



NSS **NORTHEAST**
SITE SOLUTIONS
Turnkey Wireless Development

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

September 27, 2021

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

RE: Tower Share Application
12 Nepaug Road, Burlington CT 06013
Latitude: 41.782461
Longitude: 72.989633
Site# 845993_Crown_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 12 Nepaug Road, Burlington, Connecticut.

Dish Wireless LLC proposes to install three (3) 600/1900 5G MHz antenna and six (6) RRUs, at the 70-foot level of the existing 120-foot monopole tower, one (1) Fiber cables will also be installed. Dish Wireless LLC equipment cabinets will be placed within 7x5 lease area. Included are plans by Infinigy, dated September 14, 2021 Exhibit C. Also included is a structural analysis prepared by Crown Castle, dated May 28, 2021, confirming that the existing tower is structurally capable of supporting the proposed equipment. Attached as Exhibit D. This facility was approved by Connecticut Siting Council, Docket No. 268 on February 18, 2004. Please see attached Exhibit A.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies 16-50aa, of Dish Wireless LLC intent to share a telecommunications facility pursuant to R.C.S.A. 16-50j-88. In accordance with R.C.S.A., a copy of this letter is being sent to Theodore Shafer, First Selectman, for the Town of Burlington, Jerry Burns, Zoning Enforcement Officer, as well as the tower owner (Crown Castle) and property owner (Regional School District #10)

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 tower is 120-feet; Dish Wireless LLC proposed antennas will be located at a center line height of 70-feet.
2. The proposed modifications will not result in the increase of the site boundary as depicted on the attached site plan.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed local and state criteria. The incremental effect of the proposed changes will be negligible.



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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. As indicated in the attached power density calculations, the combined site operations will result in a total power density of 30.82% 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 indicates that the shared use of this facility satisfies these criteria.

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

B. Legal Feasibility. As referenced above, C.G.S. 16-50aa has been authorized to issue orders approving the shared use of an existing tower such as this support tower in Burlington. 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 70-foot level of the existing 120-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 Burlington.

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



NSS

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SITE SOLUTIONS

Turnkey Wireless Development

Attachments

cc: Theodore Shafer, First Selectman
Town of Burlington Office of the First Selectman
200 Spielman Highway Burlington, CT 06013

Jerry Burns, Zoning Enforcement Officer
Town of Burlington Zoning Office
200 Spielman Highway Burlington, CT 06013

Regional School District #10, Property Owner
24 Lyon Road Burlington, CT 06013

Crown Castle, Tower Owner

Exhibit A

Original Facility Approval

DOCKET NO. 268 - AT&T Wireless PCS, LLC d/b/a AT&T } Wireless application for a Certificate of Environmental } Compatibility and Public Need for the construction, maintenance } and operation of a wireless telecommunications facility located } near Lyon and Nepaug Roads in Burlington, Connecticut. } } }	Connecticut Siting Council February 18, 2004
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**Decision and Order:
Burlington Site CT-828**

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the proposed site, located at the intersection of Lyon and Nepaug Roads, Burlington, Connecticut.

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

1. The tower shall be constructed no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of AT&T Wireless and other entities, both public and private, but such tower shall not exceed a height of 120 feet above ground level.
2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be submitted to and approved by the Council prior to the commencement of facility construction and shall include:
 - a) a final site plan(s) of site development to include specifications for the tower, tower foundation, antennas, equipment building, access road, utility line, and landscaping; and
 - b) construction plans for site clearing, water drainage, and erosion and sedimentation control consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.
3. The Certificate Holder shall, prior to the commencement of operation, provide the Council worst-case modeling of electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall ensure a recalculated report of electromagnetic radio frequency power density is submitted to the Council if and when circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.

4. Upon the establishment of any new State or federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.
5. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.
6. The Certificate Holder shall provide reasonable space on the tower for no compensation for any municipal antennas, provided such antennas are compatible with the structural integrity of the tower.
7. If the facility does not initially provide wireless services within one year of completion of construction or ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.
8. Any antenna that becomes obsolete and ceases to function shall be removed within 60 days after such antennas become obsolete and cease to function.
9. Unless otherwise approved by the Council, this Decision and Order shall be void if the facility authorized herein is not operational within one year of the effective date of this Decision and Order or within one year after all appeals to this Decision and Order have been resolved.

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

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

The parties and intervenors to this proceeding are:

Applicant

AT&T Wireless PCS, LLC
d/b/a AT&T Wireless

Intervenor

Sprint Spectrum, L.P.
d/b/a Sprint PCS

Its Representative

Christopher B. Fisher, Esq.
Cuddy & Feder LLP
90 Maple Avenue
White Plains, New York 10601

Its Representative

Thomas J. Regan, Esq.
Brown Rudnick Berlack Israels
CityPlace 1
185 Asylum Street
Hartford, CT 06103

Exhibit B

Property Card

12 NEPAUG RD

Location 12 NEPAUG RD

Mblu 5/11 / 17/A /

Acct# 30303110

Owner REGIONAL SCHOOL DISTRICT #10

PBN

Assessment \$94,850

Appraisal \$135,500

PID 2391

Building Count 1

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2018	\$0	\$135,500	\$135,500

Assessment			
Valuation Year	Improvements	Land	Total
2018	\$0	\$94,850	\$94,850

Owner of Record

Owner REGIONAL SCHOOL DISTRICT #10
Co-Owner
Address 24 LYON ROAD
BURLINGTON, CT 06013

Sale Price \$0
Certificate
Book & Page 0360/0463
Sale Date 09/11/2019

Ownership History

Ownership History				
Owner	Sale Price	Certificate	Book & Page	Sale Date
REGIONAL SCHOOL DISTRICT #10	\$0		0360/0463	09/11/2019
WEAVER AUDREY S TR AND HERBERT F EST OF	\$0		0345/0798	11/10/2016
WEAVER AUDREY S TR AND HERBERT F EST OF	\$0		0345/0797	11/10/2016
WEAVER TRUSTEE AUDREY S OF THE AUDREY S	\$0		0280/0489	08/07/2008
WEAVER AUDREY S AND	\$0		0274/0105	10/22/2007

Building Information

Building 1 : Section 1

Year Built:
Living Area: 0
Replacement Cost: \$0
Building Percent Good:
Replacement Cost
Less Depreciation: \$0

Building Attributes	
Field	Description
Style	Vacant Land
Model	
Grade:	
Stories:	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure:	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Total Bthrms:	
Total Half Baths:	
Total Xtra Fixtrs:	
Total Rooms:	
Bath Style:	
Kitchen Style:	
Num Kitchens	
Cndtn	
Usrflid 103	
Usrflid 104	
Usrflid 105	
Usrflid 106	
Usrflid 107	
Num Park	
Fireplaces	

Building Photo



(<http://images.vgsi.com/photos/BurlingtonCTPhotos//00\00\93\56.jpg>)

Building Layout

(ParcelSketch.ashx?pid=2391&bid=2353)

Building Sub-Areas (sq ft)	<u>Legend</u>
No Data for Building Sub-Areas	

Usrflid 108	
Usrflid 101	
Usrflid 102	
Usrflid 100	
Usrflid 300	
Usrflid 301	

Extra Features

Extra Features	<u>Legend</u>
No Data for Extra Features	

Land

Land Use

Use Code 9030
Description Municipal Mdl-00
Zone R44
Neighborhood 3000
Alt Land Appr No
Category

Land Line Valuation

Size (Acres) 6.94
Frontage
Depth
Assessed Value \$94,850
Appraised Value \$135,500

Outbuildings

Outbuildings	<u>Legend</u>
No Data for Outbuildings	

Valuation History

Appraisal			
Valuation Year	Improvements	Land	Total
2019	\$0	\$135,500	\$135,500
2018	\$0	\$125,600	\$125,600
2017	\$0	\$269,100	\$269,100

Assessment			
Valuation Year	Improvements	Land	Total
2019	\$0	\$94,850	\$94,850
2018	\$0	\$87,920	\$87,920
2017	\$0	\$188,370	\$188,370

Exhibit C

Construction Drawings



DISH Wireless L.L.C. SITE ID:

BOBDL00071A

DISH Wireless L.L.C. SITE ADDRESS:

**12 NEPAUG ROAD
BURLINGTON, CT 06013**

SCOPE OF WORK	
THIS IS NOT AN ALL INCLUSIVE LIST. CONTRACTOR SHALL UTILIZE SPECIFIED EQUIPMENT PART OR ENGINEER APPROVED EQUIVALENT. CONTRACTOR SHALL VERIFY ALL NEEDED EQUIPMENT TO PROVIDE A FUNCTIONAL SITE. THE PROJECT GENERALLY CONSISTS OF THE FOLLOWING:	
TOWER SCOPE OF WORK:	
<ul style="list-style-type: none"> • INSTALL (3) PROPOSED PANEL ANTENNAS (1 PER SECTOR) • INSTALL (1) PROPOSED PLATFORM MOUNT • INSTALL PROPOSED JUMPERS • INSTALL (6) PROPOSED RRU's (2 PER SECTOR) • INSTALL (1) PROPOSED OVER VOLTAGE PROTECTION DEVICE (OVP) • INSTALL (1) PROPOSED HYBRID CABLE 	
GROUND SCOPE OF WORK:	
<ul style="list-style-type: none"> • INSTALL (1) PROPOSED METAL PLATFORM • 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) • EXISTING METER SOCKET IS AVAILABLE AT SOCKET 	

SITE INFORMATION	PROJECT DIRECTORY
PROPERTY OWNER: REGIONAL SCHOOL ADDRESS: 24 LYON ROAD BURLINGTON, CT 06013	APPLICANT: DISH Wireless L.L.C. 5701 SOUTH SANTA FE DRIVE LITTLETON, CO 80120
TOWER TYPE: MONOPOLE	TOWER OWNER: CROWN CASTLE 2000 CORPORATE DRIVE CANONSBURG, PA 15317 (877) 486-9377
TOWER CO SITE ID: 845993	SITE DESIGNER: INFINIGY 2500 W. HIGGINS RD. SUITE 500 HOFFMAN ESTATES, IL 60169 (847) 648-4068
TOWER APP NUMBER: 556621	SITE ACQUISITION: NICHOLAS CURRY NICHOLAS.CURRY@crowncastle.com
COUNTY: HARTFORD	CONSTRUCTION MANAGER: JAVIER SOTO JAVIER.SOTTO@dish.com
LATITUDE (NAD 83): 41° 46' 56.86" N 41.782461 N	RF ENGINEER: BOSSENER CHARLES BOSSENER.CHARLES@dish.com
LONGITUDE (NAD 83): 72° 59' 22.68" W 72.989633 W	
ZONING JURISDICTION: TOWN OF BURLINGTON	
ZONING DISTRICT: R44	
PARCEL NUMBER: 5-11-17-A	
OCCUPANCY GROUP: U	
CONSTRUCTION TYPE: V-B	
POWER COMPANY: EVERSOURCE	
TELEPHONE COMPANY: TBD	



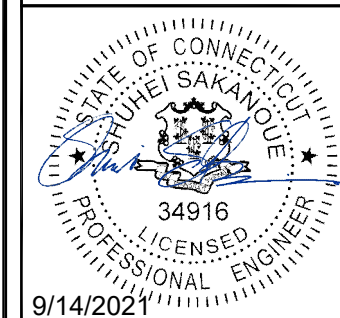
5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120



2000 CORPORATE DRIVE
CANONSBURG, PA 15317



FROM ZERO TO INFINIGY
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HOFFMAN ESTATES, IL 60169
PHONE: 847-648-4068 | FAX: 518-690-0793
WWW.INFINIGY.COM



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

DRAWN BY: RCD
CHECKED BY: SS
APPROVED BY: CJW

RFDS REV #: N/A

CONSTRUCTION DOCUMENTS

SUBMITTALS		
REV	DATE	DESCRIPTION
A	07/01/2021	ISSUED FOR REVIEW
0	08/31/2021	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER
6039-Z0001-C

DISH Wireless L.L.C.
PROJECT INFORMATION

BOBDL00071A
12 NEPAUG ROAD
BURLINGTON, CT 06013

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

CONNECTICUT CODE 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

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

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

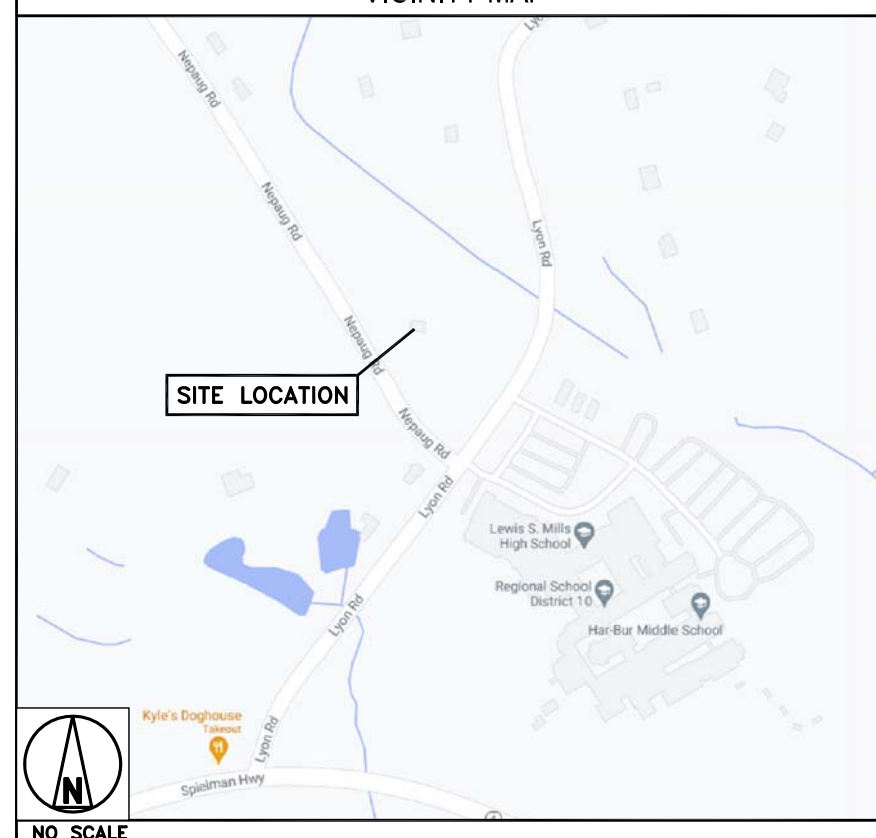
CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS, AND CONDITIONS ON THE JOB SITE, AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK.

DIRECTIONS

DIRECTIONS FROM TOURS OF DISTINCTION AIRPORT:

DEPART AND HEAD TOWARD MASSACO ST, TURN RIGHT ONTO MASSACO ST, TURN RIGHT ONTO US-202 W / CT-10 / HOPMEADOW ST, TURN RIGHT ONTO CT-167 / WEST ST, TURN LEFT TO STAY ON CT-167 / BUSHY HILL RD, TURN RIGHT ONTO CANTON RD, KEEP RIGHT TO GET ONTO WILDWOOD RD, BEAR LEFT ONTO NOTCH RD, ROAD NAME CHANGES TO WASHBURN RD, BEAR LEFT ONTO LAWTON RD, BEAR RIGHT ONTO US-202 E / US-44 E / ALBANY TPKE, TURN LEFT ONTO DOWD AVE, ROAD NAME CHANGES TO MAPLE AVE KEEP STRAIGHT TO GET ONTO CT-179 / MAPLE AVE, TURN RIGHT ONTO CT-4 / SPIELMAN HWY, TURN RIGHT ONTO LYON RD, TURN LEFT ONTO NEPAUG RD, ARRIVE AT, 12 NEPAUG ROAD, BURLINGTON, CT 06013.

VICINITY MAP



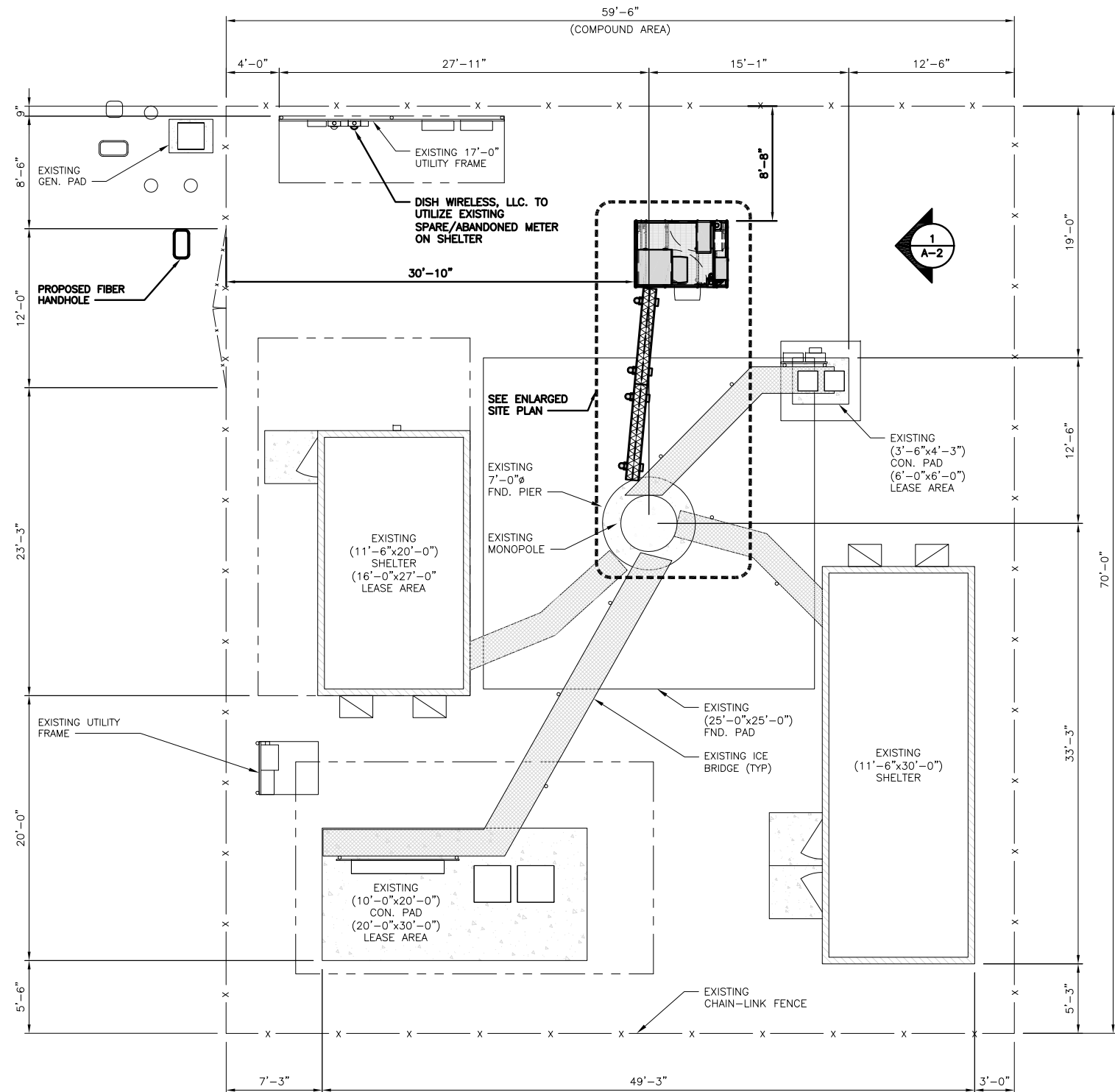
NO SCALE

NOTES

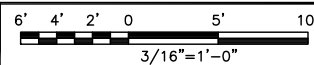
1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. ANTENNAS AND MOUNTS OMITTED FOR CLARITY.

NOTES

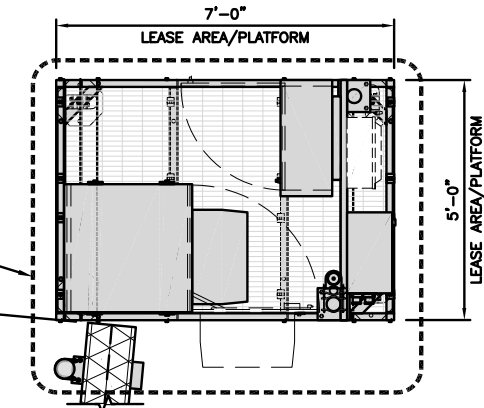
1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. CONTRACTOR SHALL MAINTAIN A 10'-0" MINIMUM SEPARATION BETWEEN THE PROPOSED GPS UNIT, TRANSMITTING ANTENNAS AND EXISTING GPS UNITS.
3. ANTENNAS AND MOUNTS OMITTED FOR CLARITY.



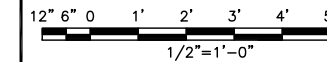
OVERALL SITE PLAN



1



ENLARGED SITE PLAN



2



ACCESS PLAN

NO SCALE

3

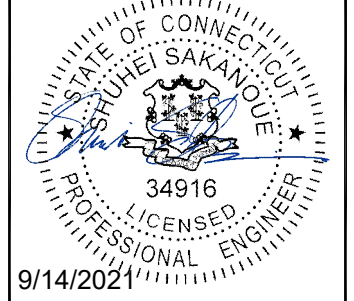
dish wireless.

5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

CROWN CASTLE

2000 CORPORATE DRIVE
CANONSBURG, PA 15317

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DRAWN BY: CHECKED BY: APPROVED BY:
RCD SS CJW

RFDS REV #: N/A

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12 NEPAUG ROAD
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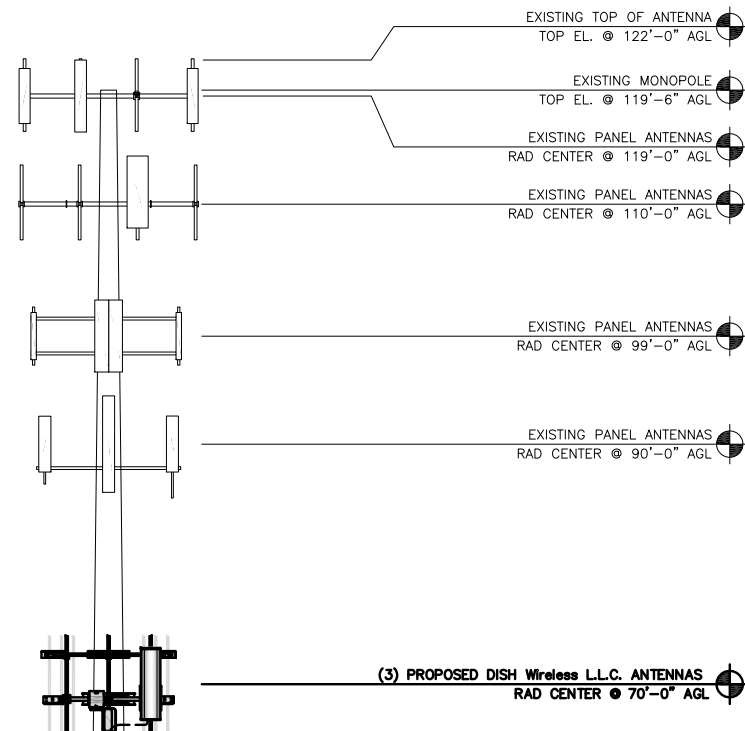
SHEET TITLE
OVERALL AND ENLARGED
SITE PLAN

SHEET NUMBER

A-1

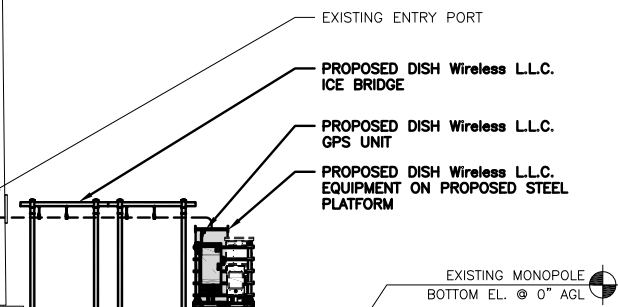
NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. ANTENNA SPECIFICATIONS REFER TO ANTENNA SCHEDULE AND TO FINAL CONSTRUCTION RFDS FOR ALL RF DETAILS
3. EXISTING EQUIPMENT AND FENCE OMITTED FOR CLARITY.
4. INFINIGY HAS NOT EVALUATED THE TOWER OR MOUNT STRUCTURE AND ASSUMES NO RESPONSIBILITY FOR THEIR STRUCTURAL INTEGRITY REGARDING PROPOSED LOADINGS. FINAL INSTALLATION SHALL COMPLY WITH RESULTS OF PASSING STRUCTURAL ANALYSES PERFORMED BY OTHERS.

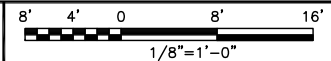


(1) PROPOSED DISH Wireless L.L.C. HYBRID CABLE ROUTED INSIDE POLE

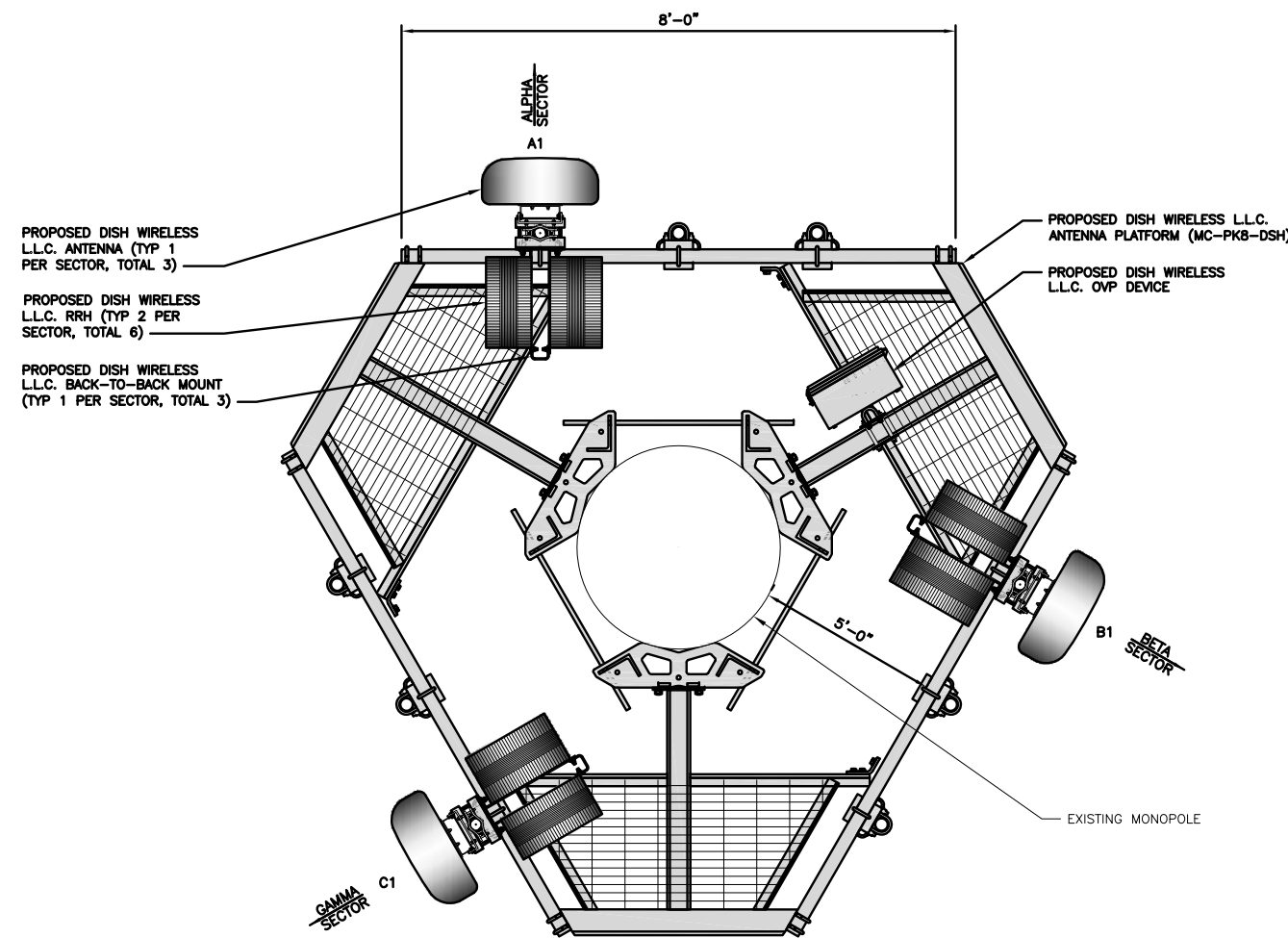
EXISTING MONOPOLE



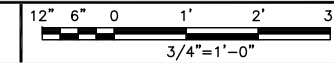
PROPOSED EAST ELEVATION



1



ANTENNA LAYOUT



2

SECTOR	POSITION	ANTENNA						TRANSMISSION CABLE	
		EXISTING OR PROPOSED	MANUFACTURER - MODEL NUMBER	TECHNOLOGY	SIZE (HxW)	AZMUTH	RAD CENTER	FEED LINE TYPE AND LENGTH	
ALPHA	A1	PROPOSED	JMA WIRELESS - MX08FR0665-21	5G	72.0" x 20.0"	0°	70'-0"	(1) HIGH-CAPACITY HYBRID CABLE (108' LONG)	
BETA	B1	PROPOSED	JMA WIRELESS - MX08FR0665-21	5G	72.0" x 20.0"	120°	70'-0"		
GAMMA	C1	PROPOSED	JMA WIRELESS - MX08FR0665-21	5G	72.0" x 20.0"	240°	70'-0"		

SECTOR	POSITION	RRH		NOTES
		MANUFACTURER - MODEL NUMBER	TECHNOLOGY	
ALPHA	A1	FUJITSU - TA08025-B604	5G	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.
	A1	FUJITSU - TA08025-B605	5G	
BETA	B1	FUJITSU - TA08025-B604	5G	
	B1	FUJITSU - TA08025-B605	5G	
GAMMA	C1	FUJITSU - TA08025-B604	5G	
	C1	FUJITSU - TA08025-B605	5G	

ANTENNA SCHEDULE

NO SCALE

3



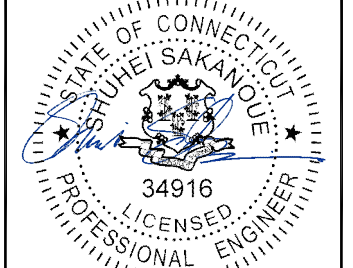
5701 SOUTH SANTA FE DRIVE
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RCD SS CJW

RFDS REV #: N/A

CONSTRUCTION DOCUMENTS

SUBMITTALS		
REV	DATE	DESCRIPTION
A	07/01/2021	ISSUED FOR REVIEW
0	08/31/2021	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER
6039-Z0001-C

DISH Wireless L.L.C. PROJECT INFORMATION
BOBDL00071A
12 NEPAUG ROAD
BURLINGTON, CT 06013

SHEET TITLE
ELEVATION, ANTENNA LAYOUT AND SCHEDULE

SHEET NUMBER

A-2



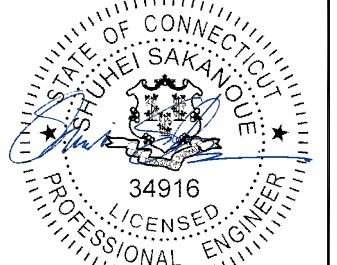
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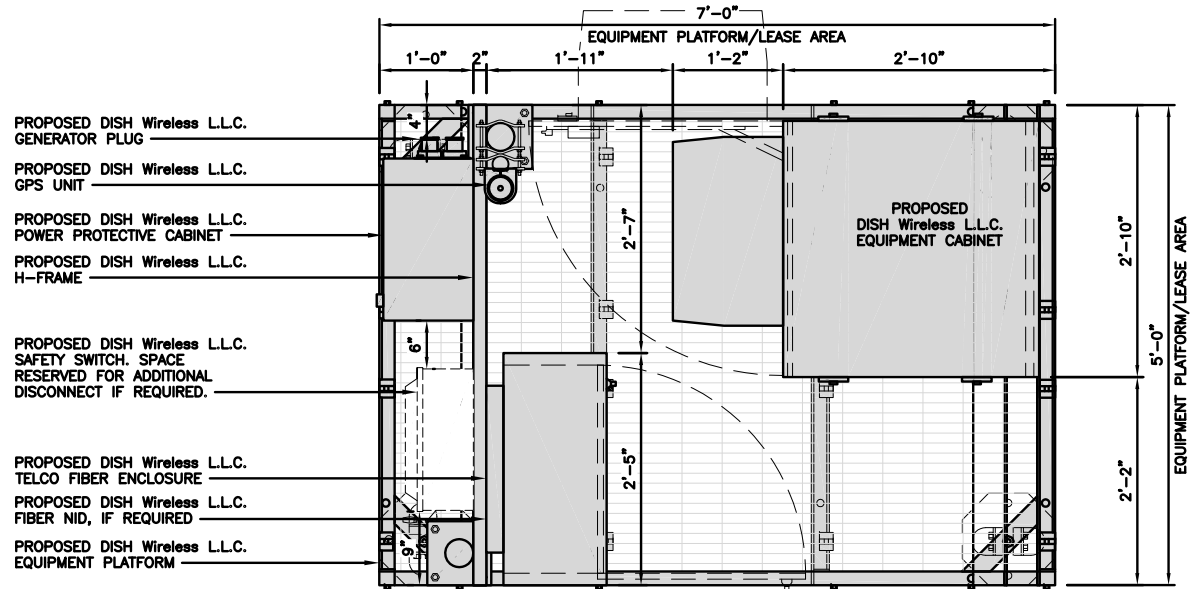
SHEET TITLE
EQUIPMENT PLATFORM AND
H-FRAME DETAILS

SHEET NUMBER

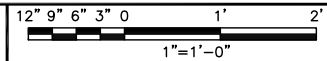
A-3

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



PLATFORM EQUIPMENT PLAN

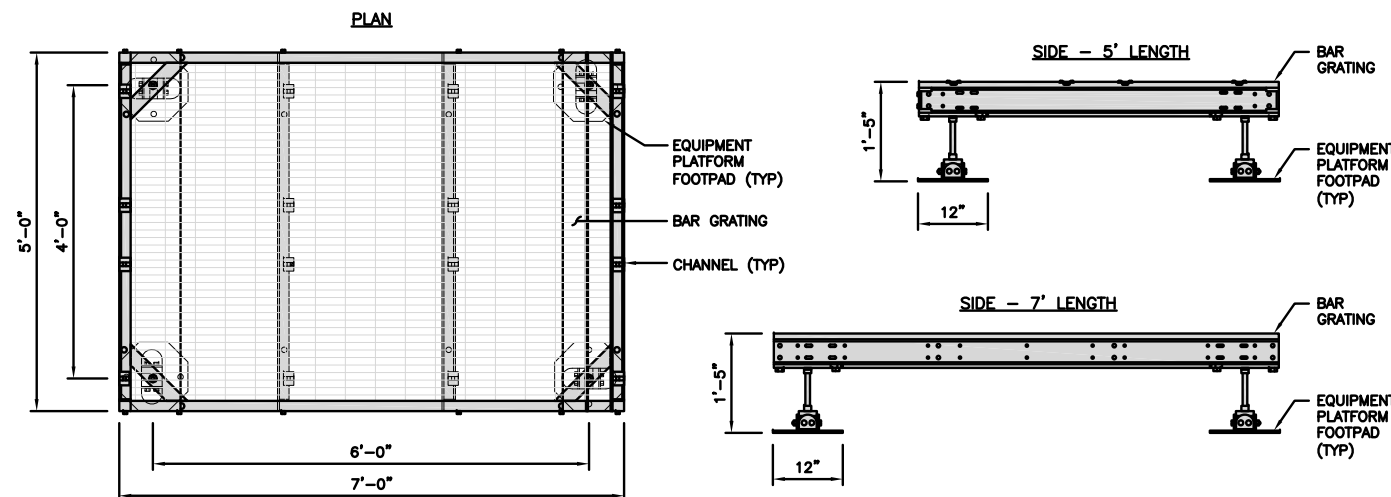


1

**COMMSCOPE MTC4045LP
5X7 PLATFORM**

DIMENSIONS (HxWxD)	16"x84"x60"
TOTAL WEIGHT	423 LBS

NOTE:
GC TO PROVIDE EXTENDED
THREAD FOR PLATFORM IF
REQUIRED HEIGHT EXCEEDS 17"



