRIPE ONLY

LOW BAND RRH	HIGH BAND RRH	LOW BAND RRH	HIGH BAND RRH	LOW BAND RRH	HIGH BAND RRH
RED	RED	BLUE	BLUE	GREEN	GREEN
	PURPLE		PURPLE		PURPLE

**POWER CABLES TO RRHs**

LOW-BAND RRH POWER CABLES HAVE SECTOR  
STRIPE ONLY

LOW BAND RRH	HIGH BAND RRH	LOW BAND RRH	HIGH BAND RRH	LOW BAND RRH	HIGH BAND RRH
RED	RED	BLUE	BLUE	GREEN	GREEN
	PURPLE		PURPLE		PURPLE

**RET MOTORS AT ANTENNAS**

ANTENNA 1 LOW BAND/ "IN"	ANTENNA 1 HIGH BAND/ "IN"	ANTENNA 1 LOW BAND/ "IN"	ANTENNA 1 HIGH BAND/ "IN"	ANTENNA 1 LOW BAND/ "IN"	ANTENNA 1 HIGH BAND/ "IN"
RED	RED	BLUE	BLUE	GREEN	GREEN
	PURPLE		PURPLE		PURPLE

**MICROWAVE RADIO LINKS**

LINKS WILL HAVE A 1.5-2 INCH WHITE WRAP WITH  
THE AZIMUTH COLOR OVERLAPPING IN THE MIDDLE.  
ADD ADDITIONAL SECTOR COLOR BANDS FOR EACH  
ADDITIONAL MW RADIO.

MICROWAVE CABLES WILL REQUIRE P-TOUCH  
LABELS INSIDE THE CABINET TO IDENTIFY THE  
LOCAL AND REMOTE SITE ID'S

FORWARD AZIMUTH OF 0-120 DEGREES		FORWARD AZIMUTH OF 120-240 DEGREES		FORWARD AZIMUTH OF 240-360 DEGREES	
PRIMARY	SECONDARY	PRIMARY	SECONDARY	PRIMARY	SECONDARY
WHITE	WHITE	WHITE	WHITE	WHITE	WHITE
RED	RED	BLUE	BLUE	GREEN	GREEN
WHITE	WHITE	WHITE	WHITE	WHITE	WHITE
	RED		BLUE		GREEN
	WHITE		WHITE		WHITE

LOW BANDS (N71+N26)  
OPTIONAL - (N29)



CBRS TECH  
(3 GHz)



AWS  
(N66+N70+H-BLOCK)



NEGATIVE SLANT PORT  
ON ANT/RRH



ALPHA SECTOR



BETA SECTOR



GAMMA SECTOR



COLOR IDENTIFIER

NO SCALE

2

NOT USED

NO SCALE

3

RF CABLE COLOR CODES

NO SCALE

1

NOT USED

NO SCALE

4



5701 SOUTH SANTA FE DRIVE  
LITTLETON, CO 80120



1717 S. BOULDER  
SUITE 300  
TULSA, OK 74119  
PH: (918) 587-4630  
www.btgrp.com



MTS ENGINEERING P.L.L.C.  
BER:2386985  
Expires 3/31/23

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.

DRAWN BY: CHECKED BY: APPROVED BY:

MEH RMC RMC

RFDS REV #: 1

**CONSTRUCTION DOCUMENTS**

SUBMITTALS		
REV	DATE	DESCRIPTION
A	9/28/21	ISSUED FOR REVIEW
0	3/7/22	ISSUED FOR CONSTRUCTION
1	2/13/23	ISSUED FOR CONSTRUCTION

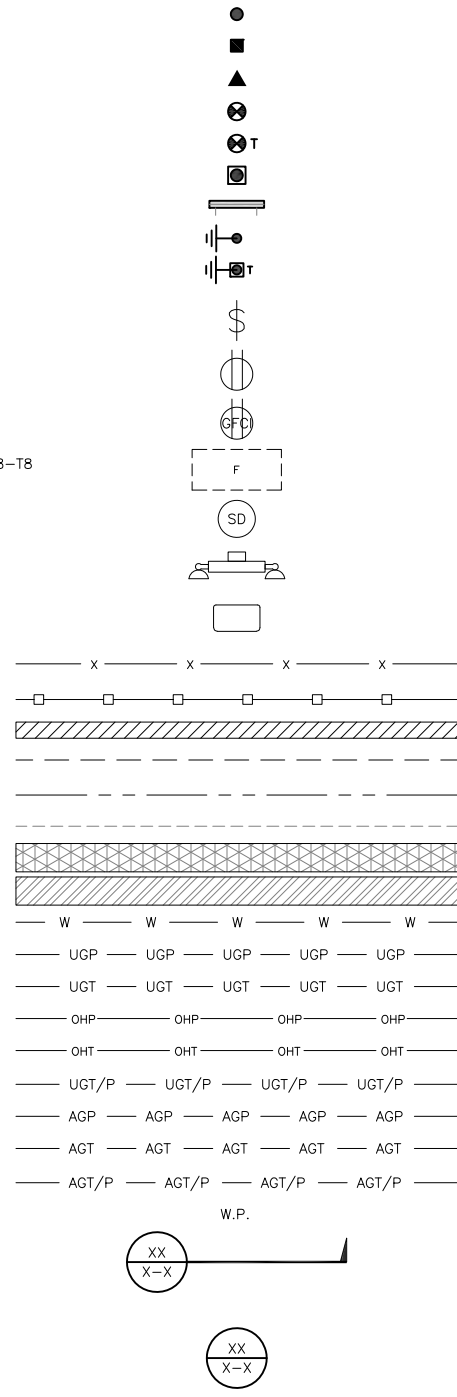
A&E PROJECT NUMBER  
149546.001.01

DISH Wireless L.L.C.  
PROJECT INFORMATION  
BOHVN00203A  
350 BURR MOUNTAIN RD  
TORRINGTON, CT 06790

SHEET TITLE  
RF  
CABLE COLOR CODES

SHEET NUMBER  
RF-1

EXOTHERMIC CONNECTION  
 MECHANICAL CONNECTION  
 BUSS BAR INSULATOR  
 CHEMICAL ELECTROLYTIC GROUNDING SYSTEM  
 TEST CHEMICAL ELECTROLYTIC GROUNDING SYSTEM  
 EXOTHERMIC WITH INSPECTION SLEEVE  
 GROUNDING BAR  
 GROUND ROD  
 TEST GROUND ROD WITH INSPECTION SLEEVE  
 SINGLE POLE SWITCH  
 DUPLEX RECEPTACLE  
 DUPLEX GFCI RECEPTACLE  
 FLUORESCENT LIGHTING FIXTURE (2) TWO LAMPS 48-T8  
 SMOKE DETECTION (DC)  
 EMERGENCY LIGHTING (DC)  
 SECURITY LIGHT W/PHOTOCELL LITHONIA ALXW  
 LED-1-25A400/51K-SR4-120-PE-DOBXTD  
 CHAIN LINK FENCE  
 WOOD/WROUGHT IRON FENCE  
 WALL STRUCTURE  
 LEASE AREA  
 PROPERTY LINE (PL)  
 SETBACKS  
 ICE BRIDGE  
 CABLE TRAY  
 WATER LINE  
 UNDERGROUND POWER  
 UNDERGROUND TELCO  
 OVERHEAD POWER  
 OVERHEAD TELCO  
 UNDERGROUND TELCO/POWER  
 ABOVE GROUND POWER  
 ABOVE GROUND TELCO  
 ABOVE GROUND TELCO/POWER  
 WORKPOINT  
 SECTION REFERENCE  
 DETAIL REFERENCE



**LEGEND**

AB ANCHOR BOLT  
 ABV ABOVE  
 AC ALTERNATING CURRENT  
 ADDL ADDITIONAL  
 AFF ABOVE FINISHED FLOOR  
 AFG ABOVE FINISHED GRADE  
 AGL ABOVE GROUND LEVEL  
 AIC AMPERAGE INTERRUPTION CAPACITY  
 ALUM ALUMINUM  
 ALT ALTERNATE  
 ANT ANTENNA  
 APPROX APPROXIMATE  
 ARCH ARCHITECTURAL  
 ATS AUTOMATIC TRANSFER SWITCH  
 AWG AMERICAN WIRE GAUGE  
 BATT BATTERY  
 BLDG BUILDING  
 BLK BLOCK  
 BLKG BLOCKING  
 BM BEAM  
 BTC BARE TINNED COPPER CONDUCTOR  
 BOF BOTTOM OF FOOTING  
 CAB CABINET  
 CANT CANTILEVERED  
 CHG CHARGING  
 CLG CEILING  
 CLR CLEAR  
 COL COLUMN  
 COMM COMMON  
 CONC CONCRETE  
 CONSTR CONSTRUCTION  
 DBL DOUBLE  
 DC DIRECT CURRENT  
 DEPT DEPARTMENT  
 DF DOUGLAS FIR  
 DIA DIAMETER  
 DIAG DIAGONAL  
 DIM DIMENSION  
 DWG DRAWING  
 DWL DOWEL  
 EA EACH  
 EC ELECTRICAL CONDUCTOR  
 EL ELEVATION  
 ELEC ELECTRICAL  
 EMT ELECTRICAL METALLIC TUBING  
 ENG ENGINEER  
 EQ EQUAL  
 EXP EXPANSION  
 EXT EXTERIOR  
 EW EACH WAY  
 FAB FABRICATION  
 FF FINISH FLOOR  
 FG FINISH GRADE  
 FIF FACILITY INTERFACE FRAME  
 FIN FINISH(ED)  
 FLR FLOOR  
 FDN FOUNDATION  
 FOC FACE OF CONCRETE  
 FOM FACE OF MASONRY  
 FOS FACE OF STUD  
 FOW FACE OF WALL  
 FS FINISH SURFACE  
 FT FOOT  
 FTG FOOTING  
 GA GAUGE  
 GEN GENERATOR  
 GFCI GROUND FAULT CIRCUIT INTERRUPTER  
 GLB GLUE LAMINATED BEAM  
 GLV GALVANIZED  
 GPS GLOBAL POSITIONING SYSTEM  
 GND GROUND  
 GSM GLOBAL SYSTEM FOR MOBILE  
 HDG HOT DIPPED GALVANIZED  
 HDR HEADER  
 HGR HANGER  
 HVAC HEAT/VENTILATION/AIR CONDITIONING  
 HT HEIGHT  
 IGR INTERIOR GROUND RING

IN INCH  
 INT INTERIOR  
 LB(S) POUND(S)  
 LF LINEAR FEET  
 LTE LONG TERM EVOLUTION  
 MAS MASONRY  
 MAX MAXIMUM  
 MB MACHINE BOLT  
 MECH MECHANICAL  
 MFR MANUFACTURER  
 MGB MASTER GROUND BAR  
 MIN MINIMUM  
 MISC MISCELLANEOUS  
 MTL METAL  
 MTS MANUAL TRANSFER SWITCH  
 MW MICROWAVE  
 NEC NATIONAL ELECTRIC CODE  
 NM NEWTON METERS  
 NO. NUMBER  
 # NUMBER  
 NTS NOT TO SCALE  
 OC ON-CENTER  
 OSHA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION  
 OPNG OPENING  
 P/C PRECAST CONCRETE  
 PCS PERSONAL COMMUNICATION SERVICES  
 PCU PRIMARY CONTROL UNIT  
 PRC PRIMARY RADIO CABINET  
 PP POLARIZING PRESERVING  
 PSF POUNDS PER SQUARE FOOT  
 PSI POUNDS PER SQUARE INCH  
 PT PRESSURE TREATED  
 PWR POWER CABINET  
 QTY QUANTITY  
 RAD RADIUS  
 RECT RECTIFIER  
 REF REFERENCE  
 REINF REINFORCEMENT  
 REQ'D REQUIRED  
 RET REMOTE ELECTRIC TILT  
 RF RADIO FREQUENCY  
 RMC RIGID METALLIC CONDUIT  
 RRH REMOTE RADIO HEAD  
 RRU REMOTE RADIO UNIT  
 RWY RACEWAY  
 SCH SCHEDULE  
 SHT SHEET  
 SIAD SMART INTEGRATED ACCESS DEVICE  
 SIM SIMILAR  
 SPEC SPECIFICATION  
 SQ SQUARE  
 SS STAINLESS STEEL  
 STD STANDARD  
 STL STEEL  
 TEMP TEMPORARY  
 THK THICKNESS  
 TMA TOWER MOUNTED AMPLIFIER  
 TN TOE NAIL  
 TOA TOP OF ANTENNA  
 TOC TOP OF CURB  
 TOF TOP OF FOUNDATION  
 TOP TOP OF PLATE (PARAPET)  
 TOS TOP OF STEEL  
 TOW TOP OF WALL  
 TVSS TRANSIENT VOLTAGE SURGE SUPPRESSION  
 TYP TYPICAL  
 UG UNDERGROUND  
 UL UNDERWRITERS LABORATORY  
 UNO UNLESS NOTED OTHERWISE  
 UMTS UNIVERSAL MOBILE TELECOMMUNICATIONS SYSTEM  
 UPS UNINTERRUPTIBLE POWER SYSTEM (DC POWER PLANT)  
 VIF VERIFIED IN FIELD  
 W WIDE  
 W/ WITH  
 WD WOOD  
 WP WEATHERPROOF  
 WT WEIGHT

**ABBREVIATIONS**



5701 SOUTH SANTA FE DRIVE  
 LITTLETON, CO 80120



1717 S. BOULDER  
 SUITE 300  
 TULSA, OK 74119  
 PH: (918) 587-4630  
 www.btgrp.com



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.

