NORTHEAST SITE SOLUTIONS
Turnkey Wireless Development

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

April 11, 2022

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

RE: Tower Share Application
349R Mountain Street, Windham, CT 06226
Latitude: 41.703011
Longitude: -72.221391
Site #: CT06462-A_BOBDL00005D_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 349R Mountain Street, Windham, Connecticut.

Dish Wireless LLC proposes to install three (3) 600/1900 MHz 5G antennas and six (6) RRUs, at the 107-foot level of the existing 196-foot self-support 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 March 23, 2022, Exhibit C. Also included is a structural analysis prepared by TES, dated February 9, 2022, confirming that the existing tower is structurally capable of supporting the proposed equipment. Attached as Exhibit D. The facility was originally approved by the Town of Windham. However, copies of the decision are not available. 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 Thomas DeVivo, James Rivers, Town Manager, and Matthew Vertefeuille, Director of Code Enforcement for the Town of Windham, as well as the tower owner (SBA) and property owner (SBA).

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 107-feet.

2. The proposed modifications will not result in an increase of the site boundary as depicted on the attached site plan.

NORTHEAST SITE SOLUTIONS
Turnkey Wireless Development

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 negligent.

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 22.05% 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 tower 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 Windham. 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 107-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 Windham.

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

NORTHEAST SITE SOLUTIONS
Turnkey Wireless Development

Attachments

Cc: Mayor Thomas DeVivo
Town of Windham
979 Main Street
Willimantic, CT 06226

James Rivers, Town Manager
Town of Windham
979 Main Street
Willimantic, CT 06226

Matthew Vertefeuille, Director of Code Enforcement
Town of Windham
979 Main Street
Willimantic, CT 06226

SBA - Tower & Property Owner

Exhibit A

Original Facility Approval

Robinson+Cole

KENNETH C. BALDWIN

280 Trumbull Street
Hartford, CT 06103-3597
Main (860) 275-8200
Fax (860) 275-8299
kbaldwin@rc.com
Direct (860) 275-8345

Also admitted in Massachusetts and New York

August 4, 2021

Via Electronic Mail

Melanie A. Bachman, Esq.
Executive Director/Staff Attorney
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **Notice of Exempt Modification – Facility Modification**
349R Mountain Street, Windham (Willimantic), Connecticut

Dear Attorney Bachman:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains an existing wireless telecommunications facility at the above-referenced property address (the "Property"). The facility consists of antennas and remote radio heads attached to a tower and related equipment on the ground, near the base of the tower. The tower was approved by the Town of Windham. Cellco's real estate consultants did reach out to Town staff in an effort to obtain copies of the original tower approval. Town staff was unable to locate those documents.[1] Cellco's shared use of the tower was approved by the Council in October 2000 (EM-VER-163-000928). A copy of Cellco's approval is included in Attachment 1.

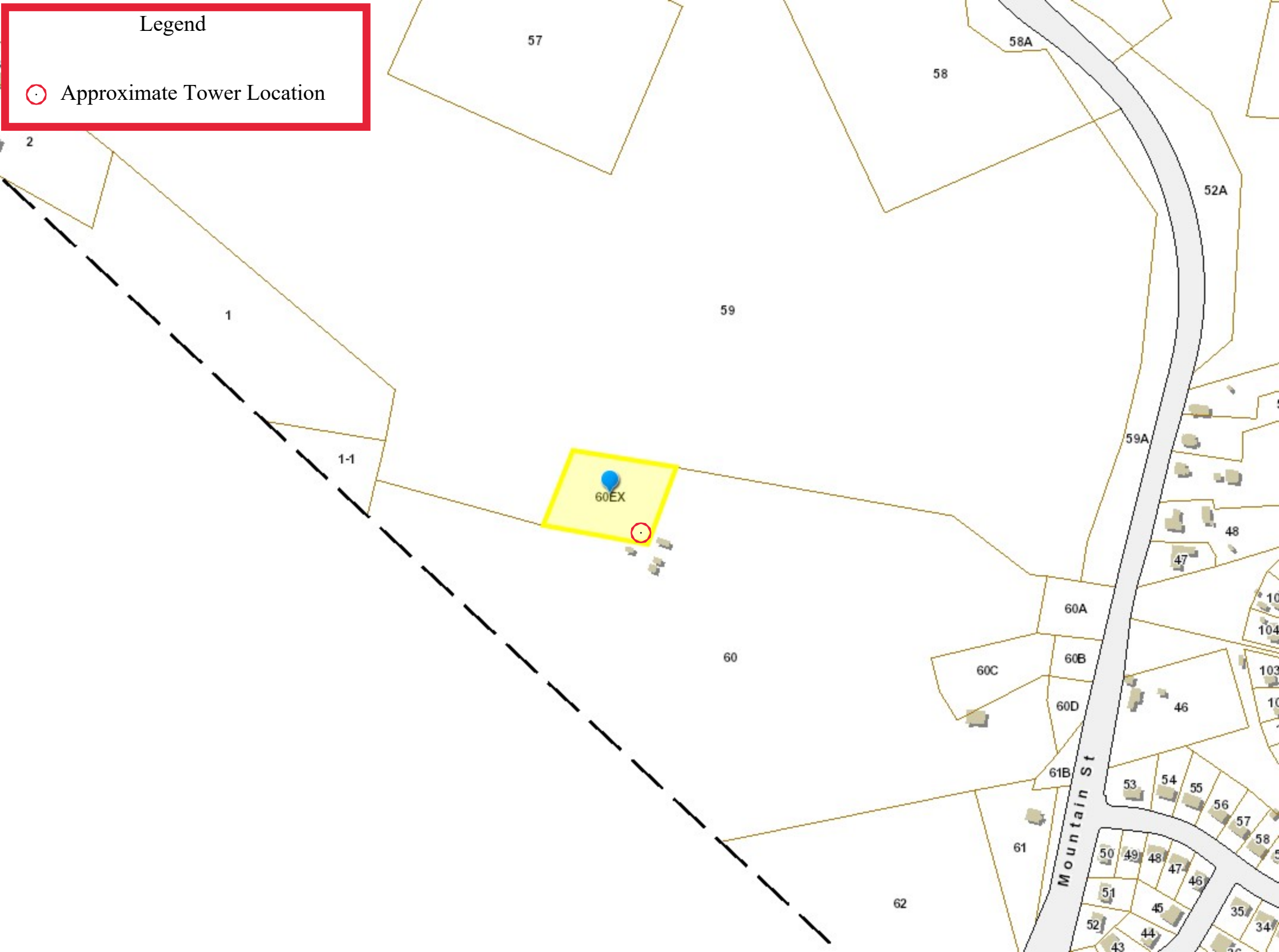
Cellco now intends to modify its facility by installing three (3) new Samsung MT6407-77A antennas and replacing nine (9) existing remote radio heads ("RRHs") with six (6) new RRHs all on Cellco's existing antenna mounts. A set of project plans showing Cellco's proposed facility modifications and new antennas and RRHs specifications are included in Attachment 2.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Windham's Chief Elected

[1] In Council filing EM-T-Mobile-163-160818 T-Mobile did note that Town officials they spoke with indicated that the tower was installed on the Property prior to the adoption of the Town zoning regulations.

Exhibit B

Property Card


Legend
Approximate Tower Location
57
58A
58
2
52A
1
59
1-1
59A
60EX
48
47
60A
60
60B
60C
60D
46
61B
Mountain St
53
54
55
56
57
58
61
50
49
48
47
46
51
45
52
44
43
35
34
62

Property Location: 349R MOUNTAIN ST | **MAP ID:** 3/9 154/ 60/EX / | **Bldg Name:** | **State Use:** 304

Vision ID: 5568 | **Account #** 00004100 | **Bldg #:** 1 of 1 | **Sec #:** 1 of 1 | **Card** 1 of 1 | **Print Date:** 12/05/2018 18:06

CURRENT OWNER	TOPO.	UTILITIES	STRT./ROAD	LOCATION
SBA PROPERTIES INC	2 Above Street	5 Well	3 Unpaved	
8051 CONGRESS AVE	5 Steep	6 Septic		
BOCA RATON, FL 33487		0 None		
Additional Owners:				

SUPPLEMENTAL DATA

Other ID:	3- 9/154/ 60EX	LCI	C
Zoning	R4	ParcelStatus	
Neighborhood	250 - 0	Cost Flag	
Living Units	0	Lot Number	0
Census	8004	A_D	
District No	2		
GIS ID:		ASSOC PID#	

CURRENT ASSESSMENT

Description	Code	Appraised Value	Assessed Value
UTL LAND	4-1	124,400	87,080
UTL BLDG	4-2	29,900	20,930
UTL OUTBL	4-3	17,020	11,920
	Total	171,320	119,930

6163
WINDHAM, CT

VISION

RECORD OF OWNERSHIP

RECORD OF OWNERSHIP	BK-VOL/PAGE	SALE DATE	q/u	v/i	SALE PRICE	V.C.
SBA PROPERTIES INC	631/ 299	04/10/2001	U	I	108,650	22
NUTMEG BROADCASTING COMPANY	343/ 130	09/10/1990	U	I	0	0
NUTMEG BROADCASTING COMPANY	304/ 277	10/09/1987	Q	I	75,000	
SYNCOM CAPITAL CORPORATION	285/ 647	09/01/1985	U	I	0	
DELTA COMMUNICATIONS CORPORATION	263/ 635	06/01/1980	U	I	0	
DAWSON JEROME & HILDA	241/ 106	04/01/1975	U	I	0	

PREVIOUS ASSESSMENTS (HISTORY)

Yr.	Code	Assessed Value	Yr.	Code	Assessed Value	Yr.	Code	Assessed Value
2017	4-1	87,080	2016	4-1	87,080	2015	300	26,810
2017	4-2	26,810	2016	4-2	26,810	2015	300	87,080
2017	4-3	0	2016	4-3	0			
	Total:	113,890		Total:	113,890		Total:	113,890

EXEMPTIONS

Year	Type	Description	Amount
		Total:	

OTHER ASSESSMENTS

Code	Description	Number	Amount	Comm. Int.

This signature acknowledges a visit by a Data Collector or Assessor

APPRAISED VALUE SUMMARY

Appraised Bldg. Value (Card)	29,900
Appraised XF (B) Value (Bldg)	0
Appraised OB (L) Value (Bldg)	17,020
Appraised Land Value (Bldg)	124,400
Special Land Value	0
Total Appraised Parcel Value	171,320
Valuation Method:	C
Adjustment:	0
Net Total Appraised Parcel Value	**171,320**

ASSESSING NEIGHBORHOOD

NBHD/ SUB	NBHD Name	Street Index Name	Tracing	Batch
0001/A			433	I

NOTES

BUILDING PERMIT RECORD

Permit ID	Issue Date	Type	Description	Amount	Insp. Date	% Comp.	Date Comp.	Comments
34217	03/12/2018	53	Cell Tower/Antennae	15,000		0		
32161	09/13/2016	53	Cell Tower/Antennae	79,651		0		
14063	07/01/2003	BP		6,000	07/10/2003	0	07/10/2003	06-26
13760	05/07/2003	BP		54,000	09/10/2003	0	09/10/2003	34-26
11453	03/13/2002	BP		30,000	09/09/2002	0	09/09/2002	34-26
10561	04/16/2001	BP		2,000	04/17/2001	0	04/17/2001	06-26
3086	03/01/1992	BP		0		0		16 26 #274

VISIT/ CHANGE HISTORY

Date	Type	IS	ID	Cd.	Purpose/Result
10/02/2002			BM	1	ENTRY + SIGN

LAND LINE VALUATION SECTION

B #	Use Code	Use Description	Zone	D	Front	Depth	Units	Unit Price	I. Factor	S.A.	Acre Disc	C. Factor	ST. Idx	Adj.	Notes- Adj	Special Pricing	S Adj Fact	Adj. Unit Price	Land Value
1	304	Public Utility C	R4				1.00 AC	80,000.00	1.0000	0	1.0000	1.00	250	1.00	Topography;		1.00		80,000
1	304	Public Utility C					0.05 AC	1,400.00	1.0000	0	1.0000	1.00		0.00	Topography;		1.00		70
1	304	Public Utility C					1.00 AC	44,330.00	1.0000	0	1.0000	1.00		0.00			1.00		44,330

Total Card Land Units: 2.05 AC | Parcel Total Land Area: 2.05 AC | Total Land Value: 124,400

Property Location: 349R MOUNTAIN ST | **MAP ID:** 3/9 154/ 60/EX / | **Bldg Name:** | **State Use:** 304

Vision ID: 5568 | **Account #** 00004100 | **Bldg #:** 1 of 1 | **Sec #:** 1 of 1 | **Card** 1 of 1 | **Print Date:** 12/05/2018 18:06

CONSTRUCTION DETAIL

Element	Cd.	Ch.	Description
Style	79		Telephone Bldg
Model	94		Commercial
Grade	03		Average
Stories	1.0		
Occupancy	0		
Exterior Wall 1	15		Concrete/mas
Level From	01		01
Level To	01		01
Uncov Parking	0		
Perimeter	68		
Identical Units	1		
Efficiency	0		
1 Bedroom	0		
2 Bedroom	0		
3 Bedroom	0		
AC Type	03		Central
Structure Type	720		720
Bldg Use	304		Public Utility C
Percent Finish	100		
Heating	07		Electr Basebrd
Frame Type	02		Wood Frame
Plumbing	00		None
Local Modifier	2.75		
Partitions	00		None
Wall Height	10		
Size	280		

CONSTRUCTION DETAIL (CONTINUED)

Element	Cd.	Ch.	Description

MIXED USE

Code	Description	Percentage
304	Public Utility C	100

COST/MARKET VALUATION

Adj. Base Rate:	146.29
AYB	1975
Dep Code	A
Remodel Rating	
Year Remodeled	
Dep %	27
Functional Obslnc	
External Obslnc	
Cost Trend Factor	
Condition	
% Complete	
Overall % Cond	73
Apprais Val	29,900
Dep % Ovr	0
Dep Ovr Comment	
Misc Imp Ovr	0
Misc Imp Ovr Comment	
Cost to Cure Ovr	0
Cost to Cure Ovr Comment	

OB-OUTBUILDING & YARD ITEMS(L) / XF-BUILDING EXTRA FEATURES(B)

Code	Description	Sub	Sub Descript	L/B	Units	Unit Price	Yr	Gde	Dp Rt	Cnd	%Cnd	Apr Value
FN3O	CHAIN LINK 6			L	120	16.90	1975				50	1,010
SH1O	SHED FRAME			L	288	15.00	1990				70	3,020
FN3O	CHAIN LINK 6			L	80	16.90	1990				70	950
FN4O	CHAIN LINK 8			L	320	22.25	2002				70	4,980
PC3O	PAVING CONC			L	1,296	6.81	2002				80	7,060

BUILDING SUB-AREA SUMMARY SECTION

Code	Description	Gross Area	Living Area	Eff. Area
BAS	First Floor	280	280	
	Ttl. Gross Liv/Lease Area:	280	280	

Exhibit C

Construction Drawings

DISH Wireless L.L.C. SITE ID:

BOBDL00005D

DISH Wireless L.L.C. SITE ADDRESS:

349 MOUNTAIN STREET
WINDHAM, CT 06226

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	2018 CT STATE BUILDING CODE/2015 IBC W/ CT AMENDMENTS
MECHANICAL	2018 CT STATE BUILDING CODE/2015 IMC W/ CT AMENDMENTS
ELECTRICAL	2018 CT STATE BUILDING CODE/2017 NEC W/ CT AMENDMENTS

SHEET INDEX

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:
- INSTALL (3) PROPOSED PANEL ANTENNAS (1 PER SECTOR)
- INSTALL (3) PROPOSED SECTOR FRAMES
- INSTALL PROPOSED JUMPERS
- INSTALL (6) PROPOSED RRUs (2 PER SECTOR)
- INSTALL (1) PROPOSED OVER VOLTAGE PROTECTION DEVICE (OVP)
- INSTALL (1) PROPOSED HYBRID CABLE

GROUND SCOPE OF WORK:
- INSTALL (1) PROPOSED ICE BRIDGE
- INSTALL (1) PROPOSED PPC CABINET
- INSTALL (1) PROPOSED EQUIPMENT CABINET
- INSTALL (1) PROPOSED POWER CONDUIT
- INSTALL (1) PROPOSED TELCO CONDUIT
- INSTALL (1) PROPOSED TELCO-FIBER BOX
- INSTALL (1) PROPOSED GPS UNIT
- INSTALL (1) PROPOSED SAFETY SWITCH (IF REQUIRED)
- INSTALL (1) PROPOSED FIBER NID (IF REQUIRED)
- INSTALL (1) PROPOSED METER SOCKET

SITE PHOTO

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.

SITE INFORMATION

PROPERTY OWNER:	SBA PROPERTIES INC
ADDRESS:	8051 CONGRESS AVE BOCA RATON, FL 33487
TOWER TYPE:	SELF-SUPPORT TOWER
TOWER CO SITE ID:	CT06462-A
TOWER APP NUMBER:	186564
COUNTY:	WINDHAM
LATITUDE (NAD 83):	41° 42' 10.8" N 41.70301111°
LONGITUDE (NAD 83):	72° 13' 17.0" W -72.22139100°
ZONING JURISDICTION:	WINDHAM COUNTY
ZONING DISTRICT:	COMMERCIAL
PARCEL NUMBER:	163-3-9-154-60EX
OCCUPANCY GROUP:	U
CONSTRUCTION TYPE:	II-B
POWER COMPANY:	EVERSOURCE
TELEPHONE COMPANY:	T.B.D.

PROJECT DIRECTORY

APPLICANT:	DISH Wireless L.L.C. 5701 SOUTH SANTA FE DRIVE LITTLETON, CO 80120 (303) 706-5008
TOWER OWNER:	SBA COMMUNICATAIONS CORP. 8051 CONGRESS AVENUE BOCA RATON, FL 33487 (800) 487-7483
SITE DESIGNER:	B+T GROUP 1717 S. BOULDER AVE, SUITE 300 TULSA, OK 74119 (918) 587-4630
SITE ACQUISITION:	DAVE EVANS devans@sbasite.com
CONST. MANAGER:	CHAD WILCOX chad.wilcox@dish.com
RF ENGINEER:	BOSSENER CHARLES bossener.charles@dish.com

DIRECTIONS

DIRECTIONS FROM WINDHAM AIRPORT:

HEAD SOUTHEAST ON AIRPORT RD TOWARD STONE GATE DR, FOLLOW BOSTON POST RD, MAIN ST AND PLEASANT ST TO CARD ST, TURN RIGHT ONTO US-6 W, CONTINUE STRAIGHT ONTO US-6 W/BOSTON POST RD, CONTINUE TO FOLLOW BOSTON POST RD, CONTINUE ONTO MAIN ST, TURN LEFT ONTO SOUTH ST, TURN RIGHT ONTO PLEASANT ST, CONTINUE STRAIGHT TO STAY ON PLEASANT ST, CONTINUE ON CARD ST. DRIVE TO ADAMS HEIGHTS RD IN LEBANON, TURN LEFT ONTO CARD ST, TURN LEFT ONTO ADAMS HEIGHTS RD AND ARRIVE AT BOBDL00005D.

VICINITY MAP

NO SCALE

dish wireless.

5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

SBA

8051 CONGRESS AVENUE
BOCA RATON, FL 33487

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

STATE OF CONNECTICUT
CHAD WILCOX
No. 23924
LICENSED
PROFESSIONAL ENGINEER
3/23/22

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/23

DRAWN BY:	CHECKED BY:	APPROVED BY:
AP	RMC	RMC

RFDS REV #: 0

CONSTRUCTION DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
A	3/14/22	ISSUED FOR REVIEW
0	3/23/22	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER

160923.001.01

DISH Wireless L.L.C.
PROJECT INFORMATION

BOBDL00005D
349 MOUNTAIN STREET
WINDHAM, CT 06226

SHEET TITLE

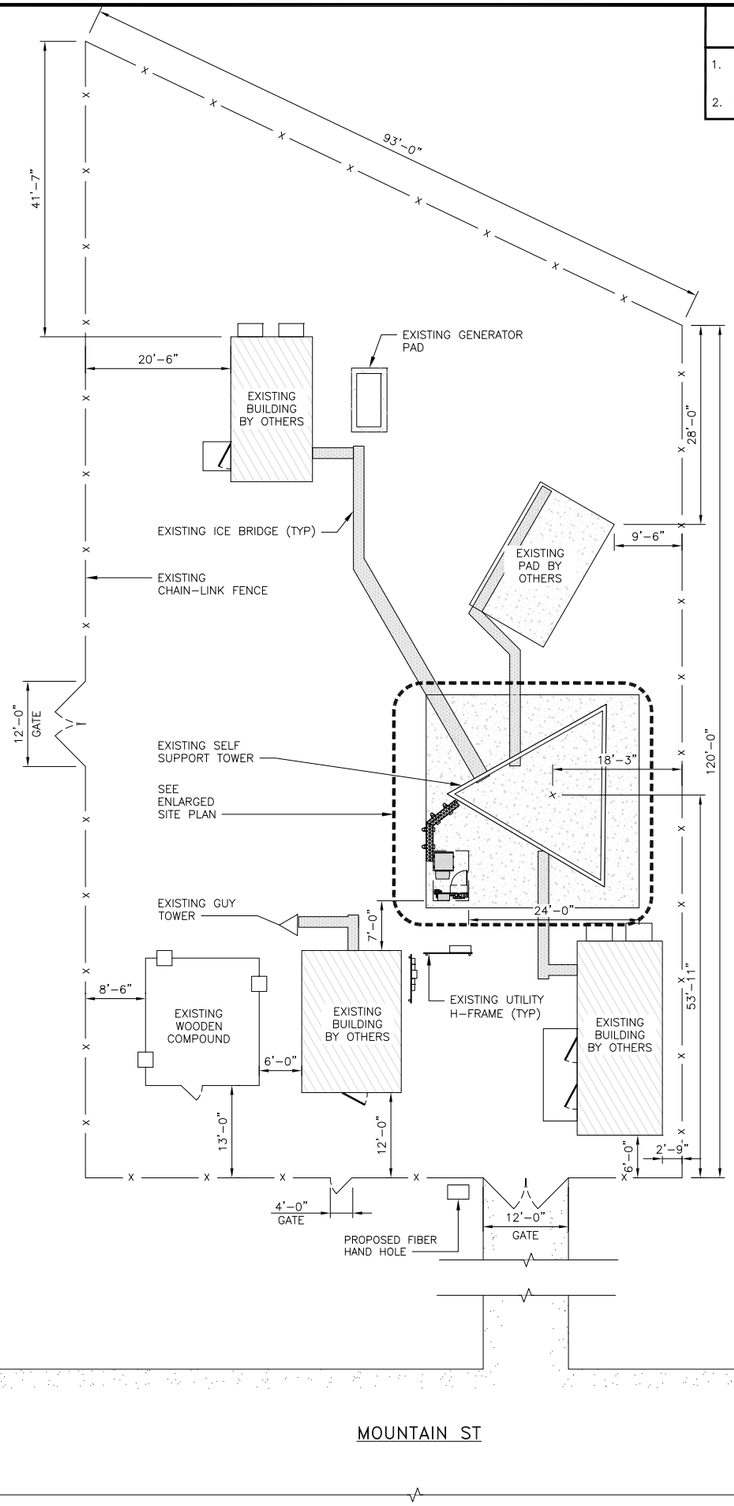
TITLE SHEET

SHEET NUMBER

T-1

NOTES

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



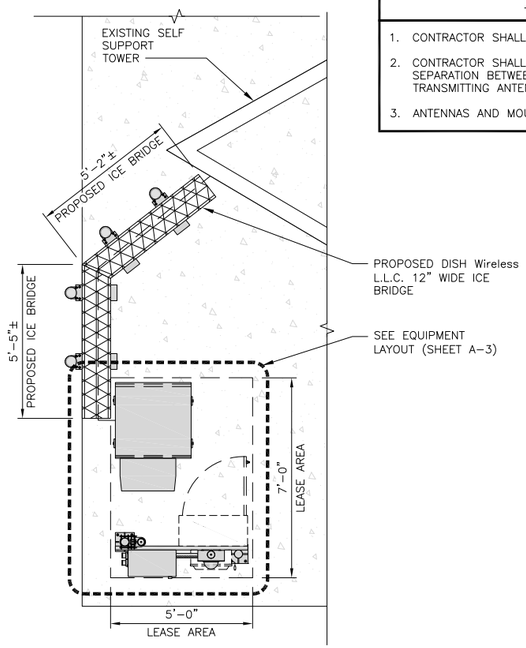
OVERALL SITE PLAN

12' 8' 4' 0 10' 20'
3/32"=1'-0"

1

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.



ENLARGED SITE PLAN

12" 6" 0 1' 2' 3' 4' 5' 6' 7'
3/8"=1'-0"

2

NOT USED

NO SCALE

3

dish wireless.
5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

SBA
8051 CONGRESS AVENUE
BOCA RATON, FL 33487

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

STATE OF CONNECTICUT
CHAD TUTTLE
No. 23924
LICENSED
PROFESSIONAL ENGINEER
3/23/22
B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/23

DRAWN BY:	CHECKED BY:	APPROVED BY:
AP	RMC	RMC

RFDS REV #: 0

CONSTRUCTION DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
A	3/14/22	ISSUED FOR REVIEW
0	3/23/22	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER

160923.001.01

DISH Wireless L.L.C.
PROJECT INFORMATION

BOBDL00005D
349 MOUNTAIN STREET
WINDHAM, CT 06226

SHEET TITLE

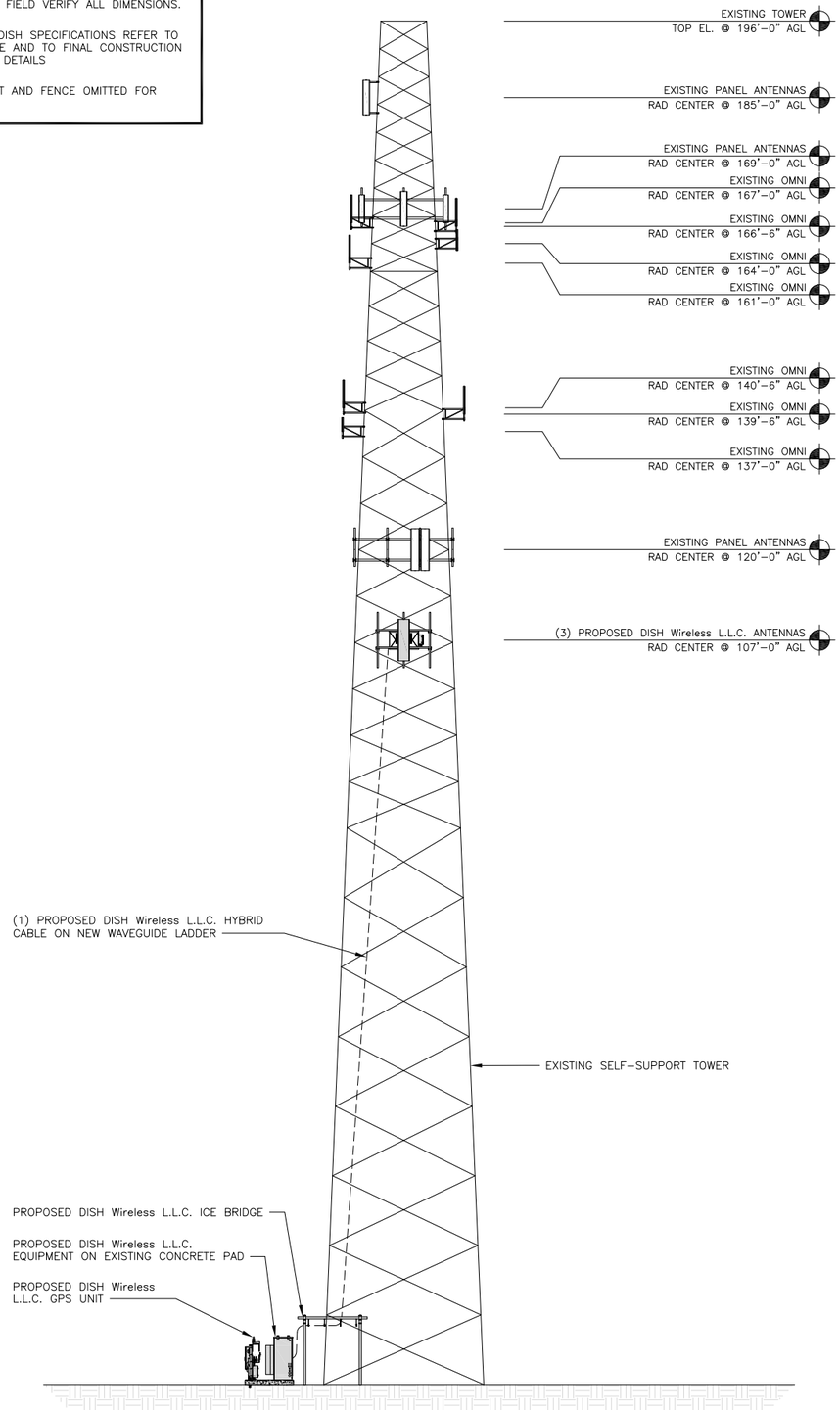
OVERALL AND ENLARGED SITE PLAN

SHEET NUMBER

A-1

NOTES

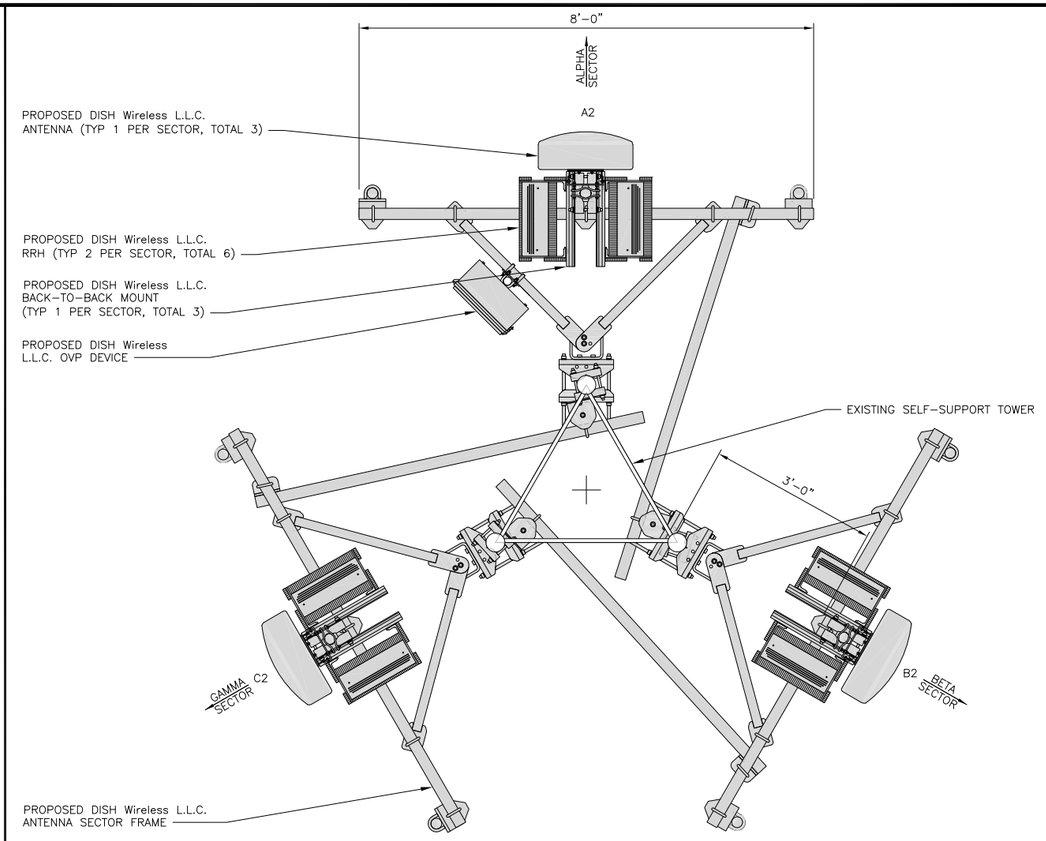
1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. ANTENNA AND MW DISH SPECIFICATIONS REFER TO ANTENNA SCHEDULE AND TO FINAL CONSTRUCTION RFDS FOR ALL RF DETAILS
3. EXISTING EQUIPMENT AND FENCE OMITTED FOR CLARITY.



PROPOSED NORTH ELEVATION

12' 8' 4' 0 10' 20'
3/32"=1'-0"

1



N

WIDTH OF TOWER FACE IS NOT TO BE CONSIDERED TO SCALE

ANTENNA LAYOUT

12" 6" 0 1' 2' 3'
3/4"=1'-0"

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	POS.	MANUFACTURER MODEL
A1	--	--	--	--	--	(1) HIGH-CAPACITY HYBRID CABLE (145' LONG)	FUJITSU – TA08025-B605	5G	A2	RAYCAP – RDIDC-9181-PF-48
A2	PROPOSED	JMA – MX08FRO665-21	5G	0°	107'-0"		FUJITSU – TA08025-B604	5G	A2	
A3	--	--	--	--	--		--	--	--	
B1	--	--	--	--	--	SHARED W/ALPHA	FUJITSU – TA08025-B605	5G	B2	SHARED W/ALPHA
B2	PROPOSED	JMA – MX08FRO665-21	5G	120°	107'-0"		FUJITSU – TA08025-B604	5G	B2	
B3	--	--	--	--	--		--	--	--	
C1	--	--	--	--	--	SHARED W/ALPHA	FUJITSU – TA08025-B605	5G	C2	SHARED W/ALPHA
C2	PROPOSED	JMA – MX08FRO665-21	5G	240°	107'-0"		FUJITSU – TA08025-B604	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

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CHAD TUTTLE
No. 23924
LICENSED PROFESSIONAL ENGINEER
3/23/22

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/23

DRAWN BY:	CHECKED BY:	APPROVED BY:
AP	RMC	RMC

RFDS REV #: 0

CONSTRUCTION DOCUMENTS

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A&E PROJECT NUMBER

160923.001.01

DISH Wireless L.L.C.
PROJECT INFORMATION

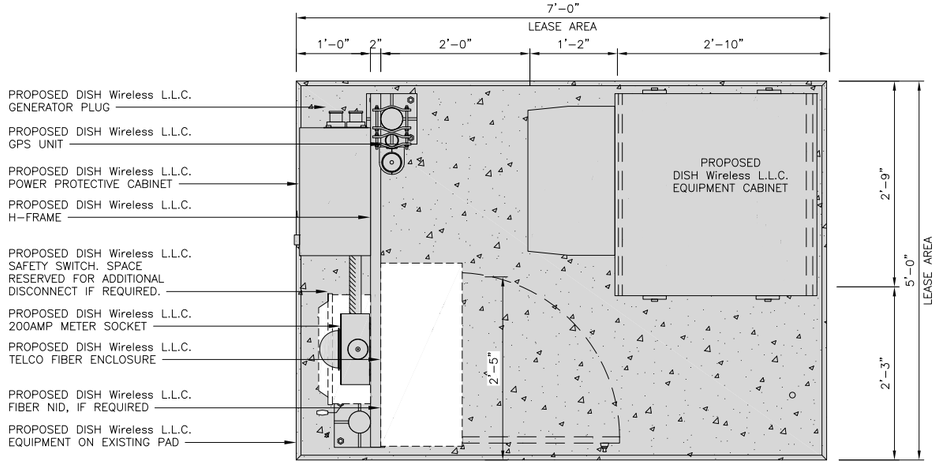
BOBDL00005D
349 MOUNTAIN STREET
WINDHAM, CT 06226

SHEET TITLE

ELEVATION, ANTENNA LAYOUT AND SCHEDULE

SHEET NUMBER

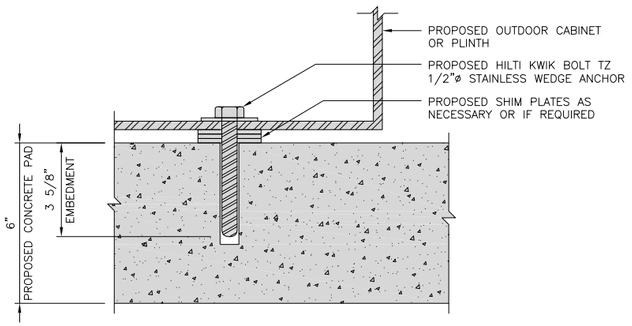
A-2



CONCRETE PAD EQUIPMENT PLAN

12" 9" 6" 3" 0 1' 2'
1"=1'-0"

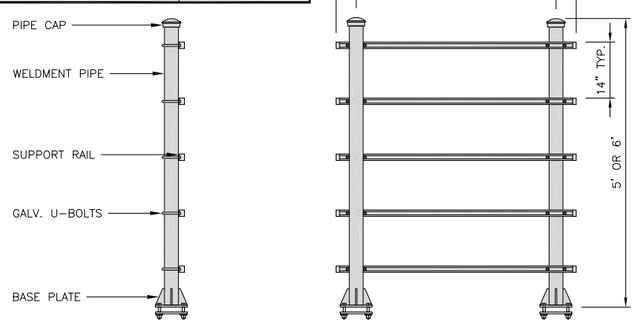
1



TYPICAL OUTDOOR EQUIPMENT TO CONCRETE SLAB ANCHORAGE

2

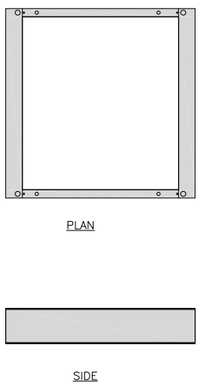
COMMSCOPE MTC4045HFLD H-FRAME	
UNISTRUT/SUPPORT RAILS QTY	5
WEIGHT	59.74 lbs