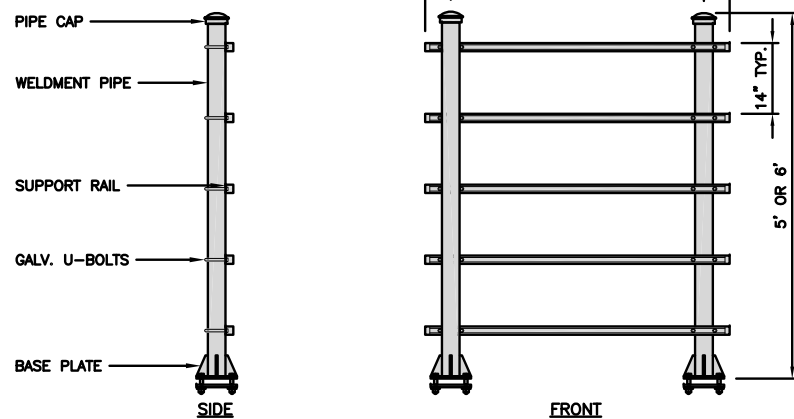
PLATFORM DETAIL

NO SCALE 2

**COMMSCOPE MTC4045HFLD
H-FRAME**

UNISTRUT/SUPPORT RAILS QTY	5
WEIGHT	59.74 lbs

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

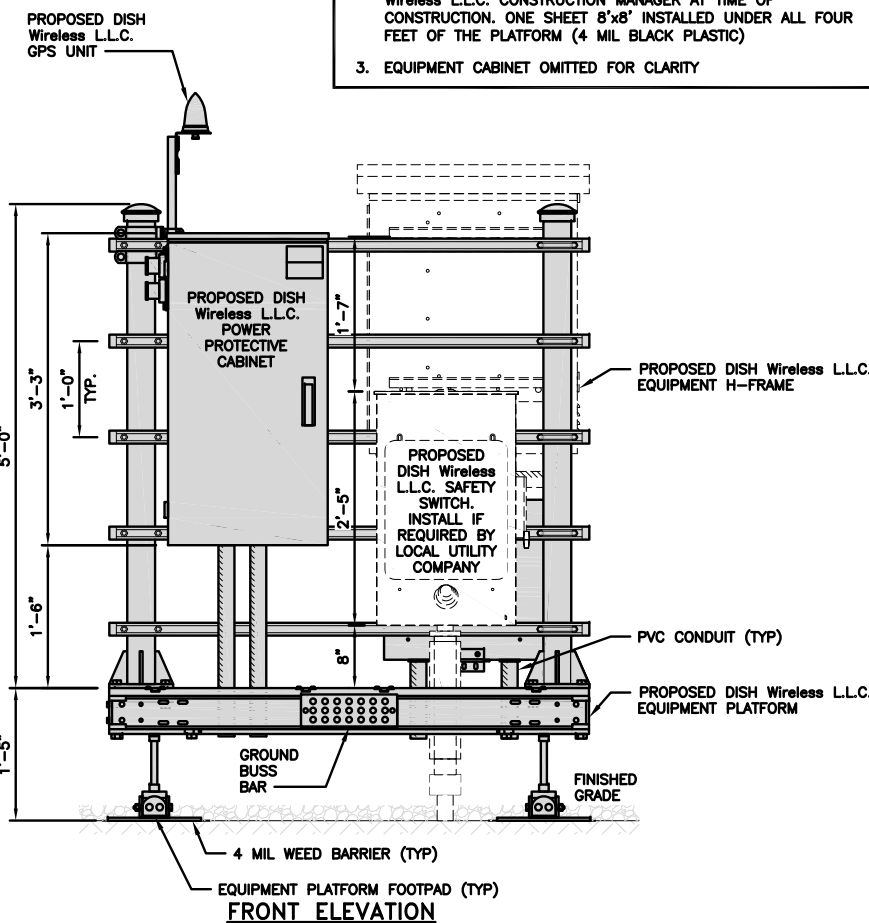


H-FRAME DETAIL

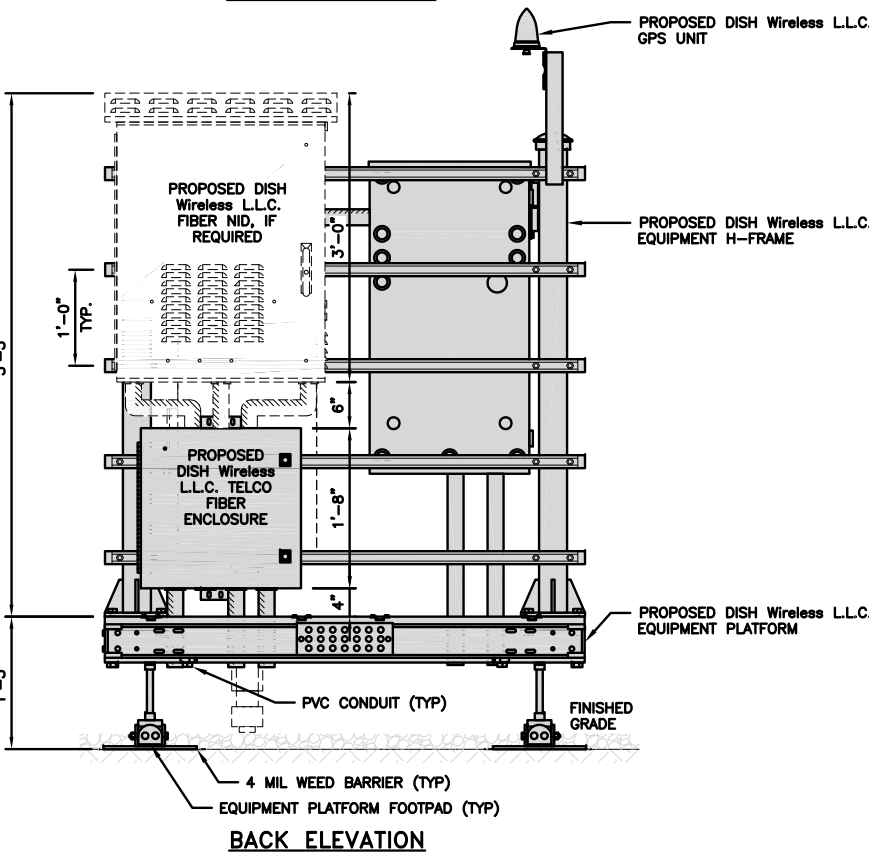
NO SCALE 3

NOT USED

NO SCALE 4

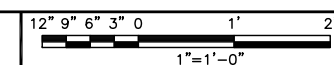


FRONT ELEVATION

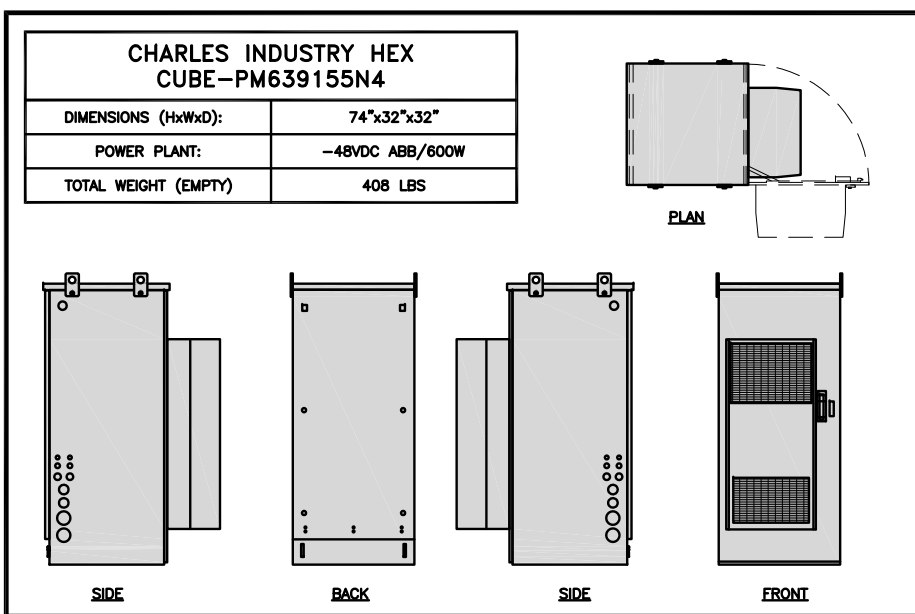


BACK ELEVATION

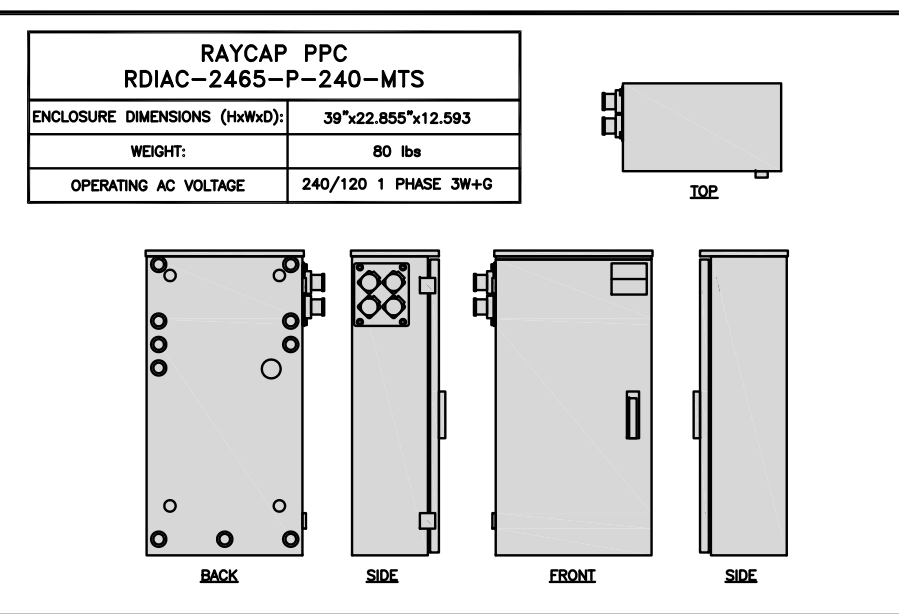
H-FRAME EQUIPMENT ELEVATION



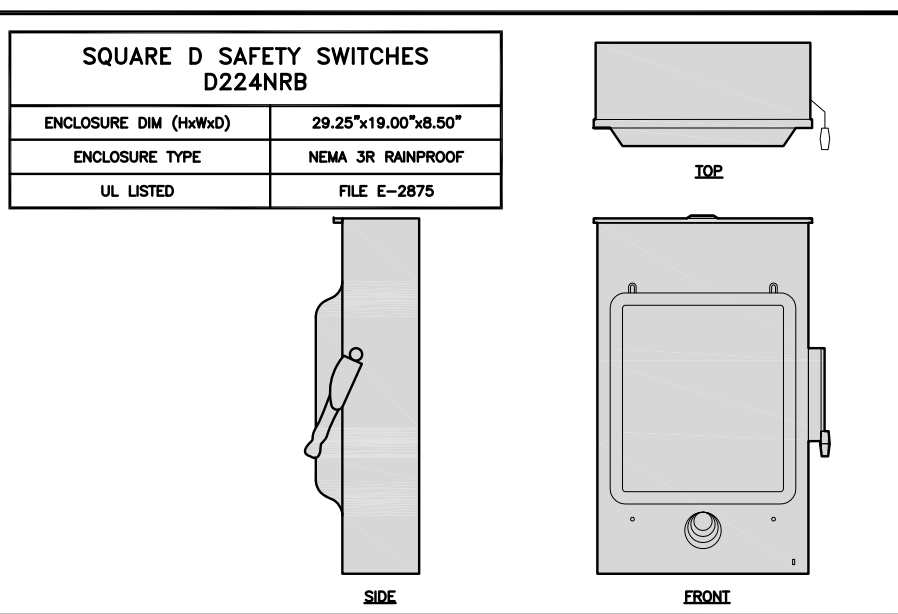
5



CABINET DETAIL NO SCALE 1



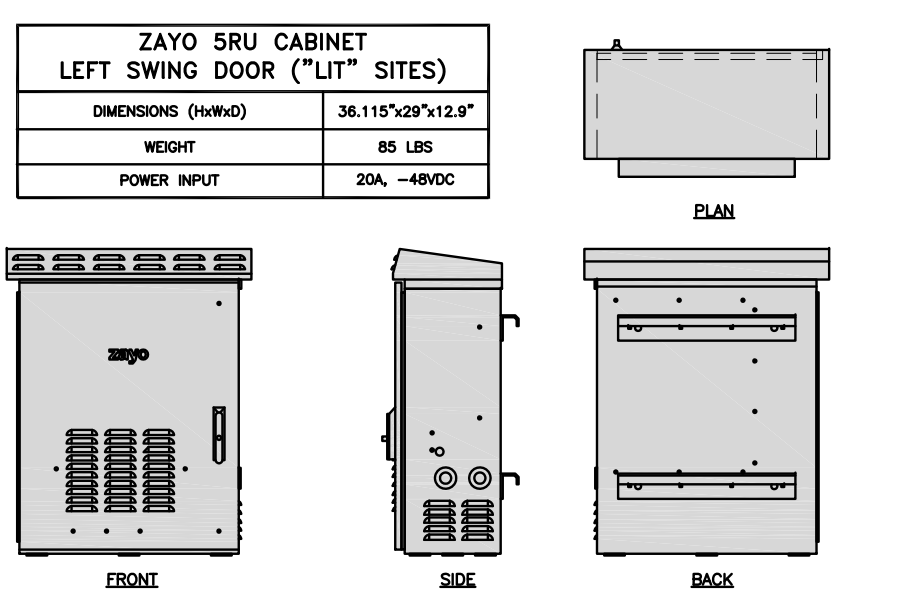
POWER PROTECTION CABINET (PPC) DETAIL NO SCALE 2



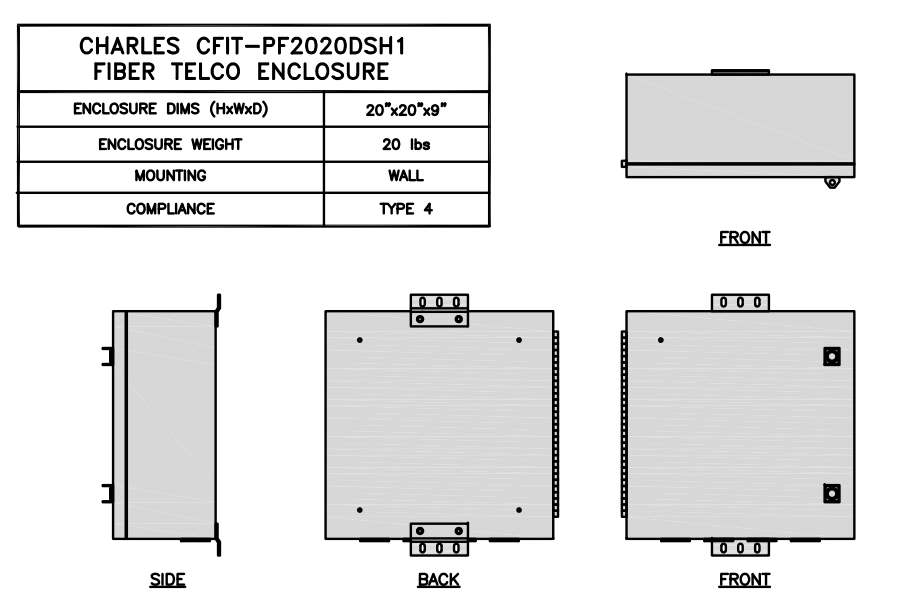
SAFETY SWITCH DETAIL NO SCALE 3



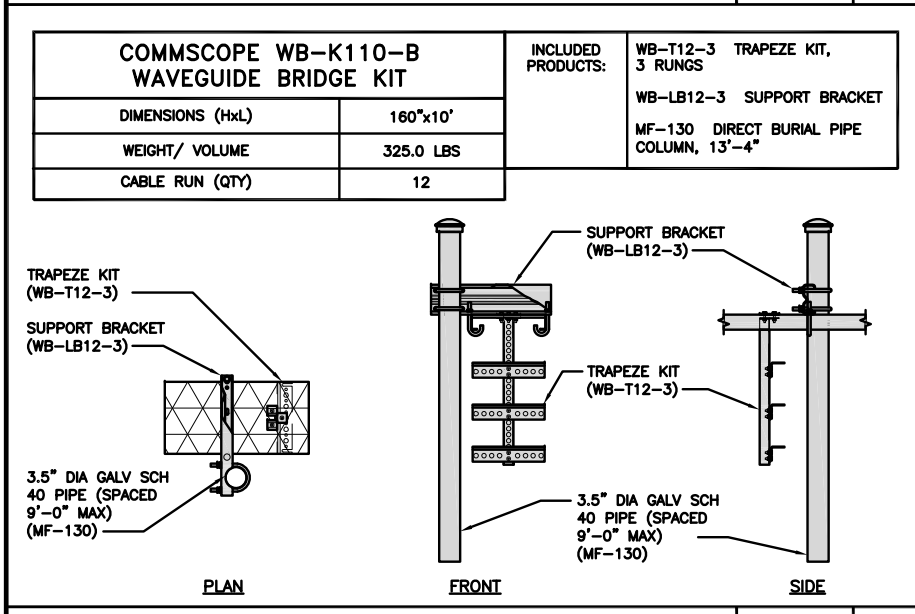
NOT USED NO SCALE 4



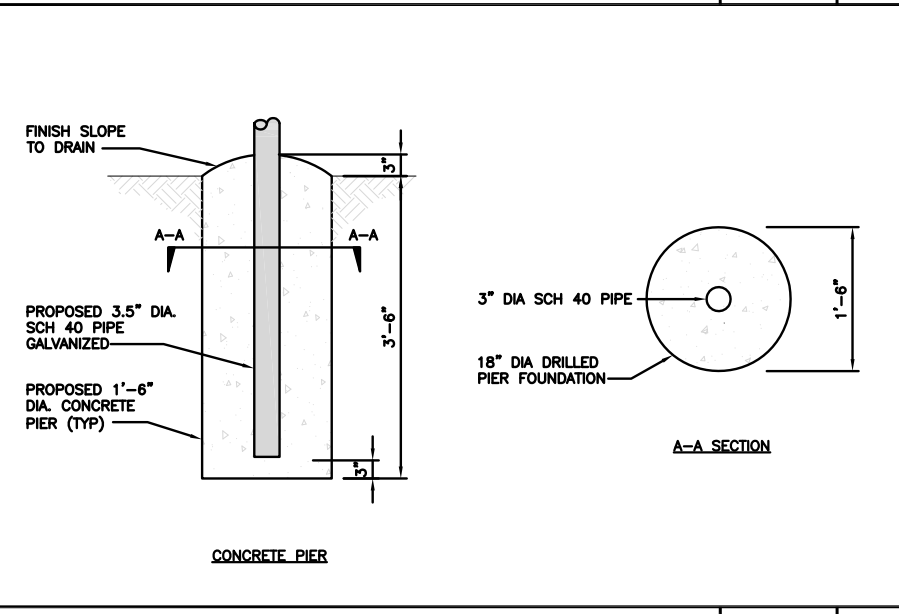
NETWORK INTERFACE UNIT DETAIL NO SCALE 5



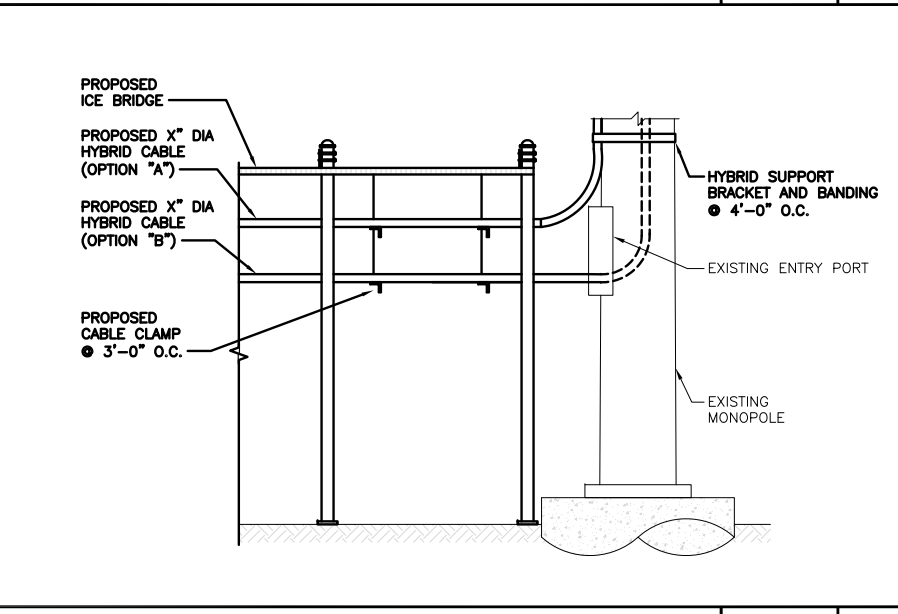
FIBER TELCO ENCLOSURE DETAIL NO SCALE 6



ICE BRIDGE DETAIL NO SCALE 7



TYPICAL ICE BRIDGE CONCRETE PIER DETAIL NO SCALE 8



HYBRID CABLE RUN NO SCALE 9

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 RCD SS CJW

RFDS REV #: N/A

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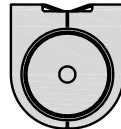
A&E PROJECT NUMBER
6039-Z0001-C

DISH Wireless L.L.C.
PROJECT INFORMATION
BOBDL0071A
12 NEPAUG ROAD
BURLINGTON, CT 06013

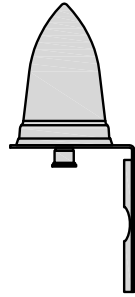
SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER
A-4

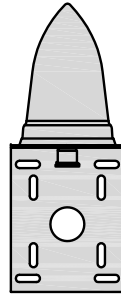
PCTEL GPSGL-TMG-SPI-40NCB	
DIMENSIONS (DIAxH) MM/INCH	81x184mm 3.2"x7.25"
WEIGHT W/ACCESSORIES	075 lbs
CONNECTOR	N-FEMALE
FREQUENCY RANGE	1590 ± 30MHz



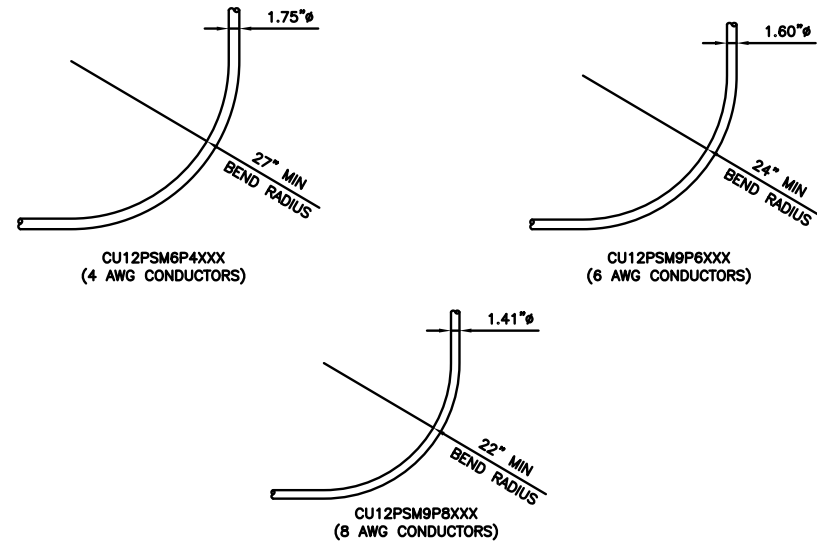
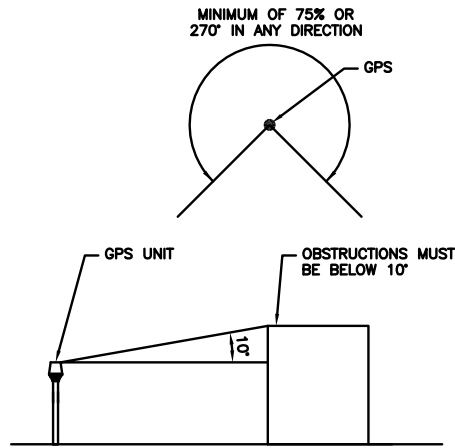
TOP



BACK



SIDE



GPS DETAIL

NO SCALE

1

GPS MINIMUM SKY VIEW REQUIREMENTS

NO SCALE

2

CABLES UNLIMITED HYBRID CABLE
MINIMUM BEND RADIUSES

NO SCALE

3

NOT USED

NO SCALE

4

NOT USED

NO SCALE

5

NOT USED

NO SCALE

6

NOT USED

NO SCALE

7

NOT USED

NO SCALE

8

NOT USED

NO SCALE

9

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wireless.

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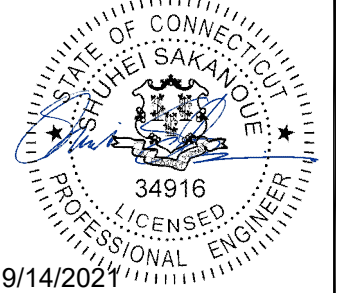
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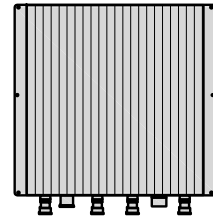
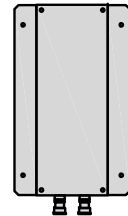
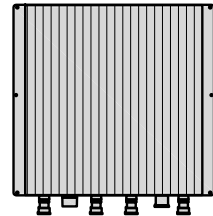
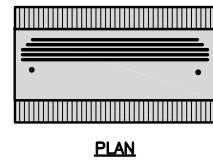
A&E PROJECT NUMBER
6039-Z0001-C

DISH Wireless L.L.C.
PROJECT INFORMATION
BOBDL00071A
12 NEPAUG ROAD
BURLINGTON, CT 06013

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

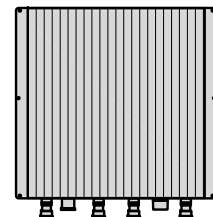
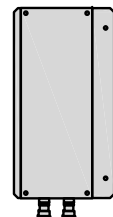
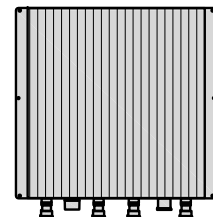
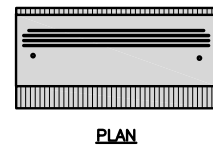


BACK

SIDE

FRONT

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



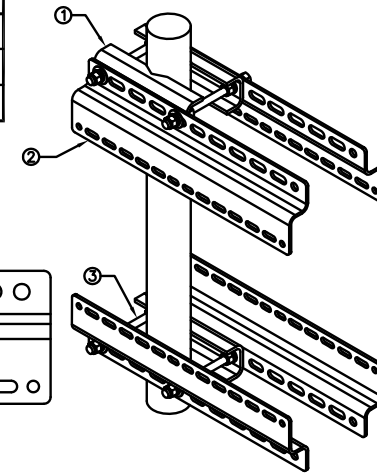
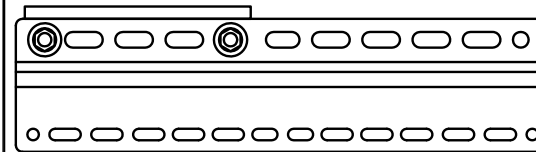
BACK

SIDE

FRONT

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 DETAIL

NO SCALE

1

RRH DETAIL

NO SCALE

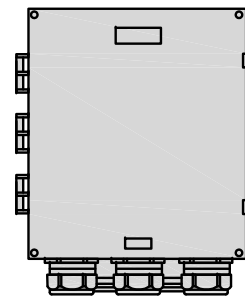
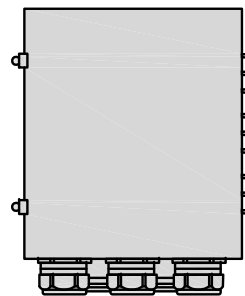
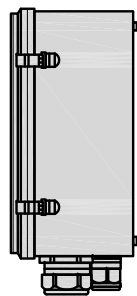
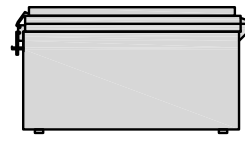
2

RRH MOUNT DETAIL

NO SCALE

3

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

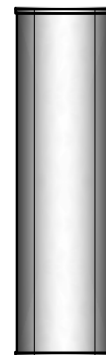
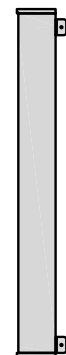


SIDE

BACK

FRONT

JMA WIRELESS MX08FR0665-21 ANTENNA	
DIMENSIONS (HxWxD)	72.0"x20.0"x8.0"
TOTAL WEIGHT	64.5 LB
RF PORTS, CONNECTOR TYPE	8 x 4.3-10 FEMALE



BACK

SIDE

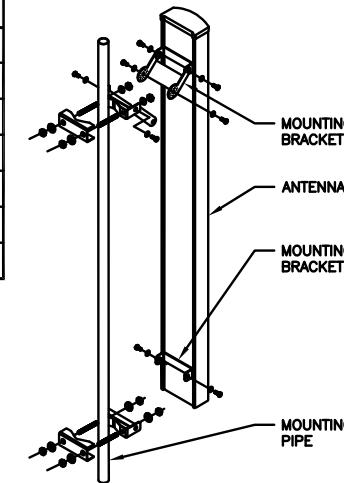
FRONT

NOTES

FINAL ANTENNA SPECIFICATIONS
TO BE CONFIRMED BY GC

M04 MOUNTING BRACKET
HPA-33R-BUU-H4-K

WIDTH	5"
DEPTH	2"
HEIGHT	8"
TOTAL WEIGHT	1.5 lbs
HOUSING MATERIAL	ASA/ABS/ALUMINUM
RADOME COLOR	LIGHT GRAY
CONNECTOR	1x8-PIN DAISY CHAIN



NOTE:
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APPROVED EQUIVALENT

SURGE SUPPRESSION DETAIL (OVP)

NO SCALE

4

ANTENNA DETAIL

NO SCALE

5

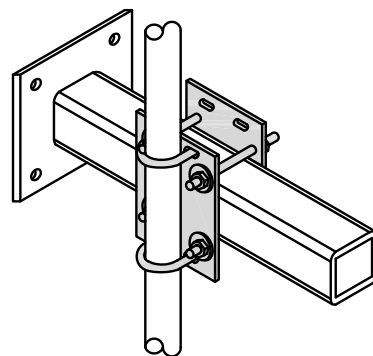
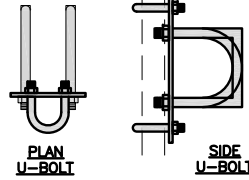
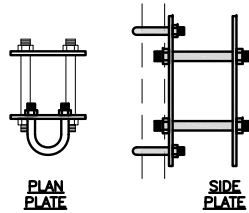
ANTENNA MOUNTING DETAIL

NO SCALE

6

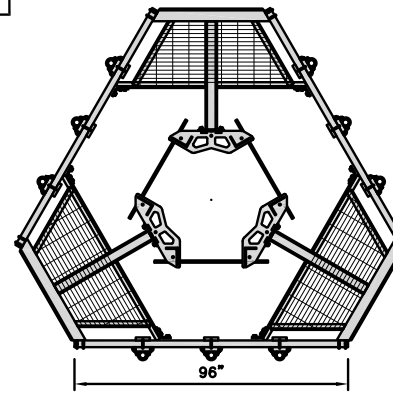
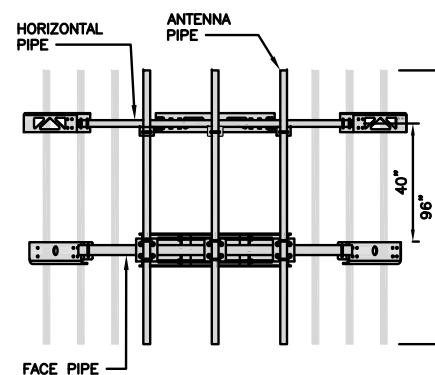
COMMSCOPE XP-2040 CROSSOVER PLATE	
DIMENSIONS (HxW)	10"x12"
WEIGHT	11 lbs

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



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

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



RRH/OVP MOUNT DETAIL

NO SCALE

7

ANTENNA PLATFORM DETAIL

NO SCALE

8

NOT USED

NO SCALE

9

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wireless.

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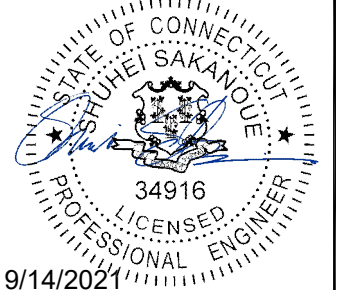
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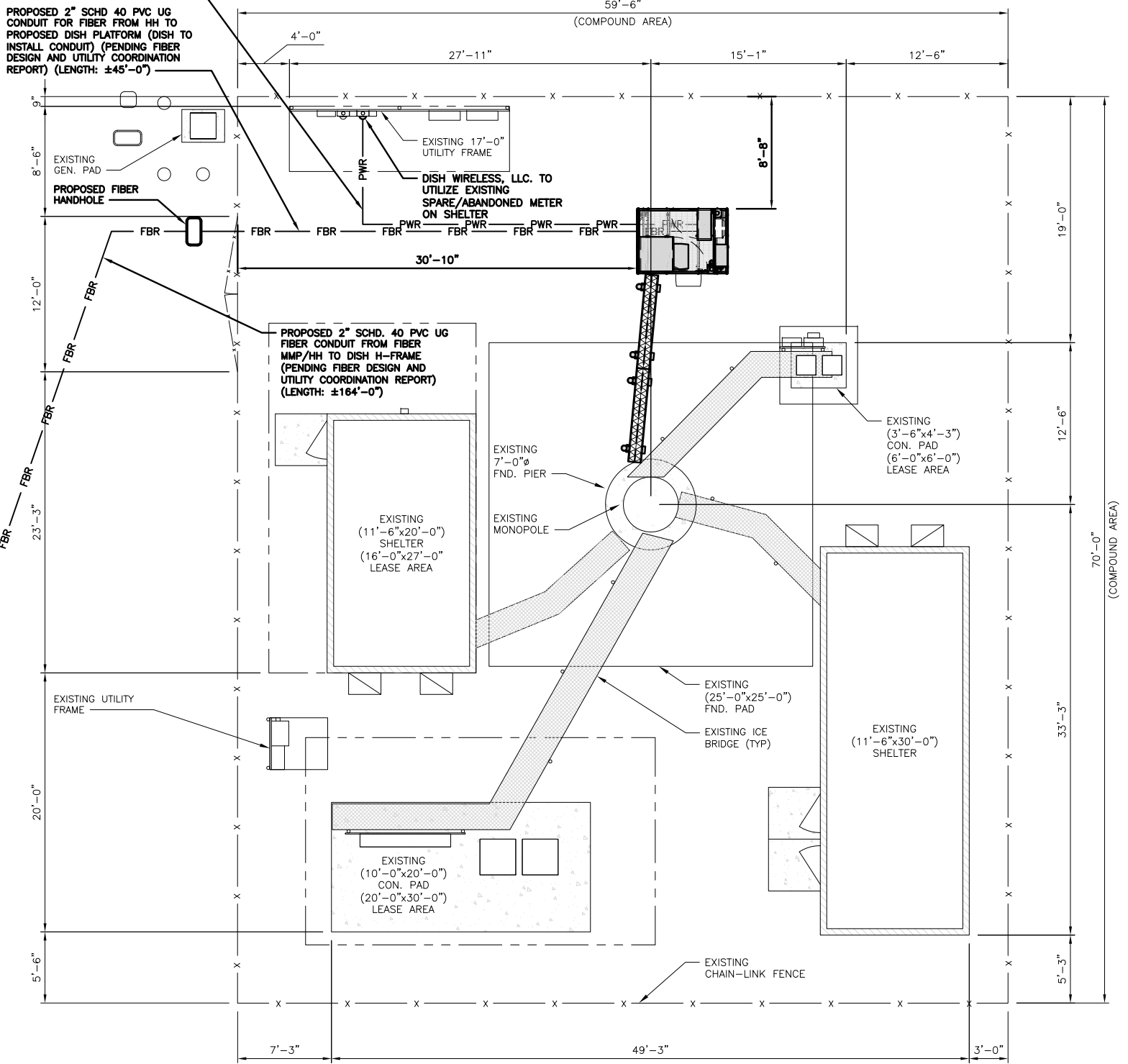
SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER

A-6

PROPOSED POWER ROUTE FROM EXISTING UTILITY FRAME WITH EMPTY SOCKET TO PROPOSED DISH PLATFORM (PENDING POWER DESIGN AND UTILITY COORDINATION REPORT) (LENGTH: ±40'-0")

PROPOSED 2" SCHD 40 PVC UG CONDUIT FOR FIBER FROM HH TO PROPOSED DISH PLATFORM (DISH TO INSTALL CONDUIT) (PENDING FIBER DESIGN AND UTILITY COORDINATION REPORT) (LENGTH: ±45'-0")



NOTES

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

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

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

ELECTRICAL NOTES

2



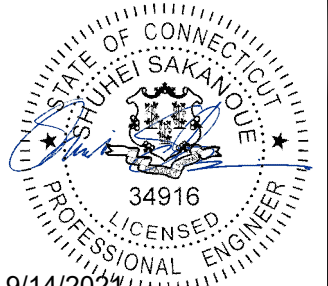
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DISH Wireless L.L.C.
PROJECT INFORMATION

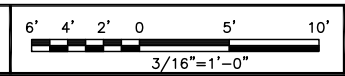
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BURLINGTON, CT 06013

SHEET TITLE
ELECTRICAL/FIBER ROUTE
PLAN AND NOTES

SHEET NUMBER

E-1

UTILITY ROUTE PLAN



1

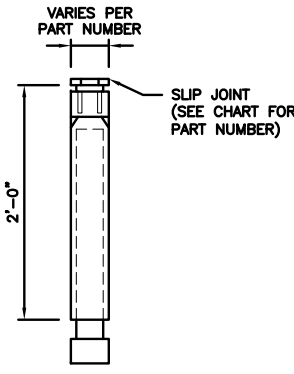
OVERALL UTILITY ROUTE PLAN

NO SCALE

3

CARLON EXPANSION FITTINGS

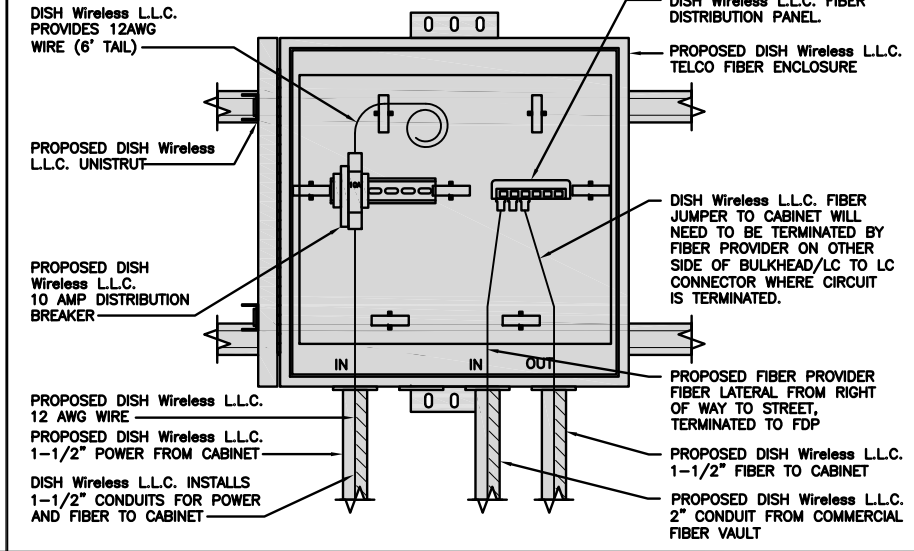
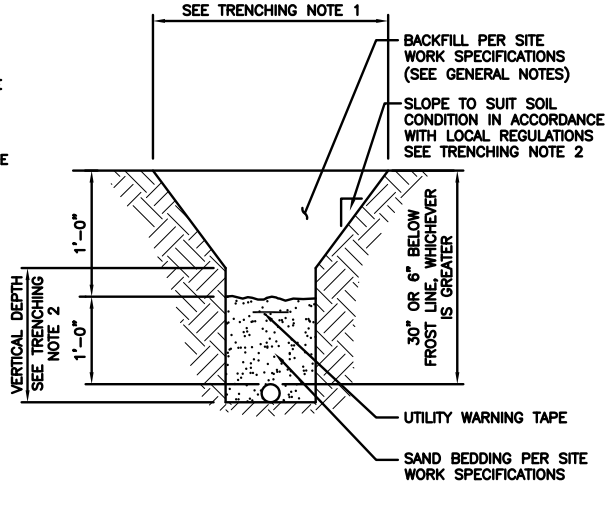
COUPLING END PART#	MALE TERMINAL ADAPTER END PART#	SIZE	STD CTN QTY.	TRAVEL LENGTH
E945D	E945DX	1/2"	20	4"
E945E	E945EX	3/4"	15	4"
E945F	E945FX	1"	10	4"
E945G	E945GX	1 1/4"	5	4"
E945H	E945HX	1 1/2"	5	4"
E945J	E945JX	2"	15	8"
E945K	E945KX	2 1/2"	10	8"
E945L	E945LX	3"	10	8"
E945M	E945MX	3 1/2"	5	8"
E945N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

TRENCHING NOTES

- 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.
- TRENCHING SAFETY; INCLUDING, BUT NOT LIMITED TO SOIL CLASSIFICATION, SLOPING, AND SHORING, SHALL BE GOVERNED BY THE CURRENT OSHA TRENCHING AND EXCAVATION SAFETY STANDARDS.
- 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.



EXPANSION JOINT DETAIL

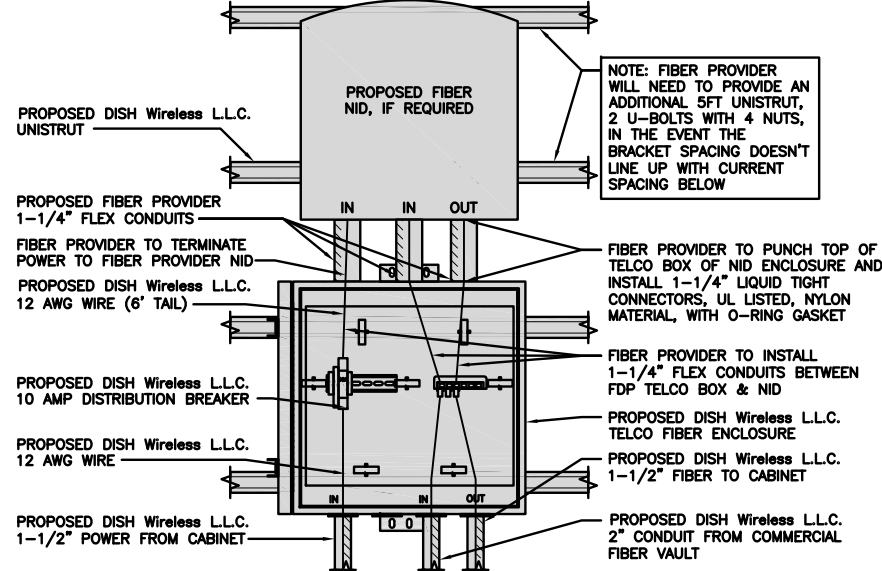
NO SCALE 1

TYPICAL UNDERGROUND TRENCH DETAIL

NO SCALE 2

DARK TELCO BOX – INTERIOR WIRING LAYOUT

NO SCALE 3



NOTE: FIBER PROVIDER WILL NEED TO PROVIDE AN ADDITIONAL 5FT UNISTRUT, 2 U-BOLTS WITH 4 NUTS, IN THE EVENT THE BRACKET SPACING DOESN'T LINE UP WITH CURRENT SPACING BELOW

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



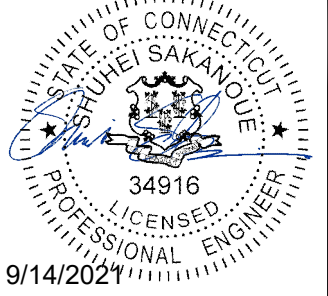
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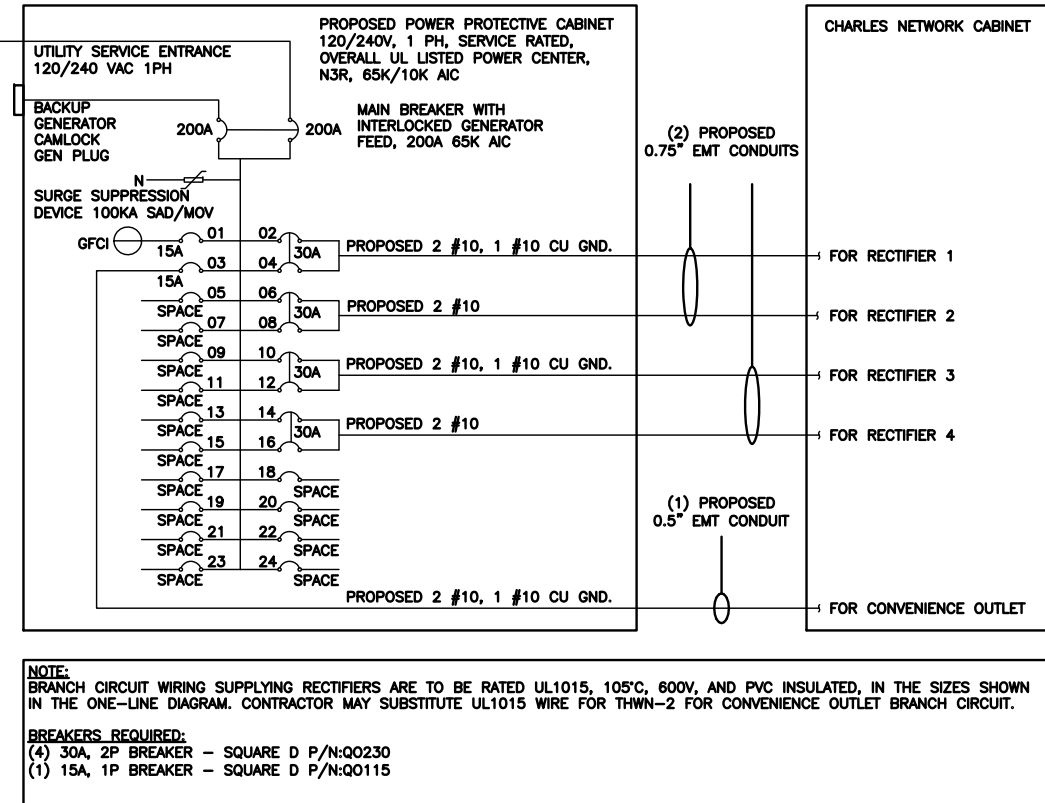
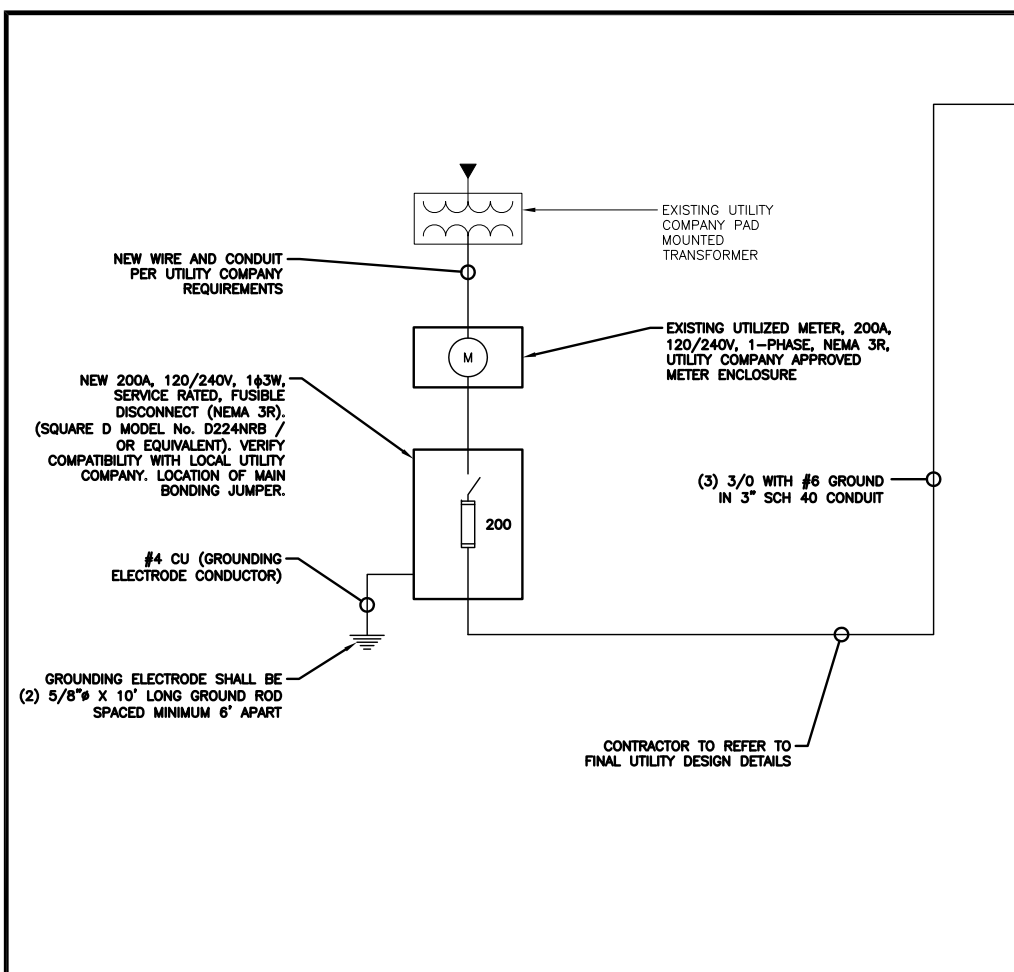
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PROJECT INFORMATION

BOBDL00071A
12 NEPAUG ROAD
BURLINGTON, CT 06013

SHEET TITLE
ELECTRICAL
DETAILS

SHEET NUMBER

E-2



NOTES

THE (2) CONDUITS WITH (4) CURRENT CARRYING CONDUCTORS EACH, SHALL APPLY THE ADJUSTMENT FACTOR OF 80% PER 2014/17 NEC TABLE 310.15(B)(3)(g) 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.