DRAWN BY:	CHECKED BY:	APPROVED BY:
MEH	RMC	RMC
RFDS REV #:		1

**CONSTRUCTION DOCUMENTS**

SUBMITTALS		
REV	DATE	DESCRIPTION
A	9/28/21	ISSUED FOR REVIEW
0	3/7/22	ISSUED FOR CONSTRUCTION
1	2/13/23	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER  
**149546.001.01**

DISH Wireless L.L.C.  
 PROJECT INFORMATION  
**BOHVN00203A**  
**350 BURR MOUNTAIN RD**  
**TORRINGTON, CT 06790**

SHEET TITLE  
**LEGEND AND ABBREVIATIONS**

SHEET NUMBER  
**GN-1**



SITE ACTIVITY REQUIREMENTS:

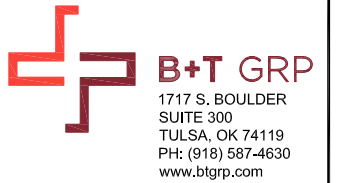
1. NOTICE TO PROCEED – NO WORK SHALL COMMENCE PRIOR TO CONTRACTOR RECEIVING A WRITTEN NOTICE TO PROCEED (NTP) AND THE ISSUANCE OF A PURCHASE ORDER. PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE DISH Wireless L.L.C. AND TOWER OWNER NOC & THE DISH Wireless L.L.C. AND TOWER OWNER CONSTRUCTION MANAGER.
2. "LOOK UP" – DISH Wireless L.L.C. AND TOWER OWNER 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 INSTALLATIONS SHALL NOT COMPROMISE THE INTEGRITY OR FUNCTIONAL 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 CONDITIONS MUST BE TAGGED OUT AND REPORTED TO YOUR DISH Wireless L.L.C. AND DISH Wireless L.L.C. AND TOWER OWNER POC OR CALL THE NOC TO GENERATE A SAFETY CLIMB MAINTENANCE AND CONTRACTOR NOTICE TICKET.
3. PRIOR TO THE START OF CONSTRUCTION, ALL REQUIRED JURISDICTIONAL PERMITS SHALL BE OBTAINED. THIS INCLUDES, BUT IS NOT LIMITED TO, BUILDING, ELECTRICAL, MECHANICAL, FIRE, FLOOD ZONE, ENVIRONMENTAL, AND ZONING. AFTER ONSITE ACTIVITIES AND CONSTRUCTION ARE COMPLETED, ALL REQUIRED PERMITS SHALL BE SATISFIED AND CLOSED OUT ACCORDING TO LOCAL JURISDICTIONAL REQUIREMENTS.
4. ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN, AND SHALL MEET ANSI/ASSE A10.48 (LATEST EDITION); FEDERAL, STATE, AND LOCAL REGULATIONS; AND ANY APPLICABLE INDUSTRY CONSENSUS STANDARDS RELATED TO THE CONSTRUCTION ACTIVITIES BEING PERFORMED. ALL RIGGING PLANS SHALL ADHERE TO ANSI/ASSE A10.48 (LATEST EDITION) AND DISH Wireless L.L.C. AND TOWER OWNER STANDARDS, INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION, TO CERTIFY THE SUPPORTING STRUCTURE(S) IN ACCORDANCE WITH ANSI/TIA-322 (LATEST EDITION).
5. ALL SITE WORK TO COMPLY WITH DISH Wireless L.L.C. AND TOWER OWNER INSTALLATION STANDARDS FOR CONSTRUCTION ACTIVITIES ON DISH Wireless L.L.C. AND TOWER OWNER TOWER SITE AND LATEST VERSION OF ANSI/TIA-1019-A-2012 "STANDARD FOR INSTALLATION, ALTERATION, AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS."
6. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY DISH Wireless L.L.C. AND TOWER OWNER PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
7. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
8. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER’S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
9. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES INCLUDING PRIVATE LOCATES SERVICES PRIOR TO THE START OF CONSTRUCTION.
10. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION E) CONSTRUCTION SAFETY PROCEDURES.
11. ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND DISH PROJECT SPECIFICATIONS, LATEST APPROVED REVISION.
12. CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH AT THE COMPLETION OF THE WORK. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
13. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF DISH Wireless L.L.C. AND TOWER OWNER, AND/OR LOCAL UTILITIES.
14. THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE REQUIRED BY LOCAL JURISDICTION AND SIGNAGE REQUIRED ON INDIVIDUAL PIECES OF EQUIPMENT, ROOMS, AND SHELTERS.
15. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE CARRIER’S EQUIPMENT AND TOWER AREAS.
16. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
17. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION AS SPECIFIED ON THE CONSTRUCTION DRAWINGS AND/OR PROJECT SPECIFICATIONS.
18. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
19. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR’S EXPENSE TO THE SATISFACTION OF OWNER.
20. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS AND RADIOS REMOVED SHALL BE RETURNED TO THE OWNER’S DESIGNATED LOCATION.
21. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.
22. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

GENERAL NOTES:

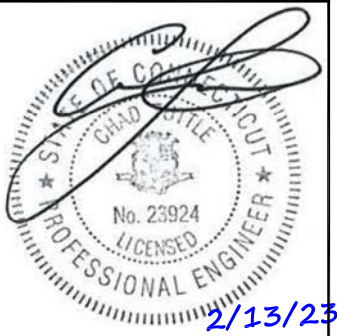
1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:  
CONTRACTOR: GENERAL CONTRACTOR RESPONSIBLE FOR CONSTRUCTION  
CARRIER: DISH Wireless L.L.C.  
TOWER OWNER: TOWER OWNER
2. THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE ENGINEERS IN THIS OR SIMILAR LOCALITIES. IT IS ASSUMED THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND/OR WORKPEOPLE WHO HAVE A WORKING KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR MISCELLANEOUS WORK NOT EXPLICITLY SHOWN.
3. THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE MEANS OR METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY FOR PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, FORMWORK, SHORING, ETC. SITE VISITS BY THE ENGINEER OR HIS REPRESENTATIVE WILL NOT INCLUDE INSPECTION OF THESE ITEMS AND IS FOR STRUCTURAL OBSERVATION OF THE FINISHED STRUCTURE ONLY.
4. NOTES AND DETAILS IN THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT, AND/OR AS PROVIDED FOR IN THE CONTRACT DOCUMENTS. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL NOTES, AND SPECIFICATIONS, THE GREATER, MORE STRICT REQUIREMENTS, SHALL GOVERN. IF FURTHER CLARIFICATION IS REQUIRED CONTACT THE ENGINEER OF RECORD.
5. SUBSTANTIAL EFFORT HAS BEEN MADE TO PROVIDE ACCURATE DIMENSIONS AND MEASUREMENTS ON THE DRAWINGS TO ASSIST IN THE FABRICATION AND/OR PLACEMENT OF CONSTRUCTION ELEMENTS BUT IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE DIMENSIONS, MEASUREMENTS, AND/OR CLEARANCES SHOWN IN THE CONSTRUCTION DRAWINGS PRIOR TO FABRICATION OR CUTTING OF ANY NEW OR EXISTING CONSTRUCTION ELEMENTS. IF IT IS DETERMINED THAT THERE ARE DISCREPANCIES AND/OR CONFLICTS WITH THE CONSTRUCTION DRAWINGS THE ENGINEER OF RECORD IS TO BE NOTIFIED AS SOON AS POSSIBLE.
6. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CARRIER POC AND TOWER OWNER.
7. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
8. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
9. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER’S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
10. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CARRIER AND TOWER OWNER PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
11. CONTRACTOR IS TO PERFORM A SITE INVESTIGATION, BEFORE SUBMITTING BIDS, TO DETERMINE THE BEST ROUTING OF ALL CONDUITS FOR POWER, AND TELCO AND FOR GROUNDING CABLES AS SHOWN IN THE POWER, TELCO, AND GROUNDING PLAN DRAWINGS.
12. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR’S EXPENSE TO THE SATISFACTION OF DISH Wireless L.L.C. AND TOWER OWNER
13. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER’S DESIGNATED LOCATION.
14. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.



5701 SOUTH SANTA FE DRIVE  
LITTLETON, CO 80120



1717 S. BOULDER  
SUITE 300  
TULSA, OK 74119  
PH: (918) 587-4630  
www.btgrp.com



MTS ENGINEERING P.L.L.C.  
BER:2386985  
Expires 3/31/23

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.

DRAWN BY:	CHECKED BY:	APPROVED BY:
MEH	RMC	RMC
RFDS REV #:		1

**CONSTRUCTION DOCUMENTS**

SUBMITTALS		
REV	DATE	DESCRIPTION
A	9/28/21	ISSUED FOR REVIEW
0	3/7/22	ISSUED FOR CONSTRUCTION
1	2/13/23	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER  
**149546.001.01**

DISH Wireless L.L.C.  
PROJECT INFORMATION

**BOHVNO0203A**  
350 BURR MOUNTAIN RD  
TORRINGTON, CT 06790

SHEET TITLE  
**GENERAL NOTES**

SHEET NUMBER  
**GN-2**



**GROUNDING NOTES:**

1. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION AND AC POWER GES'S) SHALL BE BONDED TOGETHER AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
2. THE CONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS, THE CONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
3. THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT AND PROVIDE TESTING RESULTS.
4. METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
5. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
6. EACH CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, #6 STRANDED COPPER OR LARGER FOR INDOOR BTS; #2 BARE SOLID TINNED COPPER FOR OUTDOOR BTS.
7. CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED BACK TO BACK CONNECTIONS ON OPPOSITE SIDE OF THE GROUND BUS ARE PERMITTED.
8. ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING SHALL BE #2 SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
11. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
12. ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR AND EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
13. COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
14. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
15. APPROVED ANTIOXIDANT COATINGS (i.e. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
16. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
17. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
18. BOND ALL METALLIC OBJECTS WITHIN 6 ft OF MAIN GROUND RING WITH (1) #2 BARE SOLID TINNED COPPER GROUND CONDUCTOR.
19. GROUND CONDUCTORS USED FOR THE FACILITY GROUNDING AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON-METALLIC MATERIAL SUCH AS PVC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (i.e., NONMETALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.
20. ALL GROUNDS THAT TRANSITION FROM BELOW GRADE TO ABOVE GRADE MUST BE #2 BARE SOLID TINNED COPPER IN 3/4" NON-METALLIC, FLEXIBLE CONDUIT FROM 24" BELOW GRADE TO WITHIN 3" TO 6" OF CAD-WELD TERMINATION POINT. THE EXPOSED END OF THE CONDUIT MUST BE SEALED WITH SILICONE CAULK. (ADD TRANSITIONING GROUND STANDARD DETAIL AS WELL).
21. BUILDINGS 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 GROUNDING RING, TO THE EXISTING GROUNDING SYSTEM, THE GROUNDING CONDUCTORS SHALL NOT BE SMALLER THAN 2/0 COPPER. ROOFTOP GROUNDING 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). DO NOT ATTACH GROUNDING TO FIRE SPRINKLER SYSTEM PIPES.



5701 SOUTH SANTA FE DRIVE  
LITTLETON, CO 80120



1717 S. BOULDER  
SUITE 300  
TULSA, OK 74119  
PH: (918) 587-4630  
www.btgrp.com



MTS ENGINEERING P.L.L.C.  
BER:2386985  
Expires 3/31/23

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.