SIDE FRONT

H-FRAME DETAIL NO SCALE 3

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



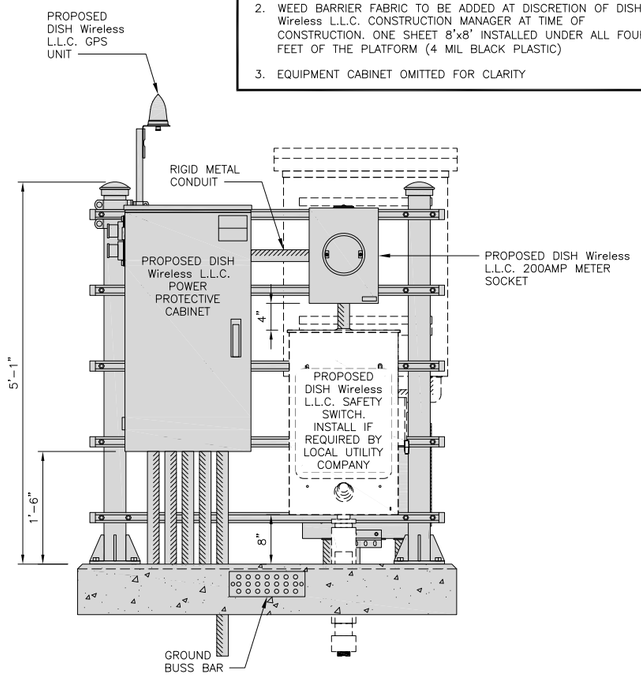
PLAN

FRONT/BACK SIDE

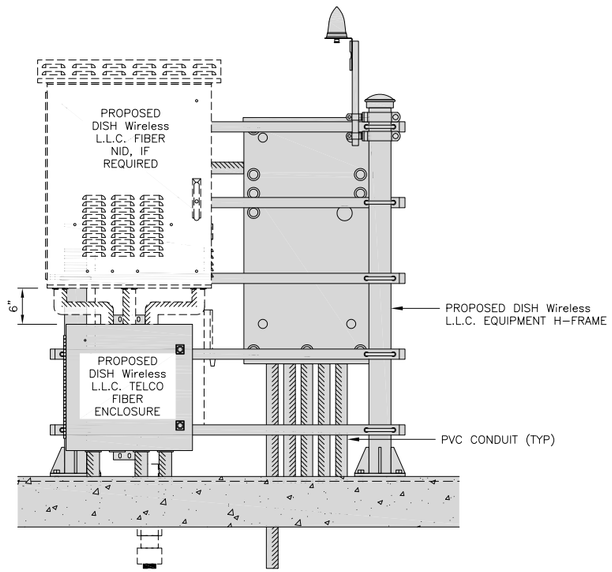
PLINTH DETAIL NO SCALE 4

NOTES

1. CONTRACTOR TO BURY PLATFORM FEET WITH A MINIMUM OF 2" OF FILL PER EXISTING SITE SURFACE
2. 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)
3. EQUIPMENT CABINET OMITTED FOR CLARITY



FRONT ELEVATION



BACK ELEVATION

H-FRAME EQUIPMENT ELEVATION

12" 9" 6" 3" 0 1' 2'
1"=1'-0"

5

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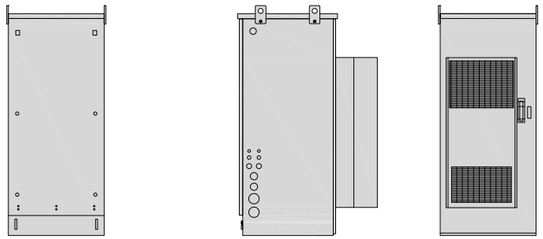
DISH Wireless L.L.C.
PROJECT INFORMATION
BOBDL00005D
349 MOUNTAIN STREET
WINDHAM, CT 06226

SHEET TITLE
EQUIPMENT PAD AND H-FRAME DETAILS

SHEET NUMBER
A-3

CHARLES INDUSTRY HEX CUBE–PM639155N4	
DIMENSIONS (HxWxD)	74"x32"x32"
POWER PLANT	–48VDC ABB/600W
TOTAL WEIGHT (EMPTY)	408 lbs

PLAN

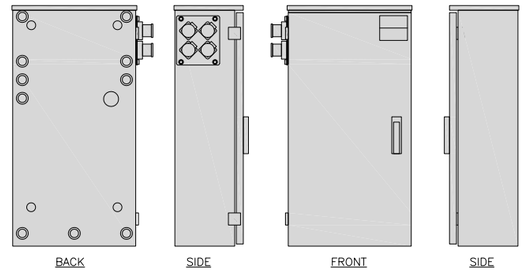


BACK SIDE FRONT

CABINET DETAIL | NO SCALE | 1

RAYCAP PPC RDIAC–2465–P–240–MTS	
ENCLOSURE DIMENSIONS (HxWxD):	39"x22.855"x12.593
WEIGHT:	80 lbs
OPERATING AC VOLTAGE	240/120 1 PHASE 3W+G

TOP

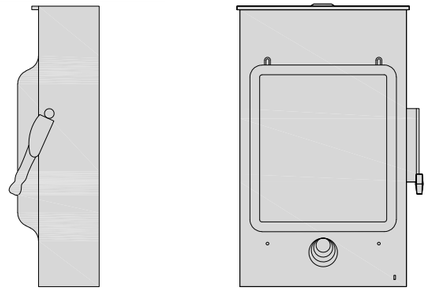


BACK SIDE FRONT SIDE

POWER PROTECTION CABINET (PPC) DETAIL | NO SCALE | 2

SQUARE D SAFETY SWITCHES D224NRB	
ENCLOSURE DIM (HxWxD)	29.25"x19.00"x8.50"
ENCLOSURE TYPE	NEMA 3R RAINPROOF
UL LISTED	FILE E–2875

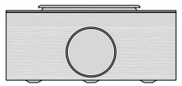
TOP



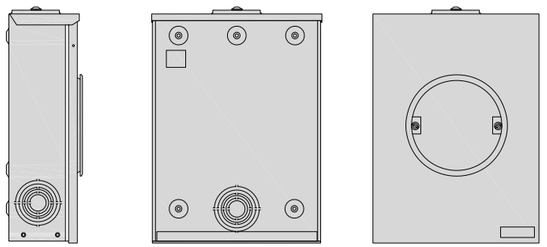
SIDE FRONT

SAFETY SWITCH DETAIL | NO SCALE | 3

EATON METER SOCKET UNRRS213BEUSE	
METER SOCKET TYPE	RING
ENCLOSURE DIM (HxWxD)	16"x12"x6"
MAIN AMPERE RATING	200A
WEIGHT	18 LBS



PLAN

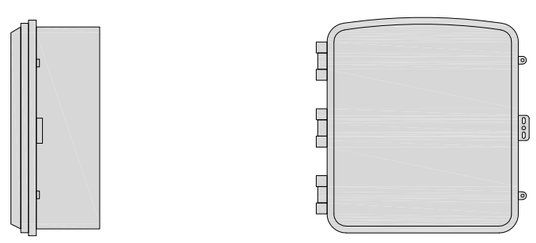


SIDE BACK FRONT

METER SOCKET DETAIL | NO SCALE | 4

CIENA 3931 FIBER NID ENCLOSURE	
DIMENSIONS (HxWxD)	17"x16.8"x7"
WEIGHT	28.6 lbs

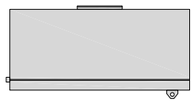
TOP



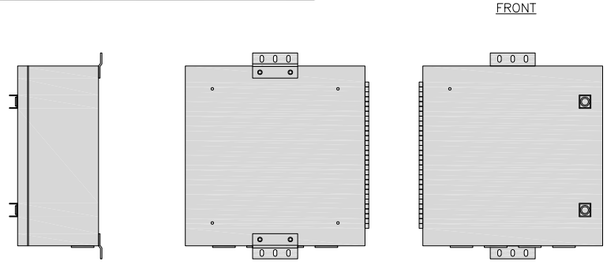
SIDE FRONT

FIBER NID ENCLOSURE DETAIL | NO SCALE | 5

CHARLES CFIT–PF2020DSH1 FIBER TELCO ENCLOSURE	
ENCLOSURE DIMS (HxWxD)	20"x20"x9"
ENCLOSURE WEIGHT	20 lbs
MOUNTING	WALL
COMPLIANCE	TYPE 4



FRONT

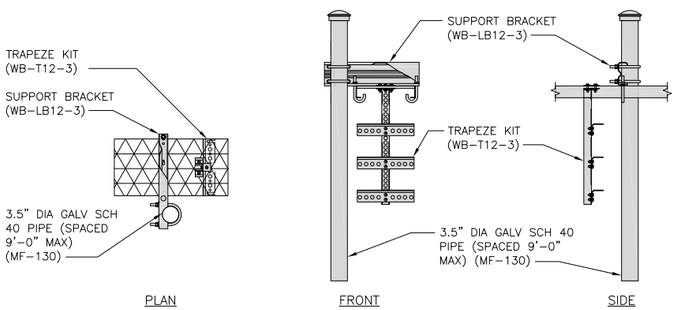


SIDE BACK FRONT

FIBER TELCO ENCLOSURE DETAIL | NO SCALE | 6

COMMSCOPE WB–K110–B WAVEGUIDE BRIDGE KIT	
DIMENSIONS (HxL)	160"x10'
WEIGHT/ VOLUME	325.0 LBS
CABLE RUN (QTY)	12

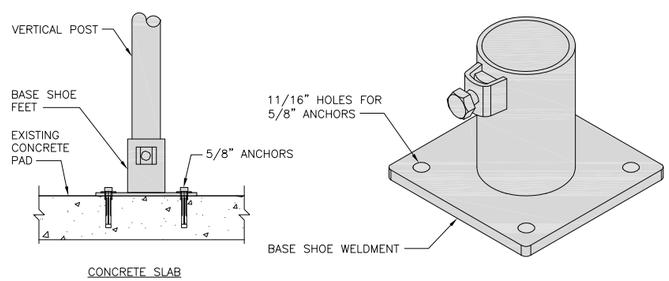
INCLUDED PRODUCTS:	
	WB–T12–3 TRAPEZE KIT, 3 RUNGS
	WB–LB12–3 SUPPORT BRACKET
	MF–130 DIRECT BURIAL PIPE COLUMN, 13'–4"



PLAN FRONT SIDE

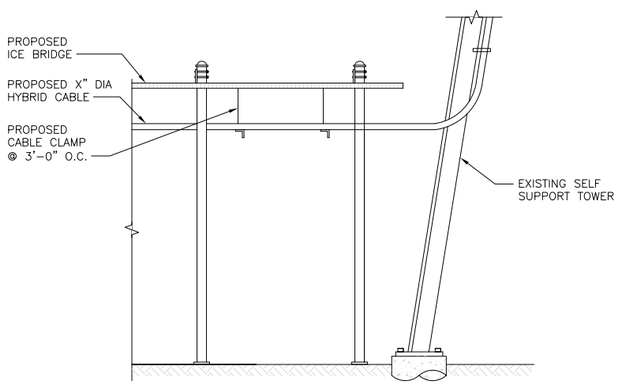
ICE BRIDGE DETAIL | NO SCALE | 7

SITEPRO1 BSF35 BASE SHOE FEET	
DIMENSIONS (HxWxL)	8"x8"x1/2"
WEIGHT	15.0 LBS
POST SIZE:	2–7/8" OR 3–1/2"



CONCRETE SLAB

ICE BRIDGE PIPE MOUNT DETAIL | NO SCALE | 8



HYBRID CABLE RUN | NO SCALE | 9

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A&E PROJECT NUMBER

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DISH Wireless L.L.C.
PROJECT INFORMATION

BOBDL00005D
349 MOUNTAIN STREET
WINDHAM, CT 06226

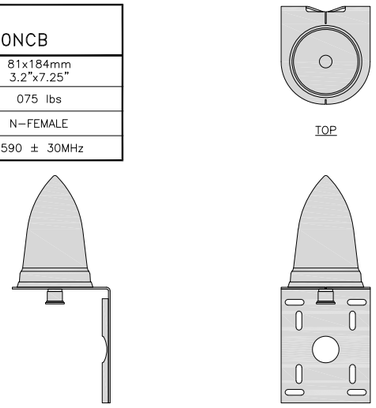
SHEET TITLE

EQUIPMENT DETAILS

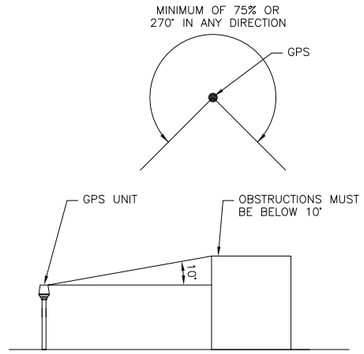
SHEET NUMBER

A-4

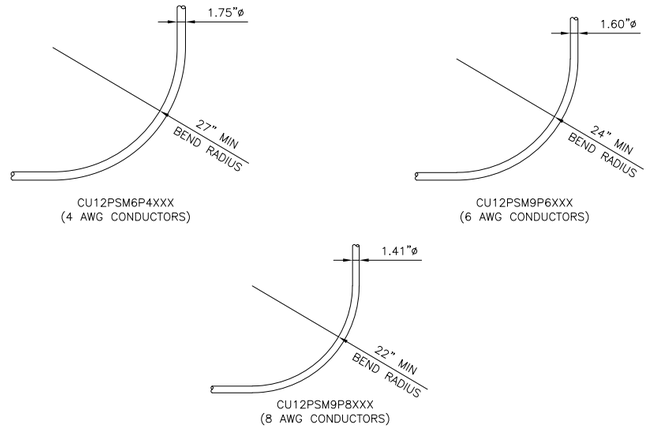
PCTEL GPSGL-TMG-SPI-40NCB	
DIMENSIONS (DIAxH) MM/INCH	81x184mm 3.2"x7.25"
WEIGHT W/ACCESSORIES	075 lbs
CONNECTOR	N-FEMALE
FREQUENCY RANGE	1590 ± 30MHz



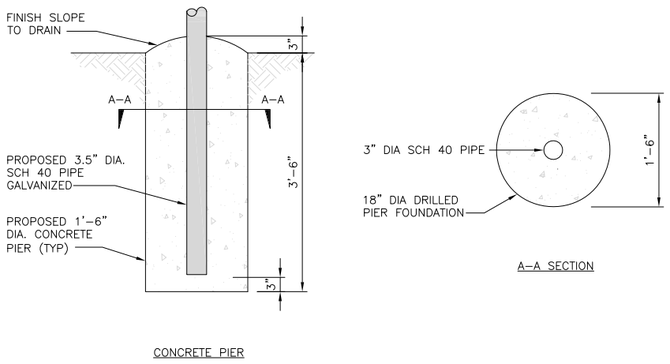
GPS DETAIL | NO SCALE | 1



GPS MINIMUM SKY VIEW REQUIREMENTS | NO SCALE | 2



CABLES UNLIMITED HYBRID CABLE
MINIMUM BEND RADIUSES | NO SCALE | 3



TYPICAL ICE BRIDGE CONCRETE PIER DETAIL | 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

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DISH Wireless L.L.C.
PROJECT INFORMATION

BOBDL00005D
349 MOUNTAIN STREET
WINDHAM, CT 06226

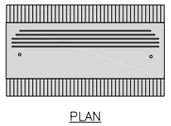
SHEET TITLE

EQUIPMENT DETAILS

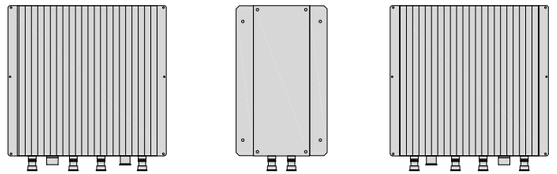
SHEET NUMBER

A-5

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



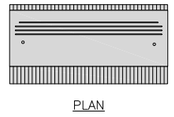
PLAN



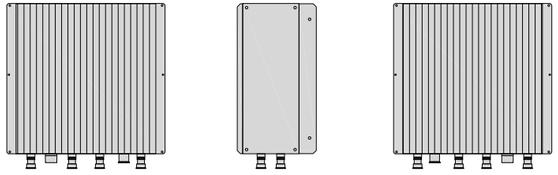
BACK SIDE FRONT

RRH DETAIL | NO SCALE | 1

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



PLAN

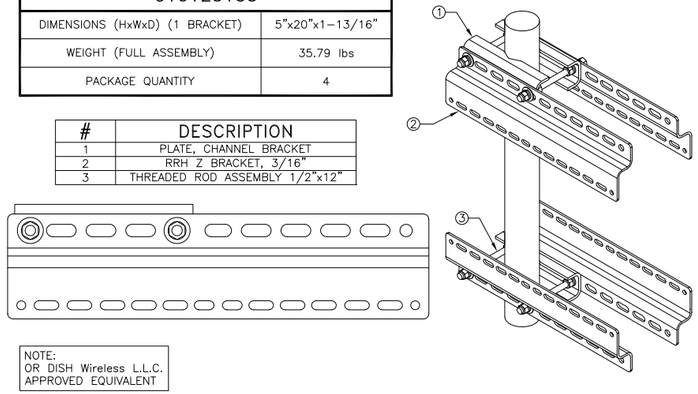


BACK SIDE FRONT

RRH DETAIL | NO SCALE | 2

SABRE DOUBLE Z-BRACKET C10123155	
DIMENSIONS (HxWxD) (1 BRACKET)	5"x20"x1-13/16"
WEIGHT (FULL ASSEMBLY)	35.79 lbs
PACKAGE QUANTITY	4

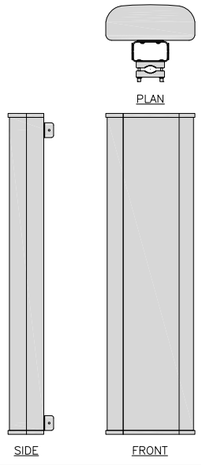
#	DESCRIPTION
1	PLATE, CHANNEL BRACKET
2	RRH Z BRACKET, 3/16"
3	THREADED ROD ASSEMBLY 1/2"x12"



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

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



PLAN SIDE FRONT

ANTENNA DETAIL | NO SCALE | 4

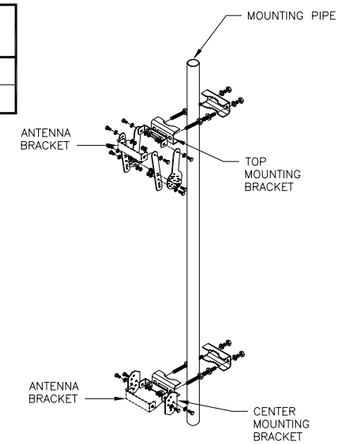
NOT USED | NO SCALE | 5

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

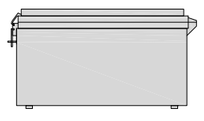
ANTENNA BRACKET NOT PART OF KIT

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

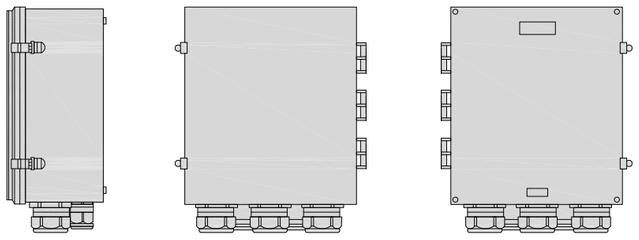


ANTENNA BRACKET DETAIL | NO SCALE | 6

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



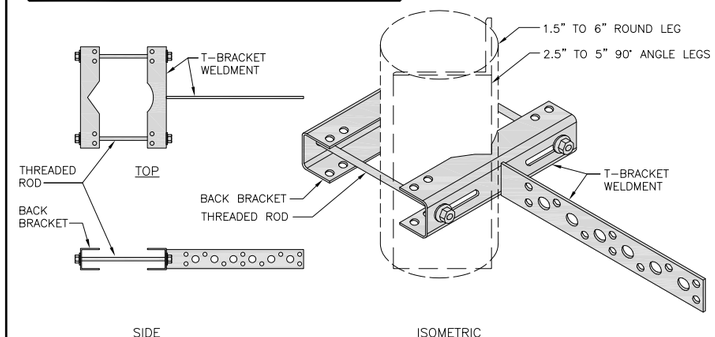
PLAN



SIDE BACK FRONT

SURGE SUPPRESSION DETAIL (OVP) | NO SCALE | 7

SITEPRO1 T600 UNIVERSAL T-BRACKET	
DIMENSIONS (HxWxL)	2.25"x10.0"x15.25"
WEIGHT/ VOLUME	5.60 LBS

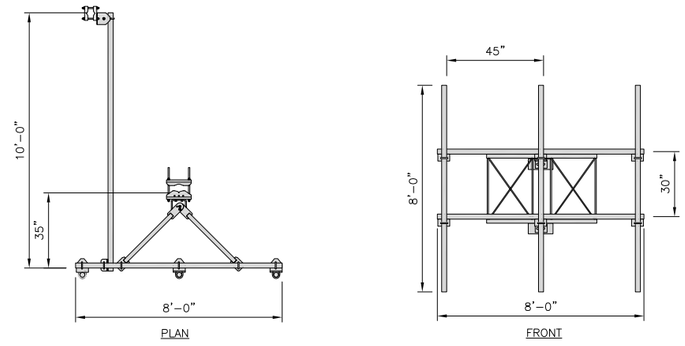


SIDE ISOMETRIC

VERTICAL CABLE SUPPORT DETAIL | NO SCALE | 8

COMMSCOPE V-FRAME MTC3975083	
FACE SIZE	8'-0"
WEIGHT	352.136 lbs

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



PLAN FRONT

ANTENNA FRAME DETAIL | NO SCALE | 9

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STATE OF CONNECTICUT
CHAD TUTTLE
No. 23924
LICENSED
PROFESSIONAL ENGINEER
3/23/22

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/23

DRAWN BY:	CHECKED BY:	APPROVED BY:
AP	RMC	RMC

RFDS REV #: 0

CONSTRUCTION DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
A	3/14/22	ISSUED FOR REVIEW
0	3/23/22	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER

160923.001.01

DISH Wireless L.L.C.
PROJECT INFORMATION

BOBDL00005D
349 MOUNTAIN STREET
WINDHAM, CT 06226

SHEET TITLE

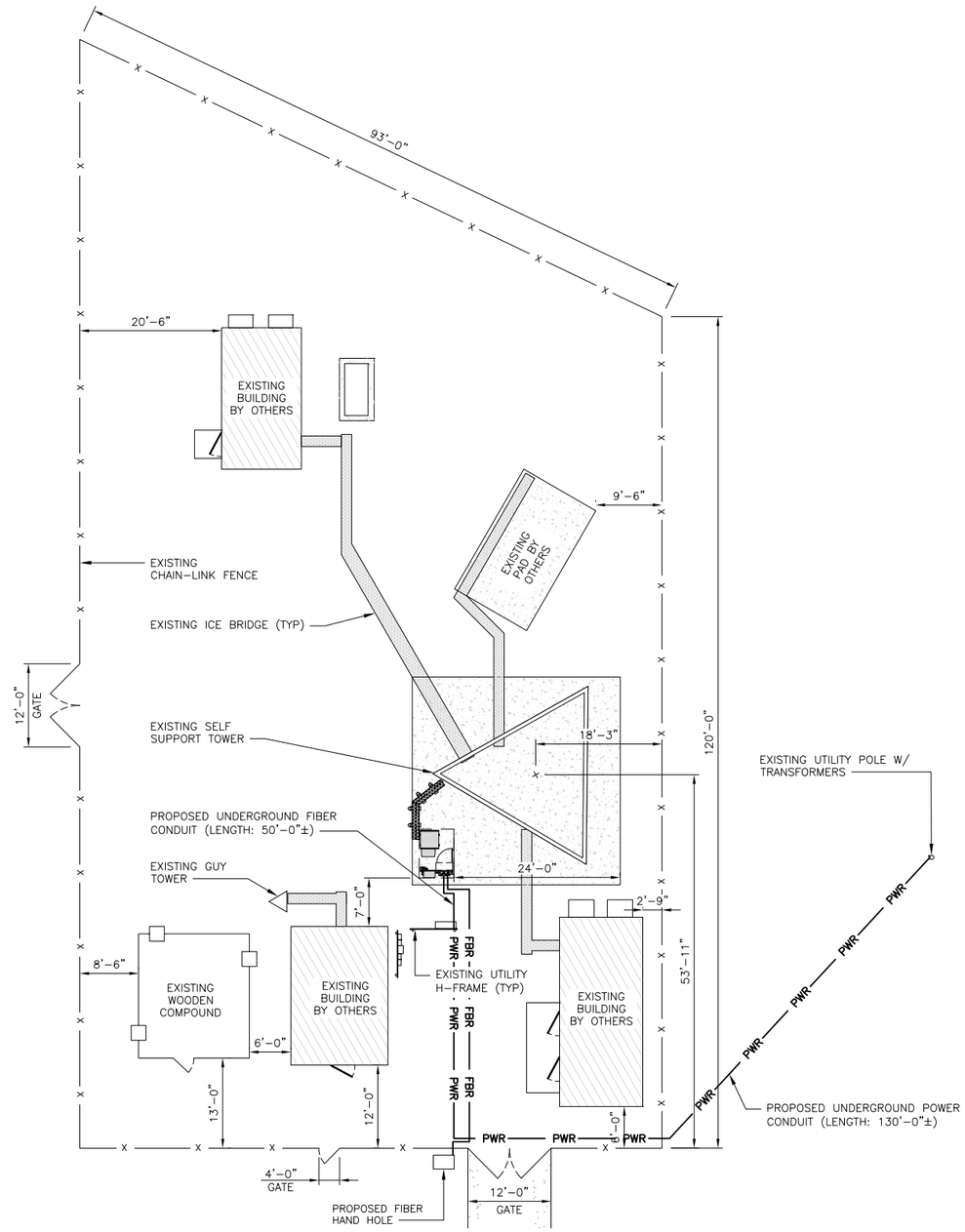
EQUIPMENT DETAILS

SHEET NUMBER

A-6

NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL PROPOSED UNDERGROUND UTILITY CONDUIT ROUTE.
2. ANTENNAS AND MOUNTS OMITTED FOR CLARITY.
3. THE GROUND LEASE PROVIDES BROAD/BLANKET UTILITY RIGHTS. "PWR" AND "FBR" PATH DEPICTED ON A-1 AND E-1 ARE BASED ON BEST AVAILABLE INFORMATION INCLUDING BUT NOT LIMITED TO FIELD VERIFICATION, PRIOR PROJECT DOCUMENTATION AND OTHER REAL PROPERTY RIGHTS DOCUMENTS. WHEN INSTALLING THE UTILITIES PLEASE LOCATE AND FOLLOW EXISTING PATH. IF EXISTING PATH IS NOT AN OPTION, PLEASE NOTIFY TOWER OWNER AS FURTHER COORDINATION MAY BE NEEDED.



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

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DISH Wireless L.L.C.
PROJECT INFORMATION

BOBDL00005D
349 MOUNTAIN STREET
WINDHAM, CT 06226

SHEET TITLE

ELECTRICAL/FIBER ROUTE PLAN AND NOTES

SHEET NUMBER

E-1

N

UTILITY ROUTE PLAN

12' 8' 4' 0 10' 20'
3/32"=1'-0"

1

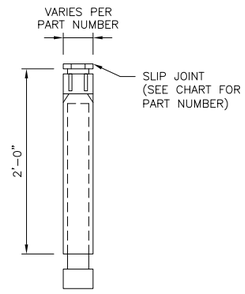
ELECTRICAL NOTES

NO SCALE

2

CARLON EXPANSION FITTINGS

COUPLING END PART#	MALE TERMINAL ADAPTER END PART#	SIZE	STD CTN QTY.	TRAVEL LENGTH
E945D	E945DX	1/2"	20	4"
E945E	E945EX	3/4"	15	4"
E945F	E945FX	1"	10	4"
E945G	E945GX	1 1/4"	5	4"
E945H	E945HX	1 1/2"	5	4"
E945J	E945JX	2"	15	8"
E945K	E945KX	2 1/2"	10	8"
E945L	E945LX	3"	10	8"
E945M	E945MX	3 1/2"	5	8"
E945N	E945NX	4"	5	8"
E945P	E945PX	5"	1	8"
E945R	E945RX	6"	1	8"

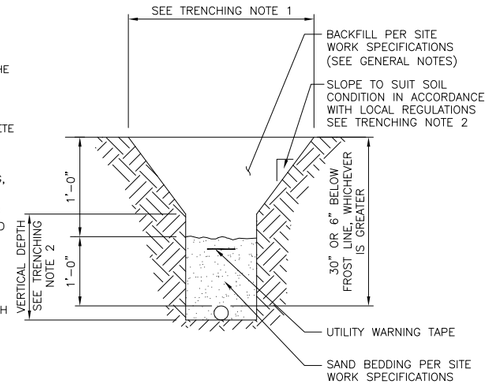


NOTE:
CONTRACTOR TO INSTALL EXPANSION FITTING SLIP JOINT AT METER CENTER CONDUIT TERMINATION, AS PER LOCAL UTILITY POLICY, ORDINANCE AND/OR SPECIFIED REQUIREMENT.

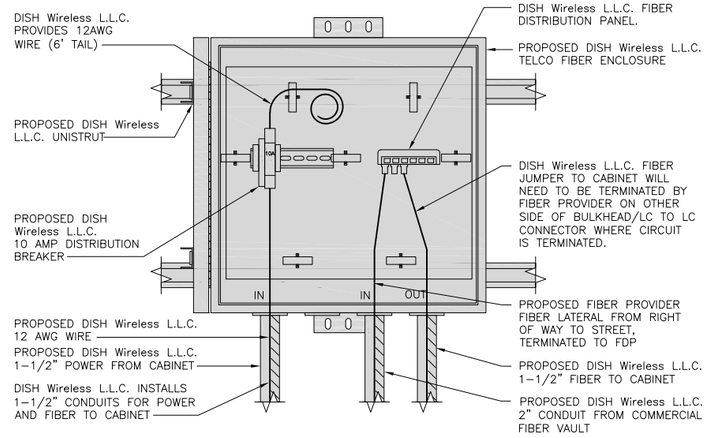
EXPANSION JOINT DETAIL | NO SCALE | 1

TRENCHING NOTES

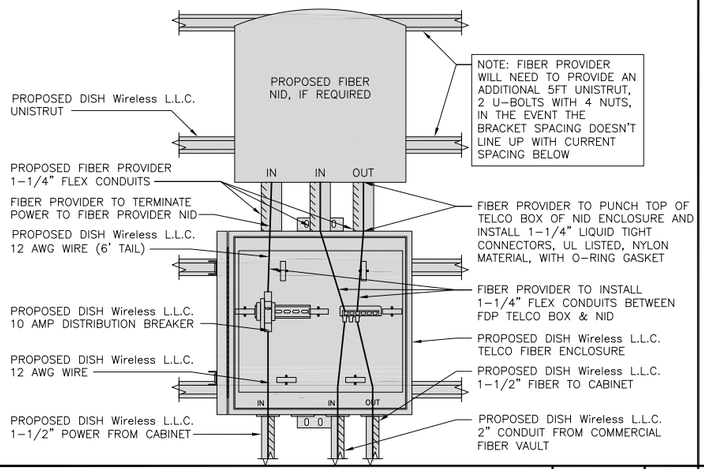
1. CONTRACTOR SHALL RESTORE THE TRENCH TO ITS ORIGINAL CONDITIONS BY EITHER SEEDING OR SODDING GRASS AREAS, OR REPLACING ASPHALT OR CONCRETE AREAS TO ITS ORIGINAL CROSS SECTION.
2. TRENCHING SAFETY; INCLUDING, BUT NOT LIMITED TO SOIL CLASSIFICATION, SLOPING, AND SHORING, SHALL BE GOVERNED BY THE CURRENT OSHA TRENCHING AND EXCAVATION SAFETY STANDARDS.
3. ALL CONDUITS SHALL BE INSTALLED IN COMPLIANCE WITH THE CURRENT NATIONAL ELECTRIC CODE (NEC) OR AS REQUIRED BY THE LOCAL JURISDICTION, WHICHEVER IS THE MOST STRINGENT.



TYPICAL UNDERGROUND TRENCH DETAIL | NO SCALE | 2



DARK TELCO BOX – INTERIOR WIRING LAYOUT | NO SCALE | 3



LIT TELCO BOX – INTERIOR WIRING LAYOUT (OPTIONAL) | 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

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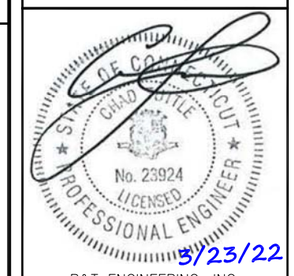

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160923.001.01

DISH Wireless L.L.C.
PROJECT INFORMATION

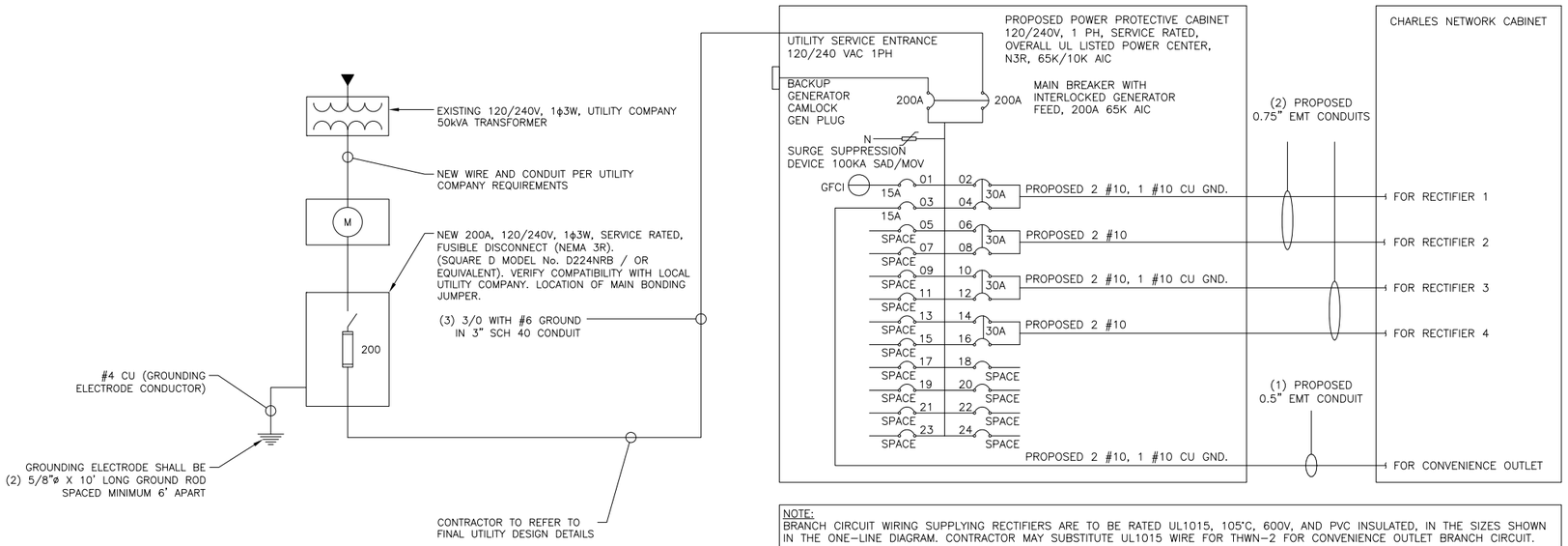
BOBDL00005D
349 MOUNTAIN STREET
WINDHAM, CT 06226

SHEET TITLE

ELECTRICAL DETAILS

SHEET NUMBER

E-2



NOTE:
BRANCH CIRCUIT WIRING SUPPLYING RECTIFIERS ARE TO BE RATED UL1015, 105°C, 600V, AND PVC INSULATED, IN THE SIZES SHOWN IN THE ONE-LINE DIAGRAM. CONTRACTOR MAY SUBSTITUTE UL1015 WIRE FOR THWN-2 FOR CONVENIENCE OUTLET BRANCH CIRCUIT.

BREAKERS REQUIRED:
(4) 30A, 2P BREAKER – SQUARE D P/N:QO230
(1) 15A, 1P BREAKER – SQUARE D P/N:QO115

NOTES

THE ENGINEER OF RECORD HAS PERFORMED ALL REQUIRED SHORT CIRCUIT CALCULATIONS AND THE AIC RATINGS FOR EACH DEVICE IS ADEQUATE TO PROTECT THE EQUIPMENT AND THE ELECTRICAL SYSTEM.

THE ENGINEER OF RECORD HAS PERFORMED ALL REQUIRED VOLTAGE DROP CALCULATIONS AND ALL BRANCH CIRCUIT AND FEEDERS COMPLY WITH THE NEC (LISTED ON T-1) ARTICLE 210.19(A)(1) FPN NO. 4.