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:Q0230
 (1) 15A, 1P BREAKER - SQUARE D P/N:Q0115

PPC ONE-LINE DIAGRAM

NO SCALE 1

PROPOSED CHARLES PANEL SCHEDULE										
LOAD SERVED	VOLT AMPS (WATTS)		TRIP	CKT #	PHASE	CKT #	TRIP	VOLT AMPS (WATTS)		LOAD SERVED
	L1	L2						L1	L2	
PPC GFCI OUTLET	180	180	15A	1	A	2	30A	2880	2880	ABB/GE INFINITY RECTIFIER 1
CHARLES GFCI OUTLET	180	180	15A	3	B	4	30A	2880	2880	ABB/GE INFINITY RECTIFIER 1
-SPACE-				5	A	6	30A	2880	2880	ABB/GE INFINITY RECTIFIER 2
-SPACE-				7	B	8	30A	2880	2880	ABB/GE INFINITY RECTIFIER 2
-SPACE-				9	A	10	30A	2880	2880	ABB/GE INFINITY RECTIFIER 3
-SPACE-				11	B	12	30A	2880	2880	ABB/GE INFINITY RECTIFIER 3
-SPACE-				13	A	14	30A	2880	2880	ABB/GE INFINITY RECTIFIER 4
-SPACE-				15	B	16	30A	2880	2880	ABB/GE INFINITY RECTIFIER 4
-SPACE-				17	A	18				-SPACE-
-SPACE-				19	B	20				-SPACE-
-SPACE-				21	A	22				-SPACE-
-SPACE-				23	B	24				-SPACE-
VOLTAGE AMPS	180	180						11520	11520	
200A MCB, 1/4" 24 SPACE, 120/240V				L1	L2					
MB RATING: 65,000 AIC				11700	11700					
				98	98					VOLTAGE AMPS
										AMPS
										98
										123
										MAX AMPS
										MAX 125%

PANEL SCHEDULE

NO SCALE 2

NOT USED

NO SCALE 3



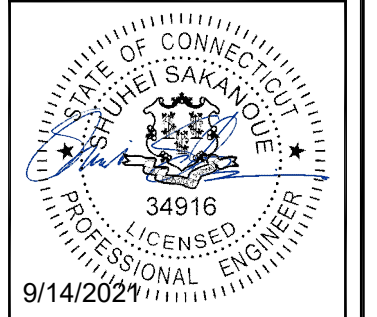
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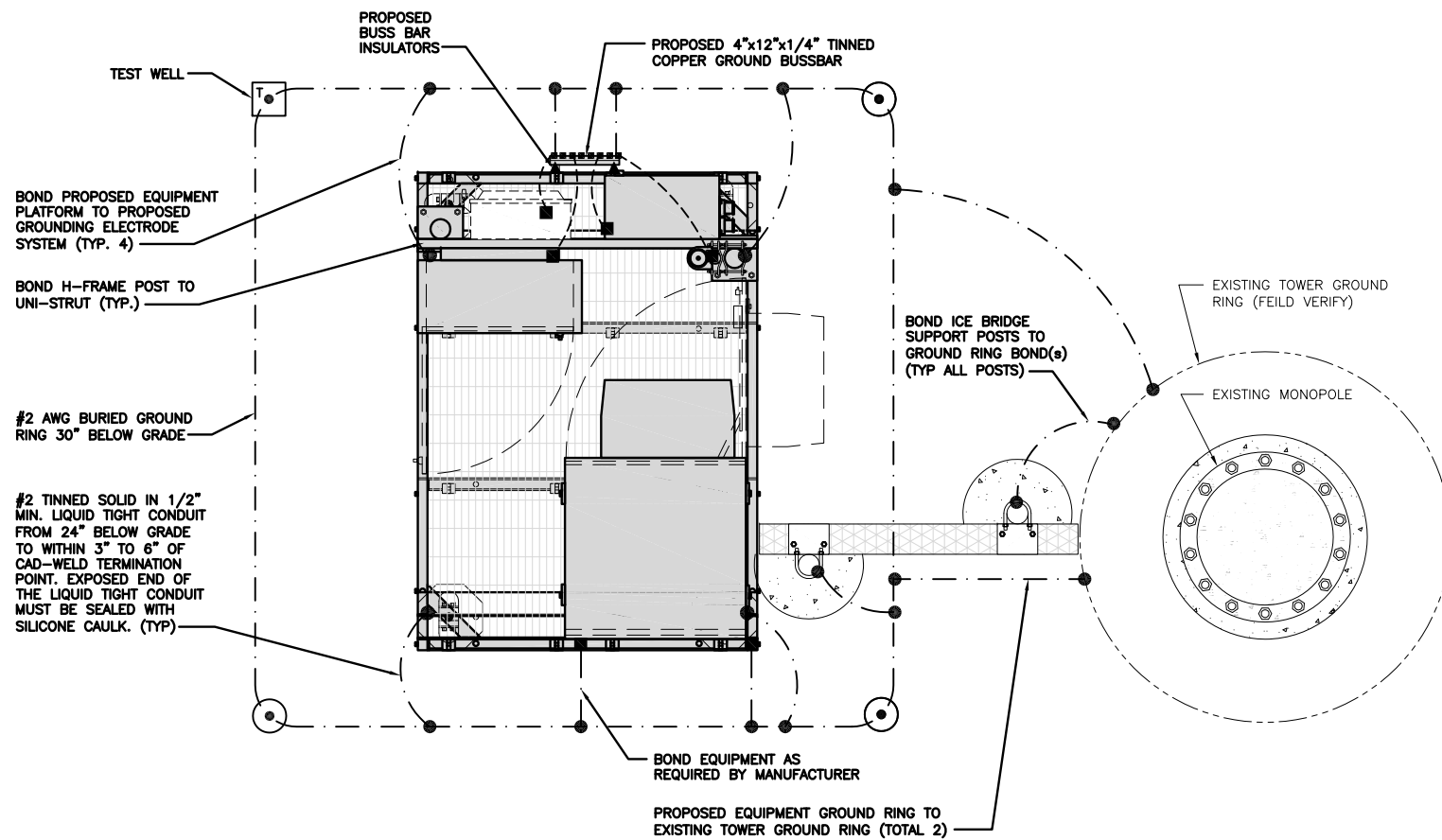
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6039-Z0001-C

DISH Wireless L.L.C.
PROJECT INFORMATION
BOBDL00071A
12 NEPAUG ROAD
BURLINGTON, CT 06013

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

SHEET NUMBER
E-3

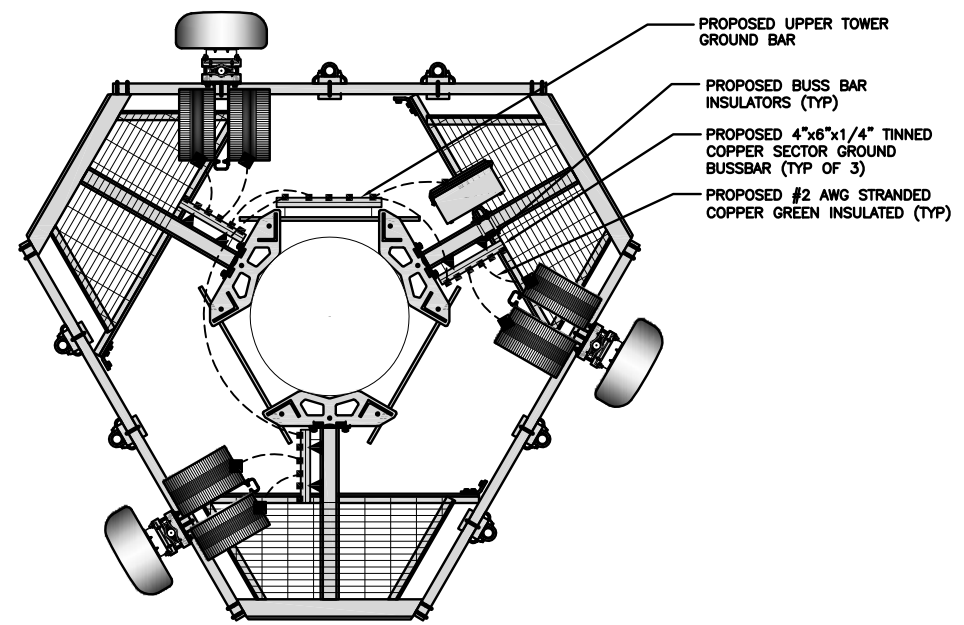


TYPICAL EQUIPMENT GROUNDING PLAN

NO SCALE 1

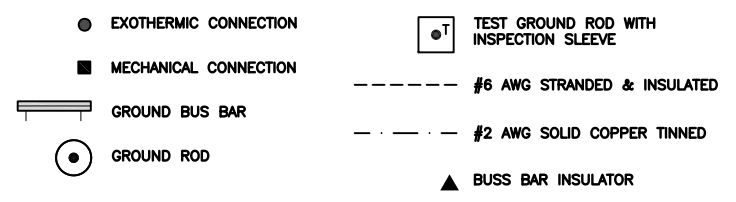
NOTES

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



TYPICAL ANTENNA GROUNDING PLAN

NO SCALE 2



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 PROPOSED ANTENNA MOUNT COLLAR. REFER TO DISH Wireless L.L.C. GROUNDING NOTES.**

GROUNDING KEY NOTES

NO SCALE 3



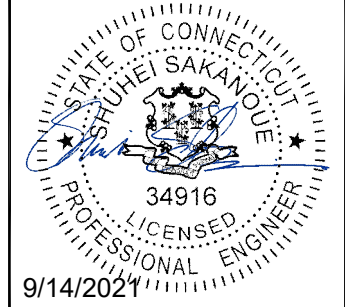
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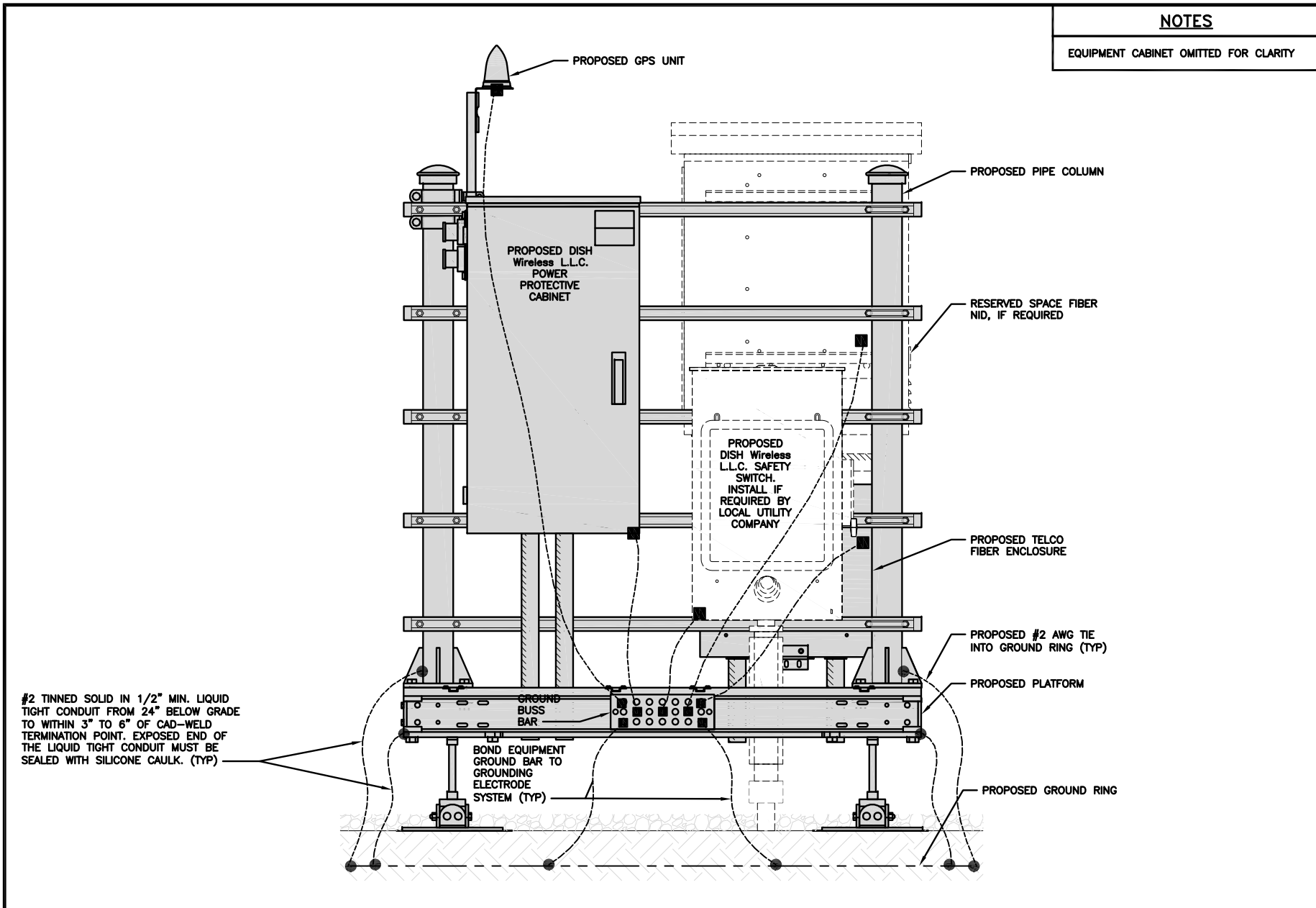
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SHEET TITLE
GROUNDING PLANS
AND NOTES

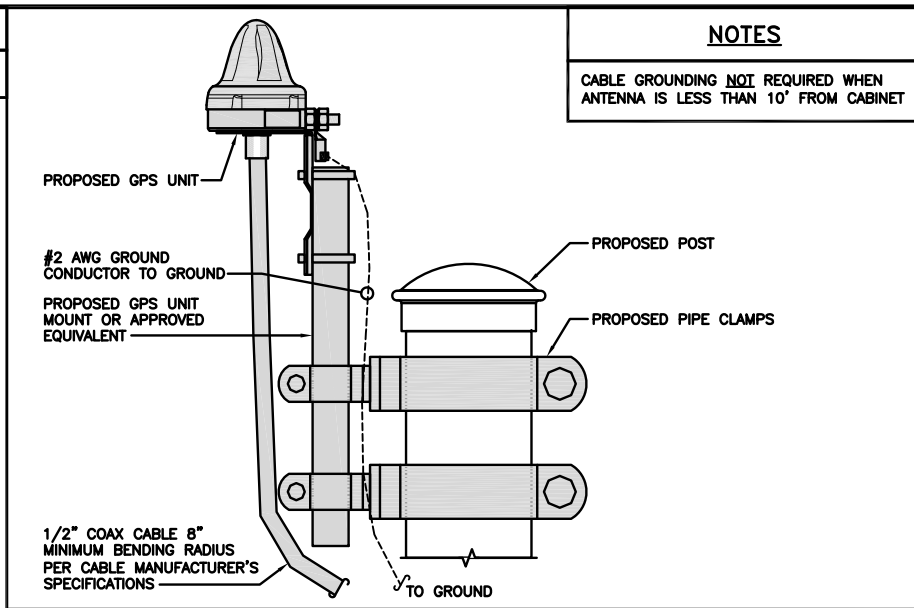
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G-1



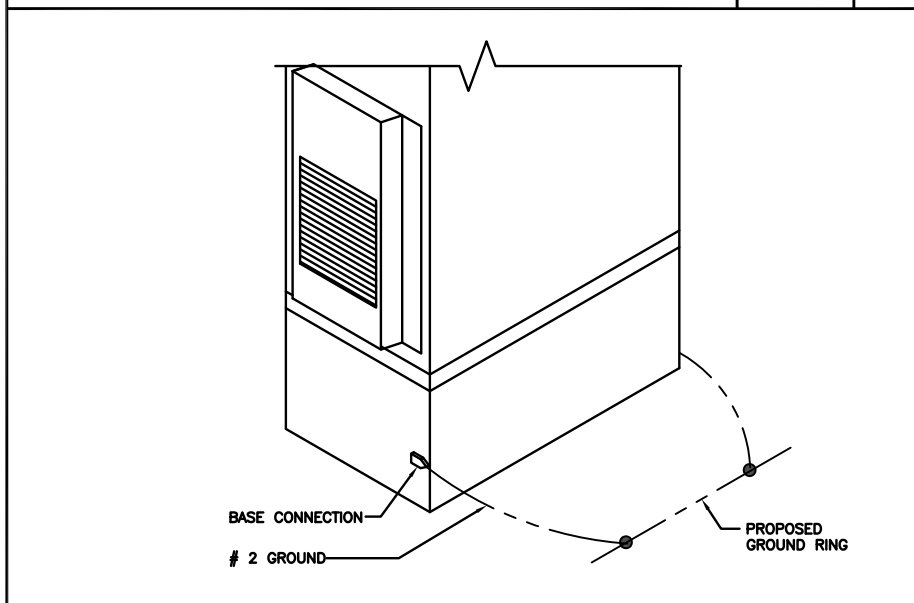
H-FRAME GROUNDING DETAIL

NO SCALE 1



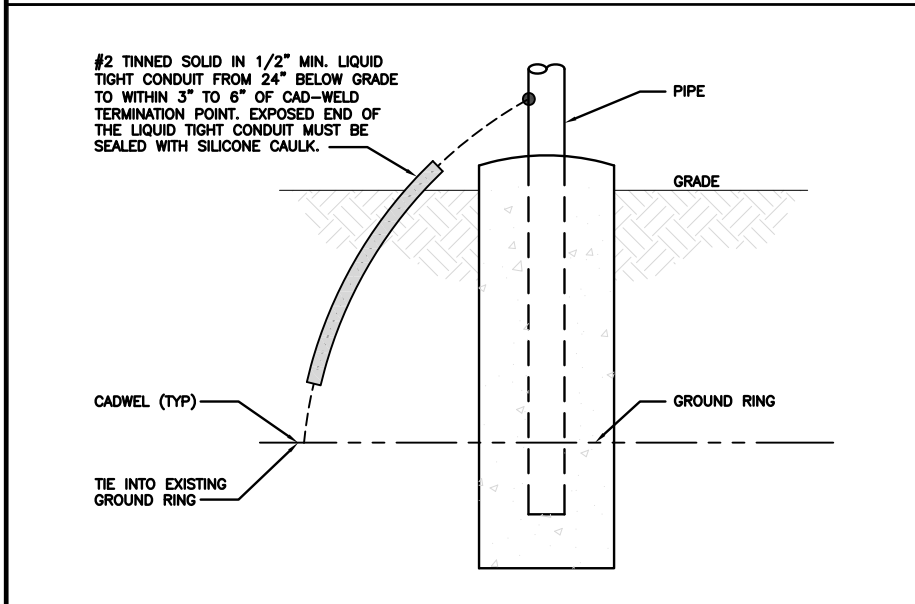
TYPICAL GPS UNIT GROUNDING

NO SCALE 2



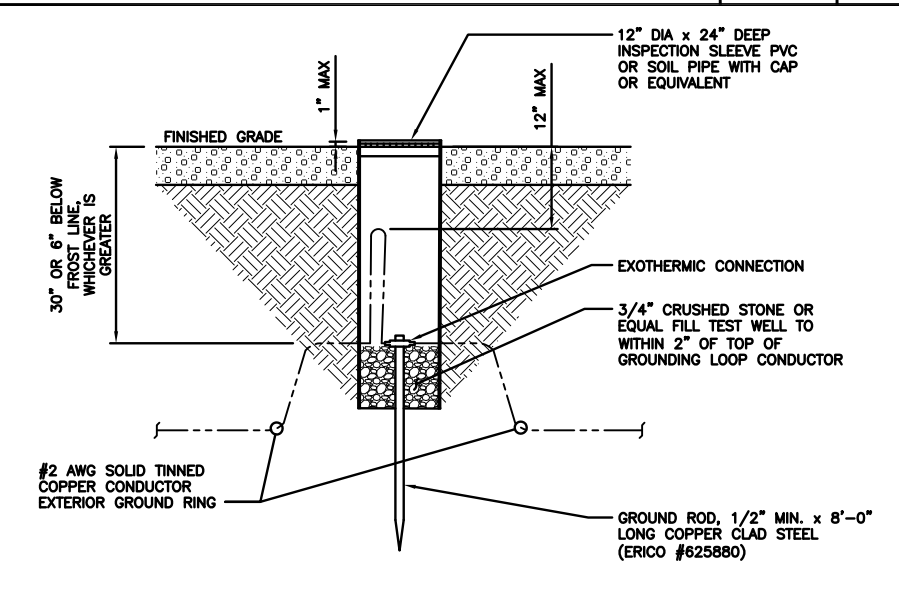
OUTDOOR CABINET GROUNDING

NO SCALE 3



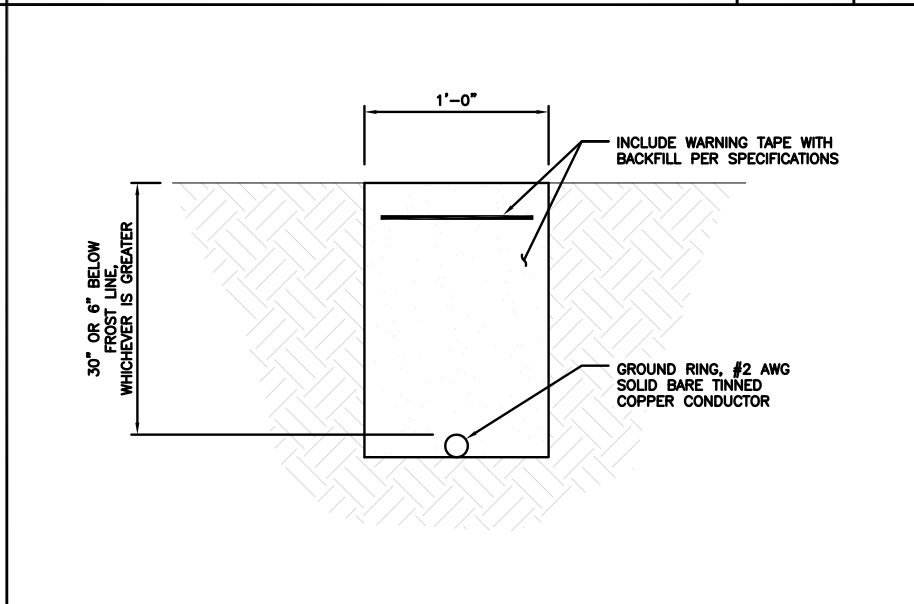
TRANSITIONING GROUND DETAIL

NO SCALE 4



TYPICAL TEST GROUND ROD WITH INSPECTION SLEEVE

NO SCALE 5



TYPICAL GROUND RING TRENCH

NO SCALE 6



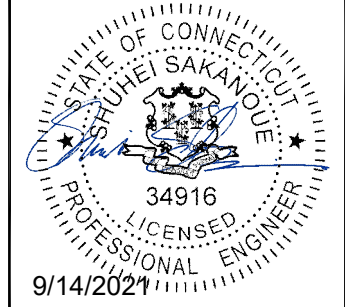
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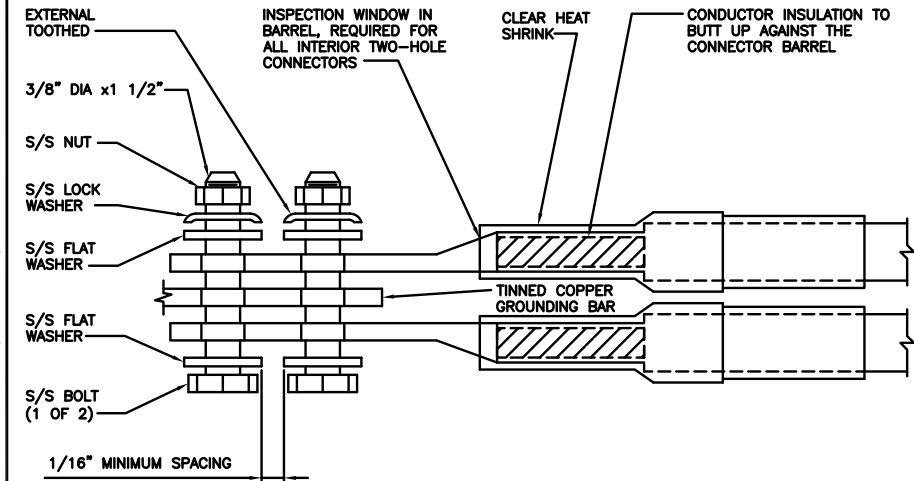
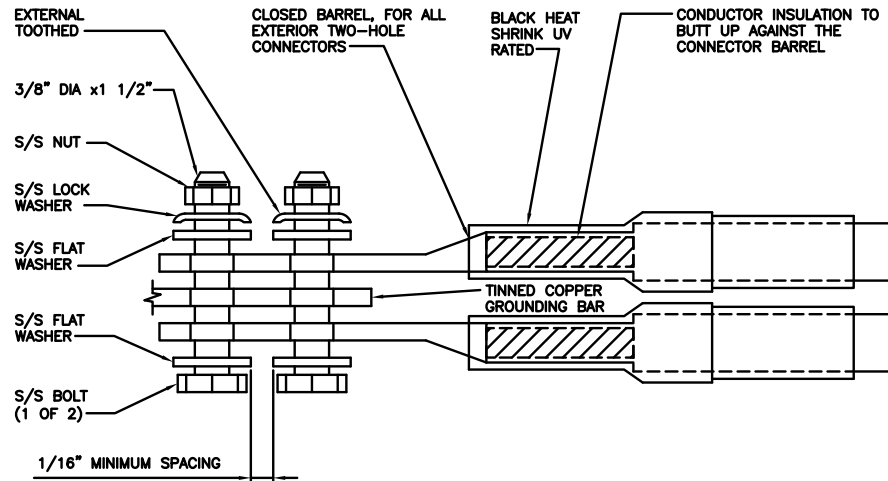
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12 NEPAUG ROAD
BURLINGTON, CT 06013

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

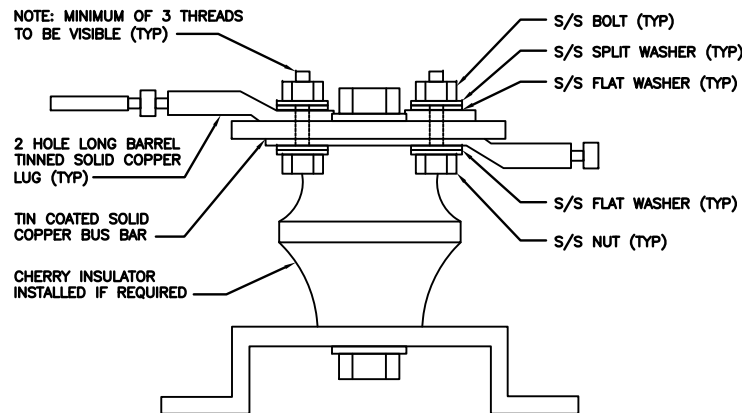
NO SCALE 1

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

dish
wireless.

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LITTLETON, CO 80120

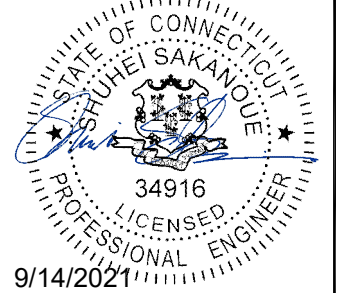
CROWN
CASTLE

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DRAWN BY: CHECKED BY: APPROVED BY:
RCD SS CJW

RFDS REV #: N/A

CONSTRUCTION
DOCUMENTS

SUBMITTALS		
REV	DATE	DESCRIPTION
A	07/01/2021	ISSUED FOR REVIEW
0	08/31/2021	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER
6039-Z0001-C

DISH Wireless L.L.C.
PROJECT INFORMATION
BOBDL0071A
12 NEPAUG ROAD
BURLINGTON, CT 06013

SHEET TITLE
GROUNDING DETAILS

SHEET NUMBER
G-3

RF JUMPER COLOR CODING

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

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

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

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

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

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

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

HYBRID/DISCREET CABLES

INCLUDE SECTOR BANDS BEING SUPPORTED
ALONG WITH FREQUENCY BANDS

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

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

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

FIBER JUMPERS TO RRHs

LOW-BAND RRH FIBER CABLES HAVE SECTOR
STRIPE ONLY

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

POWER CABLES TO RRHs

LOW-BAND RRH POWER CABLES HAVE SECTOR
STRIPE ONLY

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

RET MOTORS AT ANTENNAS

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

MICROWAVE RADIO LINKS

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

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

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

RF CABLE COLOR CODES

NO SCALE

1

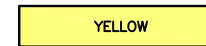
LOW BANDS (N71+N26)
OPTIONAL - (N29)



AWS
(N66+N70+H-BLOCK)



CBRS TECH
(3 GHz)



NEGATIVE SLANT PORT
ON ANT/RRH



ALPHA SECTOR



BETA SECTOR



GAMMA SECTOR



COLOR IDENTIFIER

NO SCALE

2

NOT USED

NO SCALE

3

NOT USED

NO SCALE

4



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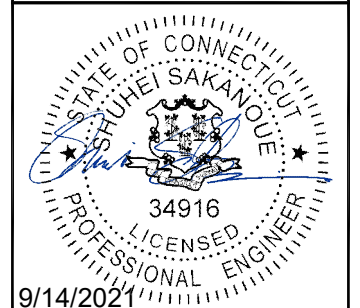


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DISH Wireless L.L.C.
PROJECT INFORMATION

BOBDL00071A
12 NEPAUG ROAD
BURLINGTON, CT 06013

SHEET TITLE
RF
CABLE COLOR CODES

SHEET NUMBER

RF-1

L:\Telecom\DISH\Crown\845993\ACAD\CD\5Gplumbingdiagram222LBMBJMAMX08FRO665208portant4portRRHOVPtower_bottom03222021_20210402021657.tiff



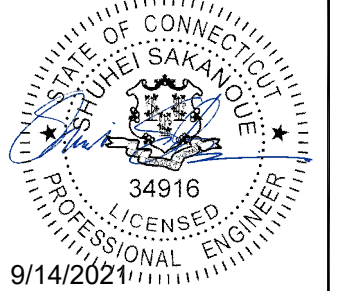
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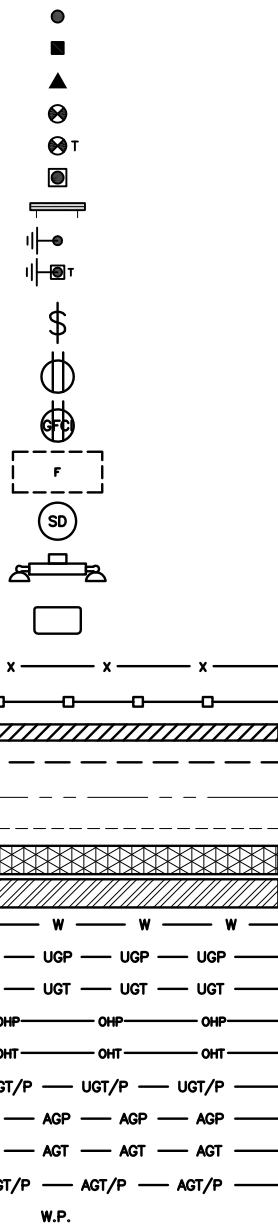
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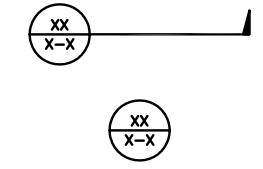
SHEET TITLE
RF
PLUMBING DIAGRAM

SHEET NUMBER
RF-2

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-DOBTD
 CHAIN LINK FENCE
 WOOD/WROUGHT IRON FENCE
 WALL STRUCTURE
 LEASE AREA
 PROPERTY LINE (PL)
 SETBACKS
 ICE BRIDGE
 CABLE TRAY
 WATER LINE
 UNDERGROUND POWER
 UNDERGROUND TELCO
 OVERHEAD POWER
 OVERHEAD TELCO
 UNDERGROUND TELCO/POWER
 ABOVE GROUND POWER
 ABOVE GROUND TELCO
 ABOVE GROUND TELCO/POWER
 WORKPOINT



SECTION REFERENCE
 DETAIL REFERENCE



LEGEND

AB ANCHOR BOLT	IN INCH
ABV ABOVE	INT INTERIOR
AC ALTERNATING CURRENT	LB(S) POUND(S)
ADDL ADDITIONAL	LF LINEAR FEET
AFF ABOVE FINISHED FLOOR	LTE LONG TERM EVOLUTION
AFG ABOVE FINISHED GRADE	MAS MASONRY
AGL ABOVE GROUND LEVEL	MAX MAXIMUM
AIC AMPERAGE INTERRUPTION CAPACITY	MB MACHINE BOLT
ALUM ALUMINUM	MECH MECHANICAL
ALT ALTERNATE	MFR MANUFACTURER
ANT ANTENNA	MGB MASTER GROUND BAR
APPROX APPROXIMATE	MIN MINIMUM
ARCH ARCHITECTURAL	MISC MISCELLANEOUS
ATS AUTOMATIC TRANSFER SWITCH	MTL METAL
AWG AMERICAN WIRE GAUGE	MTS MANUAL TRANSFER SWITCH
BATT BATTERY	MW MICROWAVE
BLDG BUILDING	NEC NATIONAL ELECTRIC CODE
BLK BLOCK	NM NEWTON METERS
BLKG BLOCKING	NO. NUMBER
BM BEAM	# NUMBER
BTC BARE TINNED COPPER CONDUCTOR	NTS NOT TO SCALE
BOF BOTTOM OF FOOTING	OC ON-CENTER
CAB CABINET	OSHA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
CANT CANTILEVERED	OPNG OPENING
CHG CHARGING	P/C PRECAST CONCRETE
CLG CEILING	PCS PERSONAL COMMUNICATION SERVICES
CLR CLEAR	PCU PRIMARY CONTROL UNIT
COL COLUMN	PRC PRIMARY RADIO CABINET
COMM COMMON	PP POLARIZING PRESERVING
CONC CONCRETE	PSF POUNDS PER SQUARE FOOT
CONSTR CONSTRUCTION	PSI POUNDS PER SQUARE INCH
DBL DOUBLE	PT PRESSURE TREATED
DC DIRECT CURRENT	PWR POWER CABINET
DEPT DEPARTMENT	QTY QUANTITY
DF DOUGLAS FIR	RAD RADIUS
DIA DIAMETER	RECT RECTIFIER
DIAG DIAGONAL	REF REFERENCE
DIM DIMENSION	REINF REINFORCEMENT
DWG DRAWING	REQ'D REQUIRED
DWL DOWEL	RET REMOTE ELECTRIC TILT
EA EACH	RF RADIO FREQUENCY
EC ELECTRICAL CONDUCTOR	RMC RIGID METALLIC CONDUIT
EL ELEVATION	RRH REMOTE RADIO HEAD
ELEC ELECTRICAL	RRU REMOTE RADIO UNIT
EMT ELECTRICAL METALLIC TUBING	RWY RACEWAY
ENG ENGINEER	SCH SCHEDULE
EQ EQUAL	SHT SHEET
EXP EXPANSION	SIAD SMART INTEGRATED ACCESS DEVICE
EXT EXTERIOR	SIM SIMILAR
EW EACH WAY	SPEC SPECIFICATION
FAB FABRICATION	SQ SQUARE
FF FINISH FLOOR	SS STAINLESS STEEL
FG FINISH GRADE	STD STANDARD
FIF FACILITY INTERFACE FRAME	STL STEEL
FIN FINISH(ED)	TEMP TEMPORARY
FLR FLOOR	THK THICKNESS
FDN FOUNDATION	TMA TOWER MOUNTED AMPLIFIER
FOC FACE OF CONCRETE	TN TOE NAIL
FOM FACE OF MASONRY	TOA TOP OF ANTENNA
FOS FACE OF STUD	TOC TOP OF CURB
FOW FACE OF WALL	TOF TOP OF FOUNDATION
FS FINISH SURFACE	TOP TOP OF PLATE (PARAPET)
FT FOOT	TOS TOP OF STEEL
FTG FOOTING	TOW TOP OF WALL
GA GAUGE	TVSS TRANSIENT VOLTAGE SURGE SUPPRESSION
GEN GENERATOR	TYP TYPICAL
GFCI GROUND FAULT CIRCUIT INTERRUPTER	UG UNDERGROUND
GLB GLUE LAMINATED BEAM	UL UNDERWRITERS LABORATORY
GLV GALVANIZED	UNO UNLESS NOTED OTHERWISE
GPS GLOBAL POSITIONING SYSTEM	UMTS UNIVERSAL MOBILE TELECOMMUNICATIONS SYSTEM
GND GROUND	UPS UNINTERRUPTIBLE POWER SYSTEM (DC POWER PLANT)
GSM GLOBAL SYSTEM FOR MOBILE	VIF VERIFIED IN FIELD
HDG HOT DIPPED GALVANIZED	W WIDE
HDR HEADER	W/ WITH
HGR HANGER	WD WOOD
HVAC HEAT/VENTILATION/AIR CONDITIONING	WP WEATHERPROOF
HT HEIGHT	WT WEIGHT
IGR INTERIOR GROUND RING	

ABBREVIATIONS



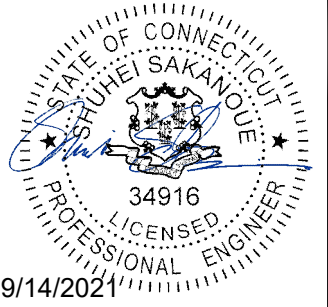
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A&E PROJECT NUMBER
 6039-Z0001-C

DISH Wireless L.L.C.
 PROJECT INFORMATION
 BOBDL00071A
 12 NEPAUG ROAD
 BURLINGTON, CT 06013

SHEET TITLE
 LEGEND AND ABBREVIATIONS

SHEET NUMBER
GN-1

SITE ACTIVITY REQUIREMENTS:

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

GENERAL NOTES:

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



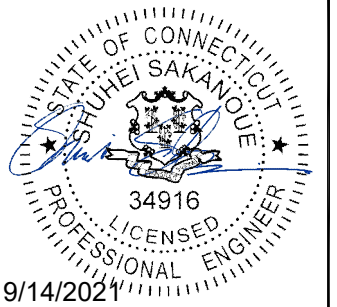
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RFDS REV #: N/A

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A&E PROJECT NUMBER
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DISH Wireless L.L.C.
PROJECT INFORMATION
BOBDL0071A
12 NEPAUG ROAD
BURLINGTON, CT 06013

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-2

CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

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

- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES/ORDINANCES.
- CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.
- WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC.
- ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.
 - ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OF APPROVAL, AND SHALL CONFORM TO REQUIREMENT OF THE NATIONAL ELECTRICAL CODE.
 - 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.
- 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.
- 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).
- PANEL BOARDS (ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.
- TIE WRAPS ARE NOT ALLOWED.
- 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.
- 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.
- POWER AND CONTROL WIRING IN FLEXIBLE CORD SHALL BE MULTI-CONDUCTOR, TYPE SOOW CORD (#14 OR LARGER) UNLESS OTHERWISE SPECIFIED.
- 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.
- 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).
- RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
- ELECTRICAL METALLIC TUBING (EMT), INTERMEDIATE METAL CONDUIT (IMC), OR RIGID METAL CONDUIT (RMC) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.

- ELECTRICAL METALLIC TUBING (EMT) OR METAL-CLAD CABLE (MC) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
- SCHEDULE 40 PVC UNDERGROUND ON STRAIGHTS AND SCHEDULE 80 PVC FOR ALL ELBOWS/90s AND ALL APPROVED ABOVE GRADE PVC CONDUIT.
- LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
- CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SET SCREW FITTINGS ARE NOT ACCEPTABLE.
- CABINETS, BOXES AND WIRE WAYS SHALL BE LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND THE NEC.
- WIREWAYS SHALL BE METAL WITH AN ENAMEL FINISH AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS (WIREMOLD SPECMATE WIREWAY).
- SLOTTED WIRING DUCT SHALL BE PVC AND INCLUDE COVER (PANDUIT TYPE E OR EQUAL).
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- INSTALL LAMICOID LABEL ON THE METER CENTER TO SHOW "DISH Wireless L.L.C.".
- ALL EMPTY/SPARE CONDUITS THAT ARE INSTALLED ARE TO HAVE A METERED MULE TAPE PULL CORD INSTALLED.



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RCD	SS	CJW

RFDS REV #: N/A

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SUBMITTALS		
REV	DATE	DESCRIPTION
A	07/01/2021	ISSUED FOR REVIEW
0	08/31/2021	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER
6039-Z0001-C

DISH Wireless L.L.C.
PROJECT INFORMATION
BOBDL00071A
12 NEPAUG ROAD
BURLINGTON, CT 06013

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-3

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.



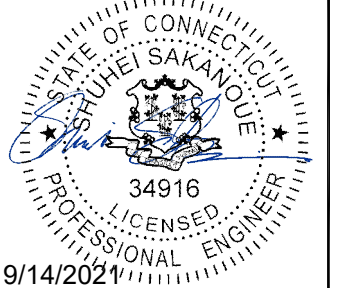
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SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-4

Exhibit D

Structural Analysis Report

Date: **May 28, 2021**



Crown Castle
2000 Corporate Drive
Canonsburg, PA 15317
(724) 416-2000

Subject: **Structural Analysis Report**

Carrier Designation: **DISH Network Co-Locate**
Site Number: BOBDL00071A
Site Name: CT-CCI-T-845993

Crown Castle Designation: **BU Number:** 845993
Site Name: BURLINGTON-NEPAUG ROAD
JDE Job Number: 650062
Work Order Number: 1966286
Order Number: 556621 Rev. 1

Engineering Firm Designation: **Crown Castle Project Number:** 1966286

Site Data: **12 NEPAUG ROAD, BURLINGTON, HARTFORD County, CT**
Latitude 41° 46' 56.86", Longitude -72° 59' 22.68"
120 Foot - Monopole Tower

Crown Castle is pleased to submit this “**Structural Analysis Report**” to determine the structural integrity of the above-mentioned tower.