DRAWN BY:	CHECKED BY:	APPROVED BY:
MEH	RMC	RMC

RFDS REV #: 1

**CONSTRUCTION DOCUMENTS**

SUBMITTALS		
REV	DATE	DESCRIPTION
A	9/28/21	ISSUED FOR REVIEW
0	3/7/22	ISSUED FOR CONSTRUCTION
1	2/13/23	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER  
**149546.001.01**

DISH Wireless L.L.C.  
PROJECT INFORMATION  
**BOHVN00203A**  
350 BURR MOUNTAIN RD  
TORRINGTON, CT 06790

SHEET TITLE  
**GENERAL NOTES**

SHEET NUMBER  
**GN-4**

# Exhibit D

## **Structural Analysis Report**





**Tower Engineering Solutions**

Phone (972) 483-0607, Fax (972) 975-9615  
1320 Greenway Drive, Suite 600, Irving, Texas 75038

---

**Structural Analysis Report**

**Existing 196 ft Valmont Monopole**

**Customer Name: SBA Communications Corp**

**Customer Site Number: CT46138-A**

**Customer Site Name: Torrington/Oandg Ind Inc**

**Carrier Name: Dish Wireless (App#: 169202, V1)**

**Carrier Site ID / Name: BOHVN00203A / 0**

**Site Location: 350 Burr Mountain Road**

**Torrington, Connecticut**

**Litchfield County**

**Latitude: 41.873255**

**Longitude: -73.088405**

**Analysis Result:**

**Max Structural Usage: 84.1% [Pass]**

**Max Foundation Usage: 71.0% [Pass]**

**Additional Usage Caused by New Mount/Mount Modification: N/A**



**Report Prepared By: Praveen Shrestha**



**Tower Engineering Solutions**

Phone (972) 483-0607, Fax (972) 975-9615  
1320 Greenway Drive, Suite 600, Irving, Texas 75038

---

## **Structural Analysis Report**

**Existing 196 ft Valmont Monopole**

**Customer Name: SBA Communications Corp**

**Customer Site Number: CT46138-A**

**Customer Site Name: Torrington/Oandg Ind Inc**

**Carrier Name: Dish Wireless (App#: 169202, V1)**

**Carrier Site ID / Name: BOHVN00203A / 0**

**Site Location: 350 Burr Mountain Road**

**Torrington, Connecticut**

**Litchfield County**

**Latitude: 41.873255**

**Longitude: -73.088405**

### **Analysis Result:**

**Max Structural Usage: 84.1% [Pass]**

**Max Foundation Usage: 71.0% [Pass]**

**Additional Usage Caused by New Mount/Mount Modification: N/A**

**Report Prepared By: Praveen Shrestha**

## Introduction

The purpose of this report is to summarize the analysis results on the 196 ft Valmont Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

## Sources of Information

<b>Tower Drawings</b>	Valmont, Order # 17566-64 Dated 08/03/2004
<b>Foundation Drawing</b>	Valmont, Eng File # A-402723 Dated 07/16/2004
<b>Geotechnical Report</b>	Geotechnical Report by Dr. Clarence Welti, P.E, P.C, Tower- CT33XC079 Dated 06/18/2004
<b>Modification Drawings</b>	Vertical Solutions, Project # 130499 Dated 06/28/2013
<b>Mount Analysis</b>	N/A

## Analysis Criteria

The comprehensive analysis was performed in accordance with the requirements and stipulations of the TIA-222-H. In accordance with this standard, the structure was analyzed using **TESPoles**, a proprietary analysis software. The program considers the structure as an elastic 3-D model with second-order effects and temperature effects incorporated in the analysis. The analysis was performed using multiple wind directions.

<b>Wind Speed Used in the Analysis:</b>	115.0 mph (3-Sec. Gust) (Ultimate wind speed)
<b>Wind Speed with Ice:</b>	50 mph (3-Sec. Gust) with 1" radial ice concurrent
<b>Service Load Wind Speed:</b>	60 mph + 0" Radial ice
<b>Standard/Codes:</b>	TIA-222-H / 2021 IBC / 2022 Connecticut State Building Code
<b>Exposure Category:</b>	C
<b>Risk Category:</b>	II
<b>Topographic Category:</b>	1
<b>Crest Height:</b>	0 ft
<b>Seismic Parameters:</b>	$S_5 = 0.175, S_1 = 0.054$

This structural analysis is based upon the tower being classified as a Risk Category II; however, if a different classification is required subsequent to the date hereof, the tower classification will be changed to meet such requirement and a new structural analysis will be run.

## Existing Antennas, Mounts and Transmission Lines

The table below summarizes the antennas, mounts and transmission lines that were considered in the analysis as existing on the tower.

Items	Elevation (ft.)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	198.0	1	RFI - BA80-41-DIN - Omni	(1) Pipe mount	(1) 7/8"	Torrington P.D.
2	191.5	3	RFS - APXVTM14-C-120 - Panel	Low Profile Platform	(6) 1 5/8" (4) 1-1/4" Fiber	Sprint
3		3	RFS - APXVSPP18-C-A20 - Panel			
4		3	ALU - 800MHz - RRU			
5		3	ALU - 1900MHz - RRU			
6		3	ALU - RRH8x20-25 - RRU			
7		3	ALU - 800MHz Filter - RRU Filter			
8		4	RFS - ACU-A20-N - RET			
9		185.0	3			
10	6		Andrew JAHH-65C-R3B-V2 - Panel			
11	3		Samsung MT6407-77A - Panel			
12	3		Commscope CBC78T-DS-43-2X			
13	3		Samsung Telecommunications RFV01U-D2A			
14	3		Samsung RFV01U-1A			
15	1		RFS DB-C1-12C-24AB-OZ			
16	175.0	6	Kathrein 800-10965- Panel	Low Profile Platform SitePro1 HRK12 (Handrail Kit)	(12) 1 5/8" (2) 2" Conduit (Housing (4) 3/4" & (2) 7/16" Fiber lines) (1) 3" Conduit (Housing (2) 3/4" & (1) 7/16" Fiber lines)	AT&T
17		2	Raycap DC6-48-60-18-8C-EV			
18		3	Ericsson RRUS 32 B30			
19		3	Ericsson RRUS 4478 B14			
20		3	Ericsson RRUS 4449 B5/B12			
21		12	Powerwave LGP13519 Diplexer			
22		12	Powerwave LGP21401 TMA			
23		3	Powerwave 7770- Panel			
24		3	Ericsson RRUS 12			
25		1	Raycap DC6-48-60-18-8F			
26	155.0	3	Commscope VV-65A-R1 - Panel	(3) T-Arms w/ Handrail kit & v-brace kit	(8) 1 5/8" (3) 1 5/8" Fiber (1) 1.9" Fiber	T-Mobile
27		3	Ericsson AIR6419 B41 - Panel			
28		3	RFS APXVAARR24_43-U-NA20 - Panel			
29		3	Ericsson KRY 112 144/1			
30		3	Ericsson 4449 B71 + B85			
31		3	Ericsson 4460 B25 + B66			
36	132.5	1	Telewave - ANT150F2 - Omni	(1) Standoff	(1) 7/8"	Torrington P.D.
37	116.5	5	14' Omni	(6) Standoff	(6) 1/2"	
38	111.5	1	4' Omni			
39	100.0	1	Maxrad - MPRD - Dish	(1) Standoff	(2) CAT5e	

**Proposed Carrier’s Final Configuration of Antennas, Mounts and Transmission Lines**

Information pertaining to the proposed carrier’s final configuration of antennas and transmission lines was provided by SBA Communications Corp. The proposed antennas and lines are listed below.

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
32	145.0	3	JMA Wireless MX08FRO665-21 - Panel	(1) Commscope MC-PK8-DSH (Platform w/ Handrails)	(1) 1.6” Hybrid	Dish Wireless
33		3	Fujitsu TA08025-B605 - RRU			
34		3	Fujitsu TA08025-B604 - RRU			
35		1	Raycap RDIDC-9181-PF-48 - OVP			

See the attached coax layout for the line placement considered in the analysis.

## **Analysis Results**

The results of the structural analysis, performed for the wind and ice loading and antenna equipment as defined above, are summarized as the following:

	Pole shafts	Anchor Bolts	Base Plate
Max. Usage:	<b>84.1%</b>	<b>67.2%</b>	<b>65.5%</b>
Pass/Fail	<b>Pass</b>	<b>Pass</b>	<b>Pass</b>

## **Foundations**

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	6579.1	46.3	83.0

The foundation has been investigated using the supplied documents and soils report and was found adequate. Therefore, no modification to the foundation will be required.

## **Service Load Condition (Rigidity):**

The maximum twist and sway of the microwave dishes under the operational wind speed as specified in the Analysis Criteria are listed in the table below:

Elevation (ft)	Antenna / Dish	Carrier	Twist (deg)	Sway (deg)
100.0	Maxrad - MPRD - Dish	Torrington P.D.	0.000	0.951

It is recommended that the carriers review the twist and sway values of the microwave dishes.

## **Conclusions**

Based on the analysis results, the existing structure and its foundation were found to be adequate to safely support the existing and proposed equipment and meet the minimum requirements per the TIA-222 Standard under the design basic wind speed as specified in the Analysis Criteria.

## Standard Conditions

1. This analysis was performed based on the information supplied to **(TES) Tower Engineering Solutions, LLC**. Verification of the information provided was not included in the Scope of Work for **TES**. The accuracy of the analysis is dependent on the accuracy of the information provided.
2. The structural analysis was performance based upon the evidence available at the time of this report. All information provided by the client is considered to be accurate.
3. The analyses will be performed based on the codes as specified by the client or based on the best knowledge of the engineering staff of **TES**. In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/TIA-222. If wind speed and/or ice loads are different from the minimum values recommended by the ANSI/TIA-222 standard or other codes, **TES** should be notified in writing and the applicable minimum values provided by the client.
4. The configuration of the existing mounts, antennas, coax and other appurtenances were supplied by the customer for the current structural analysis. **TES** has not visited the tower site to verify the adequacy of the information provided. If there is any discrepancy found in the report regarding the existing conditions, **TES** should be notified immediately to evaluate the effect of the discrepancy on the analysis results.
5. The client will assume responsibility for rework associated with the differences in initially provided information, including tower and foundation information, existing and/or proposed equipment and transmission lines.
6. If a feasibility analysis was performed, final acceptance of changed conditions shall be based upon a rigorous structural analysis.

# Usage Diagram - Max Ratio 76.70% at 136.3ft

**Structure:** CT46138-A-SBA  
**Site Name:** Torrington/Oandg Ind Inc  
**Height:** 196.00 (ft)  
**Base Elev:** 0.000 (ft)

**Code:** EIA/TIA-222-H  
**Exposure:** C  
**Gh:** 1.1

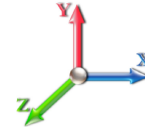
1/27/2023



Page: 1

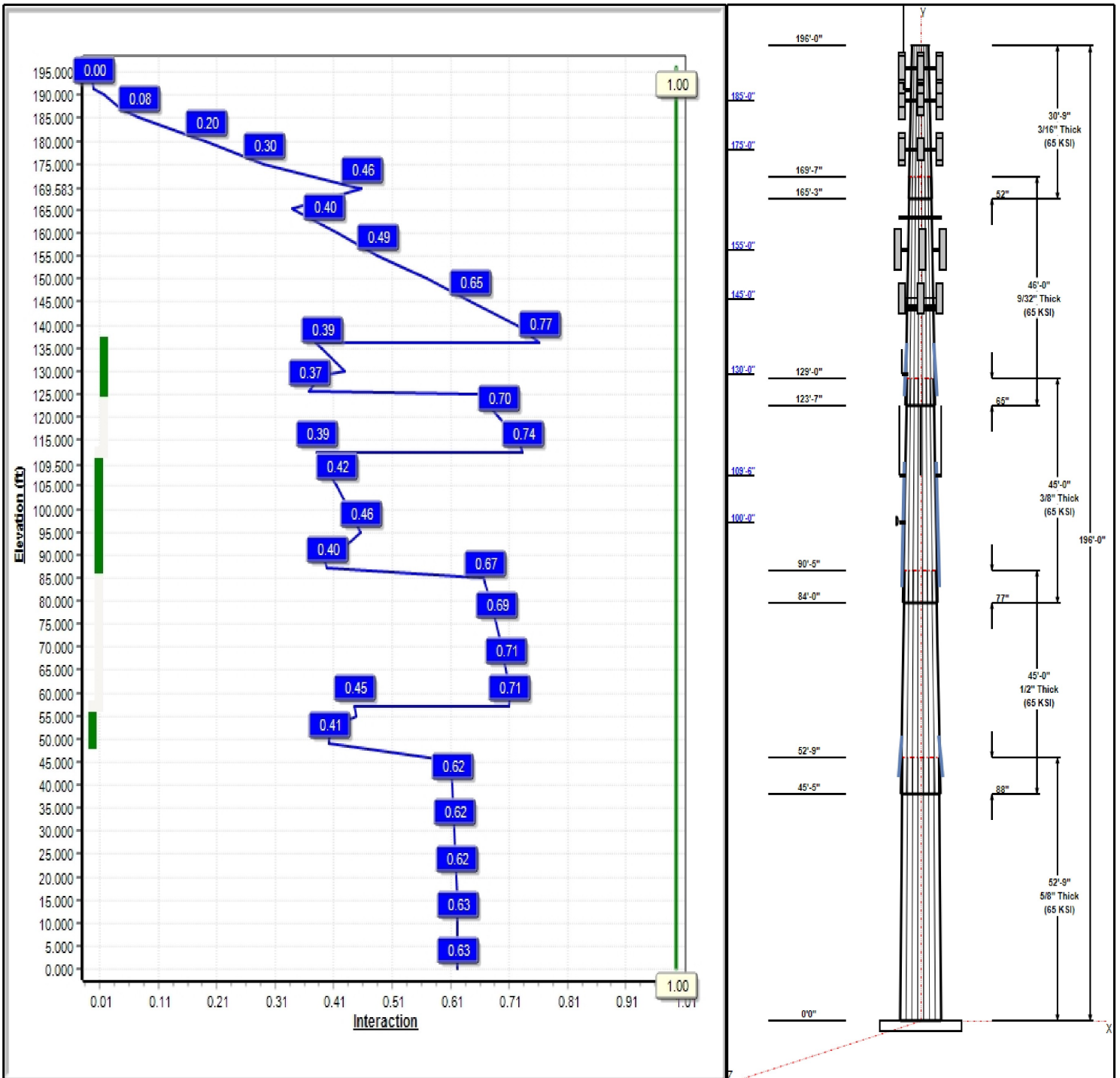
**Dead Load Factor:** 1.20  
**Wind Load Factor:** 1.00