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) L1	VOLT AMPS (WATTS) L2	TRIP	CKT #	PHASE	CKT #	TRIP	VOLT AMPS (WATTS) L1	VOLT AMPS (WATTS) L2	LOAD SERVED
PPC GFCI OUTLET	180		15A	1	A	2	30A	2880		ABB/GE INFINITY RECTIFIER 1
CHARLES GFCI OUTLET		180	15A	3	B	4			2880	
–SPACE–				5	A	6	30A	2880		ABB/GE INFINITY RECTIFIER 2
–SPACE–				7	B	8			2880	
–SPACE–				9	A	10	30A	2880		ABB/GE INFINITY RECTIFIER 3
–SPACE–				11	B	12			2880	
–SPACE–				13	A	14	30A	2880		ABB/GE INFINITY RECTIFIER 4
–SPACE–				15	B	16			2880	
–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, 1ϕ, 24 SPACE, 120/240V			L1		L2					
MB RATING: 65,000 AIC			11700		11700		VOLTAGE AMPS			
			98		98		AMPS			
			98				MAX AMPS			
			123				MAX 125%			

PANEL SCHEDULE | NO SCALE | 2

NOT USED | NO SCALE | 3

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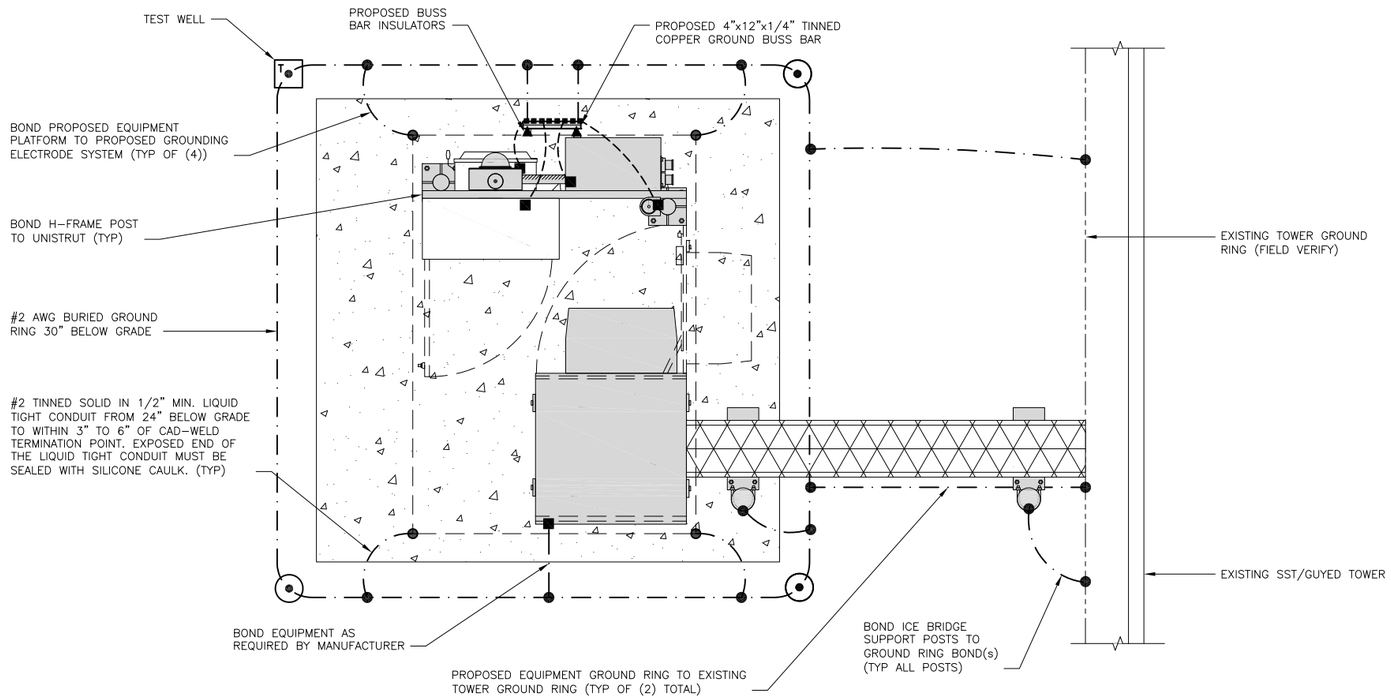
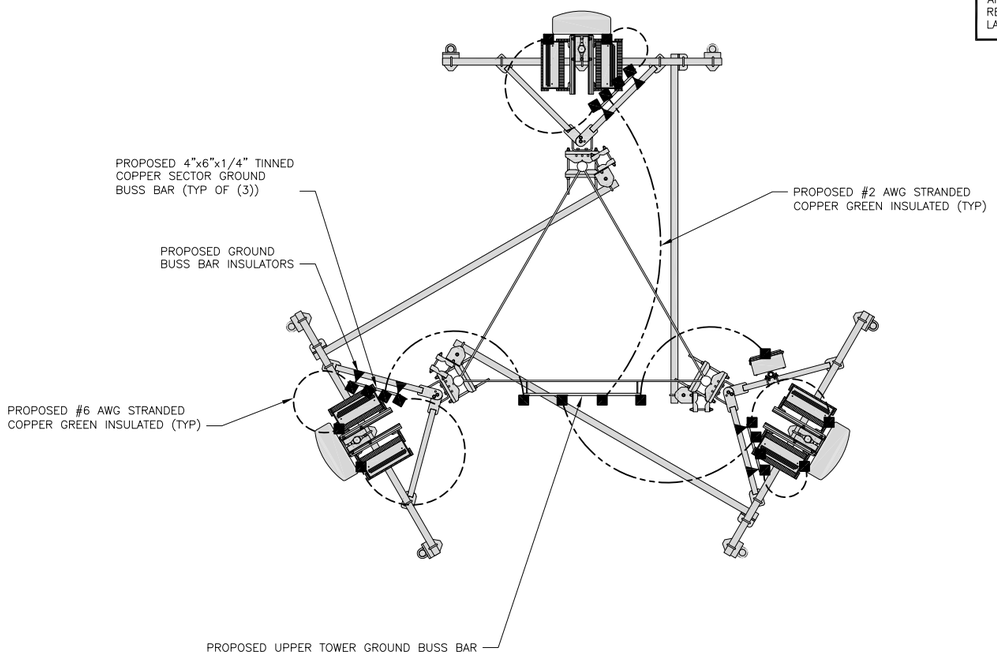
PROJECT INFORMATION
BOBDL00005D
349 MOUNTAIN STREET
WINDHAM, CT 06226

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

NOTES

ANTENNAS AND OVP SHOWN ARE GENERIC AND NOT REFERENCING TO A SPECIFIC MANUFACTURER. THIS LAYOUT IS FOR REFERENCE PURPOSES ONLY

EXOTHERMIC CONNECTION
MECHANICAL CONNECTION
GROUND BUS BAR
GROUND ROD
TEST GROUND ROD WITH INSPECTION SLEEVE
#6 AWG STRANDED & INSULATED
#2 AWG SOLID COPPER TINNED
#2 AWG STRANDED & INSULATED
BUSS BAR INSULATOR

GROUNDING LEGEND

1. GROUNDING IS SHOWN DIAGRAMMATICALLY ONLY.
2. 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.
3. 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 TOWER STEEL.

REFER TO DISH Wireless L.L.C. GROUNDING NOTES.

GROUNDING KEY NOTES | NO SCALE | 3

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349 MOUNTAIN STREET
WINDHAM, CT 06226

SHEET TITLE

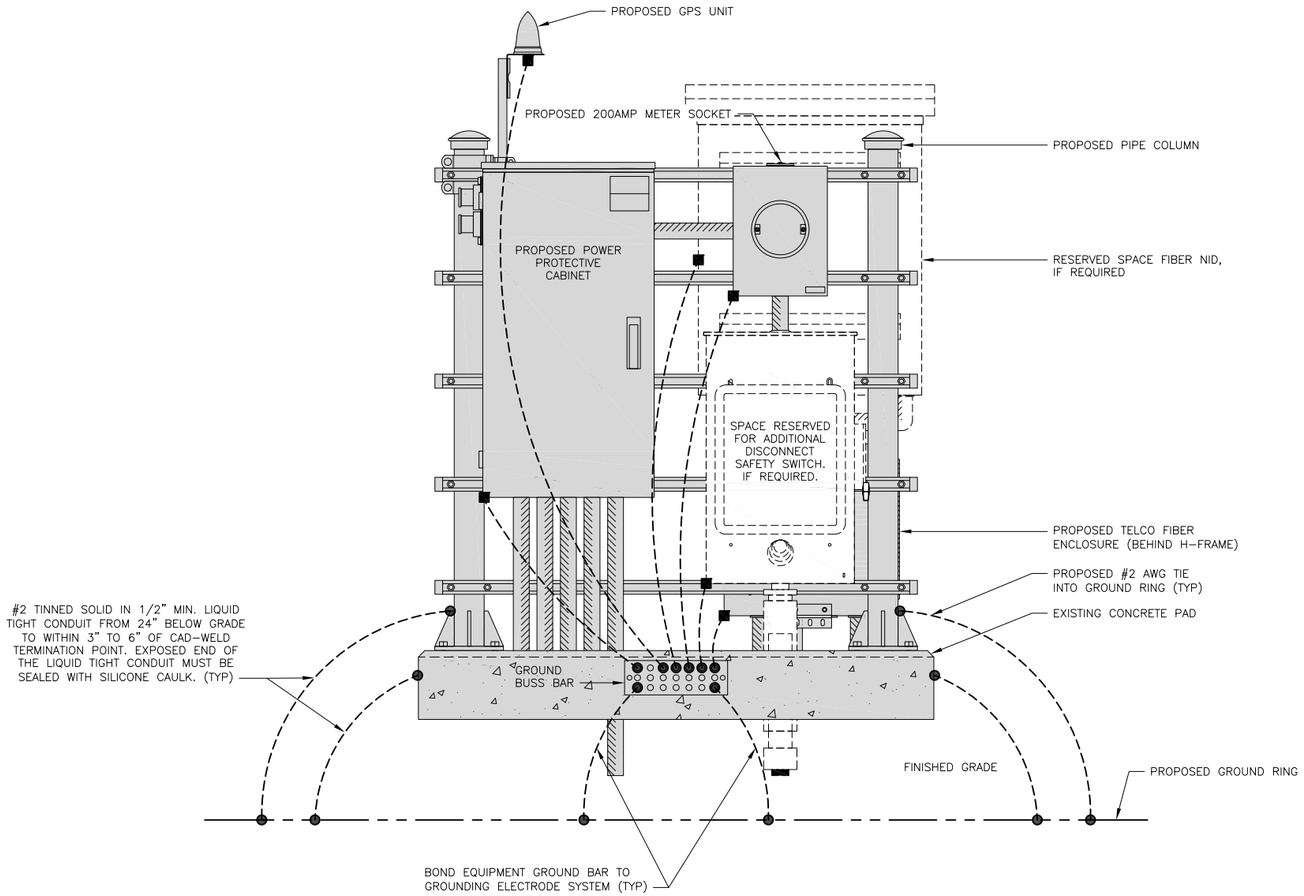
GROUNDING PLANS AND NOTES

SHEET NUMBER

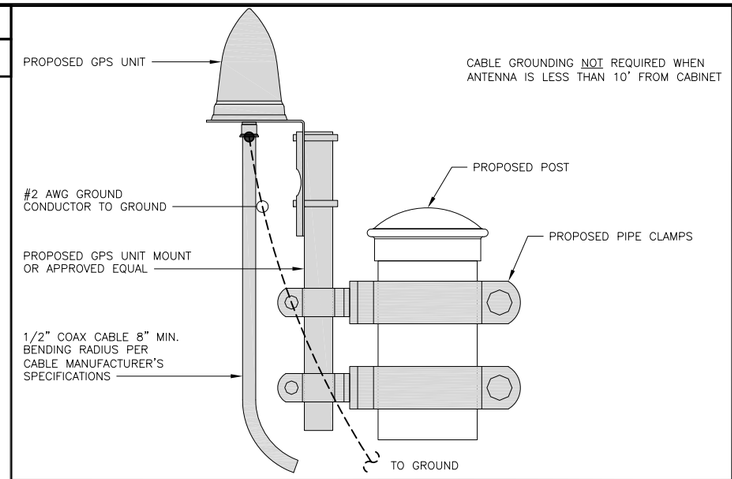
G-1

NOTES

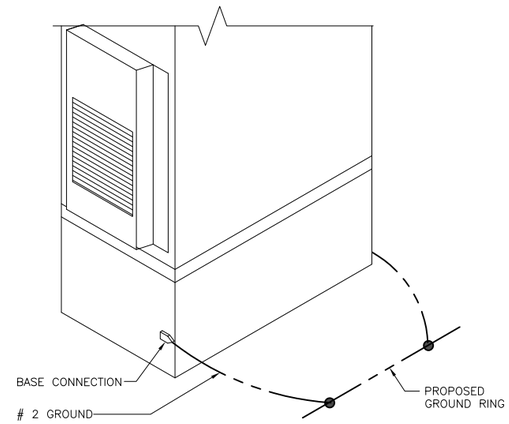
EQUIPMENT CABINET OMITTED FOR CLARITY



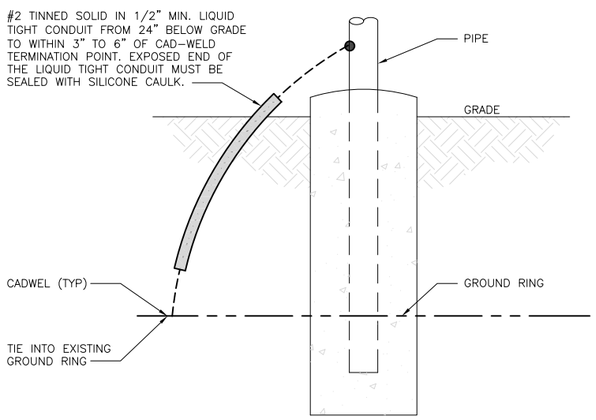
H-FRAME GROUNDING DETAIL | NO SCALE | 1



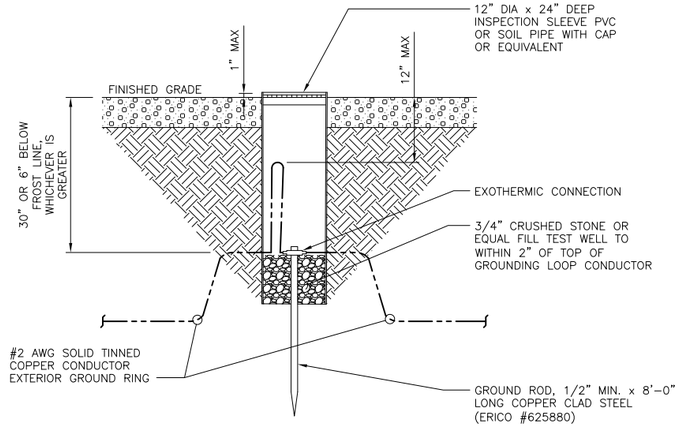
TYPICAL GPS UNIT GROUNDING | NO SCALE | 2



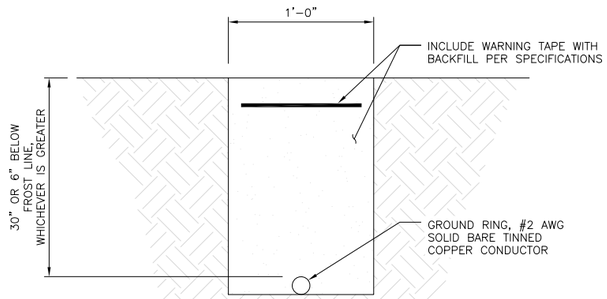
OUTDOOR CABINET GROUNDING | NO SCALE | 3



TRANSITIONING GROUND DETAIL | NO SCALE | 4



TYPICAL TEST GROUND ROD WITH INSPECTION SLEEVE | NO SCALE | 5



TYPICAL GROUND RING TRENCH | NO SCALE | 6

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STATE OF CONNECTICUT
CHAD TUTTLE
No. 23924
LICENSED PROFESSIONAL ENGINEER
3/23/22

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/23

DRAWN BY:	CHECKED BY:	APPROVED BY:
AP	RMC	RMC

RFDS REV #: 0

CONSTRUCTION DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
A	3/14/22	ISSUED FOR REVIEW
0	3/23/22	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER

160923.001.01

DISH Wireless L.L.C.
PROJECT INFORMATION

BOBDL00005D
349 MOUNTAIN STREET
WINDHAM, CT 06226

SHEET TITLE

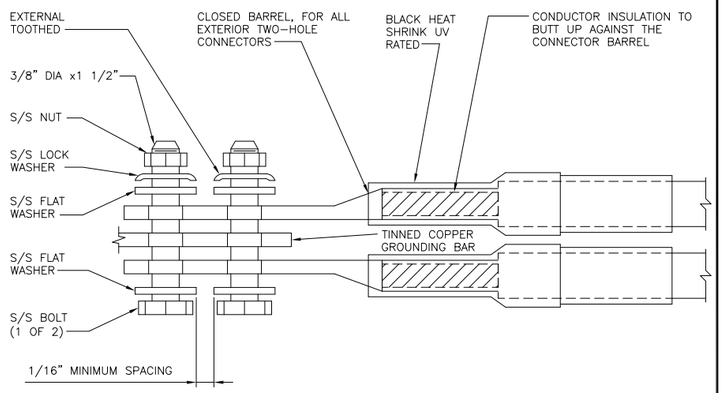
GROUNDING DETAILS

SHEET NUMBER

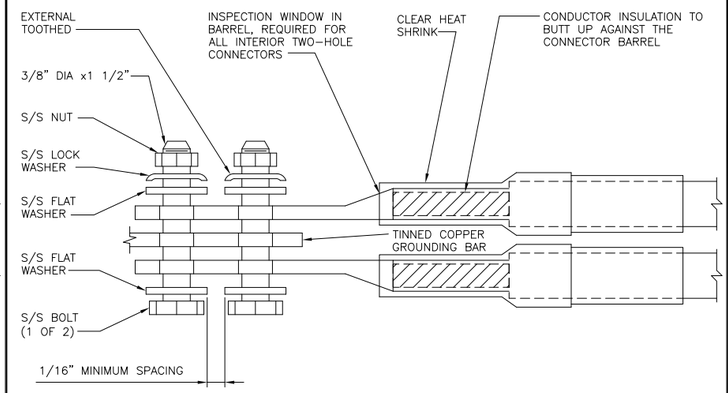
G-2

1. EXOTHERMIC WELD (2) TWO, #2 AWG BARE TINNED SOLID COPPER CONDUCTORS TO GROUND BAR, ROUTE CONDUCTORS TO BURIED GROUND RING AND PROVIDE PARALLEL EXOTHERMIC WELD.
2. ALL EXTERIOR GROUNDING HARDWARE SHALL BE STAINLESS STEEL 3/8" DIAMETER OR LARGER. ALL HARDWARE 18-8 STAINLESS STEEL INCLUDING LOCK WASHERS, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.
3. FOR GROUND BOND TO STEEL ONLY: COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.
4. DO NOT INSTALL CABLE GROUNDING KIT AT A BEND AND ALWAYS DIRECT GROUND CONDUCTOR DOWN TO GROUNDING BUS.
5. NUT & WASHER SHALL BE PLACED ON THE FRONT SIDE OF THE GROUND BAR AND BOLTED ON THE BACK SIDE.
6. ALL GROUNDING PARTS AND EQUIPMENT TO BE SUPPLIED AND INSTALLED BY CONTRACTOR.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ADDITIONAL GROUND BAR AS REQUIRED.
8. ENSURE THE WIRE INSULATION TERMINATION IS WITHIN 1/8" OF THE BARREL (NO SHINERS).

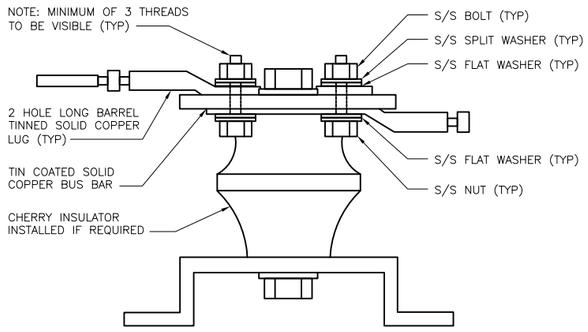
TYPICAL GROUNDING NOTES | NO SCALE | 1



TYPICAL EXTERIOR TWO HOLE LUG | NO SCALE | 2



TYPICAL INTERIOR TWO HOLE LUG | NO SCALE | 3



LUG DETAIL | 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

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349 MOUNTAIN STREET
WINDHAM, CT 06226

SHEET TITLE

GROUNDING DETAILS

SHEET NUMBER

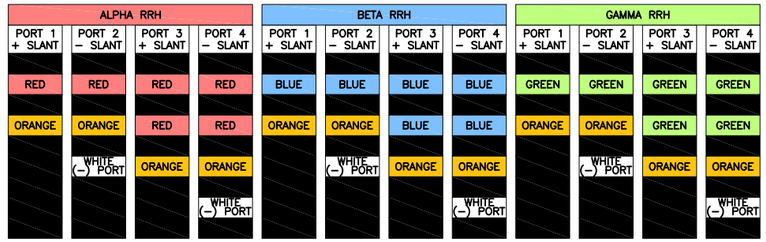
G-3

HYBRID/DISCREET CABLES

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

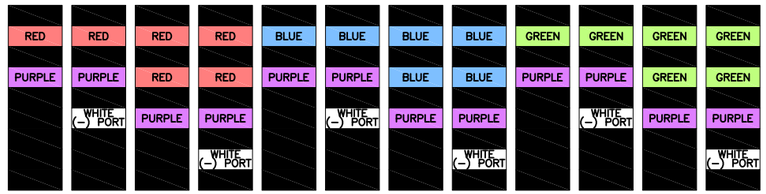
LOW–BAND RRH
(600 MHz N71 BASEBAND) +
(850 MHz N26 BAND) +
(700 MHz N29 BAND) – OPTIONAL PER MARKET

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



MID–BAND RRH
(AWS BANDS N66+N70)

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



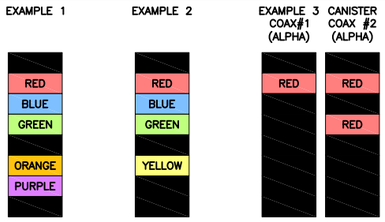
HYBRID/DISCREET CABLES

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.

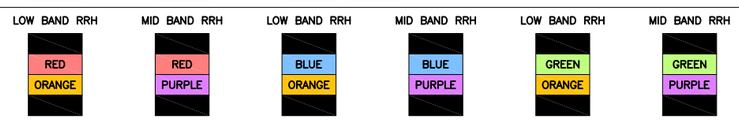
EXAMPLE 3 – MAIN COAX WITH GROUND MOUNTED RRHs.



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

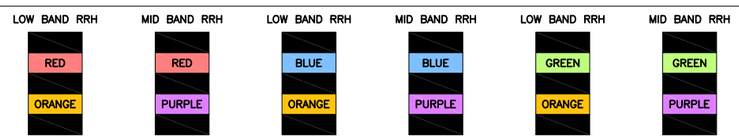
FIBER JUMPERS TO RRHs

LOW–BAND HHR FIBER CABLES HAVE SECTOR STRIPE ONLY.



POWER CABLES TO RRHs

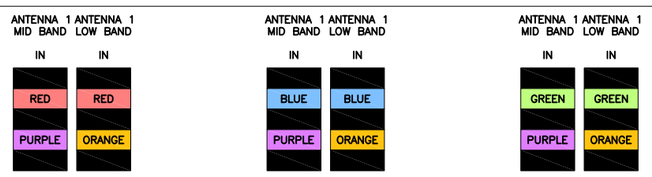
LOW–BAND RRH POWER CABLES HAVE SECTOR STRIPE ONLY



RET MOTORS AT ANTENNAS

RET CONTROL IS HANDLED BY THE MID–BAND RRH WHEN ONE SET OF RET PORTS EXIST ON ANTENNA.

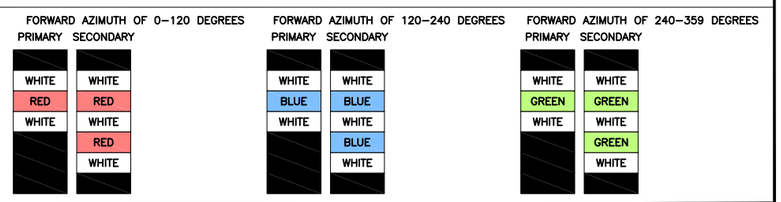
SEPARATE RET CABLES ARE USED WHEN ANTENNA PORTS PROVIDE INPUTS FOR BOTH LOW AND MID BANDS.



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.



RF CABLE COLOR CODES | NO SCALE | 1

LOW BANDS (N71+N26)
OPTIONAL – (N29)
ORANGE

AWS
(N66+N70+H–BLOCK)
PURPLE

CBRS TECH
(3 GHz)
YELLOW

NEGATIVE SLANT PORT
ON ANT/RRH
WHITE

ALPHA SECTOR
RED

BETA SECTOR
BLUE

GAMMA SECTOR
GREEN

COLOR IDENTIFIER | NO SCALE | 2

NOT USED | NO SCALE | 3

NOT USED | NO SCALE | 4

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DISH Wireless L.L.C.
PROJECT INFORMATION

BOBDL00005D
349 MOUNTAIN STREET
WINDHAM, CT 06226

SHEET TITLE
RF
CABLE COLOR CODE

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–DDBTXD

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

W.P.

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	UNITERRUPTIBLE POWER SYSTEM (DC POWER PLANT)
VIF	VERIFIED IN FIELD
W	WIDE
W/	WITH
WD	WOOD
WP	WEATHERPROOF
WT	WEIGHT

ABBREVIATIONS

dish wireless.

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DISH Wireless L.L.C.
PROJECT INFORMATION

BOBDL00005D
349 MOUNTAIN STREET
WINDHAM, CT 06226

SHEET TITLE

LEGEND AND ABBREVIATIONS

SHEET NUMBER

GN-1

SIGN TYPES		
TYPE	COLOR	COLOR CODE PURPOSE
INFORMATION	GREEN	**"INFORMATIONAL SIGN"** TO NOTIFY OTHERS OF SITE OWNERSHIP & CONTACT NUMBER AND POTENTIAL RF EXPOSURE.
NOTICE	BLUE	**"NOTICE BEYOND THIS POINT"** RF FIELDS BEYOND THIS POINT MAY EXCEED THE FCC GENERAL PUBLIC EXPOSURE LIMIT. OBEY ALL POSTED SIGNS AND SITE GUIDELINES FOR WORKING IN RF ENVIRONMENTS. IN ACCORDANCE WITH FEDERAL COMMUNICATIONS COMMISSION RULES ON RADIO FREQUENCY EMISSIONS 47 CFR-1.1307(b)
CAUTION	YELLOW	**"CAUTION BEYOND THIS POINT"** RF FIELDS BEYOND THIS POINT MAY EXCEED THE FCC GENERAL PUBLIC EXPOSURE LIMIT. OBEY ALL POSTED SIGNS AND SITE GUIDELINES FOR WORKING IN RF ENVIRONMENTS. IN ACCORDANCE WITH FEDERAL COMMUNICATIONS COMMISSION RULES ON RADIO FREQUENCY EMISSIONS 47 CFR-1.1307(b)
WARNING	ORANGE/RED	**"WARNING BEYOND THIS POINT"** RF FIELDS AT THIS SITE EXCEED FCC RULES FOR HUMAN EXPOSURE. FAILURE TO OBEY ALL POSTED SIGNS AND SITE GUIDELINES FOR WORKING IN RF ENVIRONMENTS COULD RESULT IN SERIOUS INJURY. IN ACCORDANCE WITH FEDERAL COMMUNICATIONS COMMISSION RULES ON RADIO FREQUENCY EMISSIONS 47 CFR-1.1307(b)

SIGN PLACEMENT:

- RF SIGNAGE PLACEMENT SHALL FOLLOW THE RECOMMENDATIONS OF AN EXISTING EME REPORT, CREATED BY A THIRD PARTY PREVIOUSLY AUTHORIZED BY DISH Wireless L.L.C.
- INFORMATION SIGN (GREEN) SHALL BE LOCATED ON EXISTING DISH Wireless L.L.C EQUIPMENT.
  A) IF THE INFORMATION SIGN IS A STICKER, IT SHALL BE PLACED ON EXISTING DISH Wireless L.L.C EQUIPMENT CABINET.
  B) IF THE INFORMATION SIGH IS A METAL SIGN IT SHALL BE PLACED ON EXISTING DISH Wireless L.L.C H-FRAME WITH A SECURE ATTACH METHOD.
- IF EME REPORT IS NOT AVAILABLE AT THE TIME OF CREATION OF CONSTRUCTION DOCUMENTS; PLEASE CONTACT DISH Wireless L.L.C. CONSTRUCTION MANAGER FOR FURTHER INSTRUCTION ON HOW TO PROCEED.

NOTES:

1. FOR DISH Wireless L.L.C. LOGO, SEE DISH Wireless L.L.C. DESIGN SPECIFICATIONS (PROVIDED BY DISH Wireless L.L.C.)
2. SITE ID SHALL BE APPLIED TO SIGNS USING "LASER ENGRAVING" OR ANY OTHER WEATHER RESISTANT METHOD (DISH Wireless L.L.C. APPROVAL REQUIRED)
3. TEXT FOR SIGNAGE SHALL INDICATE CORRECT SITE NAME AND NUMBER AS PER DISH Wireless L.L.C. CONSTRUCTION MANAGER RECOMMENDATIONS.
4. CABINET/SHELTER MOUNTING APPLICATION REQUIRES ANOTHER PLATE APPLIED TO THE FACE OF THE CABINET WITH WATER PROOF POLYURETHANE ADHESIVE
5. ALL SIGNS WILL BE SECURED WITH EITHER STAINLESS STEEL ZIP TIES OR STAINLESS STEEL TECH SCREWS
6. ALL SIGNS TO BE 8.5"x11" AND MADE WITH 0.04" OF ALUMINUM MATERIAL

INFORMATION

This is an access point to an area with transmitting antennas.

Obey all signs and barriers beyond this point.
Call the DISH Wireless L.L.C. NOC at 1-866-624-6874

Site ID: _____

THIS SIGN IS FOR REFERENCE PURPOSES ONLY

NOTICE

Transmitting Antenna(s)

Radio frequency fields beyond this point MAY *EXCEED* the FCC Occupational exposure limit.

Obey all posted signs and site guidelines for working in radio frequency environments.

Call the DISH Wireless L.L.C. NOC at 1-866-624-6874 prior to working beyond this point.

Site ID: _____

dish

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RF SIGNAGE

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SUBMITTALS

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A	3/14/22	ISSUED FOR REVIEW
0	3/23/22	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER
160923.001.01

DISH Wireless L.L.C.
PROJECT INFORMATION

BOBDL00005D
349 MOUNTAIN STREET
WINDHAM, CT 06226

SHEET TITLE
RF SIGNAGE

SHEET NUMBER
GN-2

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.

dish wireless.

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STATE OF CONNECTICUT
CHAD TUTTLE
No. 23924
LICENSED
PROFESSIONAL ENGINEER
3/23/22

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/23

DRAWN BY:	CHECKED BY:	APPROVED BY:
AP	RMC	RMC

RFDS REV #: 0

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BOBDL00005D
349 MOUNTAIN STREET
WINDHAM, CT 06226

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN-3

CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.

2. UNLESS NOTED OTHERWISE, SOIL BEARING PRESSURE USED FOR DESIGN OF SLABS AND FOUNDATIONS IS ASSUMED TO BE 1000 psf.

3. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 3000 psi AT 28 DAYS, UNLESS NOTED OTHERWISE. NO MORE THAN 90 MINUTES SHALL ELAPSE FROM BATCH TIME TO TIME OF PLACEMENT UNLESS APPROVED BY THE ENGINEER OF RECORD. TEMPERATURE OF CONCRETE SHALL NOT EXCEED 90°f AT TIME OF PLACEMENT.

4. CONCRETE EXPOSED TO FREEZE-THAW CYCLES SHALL CONTAIN AIR ENTRAINING ADMIXTURES. AMOUNT OF AIR ENTRAINMENT TO BE BASED ON SIZE OF AGGREGATE AND F3 CLASS EXPOSURE (VERY SEVERE). CEMENT USED TO BE TYPE II PORTLAND CEMENT WITH A MAXIMUM WATER-TO-CEMENT RATIO (W/C) OF 0.45.

5. ALL STEEL REINFORCING SHALL CONFORM TO ASTM A615. ALL WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A185. ALL SPLICES SHALL BE CLASS "B" TENSION SPLICES, UNLESS NOTED OTHERWISE. ALL HOOKS SHALL BE STANDARD 90 DEGREE HOOKS, UNLESS NOTED OTHERWISE. YIELD STRENGTH (Fy) OF STANDARD DEFORMED BARS ARE AS FOLLOWS:

#4 BARS AND SMALLER 40 ksi

#5 BARS AND LARGER 60 ksi

6. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:

- CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3"
- CONCRETE EXPOSED TO EARTH OR WEATHER:
- #6 BARS AND LARGER 2"
- #5 BARS AND SMALLER 1-1/2"
- CONCRETE NOT EXPOSED TO EARTH OR WEATHER:
- SLAB AND WALLS 3/4"
- BEAMS AND COLUMNS 1-1/2"

7. A TOOLED EDGE OR A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNLESS NOTED OTHERWISE, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

ELECTRICAL INSTALLATION NOTES:

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES/ORDINANCES.

2. CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.

3. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC.

4. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.

4.1. ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OF APPROVAL, AND SHALL CONFORM TO REQUIREMENT OF THE NATIONAL ELECTRICAL CODE.

4.2. ALL OVERCURRENT DEVICES SHALL HAVE AN INTERRUPTING CURRENT RATING THAT SHALL BE GREATER THAN THE SHORT CIRCUIT CURRENT TO WHICH THEY ARE SUBJECTED, 22,000 AIC MINIMUM. VERIFY AVAILABLE SHORT CIRCUIT CURRENT DOES NOT EXCEED THE RATING OF ELECTRICAL EQUIPMENT IN ACCORDANCE WITH ARTICLE 110.24 NEC OR THE MOST CURRENT ADOPTED CODE PRE THE GOVERNING JURISDICTION.

5. EACH END OF EVERY POWER PHASE CONDUCTOR, GROUNDING CONDUCTOR, AND TELCO CONDUCTOR OR CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2" PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA.

6. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH LAMICOID TAGS SHOWING THEIR RATED VOLTAGE, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT ID NUMBERS (i.e. PANEL BOARD AND CIRCUIT ID'S).

7. PANEL BOARDS (ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.

8. TIE WRAPS ARE NOT ALLOWED.

9. ALL POWER AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE COPPER CONDUCTOR (#14 OR LARGER) WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.

10. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE COPPER CONDUCTOR (#6 OR LARGER) WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.

11. POWER AND CONTROL WIRING IN FLEXIBLE CORD SHALL BE MULTI-CONDUCTOR, TYPE SOOW CORD (#14 OR LARGER) UNLESS OTHERWISE SPECIFIED.

12. POWER AND CONTROL WIRING FOR USE IN CABLE TRAY SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#14 OR LARGER), WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.

13. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRE NUTS SHALL BE RATED FOR OPERATION NOT LESS THAN 75° C (90° C IF AVAILABLE).

14. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.

15. ELECTRICAL METALLIC TUBING (EMT), INTERMEDIATE METAL CONDUIT (IMC), OR RIGID METAL CONDUIT (RMC) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.

16. ELECTRICAL METALLIC TUBING (EMT) OR METAL-CLAD CABLE (MC) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.

17. SCHEDULE 40 PVC UNDERGROUND ON STRAIGHTS AND SCHEDULE 80 PVC FOR ALL ELBOWS/90s AND ALL APPROVED ABOVE GRADE PVC CONDUIT.

18. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.

19. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SET SCREW FITTINGS ARE NOT ACCEPTABLE.

20. CABINETS, BOXES AND WIRE WAYS SHALL BE LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND THE NEC.

21. WIREWAYS SHALL BE METAL WITH AN ENAMEL FINISH AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS (WIREMOLD SPECMATE WIREWAY).

22. SLOTTED WIRING DUCT SHALL BE PVC AND INCLUDE COVER (PANDUIT TYPE E OR EQUAL).

23. CONDUITS SHALL BE FASTENED SECURELY IN PLACE WITH APPROVED NON-PERFORATED STRAPS AND HANGERS. EXPLOSIVE DEVICES (i.e. POWDER-ACTUATED) FOR ATTACHING HANGERS TO STRUCTURE WILL NOT BE PERMITTED. CLOSELY FOLLOW THE LINES OF THE STRUCTURE, MAINTAIN CLOSE PROXIMITY TO THE STRUCTURE AND KEEP CONDUITS IN TIGHT ENVELOPES. CHANGES IN DIRECTION TO ROUTE AROUND OBSTACLES SHALL BE MADE WITH CONDUIT OUTLET BODIES. CONDUIT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. PARALLEL AND PERPENDICULAR TO STRUCTURE WALL AND CEILING LINES. ALL CONDUIT SHALL BE FISHED TO CLEAR OBSTRUCTIONS. ENDS OF CONDUITS SHALL BE TEMPORARILY CAPPED FLUSH TO FINISH GRADE TO PREVENT CONCRETE, PLASTER OR DIRT FROM ENTERING. CONDUITS SHALL BE RIGIDLY CLAMPED TO BOXES BY GALVANIZED MALLEABLE IRON BUSHING ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE.

24. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL. SHALL MEET OR EXCEED UL 50 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND NEMA 3 (OR BETTER) FOR EXTERIOR LOCATIONS.

25. METAL RECEPTACLE, SWITCH AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.

26. NONMETALLIC RECEPTACLE, SWITCH AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2 (NEWEST REVISION) AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.

27. THE CONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CARRIER AND/OR DISH Wireless L.L.C. AND TOWER OWNER BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.

28. THE CONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD LIFE AND PROPERTY.

29. INSTALL LAMICOID LABEL ON THE METER CENTER TO SHOW "DISH Wireless L.L.C.".

30. ALL EMPTY/SPARE CONDUITS THAT ARE INSTALLED ARE TO HAVE A METERED MULE TAPE PULL CORD INSTALLED.

dish wireless.

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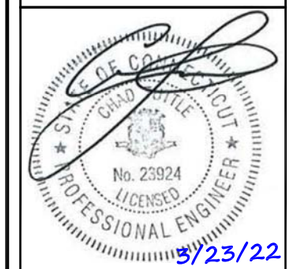

3/23/22

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/23

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SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN-4

160923.001.01_CT04462-A BOBDL00005D.dwg – SheetGN-4 – User: rramon – Mar 23, 2022 – 8:13am

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.

dish wireless.

5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

SBA

8051 CONGRESS AVENUE
BOCA RATON, FL 33487

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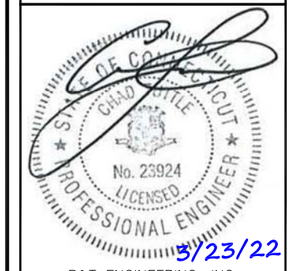

3/23/22

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/23

DRAWN BY:	CHECKED BY:	APPROVED BY:
AP	RMC	RMC

RFDS REV #: 0

CONSTRUCTION DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
A	3/14/22	ISSUED FOR REVIEW
0	3/23/22	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER

160923.001.01

DISH Wireless L.L.C.
PROJECT INFORMATION

BOBDL00005D
349 MOUNTAIN STREET
WINDHAM, CT 06226

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN-5

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 Rohn Self Supporting Tower
Customer Name: SBA Communications Corp
Customer Site Number: CT06462-A-2
Customer Site Name: Mountain Street
Carrier Name: Dish Wireless (App#: 186564, V1)
Carrier Site ID / Name: BOBDL00005D / 0
Site Location: 349 Mountain Street
Windham, Connecticut
Windham County
Latitude: 41.703011
Longitude: -72.221391

Analysis Result:

Max Structural Usage: 55.8% [Pass]
Max Foundation Usage: 46.0% [Pass]
Additional Usage Caused by New Mount/Mount Modification: N/A

Report Prepared By: Sital Shrestha

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

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Report Prepared By: Sital Shrestha

Introduction

The purpose of this report is to summarize the analysis results on the 196 ft Rohn Self Supporting Tower 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

Tower Drawings	Original fabrications drawings prepared by ROHN Industries, Inc. Dated 09-27-2001. Drawing No C011214. Eng. File No 49204TT. Previous structural report prepared by FDH Velocitel. Dated 05-10-2017. Project No 17QEIQ1400.
Foundation Drawing	Original foundation drawings prepared by ROHN Industries, Inc. Dated 08-31-2001. Drawing No A012046-1. Eng. File No 49204TT.
Geotechnical Report	Geotechnical report prepared by BL Companies. Dated 12-01-2000. Project No 00C672-C.
Modification Drawings	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 **TESTowers,** 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.