The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

LC7: Proposed Equipment Configuration

Sufficient Capacity – 57.4%

This analysis utilizes an ultimate 3-second gust wind speed of 120 mph as required by the 2018 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - "Analysis Criteria".

Structural analysis prepared by: Daniel Chen

Respectfully submitted by:

Bradley E. Byrom, P.E., S.E.
Senior Project Engineer



Digitally signed by Bradley E
Byrom
Date: 2021.05.29 16:36:15 -04'00'

TABLE OF CONTENTS

1) INTRODUCTION

2) ANALYSIS CRITERIA

Table 1 - Proposed Equipment Configuration

Table 2 - Other Considered Equipment

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

3.1) Analysis Method

3.2) Assumptions

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Table 5 - Tower Component Stresses vs. Capacity - LC7

4.1) Recommendations

5) APPENDIX A

tnxTower Output

6) APPENDIX B

Base Level Drawing

7) APPENDIX C

Additional Calculations

1) INTRODUCTION

This tower is a 120 ft Monopole tower designed by EEI.

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	120 mph
Exposure Category:	B
Topographic Factor:	1
Ice Thickness:	1.5 in
Wind Speed with Ice:	50 mph
Seismic Ss:	0.182
Seismic S1:	0.064
Service Wind Speed:	60 mph

Table 1 - Proposed Equipment Configuration

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
70.0	70.0	3	fujitsu	TA08025-B604	1	1-3/8
		3	fujitsu	TA08025-B605		
		3	jma wireless	MX08FRO665-21 w/ Mount Pipe		
		1	raycap	RDIDC-9181-PF-48		
		1	tower mounts	Commscope MC-PK8-DSH		

Table 2 - Other Considered Equipment

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
119.0	119.0	3	cci antennas	HPA65R-BU6A	12	1-5/8
		3	ericsson	RRUS 4449 B5/B12		
		3	ericsson	RRUS 8843 B2/B66A		
		1	gps	GPS_A		
		3	kathrein	80010965K		
		3	powerwave technologies	7770.00		
		6	powerwave technologies	LGP13519		
		6	powerwave technologies	LGP21401		
		2	raycap	DC6-48-60-18-8F		
		1	tower mounts	Platform Mount [LP 1201-1_HR-3]		
109.0	111.0	1	lucent	KS24019-L112A	3	1-1/4
	110.0	3	alcatel lucent	PCS 1900MHZ 4X45W 65MHZ		
		6	alcatel lucent	RRH2X50-800		

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
		3	alcatel lucent	TD-RRH8X20-25		
		3	kmw communications	ETCR-654L12H6 w/ Mount Pipe		
	109.0	1	tower mounts	Platform Mount [LP 1201-1_KCKR]		
99.0	101.0	1	lucent	KS24019-L112A	8 1	1-5/8 1/2
	99.0	3	alcatel lucent	B13 RRH 4X30		
		3	alcatel lucent	RRH4X45-AWS4 B66		
		6	antel	LPA-80080/4CF w/ Mount Pipe		
		6	commscope	JAHH-65B-R3B w/ Mount Pipe		
		3	nokia	AHCA		
		2	raycap	RRFDC-3315-PF-48		
	1	tower mounts	Platform Mount [LP 602-1_KCKR]			
88.0	90.0	3	ericsson	AIR 32 B2A/B66AA w/ Mount Pipe	8	1-5/8
		3	ericsson	ERICSSON AIR 21 B4A B2P w/ Mount Pipe		
		3	ericsson	RADIO 4449 B12/B71		
		3	rfs celwave	APXVAARR24_43-U-NA20 w/ Mount Pipe		
	88.0	1	tower mounts	Miscellaneous [NA 507-1]		
		1	tower mounts	T-Arm Mount [TA 602-3]		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Reference	Source
4-GEOTECHNICAL REPORTS	4551029	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	5072131	CCISITES
4-TOWER MANUFACTURER DRAWINGS	5117503	CCISITES

3.1) Analysis Method

tnxTower (version 8.0.9.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A. When applicable, Crown Castle has calculated and provided the effective area for panel antennas using approved methods following the intent of the TIA-222 standard.

3.2) Assumptions

- 1) Tower and structures were maintained in accordance with the TIA-222 Standard.
- 2) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.

This analysis may be affected if any assumptions are not valid or have been made in error. Crown Castle should be notified to determine the effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
L1	120 - 97	Pole	TP28.93x22.69x0.1875	1	-10.12	1014.80	17.7	Pass
L2	97 - 48	Pole	TP39.7x27.5729x0.25	2	-27.06	1867.11	54.5	Pass
L3	48 - 0	Pole	TP51.04x38.0569x0.3125	3	-39.81	3090.62	57.4	Pass
							Summary	
						Pole (L3)	57.4	Pass
						Rating =	57.4	Pass

Table 5 - Tower Component Stresses vs. Capacity - LC7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Anchor Rods	0	50.0	Pass
1	Base Plate	0	38.6	Pass
1	Base Foundation (Structure)	0	47.1	Pass
1	Base Foundation (Soil Interaction)	0	42.9	Pass

Structure Rating (max from all components) =	57.4%
---	--------------

Notes:

- 1) See additional documentation in "Appendix C - Additional Calculations" for calculations supporting the % capacity consumed.

4.1) Recommendations

The tower and its foundation have sufficient capacity to carry the proposed load configuration. No modifications are required at this time.

APPENDIX A
TNXTOWER OUTPUT

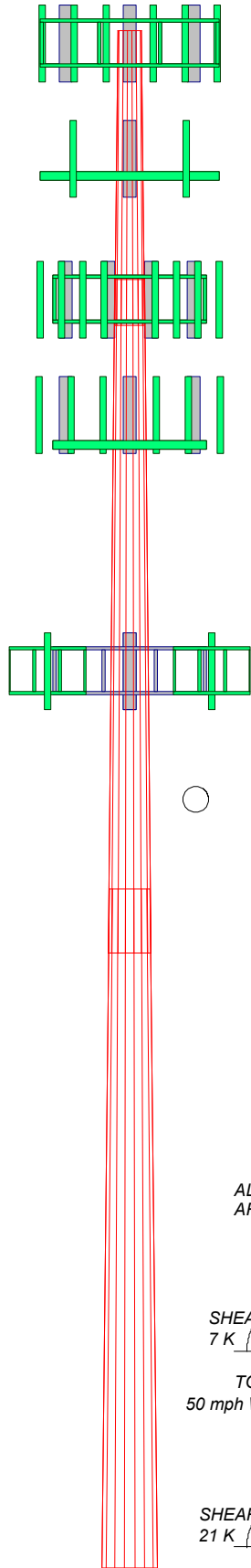
Section	1	2	3
Length (ft)	23.00	52.62	52.96
Number of Sides	18	18	18
Thickness (in)	0.1875	0.2500	0.3125
Socket Length (ft)	3.62	4.96	
Top Dia (in)	22.6800	27.5729	38.0569
Bot Dia (in)	28.9300	39.7000	51.0400
Grade		A572-65	
Weight (K)	1.2	4.7	7.9

120.0 ft

97.0 ft

48.0 ft

0.0 ft



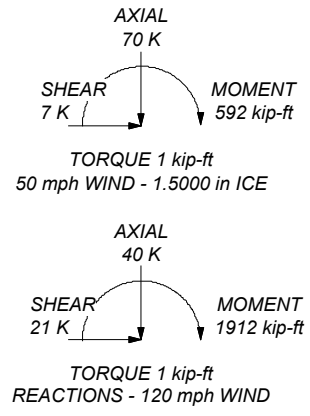
MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

TOWER DESIGN NOTES

1. Tower is located in Hartford County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-H Standard.
3. Tower designed for a 120 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50 mph basic wind with 1.50 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TOWER RATING: 57.4%

ALL REACTIONS ARE FACTORED



CROWN CASTLE
The Pathway to Possible

Crown Castle
2000 Corporate Drive
Canonsburg, PA 15317
Phone: (724) 416-2000
FAX:

Job:	BU# 845993		
Project:			
Client:	Crown Castle	Drawn by:	Daniel Chen
Code:	TIA-222-H	Date:	05/28/21
Path:			Scale: NTS
			Dwg No. E-1

C:\Users\dchen\Documents\Work Area - DChen\845993\WO 1966286 - SAIProd\845993.dwg

Tower Input Data

The tower is a monopole.
 This tower is designed using the TIA-222-H standard.
 The following design criteria apply:

- Tower is located in Hartford County, Connecticut.
- Tower base elevation above sea level: 826.00 ft.
- Basic wind speed of 120 mph.
- Risk Category II.
- Exposure Category B.
- Simplified Topographic Factor Procedure for wind speed-up calculations is used.
- Topographic Category: 1.
- Crest Height: 0.00 ft.
- Nominal ice thickness of 1.5000 in.
- Ice thickness is considered to increase with height.
- Ice density of 56 pcf.
- A wind speed of 50 mph is used in combination with ice.
- Temperature drop of 50 °F.
- Deflections calculated using a wind speed of 60 mph.
- A non-linear (P-delta) analysis was used.
- Pressures are calculated at each section.
- Stress ratio used in pole design is 1.
- Tower analysis based on target reliabilities in accordance with Annex S.
- Load Modification Factors used: $K_{es}(F_w) = 0.95$, $K_{es}(t_i) = 0.85$.
- Maximum demand-capacity ratio is: 1.05.
- Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

Consider Moments - Legs Consider Moments - Horizontals Consider Moments - Diagonals Use Moment Magnification ✓ Use Code Stress Ratios ✓ Use Code Safety Factors - Guys Escalate Ice Always Use Max Kz Use Special Wind Profile Include Bolts In Member Capacity Leg Bolts Are At Top Of Section Secondary Horizontal Braces Leg Use Diamond Inner Bracing (4 Sided) SR Members Have Cut Ends SR Members Are Concentric	Distribute Leg Loads As Uniform Assume Legs Pinned ✓ Assume Rigid Index Plate ✓ Use Clear Spans For Wind Area Use Clear Spans For KL/r Retension Guys To Initial Tension ✓ Bypass Mast Stability Checks ✓ Use Azimuth Dish Coefficients ✓ Project Wind Area of Appurt. Autocalc Torque Arm Areas Add IBC .6D+W Combination ✓ Sort Capacity Reports By Component Triangulate Diamond Inner Bracing Treat Feed Line Bundles As Cylinder Ignore KL/ry For 60 Deg. Angle Legs	Use ASCE 10 X-Brace Ly Rules Calculate Redundant Bracing Forces Ignore Redundant Members in FEA SR Leg Bolts Resist Compression All Leg Panels Have Same Allowable Offset Girt At Foundation ✓ Consider Feed Line Torque Include Angle Block Shear Check Use TIA-222-H Bracing Resist. Exemption Use TIA-222-H Tension Splice Exemption <div style="text-align: center; background-color: #e0e0e0; padding: 2px;">Poles</div> ✓ Include Shear-Torsion Interaction Always Use Sub-Critical Flow Use Top Mounted Sockets ✓ Pole Without Linear Attachments Pole With Shroud Or No Appurtenances Outside and Inside Corner Radii Are Known
--	---	---

Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	120.00-97.00	23.00	3.62	18	22.6900	28.9300	0.1875	0.7500	A572-65 (65 ksi)
L2	97.00-48.00	52.62	4.96	18	27.5729	39.7000	0.2500	1.0000	A572-65 (65 ksi)
L3	48.00-0.00	52.96		18	38.0569	51.0400	0.3125	1.2500	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in ²	I in ⁴	r in	C in	I/C in ³	J in ⁴	It/Q in ²	w in	w/t
L1	23.0111	13.3918	856.7181	7.9884	11.5265	74.3258	1714.5635	6.6972	3.6634	19.538
	29.3474	17.1054	1785.3331	10.2036	14.6964	121.4807	3573.0155	8.5543	4.7617	25.396
L2	28.8068	21.6807	2044.8607	9.6996	14.0070	145.9883	4092.4120	10.8424	4.4128	17.651
	40.2739	31.3036	6154.9624	14.0048	20.1676	305.1906	12318.023	15.6548	6.5472	26.189
L3	39.8305	37.4377	6738.3192	13.3993	19.3329	348.5416	13485.504	18.7224	6.1480	19.674
	51.7792	50.3153	16357.795	18.0083	25.9283	630.8853	32737.114	25.1625	8.4330	26.986

Tower Elevation ft	Gusset Area (per face) ft ²	Gusset Thickness in	Gusset Grade	Adjust. Factor A _r	Adjust. Factor A _r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontal in	Double Angle Stitch Bolt Spacing Redundants in
L1 120.00-97.00				1	1	1			
L2 97.00-48.00				1	1	1			
L3 48.00-0.00				1	1	1			

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Clear Spacing in	Width or Diameter r in	Perimeter r in	Weight plf

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	C _A A _A ft ² /ft	Weight plf	

5/8 rod/step	C	No	No	CaAa (Out Of Face)	120.00 - 8.00	2	No Ice 1/2" Ice 1" Ice	0.02 0.12 0.22	0.27 0.70 1.74
							2" Ice	0.42	5.65
Safety Line (3/8")	C	No	No	CaAa (Out Of Face)	120.00 - 8.00	1	No Ice 1/2" Ice 1" Ice 2" Ice	0.04 0.14 0.24 0.44	0.22 0.75 1.28 2.34
119									
LDF4-50A(1/2)	A	No	No	Inside Pole	119.00 - 4.00	2	No Ice	0.00	0.15

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		CA _{AA} ft ² /ft	Weight plf
							1/2" Ice	0.00	0.15
							1" Ice	0.00	0.15
							2" Ice	0.00	0.15
LDF5-50A(7/8)	A	No	No	Inside Pole	119.00 - 4.00	2	No Ice	0.00	0.33
							1/2" Ice	0.00	0.33
							1" Ice	0.00	0.33
							2" Ice	0.00	0.33
LDF7-50A(1-5/8)	A	No	No	Inside Pole	119.00 - 4.00	12	No Ice	0.00	0.82
							1/2" Ice	0.00	0.82
							1" Ice	0.00	0.82
							2" Ice	0.00	0.82
FIBER-GUARD/FLEX 2' (2)	A	No	No	Inside Pole	119.00 - 4.00	1	No Ice	0.00	0.22
							1/2" Ice	0.00	0.22
							1" Ice	0.00	0.22
							2" Ice	0.00	0.22
FB-L98B-034-XXX(3/8)	A	No	No	Inside Pole	119.00 - 4.00	1	No Ice	0.00	0.06
							1/2" Ice	0.00	0.06
							1" Ice	0.00	0.06
							2" Ice	0.00	0.06
WR-VG86ST-BRD(3/4)	A	No	No	Inside Pole	119.00 - 4.00	2	No Ice	0.00	0.58
							1/2" Ice	0.00	0.58
							1" Ice	0.00	0.58
							2" Ice	0.00	0.58
109 P HB114-08U3M12-XXXF(7/8)	C	No	No	Inside Pole	109.00 - 4.00	1	No Ice	0.00	0.68
							1/2" Ice	0.00	0.68
							1" Ice	0.00	0.68
							2" Ice	0.00	0.68
HB114-1-08U4-M5F(1-1/4)	C	No	No	Inside Pole	109.00 - 4.00	3	No Ice	0.00	1.30
							1/2" Ice	0.00	1.30
							1" Ice	0.00	1.30
							2" Ice	0.00	1.30
*** 99 R*** LDF7-50A(1-5/8)	C	No	No	Inside Pole	99.00 - 4.00	6	No Ice	0.00	0.82
							1/2" Ice	0.00	0.82
							1" Ice	0.00	0.82
							2" Ice	0.00	0.82
HB158-1-08U8-S8J18(1-5/8)	C	No	No	Inside Pole	99.00 - 4.00	2	No Ice	0.00	1.30
							1/2" Ice	0.00	1.30
							1" Ice	0.00	1.30
							2" Ice	0.00	1.30
LDF4-50A(1/2)	C	No	No	Inside Pole	99.00 - 4.00	1	No Ice	0.00	0.15
							1/2" Ice	0.00	0.15
							1" Ice	0.00	0.15
							2" Ice	0.00	0.15
88 R LDF7-50A(1-5/8)	B	No	No	Inside Pole	88.00 - 4.00	6	No Ice	0.00	0.82
							1/2" Ice	0.00	0.82
							1" Ice	0.00	0.82
							2" Ice	0.00	0.82
MLE HYBRID 9POWER/18FIBER RL 2(1-5/8)	B	No	No	Inside Pole	88.00 - 4.00	1	No Ice	0.00	1.07
							1/2" Ice	0.00	1.07
							1" Ice	0.00	1.07
							2" Ice	0.00	1.07
HCS 6X12 4AWG(1-5/8)	B	No	No	Inside Pole	88.00 - 4.00	1	No Ice	0.00	2.40
							1/2" Ice	0.00	2.40
							1" Ice	0.00	2.40
							2" Ice	0.00	2.40
** CU12PSM9P8XXX (1-3/8)	A	No	No	Inside Pole	70.00 - 0.00	1	No Ice	0.00	1.66
							1/2" Ice	0.00	1.66
							1" Ice	0.00	1.66
							2" Ice	0.00	1.66

Feed Line/Linear Appurtenances Section Areas

Tower Sectio n	Tower Elevation ft	Face	A_R ft ²	A_F ft ²	C_{AA} In Face ft ²	C_{AA} Out Face ft ²	Weight K
L1	120.00-97.00	A	0.000	0.000	0.000	0.000	0.27
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	1.783	0.09
L2	97.00-48.00	A	0.000	0.000	0.000	0.000	0.64
		B	0.000	0.000	0.000	0.000	0.34
		C	0.000	0.000	0.000	3.797	0.64
L3	48.00-0.00	A	0.000	0.000	0.000	0.000	0.62
		B	0.000	0.000	0.000	0.000	0.37
		C	0.000	0.000	0.000	3.100	0.57

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Sectio n	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft ²	A_F ft ²	C_{AA} In Face ft ²	C_{AA} Out Face ft ²	Weight K
L1	120.00-97.00	A	1.436	0.000	0.000	0.000	0.000	0.27
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	21.593	0.27
L2	97.00-48.00	A	1.378	0.000	0.000	0.000	0.000	0.64
		B		0.000	0.000	0.000	0.000	0.34
		C		0.000	0.000	0.000	46.002	1.02
L3	48.00-0.00	A	1.231	0.000	0.000	0.000	0.000	0.62
		B		0.000	0.000	0.000	0.000	0.37
		C		0.000	0.000	0.000	36.171	0.86

Feed Line Center of Pressure

Section	Elevation ft	CP_x in	CP_z in	CP_x Ice in	CP_z Ice in
L1	120.00-97.00	-0.5966	0.3444	-2.9131	1.6819
L2	97.00-48.00	-0.6044	0.3489	-3.1768	1.8341
L3	48.00-0.00	-0.5003	0.2888	-2.7838	1.6072

Note: For pole sections, center of pressure calculations do not consider feed line shielding.

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft	C_{AA} Front ft ²	C_{AA} Side ft ²	Weight K
119P 7770.00	A	From Leg	4.00 0.00 0.00	0.0000	119.00	No Ice 1/2" Ice 1" Ice 2" Ice	5.51 2.93 5.87 3.27 6.23 3.63 6.99 4.35	0.04 0.07 0.11 0.20
7770.00	B	From Leg	4.00	0.0000	119.00	No Ice	5.51 2.93	0.04

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA} _{Front}	C _{AA} _{Side}	Weight
			Horz	Lateral					
			ft	ft	°	ft	ft ²	ft ²	K
			0.00			1/2"	5.87	3.27	0.07
			0.00			Ice	6.23	3.63	0.11
						1" Ice	6.99	4.35	0.20
						2" Ice			
7770.00	C	From Leg	4.00	0.0000	119.00	No Ice	5.51	2.93	0.04
			0.00			1/2"	5.87	3.27	0.07
			0.00			Ice	6.23	3.63	0.11
						1" Ice	6.99	4.35	0.20
						2" Ice			
GPS_A	A	From Leg	4.00	0.0000	119.00	No Ice	0.26	0.26	0.00
			0.00			1/2"	0.32	0.32	0.00
			0.00			Ice	0.39	0.39	0.01
						1" Ice	0.56	0.56	0.02
						2" Ice			
80010965K	A	From Leg	4.00	0.0000	119.00	No Ice	12.23	4.21	0.13
			0.00			1/2"	13.00	4.88	0.21
			0.00			Ice	13.79	5.57	0.29
						1" Ice	15.41	6.99	0.48
						2" Ice			
80010965K	B	From Leg	4.00	0.0000	119.00	No Ice	12.23	4.21	0.13
			0.00			1/2"	13.00	4.88	0.21
			0.00			Ice	13.79	5.57	0.29
						1" Ice	15.41	6.99	0.48
						2" Ice			
80010965K	C	From Leg	4.00	0.0000	119.00	No Ice	12.23	4.21	0.13
			0.00			1/2"	13.00	4.88	0.21
			0.00			Ice	13.79	5.57	0.29
						1" Ice	15.41	6.99	0.48
						2" Ice			
HPA65R-BU6A	A	From Leg	4.00	0.0000	119.00	No Ice	5.88	3.82	0.05
			0.00			1/2"	6.47	4.39	0.10
			0.00			Ice	7.07	4.96	0.16
						1" Ice	8.32	6.15	0.29
						2" Ice			
HPA65R-BU6A	B	From Leg	4.00	0.0000	119.00	No Ice	5.88	3.82	0.05
			0.00			1/2"	6.47	4.39	0.10
			0.00			Ice	7.07	4.96	0.16
						1" Ice	8.32	6.15	0.29
						2" Ice			
HPA65R-BU6A	C	From Leg	4.00	0.0000	119.00	No Ice	5.88	3.82	0.05
			0.00			1/2"	6.47	4.39	0.10
			0.00			Ice	7.07	4.96	0.16
						1" Ice	8.32	6.15	0.29
						2" Ice			
DC6-48-60-18-8F	A	From Leg	1.00	0.0000	119.00	No Ice	1.21	1.21	0.02
			0.00			1/2"	1.89	1.89	0.04
			0.00			Ice	2.11	2.11	0.07
						1" Ice	2.57	2.57	0.13
						2" Ice			
(2) LGP21401	A	From Leg	4.00	0.0000	119.00	No Ice	1.10	0.21	0.01
			0.00			1/2"	1.24	0.27	0.02
			0.00			Ice	1.38	0.35	0.03
						1" Ice	1.69	0.52	0.05
						2" Ice			
(2) LGP21401	B	From Leg	4.00	0.0000	119.00	No Ice	1.10	0.21	0.01
			0.00			1/2"	1.24	0.27	0.02
			0.00			Ice	1.38	0.35	0.03
						1" Ice	1.69	0.52	0.05
						2" Ice			
(2) LGP21401	C	From Leg	4.00	0.0000	119.00	No Ice	1.10	0.21	0.01
			0.00			1/2"	1.24	0.27	0.02
			0.00			Ice	1.38	0.35	0.03
						1" Ice	1.69	0.52	0.05
						2" Ice			
(2) LGP13519	A	From Leg	4.00	0.0000	119.00	No Ice	0.29	0.18	0.01

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	CAAA	CAAA	Weight
			Horz	Lateral			Front	Side	
			ft	ft	°	ft	ft ²	ft ²	K
			ft	ft					
			0.00			1/2"	0.36	0.24	0.01
			0.00			Ice	0.44	0.31	0.01
						1" Ice	0.62	0.47	0.02
						2" Ice			
(2) LGP13519	B	From Leg	4.00	0.0000	119.00	No Ice	0.29	0.18	0.01
			0.00			1/2"	0.36	0.24	0.01
			0.00			Ice	0.44	0.31	0.01
						1" Ice	0.62	0.47	0.02
						2" Ice			
(2) LGP13519	C	From Leg	4.00	0.0000	119.00	No Ice	0.29	0.18	0.01
			0.00			1/2"	0.36	0.24	0.01
			0.00			Ice	0.44	0.31	0.01
						1" Ice	0.62	0.47	0.02
						2" Ice			
DC6-48-60-18-8F	A	From Leg	1.00	0.0000	119.00	No Ice	1.21	1.21	0.02
			0.00			1/2"	1.89	1.89	0.04
			0.00			Ice	2.11	2.11	0.07
						1" Ice	2.57	2.57	0.13
						2" Ice			
RRUS 8843 B2/B66A	A	From Leg	4.00	0.0000	119.00	No Ice	1.64	1.35	0.07
			0.00			1/2"	1.80	1.50	0.09
			0.00			Ice	1.97	1.65	0.11
						1" Ice	2.32	1.99	0.16
						2" Ice			
RRUS 8843 B2/B66A	B	From Leg	4.00	0.0000	119.00	No Ice	1.64	1.35	0.07
			0.00			1/2"	1.80	1.50	0.09
			0.00			Ice	1.97	1.65	0.11
						1" Ice	2.32	1.99	0.16
						2" Ice			
RRUS 8843 B2/B66A	C	From Leg	4.00	0.0000	119.00	No Ice	1.64	1.35	0.07
			0.00			1/2"	1.80	1.50	0.09
			0.00			Ice	1.97	1.65	0.11
						1" Ice	2.32	1.99	0.16
						2" Ice			
RRUS 4449 B5/B12	B	From Leg	4.00	0.0000	119.00	No Ice	1.97	1.41	0.07
			0.00			1/2"	2.14	1.56	0.09
			0.00			Ice	2.33	1.73	0.11
						1" Ice	2.72	2.07	0.16
						2" Ice			
(2) RRUS 4449 B5/B12	C	From Leg	4.00	0.0000	119.00	No Ice	1.97	1.41	0.07
			0.00			1/2"	2.14	1.56	0.09
			0.00			Ice	2.33	1.73	0.11
						1" Ice	2.72	2.07	0.16
						2" Ice			
4' x 3" Pipe Mount	A	From Leg	0.50	0.0000	119.00	No Ice	1.00	1.00	0.03
			0.00			1/2"	1.25	1.25	0.04
			0.00			Ice	1.50	1.50	0.05
						1" Ice	2.05	2.05	0.08
						2" Ice			
4' x 3" Pipe Mount	B	From Leg	0.50	0.0000	119.00	No Ice	1.00	1.00	0.03
			0.00			1/2"	1.25	1.25	0.04
			0.00			Ice	1.50	1.50	0.05
						1" Ice	2.05	2.05	0.08
						2" Ice			
4' x 3" Pipe Mount	C	From Leg	0.50	0.0000	119.00	No Ice	1.00	1.00	0.03
			0.00			1/2"	1.25	1.25	0.04
			0.00			Ice	1.50	1.50	0.05
						1" Ice	2.05	2.05	0.08
						2" Ice			
Platform Mount [LP 1201-1_HR-3]	B	None		0.0000	119.00	No Ice	29.96	29.96	2.62
						1/2"	36.80	36.80	3.38
						Ice	43.24	43.24	4.28
						1" Ice	55.52	55.52	6.43
						2" Ice			

*** 109 R ***

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA} _{Front}	C _{AA} _{Side}	Weight	
			Horz	Lateral						Vert
			ft	ft	°	ft	ft ²	ft ²	K	
ETCR-654L12H6 w/ Mount Pipe	A	From Leg	4.00		0.0000	109.00	No Ice	10.90	4.61	0.10
			0.00				1/2"	11.57	5.18	0.19
			1.00				Ice	12.24	5.77	0.28
							1" Ice	13.64	7.00	0.51
							2" Ice			
ETCR-654L12H6 w/ Mount Pipe	B	From Leg	4.00		0.0000	109.00	No Ice	10.90	4.61	0.10
			0.00				1/2"	11.57	5.18	0.19
			1.00				Ice	12.24	5.77	0.28
							1" Ice	13.64	7.00	0.51
							2" Ice			
ETCR-654L12H6 w/ Mount Pipe	C	From Leg	4.00		0.0000	109.00	No Ice	10.90	4.61	0.10
			0.00				1/2"	11.57	5.18	0.19
			1.00				Ice	12.24	5.77	0.28
							1" Ice	13.64	7.00	0.51
							2" Ice			
KS24019-L112A	B	From Leg	4.00		0.0000	109.00	No Ice	0.10	0.10	0.01
			0.00				1/2"	0.18	0.18	0.01
			2.00				Ice	0.26	0.26	0.01
							1" Ice	0.42	0.42	0.01
							2" Ice			
TD-RRH8X20-25	A	From Leg	4.00		0.0000	109.00	No Ice	4.05	1.53	0.07
			0.00				1/2"	4.30	1.71	0.10
			1.00				Ice	4.56	1.90	0.13
							1" Ice	5.10	2.30	0.20
							2" Ice			
TD-RRH8X20-25	B	From Leg	4.00		0.0000	109.00	No Ice	4.05	1.53	0.07
			0.00				1/2"	4.30	1.71	0.10
			1.00				Ice	4.56	1.90	0.13
							1" Ice	5.10	2.30	0.20
							2" Ice			
TD-RRH8X20-25	C	From Leg	4.00		0.0000	109.00	No Ice	4.05	1.53	0.07
			0.00				1/2"	4.30	1.71	0.10
			1.00				Ice	4.56	1.90	0.13
							1" Ice	5.10	2.30	0.20
							2" Ice			
PCS 1900MHZ 4X45W 65MHZ	A	From Leg	4.00		0.0000	109.00	No Ice	2.31	2.23	0.06
			0.00				1/2"	2.52	2.43	0.08
			1.00				Ice	2.73	2.64	0.11
							1" Ice	3.17	3.08	0.17
							2" Ice			
PCS 1900MHZ 4X45W 65MHZ	B	From Leg	4.00		0.0000	109.00	No Ice	2.31	2.23	0.06
			0.00				1/2"	2.52	2.43	0.08
			1.00				Ice	2.73	2.64	0.11
							1" Ice	3.17	3.08	0.17
							2" Ice			
PCS 1900MHZ 4X45W 65MHZ	C	From Leg	4.00		0.0000	109.00	No Ice	2.31	2.23	0.06
			0.00				1/2"	2.52	2.43	0.08
			1.00				Ice	2.73	2.64	0.11
							1" Ice	3.17	3.08	0.17
							2" Ice			
(2) RRH2X50-800	A	From Leg	4.00		0.0000	109.00	No Ice	1.70	1.28	0.05
			0.00				1/2"	1.86	1.43	0.07
			1.00				Ice	2.03	1.58	0.09
							1" Ice	2.40	1.91	0.14
							2" Ice			
(2) RRH2X50-800	B	From Leg	4.00		0.0000	109.00	No Ice	1.70	1.28	0.05
			0.00				1/2"	1.86	1.43	0.07
			1.00				Ice	2.03	1.58	0.09
							1" Ice	2.40	1.91	0.14
							2" Ice			
(2) RRH2X50-800	C	From Leg	4.00		0.0000	109.00	No Ice	1.70	1.28	0.05
			0.00				1/2"	1.86	1.43	0.07
			1.00				Ice	2.03	1.58	0.09
							1" Ice	2.40	1.91	0.14
							2" Ice			

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA}		Weight
			Horz	Lateral			Front	Side	
			ft	ft	°	ft	ft ²	ft ²	K
(3) 6' x 2" Mount Pipe	A	From Leg	4.00	0.0000	109.00	No Ice	1.43	1.43	0.02
			0.00			1/2"	1.92	1.92	0.03
			0.00			Ice	2.29	2.29	0.05
						1" Ice	3.06	3.06	0.09
						2" Ice			
(3) 6' x 2" Mount Pipe	B	From Leg	4.00	0.0000	109.00	No Ice	1.43	1.43	0.02
			0.00			1/2"	1.92	1.92	0.03
			0.00			Ice	2.29	2.29	0.05
						1" Ice	3.06	3.06	0.09
						2" Ice			
(3) 6' x 2" Mount Pipe	C	From Leg	4.00	0.0000	109.00	No Ice	1.43	1.43	0.02
			0.00			1/2"	1.92	1.92	0.03
			0.00			Ice	2.29	2.29	0.05
						1" Ice	3.06	3.06	0.09
						2" Ice			
Platform Mount [LP 1201-1_KCKR]	C	None		0.0000	109.00	No Ice	29.60	29.60	2.38
						1/2"	36.33	36.33	3.07
						Ice	43.26	43.26	3.86
						1" Ice	57.72	57.72	5.75
						2" Ice			
*** 99 R ***									
(2) LPA-80080/4CF w/ Mount Pipe	A	From Leg	4.00	0.0000	99.00	No Ice	2.86	6.57	0.03
			0.00			1/2"	3.22	7.19	0.08
			0.00			Ice	3.59	7.84	0.13
						1" Ice	4.34	9.17	0.25
						2" Ice			
(2) LPA-80080/4CF w/ Mount Pipe	B	From Leg	4.00	0.0000	99.00	No Ice	2.86	6.57	0.03
			0.00			1/2"	3.22	7.19	0.08
			0.00			Ice	3.59	7.84	0.13
						1" Ice	4.34	9.17	0.25
						2" Ice			
(2) LPA-80080/4CF w/ Mount Pipe	C	From Leg	4.00	0.0000	99.00	No Ice	2.86	6.57	0.03
			0.00			1/2"	3.22	7.19	0.08
			0.00			Ice	3.59	7.84	0.13
						1" Ice	4.34	9.17	0.25
						2" Ice			
(2) JAHH-65B-R3B w/ Mount Pipe	A	From Leg	4.00	0.0000	99.00	No Ice	5.50	4.38	0.10
			0.00			1/2"	5.97	4.84	0.17
			0.00			Ice	6.45	5.30	0.25
						1" Ice	7.44	6.26	0.46
						2" Ice			
(2) JAHH-65B-R3B w/ Mount Pipe	B	From Leg	4.00	0.0000	99.00	No Ice	5.50	4.38	0.10
			0.00			1/2"	5.97	4.84	0.17
			0.00			Ice	6.45	5.30	0.25
						1" Ice	7.44	6.26	0.46
						2" Ice			
(2) JAHH-65B-R3B w/ Mount Pipe	C	From Leg	4.00	0.0000	99.00	No Ice	5.50	4.38	0.10
			0.00			1/2"	5.97	4.84	0.17
			0.00			Ice	6.45	5.30	0.25
						1" Ice	7.44	6.26	0.46
						2" Ice			
KS24019-L112A	B	From Leg	4.00	0.0000	99.00	No Ice	0.10	0.10	0.01
			0.00			1/2"	0.18	0.18	0.01
			2.00			Ice	0.26	0.26	0.01
						1" Ice	0.42	0.42	0.01
						2" Ice			
RRH4X45-AWS4 B66	A	From Leg	4.00	0.0000	99.00	No Ice	2.66	1.59	0.06
			0.00			1/2"	2.88	1.77	0.08
			0.00			Ice	3.10	1.96	0.11
						1" Ice	3.58	2.36	0.17
						2" Ice			
RRH4X45-AWS4 B66	B	From Leg	4.00	0.0000	99.00	No Ice	2.66	1.59	0.06
			0.00			1/2"	2.88	1.77	0.08
			0.00			Ice	3.10	1.96	0.11
						1" Ice	3.58	2.36	0.17
						2" Ice			

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment t °	Placement ft	CAAA Front ft²	CAAA Side ft²	Weight K	
RRH4X45-AWS4 B66	C	From Leg	4.00 0.00 0.00	0.0000	99.00	2" Ice			
						No Ice	2.66	1.59	0.06
						1/2"	2.88	1.77	0.08
						Ice	3.10	1.96	0.11
AHCA	A	From Leg	4.00 0.00 0.00	0.0000	99.00	1" Ice	3.58	2.36	0.17
						2" Ice			
						No Ice	1.29	0.72	0.04
						1/2"	1.43	0.83	0.05
AHCA	B	From Leg	4.00 0.00 0.00	0.0000	99.00	Ice	1.58	0.96	0.06
						1" Ice	1.90	1.22	0.09
						2" Ice			
						No Ice	1.29	0.72	0.04
AHCA	C	From Leg	4.00 0.00 0.00	0.0000	99.00	1/2"	1.43	0.83	0.05
						Ice	1.58	0.96	0.06
						1" Ice	1.90	1.22	0.09
						2" Ice			
B13 RRH 4X30	A	From Leg	4.00 0.00 0.00	0.0000	99.00	No Ice	2.06	1.32	0.06
						1/2"	2.24	1.48	0.07
						Ice	2.43	1.64	0.09
						1" Ice	2.84	2.00	0.14
B13 RRH 4X30	B	From Leg	4.00 0.00 0.00	0.0000	99.00	2" Ice			
						No Ice	2.06	1.32	0.06
						1/2"	2.24	1.48	0.07
						Ice	2.43	1.64	0.09
B13 RRH 4X30	C	From Leg	4.00 0.00 0.00	0.0000	99.00	1" Ice	2.84	2.00	0.14
						2" Ice			
						No Ice	2.06	1.32	0.06
						1/2"	2.24	1.48	0.07
(2) RRFDC-3315-PF-48	B	From Leg	4.00 0.00 0.00	0.0000	99.00	Ice	2.43	1.64	0.09
						1" Ice	2.84	2.00	0.14
						2" Ice			
						No Ice	3.36	2.19	0.03
Platform Mount [LP 602-1_KCKR]	C	None		0.0000	99.00	1/2"	3.60	2.39	0.06
						Ice	3.84	2.61	0.09
						1" Ice	4.34	3.05	0.17
						2" Ice			
88 R ERICSSON AIR 21 B4A B2P w/ Mount Pipe	A	From Leg	4.00 0.00 2.00	0.0000	88.00	No Ice	42.30	42.30	1.62
						1/2"	49.04	49.04	2.38
						Ice	55.87	55.87	3.27
						1" Ice	69.85	69.85	5.40
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	B	From Leg	4.00 0.00 2.00	0.0000	88.00	2" Ice			
						No Ice	3.14	2.59	0.11
						1/2"	3.45	2.88	0.16
						Ice	3.77	3.19	0.22
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	C	From Face	4.00 0.00 2.00	0.0000	88.00	1" Ice	4.43	3.84	0.37
						2" Ice			
						No Ice	3.14	2.59	0.11
						1/2"	3.45	2.88	0.16
APXVAARR24_43-U-NA20 w/ Mount Pipe	A	From Leg	4.00 0.00 2.00	0.0000	88.00	Ice	3.77	3.19	0.22
						1" Ice	4.43	3.84	0.37
						2" Ice			
						No Ice	14.69	6.87	0.19
						1/2"	15.46	7.55	0.31
						Ice	16.23	8.25	0.46

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA} _{Front}	C _{AA} _{Side}	Weight	
			Horz	Lateral						Vert
			ft	ft	°	ft	ft ²	ft ²	K	
APXVAARR24_43-U-NA20 w/ Mount Pipe	B	From Leg	4.00	0.00	0.0000	88.00	1" Ice	17.82	9.67	0.79
							2" Ice			
							No Ice	14.69	6.87	0.19
							1/2" Ice	15.46	7.55	0.31
							Ice	16.23	8.25	0.46
APXVAARR24_43-U-NA20 w/ Mount Pipe	C	From Leg	4.00	0.00	0.0000	88.00	1" Ice	17.82	9.67	0.79
							2" Ice			
							No Ice	14.69	6.87	0.19
							1/2" Ice	15.46	7.55	0.31
							Ice	16.23	8.25	0.46
AIR 32 B2A/B66AA w/ Mount Pipe	A	From Leg	4.00	0.00	0.0000	88.00	1" Ice	17.82	9.67	0.79
							2" Ice			
							No Ice	3.76	3.15	0.19
							1/2" Ice	4.12	3.49	0.25
							Ice	4.48	3.84	0.32
AIR 32 B2A/B66AA w/ Mount Pipe	B	From Leg	4.00	0.00	0.0000	88.00	1" Ice	5.24	4.58	0.48
							2" Ice			
							No Ice	3.76	3.15	0.19
							1/2" Ice	4.12	3.49	0.25
							Ice	4.48	3.84	0.32
AIR 32 B2A/B66AA w/ Mount Pipe	C	From Leg	4.00	0.00	0.0000	88.00	1" Ice	5.24	4.58	0.48
							2" Ice			
							No Ice	3.76	3.15	0.19
							1/2" Ice	4.12	3.49	0.25
							Ice	4.48	3.84	0.32
RADIO 4449 B12/B71	A	From Leg	4.00	0.00	0.0000	88.00	1" Ice	5.24	4.58	0.48
							2" Ice			
							No Ice	1.65	1.16	0.07
							1/2" Ice	1.81	1.30	0.09
							Ice	1.98	1.45	0.11
RADIO 4449 B12/B71	B	From Leg	4.00	0.00	0.0000	88.00	1" Ice	2.34	1.76	0.16
							2" Ice			
							No Ice	1.65	1.16	0.07
							1/2" Ice	1.81	1.30	0.09
							Ice	1.98	1.45	0.11
RADIO 4449 B12/B71	C	From Leg	4.00	0.00	0.0000	88.00	1" Ice	2.34	1.76	0.16
							2" Ice			
							No Ice	1.65	1.16	0.07
							1/2" Ice	1.81	1.30	0.09
							Ice	1.98	1.45	0.11
T-Arm Mount [TA 602-3]	B	None			0.0000	88.00	1" Ice	2.34	1.76	0.16
							2" Ice			
							No Ice	13.40	13.40	0.77
							1/2" Ice	16.44	16.44	1.00
							Ice	19.70	19.70	1.29
Miscellaneous [NA 507-1]	C	None			0.0000	88.00	1" Ice	25.86	25.86	2.05
							2" Ice			
							No Ice	4.56	4.56	0.25
							1/2" Ice	6.39	6.39	0.31
							Ice	8.18	8.18	0.40
** MX08FRO665-21 w/ Mount Pipe	A	From Leg	4.00	0.00	0.0000	70.00	1" Ice	11.66	11.66	0.66
							2" Ice			
							No Ice	8.01	4.23	0.11
							1/2" Ice	8.52	4.69	0.19
							Ice	9.04	5.16	0.29
MX08FRO665-21 w/ Mount Pipe	B	From Leg	4.00	0.00	0.0000	70.00	1" Ice	10.11	6.12	0.52
							2" Ice			
							No Ice	8.01	4.23	0.11
							1/2" Ice	8.52	4.69	0.19
							Ice	9.04	5.16	0.29
MX08FRO665-21 w/ Mount Pipe	C	From Leg	4.00	0.00	0.0000	70.00	1" Ice	10.11	6.12	0.52
							2" Ice			
							No Ice	8.01	4.23	0.11
							1/2" Ice	8.52	4.69	0.19
							Ice	9.04	5.16	0.29