**Load Case : 1.2D + 1.0W 115 mph Wind**



**Iterations:** 27

*Copyright © 2023 by Tower Engineering Solutions, LLC. All rights reserved.*





# Structure: CT46138-A-SBA

**Type:** Tapered  
**Site Name:** Torrington/Oandg Ind Inc  
**Height:** 196.00 (ft)  
**Base Elev:** 0.00 (ft)

**Base Shape:** 16 Sided  
**Taper:** 0.21000

1/27/2023



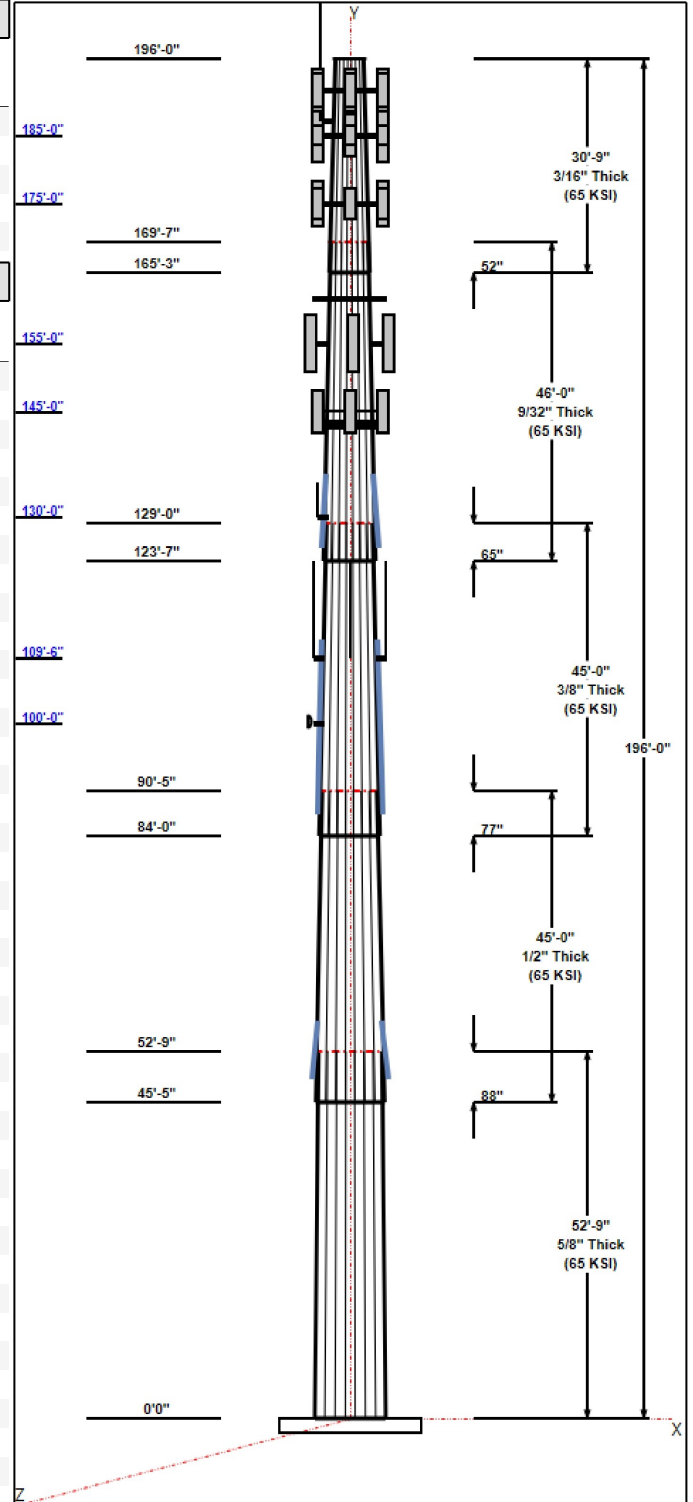
Page: 2

### Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	52.75	48.92	60.00	0.625		0.21000	65
2	45.00	42.01	51.46	0.500	Slip	0.21000	65
3	45.00	34.66	44.11	0.375	Slip	0.21000	65
4	46.00	26.70	36.36	0.281	Slip	0.21000	65
5	30.75	21.53	27.98	0.188	Slip	0.21000	65

### Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
196.00	196.00	1	6' Lightning rod	Torrington P.D.
191.50	191.50	3	APXVTM14-C-120	Sprint
191.50	191.50	3	APXVSP18-C-A20	Sprint
191.50	191.50	3	800MHz - RRU	Sprint
191.50	191.50	3	1900MHz - RRU	Sprint
191.50	191.50	3	RRH8x20-25 - RRU	Sprint
191.50	191.50	3	800MHz Filter	Sprint
191.50	191.50	4	ACU-A20-N - RET	Sprint
191.50	191.50	1	Low Profile Platform	Sprint
187.00	197.33	1	BA80-41-DIN	Torrington P.D.
187.00	187.00	1	Pipe mount	Torrington P.D.
185.00	185.00	3	BXA-70063 6CF_2	Verizon
185.00	185.00	1	Low Profile	Verizon
185.00	185.00	6	JAHH-65C-R3B-V2	Verizon
185.00	185.00	3	MT6407-77A	Verizon
185.00	185.00	3	CBC23SR-43	Verizon
185.00	185.00	3	RFV01U-D2A	Verizon
185.00	185.00	3	RFV01U-D1A	Verizon
185.00	185.00	1	DB-C1-12C-24AB-0Z	Verizon
185.00	185.00	1	HRK12-HD	Verizon
175.00	175.00	6	Kathrein 800-10965	AT&T
175.00	175.00	1	HRK12 (Handrail Kit)	AT&T
175.00	175.00	3	Powerwave 7770	AT&T
175.00	175.00	3	RRUS-12	AT&T
175.00	175.00	1	DC6-48-60-18-8F	AT&T
175.00	175.00	2	Raycap	AT&T
175.00	175.00	3	Ericsson RRUS 32 B30	AT&T
175.00	175.00	3	Ericsson RRUS 4478 B14	AT&T
175.00	175.00	3	Ericsson RRUS 4449	AT&T
175.00	175.00	12	Powerwave LGP13519	AT&T
175.00	175.00	12	Powerwave LGP21401	AT&T
175.00	175.00	1	Low Profile Platform	AT&T
161.50	161.50	1	Low Profile Platform	Vacant
155.00	155.00	3	T-Arms w/ Handrail kit &	T-Mobile
155.00	155.00	3	Commscope VV-65A-R1	T-Mobile
155.00	155.00	3	Ericsson AIR6419 B41	T-Mobile
155.00	155.00	3	RFS	T-Mobile
155.00	155.00	3	Ericsson KRY 112 144/1	T-Mobile
155.00	155.00	3	Ericsson 4449 B71 + B85	T-Mobile
155.00	155.00	3	Ericsson 4460 B25 + B66	T-Mobile
145.00	145.00	3	MX08FRO665-21	Dish Wireless
145.00	145.00	1	MC-PK8-DSH	Dish Wireless
145.00	145.00	3	TA08025-B605	Dish Wireless
145.00	145.00	3	TA08025-B604	Dish Wireless



**Structure: CT46138-A-SBA**

**Type:** Tapered      **Base Shape:** 16 Sided      1/27/2023  
**Site Name:** Torrington/Oandg Ind Inc      **Taper:** 0.21000  
**Height:** 196.00 (ft)  
**Base Elev:** 0.00 (ft)



145.00	145.00	1	RDIDC-9181-PF-48	Dish Wireless
130.00	130.00	1	Standoff	Torrington P.D.
130.00	132.50	1	ANT150F2	Torrington P.D.
109.50	116.50	5	14' Omni	Torrington P.D.
109.50	111.50	1	4' Omni	Torrington P.D.
109.50	109.50	5	Standoff	Torrington P.D.
109.50	109.50	1	Standoff	Torrington P.D.
100.00	100.00	1	MPRD	Torrington P.D.
100.00	100.00	1	Standoff	Torrington P.D.

**Linear Appurtenances**

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	191.50	Inside	1 5/8" Coax	Sprint
0.00	191.50	Inside	1-1/4" Fiber	Sprint
0.00	187.00	Inside	7/8" Coax	Torrington P.D.
0.00	185.00	Inside	1 5/8" Coax	Verizon
0.00	185.00	Inside	1 5/8" Hybrid	Verizon
0.00	175.00	Inside	1 5/8" Coax	AT&T
0.00	175.00	Outside	2" Conduit	AT&T
0.00	175.00	Outside	3" Conduit	AT&T
0.00	175.00	Inside	3/4" DC	AT&T
0.00	175.00	Inside	7/16" Fiber	AT&T
0.00	155.00	Inside	1 5/8" Coax	T-Mobile
0.00	155.00	Inside	1 5/8" Fiber	T-Mobile
0.00	155.00	Inside	1.9" Fiber	T-Mobile
0.00	145.00	Inside	1.6" Hybrid	Dish Wireless
0.00	130.00	Outside	7/8" Coax	Torrington P.D.
0.00	109.50	Inside	1/2" Coax	Torrington P.D.
0.00	100.00	Inside	CAT5e	Torrington P.D.

**Anchor Bolts**

Qty	Specifications	Grade (ksi)	Arrangement
28	2.25" 18J	75.0	Radial

**Base Plate**

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
3.0000	73.7	45.0	Polygon

**Reactions**

Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.0W 115 mph Wind	6579.1	46.3	83.0
0.9D + 1.0W 115 mph Wind	6485.0	46.3	62.2
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1889.9	13.3	108.5
1.2D + 1.0Ev + 1.0Eh	152.4	0.9	85.7
0.9D + 1.0Ev + 1.0Eh	150.9	0.9	64.9
1.0D + 1.0W 60 mph Wind	1590.0	11.3	69.2

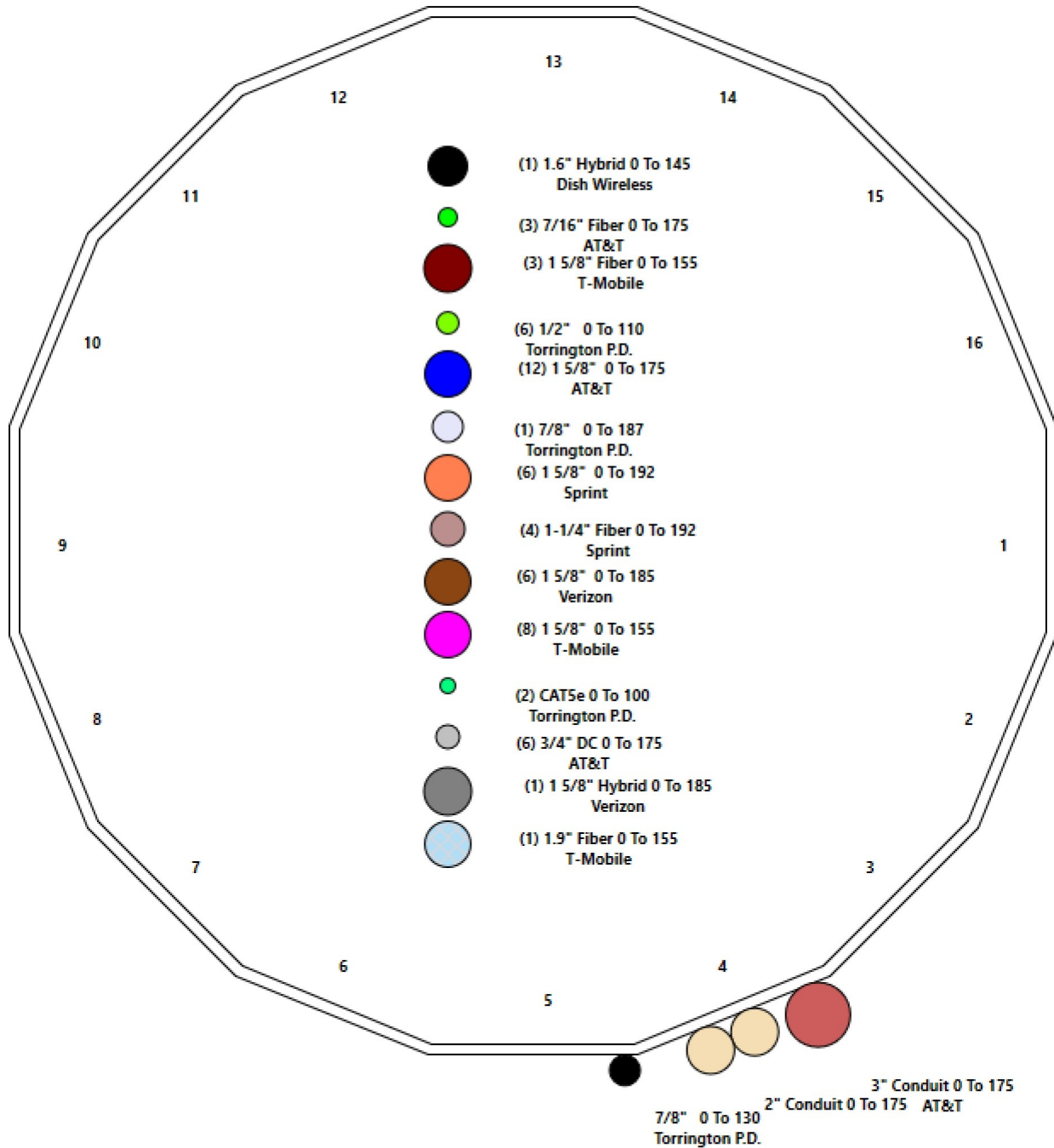
# Structure: CT46138-A-SBA - Coax Line Placement