Wind Speed Used in the Analysis:	121.0 mph (3-Sec. Gust) (Ultimate wind speed)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 1" radial ice concurrent
Service Load Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	TIA-222-H / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	B
Risk Category:	II
Topographic Category:	1
Crest Height:	0 ft
Seismic Parameters:	S_S = 0.192, S_1 = 0.055

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	185.0	3	Antel BXA-80080/4CF - Panel	Direct	(3) 1 5/8"	Verizon
2		6	Rfs Celwave FD9R6004/2C-3L Diplexers			
3	169.0	3	Ericsson AIR21-6449 B41 - Panel	(3) 10' T Frames	(9) 1 5/8" Coax (2) 1 5/8" Hybrid	Verizon/T-Mobile (A-11)1
4		3	RFS APXVAARR24_43-U-NA20 - Panel			
5		3	Ericsson AIR32 KRD901146-1 - Panel			
6		3	72" x 12" x 6" Panel			
7		3	Ericsson KRY11271 TMA's			
8		3	Commscope SDX192 6Q-43 Diplexers			
9		3	Ericsson 4449 B71 + B85 RRU's			
10		3	Ericsson 4415 B25 RRU's			
11	167.0	1	Commscope DB586-Y -Omni	(1) Sidearm (Commscope S-200)	(8) 7/8" Coax (1) 1/2" Coax	Connecticut Light & Power
12	166.5	1	RFS 458-2-Omni	(1) Sidearm (Commscope S-400)		
13	165.0	1	RFS BA1312-0- Omni	(1) Sidearm (Commscope S-400)		
14	164.0	1	Powerwave LGP104- TMA			
15	161.2	1	dbSpectra SP2D00P36D-D-Omni	(1) Sidearm (Site Pro USF-4U)		
16	140.4	1	RFS 220-3AN- Omni	(1) Sidearm (Commscope S-600)		
17	139.5	1	RFS 220-7N- Omni	(1) Sidearm (Wireless Solutions WS-S400)		
18	137.0	1	Kreco CO-36A- Omni	(1) Sidearm (Commscope S-600)		
19	120.0	2	Commscope sbnhh-1d45b - Panel	(3) 10' T-Frames	(8) 1 5/8" (2) 1 5/8" Fiber	Verizon
20		4	Commscope SBNHH-1D65B - Panel			
21		3	Samsung MT6407-77A - Panel			
22		3	Samsung B2/B66A RRH-BR049 (RFV01U-D1A) RRU's			
23		3	Samsung B5/B13 RRH-BR04C (RFV01U-D2A) RRU's			
24		2	Rfs Celwave DB-T1-6Z-8AB-0Z Junction Box			

[1] Verizon has a separate lease under (A-09).

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
25	107.0	3	JMA Wireless MX08FRO665-21- Panel	Commscope MTC3975083	(1) 1.60" Hybrid	Dish Wireless
26		3	Fujitsu TA08025-B605- RRH			
27		3	Fujitsu TA08025-B604- RRH			
28		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:

Tower Component	Legs	Diagonals	Horizontals	Anchor Bolts
Max. Usage:	**55.6%**	**55.8%**	**3.5%**	**37.0%**
Pass/Fail	**Pass**	**Pass**	**Pass**	**Pass**

Foundations

	Compression (Kips)	Uplift (Kips)	Shear (Kips)
Analysis Reactions	247.2	205.8	26.7

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):

Operational characteristics of the tower are found to be within the limits prescribed by TIA-222 for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 0.0942 degrees under the operational wind speed as specified in the Analysis Criteria.

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.

Structure: CT06462-A-2-SBA

Site Name:	Mountain Street			**Code:**	TIA-222-H	2/9/2022
Type:	Self Support	**Base Shape:**	Triangle	**Basic WS:**	121.00	
Height:	196.00 (ft)	**Base Width:**	23.00	**Basic Ice WS:**	50.00	
Base Elev:	0.00 (ft)	**Top Width:**	6.60	**Operational WS:**	60.00	Page: 1

IES Tower Engineering Solutions

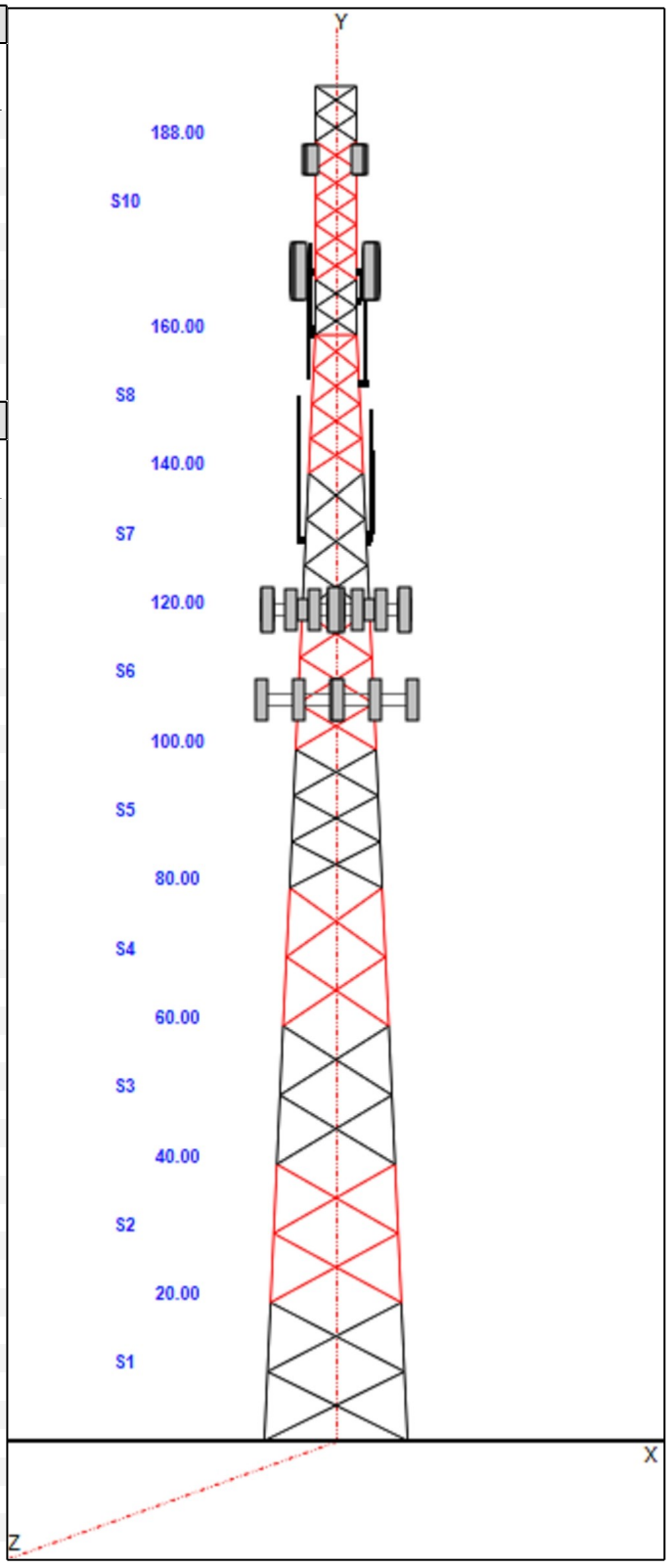
Section Properties

Sect	Leg Members	Diagonal Members	Horizontal Members
1	PX 8" DIA PIPE	SAE 4X4X0.25	
2	PSP ROHN 8 EHS	SAE 4X4X0.25	
3	PSP ROHN 8 EHS	SAE 3.5X3.5X0.25	
4	PX 6" DIA PIPE	SAE 3.5X3.5X0.25	
5	PSP ROHN 6 EHS	SAE 3X3X0.25	
6	PX 5" DIA PIPE	SAE 2.5X2.5X0.25	
7	PX 4" DIA PIPE	SAE 2.5X2.5X0.25	
8	PX 3" DIA PIPE	SAE 2X2X0.1875	SAE 1.75X1.75X0.1875
9-10	PST 3" DIA PIPE	SAE 2X2X0.25	
11	PST 3" DIA PIPE	SAE 1.75X1.75X0.1875	SAE 1.75X1.75X0.1875

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description
185.00	185.00	3	Antel BXA-80080/4CF
185.00	185.00	6	Rfs Celwave FD9R6004/2C-3L Diplexers
169.00	169.00	3	Ericsson AIR21-6449 B41
169.00	169.00	3	RFS APXVAARR24_43-U-NA20
169.00	169.00	3	Ericsson AIR32 KRD901146-1
169.00	169.00	3	72" x 12" x 6" Panel
169.00	169.00	3	Ericsson KRY11271 TMA's
169.00	169.00	3	Commscope SDX192 6Q-43 Diplexers
169.00	169.00	3	Ericsson 4449 B71 + B85 RRU's
169.00	169.00	3	Ericsson 4415 B25 RRU's
169.00	169.00	3	10' T Frames
164.81	167.00	1	Commscope DB586-Y Omni
164.81	164.00	1	Powerwave LGP104 TMA
164.81	164.81	1	Sidearm (Commscope/Andrew S-200)
160.67	165.00	1	RFS BA1312-0 Omni
160.67	160.67	1	Sidearm (Commscope S-400)
159.85	159.85	1	Sidearm (Commscope S-400)
159.85	166.50	1	RFS 458-2 Omni
153.30	161.20	1	SP2D00P36D-D
152.88	152.88	1	Sidearm (Site Pro USF-4U)
131.00	137.00	1	Kreco CO-36A Omni
131.00	131.00	1	6' Sidearm (Commscope S-600)
130.07	140.40	1	RFS 220-3AN Omni
130.07	130.07	1	6' Sidearm (Commscope/Andrew S-600)
130.00	139.50	1	RFS 220-7N Omni
130.00	130.00	1	4' Sidearm (Wireless Solutions WS-S400)
120.00	120.00	2	Commscope sbnhh-1d45b
120.00	120.00	4	Commscope SBNHH-1D65B
120.00	120.00	3	Samsung MT6407-77A
120.00	120.00	3	Samsung B2/B66A RRH-BR049 (RFV01U-D1A)
120.00	120.00	3	Samsung B5/B13 RRH-BR04C (RFV01U-D2A)
120.00	120.00	2	Rfs Celwave DB-T1-6Z-8AB-0Z Junction Box
120.00	120.00	3	10' T-Frames
107.00	107.00	3	MX08FRO665-21
107.00	107.00	3	TA08025-B604
107.00	107.00	3	TA08025-B605
107.00	107.00	1	RDIDC-9181-OF-48
107.00	107.00	1	(3) MTC3975083

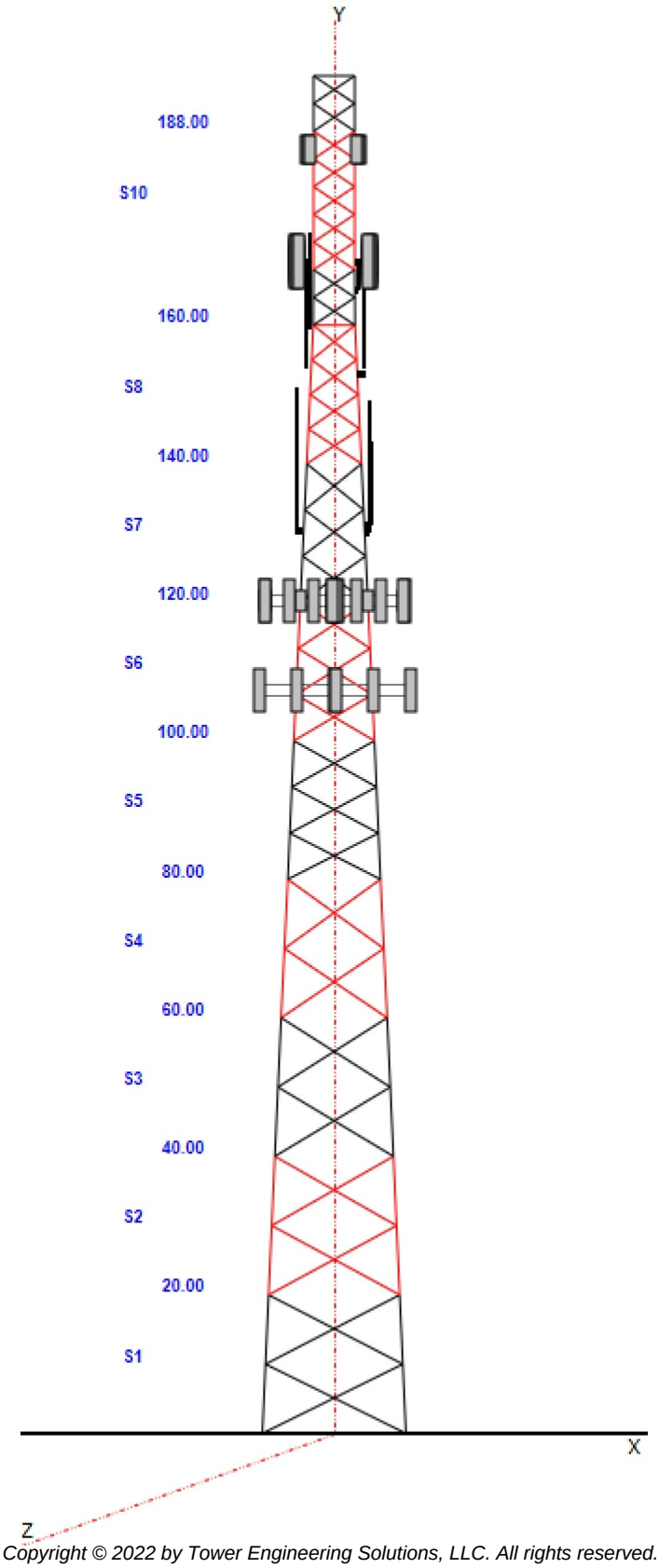
Linear Appurtenances



Elev From (ft)	Elev To (ft)	Qty	Description
1.00	196.00	1	Safety Climb
3.00	196.00	0	Step bolts (ladder)
3.00	196.00	0	Step bolts (ladder)
3.00	196.00	0	Step bolts (ladder)
0.00	185.00	1	W/G Ladder (VZW)
3.00	185.00	3	1 5/8" Coax
0.00	169.00	1	W/G Ladder (TMO)
3.00	169.00	9	1 5/8" Coax
3.00	169.00	2	1 5/8" Hybrid
0.00	160.00	1	W/G Ladder (CLP)
3.00	160.00	1	1/2" Coax
3.00	160.00	8	7/8" Coax
3.00	120.00	8	1 5/8" Coax
3.00	120.00	2	1 5/8" Fiber
1.00	107.00	1	1.6" Hybrid

Base Reactions

Leg			Overturning		
Max Uplift:	-205.84	(kips	Moment:	4598.48	(ft-kips)
Max Down:	247.23	(kips	Total Down:	49.10	(kips)
Max Shear:	26.69	(kips	Total Shear:	43.71	(kips)

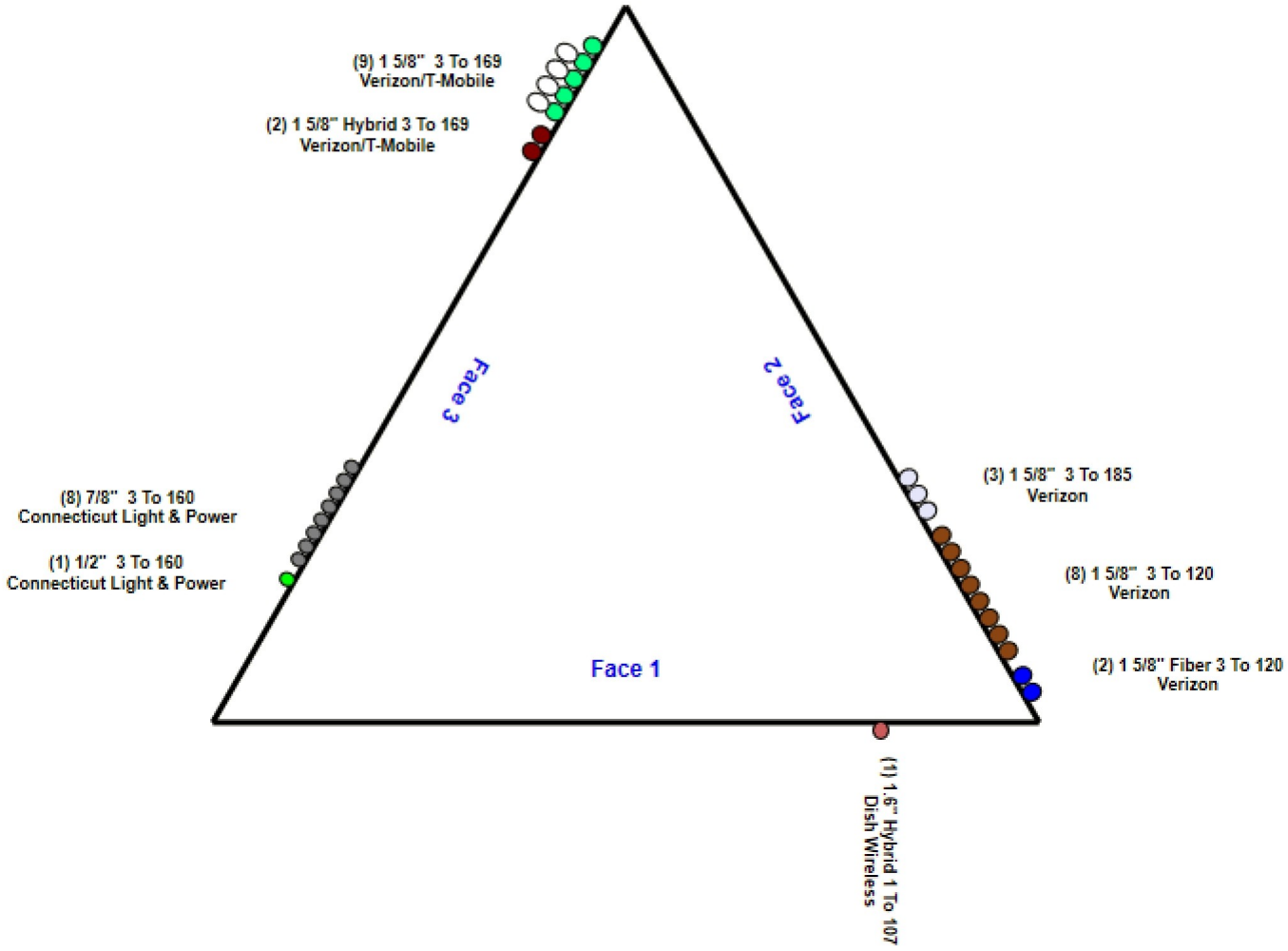


Structure: CT06462-A-2-SBA - Coax Line Placement

Type: Self Support
Site Name: Mountain Street
Height: 196.00 (ft)

2/9/2022

Tower Engineering Solutions



Loading Summary

Structure:	CT06462-A-2-SBA	**Code:**	TIA-222-H	2/9/2022	
Site Name:	Mountain Street	**Exposure:**	B		
Height:	196.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 5	

Tower Engineering Solutions

Discrete Appurtenances Properties

Attach Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice CaAa (sf)	Ice Weight (lb)	Ice CaAa (sf)	Len (in)	Width (in)	Depth (in)	Ka	Orientation Factor	Vert Ecc (ft)
185.00	Antel BXA-80080/4CF	3	14.30	4.800	87.68	6.070	48.200	11.200	5.900	1.00	1.00	0.000
185.00	Rfs Celwave FD9R6004/2C-3L	6	3.10	0.310	8.54	0.569	6.500	5.800	1.500	1.00	0.60	0.000
169.00	Ericsson AIR21-6449 B41	3	103.00	22.840	195.23	25.425	88.000	33.000	20.000	0.80	0.82	0.000
169.00	RFS APXVAARR24_43-U-NA20	3	128.00	20.240	405.88	21.503	95.900	24.000	8.700	0.80	0.72	0.000
169.00	Ericsson AIR32 KRD901146-1	3	132.20	6.050	242.46	6.768	56.000	12.000	8.700	0.80	0.67	0.000
169.00	72" x 12" x 6" Panel	3	45.00	8.130	156.02	10.008	72.000	12.000	6.000	0.80	0.79	0.000
169.00	Ericsson KRY11271 TMA's	3	11.00	1.140	20.59	2.000	13.230	10.340	6.300	0.80	0.60	0.000
169.00	Commscope SDX192 6Q-43	3	6.50	0.240	17.55	0.256	6.930	4.170	2.910	0.80	0.60	0.000
169.00	Ericsson 4449 B71 + B85 RRU's	3	75.00	1.950	125.69	2.335	17.900	13.100	10.600	0.80	0.67	0.000
169.00	Ericsson 4415 B25 RRU's	3	46.00	1.840	79.29	2.221	16.500	13.400	5.900	0.80	0.67	0.000
169.00	10' T Frames	3	500.00	15.000	734.78	23.804	0.000	0.000	0.000	0.75	0.75	0.000
164.81	Commscope DB586-Y Omni	1	8.25	1.010	39.42	1.657	52.560	2.500	2.500	1.00	1.00	2.190
164.81	Powerwave LGP104 TMA	1	7.00	0.230	12.73	0.386	7.000	4.000	1.200	1.00	1.00	-0.810
164.81	Sidearm (Commscope/Andrew	1	40.00	2.630	94.00	6.645	10.000	0.000	0.000	1.00	1.00	0.000
160.67	RFS BA1312-0 Omni	1	4.40	1.730	55.43	3.804	104.000	2.000	2.000	1.00	1.00	4.330
160.67	Sidearm (Commscope S-400)	1	53.32	3.500	124.71	8.829	10.000	0.000	0.000	1.00	1.00	0.000
159.85	Sidearm (Commscope S-400)	1	41.00	3.500	95.86	8.795	10.000	0.000	0.000	1.00	1.00	0.000
159.85	RFS 458-2 Omni	1	22.00	3.720	58.09	6.679	159.600	2.800	2.800	1.00	1.00	6.650
153.30	SP2D00P36D-D	1	45.00	5.530	103.51	9.293	189.600	3.500	3.500	1.00	1.00	7.900
152.88	Sidearm (Site Pro USF-4U)	1	165.00	5.150	329.55	9.688	20.000	0.000	0.000	1.00	1.00	0.000
131.00	Kreco CO-36A Omni	1	12.00	0.750	29.94	1.339	144.000	0.620	0.620	1.00	1.00	6.000
131.00	6' Sidearm (Commscope S-600)	1	70.00	5.150	162.33	12.831	15.000	0.000	0.000	1.00	1.00	0.000
130.07	RFS 220-3AN Omni	1	24.00	5.680	119.09	10.490	248.400	2.750	2.750	1.00	1.00	10.33
130.07	6' Sidearm (Commscope/Andrew	1	70.00	5.150	138.82	9.623	15.000	0.000	0.000	1.00	1.00	0.000
130.00	RFS 220-7N Omni	1	22.00	5.320	157.72	9.776	228.000	2.800	2.800	1.00	1.00	9.500
130.00	4' Sidearm (Wireless Solutions	1	53.32	3.500	123.70	8.753	10.000	0.000	0.000	1.00	1.00	0.000
120.00	Commscope sbnhh-1d45b	2	96.00	14.770	328.32	15.789	76.800	22.300	12.200	0.80	0.80	0.000
120.00	Commscope SBNHH-1D65B	4	50.71	8.050	171.98	8.865	72.000	11.850	7.100	0.80	0.83	0.000
120.00	Samsung MT6407-77A	3	87.10	4.700	169.00	5.385	35.120	16.060	5.510	0.80	0.70	0.000
120.00	Samsung B2/B66A RRH-BR049	3	84.40	1.880	129.75	2.229	15.000	15.000	10.000	0.80	0.67	0.000
120.00	Samsung B5/B13 RRH-BR04C	3	70.30	1.880	111.17	2.229	15.000	15.000	8.100	0.80	0.67	0.000
120.00	Rfs Celwave DB-T1-6Z-8AB-0Z	2	44.00	4.800	131.14	5.351	24.000	24.000	10.000	0.80	0.67	0.000
120.00	10' T-Frames	3	500.00	15.000	838.38	27.633	0.000	0.000	0.000	0.75	0.75	0.000
107.00	MX08FRO665-21	3	64.50	12.490	252.49	13.437	72.000	20.000	8.000	0.80	0.74	0.000
107.00	TA08025-B604	3	63.90	1.960	96.62	2.323	15.800	15.000	7.900	0.80	0.67	0.000
107.00	TA08025-B605	3	75.00	1.960	108.80	2.323	15.800	15.000	9.100	0.80	0.67	0.000
107.00	RDIDC-9181-OF-48	1	21.90	2.010	56.31	2.377	16.600	14.600	8.500	0.80	1.00	0.000
107.00	(3) MTC3975083	1	1242.0	28.050	2026.51	50.830	0.000	0.000	0.000	0.75	1.00	0.000
	Totals:	**82**	**8,421.23**		**16,700.00**						**Number of Appurtenances :**	**38**

Linear Appurtenances Properties

Elev. From (ft)	Elev. To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out of Zone	Spacing (in)	Orientation Factor	Ka Override
1.00	196.00	Safety Climb	1	0.38	0.27	100.00	1	Individual NR		N	1.00	1.00	
3.00	196.00	Step bolts (ladder)		0.63	1.04	100.00	3	Individual NR		N	1.00	1.00	
3.00	196.00	Step bolts (ladder)		0.63	1.04	100.00	1	Individual NR		N	1.00	1.00	
3.00	196.00	Step bolts (ladder)		0.63	1.04	100.00	2	Individual NR		N	1.00	1.00	
0.00	185.00	W/G Ladder (VZW)	1	2.00	6.00	100.00	2	Individual NR		N	1.00	1.00	
3.00	185.00	1 5/8" Coax	3	1.98	1.04	100.00	2	Individual IR		N	0.50	0.64	
0.00	169.00	W/G Ladder (TMO)	1	2.50	6.00	100.00	3	Individual NR		N	1.00	1.00	
3.00	169.00	1 5/8" Coax	9	1.98	1.04	50.00	3	Block		N	0.50	1.00	
3.00	169.00	1 5/8" Hybrid	2	2.00	1.10	100.00	3	Individual IR		N	0.50	1.00	
0.00	160.00	W/G Ladder (CLP)	1	3.00	6.00	100.00	3	Individual NR		N	1.00	1.00	
3.00	160.00	1/2" Coax	1	0.65	0.16	100.00	3	Individual IR		N	1.00	1.00	
3.00	160.00	7/8" Coax	8	1.11	0.52	100.00	3	Individual IR		N	0.50	1.00	
3.00	120.00	1 5/8" Coax	8	1.98	1.04	100.00	2	Individual IR		N	0.50	0.42	
3.00	120.00	1 5/8" Fiber	2	1.98	1.04	100.00	2	Individual IR		N	0.50	0.76	
1.00	107.00	1.6" Hybrid	1	1.60	1.82	100.00	1	Individual NR		N	1.00	1.00	

Section Forces

Structure:	CT06462-A-2-SBA	**Code:**	TIA-222-H	2/9/2022	
Site Name:	Mountain Street	**Exposure:**	B		
Height:	196.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 7	

Tower Engineering Solutions

Load Case: 1.2D + 1.0W Normal Wind — 1.2D + 1.0W 121 mph Wind at Normal To Face

Wind Load Factor: 1.00 — **Wind Importance Factor:** 1.00

Dead Load Factor: 1.20

Ice Dead Load Factor: 0.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	22.30	31.267	28.80	0.00	0.13	2.84	1.00	1.00	0.00	43.67	88.12	0.00	6,508.6	0.0	2349.60	1260.18	3,609.78
2	30.0	22.32	28.860	28.80	0.00	0.14	2.81	1.00	1.00	0.00	41.35	101.08	0.00	5,699.0	0.0	2205.88	1448.40	3,654.28
3	50.0	25.83	23.184	28.80	0.00	0.14	2.81	1.00	1.00	0.00	35.08	101.08	0.00	5,293.3	0.0	2166.27	1676.00	3,842.27
4	70.0	28.43	21.246	22.13	0.00	0.13	2.84	1.00	1.00	0.00	31.63	101.08	0.00	4,819.4	0.0	2171.13	1845.12	4,016.25
5	90.0	30.55	22.280	22.12	0.00	0.15	2.76	1.00	1.00	0.00	32.63	101.08	0.00	4,465.4	0.0	2336.98	1982.48	4,319.46
6	110.0	32.35	16.430	18.58	0.00	0.14	2.80	1.00	1.00	0.00	25.69	99.34	0.00	3,864.7	0.0	1979.23	2065.14	4,044.38
7	130.0	33.93	14.331	15.03	0.00	0.14	2.79	1.00	1.00	0.00	22.39	65.41	0.00	3,024.9	0.0	1803.83	1461.38	3,265.21
8	150.0	35.35	12.808	11.69	0.00	0.15	2.76	1.00	1.00	0.00	19.44	65.41	0.00	2,332.0	0.0	1613.38	1522.36	3,135.74
9	164.0	36.26	4.976	4.67	0.00	0.17	2.69	1.00	1.00	0.00	7.64	17.81	0.00	833.3	0.0	632.37	439.28	1,071.66
10	178.0	37.12	12.376	11.67	0.00	0.17	2.68	1.00	1.00	0.00	19.03	13.41	0.00	1,645.7	0.0	1611.60	310.22	1,921.82
11	192.0	37.93	5.252	4.67	0.00	0.18	2.66	1.00	1.00	0.00	7.92	0.25	0.00	506.9	0.0	680.23	5.80	686.04
														38,993.3	**0.0**			**33,566.89**

Load Case: 1.2D + 1.0W 60° Wind — 1.2D + 1.0W 121 mph Wind at 60° From Face

Wind Load Factor: 1.00 — **Wind Importance Factor:** 1.00

Dead Load Factor: 1.20

Ice Dead Load Factor: 0.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	22.30	31.267	28.80	0.00	0.13	2.84	0.80	1.00	0.00	37.42	88.12	0.00	6,508.6	0.0	2013.18	1260.18	3,273.36
2	30.0	22.32	28.860	28.80	0.00	0.14	2.81	0.80	1.00	0.00	35.58	101.08	0.00	5,699.0	0.0	1897.97	1448.40	3,346.36
3	50.0	25.83	23.184	28.80	0.00	0.14	2.81	0.80	1.00	0.00	30.44	101.08	0.00	5,293.3	0.0	1879.96	1676.00	3,555.95
4	70.0	28.43	21.246	22.13	0.00	0.13	2.84	0.80	1.00	0.00	27.38	101.08	0.00	4,819.4	0.0	1879.45	1845.12	3,724.57
5	90.0	30.55	22.280	22.12	0.00	0.15	2.76	0.80	1.00	0.00	28.18	101.08	0.00	4,465.4	0.0	2017.89	1982.48	4,000.36
6	110.0	32.35	16.430	18.58	0.00	0.14	2.80	0.80	1.00	0.00	22.40	99.34	0.00	3,864.7	0.0	1726.05	2065.14	3,791.20
7	130.0	33.93	14.331	15.03	0.00	0.14	2.79	0.80	1.00	0.00	19.53	65.41	0.00	3,024.9	0.0	1572.97	1461.38	3,034.35
8	150.0	35.35	12.808	11.69	0.00	0.15	2.76	0.80	1.00	0.00	16.88	65.41	0.00	2,332.0	0.0	1400.83	1522.36	2,923.19
9	164.0	36.26	4.976	4.67	0.00	0.17	2.69	0.80	1.00	0.00	6.64	17.81	0.00	833.3	0.0	549.98	439.28	989.26
10	178.0	37.12	12.376	11.67	0.00	0.17	2.68	0.80	1.00	0.00	16.56	13.41	0.00	1,645.7	0.0	1402.00	310.22	1,712.21
11	192.0	37.93	5.252	4.67	0.00	0.18	2.66	0.80	1.00	0.00	6.87	0.25	0.00	506.9	0.0	589.99	5.80	595.80
														38,993.3	**0.0**			**30,946.62**

Section Forces

Structure:	CT06462-A-2-SBA	**Code:**	TIA-222-H	2/9/2022	
Site Name:	Mountain Street	**Exposure:**	B		
Height:	196.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 8	

Tower Engineering Solutions

Load Case: 1.2D + 1.0W 90° Wind — 1.2D + 1.0W 121 mph Wind at 90° From Face

Wind Load Factor: 1.00 — **Wind Importance Factor:** 1.00

Dead Load Factor: 1.20

Ice Dead Load Factor: 0.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	22.30	31.267	28.80	0.00	0.13	2.84	0.85	1.00	0.00	38.98	88.12	0.00	6,508.6	0.0	2097.28	1260.18	3,357.47
2	30.0	22.32	28.860	28.80	0.00	0.14	2.81	0.85	1.00	0.00	37.02	101.08	0.00	5,699.0	0.0	1974.94	1448.40	3,423.34
3	50.0	25.83	23.184	28.80	0.00	0.14	2.81	0.85	1.00	0.00	31.60	101.08	0.00	5,293.3	0.0	1951.54	1676.00	3,627.53
4	70.0	28.43	21.246	22.13	0.00	0.13	2.84	0.85	1.00	0.00	28.44	101.08	0.00	4,819.4	0.0	1952.37	1845.12	3,797.49
5	90.0	30.55	22.280	22.12	0.00	0.15	2.76	0.85	1.00	0.00	29.29	101.08	0.00	4,465.4	0.0	2097.66	1982.48	4,080.14
6	110.0	32.35	16.430	18.58	0.00	0.14	2.80	0.85	1.00	0.00	23.22	99.34	0.00	3,864.7	0.0	1789.35	2065.14	3,854.49
7	130.0	33.93	14.331	15.03	0.00	0.14	2.79	0.85	1.00	0.00	20.25	65.41	0.00	3,024.9	0.0	1630.69	1461.38	3,092.06
8	150.0	35.35	12.808	11.69	0.00	0.15	2.76	0.85	1.00	0.00	17.52	65.41	0.00	2,332.0	0.0	1453.97	1522.36	2,976.33
9	164.0	36.26	4.976	4.67	0.00	0.17	2.69	0.85	1.00	0.00	6.89	17.81	0.00	833.3	0.0	570.57	439.28	1,009.86
10	178.0	37.12	12.376	11.67	0.00	0.17	2.68	0.85	1.00	0.00	17.18	13.41	0.00	1,645.7	0.0	1454.40	310.22	1,764.62
11	192.0	37.93	5.252	4.67	0.00	0.18	2.66	0.85	1.00	0.00	7.13	0.25	0.00	506.9	0.0	612.55	5.80	618.36
														38,993.3	**0.0**			**31,601.69**

Load Case: 0.9D + 1.0W Normal Wind — 0.9D + 1.0W 121 mph Wind at Normal To Face

Wind Load Factor: 1.00 — **Wind Importance Factor:** 1.00

Dead Load Factor: 0.90

Ice Dead Load Factor: 0.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	22.30	31.267	28.80	0.00	0.13	2.84	1.00	1.00	0.00	43.67	88.12	0.00	4,881.5	0.0	2349.60	1260.18	3,609.78
2	30.0	22.32	28.860	28.80	0.00	0.14	2.81	1.00	1.00	0.00	41.35	101.08	0.00	4,274.3	0.0	2205.88	1448.40	3,654.28
3	50.0	25.83	23.184	28.80	0.00	0.14	2.81	1.00	1.00	0.00	35.08	101.08	0.00	3,970.0	0.0	2166.27	1676.00	3,842.27
4	70.0	28.43	21.246	22.13	0.00	0.13	2.84	1.00	1.00	0.00	31.63	101.08	0.00	3,614.5	0.0	2171.13	1845.12	4,016.25
5	90.0	30.55	22.280	22.12	0.00	0.15	2.76	1.00	1.00	0.00	32.63	101.08	0.00	3,349.0	0.0	2336.98	1982.48	4,319.46
6	110.0	32.35	16.430	18.58	0.00	0.14	2.80	1.00	1.00	0.00	25.69	99.34	0.00	2,898.6	0.0	1979.23	2065.14	4,044.38
7	130.0	33.93	14.331	15.03	0.00	0.14	2.79	1.00	1.00	0.00	22.39	65.41	0.00	2,268.6	0.0	1803.83	1461.38	3,265.21
8	150.0	35.35	12.808	11.69	0.00	0.15	2.76	1.00	1.00	0.00	19.44	65.41	0.00	1,749.0	0.0	1613.38	1522.36	3,135.74
9	164.0	36.26	4.976	4.67	0.00	0.17	2.69	1.00	1.00	0.00	7.64	17.81	0.00	625.0	0.0	632.37	439.28	1,071.66
10	178.0	37.12	12.376	11.67	0.00	0.17	2.68	1.00	1.00	0.00	19.03	13.41	0.00	1,234.3	0.0	1611.60	310.22	1,921.82
11	192.0	37.93	5.252	4.67	0.00	0.18	2.66	1.00	1.00	0.00	7.92	0.25	0.00	380.2	0.0	680.23	5.80	686.04
														29,245.0	**0.0**			**33,566.89**

Section Forces

Structure:	CT06462-A-2-SBA	**Code:**	TIA-222-H	2/9/2022	
Site Name:	Mountain Street	**Exposure:**	B		
Height:	196.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 9	

Tower Engineering Solutions

Load Case: 0.9D + 1.0W 60° Wind — 0.9D + 1.0W 121 mph Wind at 60° From Face

Wind Load Factor: 1.00 — **Wind Importance Factor:** 1.00

Dead Load Factor: 0.90

Ice Dead Load Factor: 0.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	22.30	31.267	28.80	0.00	0.13	2.84	0.80	1.00	0.00	37.42	88.12	0.00	4,881.5	0.0	2013.18	1260.18	3,273.36
2	30.0	22.32	28.860	28.80	0.00	0.14	2.81	0.80	1.00	0.00	35.58	101.08	0.00	4,274.3	0.0	1897.97	1448.40	3,346.36
3	50.0	25.83	23.184	28.80	0.00	0.14	2.81	0.80	1.00	0.00	30.44	101.08	0.00	3,970.0	0.0	1879.96	1676.00	3,555.95
4	70.0	28.43	21.246	22.13	0.00	0.13	2.84	0.80	1.00	0.00	27.38	101.08	0.00	3,614.5	0.0	1879.45	1845.12	3,724.57
5	90.0	30.55	22.280	22.12	0.00	0.15	2.76	0.80	1.00	0.00	28.18	101.08	0.00	3,349.0	0.0	2017.89	1982.48	4,000.36
6	110.0	32.35	16.430	18.58	0.00	0.14	2.80	0.80	1.00	0.00	22.40	99.34	0.00	2,898.6	0.0	1726.05	2065.14	3,791.20
7	130.0	33.93	14.331	15.03	0.00	0.14	2.79	0.80	1.00	0.00	19.53	65.41	0.00	2,268.6	0.0	1572.97	1461.38	3,034.35
8	150.0	35.35	12.808	11.69	0.00	0.15	2.76	0.80	1.00	0.00	16.88	65.41	0.00	1,749.0	0.0	1400.83	1522.36	2,923.19
9	164.0	36.26	4.976	4.67	0.00	0.17	2.69	0.80	1.00	0.00	6.64	17.81	0.00	625.0	0.0	549.98	439.28	989.26
10	178.0	37.12	12.376	11.67	0.00	0.17	2.68	0.80	1.00	0.00	16.56	13.41	0.00	1,234.3	0.0	1402.00	310.22	1,712.21
11	192.0	37.93	5.252	4.67	0.00	0.18	2.66	0.80	1.00	0.00	6.87	0.25	0.00	380.2	0.0	589.99	5.80	595.80
														29,245.0	**0.0**			**30,946.62**