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA} _{Front}	C _{AA} _{Side}	Weight	
			Horz	Lateral						ft
			ft	ft	°	ft	ft ²	ft ²	K	
			0.00				Ice	9.04	5.16	0.29
							1" Ice	10.11	6.12	0.52
							2" Ice			
TA08025-B604	A	From Leg	4.00		0.0000	70.00	No Ice	1.96	0.98	0.06
			0.00				1/2"	2.14	1.11	0.08
			0.00				Ice	2.32	1.25	0.10
							1" Ice	2.71	1.55	0.15
							2" Ice			
TA08025-B604	B	From Leg	4.00		0.0000	70.00	No Ice	1.96	0.98	0.06
			0.00				1/2"	2.14	1.11	0.08
			0.00				Ice	2.32	1.25	0.10
							1" Ice	2.71	1.55	0.15
							2" Ice			
TA08025-B604	C	From Leg	4.00		0.0000	70.00	No Ice	1.96	0.98	0.06
			0.00				1/2"	2.14	1.11	0.08
			0.00				Ice	2.32	1.25	0.10
							1" Ice	2.71	1.55	0.15
							2" Ice			
TA08025-B605	A	From Leg	4.00		0.0000	70.00	No Ice	1.96	1.13	0.08
			0.00				1/2"	2.14	1.27	0.09
			0.00				Ice	2.32	1.41	0.11
							1" Ice	2.71	1.72	0.16
							2" Ice			
TA08025-B605	B	From Leg	4.00		0.0000	70.00	No Ice	1.96	1.13	0.08
			0.00				1/2"	2.14	1.27	0.09
			0.00				Ice	2.32	1.41	0.11
							1" Ice	2.71	1.72	0.16
							2" Ice			
TA08025-B605	C	From Leg	4.00		0.0000	70.00	No Ice	1.96	1.13	0.08
			0.00				1/2"	2.14	1.27	0.09
			0.00				Ice	2.32	1.41	0.11
							1" Ice	2.71	1.72	0.16
							2" Ice			
RDIDC-9181-PF-48	A	From Leg	4.00		0.0000	70.00	No Ice	2.31	1.29	0.02
			0.00				1/2"	2.50	1.45	0.04
			0.00				Ice	2.70	1.61	0.06
							1" Ice	3.12	1.96	0.12
							2" Ice			
(2) 8' x 2" Mount Pipe	A	From Leg	4.00		0.0000	70.00	No Ice	1.90	1.90	0.03
			0.00				1/2"	2.73	2.73	0.04
			0.00				Ice	3.40	3.40	0.06
							1" Ice	4.40	4.40	0.12
							2" Ice			
(2) 8' x 2" Mount Pipe	B	From Leg	4.00		0.0000	70.00	No Ice	1.90	1.90	0.03
			0.00				1/2"	2.73	2.73	0.04
			0.00				Ice	3.40	3.40	0.06
							1" Ice	4.40	4.40	0.12
							2" Ice			
(2) 8' x 2" Mount Pipe	C	From Leg	4.00		0.0000	70.00	No Ice	1.90	1.90	0.03
			0.00				1/2"	2.73	2.73	0.04
			0.00				Ice	3.40	3.40	0.06
							1" Ice	4.40	4.40	0.12
							2" Ice			
Commscope MC-PK8-DSH	C	None			0.0000	70.00	No Ice	34.24	34.24	1.75
							1/2"	62.95	62.95	2.10
							Ice	91.66	91.66	2.45
							1" Ice	149.08	149.08	3.15
							2" Ice			

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	120 - 97	Pole	Max Tension	2	0.00	0.00	-0.00
			Max. Compression	26	-21.15	0.72	-0.82
			Max. Mx	20	-10.12	106.16	-0.69
			Max. My	14	-10.12	0.45	-105.90
			Max. Vy	8	7.86	-105.47	-0.44
			Max. Vx	14	7.83	0.45	-105.90
			Max. Torque	7			
L2	97 - 48	Pole	Max Tension	1	0.00	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L3	48 - 0	Pole	Max. Compression	26	-53.34	-1.51	-2.34
			Max. Mx	8	-27.06	-844.29	-2.21
			Max. My	14	-27.06	-1.72	-842.79
			Max. Vy	8	18.86	-844.29	-2.21
			Max. Vx	14	18.85	-1.72	-842.79
			Max. Torque	7			-0.90
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-69.88	-0.93	-2.68
			Max. Mx	8	-39.81	-1909.89	-3.77
			Max. My	14	-39.81	-3.18	-1907.97
			Max. Vy	8	21.35	-1909.89	-3.77
			Max. Vx	14	21.34	-3.18	-1907.97
			Max. Torque	7			-0.74

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	32	69.88	-3.33	-5.75
	Max. H _x	20	39.83	21.32	0.03
	Max. H _z	2	39.83	0.03	21.31
	Max. M _x	2	1905.73	0.03	21.31
	Max. M _z	8	1909.89	-21.32	-0.03
	Max. Torsion	19	0.74	18.45	-10.63
	Min. Vert	5	29.87	-10.64	18.44
	Min. H _x	8	39.83	-21.32	-0.03
	Min. H _z	14	39.83	-0.03	-21.31
	Min. M _x	14	-1907.97	-0.03	-21.31
	Min. M _z	20	-1908.83	21.32	0.03
	Min. Torsion	7	-0.74	-18.45	10.63

Tower Mast Reaction Summary

Load Combination	Vertical K	Shear _x K	Shear _z K	Overturning Moment, M _x kip-ft	Overturning Moment, M _z kip-ft	Torque kip-ft
Dead Only	33.19	0.00	0.00	0.87	-0.41	-0.00
1.2 Dead+1.0 Wind 0 deg - No Ice	39.83	-0.03	-21.31	-1905.73	2.12	0.35
0.9 Dead+1.0 Wind 0 deg - No Ice	29.87	-0.03	-21.31	-1885.29	2.24	0.36
1.2 Dead+1.0 Wind 30 deg - No Ice	39.83	10.64	-18.44	-1648.94	-952.92	0.63
0.9 Dead+1.0 Wind 30 deg - No Ice	29.87	10.64	-18.44	-1631.29	-942.41	0.64
1.2 Dead+1.0 Wind 60 deg - No Ice	39.83	18.45	-10.63	-950.01	-1652.77	0.74
0.9 Dead+1.0 Wind 60 deg - No Ice	29.87	18.45	-10.63	-939.96	-1634.64	0.74
1.2 Dead+1.0 Wind 90 deg - No Ice	39.83	21.32	0.03	3.77	-1909.89	0.66
0.9 Dead+1.0 Wind 90 deg - No Ice	29.87	21.32	0.03	3.45	-1888.97	0.65
1.2 Dead+1.0 Wind 120 deg - No Ice	39.83	18.48	10.68	956.85	-1655.42	0.40
0.9 Dead+1.0 Wind 120 deg - No Ice	29.87	18.48	10.68	946.15	-1637.26	0.39
1.2 Dead+1.0 Wind 150 deg - No Ice	39.83	10.69	18.47	1653.84	-957.51	0.03
0.9 Dead+1.0 Wind 150 deg - No Ice	29.87	10.69	18.47	1635.56	-946.95	0.02

Load Combination	Vertical K	Shear _x K	Shear _z K	Overturning Moment, M _x kip-ft	Overturning Moment, M _z kip-ft	Torque kip-ft
- No Ice						
1.2 Dead+1.0 Wind 180 deg	39.83	0.03	21.31	1907.97	-3.18	-0.35
- No Ice						
0.9 Dead+1.0 Wind 180 deg	29.87	0.03	21.31	1886.94	-3.01	-0.36
- No Ice						
1.2 Dead+1.0 Wind 210 deg	39.83	-10.64	18.44	1651.19	951.87	-0.63
- No Ice						
0.9 Dead+1.0 Wind 210 deg	29.87	-10.64	18.44	1632.94	941.64	-0.63
- No Ice						
1.2 Dead+1.0 Wind 240 deg	39.83	-18.45	10.63	952.26	1651.72	-0.74
- No Ice						
0.9 Dead+1.0 Wind 240 deg	29.87	-18.45	10.63	941.61	1633.87	-0.74
- No Ice						
1.2 Dead+1.0 Wind 270 deg	39.83	-21.32	-0.03	-1.53	1908.83	-0.66
- No Ice						
0.9 Dead+1.0 Wind 270 deg	29.87	-21.32	-0.03	-1.80	1888.20	-0.65
- No Ice						
1.2 Dead+1.0 Wind 300 deg	39.83	-18.48	-10.68	-954.60	1654.36	-0.40
- No Ice						
0.9 Dead+1.0 Wind 300 deg	29.87	-18.48	-10.68	-944.50	1636.49	-0.39
- No Ice						
1.2 Dead+1.0 Wind 330 deg	39.83	-10.69	-18.47	-1651.59	956.46	-0.03
- No Ice						
0.9 Dead+1.0 Wind 330 deg	29.87	-10.69	-18.47	-1633.91	946.18	-0.02
- No Ice						
1.2 Dead+1.0 Ice+1.0 Temp	69.88	0.00	0.00	2.68	-0.93	0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	69.88	-0.01	-6.64	-586.05	-0.49	-0.55
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	69.88	3.32	-5.75	-506.90	-295.25	-0.23
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	69.88	5.75	-3.32	-291.17	-511.16	0.14
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	69.88	6.64	0.01	3.33	-590.38	0.48
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	69.88	5.76	3.33	297.69	-511.67	0.69
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	69.88	3.33	5.75	513.05	-296.13	0.72
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	69.88	0.01	6.64	591.69	-1.51	0.55
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	69.88	-3.32	5.75	512.54	293.26	0.24
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	69.88	-5.75	3.32	296.81	509.17	-0.14
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	69.88	-6.64	-0.01	2.31	588.39	-0.48
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	69.88	-5.76	-3.33	-292.06	509.68	-0.69
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	69.88	-3.33	-5.75	-507.41	294.14	-0.72
Dead+Wind 0 deg - Service	33.19	-0.01	-5.02	-445.46	0.18	0.08
Dead+Wind 30 deg - Service	33.19	2.51	-4.35	-385.34	-223.39	0.15
Dead+Wind 60 deg - Service	33.19	4.35	-2.51	-221.73	-387.22	0.17
Dead+Wind 90 deg - Service	33.19	5.02	0.01	1.55	-447.41	0.15
Dead+Wind 120 deg - Service	33.19	4.35	2.52	224.66	-387.84	0.09
Dead+Wind 150 deg - Service	33.19	2.52	4.35	387.82	-224.46	0.00
Dead+Wind 180 deg - Service	33.19	0.01	5.02	447.31	-1.06	-0.08
Dead+Wind 210 deg - Service	33.19	-2.51	4.35	387.20	222.51	-0.15
Dead+Wind 240 deg - Service	33.19	-4.35	2.51	223.58	386.34	-0.17
Dead+Wind 270 deg - Service	33.19	-5.02	-0.01	0.31	446.54	-0.15
Dead+Wind 300 deg - Service	33.19	-4.35	-2.52	-222.80	386.96	-0.09
Dead+Wind 330 deg -	33.19	-2.52	-4.35	-385.96	223.59	-0.00

Load Combination	Vertical K	Shear _x K	Shear _z K	Overturning Moment, M _x kip-ft	Overturning Moment, M _z kip-ft	Torque kip-ft
Service						

Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
1	0.00	-33.19	0.00	0.00	33.19	0.00	0.000%
2	-0.03	-39.83	-21.31	0.03	39.83	21.31	0.000%
3	-0.03	-29.87	-21.31	0.03	29.87	21.31	0.000%
4	10.64	-39.83	-18.44	-10.64	39.83	18.44	0.000%
5	10.64	-29.87	-18.44	-10.64	29.87	18.44	0.000%
6	18.45	-39.83	-10.63	-18.45	39.83	10.63	0.000%
7	18.45	-29.87	-10.63	-18.45	29.87	10.63	0.000%
8	21.32	-39.83	0.03	-21.32	39.83	-0.03	0.000%
9	21.32	-29.87	0.03	-21.32	29.87	-0.03	0.000%
10	18.48	-39.83	10.68	-18.48	39.83	-10.68	0.000%
11	18.48	-29.87	10.68	-18.48	29.87	-10.68	0.000%
12	10.69	-39.83	18.47	-10.69	39.83	-18.47	0.000%
13	10.69	-29.87	18.47	-10.69	29.87	-18.47	0.000%
14	0.03	-39.83	21.31	-0.03	39.83	-21.31	0.000%
15	0.03	-29.87	21.31	-0.03	29.87	-21.31	0.000%
16	-10.64	-39.83	18.44	10.64	39.83	-18.44	0.000%
17	-10.64	-29.87	18.44	10.64	29.87	-18.44	0.000%
18	-18.45	-39.83	10.63	18.45	39.83	-10.63	0.000%
19	-18.45	-29.87	10.63	18.45	29.87	-10.63	0.000%
20	-21.32	-39.83	-0.03	21.32	39.83	0.03	0.000%
21	-21.32	-29.87	-0.03	21.32	29.87	0.03	0.000%
22	-18.48	-39.83	-10.68	18.48	39.83	10.68	0.000%
23	-18.48	-29.87	-10.68	18.48	29.87	10.68	0.000%
24	-10.69	-39.83	-18.47	10.69	39.83	18.47	0.000%
25	-10.69	-29.87	-18.47	10.69	29.87	18.47	0.000%
26	0.00	-69.88	0.00	-0.00	69.88	-0.00	0.000%
27	-0.01	-69.88	-6.64	0.01	69.88	6.64	0.000%
28	3.32	-69.88	-5.75	-3.32	69.88	5.75	0.000%
29	5.75	-69.88	-3.32	-5.75	69.88	3.32	0.000%
30	6.64	-69.88	0.01	-6.64	69.88	-0.01	0.000%
31	5.76	-69.88	3.33	-5.76	69.88	-3.33	0.000%
32	3.33	-69.88	5.75	-3.33	69.88	-5.75	0.000%
33	0.01	-69.88	6.64	-0.01	69.88	-6.64	0.000%
34	-3.32	-69.88	5.75	3.32	69.88	-5.75	0.000%
35	-5.75	-69.88	3.32	5.75	69.88	-3.32	0.000%
36	-6.64	-69.88	-0.01	6.64	69.88	0.01	0.000%
37	-5.76	-69.88	-3.33	5.76	69.88	3.33	0.000%
38	-3.33	-69.88	-5.75	3.33	69.88	5.75	0.000%
39	-0.01	-33.19	-5.02	0.01	33.19	5.02	0.000%
40	2.51	-33.19	-4.35	-2.51	33.19	4.35	0.000%
41	4.35	-33.19	-2.51	-4.35	33.19	2.51	0.000%
42	5.02	-33.19	0.01	-5.02	33.19	-0.01	0.000%
43	4.35	-33.19	2.52	-4.35	33.19	-2.52	0.000%
44	2.52	-33.19	4.35	-2.52	33.19	-4.35	0.000%
45	0.01	-33.19	5.02	-0.01	33.19	-5.02	0.000%
46	-2.51	-33.19	4.35	2.51	33.19	-4.35	0.000%
47	-4.35	-33.19	2.51	4.35	33.19	-2.51	0.000%
48	-5.02	-33.19	-0.01	5.02	33.19	0.01	0.000%
49	-4.35	-33.19	-2.52	4.35	33.19	2.52	0.000%
50	-2.52	-33.19	-4.35	2.52	33.19	4.35	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
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1	Yes	4	0.00000001	0.00000001
2	Yes	4	0.00000001	0.00050098
3	Yes	4	0.00000001	0.00032134
4	Yes	5	0.00000001	0.00086881
5	Yes	5	0.00000001	0.00042120
6	Yes	5	0.00000001	0.00082128
7	Yes	5	0.00000001	0.00039655
8	Yes	4	0.00000001	0.00092668
9	Yes	4	0.00000001	0.00060483
10	Yes	5	0.00000001	0.00087088
11	Yes	5	0.00000001	0.00042058
12	Yes	5	0.00000001	0.00085654
13	Yes	5	0.00000001	0.00041365
14	Yes	4	0.00000001	0.00058850
15	Yes	4	0.00000001	0.00038337
16	Yes	5	0.00000001	0.00082751
17	Yes	5	0.00000001	0.00039910
18	Yes	5	0.00000001	0.00087795
19	Yes	5	0.00000001	0.00042512
20	Yes	4	0.00000001	0.00083124
21	Yes	4	0.00000001	0.00054021
22	Yes	5	0.00000001	0.00083768
23	Yes	5	0.00000001	0.00040503
24	Yes	5	0.00000001	0.00084910
25	Yes	5	0.00000001	0.00041059
26	Yes	4	0.00000001	0.00003294
27	Yes	5	0.00000001	0.00031760
28	Yes	5	0.00000001	0.00041879
29	Yes	5	0.00000001	0.00041701
30	Yes	5	0.00000001	0.00032356
31	Yes	5	0.00000001	0.00043678
32	Yes	5	0.00000001	0.00042626
33	Yes	5	0.00000001	0.00032356
34	Yes	5	0.00000001	0.00042435
35	Yes	5	0.00000001	0.00042674
36	Yes	5	0.00000001	0.00032031
37	Yes	5	0.00000001	0.00041195
38	Yes	5	0.00000001	0.00042129
39	Yes	4	0.00000001	0.00004414
40	Yes	4	0.00000001	0.00025371
41	Yes	4	0.00000001	0.00021393
42	Yes	4	0.00000001	0.00005706
43	Yes	4	0.00000001	0.00025009
44	Yes	4	0.00000001	0.00023960
45	Yes	4	0.00000001	0.00004532
46	Yes	4	0.00000001	0.00021907
47	Yes	4	0.00000001	0.00026108
48	Yes	4	0.00000001	0.00005581
49	Yes	4	0.00000001	0.00022244
50	Yes	4	0.00000001	0.00023075

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	120 - 97	11.872	43	0.8139	0.0011
L2	100.62 - 48	8.624	43	0.7728	0.0011
L3	52.96 - 0	2.389	43	0.4193	0.0003

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
119.00	7770.00	43	11.702	0.8126	0.0011	56995
109.00	ETCR-654L12H6 w/ Mount Pipe	43	10.009	0.7967	0.0011	25907
99.00	(2) LPA-80080/4CF w/ Mount Pipe	43	8.362	0.7665	0.0011	13863
88.00	ERICSSON AIR 21 B4A B2P w/ Mount Pipe	43	6.650	0.7076	0.0010	9811
70.00	MX08FRO665-21 w/ Mount Pipe	43	4.186	0.5693	0.0006	6638

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	120 - 97	50.643	10	3.4696	0.0050
L2	100.62 - 48	36.796	10	3.2976	0.0049
L3	52.96 - 0	10.198	10	1.7903	0.0013

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
119.00	7770.00	10	49.917	3.4642	0.0050	13643
109.00	ETCR-654L12H6 w/ Mount Pipe	10	42.701	3.3981	0.0051	6201
99.00	(2) LPA-80080/4CF w/ Mount Pipe	10	35.678	3.2704	0.0049	3310
88.00	ERICSSON AIR 21 B4A B2P w/ Mount Pipe	10	28.376	3.0195	0.0042	2326
70.00	MX08FRO665-21 w/ Mount Pipe	10	17.863	2.4300	0.0027	1562

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L _u ft	KI/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
L1	120 - 97 (1)	TP28.93x22.69x0.1875	23.00	0.00	0.0	16.520 9	-10.12	966.47	0.010
L2	97 - 48 (2)	TP39.7x27.5729x0.25	52.62	0.00	0.0	30.396 5	-27.06	1778.20	0.015
L3	48 - 0 (3)	TP51.04x38.0569x0.3125	52.96	0.00	0.0	50.315 3	-39.81	2943.45	0.014

Pole Bending Design Data

Section No.	Elevation ft	Size	M _{ux} kip-ft	φM _{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M _{uy} kip-ft	φM _{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	120 - 97 (1)	TP28.93x22.69x0.1875	106.39	608.22	0.175	0.00	608.22	0.000

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L2	97 - 48 (2)	TP39.7x27.5729x0.25	845.25	1521.46	0.556	0.00	1521.46	0.000
L3	48 - 0 (3)	TP51.04x38.0569x0.3125	1912.06	3247.13	0.589	0.00	3247.13	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	120 - 97 (1)	TP28.93x22.69x0.1875	7.86	289.94	0.027	0.04	704.88	0.000
L2	97 - 48 (2)	TP39.7x27.5729x0.25	18.88	533.46	0.035	0.25	1789.61	0.000
L3	48 - 0 (3)	TP51.04x38.0569x0.3125	21.37	883.03	0.024	0.40	3922.84	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio P_u	Ratio M_{ux}	Ratio M_{uy}	Ratio V_u	Ratio T_u	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
		ϕP_n	ϕM_{nx}	ϕM_{ny}	ϕV_n	ϕT_n			
L1	120 - 97 (1)	0.010	0.175	0.000	0.027	0.000	0.186	1.050	4.8.2
L2	97 - 48 (2)	0.015	0.556	0.000	0.035	0.000	0.572	1.050	4.8.2
L3	48 - 0 (3)	0.014	0.589	0.000	0.024	0.000	0.603	1.050	4.8.2

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	120 - 97	Pole	TP28.93x22.69x0.1875	1	-10.12	1014.80	17.7	Pass
L2	97 - 48	Pole	TP39.7x27.5729x0.25	2	-27.06	1867.11	54.5	Pass
L3	48 - 0	Pole	TP51.04x38.0569x0.3125	3	-39.81	3090.62	57.4	Pass
Summary								
Pole (L3)							57.4	Pass
RATING =							57.4	Pass

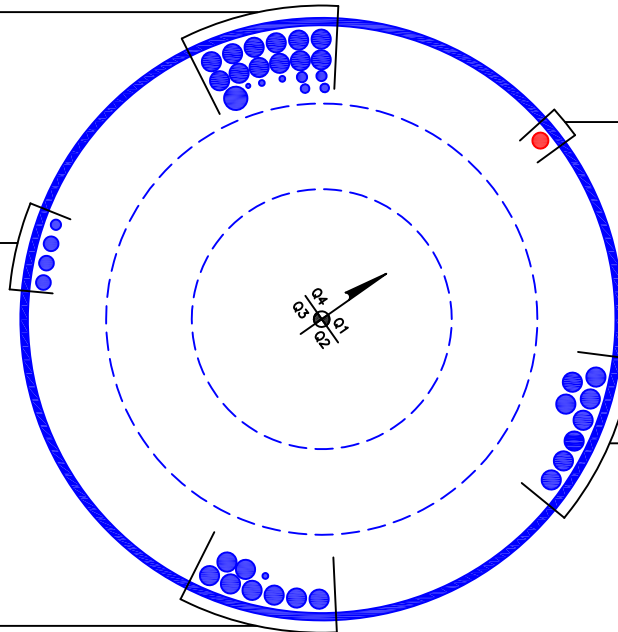
APPENDIX B
BASE LEVEL DRAWING



- (OTHER CONSIDERED EQUIPMENT)
- (1) 3/8" TO 119 FT LEVEL
 - (2) 1/2" TO 119 FT LEVEL
 - (2) 3/4" TO 119 FT LEVEL
 - (2) 7/8" TO 119 FT LEVEL
 - (12) 1-5/8" TO 119 FT LEVEL
 - (1) 2" TO 119 FT LEVEL

- (OTHER CONSIDERED EQUIPMENT)
- (1) 7/8" TO 109 FT LEVEL
 - (3) 1-1/4" TO 109 FT LEVEL

- (OTHER CONSIDERED EQUIPMENT)
- (1) 1/2" TO 99 FT LEVEL
 - (8) 1-5/8" TO 99 FT LEVEL



- (PROPOSED EQUIPMENT CONFIGURATION)
- (1) 1-3/8" TO 70 FT LEVEL

- (OTHER CONSIDERED EQUIPMENT)
- (8) 1-5/8" TO 88 FT LEVEL

APPENDIX C
ADDITIONAL CALCULATIONS

Monopole Base Plate Connection

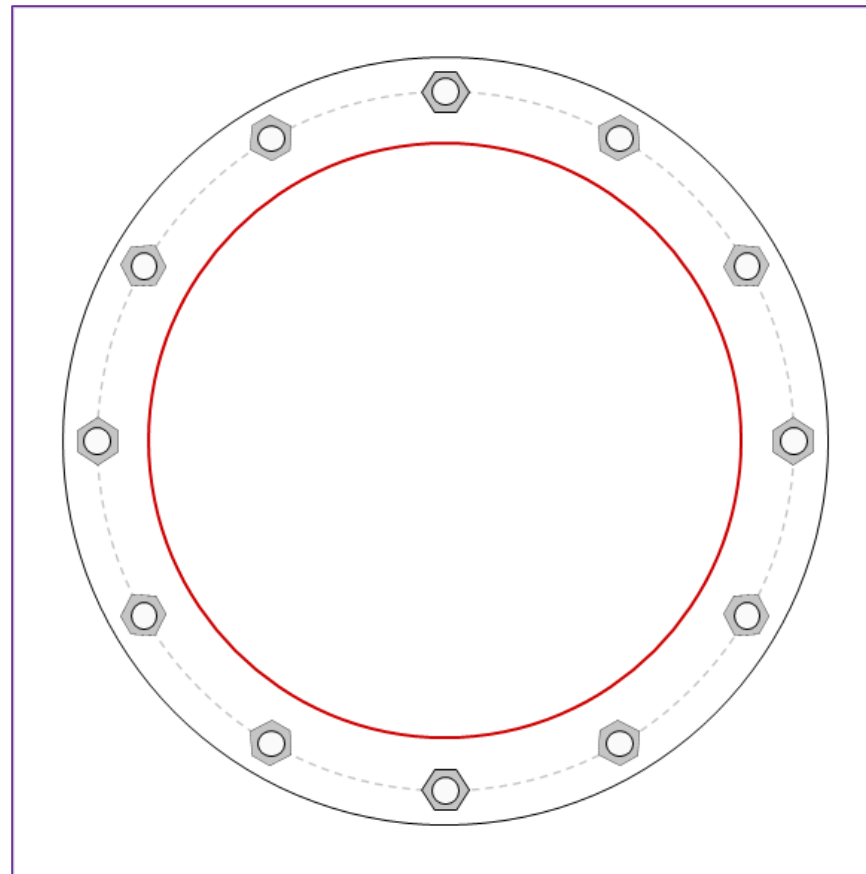


Site Info	
BU #	845993
Site Name	RLINGTON-NEPAUG RC
Order #	556621 Rev 1

Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	No
l_{ar} (in)	4.125

Applied Loads	
Moment (kip-ft)	1912.06
Axial Force (kips)	39.81
Shear Force (kips)	21.37

*TIA-222-H Section 15.5 Applied



Connection Properties	Analysis Results
-----------------------	------------------

Anchor Rod Data
(12) 2-1/4" ϕ bolts (A615-75 N; $F_y=75$ ksi, $F_u=100$ ksi) on 60" BC
Base Plate Data
66" OD x 2.25" Plate (A572-60; $F_y=60$ ksi, $F_u=75$ ksi)
Stiffener Data
N/A
Pole Data
51.04" x 0.3125" 18-sided pole (A572-65; $F_y=65$ ksi, $F_u=80$ ksi)

Anchor Rod Summary			<i>(units of kips, kip-in)</i>
$P_{u_c} = 130.72$	$\phi P_{n_c} = 268.39$	Stress Rating	
$V_u = 1.78$	$\phi V_n = 120.77$	50.0%	
$M_u = 4.78$	$\phi M_n = 128.14$	Pass	
Base Plate Summary			
Max Stress (ksi):	21.89	(Flexural)	
Allowable Stress (ksi):	54		
Stress Rating:	38.6%	Pass	

Pier and Pad Foundation



BU #: 845993
Site Name: BURLINGTON-NEP
App. Number: 556621 Rev 1

TIA-222 Revision: H
Tower Type: Monopole

Top & Bot. Pad Rein. Different?:
Block Foundation?:
Rectangular Pad?:

Superstructure Analysis Reactions		
Compression, P_{comp} :	40	kips
Base Shear, Vu_{comp} :	21	kips
Moment, M_u :	1912	ft-kips
Tower Height, H :	120	ft
BP Dist. Above Fdn, bp_{dist} :	6.25	in

Foundation Analysis Checks				
	Capacity	Demand	Rating*	Check
<i>Lateral (Sliding) (kips)</i>	156.16	21.00	12.8%	Pass
<i>Bearing Pressure (ksf)</i>	12.40	1.39	10.7%	Pass
<i>Overturning (kip*ft)</i>	4767.56	2046.84	42.9%	Pass
<i>Pier Flexure (Comp.) (kip*ft)</i>	3991.72	1972.90	47.1%	Pass
<i>Pier Compression (kip)</i>	31187.52	65.58	0.2%	Pass
<i>Pad Flexure (kip*ft)</i>	3178.02	688.19	20.6%	Pass
<i>Pad Shear - 1-way (kips)</i>	896.51	106.45	11.3%	Pass
<i>Pad Shear - 2-way (Comp) (ksi)</i>	0.190	0.021	10.3%	Pass
<i>Flexural 2-way (Comp) (kip*ft)</i>	3527.78	1183.74	32.0%	Pass

Pier Properties		
Pier Shape:	Square	
Pier Diameter, $dpier$:	7	ft
Ext. Above Grade, E :	0.9	ft
Pier Rebar Size, Sc :	8	
Pier Rebar Quantity, mc :	30	
Pier Tie/Spiral Size, St :	4	
Pier Tie/Spiral Quantity, mt :	4	
Pier Reinforcement Type:	Tie	
Pier Clear Cover, cc_{pier} :	3	in

*Rating per TIA-222-H Section 15.5

Structural Rating*:	47.1%
Soil Rating*:	42.9%

Pad Properties		
Depth, D :	5	ft
Pad Width, W_1 :	25	ft
Pad Thickness, T :	3	ft
Pad Rebar Size (Top dir.2), Sp_{top2} :	8	
Pad Rebar Quantity (Top dir. 2), mp_{top2} :	22	
Pad Rebar Size (Bottom dir. 2), Sp_2 :	8	
Pad Rebar Quantity (Bottom dir. 2), mp_2 :	29	
Pad Clear Cover, cc_{pad} :	3	in

Material Properties		
Rebar Grade, F_y :	60	ksi
Concrete Compressive Strength, F'_c :	4	ksi
Dry Concrete Density, δ_c :	150	pcf

Soil Properties		
Total Soil Unit Weight, γ :	120	pcf
Ultimate Net Bearing, Q_{net} :	16.000	ksf
Cohesion, C_u :	0.000	ksf
Friction Angle, ϕ :	30	degrees
SPT Blow Count, N_{blows} :	27	
Base Friction, μ :	0.45	
Neglected Depth, N :	4.17	ft
Foundation Bearing on Rock?	No	
Groundwater Depth, gw :	4	ft

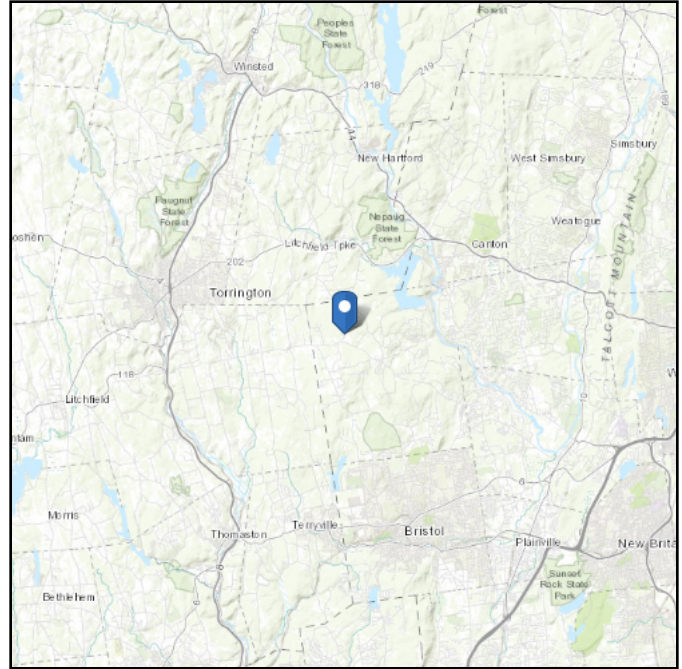
<--Toggle between Gross and Net

ASCE 7 Hazards Report

Address:
No Address at This
Location

Standard: ASCE/SEI 7-10
Risk Category: II
Soil Class: D - Stiff Soil

Elevation: 826.42 ft (NAVD 88)
Latitude: 41.782461
Longitude: -72.989633

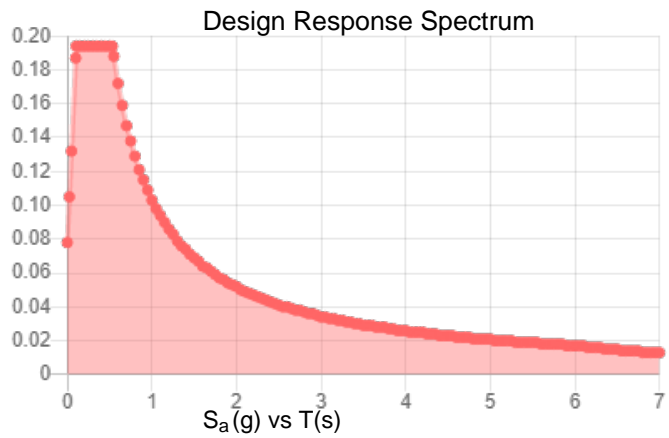
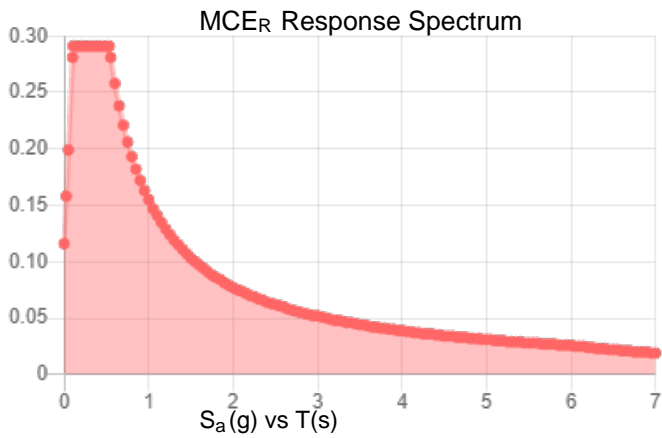


Site Soil Class: D - Stiff Soil

Results:

S_s :	0.182	S_{DS} :	0.194
S_1 :	0.064	S_{D1} :	0.103
F_a :	1.6	T_L :	6
F_v :	2.4	PGA :	0.092
S_{MS} :	0.291	PGA _M :	0.147
S_{M1} :	0.155	F _{PGA} :	1.6
		I_e :	1

Seismic Design Category B



Data Accessed:

Tue Nov 17 2020

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-10, incorporating Supplement 1 and errata of March 31, 2013, and ASCE/SEI 7-10 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-10 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness: 0.75 in.

Concurrent Temperature: 5 F

Gust Speed: 50 mph

Data Source: Standard ASCE/SEI 7-10, Figs. 10-2 through 10-8

Date Accessed: Tue Nov 17 2020

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 50-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.

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Exhibit E

Mount Analysis

Date: **September 15, 2021**

Darcy Tarr
Crown Castle
3530 Toringdon Way, Suite 300
Charlotte, NC 28277
(704) 405-6589



Trylon
1825 W. Walnut Hill Lane,
Suite 302
Irving, TX 75038
214-930-1730

Subject: **Mount Replacement Analysis Report**

Carrier Designation: **Dish Network Equipment Change Out**
Carrier Site Number: BOBDL00071A
Carrier Site Name: CT-CCI-T-845993

Crown Castle Designation: **Crown Castle BU Number:** 845993
Crown Castle Site Name: Burlington-Nepaug Road
Crown Castle JDE Job Number: 650062
Crown Castle Order Number: 556621 Rev. 1

Engineering Firm Designation: **Trylon Report Designation:** 189201 Rev. 1

Site Data: **12 Nepaug Road, Burlington, Hartford County, CT, 06013**
Latitude 41°46'56.86" Longitude -72°59'22.68"

Structure Information: **Tower Height & Type:** **119.5 ft Monopole**
Mount Elevation: **70.0 ft**
Mount Type: **8.0 ft Platform**

Dear Darcy Tarr,

Trylon is pleased to submit this **"Mount Replacement Analysis Report"** to determine the structural integrity of Dish Network's antenna mounting system with the proposed appurtenance and equipment addition on the abovementioned supporting tower structure. Analysis of the existing supporting tower structure is to be completed by others and therefore is not part of this analysis. Analysis of the antenna mounting system as a tie-off point for fall protection or rigging is not part of this document.

The purpose of the analysis is to determine acceptability of the mount stress level. Based on our analysis we have determined the mount stress level to be:

Platform **Sufficient**
***Sufficient upon completion of the changes listed in the 'Recommendations' section of this report.**

This analysis utilizes an ultimate 3-second gust wind speed of 125 mph as required by the 2018 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Mount analysis prepared by: Bryan P. Mawhinney

Respectfully Submitted by:
Cliff Abernathy, P.E.



09/15/2021

TABLE OF CONTENTS

1) INTRODUCTION

2) ANALYSIS CRITERIA

Table 1 - Proposed Equipment Configuration

3) ANALYSIS PROCEDURE

Table 2 - Documents Provided

3.1) Analysis Method

3.2) Assumptions

4) ANALYSIS RESULTS

Table 3 - Mount Component Stresses vs. Capacity

4.1) Recommendations

5) APPENDIX A

Wire Frame and Rendered Models

6) APPENDIX B

Software Input Calculations

7) APPENDIX C

Software Analysis Output

8) APPENDIX D

Additional Calculations

9) APPENDIX E

Supplemental Drawings

1) INTRODUCTION

This is a proposed 3 sector 8.0 ft Platform, designed by Commscope.

2) ANALYSIS CRITERIA

Building Code:	2015 IBC / 2018 CTSCB
TIA-222 Revision:	TIA-222-H
Risk Category:	II
Ultimate Wind Speed:	120 mph
Exposure Category:	B
Topographic Factor at Base:	1.0
Topographic Factor at Mount:	1.0
Ice Thickness:	1.5 in
Wind Speed with Ice:	50 mph
Seismic S_s:	0.182
Seismic S₁:	0.064
Live Loading Wind Speed:	30 mph
Man Live Load at Mid/End-Points:	250 lb
Man Live Load at Mount Pipes:	500 lb

Table 1 - Proposed Equipment Configuration

Mount Centerline (ft)	Antenna Centerline (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Mount / Modification Details
70.0	70.0	3	JMA WIRELESS	MX08FRO665-21	8.0 ft Platform [Commscope MC-PK8-DSH]
		3	FUJITSU	TA08025-B604	
		3	FUJITSU	TA08025-B605	
		1	RAYCAP	RDIDC-9181-PF-48	

3) ANALYSIS PROCEDURE

Table 2 - Documents Provided

Document	Remarks	Reference	Source
Crown Application	Dish Network Application	556621 Rev. 1	CCI Sites
Tower Structural Analysis Reports	Crown Castle	9800923	CCI Sites
Mount Manufacturer Drawings	Commscope	MC-PK8-DSH	TSA

3.1) Analysis Method

RISA-3D (Version 17.0.4), a commercially available analysis software package, was used to create a three-dimensional model of the antenna mounting system and calculate member stresses for various loading cases.

A tool internally developed, using Microsoft Excel, by Tylon was used to calculate wind loading on all appurtenances, dishes, and mount members for various load cases. Selected output from the analysis is included in Appendix B.

This analysis was performed in accordance with Crown Castle's ENG-SOW-10208 *Tower Mount Analysis* (Revision B).

3.2) Assumptions

- 1) The antenna mounting system was properly fabricated, installed and maintained in good condition in accordance with its original design and manufacturer's specifications.
- 2) The configuration of antennas, mounts, and other appurtenances are as specified in Table 1 and the referenced drawings.
- 3) 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.
- 4) The analysis will be required to be revised if the existing conditions in the field differ from those shown in the above-referenced documents or assumed in this analysis. No allowance was made for any damaged, missing, or rusted members.
- 5) Prior structural modifications to the tower mounting system are assumed to be installed as shown per available data.
- 6) Steel grades have been assumed as follows, unless noted otherwise:

Channel, Solid Round, Angle, Plate	ASTM A36 (GR 36)
HSS (Rectangular)	ASTM A500 (GR B-46)
Pipe	ASTM A53 (GR 35)
Connection Bolts	ASTM A325

This analysis may be affected if any assumptions are not valid or have been made in error. Tylon 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 (Platform, All Sectors)

Notes	Component	Critical Member	Centerline (ft)	% Capacity	Pass / Fail
1, 2	Mount Pipe(s)	MP1	70.0	24.5	Pass
	Horizontal(s)	H1		10.1	Pass
	Standoff(s)	M2		47.6	Pass
	Handrail(s)	M19		10.5	Pass
	Mount Connection(s)	--		24.6	Pass

Structure Rating (max from all components) =	47.6%
---	--------------

Notes:

- 1) See additional documentation in "Appendix C - Software Analysis Output" for calculations supporting the % capacity consumed.
- 2) Rating per TIA-222-H, Section 15.5

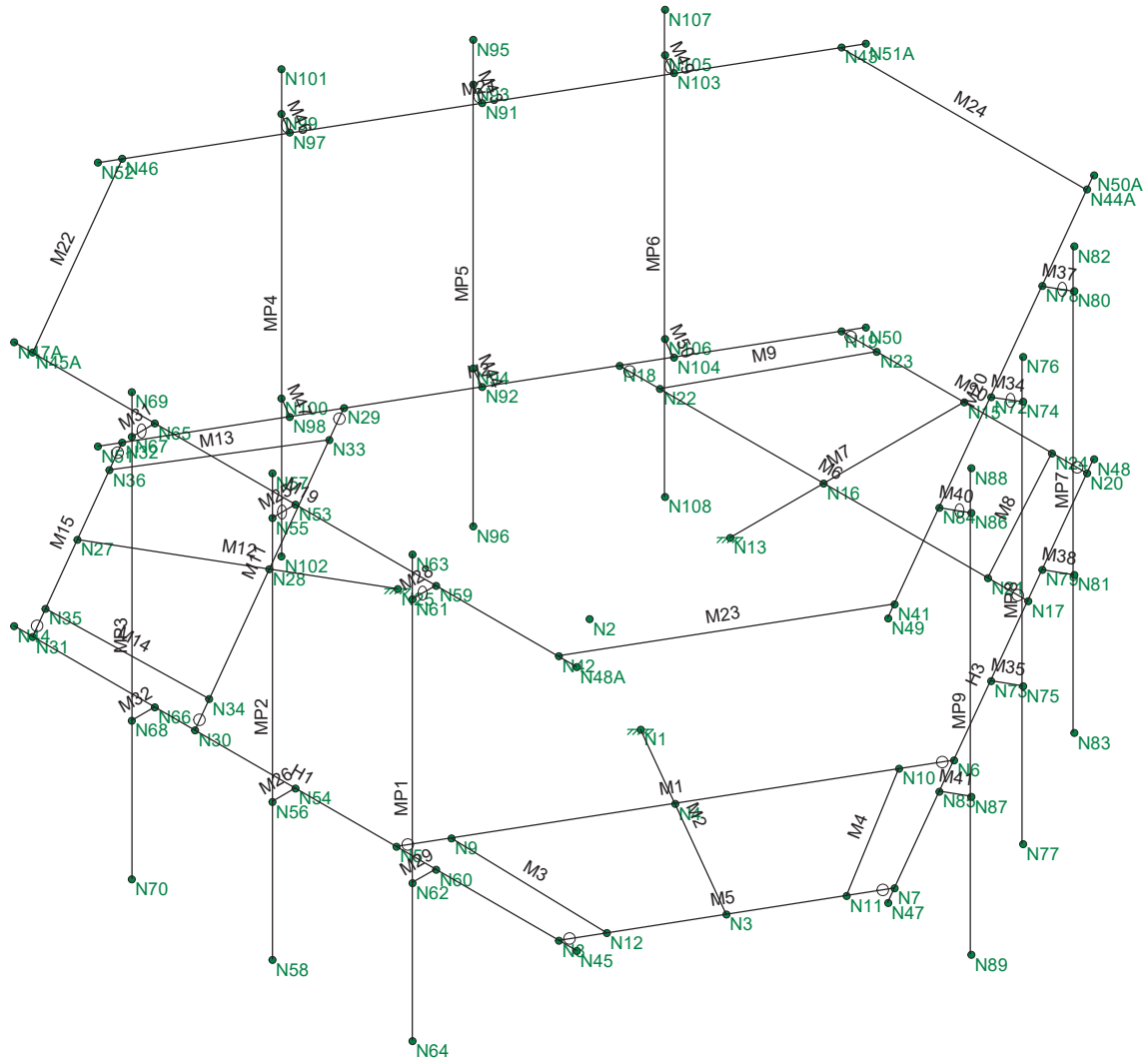
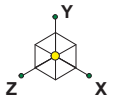
4.1) Recommendations

The mount has sufficient capacity to carry the proposed loading configuration. In order for the results of the analysis to be considered valid, the proposed mount listed below must be installed.