**Type:** Monopole  
**Site Name:** Torrington/Oandg Ind Inc  
**Height:** 196.00 (ft)

1/27/2023



Page: 4



## Final Analysis Summary

<b>Structure:</b> CT46138-A-SBA	<b>Code:</b> TIA-222-H	1/27/2023
<b>Site Name:</b> Torrington/Oandg Ind Inc	<b>Exposure:</b> C	
<b>Height:</b> 196.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II
		<b>Page:</b> 66



### Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.0W 115 mph Wind	46.3	0.00	83.01	0.00	0.00	6579.11
0.9D + 1.0W 115 mph Wind	46.3	0.00	62.24	0.00	0.00	6484.99
1.2D + 1.0Di + 1.0Wi 50 mph Wind	13.3	0.00	108.54	0.00	0.00	1889.92
1.2D + 1.0Ev + 1.0Eh	0.9	0.00	85.73	0.00	0.00	152.40
0.9D + 1.0Ev + 1.0Eh	0.9	0.00	64.86	0.00	0.00	150.87
1.0D + 1.0W 60 mph Wind	11.3	0.00	69.23	0.00	0.00	1590.05

### Max Stresses

Load Case	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Elev (ft)	Stress Ratio
1.2D + 1.0W 115 mph Wind	-23.91	-31.46	0.00	-1097.6	0.00	-1097.6	2088.60	526.16	1460.60	1429.26	136.26	0.767
0.9D + 1.0W 115 mph Wind	-17.29	-30.77	0.00	-1072.3	0.00	-1072.3	2088.60	526.16	1460.60	1429.26	136.26	0.748
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-41.35	-8.90	0.00	-312.09	0.00	-312.09	2088.60	526.16	1460.60	1429.26	136.26	0.226
1.2D + 1.0Ev + 1.0Eh	-26.98	-0.84	0.00	-26.78	0.00	-26.78	2056.07	513.79	1392.75	1373.65	140.00	0.033
0.9D + 1.0Ev + 1.0Eh	-20.42	-0.83	0.00	-26.66	0.00	-26.66	2056.07	513.79	1392.75	1373.65	140.00	0.029
1.0D + 1.0W 60 mph Wind	-22.20	-7.58	0.00	-264.76	0.00	-264.76	2088.60	526.16	1460.60	1429.26	136.26	0.188

### Additional Steel Summary

Elev From (ft)	Elev To (ft)	Member	Intermediate Connectors			Lower Termination				Upper Termination				Max Member			
			VQ/I (lb/in)	Vu (kips)	phi Vn (kips)	MQ/I (kips)	phi Vn (kips)	Num Reqd	Num Actual	MQ/I (kips)	phi Vn (kips)	Num Reqd	Num Actual	Pu (kips)	phi Pn (kips)	phi Tn (kips)	Ratio
48.9	57.1	(4) PLT-7.25x1.5(31mm Hole)	309.0	0.00	37.1	334.1	27.8	12	14	360.2	33.4	11	13	362.70	489.4	436.34	0.831
87.0	112.3	(4) PLT-6.5x1.5(31mm Hole)	415.3	0.00	37.1	296.9	33.4	9	12	275.7	33.4	9	11	320.74	438.8	381.49	0.841
125.6	136.3	(4) PLT-4.75x1.5(31mm Hole)	454.8	10.92	37.1	200.6	33.4	7	8	190.5	33.4	6	7	212.66	303.1	253.52	0.839

## Base Plate Summary

<b>Structure:</b> CT46138-A-SB	<b>Code:</b> TIA-222-H	1/27/2023
<b>Site Name:</b> Torrington/Oandg Ind Inc	<b>Exposure:</b> C	
<b>Height:</b> 196.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



Page: 67

Reactions	Base Plate	Anchor Bolts
Original Design	<b>Yield (ksi):</b> 45.00	<b>Bolt Circle:</b> 67.68
<b>Moment (kip-ft):</b> 5499.00	<b>Width (in):</b> 73.67	<b>Number Bolts:</b> 28.00
<b>Axial (kip):</b> 55.74	<b>Style:</b> Polygon	<b>Bolt Type:</b> 2.25" 18J
<b>Shear (kip):</b> 40.77	<b>Polygon Sides:</b> 16.00	<b>Bolt Diameter (in):</b> 2.25
Analysis (1.2D + 1.0W)	<b>Clip Length (in):</b> 0.00	<b>Yield (ksi):</b> 75.00
<b>Moment (kip-ft):</b> 6579.11	<b>Effective Len (in):</b> 10.91	<b>Ultimate (ksi):</b> 100.00
<b>Axial (kip):</b> 83.01	<b>Moment (kip-in):</b> 651.30	<b>Arrangement:</b> Radial
<b>Shear (kip):</b> 46.35	<b>Allow Stress (ksi):</b> 60.75	<b>Cluster Dist (in):</b> 0.00
	<b>Applied Stress (ksi):</b> 40.09	<b>Start Angle (deg):</b> 0.00
	<b>Stress Ratio:</b> 0.66	<b>Compression</b>
		<b>Force (kip):</b> 169.61
		<b>Allowable (kip):</b> 268.39
		<b>Ratio:</b> 0.63
		<b>Tension</b>
		<b>Force (kip):</b> 163.68
		<b>Allowable (kip):</b> 243.75
		<b>Ratio:</b> 0.67



# Monopole Mat Foundation Design

Date

1/27/2023

<b>Customer Name:</b>		<b>TIA Standard:</b>	TIA-222-H
<b>Site Name:</b>		<b>Structure Height (Ft.):</b>	196
<b>Site Number:</b>	CT46138-A-SBA	<b>Engineer Name:</b>	S. Hesselbeir
<b>Engr. Number:</b>	138141	<b>Engineer Login ID:</b>	

**Foundation Info Obtained from:**

Drawings/Calculations

**Structure Type:**

Monopole

**Analysis or Design?**

Analysis

**Base Reactions (Factored):**

Axial Load (Kips):	83.0	Shear Force (Kips):	46.3
Uplift Force (Kips):	0.0	Moment (Kips-ft):	6579.1

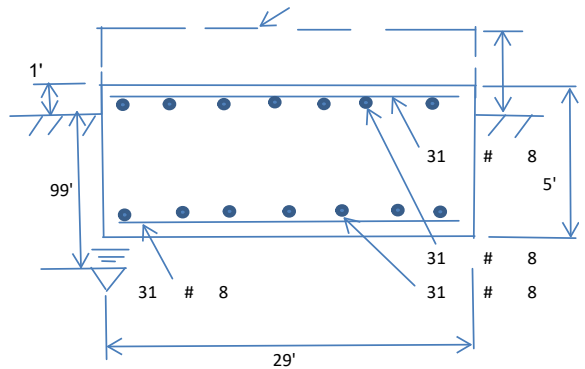
Allowable overstress %: 5.0%

**Foundation Geometries:**

Anchor Bolt Circle (ft.):	5.64	Depth of Base BG (ft.):	4.00
Thickness of Pad (ft):	5.00	Width of Pad (ft.):	29
Length of Pad (ft.):	29	Width of Pad (ft.):	29

Mods required -Yes/No?: No

Final Length of pad (ft) 29.0 Final width of pad (ft): 29.0



**Material Properties and Rebar Info:**

Concrete Strength (psi):	3000	Steel Elastic Modulus:	29000 ksi
Pad Rebar Yield (Ksi):	60	Tie Spacing (in):	12.0
Pad Steel Rebar Size (#):	8	Unit Weight of Concrete:	150.0 pcf
Concrete Cover (in.):	3		

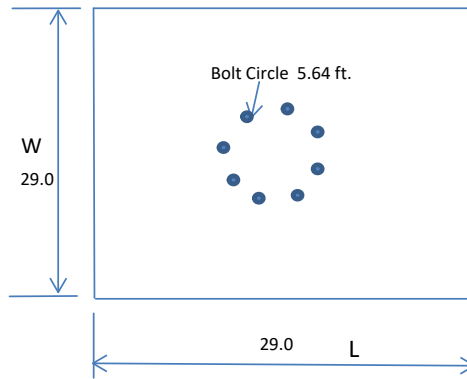
Rebar at the bottom of the concrete pad:

Qty. of Rebar in Pad (L):	31	Qty. of Rebar in Pad (W):	31
---------------------------	----	---------------------------	----

Rebar at the top of the concrete pad:

Qty. of Rebar in Pad (L):	31	Qty. of Rebar in Pad (W):	31
---------------------------	----	---------------------------	----

Apply 1.35 factor for e/w Per G: 1.35



**Soil Design Parameters:**

Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4 pcf	Angle from Top of Pad:	30
Ultimate Bearing Pressure (psf):	12000	Ultimate Skin Friction:	0 Psf	Angle from Bottm of Pad:	25
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No	Angle from Bottm of Pad:	25
Consider soil hor. resist. for OTM.:	Yes	Reduction factor on the maximum soil bearing pressure:	1.00		

**Foundation Analysis and Design:**

Uplift Strength Reduction Factor:	0.75	Compression Strength Reduction Factor:	0.75
Total Dry Soil Volume (cu. Ft.):	0.00	Total Dry Soil Weight (Kips):	0.00
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	0.00	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	4205.00	Total Dry Concrete Weight (Kips):	630.75
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	630.75	Total Vertical Load on Base (Kips):	713.75

**Check Soil Capacities:**

Calculated Maxium Net Soil Pressure under the base (psf):	3491	<	Allowable Factored Soil Bearing (psf):	9000	0.39	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	9434.8	>	Design Factored Momnt (kips-ft):	6701	0.71	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.41					OK!

Load/  
Capacity  
Ratio

**Check the capacities of Reinforcing Concrete:**

Strength reduction factor (Flexure and axial tension):	0.90	Strength reduction factor (Shear):	0.75
Strength reduction factor (Axial compression):	0.65	Wind Load Factor on Concrete Design:	1.00

**Concrete Pad:**

One-Way Design Shear Capacity (L-Direction, Kips):	1615.4	>	One-Way Factored Shear (L-D. Kips):	403.3	0.25	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	1615.4	>	One-Way Factored Shear (W-D., Kips)	403.3	0.25	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	1942.5	>	One-Way Factored Shear (C-C, Kips):	807.8	0.42	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct. ):	0.0012	OK!	Lower Steel Pad Reinf. Ratio (W-Direc	0.0012		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	6135.3	>	Moment at Bottom ( L-Direct. K-Ft):	1355.3	0.22	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	6135.3	>	Moment at Bottom ( W-Direct. K-Ft):	1355.3	0.22	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	8654.0	>	Moment at Bottom ( C-C Dir. K-Ft):	1916.7	0.22	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct. ):	0.0012	OK!	Upper Steel Reinf. Ratio (W-Direct. ):	0.0012		
Upper Steel Pad Moment Capacity (L-Direction. Kips-ft):	6135.3	>	Moment at the top (L-Dir Kips-Ft):	551.2	0.09	OK!
Upper Steel Pad Moment Capacity (W-Direction. Kips-ft):	6135.3	>	Moment at the top (W-Dir Kips-Ft):	551.2	0.09	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	8654.0	>	Moment at the top (C-C Direc. K-Ft):	941.5	0.11	OK!