Load Case: 0.9D + 1.0W 90° Wind — 0.9D + 1.0W 121 mph Wind at 90° From Face

Wind Load Factor: 1.00 — **Wind Importance Factor:** 1.00

Dead Load Factor: 0.90

Ice Dead Load Factor: 0.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	22.30	31.267	28.80	0.00	0.13	2.84	0.85	1.00	0.00	38.98	88.12	0.00	4,881.5	0.0	2097.28	1260.18	3,357.47
2	30.0	22.32	28.860	28.80	0.00	0.14	2.81	0.85	1.00	0.00	37.02	101.08	0.00	4,274.3	0.0	1974.94	1448.40	3,423.34
3	50.0	25.83	23.184	28.80	0.00	0.14	2.81	0.85	1.00	0.00	31.60	101.08	0.00	3,970.0	0.0	1951.54	1676.00	3,627.53
4	70.0	28.43	21.246	22.13	0.00	0.13	2.84	0.85	1.00	0.00	28.44	101.08	0.00	3,614.5	0.0	1952.37	1845.12	3,797.49
5	90.0	30.55	22.280	22.12	0.00	0.15	2.76	0.85	1.00	0.00	29.29	101.08	0.00	3,349.0	0.0	2097.66	1982.48	4,080.14
6	110.0	32.35	16.430	18.58	0.00	0.14	2.80	0.85	1.00	0.00	23.22	99.34	0.00	2,898.6	0.0	1789.35	2065.14	3,854.49
7	130.0	33.93	14.331	15.03	0.00	0.14	2.79	0.85	1.00	0.00	20.25	65.41	0.00	2,268.6	0.0	1630.69	1461.38	3,092.06
8	150.0	35.35	12.808	11.69	0.00	0.15	2.76	0.85	1.00	0.00	17.52	65.41	0.00	1,749.0	0.0	1453.97	1522.36	2,976.33
9	164.0	36.26	4.976	4.67	0.00	0.17	2.69	0.85	1.00	0.00	6.89	17.81	0.00	625.0	0.0	570.57	439.28	1,009.86
10	178.0	37.12	12.376	11.67	0.00	0.17	2.68	0.85	1.00	0.00	17.18	13.41	0.00	1,234.3	0.0	1454.40	310.22	1,764.62
11	192.0	37.93	5.252	4.67	0.00	0.18	2.66	0.85	1.00	0.00	7.13	0.25	0.00	380.2	0.0	612.55	5.80	618.36
														29,245.0	**0.0**			**31,601.69**

Section Forces

Structure:	CT06462-A-2-SBA	**Code:**	TIA-222-H	2/9/2022	
Site Name:	Mountain Street	**Exposure:**	B		
Height:	196.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 10	

Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi Normal Wind — 1.2D + 1.0Di + 1.0Wi 50 mph Wind at Normal From Face

Wind Load Factor: 1.00 — **Wind Importance Factor:** 1.00

Dead Load Factor: 1.20

Ice Dead Load Factor: 1.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	3.81	31.267	49.02	20.23	0.18	2.68	1.00	1.00	0.89	59.24	118.47	14.50	10,641.	4132.8	513.83	326.39	840.21
2	30.0	3.81	28.860	50.18	21.38	0.19	2.63	1.00	1.00	0.99	57.60	139.19	16.51	10,425.	4726.3	491.16	378.36	869.52
3	50.0	4.41	23.184	50.07	21.27	0.19	2.62	1.00	1.00	1.04	51.90	140.40	17.37	9,893.0	4599.7	508.99	443.67	952.66
4	70.0	4.86	21.246	42.84	20.72	0.19	2.62	1.00	1.00	1.08	45.80	141.23	17.97	9,268.9	4449.5	495.52	493.64	989.15
5	90.0	5.22	22.280	46.53	24.41	0.24	2.48	1.00	1.00	1.11	49.34	141.87	18.43	9,201.3	4735.9	543.07	526.67	1,069.74
6	110.0	5.52	16.430	41.48	22.90	0.23	2.50	1.00	1.00	1.13	40.51	140.66	16.36	8,098.5	4233.8	474.69	543.91	1,018.60
7	130.0	5.79	14.331	36.28	21.26	0.24	2.45	1.00	1.00	1.15	35.51	92.86	15.29	6,312.3	3287.5	429.30	455.81	885.11
8	150.0	6.04	12.808	35.04	23.35	0.29	2.32	1.00	1.00	1.16	33.70	89.25	19.39	5,524.3	3192.3	401.03	467.46	868.50
9	164.0	6.19	4.976	13.87	9.20	0.33	2.22	1.00	1.00	1.17	13.42	23.51	4.70	1,899.8	1066.5	156.71	119.00	275.72
10	178.0	6.34	12.376	34.78	23.11	0.33	2.21	1.00	1.00	1.18	33.58	18.61	7.50	3,752.8	2107.1	400.41	97.63	498.04
11	192.0	6.48	5.252	15.29	10.63	0.36	2.14	1.00	1.00	1.19	14.75	0.25	1.59	1,289.9	783.0	174.03	7.75	181.78
														76,307.7	**37314.4**			**8,449.04**

Load Case: 1.2D + 1.0Di + 1.0Wi 60° Wind — 1.2D + 1.0Di + 1.0Wi 50 mph Wind at 60° From Face

Wind Load Factor: 1.00 — **Wind Importance Factor:** 1.00

Dead Load Factor: 1.20

Ice Dead Load Factor: 1.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	3.81	31.267	49.02	20.23	0.18	2.68	0.80	1.00	0.89	52.99	118.47	14.50	10,641.	4132.8	459.59	326.39	785.97
2	30.0	3.81	28.860	50.18	21.38	0.19	2.63	0.80	1.00	0.99	51.82	139.19	16.51	10,425.	4726.3	441.94	378.36	820.30
3	50.0	4.41	23.184	50.07	21.27	0.19	2.62	0.80	1.00	1.04	47.26	140.40	17.37	9,893.0	4599.7	463.51	443.67	907.18
4	70.0	4.86	21.246	42.84	20.72	0.19	2.62	0.80	1.00	1.08	41.55	141.23	17.97	9,268.9	4449.5	449.55	493.64	943.18
5	90.0	5.22	22.280	46.53	24.41	0.24	2.48	0.80	1.00	1.11	44.88	141.87	18.43	9,201.3	4735.9	494.02	526.67	1,020.69
6	110.0	5.52	16.430	41.48	22.90	0.23	2.50	0.80	1.00	1.13	37.23	140.66	16.36	8,098.5	4233.8	436.19	543.91	980.10
7	130.0	5.79	14.331	36.28	21.26	0.24	2.45	0.80	1.00	1.15	32.64	92.86	15.29	6,312.3	3287.5	394.65	455.81	850.46
8	150.0	6.04	12.808	35.04	23.35	0.29	2.32	0.80	1.00	1.16	31.14	89.25	19.39	5,524.3	3192.3	370.55	467.46	838.02
9	164.0	6.19	4.976	13.87	9.20	0.33	2.22	0.80	1.00	1.17	12.42	23.51	4.70	1,899.8	1066.5	145.09	119.00	264.09
10	178.0	6.34	12.376	34.78	23.11	0.33	2.21	0.80	1.00	1.18	31.11	18.61	7.50	3,752.8	2107.1	370.90	97.63	468.53
11	192.0	6.48	5.252	15.29	10.63	0.36	2.14	0.80	1.00	1.19	13.69	0.25	1.59	1,289.9	783.0	161.63	7.75	169.39
														76,307.7	**37314.4**			**8,047.91**

Section Forces

Structure:	CT06462-A-2-SBA	**Code:**	TIA-222-H	2/9/2022	
Site Name:	Mountain Street	**Exposure:**	B		
Height:	196.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 11	

Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi 90° Wind — 1.2D + 1.0Di + 1.0Wi 50 mph Wind at 90° From Face

Wind Load Factor: 1.00 — **Wind Importance Factor:** 1.00

Dead Load Factor: 1.20

Ice Dead Load Factor: 1.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	3.81	31.267	49.02	20.23	0.18	2.68	0.85	1.00	0.89	54.55	118.47	14.50	10,641.	4132.8	473.15	326.39	799.53
2	30.0	3.81	28.860	50.18	21.38	0.19	2.63	0.85	1.00	0.99	53.27	139.19	16.51	10,425.	4726.3	454.24	378.36	832.61
3	50.0	4.41	23.184	50.07	21.27	0.19	2.62	0.85	1.00	1.04	48.42	140.40	17.37	9,893.0	4599.7	474.88	443.67	918.55
4	70.0	4.86	21.246	42.84	20.72	0.19	2.62	0.85	1.00	1.08	42.62	141.23	17.97	9,268.9	4449.5	461.04	493.64	954.67
5	90.0	5.22	22.280	46.53	24.41	0.24	2.48	0.85	1.00	1.11	46.00	141.87	18.43	9,201.3	4735.9	506.28	526.67	1,032.95
6	110.0	5.52	16.430	41.48	22.90	0.23	2.50	0.85	1.00	1.13	38.05	140.66	16.36	8,098.5	4233.8	445.82	543.91	989.73
7	130.0	5.79	14.331	36.28	21.26	0.24	2.45	0.85	1.00	1.15	33.36	92.86	15.29	6,312.3	3287.5	403.31	455.81	859.12
8	150.0	6.04	12.808	35.04	23.35	0.29	2.32	0.85	1.00	1.16	31.78	89.25	19.39	5,524.3	3192.3	378.17	467.46	845.64
9	164.0	6.19	4.976	13.87	9.20	0.33	2.22	0.85	1.00	1.17	12.67	23.51	4.70	1,899.8	1066.5	148.00	119.00	267.00
10	178.0	6.34	12.376	34.78	23.11	0.33	2.21	0.85	1.00	1.18	31.73	18.61	7.50	3,752.8	2107.1	378.28	97.63	475.91
11	192.0	6.48	5.252	15.29	10.63	0.36	2.14	0.85	1.00	1.19	13.96	0.25	1.59	1,289.9	783.0	164.73	7.75	172.49
														76,307.7	**37314.4**			**8,148.20**

Load Case: 1.0D + 1.0W Normal Wind — 1.0D + 1.0W 60 mph Wind at Normal To Face

Wind Load Factor: 1.00 — **Wind Importance Factor:** 1.00

Dead Load Factor: 1.00

Ice Dead Load Factor: 0.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	5.48	31.267	28.80	0.00	0.13	2.84	1.00	1.00	0.00	47.57	88.12	0.00	5,423.9	0.0	629.21	309.86	939.07
2	30.0	5.49	28.860	28.80	0.00	0.14	2.81	1.00	1.00	0.00	45.17	101.08	0.00	4,749.2	0.0	592.56	356.14	948.70
3	50.0	6.35	23.184	28.80	0.00	0.14	2.81	1.00	1.00	0.00	39.50	101.08	0.00	4,411.1	0.0	599.72	412.10	1,011.82
4	70.0	6.99	21.246	22.13	0.00	0.13	2.84	1.00	1.00	0.00	33.77	101.08	0.00	4,016.1	0.0	569.94	453.69	1,023.62
5	90.0	7.51	22.280	22.12	0.00	0.15	2.76	1.00	1.00	0.00	34.84	101.08	0.00	3,721.1	0.0	613.49	487.46	1,100.95
6	110.0	7.96	16.430	18.58	0.00	0.14	2.80	1.00	1.00	0.00	26.96	99.34	0.00	3,220.6	0.0	510.73	507.79	1,018.52
7	130.0	8.34	14.331	15.03	0.00	0.14	2.79	1.00	1.00	0.00	22.85	65.41	0.00	2,520.7	0.0	452.57	359.33	811.90
8	150.0	8.69	12.808	11.69	0.00	0.15	2.76	1.00	1.00	0.00	19.44	65.41	0.00	1,943.4	0.0	396.71	374.33	771.03
9	164.0	8.92	4.976	4.67	0.00	0.17	2.69	1.00	1.00	0.00	7.64	17.81	0.00	694.4	0.0	155.49	108.01	263.50
10	178.0	9.13	12.376	11.67	0.00	0.17	2.68	1.00	1.00	0.00	19.03	13.41	0.00	1,371.4	0.0	396.27	76.28	472.55
11	192.0	9.33	5.252	4.67	0.00	0.18	2.66	1.00	1.00	0.00	7.92	0.25	0.00	422.4	0.0	167.26	1.43	168.69
														32,494.4	**0.0**			**8,530.34**

Section Forces

Structure:	CT06462-A-2-SBA	**Code:**	TIA-222-H	2/9/2022	
Site Name:	Mountain Street	**Exposure:**	B		
Height:	196.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 12	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60° Wind — 1.0D + 1.0W 60 mph Wind at 60° From Face

Wind Load Factor: 1.00 — **Wind Importance Factor:** 1.00

Dead Load Factor: 1.00

Ice Dead Load Factor: 0.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	5.48	31.267	28.80	0.00	0.13	2.84	0.80	1.00	0.00	41.31	88.12	0.00	5,423.9	0.0	546.49	309.86	856.35
2	30.0	5.49	28.860	28.80	0.00	0.14	2.81	0.80	1.00	0.00	39.40	101.08	0.00	4,749.2	0.0	516.85	356.14	872.99
3	50.0	6.35	23.184	28.80	0.00	0.14	2.81	0.80	1.00	0.00	34.86	101.08	0.00	4,411.1	0.0	529.31	412.10	941.42
4	70.0	6.99	21.246	22.13	0.00	0.13	2.84	0.80	1.00	0.00	29.52	101.08	0.00	4,016.1	0.0	498.22	453.69	951.90
5	90.0	7.51	22.280	22.12	0.00	0.15	2.76	0.80	1.00	0.00	30.39	101.08	0.00	3,721.1	0.0	535.03	487.46	1,022.49
6	110.0	7.96	16.430	18.58	0.00	0.14	2.80	0.80	1.00	0.00	23.67	99.34	0.00	3,220.6	0.0	448.48	507.79	956.26
7	130.0	8.34	14.331	15.03	0.00	0.14	2.79	0.80	1.00	0.00	19.98	65.41	0.00	2,520.7	0.0	395.80	359.33	755.13
8	150.0	8.69	12.808	11.69	0.00	0.15	2.76	0.80	1.00	0.00	16.88	65.41	0.00	1,943.4	0.0	344.44	374.33	718.77
9	164.0	8.92	4.976	4.67	0.00	0.17	2.69	0.80	1.00	0.00	6.64	17.81	0.00	694.4	0.0	135.23	108.01	243.24
10	178.0	9.13	12.376	11.67	0.00	0.17	2.68	0.80	1.00	0.00	16.56	13.41	0.00	1,371.4	0.0	344.73	76.28	421.01
11	192.0	9.33	5.252	4.67	0.00	0.18	2.66	0.80	1.00	0.00	6.87	0.25	0.00	422.4	0.0	145.07	1.43	146.50
														32,494.4	**0.0**			**7,886.06**

Load Case: 1.0D + 1.0W 90° Wind — 1.0D + 1.0W 60 mph Wind at 90° From Face

Wind Load Factor: 1.00 — **Wind Importance Factor:** 1.00

Dead Load Factor: 1.00

Ice Dead Load Factor: 0.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	5.48	31.267	28.80	0.00	0.13	2.84	0.85	1.00	0.00	42.88	88.12	0.00	5,423.9	0.0	567.17	309.86	877.03
2	30.0	5.49	28.860	28.80	0.00	0.14	2.81	0.85	1.00	0.00	40.85	101.08	0.00	4,749.2	0.0	535.77	356.14	891.91
3	50.0	6.35	23.184	28.80	0.00	0.14	2.81	0.85	1.00	0.00	36.02	101.08	0.00	4,411.1	0.0	546.91	412.10	959.02
4	70.0	6.99	21.246	22.13	0.00	0.13	2.84	0.85	1.00	0.00	30.58	101.08	0.00	4,016.1	0.0	516.15	453.69	969.83
5	90.0	7.51	22.280	22.12	0.00	0.15	2.76	0.85	1.00	0.00	31.50	101.08	0.00	3,721.1	0.0	554.64	487.46	1,042.10
6	110.0	7.96	16.430	18.58	0.00	0.14	2.80	0.85	1.00	0.00	24.49	99.34	0.00	3,220.6	0.0	464.04	507.79	971.83
7	130.0	8.34	14.331	15.03	0.00	0.14	2.79	0.85	1.00	0.00	20.70	65.41	0.00	2,520.7	0.0	409.99	359.33	769.32
8	150.0	8.69	12.808	11.69	0.00	0.15	2.76	0.85	1.00	0.00	17.52	65.41	0.00	1,943.4	0.0	357.51	374.33	731.83
9	164.0	8.92	4.976	4.67	0.00	0.17	2.69	0.85	1.00	0.00	6.89	17.81	0.00	694.4	0.0	140.30	108.01	248.31
10	178.0	9.13	12.376	11.67	0.00	0.17	2.68	0.85	1.00	0.00	17.18	13.41	0.00	1,371.4	0.0	357.61	76.28	433.89
11	192.0	9.33	5.252	4.67	0.00	0.18	2.66	0.85	1.00	0.00	7.13	0.25	0.00	422.4	0.0	150.62	1.43	152.04
														32,494.4	**0.0**			**8,047.13**

Force/Stress Compression Summary

Structure:	CT06462-A-2-SBA	**Code:**	EIA/TIA-222-H	2/9/2022	
Site Name:	Mountain Street	**Exposure:**	B		
Height:	196.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 13	

IES Tower Engineering Solutions

LEG MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fy (ksi)	Mem Cap (kips)	Leg Use %	Controls
1	20	PX - 8" DIA PIPE	-240.74	1.2D + 1.0W Normal Wind	10.02	100	100	100	41.77	50.00	505.44	47.6	Member X
2	40	PSP - ROHN 8 EHS	-214.91	1.2D + 1.0W Normal Wind	10.02	100	100	100	41.17	50.00	386.42	55.6	Member X
3	60	PSP - ROHN 8 EHS	-186.86	1.2D + 1.0W Normal Wind	10.02	100	100	100	41.17	50.00	386.42	48.4	Member X
4	80	PX - 6" DIA PIPE	-158.39	1.2D + 1.0W Normal Wind	10.02	100	100	100	54.90	50.00	303.24	52.2	Member X
5	100	PSP - ROHN 6 EHS	-131.32	1.2D + 1.0W Normal Wind	6.68	100	100	100	36.01	50.00	274.76	47.8	Member X
6	120	PX - 5" DIA PIPE	-100.00	1.2D + 1.0W Normal Wind	6.68	100	100	100	43.56	50.00	239.34	41.8	Member X
7	140	PX - 4" DIA PIPE	-69.32	1.2D + 1.0W Normal Wind	6.68	100	100	100	54.15	50.00	160.15	43.3	Member X
8	160	PX - 3" DIA PIPE	-45.47	1.2D + 1.0W Normal Wind	5.01	100	100	100	52.73	50.00	110.90	41.0	Member X
9	168	PST - 3" DIA PIPE	-19.37	1.2D + 1.0W Normal Wind	4.00	100	100	100	41.38	50.00	88.54	21.9	Member X
10	188	PST - 3" DIA PIPE	-7.97	1.2D + 1.0W Normal Wind	4.00	100	100	100	41.38	50.00	88.54	9.0	Member X
11	196	PST - 3" DIA PIPE	-0.65	1.2D + 1.0W Normal Wind	4.00	100	100	100	41.38	50.00	88.54	0.7	Member X

Splices

		Top Splice						Bottom Splice					
Sect	Top Elev	Load Case	Force (kips)	Cap (kips)	Use %	Bolt Type	Num Bolts	Load Case	Force (kips)	Cap (kips)	Use %	Bolt Type	Num Bolts
1	20	1.2D + 1.0W Normal Wind	221.69	0.00	0.0			1.2D + 1.0W Normal Wind	247.61	0.00			
2	40	1.2D + 1.0W Normal Wind	194.07	0.00	0.0			1.2D + 1.0W Normal Wind	221.69	0.00		1 A325	8
3	60	1.2D + 1.0W Normal Wind	165.38	0.00	0.0			1.2D + 1.0W Normal Wind	194.07	0.00		1 A325	8
4	80	1.2D + 1.0W Normal Wind	136.61	0.00	0.0			1.2D + 1.0W Normal Wind	165.38	0.00		1 A325	8
5	100	1.2D + 1.0W Normal Wind	105.02	0.00	0.0			1.2D + 1.0W Normal Wind	136.61	0.00		1 A325	6
6	120	1.2D + 1.0W Normal Wind	74.74	0.00	0.0			1.2D + 1.0W Normal Wind	105.02	0.00		1 A325	6
7	140	1.2D + 1.0W Normal Wind	48.51	0.00	0.0			1.2D + 1.0W Normal Wind	74.74	0.00		1 A325	4
8	160	1.2D + 1.0W Normal Wind	22.46	0.00	0.0			1.2D + 1.0W Normal Wind	48.51	0.00		7/8 A325	4
9	168	1.2D + 1.0W Normal Wind	10.72	0.00	0.0			1.2D + 1.0W Normal Wind	22.46	0.00		7/8 A325	4
10	188	1.2D + 1.0W Normal Wind	0.99	0.00	0.0			1.2D + 1.0W Normal Wind	10.72	0.00		7/8 A325	4
11	196	1.2D + 1.0Di + 1.0Wi 60° Wind	0.21	0.00	0.0			1.2D + 1.0W Normal Wind	0.99	0.00		3/4 A325	4

HORIZONTAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	Use %	Controls
1	20										0.00	0	0				
2	40										0.00	0	0				
3	60										0.00	0	0				
4	80										0.00	0	0				
5	100										0.00	0	0				
6	120										0.00	0	0				
7	140										0.00	0	0				
8	160	SAE - 1.75X1.75X0.187[illegible]	-0.28	1.2D + 1.0W 90° Wind	6.69	50	50	50	118.51	36.00	12.46	1	1	13.81	13.05	2.3	Member Z
9	168										0.00	0	0				
10	188										0.00	0	0				
11	196	SAE - 1.75X1.75X0.187[illegible]	-0.01	0.9D + 1.0W 60° Wind	6.60	100	100	100	230.90	36.00	3.33	1	1	13.81	13.05	0.3	Member Z

DIAGONAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	Use %	Controls
1	20	SAE - 4X4X0.25	-7.87	1.2D + 1.0W 90° Wind	24.62	50	50	50	185.84	36.00	16.08	1	1	19.87	20.8	48.9	Member Z
2	40	SAE - 4X4X0.25	-8.15	1.2D + 1.0W 90° Wind	22.81	50	50	50	172.16	36.00	18.73	1	1	19.87	20.8	43.5	Member Z
3	60	SAE - 3.5X3.5X0.25	-7.78	1.2D + 1.0W 90° Wind	21.03	50	50	50	181.81	36.00	14.63	1	1	19.87	20.8	53.2	Member Z

Force/Stress Compression Summary

Structure:	CT06462-A-2-SBA	**Code:**	EIA/TIA-222-H	2/9/2022	
Site Name:	Mountain Street	**Exposure:**	B		
Height:	196.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 14	

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DIAGONAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	Use %	Controls
4	80	SAE - 3.5X3.5X0.25	-7.12	1.2D + 1.0W 90° Wind	19.26	50	50	50	166.49	36.00	17.45	1	1	19.87	20.8	40.8	Member Z
5	100	SAE - 3X3X0.25	-6.50	1.2D + 1.0W 90° Wind	15.99	50	50	50	162.02	36.00	15.70	1	1	19.87	20.8	41.4	Member Z
6	120	SAE - 2.5X2.5X0.25	-5.81	1.2D + 1.0W 90° Wind	14.23	50	50	50	173.91	36.00	11.26	1	1	19.87	20.8	51.6	Member Z
7	140	SAE - 2.5X2.5X0.25	-4.08	1.2D + 1.0W Normal Wind	12.43	50	50	50	151.85	36.00	14.77	1	1	13.81	17.4	29.5	Bolt Shear
8	160	SAE - 2X2X0.1875	-3.13	1.2D + 1.0W 90° Wind	9.86	50	50	50	150.21	36.00	9.01	1	1	13.81	13.0	34.7	Member Z
9	168	SAE - 2X2X0.25	-3.23	1.2D + 1.0W 90° Wind	7.78	50	50	50	119.49	36.00	18.65	1	1	13.81	17.4	23.4	Bolt Shear
10	188	SAE - 2X2X0.25	-1.36	1.2D + 1.0W Normal Wind	7.72	50	50	50	118.82	36.00	18.82	1	1	13.81	17.4	9.8	Bolt Shear
11	196	SAE - 1.75X1.75X0.187	-0.23	1.2D + 1.0W 90° Wind	7.72	50	50	50	135.00	36.00	9.74	1	1	13.81	13.0	2.4	Member Z

Force/Stress Tension Summary

Structure:	CT06462-A-2-SBA	**Code:**	EIA/TIA-222-H	2/9/2022	
Site Name:	Mountain Street	**Exposure:**	B		
Height:	196.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 15	

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LEG MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Fy (ksi)	Mem Cap (kips)	Leg Use %	Controls
1	20	PX - 8" DIA PIPE	201.13	0.9D + 1.0W 60° Wind	50	574.20	35.0	Member
2	40	PSP - ROHN 8 EHS	179.30	0.9D + 1.0W 60° Wind	50	437.40	41.0	Member
3	60	PSP - ROHN 8 EHS	156.07	0.9D + 1.0W 60° Wind	50	437.40	35.7	Member
4	80	PX - 6" DIA PIPE	132.06	0.9D + 1.0W 60° Wind	50	378.00	34.9	Member
5	100	PSP - ROHN 6 EHS	109.05	0.9D + 1.0W 60° Wind	50	302.09	36.1	Member
6	120	PX - 5" DIA PIPE	81.62	0.9D + 1.0W 60° Wind	50	274.95	29.7	Member
7	140	PX - 4" DIA PIPE	57.50	0.9D + 1.0W 60° Wind	50	198.45	29.0	Member
8	160	PX - 3" DIA PIPE	37.14	0.9D + 1.0W 60° Wind	50	135.90	27.3	Member
9	168	PST - 3" DIA PIPE	14.13	0.9D + 1.0W 60° Wind	50	100.35	14.1	Member
10	188	PST - 3" DIA PIPE	5.95	0.9D + 1.0W 60° Wind	50	100.35	5.9	Member
11	196	PST - 3" DIA PIPE	0.30	0.9D + 1.0W 60° Wind	50	100.35	0.3	Member

Splices

		Top Splice						Bottom Splice					
Sect	Top Elev	Load Case	Force (kips)	Cap (kips)	Use %	Bolt Type	Num Bolts	Load Case	Force (kips)	Cap (kips)	Use %	Bolt Type	Num Bolts
1	20	0.9D + 1.0W 60° Wind	184.31	0.00	0.0			0.9D + 1.0W 60° Wind	207.3	0.00			
2	40	0.9D + 1.0W 60° Wind	161.14	0.00	0.0			0.9D + 1.0W 60° Wind	184.3	424.08	43.5	1 A325	8
3	60	0.9D + 1.0W 60° Wind	137.14	0.00	0.0			0.9D + 1.0W 60° Wind	161.1	424.08	38.0	1 A325	8
4	80	0.9D + 1.0W 60° Wind	112.66	0.00	0.0			0.9D + 1.0W 60° Wind	137.1	424.08	32.3	1 A325	8
5	100	0.9D + 1.0W 60° Wind	85.57	0.00	0.0			0.9D + 1.0W 60° Wind	112.6	318.06	35.4	1 A325	6
6	120	0.9D + 1.0W 60° Wind	60.02	0.00	0.0			0.9D + 1.0W 60° Wind	85.57	318.06	26.9	1 A325	6
7	140	0.9D + 1.0W 60° Wind	39.46	0.00	0.0			0.9D + 1.0W 60° Wind	60.02	212.04	28.3	1 A325	4
8	160	0.9D + 1.0W 60° Wind	16.61	0.00	0.0			0.9D + 1.0W 60° Wind	39.46	166.24	23.7	7/8 A325	4
9	168	0.9D + 1.0W 60° Wind	6.18	0.00	0.0			0.9D + 1.0W 60° Wind	16.61	166.24	10.0	7/8 A325	4
10	188	0.9D + 1.0W 60° Wind	0.42	0.00	0.0			0.9D + 1.0W 60° Wind	6.18	166.24	3.7	7/8 A325	4
11	196		0.00	0.00	0.0			0.9D + 1.0W 60° Wind	0.42	120.40	0.3	3/4 A325	4

HORIZONTAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	B.S. Cap (kips)	Use %	Controls
1	20	-			36	0.00	0	0					
2	40	-			36	0.00	0	0					
3	60	-			36	0.00	0	0					
4	80	-			36	0.00	0	0					
5	100	-			36	0.00	0	0					
6	120	-			36	0.00	0	0					
7	140	-			36	0.00	0	0					
8	160	SAE - 1.75X1.75X0.1875	0.27	0.9D + 1.0W 90° Wind	36	20.09	1	1	13.81	9.79	7.50	3.5	Blck Shear
9	168	-			36	0.00	0	0					
10	188	-			36	0.00	0	0					
11	196	SAE - 1.75X1.75X0.1875	0.02	1.2D + 1.0W Normal Wi	36	20.09	1	1	13.81	9.79	7.50	0.3	Blck Shear

DIAGONAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	B.S. Cap (kips)	Use %	Controls
1	20	SAE - 4X4X0.25	8.01	1.2D + 1.0W 90° Wind	36	62.86	1	1	19.87	14.35	16.62	55.8	Bolt Bear
2	40	SAE - 4X4X0.25	7.97	0.9D + 1.0W 90° Wind	36	62.86	1	1	19.87	14.35	16.62	55.5	Bolt Bear
3	60	SAE - 3.5X3.5X0.25	7.65	0.9D + 1.0W 90° Wind	36	54.76	1	1	19.87	14.35	16.62	53.3	Bolt Bear
4	80	SAE - 3.5X3.5X0.25	7.07	1.2D + 1.0W 90° Wind	36	54.76	1	1	19.87	14.35	16.62	49.2	Bolt Bear

Force/Stress Tension Summary

Structure:	CT06462-A-2-SBA	**Code:**	EIA/TIA-222-H	2/9/2022	
Site Name:	Mountain Street	**Exposure:**	B		
Height:	196.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 16	

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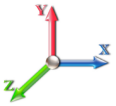
DIAGONAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	B.S. Cap (kips)	Use %	Controls
5	100	SAE - 3X3X0.25	6.44	1.2D + 1.0W 90° Wind	36	46.66	1	1	19.87	14.35	13.90	46.4	Blck Shear
6	120	SAE - 2.5X2.5X0.25	5.73	1.2D + 1.0W 90° Wind	36	38.56	1	1	19.87	14.35	12.54	45.7	Blck Shear
7	140	SAE - 2.5X2.5X0.25	4.10	0.9D + 1.0W 90° Wind	36	38.56	1	1	13.81	13.05	12.71	32.3	Blck Shear
8	160	SAE - 2X2X0.1875	3.22	1.2D + 1.0W 90° Wind	36	23.00	1	1	13.81	9.79	7.50	43.0	Blck Shear
9	168	SAE - 2X2X0.25	3.29	1.2D + 1.0W 90° Wind	36	30.46	1	1	13.81	13.05	9.99	32.9	Blck Shear
10	188	SAE - 2X2X0.25	1.25	1.2D + 1.0W 60° Wind	36	30.46	1	1	13.81	13.05	9.99	12.5	Blck Shear
11	196	SAE - 1.75X1.75X0.1875	0.24	1.2D + 1.0W 90° Wind	36	20.09	1	1	13.81	9.79	7.50	3.2	Blck Shear

Seismic Section Forces

Structure:	CT06462-A-2-SBA	**Code:**	TIA-222-H	2/9/2022	
Site Name:	Mountain Street	**Exposure:**	B		
Height:	196.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 17	



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Load Case: 1.2D + 1.0Ev + 1.0Eh

Dead Load Factor	1.20	**Sds**	0.204	**Ss**	0.1920	**Fa**	1.6000	**Ke**	1.0696	**TL**	6.0000
Seismic Load Factor	1.00	**Sd1**	0.088	**S1**	0.0550	**Fv**	2.4000	**Kg**	0.0000	**Cs**	0.0459
Seismic Importance Factor	1.00	**W1**	19.97	**R**	3.0000	**Vs**	1.8784	**T**	0.6393	**f1**	1.5643

Sect #	Elev (ft)	Wz (lb)	Lateral Fsz (lbs)	Vertical Ev (lbs)
1	10.00	5423.8	24.37	222.27
2	30.00	4749.1	68.46	194.62
3	50.00	4411.0	109.25	180.77
4	70.00	4016.1	141.63	164.58
5	90.00	3721.1	170.79	152.49
6	110.00	7802.9	467.37	319.77
7	130.00	2772.0	184.72	113.60
8	150.00	2216.3	169.45	90.83
9	164.00	807.42	63.30	33.09
10	178.00	4573.0	441.60	187.40
11	192.00	422.41	37.47	17.31

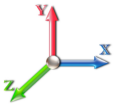
Load Case: 0.9D + 1.0Ev + 1.0Eh

Dead Load Factor	0.90	**Sds**	0.204	**Ss**	0.1920	**Fa**	1.6000	**Ke**	1.0696	**TL**	6.0000
Seismic Load Factor	1.00	**Sd1**	0.088	**S1**	0.0550	**Fv**	2.4000	**Kg**	0.0000	**Cs**	0.0459
Seismic Importance Factor	1.00	**W1**	19.97	**R**	3.0000	**Vs**	1.8784	**T**	0.6393	**f1**	1.5643

Sect #	Elev (ft)	Wz (lb)	Lateral Fsz (lbs)	Vertical Ev (lbs)
1	10.00	5423.8	24.37	222.27
2	30.00	4749.1	68.46	194.62
3	50.00	4411.0	109.25	180.77
4	70.00	4016.1	141.63	164.58
5	90.00	3721.1	170.79	152.49
6	110.00	7802.9	467.37	319.77
7	130.00	2772.0	184.72	113.60
8	150.00	2216.3	169.45	90.83
9	164.00	807.42	63.30	33.09
10	178.00	4573.0	441.60	187.40
11	192.00	422.41	37.47	17.31

Support Forces Summary

Structure:	CT06462-A-2-SBA		**Code:**	TIA-222-H	2/9/2022
Site Name:	Mountain Street		**Exposure:**	B	
Height:	196.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	0.85	**Topography:** 1	**Struct Class:**	II	Page: 18



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Load Case	Node	FX (kips)	FY (kips)	FZ (kips)	(-) = Uplift (+) = Down
1.2D + 1.0W Normal Wind	1	0.01	247.23	-26.69	
	1a	8.71	-99.09	-8.52	
	1b	-8.72	-99.04	-8.50	
1.2D + 1.0W 60° Wind	1	-2.78	125.75	-13.15	
	1a	-12.74	125.29	4.22	
	1b	-20.07	-201.94	-11.62	
1.2D + 1.0W 90° Wind	1	-3.31	16.37	-1.06	
	1a	-20.09	207.93	9.78	
	1b	-18.36	-175.20	-8.72	
0.9D + 1.0W Normal Wind	1	0.01	242.93	-26.42	
	1a	8.94	-103.07	-8.65	
	1b	-8.95	-103.04	-8.64	
0.9D + 1.0W 60° Wind	1	-2.79	121.56	-12.88	
	1a	-12.50	121.10	4.08	
	1b	-20.30	-205.84	-11.75	
0.9D + 1.0W 90° Wind	1	-3.31	12.28	-0.79	
	1a	-19.85	203.67	9.65	
	1b	-18.59	-179.12	-8.85	
1.2D + 1.0Di + 1.0Wi Normal Wind	1	0.00	88.55	-5.00	
	1a	3.62	1.55	-2.92	
	1b	-3.62	1.60	-2.92	
1.2D + 1.0Di + 1.0Wi 60° Wind	1	-0.70	58.65	-1.69	
	1a	-1.80	58.51	0.26	
	1b	-6.55	-25.46	-3.79	
1.2D + 1.0Di + 1.0Wi 90° Wind	1	-0.82	30.56	1.39	
	1a	-3.65	79.45	1.66	
	1b	-6.08	-18.30	-3.06	
1.2D + 1.0Ev + 1.0Eh	1	0.00	28.58	5.12	
	1a	5.86	11.10	-3.48	
	1b	-5.86	11.10	-3.48	
0.9D + 1.0Ev + 1.0Eh	1	0.00	24.47	5.40	
	1a	6.10	7.01	-3.62	
	1b	-6.10	7.01	-3.62	
1.0D + 1.0W Normal Wind	1	0.00	70.96	-7.35	
	1a	1.63	-15.04	-1.83	
	1b	-1.63	-15.00	-1.82	
1.0D + 1.0W 60° Wind	1	-0.72	40.81	-3.94	
	1a	-3.77	40.68	1.36	
	1b	-4.48	-40.58	-2.59	
1.0D + 1.0W 90° Wind	1	-0.85	13.64	-0.90	
	1a	-5.61	61.20	2.77	
	1b	-4.05	-33.93	-1.86	

Max Reactions

	Leg			Overturning	
Max Uplift:	-205.84	(kips)	Moment:	4598.48	(ft-kips)
Max Down:	247.23	(kips)	Total Down:	49.10	(kips)
Max Shear:	26.69	(kips)	Total Shear:	43.71	(kips)

Max Reactions

Leg			Overturning		
Max Uplift:	-205.84	(kips)	Moment:	4598.48	(ft-kips)
Max Down:	247.23	(kips)	Total Down:	49.10	(kips)
Max Shear:	26.69	(kips)	Total Shear:	43.71	(kips)

Anchor Bolts

Bolt Size (in.):	1.00	Number Bolts:	10	Type:	UnGrouted
Yield Strength (Ksi):	109.00	Tensile Strength (Ksi):	125.00		
		Length:	0.75		

Interaction Ratios:

Tensile: **0.37** Compression: **0.33**

Max Usages

Max Leg: 55.6% (1.2D + 1.0W Normal Wind - Sect 2)
Max Diag: 55.8% (1.2D + 1.0W 90° Wind - Sect 1)
Max Horiz: 3.5% (0.9D + 1.0W 90° Wind - Sect 8)

Max Deflection, Twist and Sway

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)
0.9D + 1.0Ev + 1.0Eh - Normal To Face	106.67	0.0198	0.0010	0.0209
	120.00	0.0248	-0.0011	0.0232
	126.67	0.0275	0.0012	0.0250
	133.33	0.0304	-0.0013	0.0271
	155.00	0.0417	-0.0015	0.0346
	160.00	0.0425	0.0000	0.0358
	164.00	0.0472	0.0015	0.0370
	168.00	0.0499	-0.0014	0.0387
	184.00	0.0609	-0.0012	0.0398
0.9D + 1.0W 121 mph Wind at 60° From Face	106.67	0.3301	-0.1113	0.3585
	120.00	0.4186	-0.1419	0.4012
	126.67	0.4653	0.0440	0.4015
	133.33	0.5178	-0.2037	0.4482
	155.00	0.7080	-0.2818	0.5387
	160.00	0.7570	-0.2918	0.5306
	164.00	0.7953	0.0698	0.5800
	168.00	0.8377	-0.2908	0.5834
	184.00	1.0013	-0.2878	0.5923
0.9D + 1.0W 121 mph Wind at 90° From Face	106.67	0.3339	-0.1508	0.3617
	120.00	0.4236	-0.1928	0.4078
	126.67	0.4716	0.0883	0.3839
	133.33	0.5237	-0.2782	0.4507
	155.00	0.7161	-0.3928	0.5303
	160.00	0.7659	-0.4089	0.5026
	164.00	0.8048	0.1271	0.5793
	168.00	0.8477	-0.4093	0.5895
	184.00	1.0129	-0.4073	0.5999

0.9D + 1.0W 121 mph Wind at Normal To Face	106.67	0.3484	-0.0512	0.3823
	120.00	0.4418	-0.0713	0.4225
	126.67	0.4920	-0.0909	0.4963
	133.33	0.5467	0.0141	0.5279
	155.00	0.7482	-0.1149	0.6202
	160.00	0.7998	-0.0001	0.6498
	164.00	0.8421	-0.1114	0.6236
	168.00	0.8860	-0.1096	0.6212
	184.00	1.0601	-0.1060	0.6304
1.0D + 1.0W 60 mph Wind at 60° From Face	106.67	0.0816	-0.0270	0.0884
	120.00	0.1034	-0.0344	0.0987
	126.67	0.1150	0.0068	0.0989
	133.33	0.1278	-0.0495	0.1103
	155.00	0.1745	-0.0656	0.1322
	160.00	0.1865	-0.0671	0.1302
	164.00	0.1959	0.0100	0.1421
	168.00	0.2063	-0.0637	0.1432
	184.00	0.2463	-0.0586	0.1449
1.0D + 1.0W 60 mph Wind at 90° From Face	106.67	0.0826	-0.0322	0.0892
	120.00	0.1047	-0.0410	0.1001
	126.67	0.1166	0.0192	0.0945
	133.33	0.1293	-0.0591	0.1110
	155.00	0.1765	-0.0786	0.1306
	160.00	0.1886	-0.0803	0.1237
	164.00	0.1983	0.0241	0.1420
	168.00	0.2087	-0.0762	0.1448
	184.00	0.2491	-0.0700	0.1468
1.0D + 1.0W 60 mph Wind at Normal To Face	106.67	0.0863	-0.0117	0.0942
	120.00	0.1093	-0.0164	0.1041
	126.67	0.1216	-0.0209	0.1220
	133.33	0.1352	0.0029	0.1296
	155.00	0.1847	-0.0251	0.1523
	160.00	0.1973	0.0000	0.1597
	164.00	0.2076	-0.0235	0.1530
	168.00	0.2184	-0.0227	0.1524
	184.00	0.2611	-0.0208	0.1547
1.2D + 1.0Di + 1.0Wi 50 mph Wind at 60° From Face	106.67	0.0861	-0.0330	0.0926
	120.00	0.1088	-0.0423	0.1034
	126.67	0.1193	0.0072	0.1028
	133.33	0.1341	-0.0611	0.1157
	155.00	0.1825	-0.0805	0.1377
	160.00	0.1941	-0.0822	0.1335
	164.00	0.2038	0.0101	0.1472
	168.00	0.2153	-0.0780	0.1493
	184.00	0.2571	-0.0717	0.1509
1.2D + 1.0Di + 1.0Wi 50 mph Wind at 90° From Face	106.67	0.0864	-0.0394	0.0929
	120.00	0.1092	-0.0505	0.1044
	126.67	0.1200	0.0232	0.0960
	133.33	0.1347	-0.0731	0.1155
	155.00	0.1832	-0.0966	0.1344
	160.00	0.1956	-0.0987	0.1235
	164.00	0.2048	0.0283	0.1463
	168.00	0.2163	-0.0936	0.1500
	184.00	0.2582	-0.0859	0.1518
1.2D + 1.0Di + 1.0Wi 50 mph Wind at Normal From Face	106.67	0.0883	-0.0159	0.0970
	120.00	0.1119	-0.0220	0.1069
	126.67	0.1246	-0.0278	0.1282
	133.33	0.1382	0.0048	0.1357
	155.00	0.1888	-0.0331	0.1569
	160.00	0.2008	0.0000	0.1663
	164.00	0.2123	-0.0312	0.1555
	168.00	0.2233	-0.0302	0.1554
	184.00	0.2669	-0.0277	0.1578

1.2D + 1.0Ev + 1.0Eh - Normal To Face	106.67	0.0198	0.0010	0.0210
	120.00	0.0248	0.0011	0.0232
	126.67	0.0275	0.0012	0.0250
	133.33	0.0304	-0.0013	0.0272
	155.00	0.0417	0.0015	0.0347
	160.00	0.0425	0.0000	0.0359
	164.00	0.0473	0.0015	0.0370
	168.00	0.0500	0.0014	0.0388
	184.00	0.0609	0.0012	0.0399
1.2D + 1.0W 121 mph Wind at 60° From Face	106.67	0.3305	-0.1113	0.3590
	120.00	0.4191	-0.1419	0.4017
	126.67	0.4658	0.0441	0.4021
	133.33	0.5184	-0.2037	0.4489
	155.00	0.7089	-0.2818	0.5394
	160.00	0.7579	-0.2919	0.5314
	164.00	0.7963	0.0699	0.5809
	168.00	0.8388	-0.2908	0.5841
	184.00	1.0026	-0.2878	0.5932
1.2D + 1.0W 121 mph Wind at 90° From Face	106.67	0.3343	-0.1508	0.3622
	120.00	0.4241	-0.1929	0.4082
	126.67	0.4721	0.0884	0.3845
	133.33	0.5244	-0.2783	0.4515
	155.00	0.7169	-0.3929	0.5313
	160.00	0.7668	-0.4090	0.5034
	164.00	0.8058	0.1272	0.5802
	168.00	0.8487	-0.4094	0.5905
	184.00	1.0142	-0.4074	0.6008
1.2D + 1.0W 121 mph Wind at Normal To Face	106.67	0.3488	-0.0512	0.3828
	120.00	0.4423	-0.0713	0.4230
	126.67	0.4926	-0.0909	0.4969
	133.33	0.5474	0.0140	0.5285
	155.00	0.7492	-0.1148	0.6212
	160.00	0.8009	-0.0001	0.6508
	164.00	0.8433	-0.1113	0.6246
	168.00	0.8873	-0.1096	0.6220
	184.00	1.0616	-0.1059	0.6314

Last revised on 1-3-2022

Mat Foundation Design for Self Supporting Tower

			Date: 2/9/2022
Customer Name:	SBA Communications Corp	TIA Standard:	TIA-222-H
Site Name:		Structure Height (Ft.):	196
Site Nmber:	CT06462-A-2-SBA	Engineer Name:	J. Tibbetts
Engr. Number:	123544	Engineer Login ID:	

Foundation Info Obtained from: Drawings/Calculations

Analysis or Design? Analysis

Number of Tower Legs: 3 Legs

Base Reactions (Factored):

(1). Individual Leg:

Axial Load (Kips):	247.2	Uplift Force (Kips):	205.8
Shear Force (Kips):	26.7		

(2). Tower Base:

Total Vertical Load (Kips):	49.1	Total Shear Force (Kips):	43.7
Moment (Kips-ft):	4598.5		

Foundation Geometries:

Leg distance (Center-to-Center ft.):		23.0	Mods required -Yes/No ?:	No	
Diameter of Pier (ft.):	Round	2.2	Pier Height A. G. (ft.):	0.00	
Tower center to mat center (ft):		0	Depth of Base BG (ft.):	3.5	
Length of Pad (ft.):		36	Width of Pad (ft.):	36	
Thickness of Pad (ft):		4.00			

Material Properties and Reabr Info:

Concrete Strength (psi):	3000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	7	Tie / Stirrup Size #:	4	
Qty. of Vertical Rebars:	20	Tie Spacing (in):	6.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	7	
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf

Rebar at the bottom of the concrete pad:

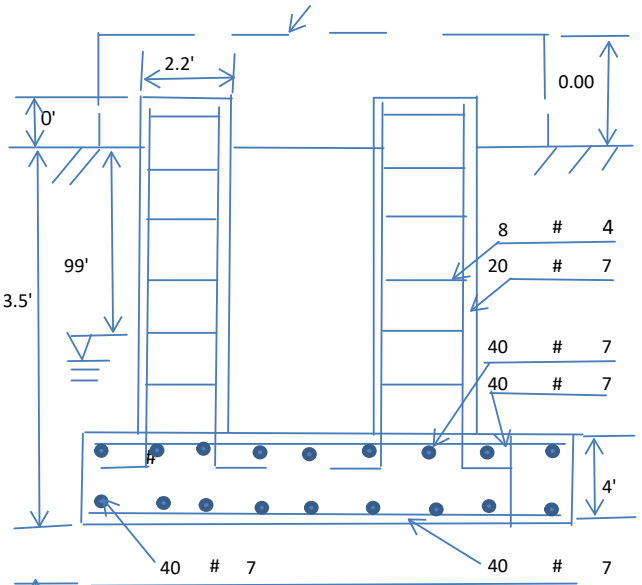
Qty. of Rebar in Pad (L):	40	Qty. of Rebar in Pad (W):	40

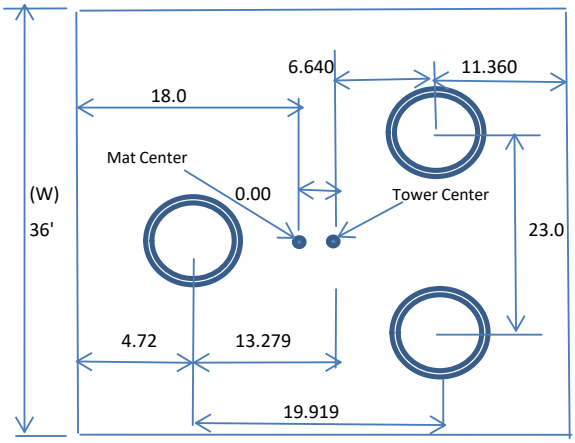
Rebar at the top of the concrete pad:

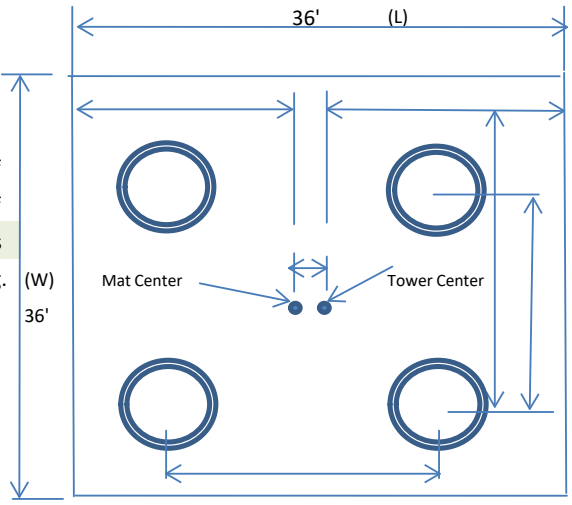
Qty. of Rebar in Pad (L):	40	Qty. of Rebar in Pad (W):	40

Soil Design Parameters:

Soil Unit Weight (pcf):	120.0	Soil Buoyant Weight:	50.0	Pcf
Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4	pcf
Ultimate Bearing Pressure (psf):	4000	Consider ties in concrete shear strength:	Yes	
Consider Soil Lateral Resistance ?	Yes	Enter soil C (psf) or Phi (deg.):	30.0	Deg.
		Depth to ignor lateral resistance	1.0	Ft.







Apply 1.35 for e/w per G/H: 1.35

Foundation Analysis and Design:	Uplift Strength Reduction Factor:	0.75	Compression Strength Reduction Factor:	0.75			
Total Dry Soil Volume (cu. Ft.):		2.57	Total Dry Soil Weight (Kips):	0.31			
Total Buoyant Soil Volume (cu. Ft.):		0.00	Total Buoyant Soil Weight (Kips):	0.00			
Total Effective Soil Weight (Kips):		0.31	Weight from the Concrete Block at Top (K):	0.00			
Total Dry Concrete Volume (cu. Ft.):		5184.08	Total Dry Concrete Weight (Kips):	777.61			
Total Buoyant Concrete Volume (cu. Ft.):		0.00	Total Buoyant Concrete Weight (Kips):	0.00			
Total Effective Concrete Weight (Kips):		777.61	Total Vertical Load on Base (Kips):	827.02			
Check Soil Capacities:						Load/ Capacity Ratio	
Calculated Maxium Net Soil Pressure under the base (psf):		1210.41	<	Allowable Factored Soil Bearing (psf):	3000	0.40	OK!
Allowable Foundation Overturning Resistance (kips-ft.):		13486.1	>	Design Factored Momont (kips-ft):	4774	0.35	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):		2.83	OK!				
Check the capacities of Reinforceing Concrete:							
Strength reduction factor (Flexure and axial tension):		0.90	Strength reduction factor (Shear):		0.75		
Strength reduction factor (Axial compresion):		0.65	Wind Load Factor on Concrete Design:		1.00		
(1) Concrete Pier:						Load/ Capacity Ratio	
	Vertical Steel Rebar Area (sq. in./each):	0.60		Tie / Stirrup Area (sq. in./each):	0.20		
	Calculated Moment Capacity (Mn,Kips-Ft):	363.3	>	Design Factored Moment (Mu, Kips-Ft)	0.2	0.00	OK!
	Calculated Shear Capacity (Kips):	69.4	>	Design Factored Shear (Kips):	26.7	0.38	OK!
	Calculated Tension Capacity (Tn, Kips):	648.0	>	Design Factored Tension (Tu Kips):	205.8	0.32	OK!
	Calculated Compression Capacity (Pn, Kips):	709.9	>	Design Factored Axial Load (Pu Kips):	247.2	0.35	OK!
	Moment & Tension Strength Combination:	0.00	OK!	Check Tie Spacing (Design/Req'd):	0.57		
	Pier Reinforcement Ratio:	0.022	Reinforcement Ratio is satisfied per ACI				
(2).Concrete Pad:							
	One-Way Design Shear Capacity (L or W Direction, Kips):	1581.6	>	One-Way Factored Shear (L/W-Dir Kips	399.0	0.25	OK!
	One-Way Design Shear Capacity (Diagonal Dir., Kips):	1332.7	>	One-Way Factored Shear (Dia. Dir, Kips	358.9	0.27	OK!
	Lower Steel Pad Reinforcement Ratio (L or W-Direct.):	0.0012		Lower Steel Reinf. Ratio (Dia. Dir.):	0.0011		
	Lower Steel Pad Moment Capacity (L or W-Dir. Kips-ft):	4742.2	>	Moment at Bottom (L-Direct. K-Ft):	2161.6	0.46	OK!
	Lower Steel Pad Moment Capacity (Dia. Direction,K-ft):	4597.7	>	Moment at Bottom (Dia. Dir. K-Ft):	1752.6	0.38	OK!
	Upper Steel Pad Reinforcement Ratio (L or W -Direction):	0.0012		Upper Steel Reinf. Ratio (Dia. Dir.):	0.0011		
	Upper Steel Pad Moment Capacity (L or W-Dir., Kips-ft):	4742.2	>	Moment at the top (L-Dir Kips-Ft):	1010.6	0.21	OK!
	Upper Steel Pad Moment Capacity (Dia. Direction, K-ft):	4597.7	>	Moment at the top (Dia. Dir., K-Ft):	626.1	0.14	OK!
	Punching Failure Capacity From Down Load (Kips):	1632.4	>	Punch. Failure Factored Shear (K):	247.2	0.15	OK!
	Punching Failure Capacity From Uplift (Kips):	1474.3	>	Punch. Failure Factored Shear (K):	205.8	0.14	OK!
(3). Check Max. eccentricity of Loading:							
	The maximum eccentricity of Loading:	5.77	ft.	Allowable eccentricity (0.45 W, ft.):	16.2		OK!

Exhibit E

Mount Analysis

March 16, 2022

Sherri Knapik
SBA Network Services, LLC.
134 Flanders Road, Suite 125
Westborough, MA 01581
(508) 251-0720 x 3805

B+T Group
1717 S. Boulder, Suite 300
Tulsa, OK 74119
(918) 587-4630
towersupport@btgrp.com

Subject:	**Appurtenance Mount Analysis Report**	
Carrier Designation:	***Dish Wireless* Co-Locate**	
	Site Number:	BOBDL00005D
	Site Name:	N/A
***SBA Network Services Designation*:**	**Site Number:**	CT06462-A-13
	Site Name:	Mountain Street
	Application Number:	186564, v1
Engineering Firm Designation:	**B+T Group Project Number:**	160923.002.01
Site Data:	**349 Mountain Street, Windham, CT, 06226, Windham County**	
	Latitude *41.70301*°, Longitude *-72.22139*°	
	Self-Support Tower	
	8' Sector Mount	

Dear Ms. Knapik,

B+T Group is 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 Note: See Table 1 for the final loading configuration	**Sufficient Capacity** **(Passing at 52.1%)**

This analysis utilizes an ultimate 3-second gust wind speed of 121 mph as required by the 2018 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 at *B+T Group* 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: Massood Sattari

Respectfully submitted by: B&T Engineering, Inc.
COA: PEC.0001564 Expires: 02/01/2023

Chad E. Tuttle, P.E.

TABLE OF CONTENTS

1) INTRODUCTION

The appurtenance mount consists of Commscope sector mount (Part # MTC3975083w/ 16ft. long tieback) at 107 ft., attached to Self-Support Tower at 349 Mountain Street, Windham, CT, 06226, Windham County. The proposed antenna loading information was obtained from SBA Network Services, LLC. All information provided to B+T Group was 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 121 mph with no ice and 50 mph with 1.0 inch escalated ice thickness. Exposure Category C, Topographic Category 1 and Risk Category II were used in this analysis. In addition, the Sector 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 30 mph. The mount was analyzed under 30º 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	107	1	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 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
Collo App	Proposed Loading	Date: 02/17/2022	SBA Network Services, LLC.
RFDS		Date: 01/19/2022	

3) ANALYSIS PROCEDURE

3.1) Analysis Method

RISA-3D (Version 19.0.4), 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.

Manufacturers drawing 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.

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. B+T Group 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

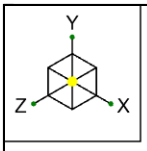
Notes	Component	Elevation (ft.)	% Capacity	Pass / Fail
-	Face Horizontals	107	13.0	Pass
-	Support Arm	107	29.5	Pass
-	Diagonals	107	29.8	Pass
-	Connection Plates	107	24.3	Pass
-	Verticals	107	52.1	Pass
-	Tieback	107	36.5	Pass
-	Mount Pipes	107	15.9	Pass
	Connection Bolts	107	17.1	Pass

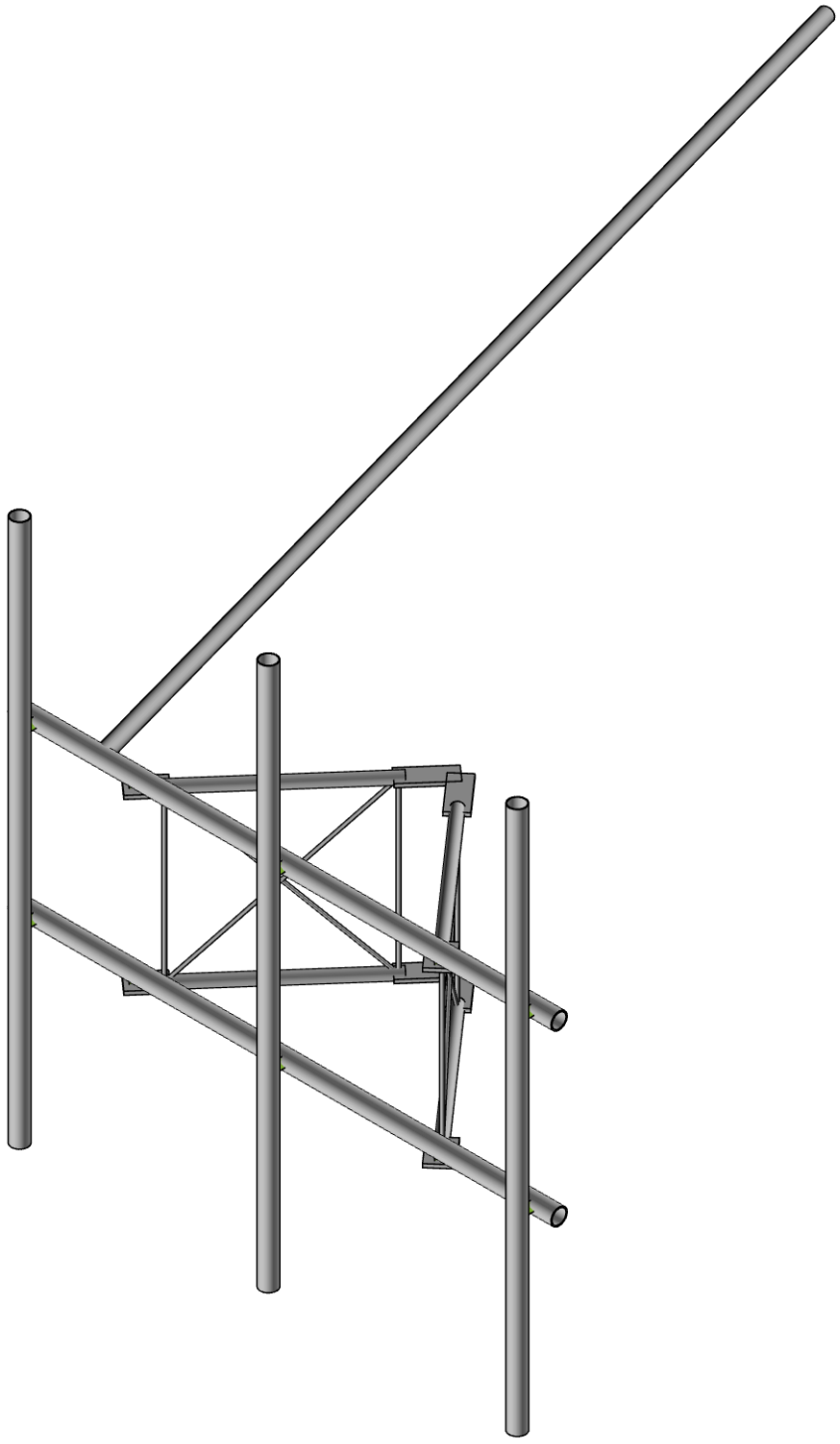
5) RECOMMENDATIONS

The Commscope sector mount (Part # MTC3975083w/ 16ft. tieback pipe) 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).

APPENDIX A

(RISA-3D Output)





Envelope Only Solution

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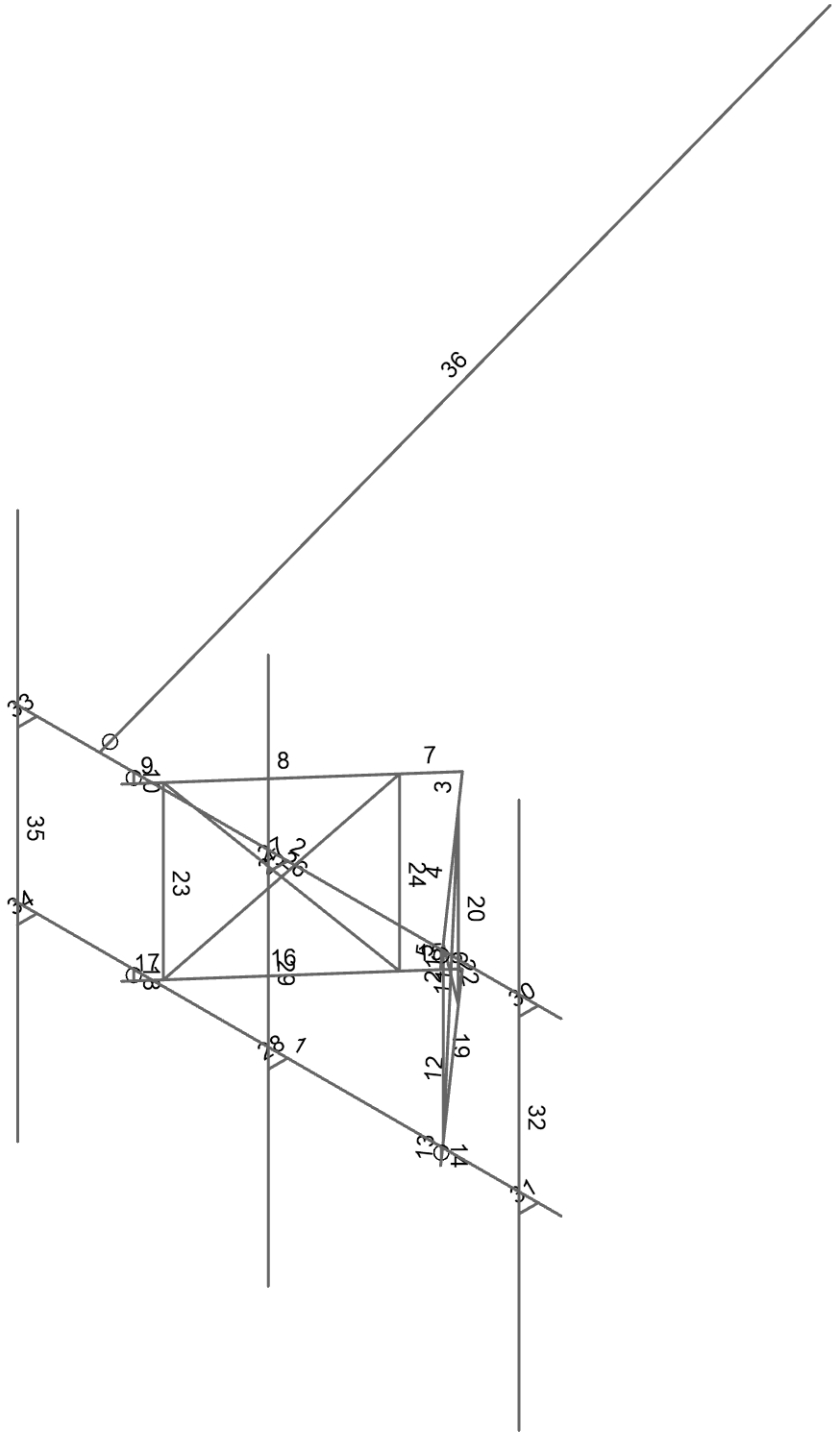

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SP		Mar 16, 2022
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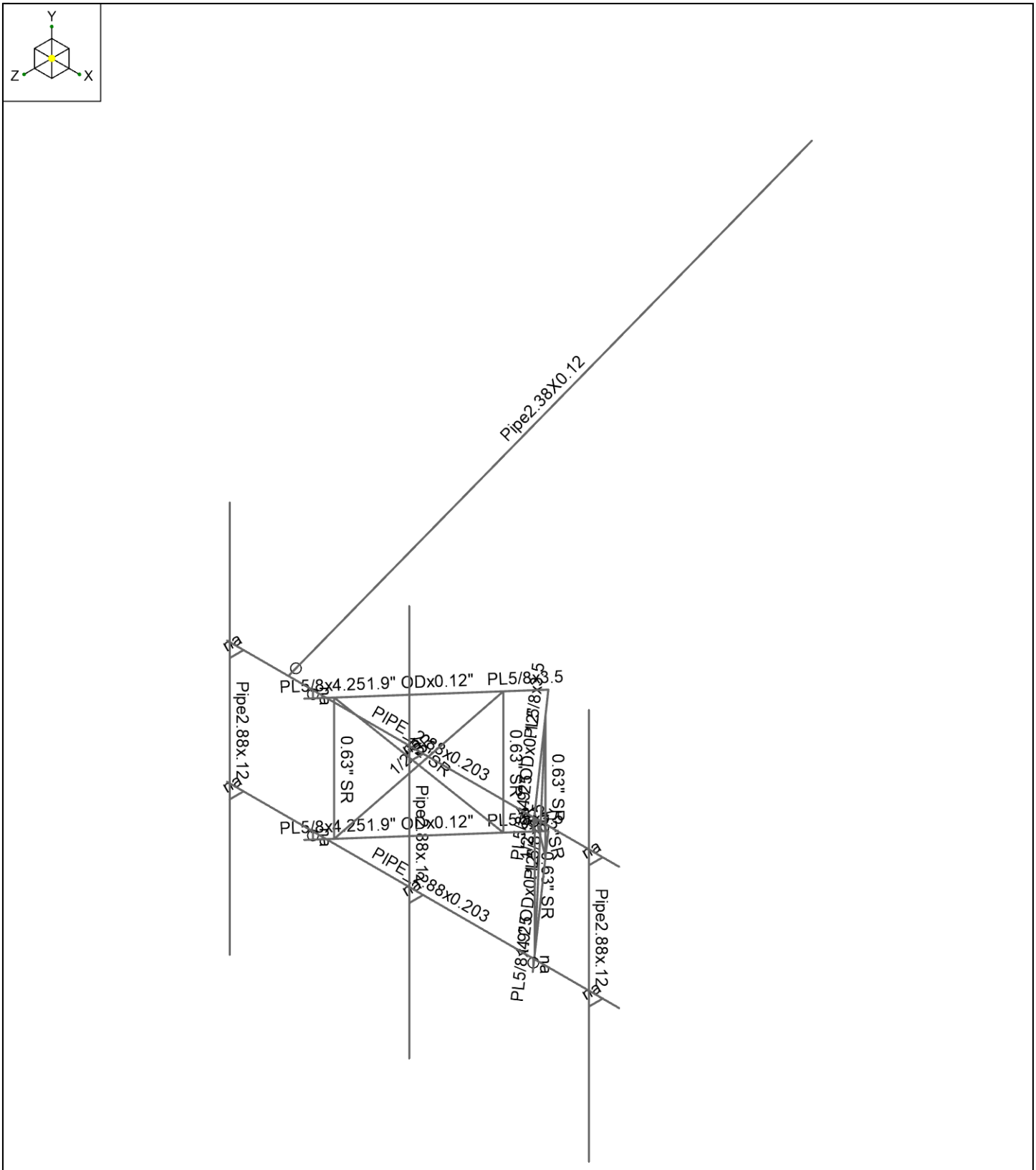
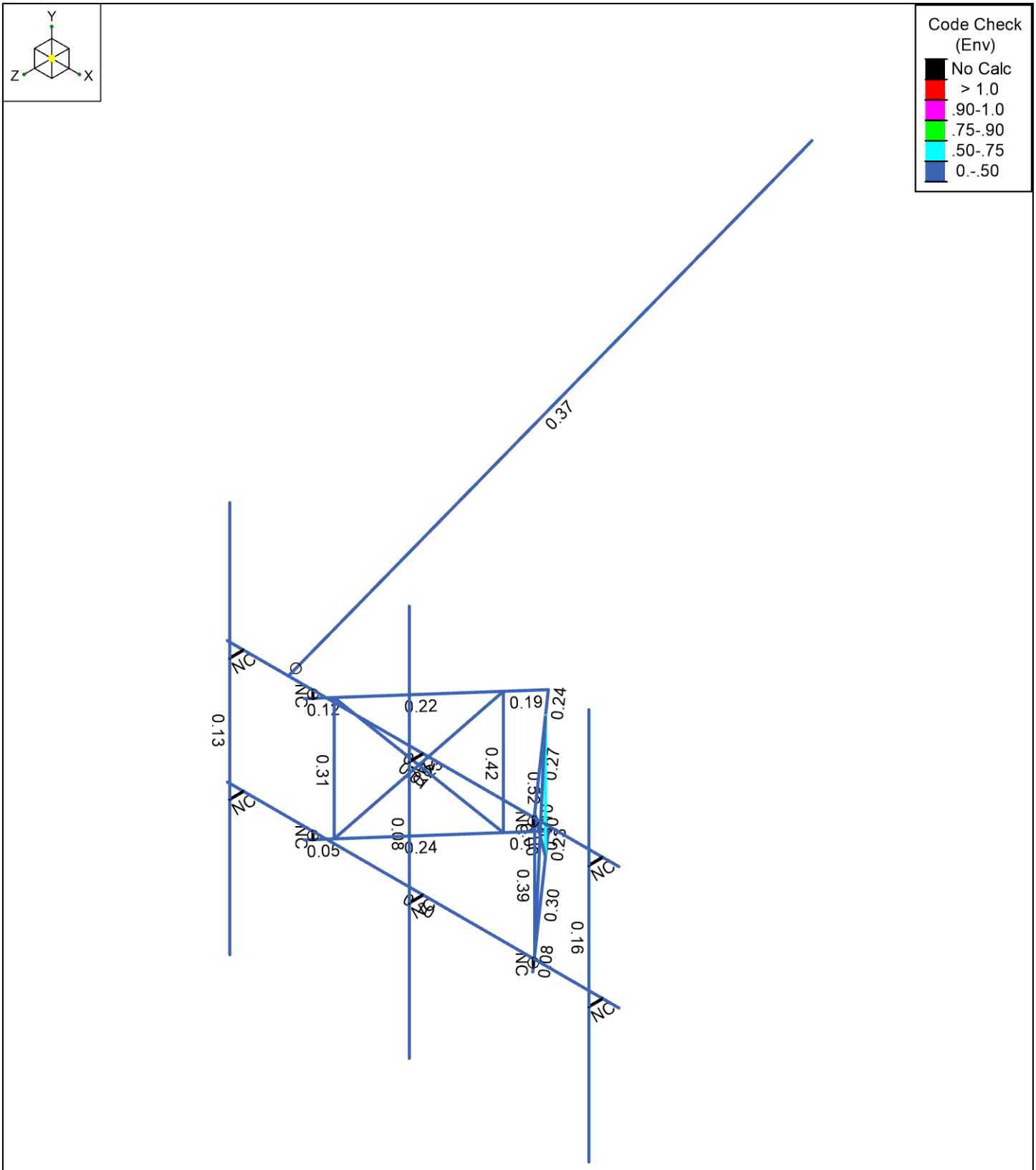


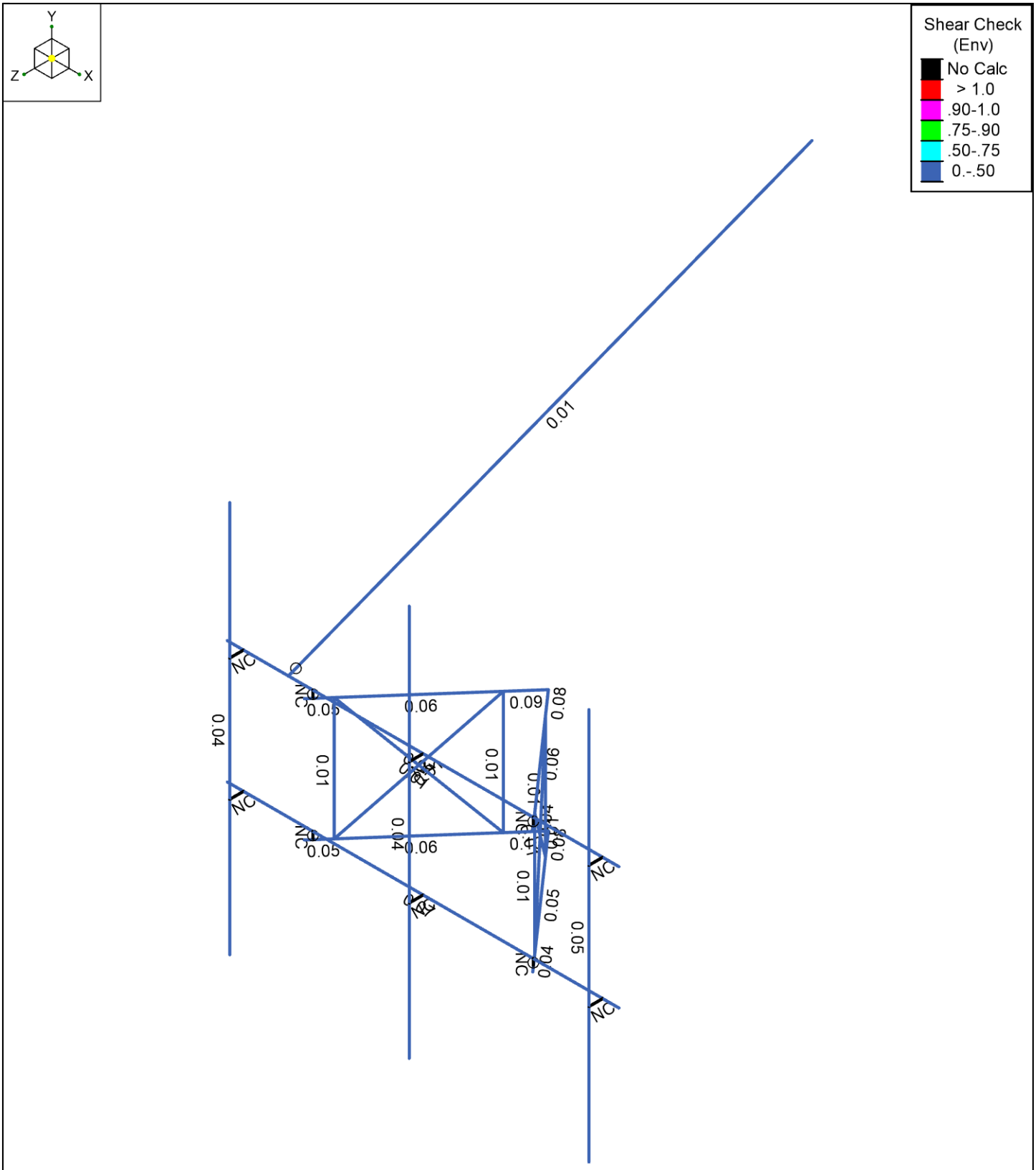
Envelope Only Solution

B+T Group	CT06462-A-13 - Mountain Street	SP-3
SP		Mar 16, 2022
160923.002.01		160923_002_01_Mountain Street_…