1. Commscope MC-PK8-DSH.

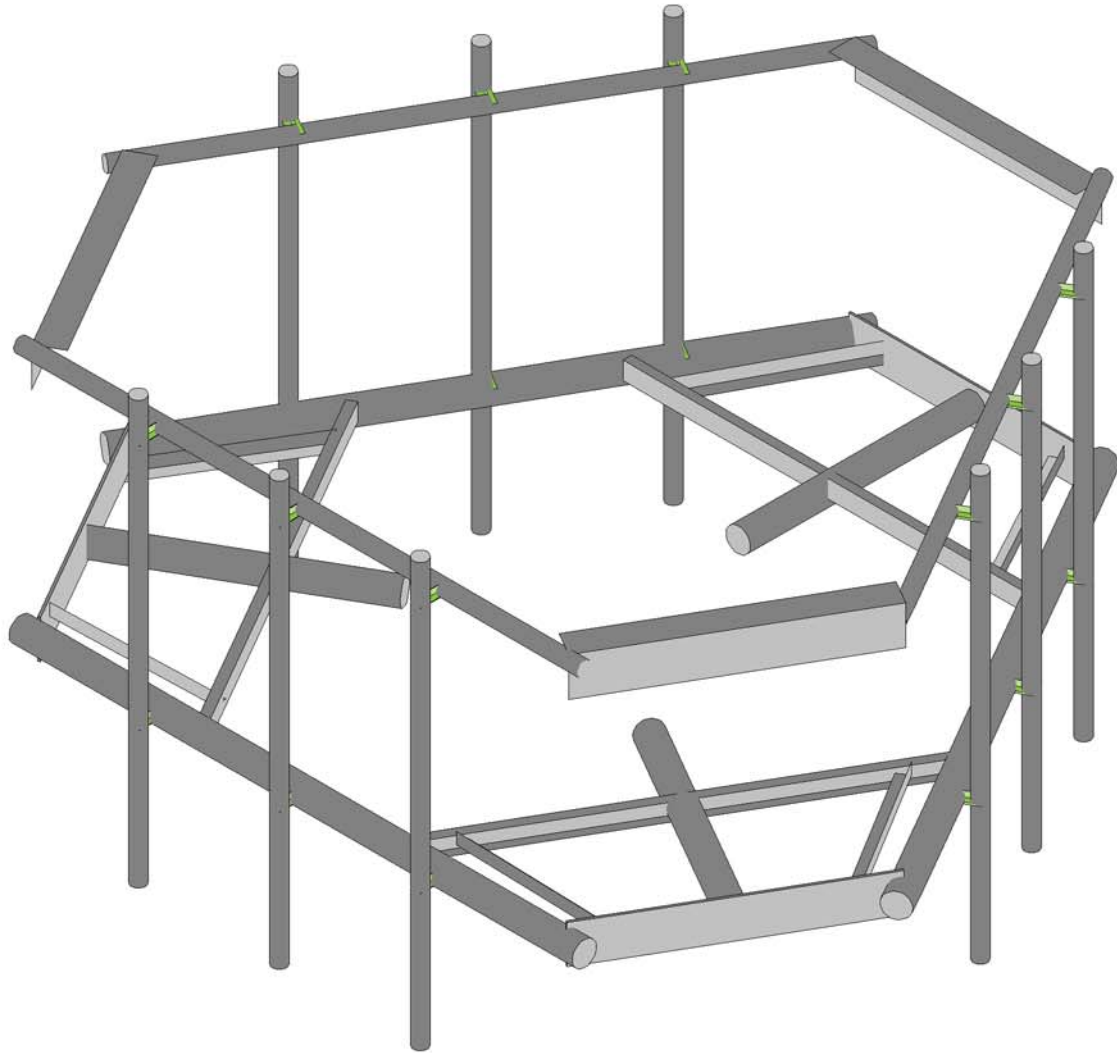
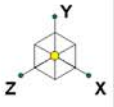
No structural modifications are required at this time, provided that the above-listed changes are implemented.

APPENDIX A
WIRE FRAME AND RENDERED MODELS



MC-PK8-C

SK - 2
Aug 2, 2021 at 11:17 AM
MC-PK8-C_loaded.r3d



MC-PK8-C

SK - 1
Aug 2, 2021 at 11:16 AM
MC-PK8-C_loaded.r3d

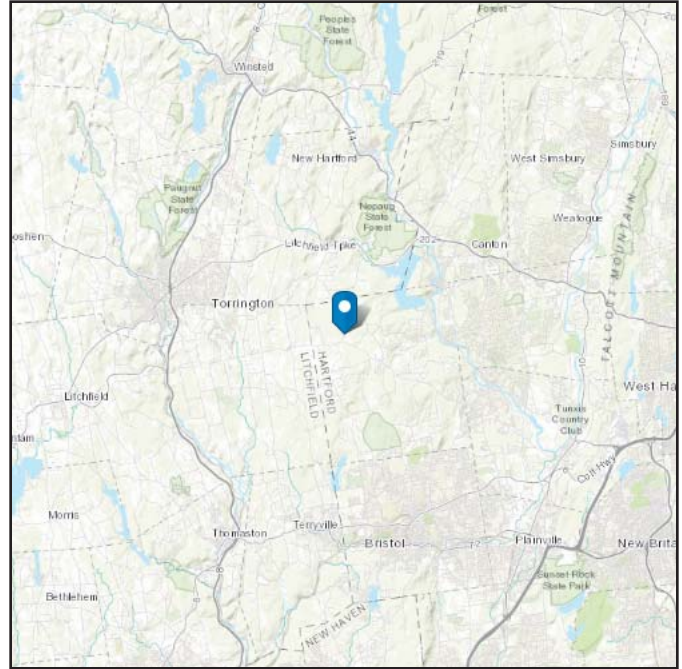
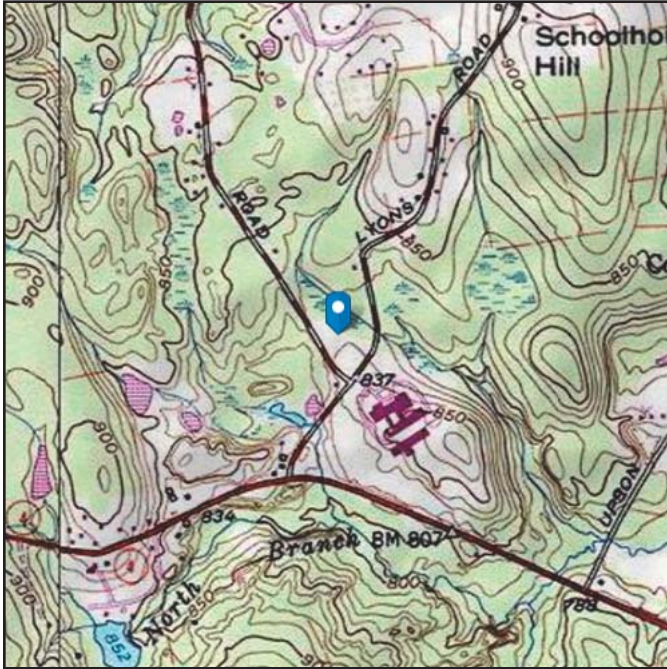
APPENDIX B
SOFTWARE INPUT CALCULATIONS

ASCE 7 Hazards Report

Address:
No Address at This
Location

Standard: ASCE/SEI 7-10
Risk Category: II
Soil Class: D - Stiff Soil

Elevation: 826.42 ft (NAVD 88)
Latitude: 41.782461
Longitude: -72.989633

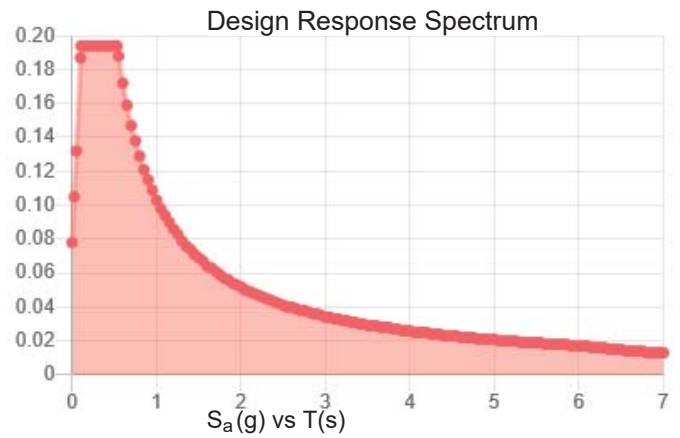
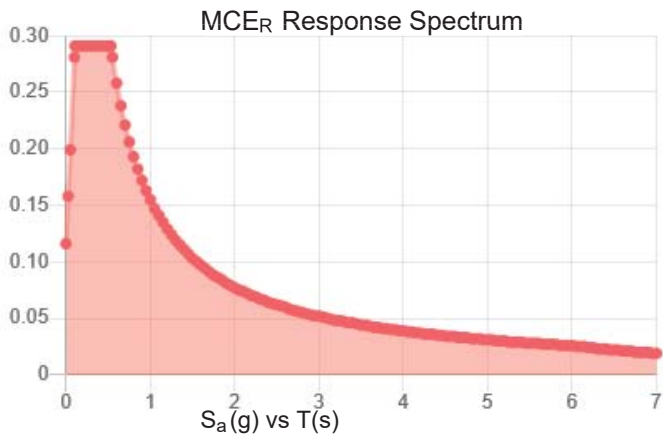


Site Soil Class: D - Stiff Soil

Results:

S_s :	0.182	S_{DS} :	0.194
S_1 :	0.064	S_{D1} :	0.103
F_a :	1.6	T_L :	6
F_v :	2.4	PGA :	0.092
S_{MS} :	0.291	PGA _M :	0.147
S_{M1} :	0.155	F _{PGA} :	1.6
		I_e :	1

Seismic Design Category B



Data Accessed:

Mon Aug 02 2021

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-10, incorporating Supplement 1 and errata of March 31, 2013, and ASCE/SEI 7-10 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-10 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness: 0.75 in.
Concurrent Temperature: 5 F
Gust Speed: 50 mph

Data Source: Standard ASCE/SEI 7-10, Figs. 10-2 through 10-8

Date Accessed: Mon Aug 02 2021

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 50-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.

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TIA LOAD CALCULATOR 2.0

PROJECT DATA	
Job Code:	845993
Carrier Site ID:	BOBDL00071A
Carrier Site Name:	CT-CCI-T-845993

CODES AND STANDARDS	
Building Code:	2015 IBC
Local Building Code:	2018 CTSCB
Design Standard:	TIA-222-H

STRUCTURE DETAILS		
Mount Type:	Platform	--
Mount Elevation:	70.0	ft.
Number of Sectors:	3	--
Structure Type:	Monopole	--
Structure Height:	119.5	ft.

ANALYSIS CRITERIA		
Structure Risk Category:	II	--
Exposure Category:	B	--
Site Class:	D - Default	--
Ground Elevation:	826	ft.

TOPOGRAPHIC DATA		
Topographic Category:	1.00	--
Topographic Feature:	N/A	--
Crest Point Elevation:	0.00	ft.
Base Point Elevation:	0.00	ft.
Crest to Mid-Height (L/2):	0.00	ft.
Distance from Crest (x):	0.00	ft.
Base Topo Factor (K_{zt}):	1.00	--
Mount Topo Factor (K_{zt}):	1.00	--

WIND PARAMETERS		
Design Wind Speed:	120	mph
Wind Escalation Factor (K_s):	1.00	--
Velocity Coefficient (K_z):	0.89	--
Directionality Factor (K_d):	0.95	--
Gust Effect Factor (G_h):	1.00	--
Shielding Factor (K_a):	0.90	--
Velocity Pressure (q_z):	30.33	psf

ICE PARAMETERS		
Design Ice Wind Speed:	50	mph
Design Ice Thickness (t_i):	1.50	in
Importance Factor (I_i):	1.00	--
Ice Velocity Pressure (q_{zi}):	30.33	psf
Mount Ice Thickness (t_{iz}):	1.62	in

WIND STRUCTURE CALCULATIONS		
Flat Member Pressure:	54.60	psf
Round Member Pressure:	32.76	psf
Ice Wind Pressure:	6.87	psf

SEISMIC PARAMETERS		
Importance Factor (I_e):	1.00	--
Short Period Accel. (S_s):	0.18	g
1 Second Accel. (S_1):	0.06	g
Short Period Des. (S_{DS}):	0.19	g
1 Second Des. (S_{D1}):	0.10	g
Short Period Coeff. (F_a):	1.60	--
1 Second Coeff. (F_v):	2.40	--
Response Coefficient (C_s):	0.10	--
Amplification Factor (A_S):	1.20	--

LOAD COMBINATIONS [LRFD]

#	Description
1	1.4DL
2	1.2DL + 1WL 0 AZI
3	1.2DL + 1WL 30 AZI
4	1.2DL + 1WL 45 AZI
5	1.2DL + 1WL 60 AZI
6	1.2DL + 1WL 90 AZI
7	1.2DL + 1WL 120 AZI
8	1.2DL + 1WL 135 AZI
9	1.2DL + 1WL 150 AZI
10	1.2DL + 1WL 180 AZI
11	1.2DL + 1WL 210 AZI
12	1.2DL + 1WL 225 AZI
13	1.2DL + 1WL 240 AZI
14	1.2DL + 1WL 270 AZI
15	1.2DL + 1WL 300 AZI
16	1.2DL + 1WL 315 AZI
17	1.2DL + 1WL 330 AZI
18	0.9DL + 1WL 0 AZI
19	0.9DL + 1WL 30 AZI
20	0.9DL + 1WL 45 AZI
21	0.9DL + 1WL 60 AZI
22	0.9DL + 1WL 90 AZI
23	0.9DL + 1WL 120 AZI
24	0.9DL + 1WL 135 AZI
25	0.9DL + 1WL 150 AZI
26	0.9DL + 1WL 180 AZI
27	0.9DL + 1WL 210 AZI
28	0.9DL + 1WL 225 AZI
29	0.9DL + 1WL 240 AZI
30	0.9DL + 1WL 270 AZI
31	0.9DL + 1WL 300 AZI
32	0.9DL + 1WL 315 AZI
33	0.9DL + 1WL 330 AZI
34	1.2DL + 1DLi + 1WLi 0 AZI
35	1.2DL + 1DLi + 1WLi 30 AZI
36	1.2DL + 1DLi + 1WLi 45 AZI
37	1.2DL + 1DLi + 1WLi 60 AZI
38	1.2DL + 1DLi + 1WLi 90 AZI
39	1.2DL + 1DLi + 1WLi 120 AZI
40	1.2DL + 1DLi + 1WLi 135 AZI
41	1.2DL + 1DLi + 1WLi 150 AZI

#	Description
42	1.2DL + 1DLi + 1WLi 180 AZI
43	1.2DL + 1DLi + 1WLi 210 AZI
44	1.2DL + 1DLi + 1WLi 225 AZI
45	1.2DL + 1DLi + 1WLi 240 AZI
46	1.2DL + 1DLi + 1WLi 270 AZI
47	1.2DL + 1DLi + 1WLi 300 AZI
48	1.2DL + 1DLi + 1WLi 315 AZI
49	1.2DL + 1DLi + 1WLi 330 AZI
50	(1.2+0.2Sds) + 1.0E 0 AZI
51	(1.2+0.2Sds) + 1.0E 30 AZI
52	(1.2+0.2Sds) + 1.0E 45 AZI
53	(1.2+0.2Sds) + 1.0E 60 AZI
54	(1.2+0.2Sds) + 1.0E 90 AZI
55	(1.2+0.2Sds) + 1.0E 120 AZI
56	(1.2+0.2Sds) + 1.0E 135 AZI
57	(1.2+0.2Sds) + 1.0E 150 AZI
58	(1.2+0.2Sds) + 1.0E 180 AZI
59	(1.2+0.2Sds) + 1.0E 210 AZI
60	(1.2+0.2Sds) + 1.0E 225 AZI
61	(1.2+0.2Sds) + 1.0E 240 AZI
62	(1.2+0.2Sds) + 1.0E 270 AZI
63	(1.2+0.2Sds) + 1.0E 300 AZI
64	(1.2+0.2Sds) + 1.0E 315 AZI
65	(1.2+0.2Sds) + 1.0E 330 AZI
66	(0.9-0.2Sds) + 1.0E 0 AZI
67	(0.9-0.2Sds) + 1.0E 30 AZI
68	(0.9-0.2Sds) + 1.0E 45 AZI
69	(0.9-0.2Sds) + 1.0E 60 AZI
70	(0.9-0.2Sds) + 1.0E 90 AZI
71	(0.9-0.2Sds) + 1.0E 120 AZI
72	(0.9-0.2Sds) + 1.0E 135 AZI
73	(0.9-0.2Sds) + 1.0E 150 AZI
74	(0.9-0.2Sds) + 1.0E 180 AZI
75	(0.9-0.2Sds) + 1.0E 210 AZI
76	(0.9-0.2Sds) + 1.0E 225 AZI
77	(0.9-0.2Sds) + 1.0E 240 AZI
78	(0.9-0.2Sds) + 1.0E 270 AZI
79	(0.9-0.2Sds) + 1.0E 300 AZI
80	(0.9-0.2Sds) + 1.0E 315 AZI
81	(0.9-0.2Sds) + 1.0E 330 AZI
82-88	1.2D + 1.5 Lv1

#	Description
89	1.2D + 1.5Lm + 1.0Wm 0 AZI - MP1
90	1.2D + 1.5Lm + 1.0Wm 30 AZI - MP1
91	1.2D + 1.5Lm + 1.0Wm 45 AZI - MP1
92	1.2D + 1.5Lm + 1.0Wm 60 AZI - MP1
93	1.2D + 1.5Lm + 1.0Wm 90 AZI - MP1
94	1.2D + 1.5Lm + 1.0Wm 120 AZI - MP1
95	1.2D + 1.5Lm + 1.0Wm 135 AZI - MP1
96	1.2D + 1.5Lm + 1.0Wm 150 AZI - MP1
97	1.2D + 1.5Lm + 1.0Wm 180 AZI - MP1
98	1.2D + 1.5Lm + 1.0Wm 210 AZI - MP1
99	1.2D + 1.5Lm + 1.0Wm 225 AZI - MP1
100	1.2D + 1.5Lm + 1.0Wm 240 AZI - MP1
101	1.2D + 1.5Lm + 1.0Wm 270 AZI - MP1
102	1.2D + 1.5Lm + 1.0Wm 300 AZI - MP1
103	1.2D + 1.5Lm + 1.0Wm 315 AZI - MP1
104	1.2D + 1.5Lm + 1.0Wm 330 AZI - MP1
105	1.2D + 1.5Lm + 1.0Wm 0 AZI - MP2
106	1.2D + 1.5Lm + 1.0Wm 30 AZI - MP2
107	1.2D + 1.5Lm + 1.0Wm 45 AZI - MP2
108	1.2D + 1.5Lm + 1.0Wm 60 AZI - MP2
109	1.2D + 1.5Lm + 1.0Wm 90 AZI - MP2
110	1.2D + 1.5Lm + 1.0Wm 120 AZI - MP2
111	1.2D + 1.5Lm + 1.0Wm 135 AZI - MP2
112	1.2D + 1.5Lm + 1.0Wm 150 AZI - MP2
113	1.2D + 1.5Lm + 1.0Wm 180 AZI - MP2
114	1.2D + 1.5Lm + 1.0Wm 210 AZI - MP2
115	1.2D + 1.5Lm + 1.0Wm 225 AZI - MP2
116	1.2D + 1.5Lm + 1.0Wm 240 AZI - MP2
117	1.2D + 1.5Lm + 1.0Wm 270 AZI - MP2
118	1.2D + 1.5Lm + 1.0Wm 300 AZI - MP2
119	1.2D + 1.5Lm + 1.0Wm 315 AZI - MP2
120	1.2D + 1.5Lm + 1.0Wm 330 AZI - MP2

#	Description
121	1.2D + 1.5Lm + 1.0Wm 0 AZI - MP3
122	1.2D + 1.5Lm + 1.0Wm 30 AZI - MP3
123	1.2D + 1.5Lm + 1.0Wm 45 AZI - MP3
124	1.2D + 1.5Lm + 1.0Wm 60 AZI - MP3
125	1.2D + 1.5Lm + 1.0Wm 90 AZI - MP3
126	1.2D + 1.5Lm + 1.0Wm 120 AZI - MP3
127	1.2D + 1.5Lm + 1.0Wm 135 AZI - MP3
128	1.2D + 1.5Lm + 1.0Wm 150 AZI - MP3
129	1.2D + 1.5Lm + 1.0Wm 180 AZI - MP3
130	1.2D + 1.5Lm + 1.0Wm 210 AZI - MP3
131	1.2D + 1.5Lm + 1.0Wm 225 AZI - MP3
132	1.2D + 1.5Lm + 1.0Wm 240 AZI - MP3
133	1.2D + 1.5Lm + 1.0Wm 270 AZI - MP3
134	1.2D + 1.5Lm + 1.0Wm 300 AZI - MP3
135	1.2D + 1.5Lm + 1.0Wm 315 AZI - MP3
136	1.2D + 1.5Lm + 1.0Wm 330 AZI - MP3
137	1.2D + 1.5Lm + 1.0Wm 0 AZI - MP4
138	1.2D + 1.5Lm + 1.0Wm 30 AZI - MP4
139	1.2D + 1.5Lm + 1.0Wm 45 AZI - MP4
140	1.2D + 1.5Lm + 1.0Wm 60 AZI - MP4
141	1.2D + 1.5Lm + 1.0Wm 90 AZI - MP4
142	1.2D + 1.5Lm + 1.0Wm 120 AZI - MP4
143	1.2D + 1.5Lm + 1.0Wm 135 AZI - MP4
144	1.2D + 1.5Lm + 1.0Wm 150 AZI - MP4
145	1.2D + 1.5Lm + 1.0Wm 180 AZI - MP4
146	1.2D + 1.5Lm + 1.0Wm 210 AZI - MP4
147	1.2D + 1.5Lm + 1.0Wm 225 AZI - MP4
148	1.2D + 1.5Lm + 1.0Wm 240 AZI - MP4
149	1.2D + 1.5Lm + 1.0Wm 270 AZI - MP4
150	1.2D + 1.5Lm + 1.0Wm 300 AZI - MP4
151	1.2D + 1.5Lm + 1.0Wm 315 AZI - MP4
152	1.2D + 1.5Lm + 1.0Wm 330 AZI - MP4

*This page shows an example of maintenance loads for (4) pipes, the number of mount pipe LCs may vary per site

EQUIPMENT LATERAL WIND FORCE CALCULATIONS [CONT.]

<i>Appurtenance Name</i>	<i>Qty.</i>	<i>--</i>	<i>0° 180°</i>	<i>30° 210°</i>	<i>60° 240°</i>	<i>90° 270°</i>	<i>120° 300°</i>	<i>150° 330°</i>
		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						
		No Ice						
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		No Ice						
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		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						

APPENDIX C
SOFTWARE ANALYSIS OUTPUT

(Global) Model Settings

Display Sections for Member Calcs	5
Max Internal Sections for Member Calcs	97
Include Shear Deformation?	Yes
Increase Nailing Capacity for Wind?	Yes
Include Warping?	Yes
Trans Load Btwn Intersecting Wood Wall?	Yes
Area Load Mesh (in^2)	144
Merge Tolerance (in)	.12
P-Delta Analysis Tolerance	0.50%
Include P-Delta for Walls?	Yes
Automatically Iterate Stiffness for Walls?	Yes
Max Iterations for Wall Stiffness	3
Gravity Acceleration (in/sec^2)	386.4
Wall Mesh Size (in)	24
Eigensolution Convergence Tol. (1.E-)	4
Vertical Axis	Y
Global Member Orientation Plane	XZ
Static Solver	Sparse Accelerated
Dynamic Solver	Accelerated Solver

Hot Rolled Steel Code	AISC 15th(360-16): LRFD
Adjust Stiffness?	Yes(Iterative)
RISAConnection Code	AISC 15th(360-16): LRFD
Cold Formed Steel Code	AISI S100-12: LRFD
Wood Code	AWC NDS-15: ASD
Wood Temperature	< 100F
Concrete Code	ACI 318-14
Masonry Code	ACI 530-13: Strength
Aluminum Code	AA ADM1-10: LRFD - Building
Stainless Steel Code	AISC 14th(360-10): LRFD
Adjust Stiffness?	Yes(Iterative)

Number of Shear Regions	4
Region Spacing Increment (in)	4
Biaxial Column Method	Exact Integration
Parme Beta Factor (PCA)	.65
Concrete Stress Block	Rectangular
Use Cracked Sections?	Yes
Use Cracked Sections Slab?	Yes
Bad Framing Warnings?	No
Unused Force Warnings?	Yes
Min 1 Bar Diam. Spacing?	No
Concrete Rebar Set	REBAR_SET_ASTMA615
Min % Steel for Column	1
Max % Steel for Column	8

(Global) Model Settings, Continued

Seismic Code	ASCE 7-10
Seismic Base Elevation (in)	Not Entered
Add Base Weight?	Yes
Ct X	.02
Ct Z	.02
T X (sec)	Not Entered
T Z (sec)	Not Entered
R X	3
R Z	3
Ct Exp. X	.75
Ct Exp. Z	.75
SD1	1
SDS	1
S1	1
TL (sec)	5
Risk Cat	I or II
Drift Cat	Other
Om Z	1
Om X	1
Cd Z	1
Cd X	1
Rho Z	1
Rho X	1

Material Takeoff

	Material	Size	Pieces	Length[in]	Weight[K]
1	General				
2	RIGID		18	72	0
3	Total General		18	72	0
4					
5	Hot Rolled Steel				
6	A36 Gr.36	C3X5	3	209.1	.087
7	A36 Gr.36	L6 5/8x4 7/16x3/16	3	126	.073
8	A36 Gr.36	L2x2x3	6	163.8	.034
9	A53 Gr.B	6.5"x0.37" Plate	3	126	.086
10	A53 Gr.B	PIPE 2.0	12	936	.271
11	A53 Gr.B	PIPE 3.5	6	408	.289
12	Total HR Steel		33	1968.9	.839

Joint Coordinates and Temperatures

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
1	N1	20.78461	0	-12	0	
2	N2	0	0	-24	0	
3	N3	55.425626	0	8	0	
4	N4	34.641016	0	-4	0	
5	N5	17.212813	0	26.186533	0	
6	N6	52.069219	0	-34.186533	0	
7	N7	65.925626	0	-10.186533	0	
8	N8	44.925626	0	26.186533	0	
9	N9	20.641016	0	20.248711	0	



Company :
 Designer :
 Job Number :
 Model Name : MC-PK8-C

Aug 2, 2021
 12:52 PM
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Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
10	N10	48.641016	0	-28.248711	0	
11	N11	62.925626	0	-4.990381	0	
12	N12	47.925626	0	20.990381	0	
13	N13	-0.	0	-48	0	
14	N15	-0.	0	-88	0	
15	N16	-0.	0	-64	0	
16	N17	34.856406	0	-64	0	
17	N18	-34.856406	0	-64	0	
18	N19	-21	0	-88	0	
19	N20	21	0	-88	0	
20	N21	28	0	-64	0	
21	N22	-28	0	-64	0	
22	N23	-15	0	-88	0	
23	N24	15	0	-88	0	
24	N25	-20.78461	0	-12	0	
25	N27	-55.425626	0	8	0	
26	N28	-34.641016	0	-4	0	
27	N29	-52.069219	0	-34.186533	0	
28	N30	-17.212813	0	26.186533	0	
29	N31	-44.925626	0	26.186533	0	
30	N32	-65.925626	0	-10.186533	0	
31	N33	-48.641016	0	-28.248711	0	
32	N34	-20.641016	0	20.248711	0	
33	N35	-47.925626	0	20.990381	0	
34	N36	-62.925626	0	-4.990381	0	
35	N44	-48.000126	0	26.186533	0	
36	N45	48.000126	0	26.186533	0	
37	N47	67.462876	0	-7.523938	0	
38	N48	19.46275	0	-90.662595	0	
39	N50	-19.46275	0	-90.662595	0	
40	N51	-67.462876	0	-7.523938	0	
41	N41	65.925626	42	-10.186533	0	
42	N42	44.925626	42	26.186533	0	
43	N43	-21	42	-88	0	
44	N44A	21	42	-88	0	
45	N45A	-44.925626	42	26.186533	0	
46	N46	-65.925626	42	-10.186533	0	
47	N47A	-48.000126	42	26.186533	0	
48	N48A	48.000126	42	26.186533	0	
49	N49	67.462876	42	-7.523938	0	
50	N50A	19.46275	42	-90.662595	0	
51	N51A	-19.46275	42	-90.662595	0	
52	N52	-67.462876	42	-7.523938	0	
53	N53	0	42	26.186533	0	
54	N54	0	0	26.186533	0	
55	N55	0	42	30.186533	0	
56	N56	0	0	30.186533	0	
57	N57	0	48.625	30.186533	0	
58	N58	0	-23.375	30.186533	0	
59	N59	24	42	26.186533	0	
60	N60	24	0	26.186533	0	
61	N61	24	42	30.186533	0	



Company :
 Designer :
 Job Number :
 Model Name : MC-PK8-C

Aug 2, 2021
 12:52 PM
 Checked By: _____

Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
62	N62	24	0	30.186533	0	
63	N63	24	48.625	30.186533	0	
64	N64	24	-23.375	30.186533	0	
65	N65	-24	42	26.186533	0	
66	N66	-24	0	26.186533	0	
67	N67	-24	42	30.186533	0	
68	N68	-24	0	30.186533	0	
69	N69	-24	48.625	30.186533	0	
70	N70	-24	-23.375	30.186533	0	
71	N72	43.462813	42	-49.093267	0	
72	N73	43.462813	0	-49.093267	0	
73	N74	46.926915	42	-51.093267	0	
74	N75	46.926915	0	-51.093267	0	
75	N76	46.926915	48.625	-51.093267	0	
76	N77	46.926915	-23.375	-51.093267	0	
77	N78	31.462813	42	-69.877876	0	
78	N79	31.462813	0	-69.877876	0	
79	N80	34.926915	42	-71.877876	0	
80	N81	34.926915	0	-71.877876	0	
81	N82	34.926915	48.625	-71.877876	0	
82	N83	34.926915	-23.375	-71.877876	0	
83	N84	55.462813	42	-28.308657	0	
84	N85	55.462813	0	-28.308657	0	
85	N86	58.926915	42	-30.308657	0	
86	N87	58.926915	0	-30.308657	0	
87	N88	58.926915	48.625	-30.308657	0	
88	N89	58.926915	-23.375	-30.308657	0	
89	N91	-43.462813	42	-49.093267	0	
90	N92	-43.462813	0	-49.093267	0	
91	N93	-46.926915	42	-51.093267	0	
92	N94	-46.926915	0	-51.093267	0	
93	N95	-46.926915	48.625	-51.093267	0	
94	N96	-46.926915	-23.375	-51.093267	0	
95	N97	-55.462813	42	-28.308657	0	
96	N98	-55.462813	0	-28.308657	0	
97	N99	-58.926915	42	-30.308657	0	
98	N100	-58.926915	0	-30.308657	0	
99	N101	-58.926915	48.625	-30.308657	0	
100	N102	-58.926915	-23.375	-30.308657	0	
101	N103	-31.462813	42	-69.877876	0	
102	N104	-31.462813	0	-69.877876	0	
103	N105	-34.926915	42	-71.877876	0	
104	N106	-34.926915	0	-71.877876	0	
105	N107	-34.926915	48.625	-71.877876	0	
106	N108	-34.926915	-23.375	-71.877876	0	

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(de...	Section/Shape	Type	Design List	Material	Design Rul...
1	M1	N5	N6			Standoff Bracing	Beam	Channel	A36 Gr.36	Typical
2	M2	N3	N1			Standoffs	Beam	Pipe	A53 Gr.B	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(de...)	Section/Shape	Type	Design List	Material	Design Rul...
3	M3	N9	N12		270	Grating Bracing	Beam	Single Angle	A36 Gr.36	Typical
4	M4	N10	N11			Grating Bracing	Beam	Single Angle	A36 Gr.36	Typical
5	M5	N8	N7			Plates	Beam	RECT	A53 Gr.B	Typical
6	M6	N17	N18			Standoff Bracing	Beam	Channel	A36 Gr.36	Typical
7	M7	N15	N13			Standoffs	Beam	Pipe	A53 Gr.B	Typical
8	M8	N21	N24		270	Grating Bracing	Beam	Single Angle	A36 Gr.36	Typical
9	M9	N22	N23			Grating Bracing	Beam	Single Angle	A36 Gr.36	Typical
10	M10	N20	N19			Plates	Beam	RECT	A53 Gr.B	Typical
11	M11	N29	N30			Standoff Bracing	Beam	Channel	A36 Gr.36	Typical
12	M12	N27	N25			Standoffs	Beam	Pipe	A53 Gr.B	Typical
13	M13	N33	N36		270	Grating Bracing	Beam	Single Angle	A36 Gr.36	Typical
14	M14	N34	N35			Grating Bracing	Beam	Single Angle	A36 Gr.36	Typical
15	M15	N32	N31			Plates	Beam	RECT	A53 Gr.B	Typical
16	H1	N44	N45			Horizontals	Beam	Pipe	A53 Gr.B	Typical
17	H3	N47	N48			Horizontals	Beam	Pipe	A53 Gr.B	Typical
18	H2	N50	N51			Horizontals	Beam	Pipe	A53 Gr.B	Typical
19	M19	N47A	N48A			Handrails	Beam	Pipe	A53 Gr.B	Typical
20	M20	N49	N50A			Handrails	Beam	Pipe	A53 Gr.B	Typical
21	M21	N51A	N52			Handrails	Beam	Pipe	A53 Gr.B	Typical
22	M22	N46	N45A		180	Handrail Corners	Beam	Single Angle	A36 Gr.36	Typical
23	M23	N42	N41		180	Handrail Corners	Beam	Single Angle	A36 Gr.36	Typical
24	M24	N44A	N43		180	Handrail Corners	Beam	Single Angle	A36 Gr.36	Typical
25	M25	N55	N53			RIGID	None	None	RIGID	Typical
26	M26	N56	N54			RIGID	None	None	RIGID	Typical
27	MP2	N57	N58			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
28	M28	N61	N59			RIGID	None	None	RIGID	Typical
29	M29	N62	N60			RIGID	None	None	RIGID	Typical
30	MP1	N63	N64			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
31	M31	N67	N65			RIGID	None	None	RIGID	Typical
32	M32	N68	N66			RIGID	None	None	RIGID	Typical
33	MP3	N69	N70			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
34	M34	N74	N72			RIGID	None	None	RIGID	Typical
35	M35	N75	N73			RIGID	None	None	RIGID	Typical
36	MP8	N76	N77			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
37	M37	N80	N78			RIGID	None	None	RIGID	Typical
38	M38	N81	N79			RIGID	None	None	RIGID	Typical
39	MP7	N82	N83			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
40	M40	N86	N84			RIGID	None	None	RIGID	Typical
41	M41	N87	N85			RIGID	None	None	RIGID	Typical
42	MP9	N88	N89			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
43	M43	N93	N91			RIGID	None	None	RIGID	Typical
44	M44	N94	N92			RIGID	None	None	RIGID	Typical
45	MP5	N95	N96			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
46	M46	N99	N97			RIGID	None	None	RIGID	Typical
47	M47	N100	N98			RIGID	None	None	RIGID	Typical
48	MP4	N101	N102			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
49	M49	N105	N103			RIGID	None	None	RIGID	Typical
50	M50	N106	N104			RIGID	None	None	RIGID	Typical
51	MP6	N107	N108			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical



Company :
 Designer :
 Job Number :
 Model Name : MC-PK8-C

Aug 2, 2021
 12:52 PM
 Checked By: _____

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M1	BenPIN	BenPIN				Yes				None
2	M2						Yes				None
3	M3						Yes				None
4	M4						Yes				None
5	M5	OOOXXO	OOOXXO				Yes	Default			None
6	M6	BenPIN	BenPIN				Yes				None
7	M7						Yes				None
8	M8						Yes				None
9	M9						Yes				None
10	M10	OOOXXO	OOOXXO				Yes	Default			None
11	M11	BenPIN	BenPIN				Yes				None
12	M12						Yes				None
13	M13						Yes				None
14	M14						Yes				None
15	M15	OOOXXO	OOOXXO				Yes	Default			None
16	H1						Yes	Default			None
17	H3						Yes				None
18	H2						Yes				None
19	M19						Yes				None
20	M20						Yes				None
21	M21						Yes				None
22	M22						Yes				None
23	M23						Yes				None
24	M24						Yes				None
25	M25	OOOXXO					Yes	** NA **			None
26	M26						Yes	** NA **			None
27	MP2						Yes				None
28	M28	OOOXXO					Yes	** NA **			None
29	M29						Yes	** NA **			None
30	MP1						Yes				None
31	M31	OOOXXO					Yes	** NA **			None
32	M32						Yes	** NA **			None
33	MP3						Yes				None
34	M34	OOOXXO					Yes	** NA **			None
35	M35						Yes	** NA **			None
36	MP8						Yes				None
37	M37	OOOXXO					Yes	** NA **			None
38	M38						Yes	** NA **			None
39	MP7						Yes				None
40	M40	OOOXXO					Yes	** NA **			None
41	M41						Yes	** NA **			None
42	MP9						Yes				None
43	M43	OOOXXO					Yes	** NA **			None
44	M44						Yes	** NA **			None
45	MP5						Yes				None
46	M46	OOOXXO					Yes	** NA **			None
47	M47						Yes	** NA **			None
48	MP4						Yes				None
49	M49	OOOXXO					Yes	** NA **			None
50	M50						Yes	** NA **			None
51	MP6						Yes				None

Hot Rolled Steel Design Parameters

	Label	Shape	Length[in]	Lbyy[in]	Lbzz[in]	Lcomp top[in]	Lcomp bot[in]	L-torqu...	Kyy	Kzz	Cb	Function
1	M1	Standoff Br...	69.713			Lbyy						Lateral
2	M2	Standoffs	40			Lbyy						Lateral
3	M3	Grating Bra...	27.295			Lbyy						Lateral
4	M4	Grating Bra...	27.295			Lbyy						Lateral
5	M5	Plates	42			Lbyy						Lateral
6	M6	Standoff Br...	69.713	28	28	28	28	28				Lateral
7	M7	Standoffs	40			Lbyy						Lateral
8	M8	Grating Bra...	27.295			Lbyy						Lateral
9	M9	Grating Bra...	27.295			Lbyy						Lateral
10	M10	Plates	42			Lbyy						Lateral
11	M11	Standoff Br...	69.713			Lbyy						Lateral
12	M12	Standoffs	40			Lbyy						Lateral
13	M13	Grating Bra...	27.295			Lbyy						Lateral
14	M14	Grating Bra...	27.295			Lbyy						Lateral
15	M15	Plates	42			Lbyy						Lateral
16	H1	Horizontals	96			Lbyy						Lateral
17	H3	Horizontals	96			Lbyy						Lateral
18	H2	Horizontals	96			Lbyy						Lateral
19	M19	Handrails	96			Lbyy						Lateral
20	M20	Handrails	96			Lbyy						Lateral
21	M21	Handrails	96			Lbyy						Lateral
22	M22	Handrail Co...	42			Lbyy						Lateral
23	M23	Handrail Co...	42			Lbyy						Lateral
24	M24	Handrail Co...	42			Lbyy						Lateral
25	MP2	Mount Pipes	72			Lbyy						Lateral
26	MP1	Mount Pipes	72			Lbyy						Lateral
27	MP3	Mount Pipes	72			Lbyy						Lateral
28	MP8	Mount Pipes	72			Lbyy						Lateral
29	MP7	Mount Pipes	72			Lbyy						Lateral
30	MP9	Mount Pipes	72			Lbyy						Lateral
31	MP5	Mount Pipes	72			Lbyy						Lateral
32	MP4	Mount Pipes	72			Lbyy						Lateral
33	MP6	Mount Pipes	72			Lbyy						Lateral

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Plates	6.5"x0.37" Plate	Beam	RECT	A53 Gr.B	Typical	2.405	.027	8.468	.106
2	Grating Bracing	L2x2x3	Beam	Single Angle	A36 Gr.36	Typical	.722	.271	.271	.009
3	Standoffs	PIPE 3.5	Beam	Pipe	A53 Gr.B	Typical	2.5	4.52	4.52	9.04
4	Standoff Bracing	C3X5	Beam	Channel	A36 Gr.36	Typical	1.47	.241	1.85	.043
5	Handrails	PIPE 2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
6	Handrail Corners	L6 5/8x4 7/16x3/16	Beam	Single Angle	A36 Gr.36	Typical	2.039	3.593	9.575	.023
7	Horizontals	PIPE 3.5	Beam	Pipe	A53 Gr.B	Typical	2.5	4.52	4.52	9.04
8	Mount Pipes	PIPE 2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E...Density[k/ft...	Yield[psi]	Ry	Fu[psi]	Rt	
1	A992	29000	11154	.3	.65	.49	50000	1.1	65000	1.1
2	A36 Gr.36	29000	11154	.3	.65	.49	36000	1.5	58000	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50000	1.1	65000	1.1
4	A500 Gr.B RND	29000	11154	.3	.65	.527	42000	1.4	58000	1.3
5	A500 Gr.B Rect	29000	11154	.3	.65	.527	46000	1.4	58000	1.3
6	A53 Gr.B	29000	11154	.3	.65	.49	35000	1.6	60000	1.2
7	A1085	29000	11154	.3	.65	.49	50000	1.4	65000	1.3