# Exhibit E

## **Mount Analysis**





December 2, 2022

Keira Martinez  
SBA Network Services, LLC.  
134 Flanders Road, Suite 125  
Westborough, MA 01581

MTS Engineering, P.L.L.C.  
1717 S. Boulder, Suite 300  
Tulsa, OK 74119  
(918) 587-4630  
btwo@btgrp.com

**Subject:** **Appurtenance Mount Analysis Report**

**Carrier Designation:** **Dish Wireless Co-Locate**  
**Site Number:** BOHVN00203A  
**Site Name:** SBA – Burr Mountain Road

**SBA Network Services Designation:** **Site Number:** CT46138-A  
**Site Name:** Torrington/Oandg Ind Inc  
**Application Number:** 169202, v1

**Engineering Firm Designation:** **Project Number:** 149546.003.01.0001

**Site Data:** **350 Burr Mountain Road, Torrington, CT, 06790, Litchfield County**  
**Latitude 41.87325°, Longitude -73.08840°**  
**Monopole**  
**8 ft. Platform Mount**

Dear Ms. Martinez,

We are pleased to submit this “**Appurtenance Mount Analysis Report**” to determine the structural integrity of the antenna mount on the above-mentioned structure.

The purpose of the analysis is to determine acceptability of the mount’s stress level. Based on our analysis we have determined the stress level for the mount under the following load case to be:

Proposed Equipment	<b>Sufficient Capacity</b>
Note: See Table 1 for the final loading configuration	<b>(Passing at 56.3%)</b>

This analysis utilizes an ultimate 3-second gust wind speed of 115 mph as required by the 2022 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

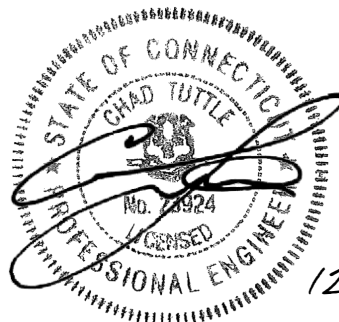
All the equipment proposed in this report shall be installed in accordance with the drawings for the determined available structural capacity to be effective.

We appreciate the opportunity of providing our continuing professional services to you and *SBA Network Services, LLC*. If you have any questions or need further assistance on this or any other projects, please give us a call.

Mount structural analysis prepared by: Clint Coody

Respectfully submitted by: MTS Engineering, P.L.L.C.  
COA: BER:2386985 Expires: 02/01/2023

Chad E. Tuttle, P.E.



12-2-22

## **TABLE OF CONTENTS**

### **1) INTRODUCTION**

### **2) ANALYSIS CRITERIA**

Table 1 - Proposed Equipment Information

Table 2 - Documents Provided

### **3) ANALYSIS PROCEDURE**

3.1) Analysis Method

3.2) Assumptions

### **4) ANALYSIS RESULTS**

Table 3 – Mount Component Stresses vs. Capacity

### **5) RECOMMENDATIONS**

### **6) APPENDIX A**

RISA-3D Output

### **7) APPENDIX B**

Additional Calculations

## 1) INTRODUCTION

The appurtenance mount consists of Commscope Platform mount (Part # MC-PK8-DSH) at 145 ft., attached to Monopole at Lot 5 Burr Mountain Road, Torrington, CT, 06790, Litchfield County. The proposed antenna loading information was obtained from SBA Network Services, LLC. All information provided to us assumed accurate and complete.

## 2) ANALYSIS CRITERIA

The structural analysis was performed for this mount in accordance with the ANSI/TIA-222-H-2017 Structural Standard for Antenna Supporting Structures and Antennas and Small Wind Turbine Support Structures using a 3 - second gust wind speed of 115 mph with no ice and 50 mph with 1 inch escalated ice thickness. Exposure category C, Topographic Category 1 and Risk Category II were used in the analysis. In addition, the platform mount has been analyzed for various live loading conditions consisting of a 250-lb man live load applied individually at the midpoint and cantilevered ends of horizontal members as well as a 500-pound man live load applied individually at mount pipe locations using a 3-second gust of 30mph. The mount was analyzed under 30° increments in the wind direction. The analyzed loading is detailed in Table 1.

**Table 1 – Proposed Equipment Information**

Loading	RAD Center Elev. (ft.)	Position	Qty.	Description	Note
Proposed	145	2	3	JMA Wireless MX08FRO665-21	1
			3	Fujitsu TA08025-B605	2
			3	Fujitsu TA08025-B604	
		-	1	Raycap RDIDC-9181-PF-48	3

Note:

- 1) Proposed Antenna to be installed on the Proposed Mount Pipe.
- 2) Proposed Equipment to be installed directly behind the Antenna
- 3) Proposed Equipment to be installed on the Mount.

**Table 2 - Documents Provided**

Documents	Remarks	Reference	Source
SBA Application	Proposed Loading	Date: 08/11/2021	SBA Network Services, LLC.
RFDS		Date: 04/06/2022	
CD's	MTS Engineering, P.L.L.C.	Date: 09/28/2021	On File
Mount Manufacture Drawing	Commscope (Part# MC-PK8-DSH)	Date: 03/08/2021	Commscope

## 3) ANALYSIS PROCEDURE

### 3.1) Analysis Method

RISA-3D (Version 20.0.4), a commercially available analysis software package, was used to create a three-dimensional model of the mount and calculate member stresses and deflections for various loading cases. Selected output from the analysis is included in Appendix A.

Manufacturer's drawings were used to create the model.

### 3.2) Assumptions

1. The mount was built in accordance with the manufacturer's specifications.
2. The mount has been maintained in accordance with the manufacturer's specifications and is free of damage.
3. The configuration of antennas and other appurtenances are as specified in Table 1.

4. All mount components have been assumed to be in sufficient condition to carry their full design capacity for the analysis.
5. Mount areas and weights are determined from field measurements, standard material properties, and/or manufacturer product data.

The following assumptions have been included in the analysis of the mount

Component	Section	Length	Note
Proposed Mount Pipe for Raycap	2" Std. Pipe	6'-0"	Installed on Support Tube between Alpha and Beta sector

6. Serviceability with respect to antenna twist, tilt, roll or lateral translation is not checked and is left to the carrier or tower owner to ensure conformance.
7. All prior structural modifications, if any are assumed to be correctly installed and fully effective.
8. All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.
9. The following material grades were assumed (Unless Noted Otherwise):
  - a) Connection Bolts : ASTM A325
  - b) Steel Pipe : ASTM A53 (GR. 35)
  - c) HSS (Round) : ASTM 500 (GR. B-42)
  - d) HSS (Rectangular) : ASTM 500 (GR. B-46)
  - e) Channel : ASTM A36 (GR. 36)
  - f) Steel Solid Rod : ASTM A36 (GR. 36)
  - g) Steel Plate : ASTM A36 (GR. 36)
  - h) Steel Angle : ASTM A36 (GR. 36)
  - i) UNISTRUT : ASTM A570 (GR. 33)

This analysis may be affected if any assumptions are not valid or have been made in error. MTS Engineering, P.L.L.C. should be notified to determine the effect on the structural integrity of the antenna mounting system.

#### 4) ANALYSIS RESULTS

**Table 3 – Mount Component Stresses vs. Capacity**

Notes	Component	Elevation (ft.)	% Capacity	Pass / Fail
-	Main Horizontals	145	7.3	Pass
-	Support Rails	145	11.1	Pass
-	Support Tubes	145	56.3	Pass
-	Support Channels	145	36.8	Pass
-	Support Angles	145	30.6	Pass
-	Mount Pipes	145	14.3	Pass
-	Connection Plates	145	22.3	Pass
-	Connection Angles	145	18.5	Pass
-	Connection Bolts	145	30.8	Pass

#### 5) RECOMMENDATIONS

The Commscope Platform mount (Part # MC-PK8-DSH) has sufficient capacity to carry the proposed loads and is in compliance with the ANSI/TIA-222-H standard for the proposed loading. (Refer to the RISA output for the specific members).

# Exhibit F

## **Power Density/RF Emissions Report**



# Radio Frequency Emissions Analysis Report



**Site ID: BOHVN00203A**

SBA Torrington/Oandg Ind Inc  
350 Burr Mountain Road  
Torrington, CT 06790

**January 5, 2023**

**Fox Hill Telecom Project Number: 222131**

Site Compliance Summary	
Compliance Status:	<b>COMPLIANT</b>
Site total MPE% of FCC general population allowable limit:	<b>9.67 %</b>

January 5, 2023

Dish Wireless  
5701 South Santa Fe Drive  
Littleton, CO 80120

Emissions Analysis for Site: **BOHVN00203A – SBA Torrington/Oandg Ind Inc**

Fox Hill Telecom, Inc (“Fox Hill”) was directed to analyze the proposed radio installation for Dish Wireless, LLC (Dish) facility located at **350 Burr Mountain Road, Torrington, CT**, for the purpose of determining whether the emissions from the Proposed Dish radio and antenna installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ( $\mu\text{W}/\text{cm}^2$ ). The number of  $\mu\text{W}/\text{cm}^2$  calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general population may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general population would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Population exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ( $\mu\text{W}/\text{cm}^2$ ). The general population exposure limit for the 600 MHz band is approximately  $400 \mu\text{W}/\text{cm}^2$ . The general population exposure limit for the 1900 MHz (PCS) and 2100 MHz (AWS / AWS-4) bands is  $1000 \mu\text{W}/\text{cm}^2$ . Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.





Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.



## CALCULATIONS

Calculations were performed for the proposed upgrades to the Dish Wireless antenna facility located at **350 Burr Mountain Road, Torrington, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65 for far field modeling calculations.

In OET-65, plane wave power densities in the Far Field of an antenna are calculated by considering antenna gain and reflective waves that would contribute to exposure.

Since the radiation pattern of an antenna has developed in the **Far Field** region the power gain in specific directions needs to be considered in exposure predictions to yield an Effective Radiated Power (ERP) in each specific direction from the antenna. Also, since the vertical radiation pattern of the antenna is considered, the exposure calculations would most likely be reduced significantly at ground level, resulting in a more realistic estimate of the actual exposure levels. To determine a worst-case scenario at each point along the calculation radials, each point was calculated using the antenna gain value at each angle of incident and compared against the result using an isotropic radiator at the antenna height with the greater of the two used to yield the more pessimistic far field value for each point along the calculation radial.

Additionally, to model a truly "worst case" prediction of exposure levels at or near a surface, such as at ground-level or on a rooftop, reflection off the surface of antenna radiation power can be assumed, resulting in a potential 1.6 times increase in power density in calculating far field power density values.

With these factors Considered, the worst case **Far Field prediction model** utilized in this analysis is determined by the following equation:

Equation 9 per FCC OET65 for Far Field Modeling

$$S = \frac{33.4 \text{ ERP}}{R^2}$$

S = Power Density (in  $\mu\text{w}/\text{cm}^2$ )

ERP = Effective Radiated Power from antenna (watts)

R = Distance from the antenna (meters)

Predicted far field power density values for all carriers identified in this report were calculated 6 feet above the ground level and are displayed as a percentage of the applicable FCC standards. All emissions values for other carriers were calculated using the same Far Field model outlined above, using industry standard radio configurations and frequency band selection based upon available licenses in this geographic area for emissions contribution estimates.



For each Dish sector the following channel counts, frequency bands and power levels were utilized as shown in *Table 1*:

Technology	Frequency Band	Channel Count	Transmit Power per Channel (W)
5G	n71 (600 MHz)	4	61.5
5G	n70 (AWS-4 / 1995-2020)	4	40
5G	n66 (AWS-4 / 2180-2200)	4	40

*Table 1: Channel Data Table*



The following **Dish** antennas listed in *Table 2* were used in the modeling for transmission in the 600 MHz (n71) frequency band and the 2100 MHz (AWS 4) frequency bands at 1995-2020 MHz (n70) and 2180-2200 MHz (n66). This is based on feedback from Dish regarding anticipated antenna selection. Maximum gain values for all antennas are listed in the Inventory and Power Data table below.

Sector	Antenna Number	Antenna Make / Model	Antenna Centerline (ft)
A	1	JMA MX08FRO665-21	145
B	1	JMA MX08FRO665-21	145
C	1	JMA MX08FRO665-21	145

*Table 2: Antenna Data*

All calculations were done with respect to uncontrolled / general population threshold limits.

## RESULTS

Per the calculations completed for the proposed **Dish** configurations *Table 3* shows resulting emissions power levels and percentages of the FCC's allowable general population limit.