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

B+T Group	CT06462-A-13 - Mountain Street	SP-4
SP		Mar 16, 2022
160923.002.01		160923_002_01_Mountain Street_…



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

B+T Group	CT06462-A-13 - Mountain Street	SP-5
SP		Mar 16, 2022
160923.002.01		160923_002_01_Mountain Street_…

Node Coordinates

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1	1	-4	-2.354167	2.796875	
2	2	4	-2.354167	2.796875	
3	3	-4	0.145833	2.796875	
4	4	4	0.145833	2.796875	
5	5	0.467947	0	0.771833	
6	6	0.385368	0	0.677994	
7	7	2.091999	0.	2.61733	
8	8	2.00942	0.	2.523491	
9	9	2.332579	0.	2.890714	
10	10	2.25	0.145833	2.796875	
11	11	2.25	0.	2.796875	
12	12	0.	0	0.24008	
13	13	-0.467947	0	0.771833	
14	14	-0.385368	0	0.677994	
15	15	-2.091999	0.	2.61733	
16	16	-2.00942	0.	2.523491	
17	17	-2.332579	0.	2.890714	
18	18	-2.25	0.145833	2.796875	
19	19	-2.25	0.	2.796875	
20	20	0.467947	-2.5	0.771833	
21	21	0.385368	-2.5	0.677994	
22	22	2.091999	-2.5	2.61733	
23	23	2.00942	-2.5	2.523491	
24	24	2.332579	-2.5	2.890714	
25	25	2.25	-2.354167	2.796875	
26	26	2.25	-2.5	2.796875	
27	27	0.	-2.5	0.24008	
28	28	-0.467947	-2.5	0.771833	
29	29	-0.385368	-2.5	0.677994	
30	30	-2.091999	-2.5	2.61733	
31	31	-2.00942	-2.5	2.523491	
32	32	-2.332579	-2.5	2.890714	
33	33	-2.25	-2.354167	2.796875	
34	34	-2.25	-2.5	2.796875	
35	35	0.430236	0	0.72898	
36	36	2.047131	-2.5	2.566344	
37	37	2.047131	0.	2.566344	
38	38	0.430236	-2.5	0.72898	
39	39	-0.430236	0	0.72898	
40	40	-2.047131	-2.5	2.566344	
41	41	-2.047131	0.	2.566344	
42	42	-0.430236	-2.5	0.72898	
43	43	0.	0.145833	2.796875	
44	44	0.	0.145833	3.078125	
45	45	0.	-2.354167	2.796875	
46	46	0.	-2.354167	3.078125	
47	47	0.	2.895833	3.078125	
48	48	0.	-5.104167	3.078125	
49	49	3.666667	0.145833	2.796875	
50	50	3.666667	0.145833	3.078125	
51	51	3.666667	-2.354167	2.796875	
52	52	3.666667	-2.354167	3.078125	
53	53	3.666667	2.895833	3.078125	
54	54	3.666667	-5.104167	3.078125	
55	55	-3.666667	0.145833	2.796875	
56	56	-3.666667	0.145833	3.078125	
57	57	-3.666667	-2.354167	2.796875	
58	58	-3.666667	-2.354167	3.078125	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
59	59	-3.666667	2.895833	3.078125	
60	60	-3.666667	-5.104167	3.078125	
61	61	0	0	0	
62	62	-2.75	0.145833	2.796875	
63	63	-7.023469	0	-12.165006	
64	64	7.023469	0	-12.165006	

Node Boundary Conditions

	Y [k/in]	X [k/in]	Z [k/in]	Node Label
1	Reaction	Reaction	Reaction	12
2	Reaction	Reaction	Reaction	27
3	Reaction	Reaction	Reaction	63

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e⁵°F⁻¹]	Density [k/ft³]	Yield [ksi]	Ry	Fu [ksi]	Rt
1	A992	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	0.3	0.65	0.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	0.3	0.65	0.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	0.3	0.65	0.49	35	1.6	60	1.2
7	A1085	29000	11154	0.3	0.65	0.49	50	1.4	65	1.3
8	A529 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
9	A500 Gr.42	29000	11154	0.3	0.65	0.49	42	1.4	58	1.3
10	A500 Gr.46	29000	11154	0.3	0.65	0.49	46	1.4	58	1.3
11	A500 Gr.C	29000	11154	0.3	0.65	0.49	46	1.4	62	1.3

Cold Formed Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e⁵°F⁻¹]	Density [k/ft³]	Yield [ksi]	Fu [ksi]
1	A653 SS Gr33	29500	11346	0.3	0.65	0.49	33	45
2	A653 SS Gr50/1	29500	11346	0.3	0.65	0.49	50	65

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in²]	Iyy [in⁴]	Izz [in⁴]	J [in⁴]
1	MF-H1	PIPE_2.88x0.203	Beam	Pipe	A500 Gr.C	Typical	1.707	1.538	1.538	3.076
2	MF- SA1	1.9" ODx0.12"	Beam	Pipe	A500 Gr.B RND	Typical	0.671	0.267	0.267	0.534
3	MF-D1	1/2" SR	VBrace	BAR	A529 Gr.50	Typical	0.196	0.003	0.003	0.006
4	MF-CP1	PL5/8x3.5	Beam	RECT	A572 Gr.50	Typical	2.205	0.073	2.251	0.259
5	MF-V1	0.63" SR	Column	BAR	A529 Gr.50	Typical	0.312	0.008	0.008	0.015
6	MF-CP2	PL5/8x4.25	Beam	RECT	A572 Gr.50	Typical	2.656	0.086	3.998	0.314
7	Tieback	Pipe2.38X0.12	Beam	Pipe	A500 Gr.C	Typical	0.852	0.545	0.545	1.091
8	MF-P1	Pipe2.88x.12	Column	Pipe	A500 Gr.C	Typical	1.04	0.993	0.993	1.985

Cold Formed Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in²]	Iyy [in⁴]	Izz [in⁴]	J [in⁴]
1	CF1	8CU1.25X057	Beam	None	A653 SS Gr33	Typical	0.581	0.057	4.41	0.00063

Member Primary Data

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
1	1	1	2		MF-H1	Beam	Pipe	A500 Gr.C	Typical
2	2	3	4		MF-H1	Beam	Pipe	A500 Gr.C	Typical
3	3	12	5	90	MF-CP1	Beam	RECT	A572 Gr.50	Typical
4	4	6	7		MF- SA1	Beam	Pipe	A500 Gr.B RND	Typical
5	5	8	9	90	MF-CP2	Beam	RECT	A572 Gr.50	Typical
6	6	10	11	90	RIGID	None	None	RIGID	Typical
7	7	12	13	90	MF-CP1	Beam	RECT	A572 Gr.50	Typical
8	8	14	15		MF- SA1	Beam	Pipe	A500 Gr.B RND	Typical
9	9	16	17	90	MF-CP2	Beam	RECT	A572 Gr.50	Typical
10	10	18	19	90	RIGID	None	None	RIGID	Typical
11	11	27	20	90	MF-CP1	Beam	RECT	A572 Gr.50	Typical
12	12	21	22		MF- SA1	Beam	Pipe	A500 Gr.B RND	Typical
13	13	23	24	90	MF-CP2	Beam	RECT	A572 Gr.50	Typical
14	14	25	26	90	RIGID	None	None	RIGID	Typical
15	15	27	28	90	MF-CP1	Beam	RECT	A572 Gr.50	Typical
16	16	29	30		MF- SA1	Beam	Pipe	A500 Gr.B RND	Typical
17	17	31	32	90	MF-CP2	Beam	RECT	A572 Gr.50	Typical
18	18	33	34	90	RIGID	None	None	RIGID	Typical
19	19	37	36		MF-V1	Column	BAR	A529 Gr.50	Typical
20	20	35	38		MF-V1	Column	BAR	A529 Gr.50	Typical
21	21	35	36		MF-D1	VBrace	BAR	A529 Gr.50	Typical
22	22	37	38		MF-D1	VBrace	BAR	A529 Gr.50	Typical
23	23	41	40		MF-V1	Column	BAR	A529 Gr.50	Typical
24	24	39	42		MF-V1	Column	BAR	A529 Gr.50	Typical
25	25	39	40		MF-D1	VBrace	BAR	A529 Gr.50	Typical
26	26	41	42		MF-D1	VBrace	BAR	A529 Gr.50	Typical
27	27	43	44	90	RIGID	None	None	RIGID	Typical
28	28	45	46	90	RIGID	None	None	RIGID	Typical
29	29	47	48		MF-P1	Column	Pipe	A500 Gr.C	Typical
30	30	49	50	90	RIGID	None	None	RIGID	Typical
31	31	51	52	90	RIGID	None	None	RIGID	Typical
32	32	53	54		MF-P1	Column	Pipe	A500 Gr.C	Typical
33	33	55	56	90	RIGID	None	None	RIGID	Typical
34	34	57	58	90	RIGID	None	None	RIGID	Typical
35	35	59	60		MF-P1	Column	Pipe	A500 Gr.C	Typical
36	36	62	63		Tieback	Beam	Pipe	A500 Gr.C	Typical

Member Advanced Data

	Label	I Release	T/C Only	Physical	Deflection Ratio Options	Seismic DR
1	1			Yes		None
2	2			Yes	Default	None
3	3			Yes		None
4	4			Yes		None
5	5			Yes		None
6	6	OOOOXO		Yes	** NA **	None
7	7			Yes		None
8	8			Yes		None
9	9			Yes		None
10	10	OOOOXO		Yes	** NA **	None
11	11			Yes		None
12	12			Yes		None
13	13			Yes		None
14	14	OOOOXO		Yes	** NA **	None
15	15			Yes		None
16	16			Yes		None
17	17			Yes		None
18	18	OOOOXO		Yes	** NA **	None

Member Advanced Data (Continued)

	Label	I Release	T/C Only	Physical	Deflection Ratio Options	Seismic DR
19	19			Yes	** NA **	None
20	20			Yes	** NA **	None
21	21			Yes	** NA **	None
22	22		Euler Buckling	Yes	** NA **	None
23	23			Yes	** NA **	None
24	24			Yes	** NA **	None
25	25			Yes	** NA **	None
26	26		Euler Buckling	Yes	** NA **	None
27	27			Yes	** NA **	None
28	28			Yes	** NA **	None
29	29			Yes	** NA **	None
30	30			Yes	** NA **	None
31	31			Yes	** NA **	None
32	32			Yes	** NA **	None
33	33			Yes	** NA **	None
34	34			Yes	** NA **	None
35	35			Yes	** NA **	None
36	36	BenPIN		Yes	Default	None

Hot Rolled Steel Design Parameters

	Label	Shape	Length [ft]	Lcomp top [ft]	Function
1	1	MF-H1	8	Lbyy	Lateral
2	2	MF-H1	8	Lbyy	Lateral
3	3	MF-CP1	0.708	Lbyy	Lateral
4	4	MF- SA1	2.583	Lbyy	Lateral
5	5	MF-CP2	0.489	Lbyy	Lateral
6	7	MF-CP1	0.708	Lbyy	Lateral
7	8	MF- SA1	2.583	Lbyy	Lateral
8	9	MF-CP2	0.489	Lbyy	Lateral
9	11	MF-CP1	0.708	Lbyy	Lateral
10	12	MF- SA1	2.583	Lbyy	Lateral
11	13	MF-CP2	0.489	Lbyy	Lateral
12	15	MF-CP1	0.708	Lbyy	Lateral
13	16	MF- SA1	2.583	Lbyy	Lateral
14	17	MF-CP2	0.489	Lbyy	Lateral
15	19	MF-V1	2.5	Lbyy	Lateral
16	20	MF-V1	2.5	Lbyy	Lateral
17	21	MF-D1	3.499	Lbyy	Lateral
18	22	MF-D1	3.499	Lbyy	Lateral
19	23	MF-V1	2.5	Lbyy	Lateral
20	24	MF-V1	2.5	Lbyy	Lateral
21	25	MF-D1	3.499	Lbyy	Lateral
22	26	MF-D1	3.499	Lbyy	Lateral
23	29	MF-P1	8	Lbyy	Lateral
24	32	MF-P1	8	Lbyy	Lateral
25	35	MF-P1	8	Lbyy	Lateral
26	36	Tieback	15.561	Lbyy	Lateral

Cold Formed Steel Design Parameters

No Data to Print...

Member Point Loads (BLC 1 : Dead)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	32	Y	-0.032	%15
2	32	Y	-0.032	%85
3	32	Y	-0.075	%20

Member Point Loads (BLC 1 : Dead) (Continued)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
4	32	Y	-0.064	%50
5	32	Y	0	0
6	8	Y	-0.022	%50
7	8	Y	0	0
8	8	Y	0	0
9	8	Y	0	0
10	8	Y	0	0

Member Point Loads (BLC 2 : 0 Wind - No Ice)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	32	Z	-0.18	%15
2	32	Z	-0.18	%85
3	32	Z	-0.079	%20
4	32	Z	-0.079	%50
5	32	Z	0	0
6	8	Z	-0.081	%50
7	8	Z	0	0
8	8	Z	0	0
9	8	Z	0	0
10	8	Z	0	0

Member Point Loads (BLC 3 : 90 Wind - No Ice)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	32	X	-0.072	%15
2	32	X	-0.072	%85
3	32	X	-0.04	%20
4	32	X	-0.04	%50
5	32	X	0	0
6	8	X	-0.045	%50
7	8	X	0	0
8	8	X	0	0
9	8	X	0	0
10	8	X	0	0

Member Point Loads (BLC 4 : 0 Wind - Ice)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	32	Z	-0.035	%15
2	32	Z	-0.035	%85
3	32	Z	-0.014	%20
4	32	Z	-0.014	%50
5	32	Z	0	0
6	8	Z	-0.014	%50
7	8	Z	0	0
8	8	Z	0	0
9	8	Z	0	0
10	8	Z	0	0

Member Point Loads (BLC 5 : 90 Wind - Ice)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	32	X	-0.016	%15
2	32	X	-0.016	%85
3	32	X	-0.007	%20
4	32	X	-0.007	%50

Member Point Loads (BLC 5 : 90 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
5	32	X	0	0
6	8	X	-0.008	%50
7	8	X	0	0
8	8	X	0	0
9	8	X	0	0
10	8	X	0	0

Member Point Loads (BLC 6 : 0 Wind - Service)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	32	Z	-0.011	%15
2	32	Z	-0.011	%85
3	32	Z	-0.005	%20
4	32	Z	-0.005	%50
5	32	Z	0	0
6	8	Z	-0.005	%50
7	8	Z	0	0
8	8	Z	0	0
9	8	Z	0	0
10	8	Z	0	0

Member Point Loads (BLC 7 : 90 Wind - Service)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	32	X	-0.004	%15
2	32	X	-0.004	%85
3	32	X	-0.002	%20
4	32	X	-0.002	%50
5	32	X	0	0
6	8	X	-0.003	%50
7	8	X	0	0
8	8	X	0	0
9	8	X	0	0
10	8	X	0	0

Member Point Loads (BLC 8 : Ice)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	32	Y	-0.118	%15
2	32	Y	-0.118	%85
3	32	Y	-0.032	%20
4	32	Y	-0.032	%50
5	32	Y	0	0
6	8	Y	-0.034	%50
7	8	Y	0	0
8	8	Y	0	0
9	8	Y	0	0
10	8	Y	0	0

Member Point Loads (BLC 9 : 0 Seismic)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	32	Z	-0.008	%15
2	32	Z	-0.008	%85
3	32	Z	-0.009	%20
4	32	Z	-0.008	%50
5	32	Z	0	0

Member Point Loads (BLC 9 : 0 Seismic) (Continued)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
6	8	Z	-0.003	%50
7	8	Z	0	0
8	8	Z	0	0
9	8	Z	0	0
10	8	Z	0	0

Member Point Loads (BLC 10 : 90 Seismic)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	32	X	-0.008	%15
2	32	X	-0.008	%85
3	32	X	-0.009	%20
4	32	X	-0.008	%50
5	32	X	0	0
6	8	X	-0.003	%50
7	8	X	0	0
8	8	X	0	0
9	8	X	0	0
10	8	X	0	0

Member Point Loads (BLC 15 : Maint LL 1)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	2	Y	-0.25	%95

Member Point Loads (BLC 16 : Maint LL 2)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	1	Y	-0.25	%95

Member Point Loads (BLC 17 : Maint LL 3)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	8	Y	-0.25	%50

Member Point Loads (BLC 18 : Maint LL 4)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	16	Y	-0.25	%50

Member Point Loads (BLC 19 : Maint LL 5)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	4	Y	-0.25	%50

Member Point Loads (BLC 20 : Maint LL 6)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	12	Y	-0.25	%50

Member Distributed Loads (BLC 2 : 0 Wind - No Ice)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Z	-0.012	-0.012	0	%100
2	2	Z	-0.012	-0.012	0	%100

Member Distributed Loads (BLC 2 : 0 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
3	3	Z	-0.003	-0.003	0	%100
4	4	Z	-0.006	-0.006	0	%100
5	5	Z	-0.003	-0.003	0	%100
6	7	Z	-0.003	-0.003	0	%100
7	8	Z	-0.006	-0.006	0	%100
8	9	Z	-0.003	-0.003	0	%100
9	11	Z	-0.003	-0.003	0	%100
10	12	Z	-0.006	-0.006	0	%100
11	13	Z	-0.003	-0.003	0	%100
12	15	Z	-0.003	-0.003	0	%100
13	16	Z	-0.006	-0.006	0	%100
14	17	Z	-0.003	-0.003	0	%100
15	19	Z	-0.003	-0.003	0	%100
16	20	Z	-0.003	-0.003	0	%100
17	21	Z	-0.002	-0.002	0	%100
18	22	Z	-0.002	-0.002	0	%100
19	23	Z	-0.003	-0.003	0	%100
20	24	Z	-0.003	-0.003	0	%100
21	25	Z	-0.002	-0.002	0	%100
22	26	Z	-0.002	-0.002	0	%100
23	29	Z	-0.012	-0.012	0	%100
24	32	Z	-0.012	-0.012	0	%100
25	35	Z	-0.012	-0.012	0	%100
26	36	Z	-0.01	-0.01	0	%100

Member Distributed Loads (BLC 3 : 90 Wind - No Ice)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	X	-0.012	-0.012	0	%100
2	2	X	-0.012	-0.012	0	%100
3	3	X	-0.003	-0.003	0	%100
4	4	X	-0.006	-0.006	0	%100
5	5	X	-0.003	-0.003	0	%100
6	7	X	-0.003	-0.003	0	%100
7	8	X	-0.006	-0.006	0	%100
8	9	X	-0.003	-0.003	0	%100
9	11	X	-0.003	-0.003	0	%100
10	12	X	-0.006	-0.006	0	%100
11	13	X	-0.003	-0.003	0	%100
12	15	X	-0.003	-0.003	0	%100
13	16	X	-0.006	-0.006	0	%100
14	17	X	-0.003	-0.003	0	%100
15	19	X	-0.003	-0.003	0	%100
16	20	X	-0.003	-0.003	0	%100
17	21	X	-0.002	-0.002	0	%100
18	22	X	-0.002	-0.002	0	%100
19	23	X	-0.003	-0.003	0	%100
20	24	X	-0.003	-0.003	0	%100
21	25	X	-0.002	-0.002	0	%100
22	26	X	-0.002	-0.002	0	%100
23	29	X	-0.012	-0.012	0	%100
24	32	X	-0.012	-0.012	0	%100
25	35	X	-0.012	-0.012	0	%100
26	36	X	-0.01	-0.01	0	%100

Member Distributed Loads (BLC 4 : 0 Wind - Ice)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Z	-0.002	-0.002	0	%100
2	2	Z	-0.002	-0.002	0	%100
3	3	Z	-0.003	-0.003	0	%100
4	4	Z	-0.002	-0.002	0	%100
5	5	Z	-0.003	-0.003	0	%100
6	7	Z	-0.003	-0.003	0	%100
7	8	Z	-0.002	-0.002	0	%100
8	9	Z	-0.003	-0.003	0	%100
9	11	Z	-0.003	-0.003	0	%100
10	12	Z	-0.002	-0.002	0	%100
11	13	Z	-0.003	-0.003	0	%100
12	15	Z	-0.003	-0.003	0	%100
13	16	Z	-0.002	-0.002	0	%100
14	17	Z	-0.003	-0.003	0	%100
15	19	Z	-0.002	-0.002	0	%100
16	20	Z	-0.002	-0.002	0	%100
17	21	Z	-0.002	-0.002	0	%100
18	22	Z	-0.002	-0.002	0	%100
19	23	Z	-0.002	-0.002	0	%100
20	24	Z	-0.002	-0.002	0	%100
21	25	Z	-0.002	-0.002	0	%100
22	26	Z	-0.002	-0.002	0	%100
23	29	Z	-0.002	-0.002	0	%100
24	32	Z	-0.002	-0.002	0	%100
25	35	Z	-0.002	-0.002	0	%100
26	36	Z	-0.002	-0.002	0	%100

Member Distributed Loads (BLC 5 : 90 Wind - Ice)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	X	-0.002	-0.002	0	%100
2	2	X	-0.002	-0.002	0	%100
3	3	X	-0.003	-0.003	0	%100
4	4	X	-0.002	-0.002	0	%100
5	5	X	-0.003	-0.003	0	%100
6	7	X	-0.003	-0.003	0	%100
7	8	X	-0.002	-0.002	0	%100
8	9	X	-0.003	-0.003	0	%100
9	11	X	-0.003	-0.003	0	%100
10	12	X	-0.002	-0.002	0	%100
11	13	X	-0.003	-0.003	0	%100
12	15	X	-0.003	-0.003	0	%100
13	16	X	-0.002	-0.002	0	%100
14	17	X	-0.003	-0.003	0	%100
15	19	X	-0.002	-0.002	0	%100
16	20	X	-0.002	-0.002	0	%100
17	21	X	-0.002	-0.002	0	%100
18	22	X	-0.002	-0.002	0	%100
19	23	X	-0.002	-0.002	0	%100
20	24	X	-0.002	-0.002	0	%100
21	25	X	-0.002	-0.002	0	%100
22	26	X	-0.002	-0.002	0	%100
23	29	X	-0.002	-0.002	0	%100
24	32	X	-0.002	-0.002	0	%100
25	35	X	-0.002	-0.002	0	%100
26	36	X	-0.002	-0.002	0	%100

Member Distributed Loads (BLC 6 : 0 Wind - Service)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Z	-0.0004	-0.0004	0	%100
2	2	Z	-0.0004	-0.0004	0	%100
3	3	Z	-0.0002	-0.0002	0	%100
4	4	Z	-0.0002	-0.0002	0	%100
5	5	Z	-0.0002	-0.0002	0	%100
6	7	Z	-0.0002	-0.0002	0	%100
7	8	Z	-0.0002	-0.0002	0	%100
8	9	Z	-0.0002	-0.0002	0	%100
9	11	Z	-0.0002	-0.0002	0	%100
10	12	Z	-0.0002	-0.0002	0	%100
11	13	Z	-0.0002	-0.0002	0	%100
12	15	Z	-0.0002	-0.0002	0	%100
13	16	Z	-0.0002	-0.0002	0	%100
14	17	Z	-0.0002	-0.0002	0	%100
15	19	Z	-1e-04	-1e-04	0	%100
16	20	Z	-1e-04	-1e-04	0	%100
17	21	Z	-1e-04	-1e-04	0	%100
18	22	Z	-1e-04	-1e-04	0	%100
19	23	Z	-1e-04	-1e-04	0	%100
20	24	Z	-1e-04	-1e-04	0	%100
21	25	Z	-1e-04	-1e-04	0	%100
22	26	Z	-1e-04	-1e-04	0	%100
23	29	Z	-0.0004	-0.0004	0	%100
24	32	Z	-0.0004	-0.0004	0	%100
25	35	Z	-0.0004	-0.0004	0	%100
26	36	Z	-0.0003	-0.0003	0	%100

Member Distributed Loads (BLC 7 : 90 Wind - Service)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	X	-0.0004	-0.0004	0	%100
2	2	X	-0.0004	-0.0004	0	%100
3	3	X	-0.0002	-0.0002	0	%100
4	4	X	-0.0002	-0.0002	0	%100
5	5	X	-0.0002	-0.0002	0	%100
6	7	X	-0.0002	-0.0002	0	%100
7	8	X	-0.0002	-0.0002	0	%100
8	9	X	-0.0002	-0.0002	0	%100
9	11	X	-0.0002	-0.0002	0	%100
10	12	X	-0.0002	-0.0002	0	%100
11	13	X	-0.0002	-0.0002	0	%100
12	15	X	-0.0002	-0.0002	0	%100
13	16	X	-0.0002	-0.0002	0	%100
14	17	X	-0.0002	-0.0002	0	%100
15	19	X	-1e-04	-1e-04	0	%100
16	20	X	-1e-04	-1e-04	0	%100
17	21	X	-1e-04	-1e-04	0	%100
18	22	X	-1e-04	-1e-04	0	%100
19	23	X	-1e-04	-1e-04	0	%100
20	24	X	-1e-04	-1e-04	0	%100
21	25	X	-1e-04	-1e-04	0	%100
22	26	X	-1e-04	-1e-04	0	%100
23	29	X	-0.0004	-0.0004	0	%100
24	32	X	-0.0004	-0.0004	0	%100
25	35	X	-0.0004	-0.0004	0	%100
26	36	X	-0.0003	-0.0003	0	%100

Member Distributed Loads (BLC 8 : Ice)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Y	-0.006	-0.006	0	%100
2	2	Y	-0.006	-0.006	0	%100
3	3	Y	-0.006	-0.006	0	%100
4	4	Y	-0.004	-0.004	0	%100
5	5	Y	-0.007	-0.007	0	%100
6	7	Y	-0.006	-0.006	0	%100
7	8	Y	-0.004	-0.004	0	%100
8	9	Y	-0.007	-0.007	0	%100
9	11	Y	-0.006	-0.006	0	%100
10	12	Y	-0.004	-0.004	0	%100
11	13	Y	-0.007	-0.007	0	%100
12	15	Y	-0.006	-0.006	0	%100
13	16	Y	-0.004	-0.004	0	%100
14	17	Y	-0.007	-0.007	0	%100
15	19	Y	-0.002	-0.002	0	%100
16	20	Y	-0.002	-0.002	0	%100
17	21	Y	-0.002	-0.002	0	%100
18	22	Y	-0.002	-0.002	0	%100
19	23	Y	-0.002	-0.002	0	%100
20	24	Y	-0.002	-0.002	0	%100
21	25	Y	-0.002	-0.002	0	%100
22	26	Y	-0.002	-0.002	0	%100
23	29	Y	-0.006	-0.006	0	%100
24	32	Y	-0.006	-0.006	0	%100
25	35	Y	-0.006	-0.006	0	%100
26	36	Y	-0.005	-0.005	0	%100

Member Distributed Loads (BLC 9 : 0 Seismic)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Z	-0.0007	-0.0007	0	%100
2	2	Z	-0.0007	-0.0007	0	%100
3	3	Z	-0.0008	-0.0008	0	%100
4	4	Z	-0.0003	-0.0003	0	%100
5	5	Z	-0.001	-0.001	0	%100
6	7	Z	-0.0008	-0.0008	0	%100
7	8	Z	-0.0003	-0.0003	0	%100
8	9	Z	-0.001	-0.001	0	%100
9	11	Z	-0.0008	-0.0008	0	%100
10	12	Z	-0.0003	-0.0003	0	%100
11	13	Z	-0.001	-0.001	0	%100
12	15	Z	-0.0008	-0.0008	0	%100
13	16	Z	-0.0003	-0.0003	0	%100
14	17	Z	-0.001	-0.001	0	%100
15	19	Z	-0.0002	-0.0002	0	%100
16	20	Z	-0.0002	-0.0002	0	%100
17	21	Z	-0.0002	-0.0002	0	%100
18	22	Z	-0.0002	-0.0002	0	%100
19	23	Z	-0.0002	-0.0002	0	%100
20	24	Z	-0.0002	-0.0002	0	%100
21	25	Z	-0.0002	-0.0002	0	%100
22	26	Z	-0.0002	-0.0002	0	%100
23	29	Z	-0.0004	-0.0004	0	%100
24	32	Z	-0.0004	-0.0004	0	%100
25	35	Z	-0.0004	-0.0004	0	%100
26	36	Z	-0.0004	-0.0004	0	%100

Member Distributed Loads (BLC 10 : 90 Seismic)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	X	-0.0007	-0.0007	0	%100
2	2	X	-0.0007	-0.0007	0	%100
3	3	X	-0.0008	-0.0008	0	%100
4	4	X	-0.0003	-0.0003	0	%100
5	5	X	-0.001	-0.001	0	%100
6	7	X	-0.0008	-0.0008	0	%100
7	8	X	-0.0003	-0.0003	0	%100
8	9	X	-0.001	-0.001	0	%100
9	11	X	-0.0008	-0.0008	0	%100
10	12	X	-0.0003	-0.0003	0	%100
11	13	X	-0.001	-0.001	0	%100
12	15	X	-0.0008	-0.0008	0	%100
13	16	X	-0.0003	-0.0003	0	%100
14	17	X	-0.001	-0.001	0	%100
15	19	X	-0.0002	-0.0002	0	%100
16	20	X	-0.0002	-0.0002	0	%100
17	21	X	-0.0002	-0.0002	0	%100
18	22	X	-0.0002	-0.0002	0	%100
19	23	X	-0.0002	-0.0002	0	%100
20	24	X	-0.0002	-0.0002	0	%100
21	25	X	-0.0002	-0.0002	0	%100
22	26	X	-0.0002	-0.0002	0	%100
23	29	X	-0.0004	-0.0004	0	%100
24	32	X	-0.0004	-0.0004	0	%100
25	35	X	-0.0004	-0.0004	0	%100
26	36	X	-0.0004	-0.0004	0	%100

Basic Load Cases

	BLC Description	Category	Y Gravity	Nodal	Point	Distributed
1	Dead	DL	-1		10	
2	0 Wind - No Ice	WLZ			10	26
3	90 Wind - No Ice	WLX			10	26
4	0 Wind - Ice	WLZ			10	26
5	90 Wind - Ice	WLX			10	26
6	0 Wind - Service	WLZ			10	26
7	90 Wind - Service	WLX			10	26
8	Ice	OL1			10	26
9	0 Seismic	ELZ			10	26
10	90 Seismic	ELX			10	26
11	Live Load a	LL		1		
12	Live Load b	LL		1		
13	Live Load c	LL		1		
14	Live Load d	LL				
15	Maint LL 1	LL			1	
16	Maint LL 2	LL			1	
17	Maint LL 3	LL			1	
18	Maint LL 4	LL			1	
19	Maint LL 5	LL			1	
20	Maint LL 6	LL			1	
21	Maint LL 7	LL				
22	Maint LL 8	LL				
23	Maint LL 9	LL				
24	Maint LL 10	LL				
25	Maint LL 11	LL				
26	Maint LL 12	LL				
27	Maint LL 13	LL				
28	Maint LL 14	LL				

Basic Load Cases (Continued)

	BLC Description	Category	Y Gravity	Nodal	Point	Distributed
29	Maint LL 15	LL				

Load Combinations

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	1.4 Dead	Yes	Y	1	1.4						
2	1.2 D + 1.0 - 0 W	Yes	Y	1	1.2	2	1				
3	1.2 D + 1.0 - 30 W	Yes	Y	1	1.2	2	0.866	3	0.5		
4	1.2 D + 1.0 - 60 W	Yes	Y	1	1.2	3	0.866	2	0.5		
5	1.2 D + 1.0 - 90 W	Yes	Y	1	1.2	3	1				
6	1.2 D + 1.0 - 120 W	Yes	Y	1	1.2	3	0.866	2	-0.5		
7	1.2 D + 1.0 - 150 W	Yes	Y	1	1.2	2	-0.866	3	0.5		
8	1.2 D + 1.0 - 180 W	Yes	Y	1	1.2	2	-1				
9	1.2 D + 1.0 - 210 W	Yes	Y	1	1.2	2	-0.866	3	-0.5		
10	1.2 D + 1.0 - 240 W	Yes	Y	1	1.2	3	-0.866	2	-0.5		
11	1.2 D + 1.0 - 270 W	Yes	Y	1	1.2	3	-1				
12	1.2 D + 1.0 - 300 W	Yes	Y	1	1.2	3	-0.866	2	0.5		
13	1.2 D + 1.0 - 330 W	Yes	Y	1	1.2	2	0.866	3	-0.5		
14	1.2 D + 1.0 - 0 W/Ice	Yes	Y	1	1.2	4	1			8	1
15	1.2 D + 1.0 - 30 W/Ice	Yes	Y	1	1.2	4	0.866	5	0.5	8	1
16	1.2 D + 1.0 - 60 W/Ice	Yes	Y	1	1.2	5	0.866	4	0.5	8	1
17	1.2 D + 1.0 - 90 W/Ice	Yes	Y	1	1.2	5	1			8	1
18	1.2 D + 1.0 - 120 W/Ice	Yes	Y	1	1.2	5	0.866	4	-0.5	8	1
19	1.2 D + 1.0 - 150 W/Ice	Yes	Y	1	1.2	4	-0.866	5	0.5	8	1
20	1.2 D + 1.0 - 180 W/Ice	Yes	Y	1	1.2	4	-1			8	1
21	1.2 D + 1.0 - 210 W/Ice	Yes	Y	1	1.2	4	-0.866	5	-0.5	8	1
22	1.2 D + 1.0 - 240 W/Ice	Yes	Y	1	1.2	5	-0.866	4	-0.5	8	1
23	1.2 D + 1.0 - 270 W/Ice	Yes	Y	1	1.2	5	-1			8	1
24	1.2 D + 1.0 - 300 W/Ice	Yes	Y	1	1.2	5	-0.866	4	0.5	8	1
25	1.2 D + 1.0 - 330 W/Ice	Yes	Y	1	1.2	4	0.866	5	-0.5	8	1
26	1.2 D + 1.0 E - 0	Yes	Y	1	1.2	9	1				
27	1.2 D + 1.0 E - 30	Yes	Y	1	1.2	9	0.866	10	0.5		
28	1.2 D + 1.0 E - 60	Yes	Y	1	1.2	10	0.866	9	0.5		
29	1.2 D + 1.0 E - 90	Yes	Y	1	1.2	10	1				
30	1.2 D + 1.0 E - 120	Yes	Y	1	1.2	10	0.866	9	-0.5		
31	1.2 D + 1.0 E - 150	Yes	Y	1	1.2	9	-0.866	10	0.5		
32	1.2 D + 1.0 E - 180	Yes	Y	1	1.2	9	-1				
33	1.2 D + 1.0 E - 210	Yes	Y	1	1.2	9	-0.866	10	-0.5		
34	1.2 D + 1.0 E - 240	Yes	Y	1	1.2	10	-0.866	9	-0.5		
35	1.2 D + 1.0 E - 270	Yes	Y	1	1.2	10	-1				
36	1.2 D + 1.0 E - 300	Yes	Y	1	1.2	10	-0.866	9	0.5		
37	1.2 D + 1.0 E - 330	Yes	Y	1	1.2	9	0.866	10	-0.5		
38	1.2 D + 1.5 LL a + Service - 0 W	Yes	Y	1	1.2	6	1			11	1.5
39	1.2 D + 1.5 LL a + Service - 30 W	Yes	Y	1	1.2	6	0.866	7	0.5	11	1.5
40	1.2 D + 1.5 LL a + Service - 60 W	Yes	Y	1	1.2	7	0.866	6	0.5	11	1.5
41	1.2 D + 1.5 LL a + Service - 90 W	Yes	Y	1	1.2	7	1			11	1.5
42	1.2 D + 1.5 LL a + Service - 120 W	Yes	Y	1	1.2	7	0.866	6	-0.5	11	1.5
43	1.2 D + 1.5 LL a + Service - 150 W	Yes	Y	1	1.2	6	-0.866	7	0.5	11	1.5
44	1.2 D + 1.5 LL a + Service - 180 W	Yes	Y	1	1.2	6	-1			11	1.5
45	1.2 D + 1.5 LL a + Service - 210 W	Yes	Y	1	1.2	6	-0.866	7	-0.5	11	1.5
46	1.2 D + 1.5 LL a + Service - 240 W	Yes	Y	1	1.2	7	-0.866	6	-0.5	11	1.5
47	1.2 D + 1.5 LL a + Service - 270 W	Yes	Y	1	1.2	7	-1			11	1.5
48	1.2 D + 1.5 LL a + Service - 300 W	Yes	Y	1	1.2	7	-0.866	6	0.5	11	1.5
49	1.2 D + 1.5 LL a + Service - 330 W	Yes	Y	1	1.2	6	0.866	7	-0.5	11	1.5
50	1.2 D + 1.5 LL b + Service - 0 W	Yes	Y	1	1.2	6	1			12	1.5
51	1.2 D + 1.5 LL b + Service - 30 W	Yes	Y	1	1.2	6	0.866	7	0.5	12	1.5
52	1.2 D + 1.5 LL b + Service - 60 W	Yes	Y	1	1.2	7	0.866	6	0.5	12	1.5
53	1.2 D + 1.5 LL b + Service - 90 W	Yes	Y	1	1.2	7	1			12	1.5
54	1.2 D + 1.5 LL b + Service - 120 W	Yes	Y	1	1.2	7	0.866	6	-0.5	12	1.5

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
55	1.2 D + 1.5 LL b + Service - 150 W	Yes	Y	1	1.2	6	-0.866	7	0.5	12	1.5
56	1.2 D + 1.5 LL b + Service - 180 W	Yes	Y	1	1.2	6	-1			12	1.5
57	1.2 D + 1.5 LL b + Service - 210 W	Yes	Y	1	1.2	6	-0.866	7	-0.5	12	1.5
58	1.2 D + 1.5 LL b + Service - 240 W	Yes	Y	1	1.2	7	-0.866	6	-0.5	12	1.5
59	1.2 D + 1.5 LL b + Service - 270 W	Yes	Y	1	1.2	7	-1			12	1.5
60	1.2 D + 1.5 LL b + Service - 300 W	Yes	Y	1	1.2	7	-0.866	6	0.5	12	1.5
61	1.2 D + 1.5 LL b + Service - 330 W	Yes	Y	1	1.2	6	0.866	7	-0.5	12	1.5
62	1.2 D + 1.5 LL c + Service - 0 W	Yes	Y	1	1.2	6	1			13	1.5
63	1.2 D + 1.5 LL c + Service - 30 W	Yes	Y	1	1.2	6	0.866	7	0.5	13	1.5
64	1.2 D + 1.5 LL c + Service - 60 W	Yes	Y	1	1.2	7	0.866	6	0.5	13	1.5
65	1.2 D + 1.5 LL c + Service - 90 W	Yes	Y	1	1.2	7	1			13	1.5
66	1.2 D + 1.5 LL c + Service - 120 W	Yes	Y	1	1.2	7	0.866	6	-0.5	13	1.5
67	1.2 D + 1.5 LL c + Service - 150 W	Yes	Y	1	1.2	6	-0.866	7	0.5	13	1.5
68	1.2 D + 1.5 LL c + Service - 180 W	Yes	Y	1	1.2	6	-1			13	1.5
69	1.2 D + 1.5 LL c + Service - 210 W	Yes	Y	1	1.2	6	-0.866	7	-0.5	13	1.5
70	1.2 D + 1.5 LL c + Service - 240 W	Yes	Y	1	1.2	7	-0.866	6	-0.5	13	1.5
71	1.2 D + 1.5 LL c + Service - 270 W	Yes	Y	1	1.2	7	-1			13	1.5
72	1.2 D + 1.5 LL c + Service - 300 W	Yes	Y	1	1.2	7	-0.866	6	0.5	13	1.5
73	1.2 D + 1.5 LL c + Service - 330 W	Yes	Y	1	1.2	6	0.866	7	-0.5	13	1.5
74	1.2 D + 1.5 LL d + Service - 0 W	Yes	Y	1	1.2	6	1			14	1.5
75	1.2 D + 1.5 LL d + Service - 30 W	Yes	Y	1	1.2	6	0.866	7	0.5	14	1.5
76	1.2 D + 1.5 LL d + Service - 60 W	Yes	Y	1	1.2	7	0.866	6	0.5	14	1.5
77	1.2 D + 1.5 LL d + Service - 90 W	Yes	Y	1	1.2	7	1			14	1.5
78	1.2 D + 1.5 LL d + Service - 120 W	Yes	Y	1	1.2	7	0.866	6	-0.5	14	1.5
79	1.2 D + 1.5 LL d + Service - 150 W	Yes	Y	1	1.2	6	-0.866	7	0.5	14	1.5
80	1.2 D + 1.5 LL d + Service - 180 W	Yes	Y	1	1.2	6	-1			14	1.5
81	1.2 D + 1.5 LL d + Service - 210 W	Yes	Y	1	1.2	6	-0.866	7	-0.5	14	1.5
82	1.2 D + 1.5 LL d + Service - 240 W	Yes	Y	1	1.2	7	-0.866	6	-0.5	14	1.5
83	1.2 D + 1.5 LL d + Service - 270 W	Yes	Y	1	1.2	7	-1			14	1.5
84	1.2 D + 1.5 LL d + Service - 300 W	Yes	Y	1	1.2	7	-0.866	6	0.5	14	1.5
85	1.2 D + 1.5 LL d + Service - 330 W	Yes	Y	1	1.2	6	0.866	7	-0.5	14	1.5
86	1.2 D + 1.5 LL Maint (1)	Yes	Y	1	1.2					15	1.5
87	1.2 D + 1.5 LL Maint (2)	Yes	Y	1	1.2					16	1.5
88	1.2 D + 1.5 LL Maint (3)	Yes	Y	1	1.2					17	1.5
89	1.2 D + 1.5 LL Maint (4)	Yes	Y	1	1.2					18	1.5
90	1.2 D + 1.5 LL Maint (5)	Yes	Y	1	1.2					19	1.5
91	1.2 D + 1.5 LL Maint (6)	Yes	Y	1	1.2					20	1.5
92	1.2 D + 1.5 LL Maint (7)	Yes	Y	1	1.2					21	1.5
93	1.2 D + 1.5 LL Maint (8)	Yes	Y	1	1.2					22	1.5
94	1.2 D + 1.5 LL Maint (9)	Yes	Y	1	1.2					23	1.5
95	1.2 D + 1.5 LL Maint (10)	Yes	Y	1	1.2					24	1.5
96	1.2 D + 1.5 LL Maint (11)	Yes	Y	1	1.2					25	1.5
97	1.2 D + 1.5 LL Maint (12)	Yes	Y	1	1.2					26	1.5
98	1.2 D + 1.5 LL Maint (13)	Yes	Y	1	1.2					27	1.5
99	1.2 D + 1.5 LL Maint (14)	Yes	Y	1	1.2					28	1.5
100	1.2 D + 1.5 LL Maint (15)	Yes	Y	1	1.2					29	1.5
101	1.2 D + 1.5 LL Maint (16)	Yes	Y	1	1.2					30	1.5
102	1.2 D + 1.5 LL Maint (17)	Yes	Y	1	1.2					31	1.5
103	1.2 D + 1.5 LL Maint (18)	Yes	Y	1	1.2					32	1.5
104	1.2 D + 1.5 LL Maint (19)	Yes	Y	1	1.2					33	1.5
105	1.2 D + 1.5 LL Maint (20)	Yes	Y	1	1.2					34	1.5
106	1.2 D + 1.5 LL Maint (21)	Yes	Y	1	1.2					35	1.5
107	1.2 D + 1.5 LL Maint (22)	Yes	Y	1	1.2					36	1.5
108	1.2 D + 1.5 LL Maint (23)	Yes	Y	1	1.2					37	1.5
109	1.2 D + 1.5 LL Maint (24)	Yes	Y	1	1.2					38	1.5

Envelope Node Reactions

No Data to Print...