Member Point Loads (BLC 1 : Self Weight)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Y	-41.25	0
2	MP1	Y	-41.25	72
3	MP1	Y	-63.9	%50
4	MP1	Y	-75	%50
5	MP1	Y	-21.85	%25
6	MP4	Y	-41.25	0
7	MP4	Y	-41.25	72
8	MP4	Y	-63.9	%50
9	MP4	Y	-75	%50
10	MP7	Y	-41.25	0
11	MP7	Y	-41.25	72
12	MP7	Y	-63.9	%50
13	MP7	Y	-75	%50

Member Point Loads (BLC 4 : Wind Load 0 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-170.482	0
2	MP1	Z	-170.482	72
3	MP1	Z	-53.606	%50
4	MP1	Z	-53.606	%50
5	MP1	Z	-54.927	%25
6	MP4	Z	-102.683	0
7	MP4	Z	-102.683	72
8	MP4	Z	-33.491	%50
9	MP4	Z	-36.529	%50
10	MP7	Z	-102.683	0
11	MP7	Z	-102.683	72
12	MP7	Z	-33.491	%50
13	MP7	Z	-36.529	%50
14	MP1	X	0	0
15	MP1	X	0	72
16	MP1	X	0	%50
17	MP1	X	0	%50
18	MP1	X	0	%25
19	MP4	X	0	0
20	MP4	X	0	72
21	MP4	X	0	%50
22	MP4	X	0	%50
23	MP7	X	0	0



Company :
 Designer :
 Job Number :
 Model Name : MC-PK8-C

Aug 2, 2021
 12:52 PM
 Checked By: _____

Member Point Loads (BLC 4 : Wind Load 0 AZI) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
24	MP7	X	0	72
25	MP7	X	0	%50
26	MP7	X	0	%50

Member Point Loads (BLC 5 : Wind Load 30 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-128.07	0
2	MP1	Z	-128.07	72
3	MP1	Z	-40.618	%50
4	MP1	Z	-41.494	%50
5	MP1	Z	-42.581	%25
6	MP4	Z	-128.07	0
7	MP4	Z	-128.07	72
8	MP4	Z	-40.618	%50
9	MP4	Z	-41.494	%50
10	MP7	Z	-69.355	0
11	MP7	Z	-69.355	72
12	MP7	Z	-23.197	%50
13	MP7	Z	-26.705	%50
14	MP1	X	-73.941	0
15	MP1	X	-73.941	72
16	MP1	X	-23.451	%50
17	MP1	X	-23.957	%50
18	MP1	X	-24.584	%25
19	MP4	X	-73.941	0
20	MP4	X	-73.941	72
21	MP4	X	-23.451	%50
22	MP4	X	-23.957	%50
23	MP7	X	-40.042	0
24	MP7	X	-40.042	72
25	MP7	X	-13.393	%50
26	MP7	X	-15.418	%50

Member Point Loads (BLC 6 : Wind Load 45 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-88.588	0
2	MP1	Z	-88.588	72
3	MP1	Z	-28.423	%50
4	MP1	Z	-29.855	%50
5	MP1	Z	-30.695	%25
6	MP4	Z	-116.267	0
7	MP4	Z	-116.267	72
8	MP4	Z	-36.635	%50
9	MP4	Z	-36.827	%50
10	MP7	Z	-60.91	0
11	MP7	Z	-60.91	72
12	MP7	Z	-20.211	%50
13	MP7	Z	-22.883	%50
14	MP1	X	-88.588	0
15	MP1	X	-88.588	72
16	MP1	X	-28.423	%50



Company :
 Designer :
 Job Number :
 Model Name : MC-PK8-C

Aug 2, 2021
 12:52 PM
 Checked By: _____

Member Point Loads (BLC 6 : Wind Load 45 AZI) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
17	MP1	X	-29.855	%50
18	MP1	X	-30.695	%25
19	MP4	X	-116.267	0
20	MP4	X	-116.267	72
21	MP4	X	-36.635	%50
22	MP4	X	-36.827	%50
23	MP7	X	-60.91	0
24	MP7	X	-60.91	72
25	MP7	X	-20.211	%50
26	MP7	X	-22.883	%50

Member Point Loads (BLC 7 : Wind Load 60 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-51.342	0
2	MP1	Z	-51.342	72
3	MP1	Z	-16.746	%50
4	MP1	Z	-18.264	%50
5	MP1	Z	-18.826	%25
6	MP4	Z	-85.241	0
7	MP4	Z	-85.241	72
8	MP4	Z	-26.803	%50
9	MP4	Z	-26.803	%50
10	MP7	Z	-51.342	0
11	MP7	Z	-51.342	72
12	MP7	Z	-16.746	%50
13	MP7	Z	-18.264	%50
14	MP1	X	-88.926	0
15	MP1	X	-88.926	72
16	MP1	X	-29.004	%50
17	MP1	X	-31.635	%50
18	MP1	X	-32.607	%25
19	MP4	X	-147.641	0
20	MP4	X	-147.641	72
21	MP4	X	-46.424	%50
22	MP4	X	-46.424	%50
23	MP7	X	-88.926	0
24	MP7	X	-88.926	72
25	MP7	X	-29.004	%50
26	MP7	X	-31.635	%50

Member Point Loads (BLC 8 : Wind Load 90 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-4.904e-15	0
2	MP1	Z	-4.904e-15	72
3	MP1	Z	-1.64e-15	%50
4	MP1	Z	-1.888e-15	%50
5	MP1	Z	-1.953e-15	%25
6	MP4	Z	-9.055e-15	0
7	MP4	Z	-9.055e-15	72
8	MP4	Z	-2.872e-15	%50
9	MP4	Z	-2.934e-15	%50



Company :
 Designer :
 Job Number :
 Model Name : MC-PK8-C

Aug 2, 2021
 12:52 PM
 Checked By: _____

Member Point Loads (BLC 8 : Wind Load 90 AZI) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
10	MP7	Z	-9.055e-15	0
11	MP7	Z	-9.055e-15	72
12	MP7	Z	-2.872e-15	%50
13	MP7	Z	-2.934e-15	%50
14	MP1	X	-80.084	0
15	MP1	X	-80.084	72
16	MP1	X	-26.786	%50
17	MP1	X	-30.836	%50
18	MP1	X	-31.893	%25
19	MP4	X	-147.882	0
20	MP4	X	-147.882	72
21	MP4	X	-46.901	%50
22	MP4	X	-47.914	%50
23	MP7	X	-147.882	0
24	MP7	X	-147.882	72
25	MP7	X	-46.901	%50
26	MP7	X	-47.914	%50

Member Point Loads (BLC 9 : Wind Load 120 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	51.342	0
2	MP1	Z	51.342	72
3	MP1	Z	16.746	%50
4	MP1	Z	18.264	%50
5	MP1	Z	18.826	%25
6	MP4	Z	51.342	0
7	MP4	Z	51.342	72
8	MP4	Z	16.746	%50
9	MP4	Z	18.264	%50
10	MP7	Z	85.241	0
11	MP7	Z	85.241	72
12	MP7	Z	26.803	%50
13	MP7	Z	26.803	%50
14	MP1	X	-88.926	0
15	MP1	X	-88.926	72
16	MP1	X	-29.004	%50
17	MP1	X	-31.635	%50
18	MP1	X	-32.607	%25
19	MP4	X	-88.926	0
20	MP4	X	-88.926	72
21	MP4	X	-29.004	%50
22	MP4	X	-31.635	%50
23	MP7	X	-147.641	0
24	MP7	X	-147.641	72
25	MP7	X	-46.424	%50
26	MP7	X	-46.424	%50

Member Point Loads (BLC 10 : Wind Load 135 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	88.588	0
2	MP1	Z	88.588	72



Company :
 Designer :
 Job Number :
 Model Name : MC-PK8-C

Aug 2, 2021
 12:52 PM
 Checked By: _____

Member Point Loads (BLC 10 : Wind Load 135 AZI) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
3	MP1	Z	28.423	%50
4	MP1	Z	29.855	%50
5	MP1	Z	30.695	%25
6	MP4	Z	60.91	0
7	MP4	Z	60.91	72
8	MP4	Z	20.211	%50
9	MP4	Z	22.883	%50
10	MP7	Z	116.267	0
11	MP7	Z	116.267	72
12	MP7	Z	36.635	%50
13	MP7	Z	36.827	%50
14	MP1	X	-88.588	0
15	MP1	X	-88.588	72
16	MP1	X	-28.423	%50
17	MP1	X	-29.855	%50
18	MP1	X	-30.695	%25
19	MP4	X	-60.91	0
20	MP4	X	-60.91	72
21	MP4	X	-20.211	%50
22	MP4	X	-22.883	%50
23	MP7	X	-116.267	0
24	MP7	X	-116.267	72
25	MP7	X	-36.635	%50
26	MP7	X	-36.827	%50

Member Point Loads (BLC 11 : Wind Load 150 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	128.07	0
2	MP1	Z	128.07	72
3	MP1	Z	40.618	%50
4	MP1	Z	41.494	%50
5	MP1	Z	42.581	%25
6	MP4	Z	69.355	0
7	MP4	Z	69.355	72
8	MP4	Z	23.197	%50
9	MP4	Z	26.705	%50
10	MP7	Z	128.07	0
11	MP7	Z	128.07	72
12	MP7	Z	40.618	%50
13	MP7	Z	41.494	%50
14	MP1	X	-73.941	0
15	MP1	X	-73.941	72
16	MP1	X	-23.451	%50
17	MP1	X	-23.957	%50
18	MP1	X	-24.584	%25
19	MP4	X	-40.042	0
20	MP4	X	-40.042	72
21	MP4	X	-13.393	%50
22	MP4	X	-15.418	%50
23	MP7	X	-73.941	0
24	MP7	X	-73.941	72



Company :
 Designer :
 Job Number :
 Model Name : MC-PK8-C

Aug 2, 2021
 12:52 PM
 Checked By: _____

Member Point Loads (BLC 11 : Wind Load 150 AZI) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
25	MP7	X	-23.451	%50
26	MP7	X	-23.957	%50

Member Point Loads (BLC 12 : Ice Weight)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Y	-131.537	0
2	MP1	Y	-131.537	72
3	MP1	Y	-64.204	%50
4	MP1	Y	-68.438	%50
5	MP1	Y	-67.439	%25
6	MP4	Y	-131.537	0
7	MP4	Y	-131.537	72
8	MP4	Y	-64.204	%50
9	MP4	Y	-68.438	%50
10	MP7	Y	-131.537	0
11	MP7	Y	-131.537	72
12	MP7	Y	-64.204	%50
13	MP7	Y	-68.438	%50

Member Point Loads (BLC 15 : Ice Wind Load 0 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-32.307	0
2	MP1	Z	-32.307	72
3	MP1	Z	-11.172	%50
4	MP1	Z	-11.172	%50
5	MP1	Z	-11.43	%25
6	MP4	Z	-20.371	0
7	MP4	Z	-20.371	72
8	MP4	Z	-7.367	%50
9	MP4	Z	-7.941	%50
10	MP7	Z	-20.371	0
11	MP7	Z	-20.371	72
12	MP7	Z	-7.367	%50
13	MP7	Z	-7.941	%50
14	MP1	X	0	0
15	MP1	X	0	72
16	MP1	X	0	%50
17	MP1	X	0	%50
18	MP1	X	0	%25
19	MP4	X	0	0
20	MP4	X	0	72
21	MP4	X	0	%50
22	MP4	X	0	%50
23	MP7	X	0	0
24	MP7	X	0	72
25	MP7	X	0	%50
26	MP7	X	0	%50

Member Point Loads (BLC 16 : Ice Wind Load 30 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
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Company :
 Designer :
 Job Number :
 Model Name : MC-PK8-C

Aug 2, 2021
 12:52 PM
 Checked By: _____

Member Point Loads (BLC 16 : Ice Wind Load 30 AZI) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-24.533	0
2	MP1	Z	-24.533	72
3	MP1	Z	-8.577	%50
4	MP1	Z	-8.743	%50
5	MP1	Z	-8.963	%25
6	MP4	Z	-24.533	0
7	MP4	Z	-24.533	72
8	MP4	Z	-8.577	%50
9	MP4	Z	-8.743	%50
10	MP7	Z	-14.197	0
11	MP7	Z	-14.197	72
12	MP7	Z	-5.281	%50
13	MP7	Z	-5.944	%50
14	MP1	X	-14.164	0
15	MP1	X	-14.164	72
16	MP1	X	-4.952	%50
17	MP1	X	-5.048	%50
18	MP1	X	-5.175	%25
19	MP4	X	-14.164	0
20	MP4	X	-14.164	72
21	MP4	X	-4.952	%50
22	MP4	X	-5.048	%50
23	MP7	X	-8.196	0
24	MP7	X	-8.196	72
25	MP7	X	-3.049	%50
26	MP7	X	-3.432	%50

Member Point Loads (BLC 17 : Ice Wind Load 45 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-17.218	0
2	MP1	Z	-17.218	72
3	MP1	Z	-6.106	%50
4	MP1	Z	-6.377	%50
5	MP1	Z	-6.554	%25
6	MP4	Z	-22.09	0
7	MP4	Z	-22.09	72
8	MP4	Z	-7.66	%50
9	MP4	Z	-7.696	%50
10	MP7	Z	-12.345	0
11	MP7	Z	-12.345	72
12	MP7	Z	-4.552	%50
13	MP7	Z	-5.057	%50
14	MP1	X	-17.218	0
15	MP1	X	-17.218	72
16	MP1	X	-6.106	%50
17	MP1	X	-6.377	%50
18	MP1	X	-6.554	%25
19	MP4	X	-22.09	0
20	MP4	X	-22.09	72
21	MP4	X	-7.66	%50
22	MP4	X	-7.696	%50



Company :
 Designer :
 Job Number :
 Model Name : MC-PK8-C

Aug 2, 2021
 12:52 PM
 Checked By: _____

Member Point Loads (BLC 17 : Ice Wind Load 45 AZI) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
23	MP7	X	-12.345	0
24	MP7	X	-12.345	72
25	MP7	X	-4.552	%50
26	MP7	X	-5.057	%50

Member Point Loads (BLC 18 : Ice Wind Load 60 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-10.186	0
2	MP1	Z	-10.186	72
3	MP1	Z	-3.683	%50
4	MP1	Z	-3.97	%50
5	MP1	Z	-4.094	%25
6	MP4	Z	-16.153	0
7	MP4	Z	-16.153	72
8	MP4	Z	-5.586	%50
9	MP4	Z	-5.586	%50
10	MP7	Z	-10.186	0
11	MP7	Z	-10.186	72
12	MP7	Z	-3.683	%50
13	MP7	Z	-3.97	%50
14	MP1	X	-17.642	0
15	MP1	X	-17.642	72
16	MP1	X	-6.38	%50
17	MP1	X	-6.877	%50
18	MP1	X	-7.092	%25
19	MP4	X	-27.978	0
20	MP4	X	-27.978	72
21	MP4	X	-9.676	%50
22	MP4	X	-9.676	%50
23	MP7	X	-17.642	0
24	MP7	X	-17.642	72
25	MP7	X	-6.38	%50
26	MP7	X	-6.877	%50

Member Point Loads (BLC 19 : Ice Wind Load 90 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-1.004e-15	0
2	MP1	Z	-1.004e-15	72
3	MP1	Z	-3.734e-16	%50
4	MP1	Z	-4.203e-16	%50
5	MP1	Z	-4.352e-16	%25
6	MP4	Z	-1.735e-15	0
7	MP4	Z	-1.735e-15	72
8	MP4	Z	-6.064e-16	%50
9	MP4	Z	-6.182e-16	%50
10	MP7	Z	-1.735e-15	0
11	MP7	Z	-1.735e-15	72
12	MP7	Z	-6.064e-16	%50
13	MP7	Z	-6.182e-16	%50
14	MP1	X	-16.393	0
15	MP1	X	-16.393	72



Member Point Loads (BLC 19 : Ice Wind Load 90 AZI) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
16	MP1	X	-6.098	%50
17	MP1	X	-6.864	%50
18	MP1	X	-7.108	%25
19	MP4	X	-28.328	0
20	MP4	X	-28.328	72
21	MP4	X	-9.904	%50
22	MP4	X	-10.095	%50
23	MP7	X	-28.328	0
24	MP7	X	-28.328	72
25	MP7	X	-9.904	%50
26	MP7	X	-10.095	%50

Member Point Loads (BLC 20 : Ice Wind Load 120 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	10.186	0
2	MP1	Z	10.186	72
3	MP1	Z	3.683	%50
4	MP1	Z	3.97	%50
5	MP1	Z	4.094	%25
6	MP4	Z	10.186	0
7	MP4	Z	10.186	72
8	MP4	Z	3.683	%50
9	MP4	Z	3.97	%50
10	MP7	Z	16.153	0
11	MP7	Z	16.153	72
12	MP7	Z	5.586	%50
13	MP7	Z	5.586	%50
14	MP1	X	-17.642	0
15	MP1	X	-17.642	72
16	MP1	X	-6.38	%50
17	MP1	X	-6.877	%50
18	MP1	X	-7.092	%25
19	MP4	X	-17.642	0
20	MP4	X	-17.642	72
21	MP4	X	-6.38	%50
22	MP4	X	-6.877	%50
23	MP7	X	-27.978	0
24	MP7	X	-27.978	72
25	MP7	X	-9.676	%50
26	MP7	X	-9.676	%50

Member Point Loads (BLC 21 : Ice Wind Load 135 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	17.218	0
2	MP1	Z	17.218	72
3	MP1	Z	6.106	%50
4	MP1	Z	6.377	%50
5	MP1	Z	6.554	%25
6	MP4	Z	12.345	0
7	MP4	Z	12.345	72
8	MP4	Z	4.552	%50



Company :
 Designer :
 Job Number :
 Model Name : MC-PK8-C

Aug 2, 2021
 12:52 PM
 Checked By: _____

Member Point Loads (BLC 21 : Ice Wind Load 135 AZI) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
9	MP4	Z	5.057	%50
10	MP7	Z	22.09	0
11	MP7	Z	22.09	72
12	MP7	Z	7.66	%50
13	MP7	Z	7.696	%50
14	MP1	X	-17.218	0
15	MP1	X	-17.218	72
16	MP1	X	-6.106	%50
17	MP1	X	-6.377	%50
18	MP1	X	-6.554	%25
19	MP4	X	-12.345	0
20	MP4	X	-12.345	72
21	MP4	X	-4.552	%50
22	MP4	X	-5.057	%50
23	MP7	X	-22.09	0
24	MP7	X	-22.09	72
25	MP7	X	-7.66	%50
26	MP7	X	-7.696	%50

Member Point Loads (BLC 22 : Ice Wind Load 150 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	24.533	0
2	MP1	Z	24.533	72
3	MP1	Z	8.577	%50
4	MP1	Z	8.743	%50
5	MP1	Z	8.963	%25
6	MP4	Z	14.197	0
7	MP4	Z	14.197	72
8	MP4	Z	5.281	%50
9	MP4	Z	5.944	%50
10	MP7	Z	24.533	0
11	MP7	Z	24.533	72
12	MP7	Z	8.577	%50
13	MP7	Z	8.743	%50
14	MP1	X	-14.164	0
15	MP1	X	-14.164	72
16	MP1	X	-4.952	%50
17	MP1	X	-5.048	%50
18	MP1	X	-5.175	%25
19	MP4	X	-8.196	0
20	MP4	X	-8.196	72
21	MP4	X	-3.049	%50
22	MP4	X	-3.432	%50
23	MP7	X	-14.164	0
24	MP7	X	-14.164	72
25	MP7	X	-4.952	%50
26	MP7	X	-5.048	%50

Member Point Loads (BLC 23 : Seismic Load Z)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-4.805	0

Member Point Loads (BLC 23 : Seismic Load Z) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
2	MP1	Z	-4.805	72
3	MP1	Z	-7.443	%50
4	MP1	Z	-8.736	%50
5	MP1	Z	-2.545	%25
6	MP4	Z	-4.805	0
7	MP4	Z	-4.805	72
8	MP4	Z	-7.443	%50
9	MP4	Z	-8.736	%50
10	MP7	Z	-4.805	0
11	MP7	Z	-4.805	72
12	MP7	Z	-7.443	%50
13	MP7	Z	-8.736	%50

Member Point Loads (BLC 24 : Seismic Load X)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-4.805	0
2	MP1	X	-4.805	72
3	MP1	X	-7.443	%50
4	MP1	X	-8.736	%50
5	MP1	X	-2.545	%25
6	MP4	X	-4.805	0
7	MP4	X	-4.805	72
8	MP4	X	-7.443	%50
9	MP4	X	-8.736	%50
10	MP7	X	-4.805	0
11	MP7	X	-4.805	72
12	MP7	X	-7.443	%50
13	MP7	X	-8.736	%50

Member Point Loads (BLC 25 : Live Load 1 (Lv))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	H1	Y	-250	0

Member Point Loads (BLC 26 : Live Load 2 (Lv))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	H1	Y	-250	%50

Member Point Loads (BLC 27 : Live Load 3 (Lv))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	H1	Y	-250	%100

Member Point Loads (BLC 28 : Live Load 4 (Lv))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	H3	Y	-250	0

Member Point Loads (BLC 29 : Live Load 5 (Lv))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	H3	Y	-250	%50



Company :
 Designer :
 Job Number :
 Model Name : MC-PK8-C

Aug 2, 2021
 12:52 PM
 Checked By: _____

Member Point Loads (BLC 30 : Live Load 6 (Lv))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	H3	Y	-250	%100

Member Point Loads (BLC 31 : Live Load 7 (Lv))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	H2	Y	-250	0

Member Point Loads (BLC 32 : Live Load 8 (Lv))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	H2	Y	-250	%50

Member Point Loads (BLC 33 : Live Load 9 (Lv))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	H2	Y	-250	%100

Member Point Loads (BLC 34 : Maintenance Load 1 (Lm))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	Y	-500	%50

Member Point Loads (BLC 35 : Maintenance Load 2 (Lm))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Y	-500	%50

Member Point Loads (BLC 36 : Maintenance Load 3 (Lm))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP3	Y	-500	%50

Member Point Loads (BLC 37 : Maintenance Load 4 (Lm))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP8	Y	-500	%50

Member Point Loads (BLC 38 : Maintenance Load 5 (Lm))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP7	Y	-500	%50

Member Point Loads (BLC 39 : Maintenance Load 6 (Lm))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP9	Y	-500	%50

Member Point Loads (BLC 40 : Maintenance Load 7 (Lm))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP5	Y	-500	%50

Member Point Loads (BLC 41 : Maintenance Load 8 (Lm))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	Y	-500	%50



Company :
 Designer :
 Job Number :
 Model Name : MC-PK8-C

Aug 2, 2021
 12:52 PM
 Checked By: _____

Member Point Loads (BLC 42 : Maintenance Load 9 (Lm))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP6	Y	-500	%50

Member Distributed Loads (BLC 2 : Structure Wind Z)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	M1	SZ	-54.603	-54.603	0	%100
2	M2	SZ	-32.762	-32.762	0	%100
3	M3	SZ	-54.603	-54.603	0	%100
4	M4	SZ	-54.603	-54.603	0	%100
5	M5	SZ	-54.603	-54.603	0	%100
6	M6	SZ	-54.603	-54.603	0	%100
7	M7	SZ	-32.762	-32.762	0	%100
8	M8	SZ	-54.603	-54.603	0	%100
9	M9	SZ	-54.603	-54.603	0	%100
10	M10	SZ	-54.603	-54.603	0	%100
11	M11	SZ	-54.603	-54.603	0	%100
12	M12	SZ	-32.762	-32.762	0	%100
13	M13	SZ	-54.603	-54.603	0	%100
14	M14	SZ	-54.603	-54.603	0	%100
15	M15	SZ	-54.603	-54.603	0	%100
16	H1	SZ	-32.762	-32.762	0	%100
17	H3	SZ	-32.762	-32.762	0	%100
18	H2	SZ	-32.762	-32.762	0	%100
19	M19	SZ	-32.762	-32.762	0	%100
20	M20	SZ	-32.762	-32.762	0	%100
21	M21	SZ	-32.762	-32.762	0	%100
22	M22	SZ	-54.603	-54.603	0	%100
23	M23	SZ	-54.603	-54.603	0	%100
24	M24	SZ	-54.603	-54.603	0	%100
25	M25	SZ	-54.603	-54.603	0	%100
26	M26	SZ	-54.603	-54.603	0	%100
27	MP2	SZ	-32.762	-32.762	0	%100
28	M28	SZ	-54.603	-54.603	0	%100
29	M29	SZ	-54.603	-54.603	0	%100
30	MP1	SZ	-32.762	-32.762	0	%100
31	M31	SZ	-54.603	-54.603	0	%100
32	M32	SZ	-54.603	-54.603	0	%100
33	MP3	SZ	-32.762	-32.762	0	%100
34	M34	SZ	-54.603	-54.603	0	%100
35	M35	SZ	-54.603	-54.603	0	%100
36	MP8	SZ	-32.762	-32.762	0	%100
37	M37	SZ	-54.603	-54.603	0	%100
38	M38	SZ	-54.603	-54.603	0	%100
39	MP7	SZ	-32.762	-32.762	0	%100
40	M40	SZ	-54.603	-54.603	0	%100
41	M41	SZ	-54.603	-54.603	0	%100
42	MP9	SZ	-32.762	-32.762	0	%100
43	M43	SZ	-54.603	-54.603	0	%100
44	M44	SZ	-54.603	-54.603	0	%100
45	MP5	SZ	-32.762	-32.762	0	%100
46	M46	SZ	-54.603	-54.603	0	%100



Company :
 Designer :
 Job Number :
 Model Name : MC-PK8-C

Aug 2, 2021
 12:52 PM
 Checked By: _____

Member Distributed Loads (BLC 2 : Structure Wind Z) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
47	M47	SZ	-54.603	-54.603	0	% 100
48	MP4	SZ	-32.762	-32.762	0	% 100
49	M49	SZ	-54.603	-54.603	0	% 100
50	M50	SZ	-54.603	-54.603	0	% 100
51	MP6	SZ	-32.762	-32.762	0	% 100

Member Distributed Loads (BLC 3 : Structure Wind X)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M1	SX	-54.603	-54.603	0	% 100
2	M2	SX	-32.762	-32.762	0	% 100
3	M3	SX	-54.603	-54.603	0	% 100
4	M4	SX	-54.603	-54.603	0	% 100
5	M5	SX	-54.603	-54.603	0	% 100
6	M6	SX	-54.603	-54.603	0	% 100
7	M7	SX	-32.762	-32.762	0	% 100
8	M8	SX	-54.603	-54.603	0	% 100
9	M9	SX	-54.603	-54.603	0	% 100
10	M10	SX	-54.603	-54.603	0	% 100
11	M11	SX	-54.603	-54.603	0	% 100
12	M12	SX	-32.762	-32.762	0	% 100
13	M13	SX	-54.603	-54.603	0	% 100
14	M14	SX	-54.603	-54.603	0	% 100
15	M15	SX	-54.603	-54.603	0	% 100
16	H1	SX	-32.762	-32.762	0	% 100
17	H3	SX	-32.762	-32.762	0	% 100
18	H2	SX	-32.762	-32.762	0	% 100
19	M19	SX	-32.762	-32.762	0	% 100
20	M20	SX	-32.762	-32.762	0	% 100
21	M21	SX	-32.762	-32.762	0	% 100
22	M22	SX	-54.603	-54.603	0	% 100
23	M23	SX	-54.603	-54.603	0	% 100
24	M24	SX	-54.603	-54.603	0	% 100
25	M25	SX	-54.603	-54.603	0	% 100
26	M26	SX	-54.603	-54.603	0	% 100
27	MP2	SX	-32.762	-32.762	0	% 100
28	M28	SX	-54.603	-54.603	0	% 100
29	M29	SX	-54.603	-54.603	0	% 100
30	MP1	SX	-32.762	-32.762	0	% 100
31	M31	SX	-54.603	-54.603	0	% 100
32	M32	SX	-54.603	-54.603	0	% 100
33	MP3	SX	-32.762	-32.762	0	% 100
34	M34	SX	-54.603	-54.603	0	% 100
35	M35	SX	-54.603	-54.603	0	% 100
36	MP8	SX	-32.762	-32.762	0	% 100
37	M37	SX	-54.603	-54.603	0	% 100
38	M38	SX	-54.603	-54.603	0	% 100
39	MP7	SX	-32.762	-32.762	0	% 100
40	M40	SX	-54.603	-54.603	0	% 100
41	M41	SX	-54.603	-54.603	0	% 100
42	MP9	SX	-32.762	-32.762	0	% 100
43	M43	SX	-54.603	-54.603	0	% 100



Company :
 Designer :
 Job Number :
 Model Name : MC-PK8-C

Aug 2, 2021
 12:52 PM
 Checked By: _____

Member Distributed Loads (BLC 3 : Structure Wind X) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
44	M44	SX	-54.603	-54.603	0	% 100
45	MP5	SX	-32.762	-32.762	0	% 100
46	M46	SX	-54.603	-54.603	0	% 100
47	M47	SX	-54.603	-54.603	0	% 100
48	MP4	SX	-32.762	-32.762	0	% 100
49	M49	SX	-54.603	-54.603	0	% 100
50	M50	SX	-54.603	-54.603	0	% 100
51	MP6	SX	-32.762	-32.762	0	% 100

Member Distributed Loads (BLC 12 : Ice Weight)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M1	Y	-9.822	-9.822	0	% 100
2	M2	Y	-11.098	-11.098	0	% 100
3	M3	Y	-8.783	-8.783	0	% 100
4	M4	Y	-8.783	-8.783	0	% 100
5	M5	Y	-16.058	-16.058	0	% 100
6	M6	Y	-9.822	-9.822	0	% 100
7	M7	Y	-11.098	-11.098	0	% 100
8	M8	Y	-8.783	-8.783	0	% 100
9	M9	Y	-8.783	-8.783	0	% 100
10	M10	Y	-16.058	-16.058	0	% 100
11	M11	Y	-9.822	-9.822	0	% 100
12	M12	Y	-11.098	-11.098	0	% 100
13	M13	Y	-8.783	-8.783	0	% 100
14	M14	Y	-8.783	-8.783	0	% 100
15	M15	Y	-16.058	-16.058	0	% 100
16	H1	Y	-11.098	-11.098	0	% 100
17	H3	Y	-11.098	-11.098	0	% 100
18	H2	Y	-11.098	-11.098	0	% 100
19	M19	Y	-7.887	-7.887	0	% 100
20	M20	Y	-7.887	-7.887	0	% 100
21	M21	Y	-7.887	-7.887	0	% 100
22	M22	Y	-18.949	-18.949	0	% 100
23	M23	Y	-18.949	-18.949	0	% 100
24	M24	Y	-18.949	-18.949	0	% 100
25	M25	Y	0	0	0	% 100
26	M26	Y	0	0	0	% 100
27	MP2	Y	-7.887	-7.887	0	% 100
28	M28	Y	0	0	0	% 100
29	M29	Y	0	0	0	% 100
30	MP1	Y	-7.887	-7.887	0	% 100
31	M31	Y	0	0	0	% 100
32	M32	Y	0	0	0	% 100
33	MP3	Y	-7.887	-7.887	0	% 100
34	M34	Y	0	0	0	% 100
35	M35	Y	0	0	0	% 100
36	MP8	Y	-7.887	-7.887	0	% 100
37	M37	Y	0	0	0	% 100
38	M38	Y	0	0	0	% 100
39	MP7	Y	-7.887	-7.887	0	% 100
40	M40	Y	0	0	0	% 100



Company :
 Designer :
 Job Number :
 Model Name : MC-PK8-C

Aug 2, 2021
 12:52 PM
 Checked By: _____

Member Distributed Loads (BLC 12 : Ice Weight) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
41	M41	Y	0	0	0	% 100
42	MP9	Y	-7.887	-7.887	0	% 100
43	M43	Y	0	0	0	% 100
44	M44	Y	0	0	0	% 100
45	MP5	Y	-7.887	-7.887	0	% 100
46	M46	Y	0	0	0	% 100
47	M47	Y	0	0	0	% 100
48	MP4	Y	-7.887	-7.887	0	% 100
49	M49	Y	0	0	0	% 100
50	M50	Y	0	0	0	% 100
51	MP6	Y	-7.887	-7.887	0	% 100

Member Distributed Loads (BLC 13 : Ice Structure Wind Z)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M1	SZ	-13.496	-13.496	0	% 100
2	M2	SZ	-12.426	-12.426	0	% 100
3	M3	SZ	-14.727	-14.727	0	% 100
4	M4	SZ	-14.727	-14.727	0	% 100
5	M5	SZ	-10.284	-10.284	0	% 100
6	M6	SZ	-13.496	-13.496	0	% 100
7	M7	SZ	-12.426	-12.426	0	% 100
8	M8	SZ	-14.727	-14.727	0	% 100
9	M9	SZ	-14.727	-14.727	0	% 100
10	M10	SZ	-10.284	-10.284	0	% 100
11	M11	SZ	-13.496	-13.496	0	% 100
12	M12	SZ	-12.426	-12.426	0	% 100
13	M13	SZ	-14.727	-14.727	0	% 100
14	M14	SZ	-14.727	-14.727	0	% 100
15	M15	SZ	-10.284	-10.284	0	% 100
16	H1	SZ	-12.426	-12.426	0	% 100
17	H3	SZ	-12.426	-12.426	0	% 100
18	H2	SZ	-12.426	-12.426	0	% 100
19	M19	SZ	-16.227	-16.227	0	% 100
20	M20	SZ	-16.227	-16.227	0	% 100
21	M21	SZ	-16.227	-16.227	0	% 100
22	M22	SZ	-9.658	-9.658	0	% 100
23	M23	SZ	-9.658	-9.658	0	% 100
24	M24	SZ	-9.658	-9.658	0	% 100
25	M25	SZ	0	0	0	% 100
26	M26	SZ	0	0	0	% 100
27	MP2	SZ	-16.227	-16.227	0	% 100
28	M28	SZ	0	0	0	% 100
29	M29	SZ	0	0	0	% 100
30	MP1	SZ	-16.227	-16.227	0	% 100
31	M31	SZ	0	0	0	% 100
32	M32	SZ	0	0	0	% 100
33	MP3	SZ	-16.227	-16.227	0	% 100
34	M34	SZ	0	0	0	% 100
35	M35	SZ	0	0	0	% 100
36	MP8	SZ	-16.227	-16.227	0	% 100
37	M37	SZ	0	0	0	% 100



Company :
 Designer :
 Job Number :
 Model Name : MC-PK8-C

Aug 2, 2021
 12:52 PM
 Checked By: _____

Member Distributed Loads (BLC 13 : Ice Structure Wind Z) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
38	M38	SZ	0	0	0	% 100
39	MP7	SZ	-16.227	-16.227	0	% 100
40	M40	SZ	0	0	0	% 100
41	M41	SZ	0	0	0	% 100
42	MP9	SZ	-16.227	-16.227	0	% 100
43	M43	SZ	0	0	0	% 100
44	M44	SZ	0	0	0	% 100
45	MP5	SZ	-16.227	-16.227	0	% 100
46	M46	SZ	0	0	0	% 100
47	M47	SZ	0	0	0	% 100
48	MP4	SZ	-16.227	-16.227	0	% 100
49	M49	SZ	0	0	0	% 100
50	M50	SZ	0	0	0	% 100
51	MP6	SZ	-16.227	-16.227	0	% 100

Member Distributed Loads (BLC 14 : Ice Structure Wind X)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M1	SX	-13.496	-13.496	0	% 100
2	M2	SX	-12.426	-12.426	0	% 100
3	M3	SX	-14.727	-14.727	0	% 100
4	M4	SX	-14.727	-14.727	0	% 100
5	M5	SX	-10.284	-10.284	0	% 100
6	M6	SX	-13.496	-13.496	0	% 100
7	M7	SX	-12.426	-12.426	0	% 100
8	M8	SX	-14.727	-14.727	0	% 100
9	M9	SX	-14.727	-14.727	0	% 100
10	M10	SX	-10.284	-10.284	0	% 100
11	M11	SX	-13.496	-13.496	0	% 100
12	M12	SX	-12.426	-12.426	0	% 100
13	M13	SX	-14.727	-14.727	0	% 100
14	M14	SX	-14.727	-14.727	0	% 100
15	M15	SX	-10.284	-10.284	0	% 100
16	H1	SX	-12.426	-12.426	0	% 100
17	H3	SX	-12.426	-12.426	0	% 100
18	H2	SX	-12.426	-12.426	0	% 100
19	M19	SX	-16.227	-16.227	0	% 100
20	M20	SX	-16.227	-16.227	0	% 100
21	M21	SX	-16.227	-16.227	0	% 100
22	M22	SX	-9.658	-9.658	0	% 100
23	M23	SX	-9.658	-9.658	0	% 100
24	M24	SX	-9.658	-9.658	0	% 100
25	M25	SX	0	0	0	% 100
26	M26	SX	0	0	0	% 100
27	MP2	SX	-16.227	-16.227	0	% 100
28	M28	SX	0	0	0	% 100
29	M29	SX	0	0	0	% 100
30	MP1	SX	-16.227	-16.227	0	% 100
31	M31	SX	0	0	0	% 100
32	M32	SX	0	0	0	% 100
33	MP3	SX	-16.227	-16.227	0	% 100
34	M34	SX	0	0	0	% 100

Member Distributed Loads (BLC 14 : Ice Structure Wind X) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
35	M35	SX	0	0	0	%100
36	MP8	SX	-16.227	-16.227	0	%100
37	M37	SX	0	0	0	%100
38	M38	SX	0	0	0	%100
39	MP7	SX	-16.227	-16.227	0	%100
40	M40	SX	0	0	0	%100
41	M41	SX	0	0	0	%100
42	MP9	SX	-16.227	-16.227	0	%100
43	M43	SX	0	0	0	%100
44	M44	SX	0	0	0	%100
45	MP5	SX	-16.227	-16.227	0	%100
46	M46	SX	0	0	0	%100
47	M47	SX	0	0	0	%100
48	MP4	SX	-16.227	-16.227	0	%100
49	M49	SX	0	0	0	%100
50	M50	SX	0	0	0	%100
51	MP6	SX	-16.227	-16.227	0	%100

Member Distributed Loads (BLC 43 : BLC 1 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M12	Y	-18.202	-18.202	0	23.596
2	M13	Y	-9.173	-9.173	3.828	27.295
3	M14	Y	-9.173	-9.173	3.828	27.295
4	M7	Y	-18.202	-18.202	0	23.596
5	M8	Y	-9.173	-9.173	3.828	27.295
6	M9	Y	-9.173	-9.173	3.828	27.295
7	M2	Y	-18.202	-18.202	0	23.596
8	M3	Y	-9.173	-9.173	3.828	27.295
9	M4	Y	-9.173	-9.173	3.828	27.295

Member Distributed Loads (BLC 44 : BLC 12 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M12	Y	-27.485	-27.485	0	23.596
2	M13	Y	-13.851	-13.851	3.828	27.295
3	M14	Y	-13.851	-13.851	3.828	27.295
4	M7	Y	-27.485	-27.485	0	23.596
5	M8	Y	-13.851	-13.851	3.828	27.295
6	M9	Y	-13.851	-13.851	3.828	27.295
7	M2	Y	-27.485	-27.485	0	23.596
8	M3	Y	-13.851	-13.851	3.828	27.295
9	M4	Y	-13.851	-13.851	3.828	27.295

Member Area Loads (BLC 1 : Self Weight)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	N35	N36	N33	N34	Y	Two Way	-10
2	N23	N24	N21	N22	Y	Two Way	-10
3	N11	N12	N9	N10	Y	Two Way	-10



Company :
 Designer :
 Job Number :
 Model Name : MC-PK8-C

Aug 2, 2021
 12:52 PM
 Checked By: _____

Member Area Loads (BLC 12 : Ice Weight)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	N35	N36	N33	N34	Y	Two Way	-15.1
2	N23	N24	N21	N22	Y	Two Way	-15.1
3	N11	N12	N9	N10	Y	Two Way	-15.1

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me... Surface(...
1	Self Weight	DL		-1			13	3
2	Structure Wind Z	WLZ						51
3	Structure Wind X	WLX						51
4	Wind Load 0 AZI	WLZ					26	
5	Wind Load 30 AZI	None					26	
6	Wind Load 45 AZI	None					26	
7	Wind Load 60 AZI	None					26	
8	Wind Load 90 AZI	WLX					26	
9	Wind Load 120 AZI	None					26	
10	Wind Load 135 AZI	None					26	
11	Wind Load 150 AZI	None					26	
12	Ice Weight	OL1					13	51 3
13	Ice Structure Wind Z	OL2						51
14	Ice Structure Wind X	OL3						51
15	Ice Wind Load 0 AZI	OL2					26	
16	Ice Wind Load 30 AZI	None					26	
17	Ice Wind Load 45 AZI	None					26	
18	Ice Wind Load 60 AZI	None					26	
19	Ice Wind Load 90 AZI	OL3					26	
20	Ice Wind Load 120 AZI	None					26	
21	Ice Wind Load 135 AZI	None					26	
22	Ice Wind Load 150 AZI	None					26	
23	Seismic Load Z	ELZ			-.116		13	
24	Seismic Load X	ELX	-.116				13	
25	Live Load 1 (Lv)	None					1	
26	Live Load 2 (Lv)	None					1	
27	Live Load 3 (Lv)	None					1	
28	Live Load 4 (Lv)	None					1	
29	Live Load 5 (Lv)	None					1	
30	Live Load 6 (Lv)	None					1	
31	Live Load 7 (Lv)	None					1	
32	Live Load 8 (Lv)	None					1	
33	Live Load 9 (Lv)	None					1	
34	Maintenance Load 1 (Lm)	None					1	
35	Maintenance Load 2 (Lm)	None					1	
36	Maintenance Load 3 (Lm)	None					1	
37	Maintenance Load 4 (Lm)	None					1	
38	Maintenance Load 5 (Lm)	None					1	
39	Maintenance Load 6 (Lm)	None					1	
40	Maintenance Load 7 (Lm)	None					1	
41	Maintenance Load 8 (Lm)	None					1	
42	Maintenance Load 9 (Lm)	None					1	
43	BLC 1 Transient Area Loads	None						9
44	BLC 12 Transient Area Loa...	None						9