Antenna ID	Antenna Make / Model	Frequency Bands	Antenna Gain (dBd)	Channel Count	Total TX Power (W)	ERP (W)	MPE %
Antenna A1	JMA MX08FRO665-21	n71 (600 MHz) / n70 (AWS-4 / 1995-2020) / n66 (AWS-4 / 2180-2200)	11.45 / 16.15 / 16.65	12	566	17,426.72	1.76
Sector A Composite MPE%							<b>1.76</b>
Antenna B1	JMA MX08FRO665-21	n71 (600 MHz) / n70 (AWS-4 / 1995-2020) / n66 (AWS-4 / 2180-2200)	11.45 / 16.15 / 16.65	12	566	17,426.72	1.76
Sector B Composite MPE%							<b>1.76</b>
Antenna C1	JMA MX08FRO665-21	n71 (600 MHz) / n70 (AWS-4 / 1995-2020) / n66 (AWS-4 / 2180-2200)	11.45 / 16.15 / 16.65	12	566	17,426.72	1.76
Sector C Composite MPE%							<b>1.76</b>

*Table 3: Dish Emissions Levels*



The Following table (*Table 4*) shows all additional carriers on site and their emissions contribution estimates, along with the newly calculated **Dish** far field emissions contributions per this report. FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site emissions values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. For this site, all three sectors have the same configuration yielding the same results on all three sectors. *Table 5* below shows a summary for each **Dish** Sector as well as the composite emissions value for the site.

<b>Site Composite MPE%</b>	
<b>Carrier</b>	<b>MPE%</b>
Dish – Max Per Sector Value	<b>1.76 %</b>
Sprint	0.66%
Verizon Wireless	1.28 %
AT&T	1.96 %
T-Mobile	1.27 %
Torrington PD (Composite)	2.74 %
<b>Site Total MPE %:</b>	<b>9.67 %</b>

*Table 4: All Carrier MPE Contributions*

Dish Sector A Total:	1.76 %
Dish Sector B Total:	1.76 %
Dish Sector C Total:	1.76 %
Site Total:	9.67 %

*Table 5: Site MPE Summary*

Table 6 below details a breakdown by frequency band and technology for the MPE power values for the maximum calculated **Dish** sector(s). For this site, all three sectors have the same configuration yielding the same results on all three sectors.

Dish _ Frequency Band / Technology Max Power Values (Per Sector)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ( $\mu\text{W}/\text{cm}^2$ )	Frequency (MHz)	Allowable MPE ( $\mu\text{W}/\text{cm}^2$ )	Calculated % MPE
Dish n71 (600 MHz) 5G	4	858.77	145	4.64	n71 (600 MHz)	400	1.16%
Dish n70 (AWS-4 / 1995-2020) 5G	4	1,648.39	145	3.00	n70 (AWS-4 / 1995-2020)	1000	0.30%
Dish n66 (AWS-4 / 2180-2200) 5G	4	1,849.52	145	3.00	n66 (AWS-4 / 2180-2200)	1000	0.30%
						<b>Total:</b>	<b>1.76 %</b>

Table 6: Dish Maximum Sector MPE Power Values





## Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general population exposure to RF Emissions.

The anticipated maximum composite contributions from the Dish facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

Dish Sector	Power Density Value (%)
Sector A:	1.76 %
Sector B:	1.76 %
Sector C:	1.76 %
Dish Maximum Total (per sector):	1.76 %
Site Total:	9.67 %
Site Compliance Status:	<b>COMPLIANT</b>

The anticipated composite emissions value for this site, assuming all carriers present, is **9.67 %** of the allowable FCC established general population limit sampled at the ground level. This is based upon the far field calculations performed for all carriers identified in this report.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.

Scott Heffernan  
Principal RF Engineer  
**Fox Hill Telecom, Inc**  
Worcester, MA 01609  
(978)660-3998

# Exhibit G

## **Letter of Authorization**

## SBA Letter of Authorization

CT - CONNECTICUT SITING COUNCIL

Melanie A. Bachman

Executive Director

Connecticut Siting Council

10 Franklin Square

New Britain, CT 06051

Re: Tower Share Application

SBA COMMUNICATIONS CORPORATION hereby authorizes DISH Wireless LLC, including their Agent, to act as our Agent in the processing of all zoning applications, building permits and approvals through the CONNECTICUT SITING COUNCIL for existing wireless communications towers.


SBA COMMUNICATIONS CORPORATION

134 Flanders Road, Suite 125

Westboro, MA 01581

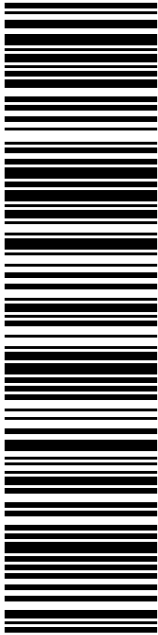
# Exhibit H

## Recipient Mailings



ELINORE CARBONE  
MAYOR OF TORRINGTON  
140 MAIN ST  
TORRINGTON CT 06790-5201

**USPS TRACKING #**



**9405 5036 9930 0487 4531 90**

**P**

USPS.com 9405 5036 9930 0487 4531 90 0096 5000 0020 6790  
**US POSTAGE \$9.65**  
 Flat Rate Env  
 U.S. POSTAGE PAID  
 Click-N-Ship®

02/24/2023 Mailed from 01566 986764901598032


**PRIORITY MAIL®**

DEBORAH CHASE  
NORTHEAST SITE SOLUTIONS  
STE 1  
420 MAIN ST  
STURBRIDGE MA 01566-1359

Expected Delivery Date: 02/27/23  
Ref#: SBDS-203A  
**0000**

**C009**

Electronic Rate Approved #038555749





Cut on dotted line.

### Instructions

1. Each Click-N-Ship® label is unique. Labels are to be used as printed and used only once. DO NOT PHOTO COPY OR ALTER LABEL.
2. Place your label so it does not wrap around the edge of the package.
3. Adhere your label to the package. A self-adhesive label is recommended. If tape or glue is used, DO NOT TAPE OVER BARCODE. Be sure all edges are secure.
4. To mail your package with PC Postage®, you may schedule a Package Pickup online, hand to your letter carrier, take to a Post Office™, or drop in a USPS collection box.
5. Mail your package on the "Ship Date" you selected when creating this label.

### Click-N-Ship® Label Record

**USPS TRACKING # :**  
**9405 5036 9930 0487 4531 90**

Trans. #: 583285375	Priority Mail® Postage: <b>\$9.65</b>
Print Date: 02/24/2023	Total: <b>\$9.65</b>
Ship Date: 02/24/2023	
Expected Delivery Date: 02/27/2023	


**From:** DEBORAH CHASE      Ref#: SBDS-203A  
 NORTHEAST SITE SOLUTIONS  
 STE 1  
 420 MAIN ST  
 STURBRIDGE MA 01566-1359

**To:** ELINORE CARBONE  
 MAYOR OF TORRINGTON  
 140 MAIN ST  
 TORRINGTON CT 06790-5201

\* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.

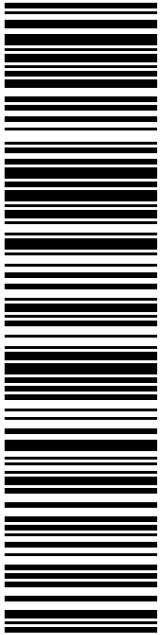


Thank you for shipping with the United States Postal Service!  
 Check the status of your shipment on the USPS Tracking® page at usps.com



JEREMY LEIFERT  
CITY PLANNER  
140 MAIN ST  
TORRINGTON CT 06790-5201

**USPS TRACKING #**



**9405 5036 9930 0487 4532 06**

**P**

USPS.com 9405 5036 9930 0487 4532 06 0096 5000 0020 6790  
**US POSTAGE \$9.65**  
 Flat Rate Envoy

U.S. POSTAGE PAID  
 Click-N-Ship®

Mailed from 01566 986764901596866


DEBORAH CHASE  
NORTHEAST SITE SOLUTIONS  
STE 1  
420 MAIN ST  
STURBRIDGE MA 01566-1359

**PRIORITY MAIL®**

Expected Delivery Date: 02/27/23  
Ref#: SBCT-203A  
**0000**

**C009**

Electronic Rate Approved #038555749





Cut on dotted line.

### Instructions

1. Each Click-N-Ship® label is unique. Labels are to be used as printed and used only once. DO NOT PHOTO COPY OR ALTER LABEL.
2. Place your label so it does not wrap around the edge of the package.
3. Adhere your label to the package. A self-adhesive label is recommended. If tape or glue is used, DO NOT TAPE OVER BARCODE. Be sure all edges are secure.
4. To mail your package with PC Postage®, you may schedule a Package Pickup online, hand to your letter carrier, take to a Post Office™, or drop in a USPS collection box.
5. Mail your package on the "Ship Date" you selected when creating this label.

### Click-N-Ship® Label Record

**USPS TRACKING # :**  
**9405 5036 9930 0487 4532 06**

Trans. #: 583285375	Priority Mail® Postage: <b>\$9.65</b>
Print Date: 02/24/2023	Total: <b>\$9.65</b>
Ship Date: 02/24/2023	
Expected Delivery Date: 02/27/2023	

**From:** DEBORAH CHASE  
NORTHEAST SITE SOLUTIONS  
STE 1  
420 MAIN ST  
STURBRIDGE MA 01566-1359


**To:** JEREMY LEIFERT  
CITY PLANNER  
140 MAIN ST  
TORRINGTON CT 06790-5201

Ref#: SBCT-203A

\* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.



Thank you for shipping with the United States Postal Service!  
 Check the status of your shipment on the USPS Tracking® page at usps.com

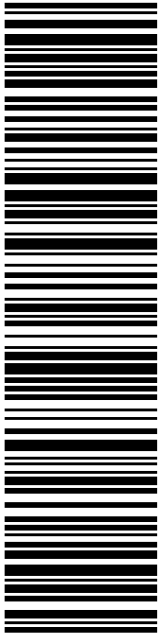


SBA COMMUNICATIONS CORPORATION  
STE 125  
13 FLANDERS RD  
WESTBOROUGH MA 01581

DEBORAH CHASE  
NORTHEAST SITE SOLUTIONS  
STE 1  
420 MAIN ST  
STURBRIDGE MA 01566-1359


Expected Delivery Date: 02/25/23  
Ref#: SBDS-203A  
**0000**


**USPS TRACKING #**



**9405 5036 9930 0487 4532 13**

Electronic Rate Approved #038555749





**Click-N-Ship®**

**P**

USPS.com 9405 5036 9930 0487 4532 13 0096 5000 0010 1581  
**\$9.65**  
**US POSTAGE**  
 Flat Rate Env  
**U.S. POSTAGE PAID**  
 Click-N-Ship®  
 Mailed from 01566 986764901596308  
 02/24/2023

**PRIORITY MAIL®**



Cut on dotted line.

## Instructions

1. Each Click-N-Ship® label is unique. Labels are to be used as printed and used only once. DO NOT PHOTO COPY OR ALTER LABEL.
2. Place your label so it does not wrap around the edge of the package.
3. Adhere your label to the package. A self-adhesive label is recommended. If tape or glue is used, DO NOT TAPE OVER BARCODE. Be sure all edges are secure.
4. To mail your package with PC Postage®, you may schedule a Package Pickup online, hand to your letter carrier, take to a Post Office™, or drop in a USPS collection box.
5. Mail your package on the "Ship Date" you selected when creating this label.

## Click-N-Ship® Label Record

**USPS TRACKING # :**  
**9405 5036 9930 0487 4532 13**

Trans. #: 583285375	Priority Mail® Postage: <b>\$9.65</b>
Print Date: 02/24/2023	Total: <b>\$9.65</b>
Ship Date: 02/24/2023	
Expected Delivery Date: 02/25/2023	

**From:** DEBORAH CHASE Ref#: SBDS-203A  
 NORTHEAST SITE SOLUTIONS  
 STE 1  
 420 MAIN ST  
 STURBRIDGE MA 01566-1359

**To:** SBA COMMUNICATIONS CORPORATION  
 STE 125  
 13 FLANDERS RD  
 WESTBOROUGH MA 01581


\* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.



Thank you for shipping with the United States Postal Service!

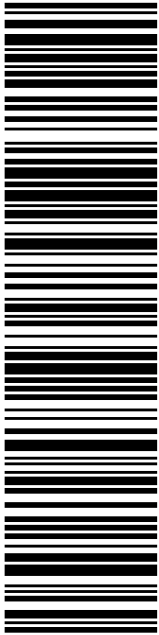
Check the status of your shipment on the USPS Tracking® page at [usps.com](https://usps.com)





O & G INDUSTRIES INC.  
112 WALL ST  
TORRINGTON CT 06790-5416

**USPS TRACKING #**



**9405 5036 9930 0487 4532 20**

**P**

USPS.com 9405 5036 9930 0487 4532 20 0096 5000 0020 6790  
**US POSTAGE \$9.65**  
 Flat Rate Env  
 U.S. POSTAGE PAID  
 Click-N-Ship®

02/24/2023 Mailed from 01566 986764901595597


**PRIORITY MAIL®**

DEBORAH CHASE  
NORTHEAST SITE SOLUTIONS  
STE 1  
420 MAIN ST  
STURBRIDGE MA 01566-1359

Expected Delivery Date: 02/27/23  
Ref#: SBDS-203A  
**0000**

**C026**

Electronic Rate Approved #038555749





Cut on dotted line.