Envelope AISC 15TH (360-16): LRFD Member Steel Code Checks

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
1	29	Pipe2.88x.12	0.076	2.75	7	0.042	2.75	67	22.492	43.076	3.156	3.156	3	H1-1b
2	32	Pipe2.88x.12	0.159	5.25	62	0.046	5.25	62	22.492	43.076	3.156	3.156	3	H1-1b
3	35	Pipe2.88x.12	0.126	5.25	43	0.037	5.25	48	22.492	43.076	3.156	3.156	3	H1-1b

Envelope NONE Member Cold Formed Steel Code Checks

No Data to Print...

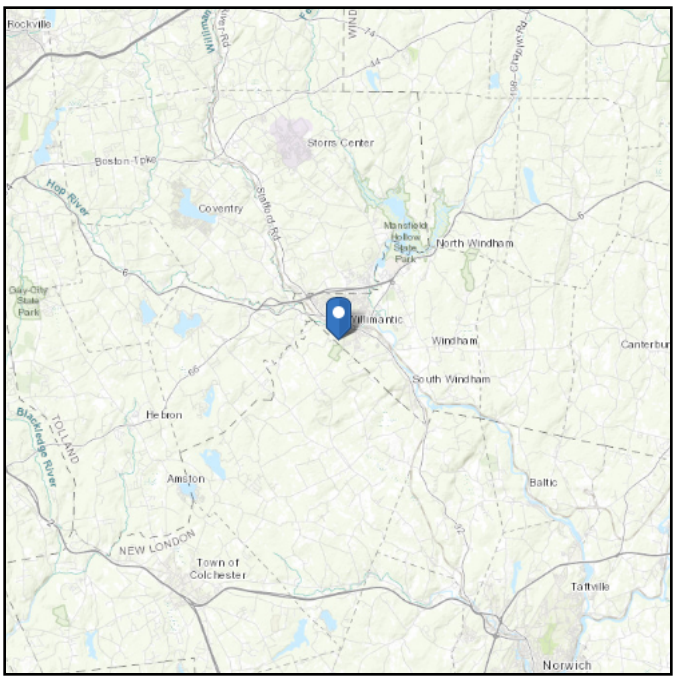
APPENDIX B
(Additional Calculations)

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: D - Default (see Section 11.4.3)

Elevation: 521.53 ft (NAVD 88)
Latitude: 41.703011
Longitude: -72.221391



Wind

Results:

Wind Speed	121 Vmph
10-year MRI	75 Vmph
25-year MRI	84 Vmph
50-year MRI	93 Vmph
100-year MRI	99 Vmph

Data Source:	ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2
Date Accessed:	Thu Feb 10 2022

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings need not be protected against wind-borne debris.

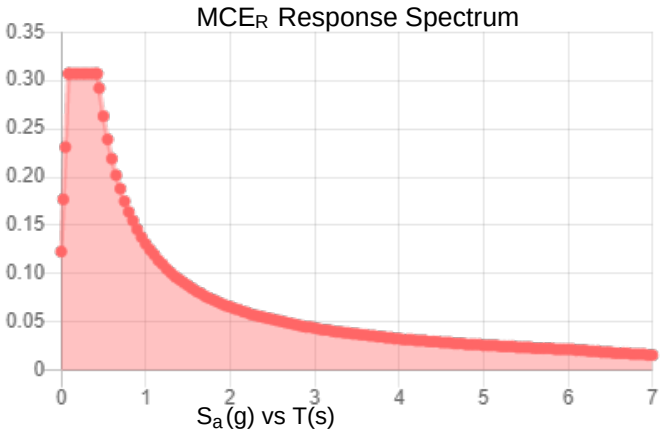
Seismic

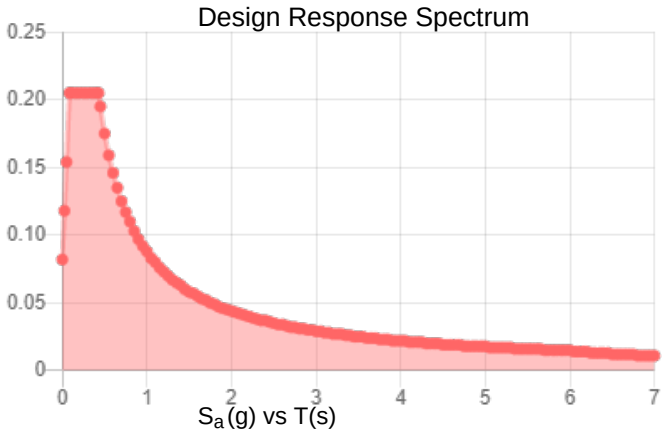
Site Soil Class: D - Default (see Section 11.4.3)

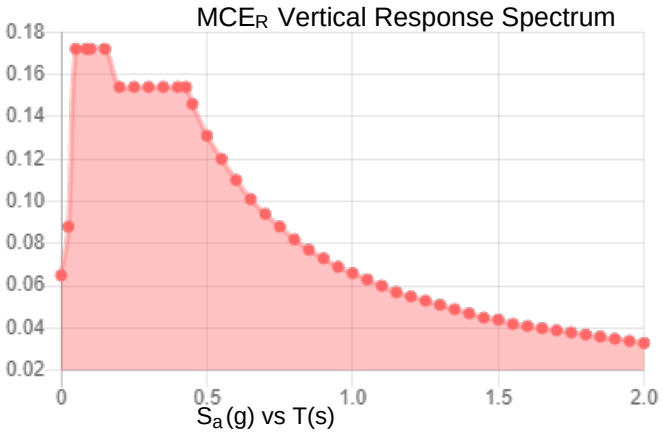
Results:

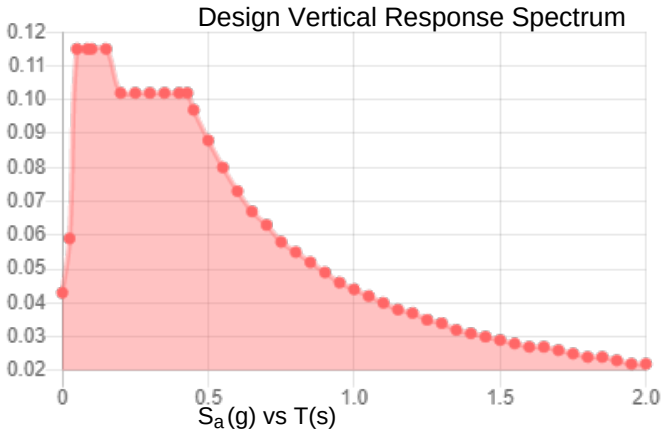
S_S :	0.192	S_{D1} :	0.088
S_1 :	0.055	T_L :	6
F_a :	1.6	PGA :	0.105
F_v :	2.4	PGA_M :	0.166
S_{MS} :	0.307	F_{PGA} :	1.591
S_{M1} :	0.131	I_e :	1
S_{DS} :	0.205	C_v :	0.7

Seismic Design Category B









Data Accessed: **Thu Feb 10 2022**

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-16 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness:	1.00 in.
Concurrent Temperature:	15 F
Gust Speed	50 mph
Data Source:	Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8
Date Accessed:	Thu Feb 10 2022

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 500-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

PROJECT	**160923.002.01 - Mountain St**		**KSC**
SUBJECT	**Sector Mount Analysis**		
DATE	**03/16/22**	PAGE	OF

B+T GRP
1717 S. Boulder, Suite 300
Tulsa, OK 74119
(918) 587-4630

Tower Type		:	SST		
Ground Elevation	z_s	:	522	ft	[ASCE7 Hazard Tool]
Tower Height		:	196.00	ft	
Mount Elevation		:	107.00	ft	
Antenna Elevation		:	107.00	ft	
Crest Height		:	0	ft	
Risk Category		:	II		[Table 2-1]
Exposure Category		:	C		[Sec. 2.6.5.1.2]
Topography Category		:	1.00		[Sec. 2.6.6.2]
Wind Velocity	V	:	121	mph	[ASCE7 Hazard Tool]
Ice wind Velocity	V_i	:	50	mph	[ASCE7 Hazard Tool]
Service Velocity	V_s	:	30	mph	[ASCE7 Hazard Tool]
Base Ice thickness	t_i	:	1.00	in	[ASCE7 Hazard Tool]
Seismic Design Cat.		:	B		[ASCE7 Hazard Tool]
	S_S	:	0.19		
	S_1	:	0.06		
	S_{DS}	:	0.21		
	S_{D1}	:	0.09		

Gust Factor	G_h	:	1.00		[Sec. 16.6]
Pressure Coefficient	K_z	:	1.28		[Sec. 2.6.5.2]
Topography Factor	K_{zt}	:	1.00		[Sec. 2.6.6]
Elevation Factor	K_e	:	0.98		[Sec. 2.6.8]
Directionality Factor	K_d	:	0.95		[Sec. 16.6]
Shielding Factor	K_a	:	0.90		[Sec. 16.6]
Design Ice Thickness	t_{iz}	:	1.12	in	[Sec. 2.6.10]

Importance Factor	I_e	:	1		[Table 2-3]
Response Coefficient	C_s	:	0.103		[Sec. 2.7.7.1]
Amplification	A_s	:	1.183673		[Sec. 16.7]

	q_z	:	44.86	psf

PROJECT	**160923.002.01 - Mountain St**		**KSC**
SUBJECT	**Sector Mount Analysis**		
DATE	**03/16/22**	PAGE	OF

B+T GRP
1717 S. Boulder, Suite 300
Tulsa, OK 74119
(918) 587-4630

Manufacturer	Model	Qty	Aspect Ratio	C_a flat/round	EPA_N (ft^2)	EPA_T (ft^2)	$EPA_{N\text{-}Ice}$ (ft^2)	$EPA_{T\text{-}Ice}$ (ft^2)	$F_{A\ No\ Ice\ (N)}$	$F_{A\ No\ Ice\ (T)}$	$F_{A\ Ice\ (N)}$	$F_{A\ Ice\ (T)}$
JMA WIRELESS	MX08FRO665-21	0.5	3.60	1.25	4.01	1.61	4.53	2.06	0.18	0.07	0.03	0.02
JMA WIRELESS	MX08FRO665-21	0.5	3.60	1.25	4.01	1.61	4.53	2.06	0.18	0.07	0.03	0.02
Fujitsu	TA08025-B605	1	0.95	1.20	1.64	0.82	2.15	1.21	0.08	0.04	0.01	0.01
Fujitsu	TA08025-B604	1	0.95	1.20	1.64	0.82	2.15	1.21	0.08	0.04	0.01	0.01
RAYCAP	RDIDC-9181-PF-48	1	1.14	1.20	1.68	0.94	2.20	1.36	0.08	0.05	0.01	0.01

PROJECT	**160923.002.01 - Mountain Street, CT**				**KSC**
SUBJECT	**Sector Mount Analysis**				
DATE	**03/16/22**	PAGE	1	OF	1

B+T Group
1717 S. Boulder, Suite 300
Tulsa, OK 74119
(918) 587-4630

[REF: AISC 360-05]

Reactions at Bolted Connection

Tension	:	1.428	k
Vertical Shear	:	0.669	k
Horizontal Shear	:	1.428	k
Torsion	:	0	k.ft
Moment from Horizontal Forces	:	0	k.ft
Moment from Vertical Forces	:	0	k.ft

Bolt Parameters

Bolt Grade	:	A307	
Bolt Diameter	:	0.625	in
Nominal Bolt Area	:	0.307	in^2
Bolt spacing, Horizontal	:	6	in
Bolt spacing, Vertical	:	6	in
Bolt edge distance, plate height	:	1.5	in
Bolt edge distance, plate width	:	1.5	in
Total Number of Bolts	:	4	bolts

Summary of Forces

Shear Resultant Force	:	1.58	k
Force from Horz. Moment	:	0.00	k
Force from Vert. Moment	:	0.00	k
Shear Load / Bolt	:	0.39	k
Tension Load / Bolt	:	0.36	k
Resultant from Moments / Bolt	:	0.00	k

Bolt Checks

Nominal Tensile Stress, F_{nt}	:	45.00	ksi	[AISC Table J3.2]
Available Tensile Stress, ΦR_{nt}	:	10.36	k/bolt	[Eq. J3-1]
Unity Check, Bolt Tension	:	**3.45%**		**OKAY**
Nominal Shear Stress, F_{nv}	:	24.00	ksi	[AISC Table J3.2]
Available Shear Stress, ΦR_{nv}	:	5.53	k/bolt	[Eq. J3-1]
Unity Check, Bolt Shear	:	**13.59%**		**OKAY**
Unity Check, Combined	:	**17.04%**		**OKAY**
Available Bearing Strength, ΦR_n	:	34.66	k/bolt	
Unity Check, Bolt Bearing	:	**1.14%**		**OKAY**

Exhibit F

Power Density/RF Emissions Report

EBI Consulting

environmental | engineering | due diligence

RADIO FREQUENCY EMISSIONS ANALYSIS REPORT
EVALUATION OF HUMAN EXPOSURE POTENTIAL TO NON-IONIZING EMISSIONS

Dish Wireless Existing Facility

Site ID: BOBDL00005D

349 Mountain Street
Windham, Connecticut 06226

March 31, 2022

EBI Project Number: 6222001975

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general population allowable limit:	**22.05%**

21 B Street, Burlington, MA 01803 · Tel: (781) 273.2500 · Fax: (781) 273.3311

March 31, 2022

Attn: Dish Wireless

Emissions Analysis for Site: BOBDL00005D

EBI Consulting was directed to analyze the proposed Dish Wireless facility located at **349 Mountain Street** in **Windham, Connecticut** for the purpose of determining whether the emissions from the Proposed Dish Wireless 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 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu W/cm^2$). The number of $\mu W/cm^2$ 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.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limits for the 600 MHz and 700 MHz frequency bands are approximately 400 $\mu W/cm^2$ and 467 $\mu W/cm^2$, respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 11 GHz frequency bands is 1000 $\mu W/cm^2$. 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 done for the proposed Dish Wireless Wireless antenna facility located at 349 Mountain Street in Windham, Connecticut using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since Dish Wireless is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 20 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was focused at the base of the tower. For this report, the sample point is the top of a 6-foot person standing at the base of the tower.

For all calculations, all equipment was calculated using the following assumptions:

1) 4 n71 channels (600 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

2) 4 n70 channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.

3) 4 n66 channels (AWS Band - 2190 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.

4) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.

5) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 20 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used in this direction. This value is a very conservative

estimate as gain reductions for these particular antennas are typically much higher in this direction.

6) The antennas used in this modeling are the JMA MX08FRO665-21 for the 600 MHz / 1900 MHz / 2190 MHz channel(s) in Sector A, the JMA MX08FRO665-21 for the 600 MHz / 1900 MHz / 2190 MHz channel(s) in Sector B, the JMA MX08FRO665-21 for the 600 MHz / 1900 MHz / 2190 MHz channel(s) in Sector C. This is based on feedback from the carrier with regard to anticipated antenna selection. All Antenna gain values and associated transmit power levels are shown in the Site Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 20 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

7) The antenna mounting height centerline of the proposed antennas is 107 feet above ground level (AGL).

8) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

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

Dish Wireless Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	JMA MX08FRO665-21	Make / Model:	JMA MX08FRO665-21	Make / Model:	JMA MX08FRO665-21
Frequency Bands:	600 MHz / 1900 MHz / 2190 MHz	Frequency Bands:	600 MHz / 1900 MHz / 2190 MHz	Frequency Bands:	600 MHz / 1900 MHz / 2190 MHz
Gain:	17.45 dBd / 22.65 dBd / 22.65 dBd	Gain:	17.45 dBd / 22.65 dBd / 22.65 dBd	Gain:	17.45 dBd / 22.65 dBd / 22.65 dBd
Height (AGL):	107 feet	Height (AGL):	107 feet	Height (AGL):	107 feet
Channel Count:	12	Channel Count:	12	Channel Count:	12
Total TX Power (W):	440.00 Watts	Total TX Power (W):	440.00 Watts	Total TX Power (W):	440.00 Watts
ERP (W):	5,236.31	ERP (W):	5,236.31	ERP (W):	5,236.31
Antenna A1 MPE %:	**2.32%**	Antenna B1 MPE %:	**2.32%**	Antenna C1 MPE %:	**2.32%**

Site Composite MPE %	
Carrier	**MPE %**
Dish Wireless (Max at Sector A):	2.32%
Verizon	15.19%
T-Mobile	2.36%
Eversource	0.4%
CL&P	1.78%
Site Total MPE % :	22.05%

Dish Wireless MPE % Per Sector	
Dish Wireless Sector A Total:	2.32%
Dish Wireless Sector B Total:	2.32%
Dish Wireless Sector C Total:	2.32%
Site Total MPE % :	22.05%

Dish Wireless Maximum MPE Power Values (Sector A)

Dish Wireless Frequency Band / Technology (Sector A)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density (μW/cm²)	Frequency (MHz)	Allowable MPE (μW/cm²)	Calculated % MPE
Dish Wireless 600 MHz n71	4	223.68	107.0	3.15	600 MHz n71	400	0.79%
Dish Wireless 1900 MHz n70	4	542.70	107.0	7.65	1900 MHz n70	1000	0.77%
Dish Wireless 2190 MHz n66	4	542.70	107.0	7.65	2190 MHz n66	1000	0.77%
						Total:	**2.32%**

• NOTE: Totals may vary by approximately 0.01% due to summation of remainders in calculations.

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 Wireless 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 Wireless Sector	Power Density Value (%)
Sector A:	2.32%
Sector B:	2.32%
Sector C:	2.32%
Dish Wireless Maximum MPE % (Sector A):	2.32%
Site Total:	22.05%
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **22.05%** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

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.

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

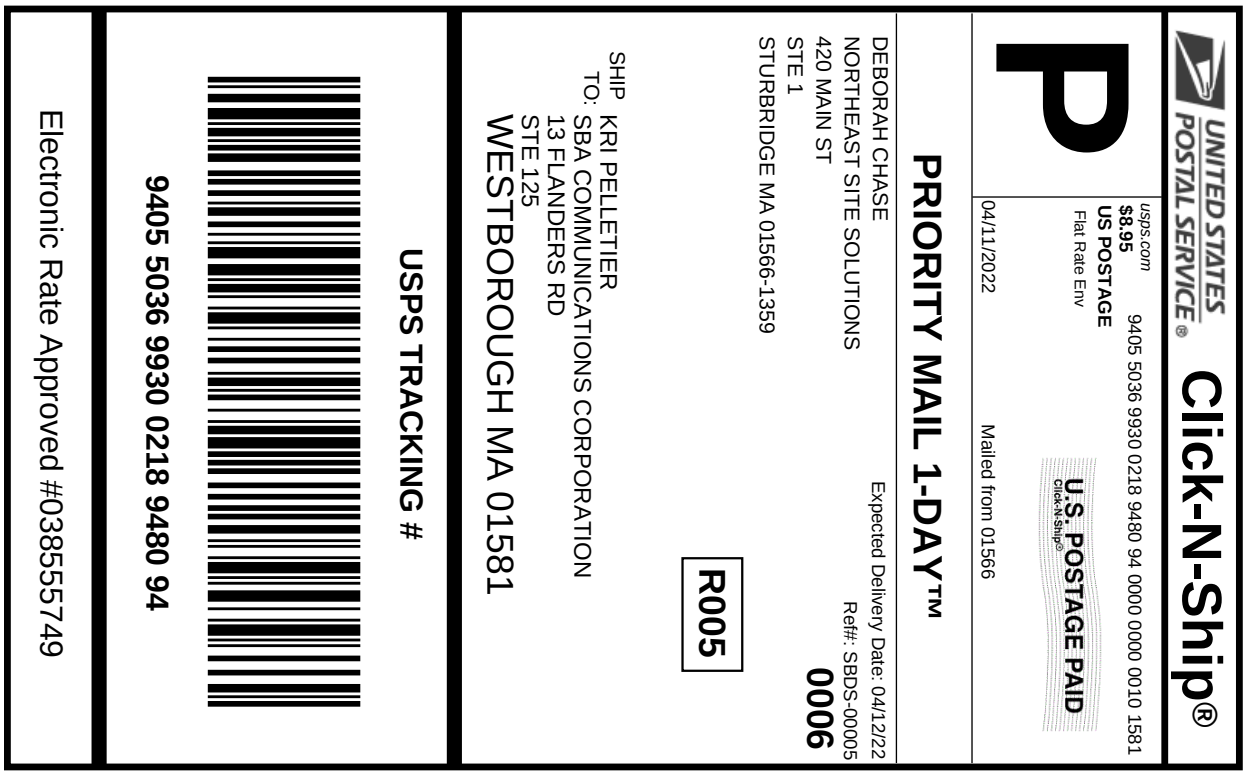
SBA COMMUNICATIONS CORPORATION hereby authorizes DISH Wireless LLC, including their Agent, to act as our Agent in the processing of all zoning applications, building permits and approvals through the CONNECTICUT SITING COUNCIL for existing wireless communications towers.

Kri Pelletier
Site Development Manager
SBA COMMUNICATIONS CORPORATION
134 Flanders Road, Suite 125
Westboro, MA 01581

SBA
By: _____ Date: 3-30-22

Exhibit H

Recipient Mailings



Cut on dotted line.

Instructions

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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

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Trans. #:	560989642
Print Date:	04/11/2022
Ship Date:	04/11/2022
Expected Delivery Date:	04/12/2022

Priority Mail® Postage:	**$8.95**
Total:	**$8.95**

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

Ref#: SBDS-00005

To: KRI PELLETIER
SBA COMMUNICATIONS CORPORATION
13 FLANDERS RD
STE 125
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.

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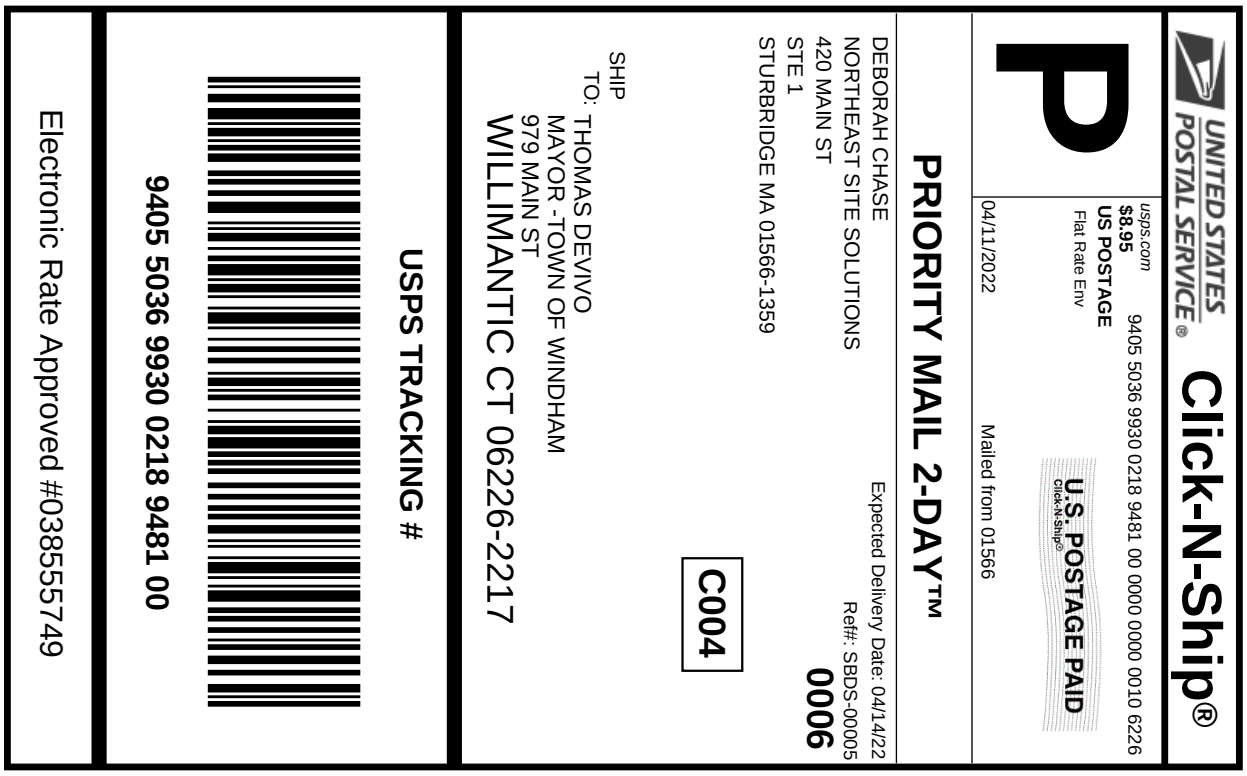
Check the status of your shipment on the USPS Tracking® page at usps.com



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Trans. #:	560989642
Print Date:	04/11/2022
Ship Date:	04/11/2022
Expected Delivery Date:	04/14/2022

Priority Mail® Postage:	**$8.95**
Total:	**$8.95**

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

Ref#: SBDS-00005

To: THOMAS DEVIVO
MAYOR -TOWN OF WINDHAM
979 MAIN ST
WILLIMANTIC CT 06226-2217

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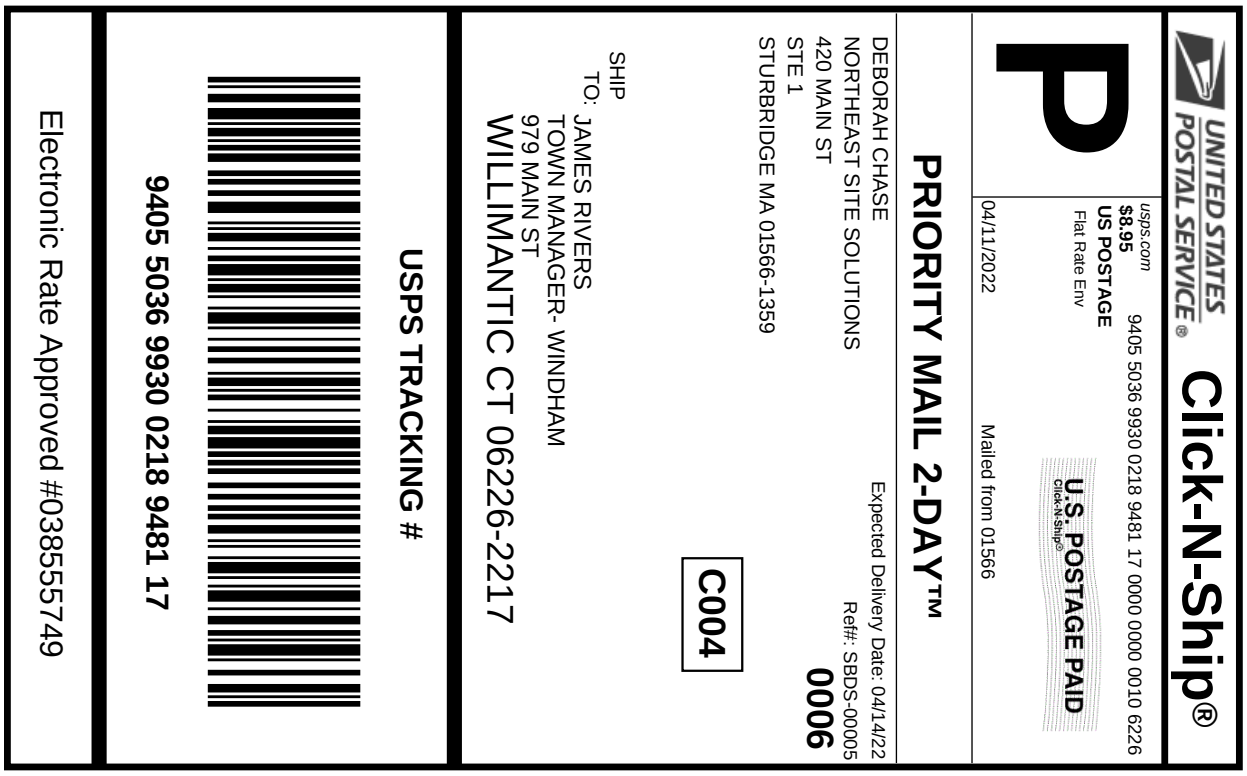

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USPS TRACKING # :
9405 5036 9930 0218 9481 17

Trans. #:	560989642
Print Date:	04/11/2022
Ship Date:	04/11/2022
Expected Delivery Date:	04/14/2022

Priority Mail® Postage:	**$8.95**
Total:	**$8.95**

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

Ref#: SBDS-00005

To: JAMES RIVERS
TOWN MANAGER- WINDHAM
979 MAIN ST
WILLIMANTIC CT 06226-2217

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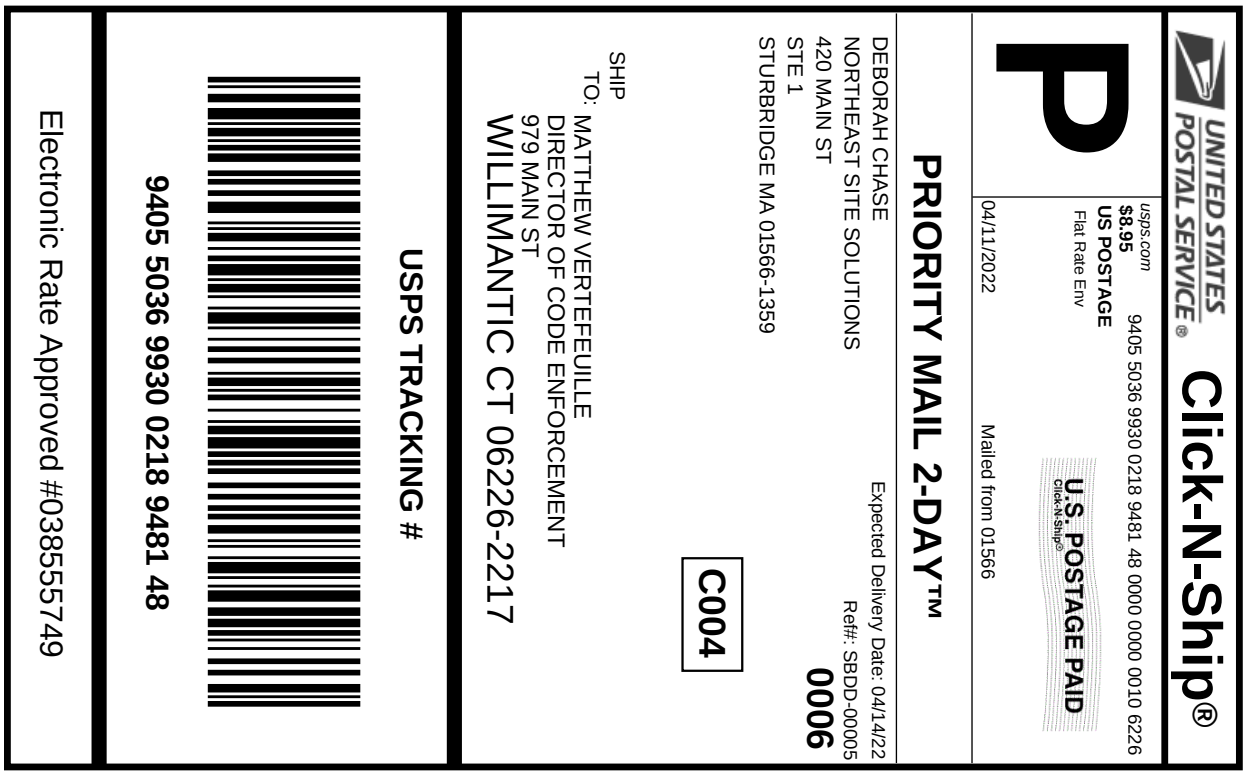

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9405 5036 9930 0218 9481 48

Trans. #:	560989642
Print Date:	04/11/2022
Ship Date:	04/11/2022
Expected Delivery Date:	04/14/2022

Priority Mail® Postage:	**$8.95**
Total:	**$8.95**

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

Ref#: SBDD-00005

To: MATTHEW VERTEFEUILLE
DIRECTOR OF CODE ENFORCEMENT
979 MAIN ST
WILLIMANTIC CT 06226-2217

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FARMINGTON
210 MAIN ST
FARMINGTON, CT 06032-9998
(800)275-8777

04/12/2022 04:43 PM

Product	Qty	Unit Price	Price
Prepaid Mail Willimantic, CT 06226 Weight: 0 lb 7.40 oz Acceptance Date: Tue 04/12/2022 Tracking #: 9405 5036 9930 0218 9481 48	1		$0.00
Prepaid Mail Westborough, MA 01581 Weight: 0 lb 2.00 oz Acceptance Date: Tue 04/12/2022 Tracking #: 9405 5036 9930 0218 9480 94	1		$0.00
Prepaid Mail Willimantic, CT 06226 Weight: 0 lb 7.50 oz Acceptance Date: Tue 04/12/2022 Tracking #: 9405 5036 9930 0218 9481 17	1		$0.00
Prepaid Mail Willimantic, CT 06226 Weight: 0 lb 7.40 oz Acceptance Date: Tue 04/12/2022 Tracking #: 9405 5036 9930 0218 9481 00	1		$0.00
Grand Total:			$0.00

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