### Instructions

1. Each Click-N-Ship® label is unique. Labels are to be used as printed and used only once. DO NOT PHOTO COPY OR ALTER LABEL.
2. Place your label so it does not wrap around the edge of the package.
3. Adhere your label to the package. A self-adhesive label is recommended. If tape or glue is used, DO NOT TAPE OVER BARCODE. Be sure all edges are secure.
4. To mail your package with PC Postage®, you may schedule a Package Pickup online, hand to your letter carrier, take to a Post Office™, or drop in a USPS collection box.
5. Mail your package on the "Ship Date" you selected when creating this label.

### Click-N-Ship® Label Record

**USPS TRACKING # :**  
**9405 5036 9930 0487 4532 20**

Trans. #: 583285375	Priority Mail® Postage: <b>\$9.65</b>
Print Date: 02/24/2023	Total: <b>\$9.65</b>
Ship Date: 02/24/2023	
Expected Delivery Date: 02/27/2023	

**From:** DEBORAH CHASE      Ref#: SBDS-203A  
 NORTHEAST SITE SOLUTIONS  
 STE 1  
 420 MAIN ST  
 STURBRIDGE MA 01566-1359


**To:** O & G INDUSTRIES INC.  
 112 WALL ST  
 TORRINGTON CT 06790-5416

\* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.



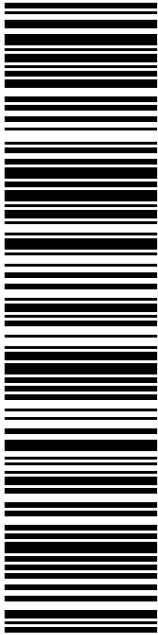
Thank you for shipping with the United States Postal Service!

Check the status of your shipment on the USPS Tracking® page at usps.com



ELINORE CARBONE  
MAYOR OF TORRINGTON  
140 MAIN ST  
TORRINGTON CT 06790-5201

**USPS TRACKING #**



**9405 5036 9930 0487 4531 90**

**P**

USPS.com 9405 5036 9930 0487 4531 90 0096 5000 0020 6790  
**US POSTAGE \$9.65**  
 Flat Rate Env  
 U.S. POSTAGE PAID  
 Click-N-Ship®  
 Mailed from 01566 986764901598032  
 02/24/2023


**PRIORITY MAIL®**

DEBORAH CHASE  
NORTHEAST SITE SOLUTIONS  
STE 1  
420 MAIN ST  
STURBRIDGE MA 01566-1359

Expected Delivery Date: 02/27/23  
Ref#: SBDS-203A  
**0000**

**C009**

Electronic Rate Approved #038555749





Cut on dotted line.

### Instructions

1. Each Click-N-Ship® label is unique. Labels are to be used as printed and used only once. DO NOT PHOTO COPY OR ALTER LABEL.
2. Place your label so it does not wrap around the edge of the package.
3. Adhere your label to the package. A self-adhesive label is recommended. If tape or glue is used, DO NOT TAPE OVER BARCODE. Be sure all edges are secure.
4. To mail your package with PC Postage®, you may schedule a Package Pickup online, hand to your letter carrier, take to a Post Office™, or drop in a USPS collection box.
5. Mail your package on the "Ship Date" you selected when creating this label.

### Click-N-Ship® Label Record

**USPS TRACKING # :**  
**9405 5036 9930 0487 4531 90**

Trans. #: 583285375	Priority Mail® Postage: <b>\$9.65</b>
Print Date: 02/24/2023	Total: <b>\$9.65</b>
Ship Date: 02/24/2023	
Expected Delivery Date: 02/27/2023	

**From:** DEBORAH CHASE      Ref#: SBDS-203A  
 NORTHEAST SITE SOLUTIONS  
 STE 1  
 420 MAIN ST  
 STURBRIDGE MA 01566-1359


**To:** ELINORE CARBONE  
 MAYOR OF TORRINGTON  
 140 MAIN ST  
 TORRINGTON CT 06790-5201

\* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.



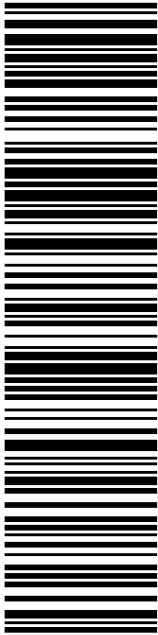
Thank you for shipping with the United States Postal Service!

Check the status of your shipment on the USPS Tracking® page at usps.com



JEREMY LEIFERT  
CITY PLANNER  
140 MAIN ST  
TORRINGTON CT 06790-5201

**USPS TRACKING #**



**9405 5036 9930 0487 4532 06**

**P**

USPS.com 9405 5036 9930 0487 4532 06 0096 5000 0020 6790  
**US POSTAGE \$9.65**  
 Flat Rate Envoy

U.S. POSTAGE PAID  
 Click-N-Ship®

Mailed from 01566 986764901596866


**PRIORITY MAIL®**

Expected Delivery Date: 02/27/23 Ref#: SBCT-203A  
**0000**

**C009**

DEBORAH CHASE  
NORTHEAST SITE SOLUTIONS  
STE 1  
420 MAIN ST  
STURBRIDGE MA 01566-1359

Electronic Rate Approved #038555749





Cut on dotted line.

### Instructions

1. Each Click-N-Ship® label is unique. Labels are to be used as printed and used only once. DO NOT PHOTO COPY OR ALTER LABEL.
2. Place your label so it does not wrap around the edge of the package.
3. Adhere your label to the package. A self-adhesive label is recommended. If tape or glue is used, DO NOT TAPE OVER BARCODE. Be sure all edges are secure.
4. To mail your package with PC Postage®, you may schedule a Package Pickup online, hand to your letter carrier, take to a Post Office™, or drop in a USPS collection box.
5. Mail your package on the "Ship Date" you selected when creating this label.

### Click-N-Ship® Label Record

**USPS TRACKING # :**  
**9405 5036 9930 0487 4532 06**

Trans. #: 583285375	Priority Mail® Postage: <b>\$9.65</b>
Print Date: 02/24/2023	Total: <b>\$9.65</b>
Ship Date: 02/24/2023	
Expected Delivery Date: 02/27/2023	


**From:** DEBORAH CHASE Ref#: SBCT-203A  
 NORTHEAST SITE SOLUTIONS  
 STE 1  
 420 MAIN ST  
 STURBRIDGE MA 01566-1359

**To:** JEREMY LEIFERT  
 CITY PLANNER  
 140 MAIN ST  
 TORRINGTON CT 06790-5201

\* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.

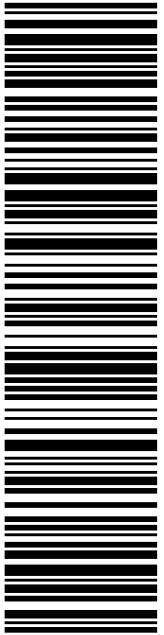


Thank you for shipping with the United States Postal Service!  
 Check the status of your shipment on the USPS Tracking® page at usps.com



SBA COMMUNICATIONS CORPORATION  
STE 125  
13 FLANDERS RD  
WESTBOROUGH MA 01581

**USPS TRACKING #**




**9405 5036 9930 0487 4532 13**

DEBORAH CHASE  
NORTHEAST SITE SOLUTIONS  
STE 1  
420 MAIN ST  
STURBRIDGE MA 01566-1359

**PRIORITY MAIL®**


Expected Delivery Date: 02/25/23  
Ref#: SBDS-203A  
**0000**

**R005**




**Click-N-Ship®**

usps.com 9405 5036 9930 0487 4532 13 0096 5000 0010 1581  
**US POSTAGE \$9.65**  
 Flat Rate Env  
**U.S. POSTAGE PAID**  
 Click-N-Ship®  
 Mailed from 01566 986764901596308  
 02/24/2023



Electronic Rate Approved #038555749





Cut on dotted line.

### Instructions

- Each Click-N-Ship® label is unique. Labels are to be used as printed and used only once. DO NOT PHOTO COPY OR ALTER LABEL.
- Place your label so it does not wrap around the edge of the package.
- Adhere your label to the package. A self-adhesive label is recommended. If tape or glue is used, DO NOT TAPE OVER BARCODE. Be sure all edges are secure.
- To mail your package with PC Postage®, you may schedule a Package Pickup online, hand to your letter carrier, take to a Post Office™, or drop in a USPS collection box.
- Mail your package on the "Ship Date" you selected when creating this label.

### Click-N-Ship® Label Record

**USPS TRACKING # :**  
**9405 5036 9930 0487 4532 13**

Trans. #: 583285375	Priority Mail® Postage: <b>\$9.65</b>
Print Date: 02/24/2023	Total: <b>\$9.65</b>
Ship Date: 02/24/2023	
Expected Delivery Date: 02/25/2023	

**From:** DEBORAH CHASE      Ref#: SBDS-203A  
 NORTHEAST SITE SOLUTIONS  
 STE 1  
 420 MAIN ST  
 STURBRIDGE MA 01566-1359


**To:** SBA COMMUNICATIONS CORPORATION  
 STE 125  
 13 FLANDERS RD  
 WESTBOROUGH MA 01581

\* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.



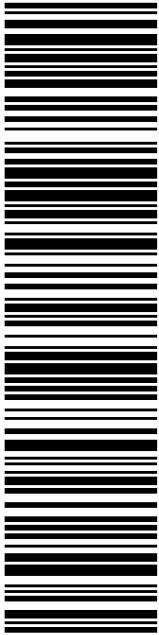
Thank you for shipping with the United States Postal Service!

Check the status of your shipment on the USPS Tracking® page at usps.com



O & G INDUSTRIES INC.  
112 WALL ST  
TORRINGTON CT 06790-5416

**USPS TRACKING #**



**9405 5036 9930 0487 4532 20**

**P**

USPS.com 9405 5036 9930 0487 4532 20 0096 5000 0020 6790  
**\$9.65**  
 US POSTAGE  
 Flat Rate Env  
 U.S. POSTAGE PAID  
 Click-N-Ship®  
 Mailed from 01566 986764901595597  
 02/24/2023


**PRIORITY MAIL®**

DEBORAH CHASE  
NORTHEAST SITE SOLUTIONS  
STE 1  
420 MAIN ST  
STURBRIDGE MA 01566-1359

Expected Delivery Date: 02/27/23  
Ref#: SBDS-203A  
**0000**

**C026**

Electronic Rate Approved #038555749





Cut on dotted line.

## Instructions

- Each Click-N-Ship® label is unique. Labels are to be used as printed and used only once. DO NOT PHOTO COPY OR ALTER LABEL.
- Place your label so it does not wrap around the edge of the package.
- Adhere your label to the package. A self-adhesive label is recommended. If tape or glue is used, DO NOT TAPE OVER BARCODE. Be sure all edges are secure.
- To mail your package with PC Postage®, you may schedule a Package Pickup online, hand to your letter carrier, take to a Post Office™, or drop in a USPS collection box.
- Mail your package on the "Ship Date" you selected when creating this label.

## Click-N-Ship® Label Record

**USPS TRACKING # :**  
**9405 5036 9930 0487 4532 20**

Trans. #: 583285375	Priority Mail® Postage: <b>\$9.65</b>
Print Date: 02/24/2023	Total: <b>\$9.65</b>
Ship Date: 02/24/2023	
Expected Delivery Date: 02/27/2023	

**From:** DEBORAH CHASE  
NORTHEAST SITE SOLUTIONS  
STE 1  
420 MAIN ST  
STURBRIDGE MA 01566-1359

Ref#: SBDS-203A

**To:** O & G INDUSTRIES INC.  
112 WALL ST  
TORRINGTON CT 06790-5416

\* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.



Thank you for shipping with the United States Postal Service!  
Check the status of your shipment on the USPS Tracking® page at usps.com

BOHVN100203A - SBA  
DISH



LINCOLN MALL  
560 LINCOLN ST STE 8  
WORCESTER, MA 01605-1925  
(800)275-8777

02/24/2023

12:27 PM

Product	Qty	Unit Price	Price
---------	-----	------------	-------

Prepaid Mail	1		\$0.00
Torrington, CT 06790			
Weight: 0 lb 12.00 oz			
Acceptance Date:			
Fri 02/24/2023			
Tracking #:			
9405 5036 9930 0487 4532 20			

Prepaid Mail	1		\$0.00
Westborough, MA 01581			
Weight: 0 lb 2.00 oz			
Acceptance Date:			
Fri 02/24/2023			
Tracking #:			
9405 5036 9930 0487 4532 13			

Prepaid Mail	1		\$0.00
Torrington, CT 06790			
Weight: 0 lb 12.10 oz			
Acceptance Date:			
Fri 02/24/2023			
Tracking #:			
9405 5036 9930 0487 4531 90			

Prepaid Mail	1		\$0.00
Torrington, CT 06790			
Weight: 0 lb 12.00 oz			
Acceptance Date:			
Fri 02/24/2023			
Tracking #:			
9405 5036 9930 0487 4532 06			

Grand Total:

\$0.00