Company :
 Designer :
 Job Number :
 Model Name : MC-PK8-C

Aug 2, 2021
 12:52 PM
 Checked By: _____

Load Combinations

	Description	Solve	PDelta	SRSS	BLC	Fa...B...	Fa...B...	Fact...B...	Fa...B...	Fa...B...	Fa...B...	Fa...B...	Fa...B...	Fa...B...	Fa...B...	Fa...B...	Fa...B...
1	1.4DL	Yes	Y		DL	1.4											
2	1.2DL + 1WL 0 AZI	Yes	Y		DL	1.2	2	1	3		4	1					
3	1.2DL + 1WL 30 AZI	Yes	Y		DL	1.2	2	.866	3	.5	5	1					
4	1.2DL + 1WL 45 AZI	Yes	Y		DL	1.2	2	.707	3	.707	6	1					
5	1.2DL + 1WL 60 AZI	Yes	Y		DL	1.2	2	.5	3	.866	7	1					
6	1.2DL + 1WL 90 AZI	Yes	Y		DL	1.2	2		3	1	8	1					
7	1.2DL + 1WL 120 AZI	Yes	Y		DL	1.2	2	-.5	3	.866	9	1					
8	1.2DL + 1WL 135 AZI	Yes	Y		DL	1.2	2	-.7	3	.707	10	1					
9	1.2DL + 1WL 150 AZI	Yes	Y		DL	1.2	2	-.8	3	.5	11	1					
10	1.2DL + 1WL 180 AZI	Yes	Y		DL	1.2	2	-.1	3		4	-1					
11	1.2DL + 1WL 210 AZI	Yes	Y		DL	1.2	2	-.8	3	-.5	5	-1					
12	1.2DL + 1WL 225 AZI	Yes	Y		DL	1.2	2	-.7	3	-.707	6	-1					
13	1.2DL + 1WL 240 AZI	Yes	Y		DL	1.2	2	-.5	3	-.866	7	-1					
14	1.2DL + 1WL 270 AZI	Yes	Y		DL	1.2	2		3	-.1	8	-1					
15	1.2DL + 1WL 300 AZI	Yes	Y		DL	1.2	2	.5	3	-.866	9	-1					
16	1.2DL + 1WL 315 AZI	Yes	Y		DL	1.2	2	.707	3	-.707	10	-1					
17	1.2DL + 1WL 330 AZI	Yes	Y		DL	1.2	2	.866	3	-.5	11	-1					
18	0.9DL + 1WL 0 AZI	Yes	Y		DL	.9	2	1	3		4	1					
19	0.9DL + 1WL 30 AZI	Yes	Y		DL	.9	2	.866	3	.5	5	1					
20	0.9DL + 1WL 45 AZI	Yes	Y		DL	.9	2	.707	3	.707	6	1					
21	0.9DL + 1WL 60 AZI	Yes	Y		DL	.9	2	.5	3	.866	7	1					
22	0.9DL + 1WL 90 AZI	Yes	Y		DL	.9	2		3	1	8	1					
23	0.9DL + 1WL 120 AZI	Yes	Y		DL	.9	2	-.5	3	.866	9	1					
24	0.9DL + 1WL 135 AZI	Yes	Y		DL	.9	2	-.7	3	.707	10	1					
25	0.9DL + 1WL 150 AZI	Yes	Y		DL	.9	2	-.8	3	.5	11	1					
26	0.9DL + 1WL 180 AZI	Yes	Y		DL	.9	2	-.1	3		4	-1					
27	0.9DL + 1WL 210 AZI	Yes	Y		DL	.9	2	-.8	3	-.5	5	-1					
28	0.9DL + 1WL 225 AZI	Yes	Y		DL	.9	2	-.7	3	-.707	6	-1					
29	0.9DL + 1WL 240 AZI	Yes	Y		DL	.9	2	-.5	3	-.866	7	-1					
30	0.9DL + 1WL 270 AZI	Yes	Y		DL	.9	2		3	-.1	8	-1					
31	0.9DL + 1WL 300 AZI	Yes	Y		DL	.9	2	.5	3	-.866	9	-1					
32	0.9DL + 1WL 315 AZI	Yes	Y		DL	.9	2	.707	3	-.707	10	-1					
33	0.9DL + 1WL 330 AZI	Yes	Y		DL	.9	2	.866	3	-.5	11	-1					
34	1.2DL + 1DLi + 1WL 0 ...	Yes	Y		DL	1.2	0...	1	13	1	14	15	1				
35	1.2DL + 1DLi + 1WL 30 ...	Yes	Y		DL	1.2	0...	1	13	.866	14	.5	16	1			
36	1.2DL + 1DLi + 1WL 45 ...	Yes	Y		DL	1.2	0...	1	13	.707	14	.707	17	1			
37	1.2DL + 1DLi + 1WL 60 ...	Yes	Y		DL	1.2	0...	1	13	.5	14	.866	18	1			
38	1.2DL + 1DLi + 1WL 90 ...	Yes	Y		DL	1.2	0...	1	13		14	1	19	1			
39	1.2DL + 1DLi + 1WL 12...	Yes	Y		DL	1.2	0...	1	13	-.5	14	.866	20	1			
40	1.2DL + 1DLi + 1WL 13...	Yes	Y		DL	1.2	0...	1	13	-.707	14	.707	21	1			
41	1.2DL + 1DLi + 1WL 15...	Yes	Y		DL	1.2	0...	1	13	-.866	14	.5	22	1			
42	1.2DL + 1DLi + 1WL 18...	Yes	Y		DL	1.2	0...	1	13	-.1	14		15	-1			
43	1.2DL + 1DLi + 1WL 21...	Yes	Y		DL	1.2	0...	1	13	-.866	14	-.5	16	-1			
44	1.2DL + 1DLi + 1WL 22...	Yes	Y		DL	1.2	0...	1	13	-.707	14	-.7	17	-1			
45	1.2DL + 1DLi + 1WL 24...	Yes	Y		DL	1.2	0...	1	13	-.5	14	-.8	18	-1			
46	1.2DL + 1DLi + 1WL 27...	Yes	Y		DL	1.2	0...	1	13		14	-.1	19	-1			
47	1.2DL + 1DLi + 1WL 30...	Yes	Y		DL	1.2	0...	1	13	.5	14	-.8	20	-1			
48	1.2DL + 1DLi + 1WL 31...	Yes	Y		DL	1.2	0...	1	13	.707	14	-.7	21	-1			
49	1.2DL + 1DLi + 1WL 33...	Yes	Y		DL	1.2	0...	1	13	.866	14	-.5	22	-1			
50	(1.2+0.2Sds)DL + 1E 0 ...	Yes	Y		DL	1...	23	1	24								
51	(1.2+0.2Sds)DL + 1E 30...	Yes	Y		DL	1...	23	.866	24	.5							



Company :
 Designer :
 Job Number :
 Model Name : MC-PK8-C

Aug 2, 2021
 12:52 PM
 Checked By: _____

Load Combinations (Continued)

Description	Solve	PDelta	SRSS	BLC	Fa...	B...	Fa...	B...	Fact...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...
52 (1.2+0.2Sds)DL + 1E 45...	Yes	Y		DL	1...	23.707	24.707													
53 (1.2+0.2Sds)DL + 1E 60...	Yes	Y		DL	1...	23.5	24.866													
54 (1.2+0.2Sds)DL + 1E 90...	Yes	Y		DL	1...	23	24	1												
55 (1.2+0.2Sds)DL + 1E 12...	Yes	Y		DL	1...	23-.5	24.866													
56 (1.2+0.2Sds)DL + 1E 13...	Yes	Y		DL	1...	23-.7	24.707													
57 (1.2+0.2Sds)DL + 1E 15...	Yes	Y		DL	1...	23-.8	24	.5												
58 (1.2+0.2Sds)DL + 1E 18...	Yes	Y		DL	1...	23	-1	24												
59 (1.2+0.2Sds)DL + 1E 21...	Yes	Y		DL	1...	23-.8	24	-.5												
60 (1.2+0.2Sds)DL + 1E 22...	Yes	Y		DL	1...	23-.7	24	-.707												
61 (1.2+0.2Sds)DL + 1E 24...	Yes	Y		DL	1...	23-.5	24	-.866												
62 (1.2+0.2Sds)DL + 1E 27...	Yes	Y		DL	1...	23	24	-1												
63 (1.2+0.2Sds)DL + 1E 30...	Yes	Y		DL	1...	23.5	24	-.866												
64 (1.2+0.2Sds)DL + 1E 31...	Yes	Y		DL	1...	23.707	24	-.707												
65 (1.2+0.2Sds)DL + 1E 33...	Yes	Y		DL	1...	23.866	24	-.5												
66 (0.9-0.2Sds)DL + 1E 0 A...	Yes	Y		DL	.861	23	1	24												
67 (0.9-0.2Sds)DL + 1E 30 ...	Yes	Y		DL	.861	23.866	24	.5												
68 (0.9-0.2Sds)DL + 1E 45 ...	Yes	Y		DL	.861	23.707	24.707													
69 (0.9-0.2Sds)DL + 1E 60 ...	Yes	Y		DL	.861	23.5	24.866													
70 (0.9-0.2Sds)DL + 1E 90 ...	Yes	Y		DL	.861	23	24	1												
71 (0.9-0.2Sds)DL + 1E 12...	Yes	Y		DL	.861	23-.5	24.866													
72 (0.9-0.2Sds)DL + 1E 13...	Yes	Y		DL	.861	23-.7	24.707													
73 (0.9-0.2Sds)DL + 1E 15...	Yes	Y		DL	.861	23-.8	24	.5												
74 (0.9-0.2Sds)DL + 1E 18...	Yes	Y		DL	.861	23	-1	24												
75 (0.9-0.2Sds)DL + 1E 21...	Yes	Y		DL	.861	23-.8	24	-.5												
76 (0.9-0.2Sds)DL + 1E 22...	Yes	Y		DL	.861	23-.7	24	-.707												
77 (0.9-0.2Sds)DL + 1E 24...	Yes	Y		DL	.861	23-.5	24	-.866												
78 (0.9-0.2Sds)DL + 1E 27...	Yes	Y		DL	.861	23	24	-1												
79 (0.9-0.2Sds)DL + 1E 30...	Yes	Y		DL	.861	23.5	24	-.866												
80 (0.9-0.2Sds)DL + 1E 31...	Yes	Y		DL	.861	23.707	24	-.707												
81 (0.9-0.2Sds)DL + 1E 33...	Yes	Y		DL	.861	23.866	24	-.5												
82 1.2DL + 1Lv1	Yes	Y		DL	1.2	25	1.5													
83 1.2DL + 1Lv2	Yes	Y		DL	1.2	26	1.5													
84 1.2DL + 1Lv3	Yes	Y		DL	1.2	27	1.5													
85 1.2DL + 1Lv4	Yes	Y		DL	1.2	28	1.5													
86 1.2DL + 1Lv5	Yes	Y		DL	1.2	29	1.5													
87 1.2DL + 1Lv6	Yes	Y		DL	1.2	30	1.5													
88 1.2DL + 1Lv7	Yes	Y		DL	1.2	31	1.5													
89 1.2DL + 1Lv8	Yes	Y		DL	1.2	32	1.5													
90 1.2DL + 1Lv9	Yes	Y		DL	1.2	33	1.5													
91 1.2DL + 1.5Lm + 1Wm 0...	Yes	Y		DL	1.2	34	1.5	2	.063	3	4	.063								
92 1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.2	34	1.5	2	.054	3	.031	5	.063							
93 1.2DL + 1.5Lm + 1Wm 4...	Yes	Y		DL	1.2	34	1.5	2	.044	3	.044	6	.063							
94 1.2DL + 1.5Lm + 1Wm 6...	Yes	Y		DL	1.2	34	1.5	2	.031	3	.054	7	.063							
95 1.2DL + 1.5Lm + 1Wm 9...	Yes	Y		DL	1.2	34	1.5	2		3	.063	8	.063							
96 1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.2	34	1.5	2	-.031	3	.054	9	.063							
97 1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.2	34	1.5	2	-.044	3	.044	10	.063							
98 1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.2	34	1.5	2	-.054	3	.031	11	.063							
99 1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.2	34	1.5	2	-.063	3	4	-.0...								
100 1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.2	34	1.5	2	-.054	3	-.0...	5	-.0...							
101 1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.2	34	1.5	2	-.044	3	-.0...	6	-.0...							
102 1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.2	34	1.5	2	-.031	3	-.0...	7	-.0...							
103 1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.2	34	1.5	2		3	-.0...	8	-.0...							



Company :
 Designer :
 Job Number :
 Model Name : MC-PK8-C

Aug 2, 2021
 12:52 PM
 Checked By: _____

Load Combinations (Continued)

	Description	Solve	PDelta	SRSS	BLC	Fa...	B...	Fa...	B...	Fact...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	
104	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.234	1.5 2	.031	3	-0...	9	-0...										
105	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.234	1.5 2	.044	3	-0...	10	-0...										
106	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.234	1.5 2	.054	3	-0...	11	-0...										
107	1.2DL + 1.5Lm + 1Wm 0...	Yes	Y		DL	1.235	1.5 2	.063	3		4	.063										
108	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.235	1.5 2	.054	3	.031	5	.063										
109	1.2DL + 1.5Lm + 1Wm 4...	Yes	Y		DL	1.235	1.5 2	.044	3	.044	6	.063										
110	1.2DL + 1.5Lm + 1Wm 6...	Yes	Y		DL	1.235	1.5 2	.031	3	.054	7	.063										
111	1.2DL + 1.5Lm + 1Wm 9...	Yes	Y		DL	1.235	1.5 2		3	.063	8	.063										
112	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.235	1.5 2	-.031	3	.054	9	.063										
113	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.235	1.5 2	-.044	3	.044	10	.063										
114	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.235	1.5 2	-.054	3	.031	11	.063										
115	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.235	1.5 2	-.063	3		4	-0...										
116	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.235	1.5 2	-.054	3	-0...	5	-0...										
117	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.235	1.5 2	-.044	3	-0...	6	-0...										
118	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.235	1.5 2	-.031	3	-0...	7	-0...										
119	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.235	1.5 2		3	-0...	8	-0...										
120	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.235	1.5 2	.031	3	-0...	9	-0...										
121	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.235	1.5 2	.044	3	-0...	10	-0...										
122	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.235	1.5 2	.054	3	-0...	11	-0...										
123	1.2DL + 1.5Lm + 1Wm 0...	Yes	Y		DL	1.236	1.5 2	.063	3		4	.063										
124	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.236	1.5 2	.054	3	.031	5	.063										
125	1.2DL + 1.5Lm + 1Wm 4...	Yes	Y		DL	1.236	1.5 2	.044	3	.044	6	.063										
126	1.2DL + 1.5Lm + 1Wm 6...	Yes	Y		DL	1.236	1.5 2	.031	3	.054	7	.063										
127	1.2DL + 1.5Lm + 1Wm 9...	Yes	Y		DL	1.236	1.5 2		3	.063	8	.063										
128	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.236	1.5 2	-.031	3	.054	9	.063										
129	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.236	1.5 2	-.044	3	.044	10	.063										
130	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.236	1.5 2	-.054	3	.031	11	.063										
131	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.236	1.5 2	-.063	3		4	-0...										
132	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.236	1.5 2	-.054	3	-0...	5	-0...										
133	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.236	1.5 2	-.044	3	-0...	6	-0...										
134	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.236	1.5 2	-.031	3	-0...	7	-0...										
135	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.236	1.5 2		3	-0...	8	-0...										
136	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.236	1.5 2	.031	3	-0...	9	-0...										
137	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.236	1.5 2	.044	3	-0...	10	-0...										
138	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.236	1.5 2	.054	3	-0...	11	-0...										
139	1.2DL + 1.5Lm + 1Wm 0...	Yes	Y		DL	1.237	1.5 2	.063	3		4	.063										
140	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.237	1.5 2	.054	3	.031	5	.063										
141	1.2DL + 1.5Lm + 1Wm 4...	Yes	Y		DL	1.237	1.5 2	.044	3	.044	6	.063										
142	1.2DL + 1.5Lm + 1Wm 6...	Yes	Y		DL	1.237	1.5 2	.031	3	.054	7	.063										
143	1.2DL + 1.5Lm + 1Wm 9...	Yes	Y		DL	1.237	1.5 2		3	.063	8	.063										
144	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.237	1.5 2	-.031	3	.054	9	.063										
145	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.237	1.5 2	-.044	3	.044	10	.063										
146	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.237	1.5 2	-.054	3	.031	11	.063										
147	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.237	1.5 2	-.063	3		4	-0...										
148	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.237	1.5 2	-.054	3	-0...	5	-0...										
149	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.237	1.5 2	-.044	3	-0...	6	-0...										
150	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.237	1.5 2	-.031	3	-0...	7	-0...										
151	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.237	1.5 2		3	-0...	8	-0...										
152	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.237	1.5 2	.031	3	-0...	9	-0...										
153	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.237	1.5 2	.044	3	-0...	10	-0...										
154	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.237	1.5 2	.054	3	-0...	11	-0...										
155	1.2DL + 1.5Lm + 1Wm 0...	Yes	Y		DL	1.238	1.5 2	.063	3		4	.063										



Company :
 Designer :
 Job Number :
 Model Name : MC-PK8-C

Aug 2, 2021
 12:52 PM
 Checked By: _____

Load Combinations (Continued)

	Description	Solve	PDelta	SRSS	BLC	Fa...	B...	Fa...	B...	Fact...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...
156	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.238	1.5 2	.054	3	.031	5	.063							
157	1.2DL + 1.5Lm + 1Wm 4...	Yes	Y		DL	1.238	1.5 2	.044	3	.044	6	.063							
158	1.2DL + 1.5Lm + 1Wm 6...	Yes	Y		DL	1.238	1.5 2	.031	3	.054	7	.063							
159	1.2DL + 1.5Lm + 1Wm 9...	Yes	Y		DL	1.238	1.5 2		3	.063	8	.063							
160	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.238	1.5 2	-.031	3	.054	9	.063							
161	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.238	1.5 2	-.044	3	.044	10	.063							
162	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.238	1.5 2	-.054	3	.031	11	.063							
163	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.238	1.5 2	-.063	3		4	-.0...							
164	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.238	1.5 2	-.054	3	-.0...	5	-.0...							
165	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.238	1.5 2	-.044	3	-.0...	6	-.0...							
166	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.238	1.5 2	-.031	3	-.0...	7	-.0...							
167	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.238	1.5 2		3	-.0...	8	-.0...							
168	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.238	1.5 2	.031	3	-.0...	9	-.0...							
169	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.238	1.5 2	.044	3	-.0...	10	-.0...							
170	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.238	1.5 2	.054	3	-.0...	11	-.0...							
171	1.2DL + 1.5Lm + 1Wm 0...	Yes	Y		DL	1.239	1.5 2	.063	3		4	.063							
172	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.239	1.5 2	.054	3	.031	5	.063							
173	1.2DL + 1.5Lm + 1Wm 4...	Yes	Y		DL	1.239	1.5 2	.044	3	.044	6	.063							
174	1.2DL + 1.5Lm + 1Wm 6...	Yes	Y		DL	1.239	1.5 2	.031	3	.054	7	.063							
175	1.2DL + 1.5Lm + 1Wm 9...	Yes	Y		DL	1.239	1.5 2		3	.063	8	.063							
176	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.239	1.5 2	-.031	3	.054	9	.063							
177	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.239	1.5 2	-.044	3	.044	10	.063							
178	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.239	1.5 2	-.054	3	.031	11	.063							
179	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.239	1.5 2	-.063	3		4	-.0...							
180	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.239	1.5 2	-.054	3	-.0...	5	-.0...							
181	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.239	1.5 2	-.044	3	-.0...	6	-.0...							
182	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.239	1.5 2	-.031	3	-.0...	7	-.0...							
183	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.239	1.5 2		3	-.0...	8	-.0...							
184	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.239	1.5 2	.031	3	-.0...	9	-.0...							
185	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.239	1.5 2	.044	3	-.0...	10	-.0...							
186	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.239	1.5 2	.054	3	-.0...	11	-.0...							
187	1.2DL + 1.5Lm + 1Wm 0...	Yes	Y		DL	1.240	1.5 2	.063	3		4	.063							
188	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.240	1.5 2	.054	3	.031	5	.063							
189	1.2DL + 1.5Lm + 1Wm 4...	Yes	Y		DL	1.240	1.5 2	.044	3	.044	6	.063							
190	1.2DL + 1.5Lm + 1Wm 6...	Yes	Y		DL	1.240	1.5 2	.031	3	.054	7	.063							
191	1.2DL + 1.5Lm + 1Wm 9...	Yes	Y		DL	1.240	1.5 2		3	.063	8	.063							
192	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.240	1.5 2	-.031	3	.054	9	.063							
193	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.240	1.5 2	-.044	3	.044	10	.063							
194	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.240	1.5 2	-.054	3	.031	11	.063							
195	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.240	1.5 2	-.063	3		4	-.0...							
196	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.240	1.5 2	-.054	3	-.0...	5	-.0...							
197	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.240	1.5 2	-.044	3	-.0...	6	-.0...							
198	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.240	1.5 2	-.031	3	-.0...	7	-.0...							
199	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.240	1.5 2		3	-.0...	8	-.0...							
200	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.240	1.5 2	.031	3	-.0...	9	-.0...							
201	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.240	1.5 2	.044	3	-.0...	10	-.0...							
202	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.240	1.5 2	.054	3	-.0...	11	-.0...							
203	1.2DL + 1.5Lm + 1Wm 0...	Yes	Y		DL	1.241	1.5 2	.063	3		4	.063							
204	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.241	1.5 2	.054	3	.031	5	.063							
205	1.2DL + 1.5Lm + 1Wm 4...	Yes	Y		DL	1.241	1.5 2	.044	3	.044	6	.063							
206	1.2DL + 1.5Lm + 1Wm 6...	Yes	Y		DL	1.241	1.5 2	.031	3	.054	7	.063							
207	1.2DL + 1.5Lm + 1Wm 9...	Yes	Y		DL	1.241	1.5 2		3	.063	8	.063							

Load Combinations (Continued)

	Description	Solve	PDelta	SRSS	BLC	Fa...B...	Fa...B...	Fact...B...	Fa...B...	Fa...B...	Fa...B...	Fa...B...	Fa...B...	Fa...B...	Fa...B...	Fa...B...	Fa...B...
208	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.241	1.5 2	-0.31	3	.054	9	.063					
209	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.241	1.5 2	-0.44	3	.044	10	.063					
210	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.241	1.5 2	-0.54	3	.031	11	.063					
211	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.241	1.5 2	-0.63	3		4	-0...					
212	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.241	1.5 2	-0.54	3	-0...	5	-0...					
213	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.241	1.5 2	-0.44	3	-0...	6	-0...					
214	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.241	1.5 2	-0.31	3	-0...	7	-0...					
215	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.241	1.5 2		3	-0...	8	-0...					
216	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.241	1.5 2	.031	3	-0...	9	-0...					
217	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.241	1.5 2	.044	3	-0...	10	-0...					
218	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.241	1.5 2	.054	3	-0...	11	-0...					
219	1.2DL + 1.5Lm + 1Wm 0...	Yes	Y		DL	1.242	1.5 2	.063	3		4	.063					
220	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.242	1.5 2	.054	3	.031	5	.063					
221	1.2DL + 1.5Lm + 1Wm 4...	Yes	Y		DL	1.242	1.5 2	.044	3	.044	6	.063					
222	1.2DL + 1.5Lm + 1Wm 6...	Yes	Y		DL	1.242	1.5 2	.031	3	.054	7	.063					
223	1.2DL + 1.5Lm + 1Wm 9...	Yes	Y		DL	1.242	1.5 2		3	.063	8	.063					
224	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.242	1.5 2	-0.31	3	.054	9	.063					
225	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.242	1.5 2	-0.44	3	.044	10	.063					
226	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.242	1.5 2	-0.54	3	.031	11	.063					
227	1.2DL + 1.5Lm + 1Wm 1...	Yes	Y		DL	1.242	1.5 2	-0.63	3		4	-0...					
228	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.242	1.5 2	-0.54	3	-0...	5	-0...					
229	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.242	1.5 2	-0.44	3	-0...	6	-0...					
230	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.242	1.5 2	-0.31	3	-0...	7	-0...					
231	1.2DL + 1.5Lm + 1Wm 2...	Yes	Y		DL	1.242	1.5 2		3	-0...	8	-0...					
232	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.242	1.5 2	.031	3	-0...	9	-0...					
233	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.242	1.5 2	.044	3	-0...	10	-0...					
234	1.2DL + 1.5Lm + 1Wm 3...	Yes	Y		DL	1.242	1.5 2	.054	3	-0...	11	-0...					

Envelope Joint Reactions

Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC	
1	N25	max	791.641	20	1850.784	39	1182.628	3	-32.402	33	1405.634	19	-270.473	31
2		min	-795.104	12	234.384	31	-1177.66	27	-2004.701	130	-1409.008	11	-3381.965	39
3	N1	max	687.534	8	1899.409	45	1246.242	17	-55.163	19	1430.604	25	3309.109	45
4		min	-681.186	32	243.947	21	-1244.764	25	-2245.403	43	-1435.311	17	283.179	21
5	N13	max	1233.505	22	1808.13	34	299.571	18	3756.144	34	1212.99	30	743.723	167
6		min	-1236.189	14	209.258	26	-306.14	10	248.464	26	-1216.084	6	-608.6	223
7	Totals:	max	2267.146	22	5319.025	42	2405.013	18						
8		min	-2267.146	30	1498.878	66	-2405.015	10						

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

Member	Shape	Code Che...	Lo...	LC	She...Lo...	...	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [lb...]	phi*M.....	Eqn
1	M2	PIPE_3.5	.500	40	45	.165	40	115	75262.68	78750	7953.75	7953..... H1-1b
2	M12	PIPE_3.5	.483	40	39	.159	40	205	75262.68	78750	7953.75	7953..... H1-1b
3	M7	PIPE_3.5	.473	40	34	.160	40	168	75262.68	78750	7953.75	7953..... H1-1b
4	M1	C3X5	.381	34...	44	.135	63...y	40	11202.931	47628	981.263	4104 ... H1-1b
5	M11	C3X5	.371	34...	40	.134	63...y	34	11202.931	47628	981.263	4104 ... H1-1b
6	M6	C3X5	.364	34...	34	.129	63...y	45	37027.882	47628	981.263	4020... 1 H1-1b
7	MP1	PIPE_2.0	.257	48	17	.037	48	17	20866.733	32130	1871.625	1871..... H1-1b
8	MP4	PIPE_2.0	.243	48	11	.038	48	11	20866.733	32130	1871.625	1871..... H1-1b



Company :
 Designer :
 Job Number :
 Model Name : MC-PK8-C

Aug 2, 2021
 12:52 PM
 Checked By: _____

Envelope AISC 15th(360-16): LRFD Steel Code Checks (Continued)

Member	Shape	Code	Che...Lo...	LC	She...Lo... ..	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [lb...phi*M.....	Eqn
9	MP7	PIPE_2.0	.228 48	10	.029 48	6	20866.733	32130	1871.625 1871.....	H1-1b
10	MP3	PIPE_2.0	.225 48	5	.024 48	10	20866.733	32130	1871.625 1871.....	H1-1b
11	MP9	PIPE_2.0	.224 48	10	.022 48	3	20866.733	32130	1871.625 1871.....	H1-1b
12	MP2	PIPE_2.0	.222 48	5	.034 48	9	20866.733	32130	1871.625 1871.....	H1-1b
13	MP8	PIPE_2.0	.222 48	10	.027 48	10	20866.733	32130	1871.625 1871.....	H1-1b
14	MP5	PIPE_2.0	.204 48	16	.032 48	3	20866.733	32130	1871.625 1871.....	H1-1b
15	MP6	PIPE_2.0	.198 48	15	.022 48	9	20866.733	32130	1871.625 1871.....	H1-1b
16	M10	6.5"x0.3...	.186 21	2	.091 21 y	48	3513.807	75757.5	583.963 6442.....	H1-1b
17	M15	6.5"x0.3...	.185 21	7	.093 21 y	37	3513.807	75757.5	583.963 6401.....	H1-1b
18	M5	6.5"x0.3...	.183 21	12	.097 21 y	42	3513.807	75757.5	583.963 6680.....	H1-1b
19	M13	L2x2x3	.150 0	6	.027 0 z	43	18051.765	23392.8	557.717 1239.....	H2-1
20	M3	L2x2x3	.145 0	11	.027 0 z	49	18051.765	23392.8	557.717 1239.....	H2-1
21	M8	L2x2x3	.132 0	17	.026 0 z	38	18051.765	23392.8	557.717 1239.....	H2-1
22	M19	PIPE_2.0	.110 72	10	.099 72	2	14916.036	32130	1871.625 1871.....	H1-1b
23	M4	L2x2x3	.109 0	13	.029 0 y	41	18051.765	23392.8	557.717 1239.....	H2-1
24	M22	L6 5/8x...	.108 0	21	.021 42 y	11	15453.054	66065.641	1040.591 3031.....	H2-1
25	H1	PIPE_3.5	.106 72	121	.072 24	11	60666.044	78750	7953.75 7953.....	H1-1b
26	M20	PIPE_2.0	.106 24	16	.094 72	8	14916.036	32130	1871.625 1871.....	H1-1b
27	H2	PIPE_3.5	.103 72	211	.063 24	5	60666.044	78750	7953.75 7953.....	H1-1b
28	H3	PIPE_3.5	.103 72	158	.070 24	16	60666.044	78750	7953.75 7953.....	H1-1b
29	M23	L6 5/8x...	.102 0	26	.021 42 y	17	15453.054	66065.641	1040.591 3031.....	H2-1
30	M21	PIPE_2.0	.102 72	5	.095 72	13	14916.036	32130	1871.625 1871.....	H1-1b
31	M9	L2x2x3	.099 0	2	.028 0 y	46	18051.765	23392.8	557.717 1239.....	H2-1
32	M14	L2x2x3	.092 0	7	.029 0 y	35	18051.765	23392.8	557.717 1239.....	H2-1
33	M24	L6 5/8x...	.090 0	32	.019 42 y	6	15453.054	66065.641	1040.591 3031.....	H2-1

APPENDIX D
ADDITIONAL CALCUATIONS

BOLT TOOL 1.5.2

Project Data	
Job Code:	845993
Carrier Site ID:	BOBDL00071A
Carrier Site Name:	CT-CCI-T-845993

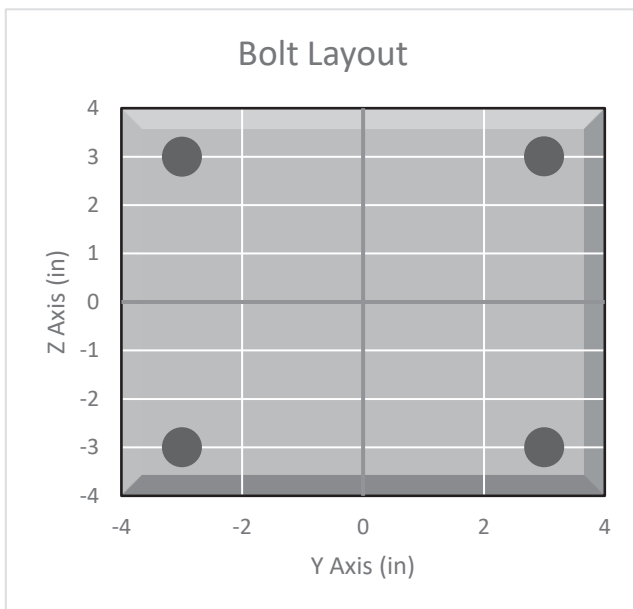
Code	
Design Standard:	TIA-222-H
Slip Check:	No
Pretension Standard:	TIA-222-H

Bolt Properties		
Connection Type:	Bolt	
Diameter:	0.75	in
Grade:	A529	--
Yield Strength (Fy):	50	ksi
Ultimate Strength (Fu):	65	ksi
Number of Bolts:	4	--
Threads Included:	Yes	--
Double Shear:	No	--
Connection Pipe Size:	-	in

Connection Description
Mount Standoff to Collar

Bolt Check*		
Tensile Capacity (ϕT_n):	16304.9	lbs
Shear Capacity (ϕV_n):	10768.5	lbs
Tension Force (T_u):	4211.8	lbs
Shear Force (V_u):	687.3	lbs
Tension Usage:	24.6%	--
Shear Usage:	6.1%	--
Interaction:	24.6%	Pass
Controlling Member:	M2	--
Controlling LC:	42	--

*Rating per TIA-222-H Section 15.5



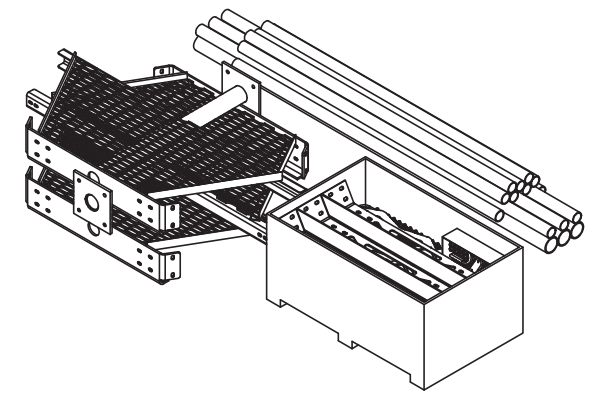
APPENDIX E
SUPPLEMENTAL DRAWINGS

ITEM	PART NO.	DESCRIPTION	QTY.	WEIGHT	NOTE NO.
1	MTC3006SB	STEEL BUNDLE FOR SNUB NOSE PLATFORM	1	402.64 LBS	
2	MCPK8CSB	PIPE STEEL BUNDLE FOR MC-PK8-C	1	464.27 LBS	
3	MCPK8CHWK	HARDWARE KIT FOR MC-PK8-C	1	543.22 LBS	




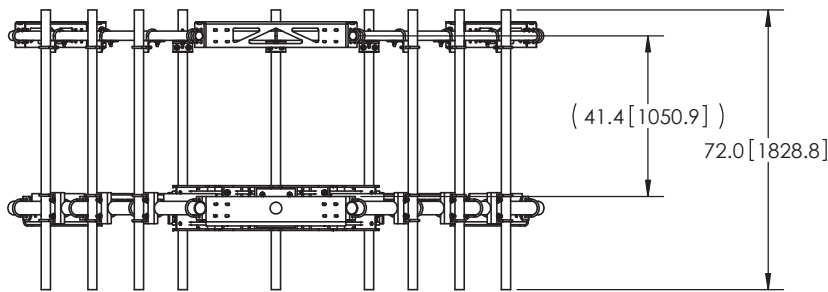
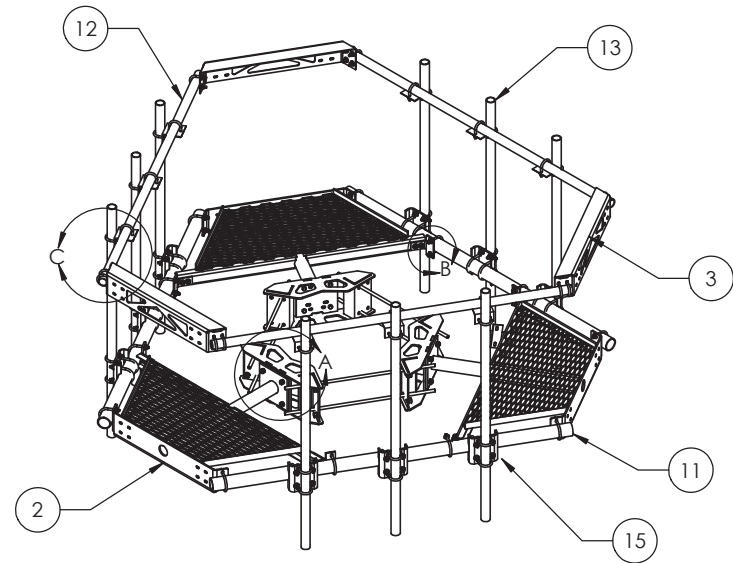
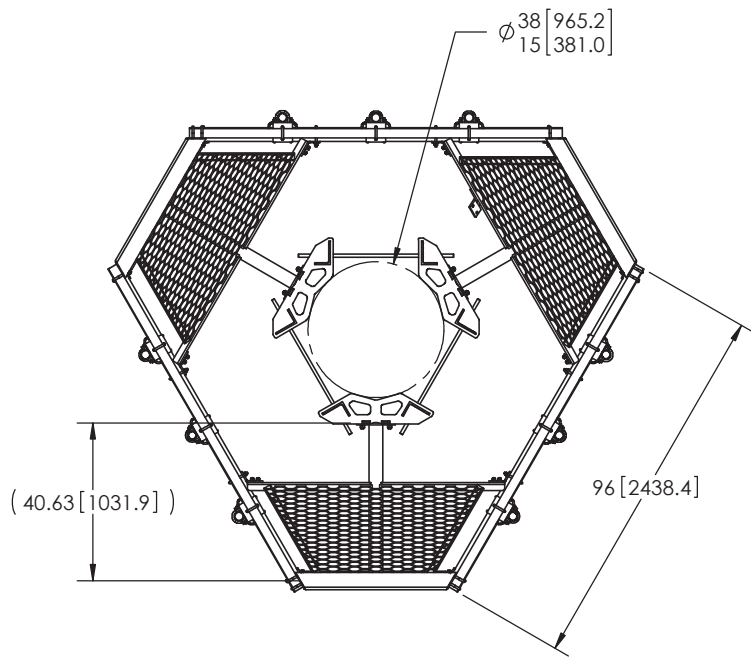
REVISIONS				
REV.	ECN	DESCRIPTION	BY	DATE
A		INITIAL RELEASE	DRR	12/27/11
B	8000005979	CHANGE NOSE CORNER BRKT, ADD GUB-4240	MSM	11/25/14
C	8000007579	NEW RINGMOUNT WELDMENT DESIGN	RJC	04/07/15

FOR BOM ENTRY ONLY



NOTES:
1. CUSTOMER ASSEMBLY SHEETS 2-3.

<small>These drawings and specifications are the proprietary property of ANDREW CORPORATION and may be used only for the specific purpose authorized in writing by Andrew Corporation.</small>			<small>DRAWN BY:</small> MSM	<small>SHEET:</small> 1 of 3	<small>PART NUMBER:</small> MC-PK8-C
<small>ALL DIMENSIONS ARE IN INCHES U.O.S. TOLERANCES UNLESS OTHERWISE SPECIFIED:</small>			<small>CHECKED BY:</small> TP	<small>SCALE:</small> NTS	<small>DESCRIPTION:</small> LOW PROFILE PLATFORM KIT 8' FACE
<small>.X = ± .12 ANGLES ±2° .XX = ± .06 FRACTIONS ±1/32 .XXX = ± .03</small>			<small>DATE:</small> 10/18/11	<small>MATERIAL:</small> A36, A500	<small>DRAWING TYPE:</small> ASSEMBLY DRAWING
<small>REMOVE BURRS AND BREAK EDGES .005</small>			<small>REVISION:</small> C	<small>FINISH:</small> GALV A123	 WESTCHESTER, IL. 60154 U.S.A.
<small>DO NOT SCALE THIS PRINT</small>				<small>WEIGHT:</small> 1410.14 LBS	



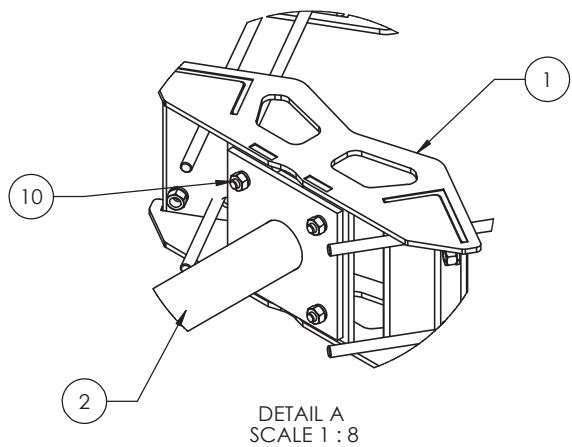
ITEM	PART NO.	DESCRIPTION	QTY.	WEIGHT
1	MC-RM1550-3	12" - 50" OD RINGMOUNT	1	230.42 LBS
2	MTC300601	Low Profile Co-Location Platform Snub Nose	3	134.21 LBS
3	MT195801	Corner Weldment Snub Nose Handrail	3	27.10 LBS
4	XA2020.01	CROSS OVER ANGLE	9	2.65 LBS
5	GUB-4356	1/2" X 3-5/8" X 6" GALV U-BOLT	18	0.82 LBS
6	GUB-4355	1/2" X 3-5/8" X 5" GALV U-BOLT	12	0.71 LBS
7	GUB-4240	1/2" X 2-1/2" X 4" GALV U-BOLT	48	0.56 LBS
8	GB-04145	1/2" X 1-1/2" GALV BOLT KIT	12	0.13 LBS
9	GWF-04	1/2" GALV FLAT WASHER	24	0.03 LBS
10	GB-0520A	5/8" X 2" GALV BOLT KIT (A325)	12	0.27 LBS
11	MT54796	3.50" OD X 96" GALV PIPE	3	60.28 LBS
12	MT-651-96	Ø2.375" OD X 96" PIPE	3	29.07 LBS
13	MT-651	2.375" OD x 72" PIPE	9	21.80 LBS
14	MT19617	MT196 Pipe Mount Plate	6	2.49 LBS
15	MT21701	PIPE MOUNT PLATE	9	7.93 LBS

<small>These drawings and specifications are the proprietary property of ANDREW CORPORATION and may be used only for the specific purpose authorized in writing by Andrew Corporation.</small>			
DESIGNED BY: MSM	DRAWN BY: TP	DATE: 10/18/11	REV: C
SHEET: 2 of 3	TITLE: NTS	DESCRIPTION: 25" OD Snub Nose MT-196	PART NUMBER: MC-PK8-C
DATE: 10/18/11	MATERIAL: A36, A53	DRAWING TYPE: ASSEMBLY DRAWING	WEIGHT: 1361.27 LBS
<small>REMOVE BURRS AND BREAK EDGES .005</small> DO NOT SCALE THIS PRINT			

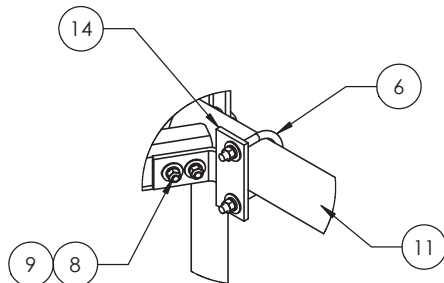
- NOTES:
1. ALL METRIC DIMENSIONS ARE IN BRACKETS.
 2. WILL FIT MONOPOLES 15"-38" OD.

WESTCHESTER, IL. 60154 U.S.A.

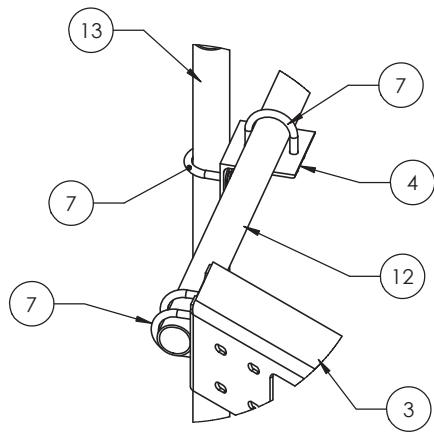
8 7 6 5 4 3 2 1



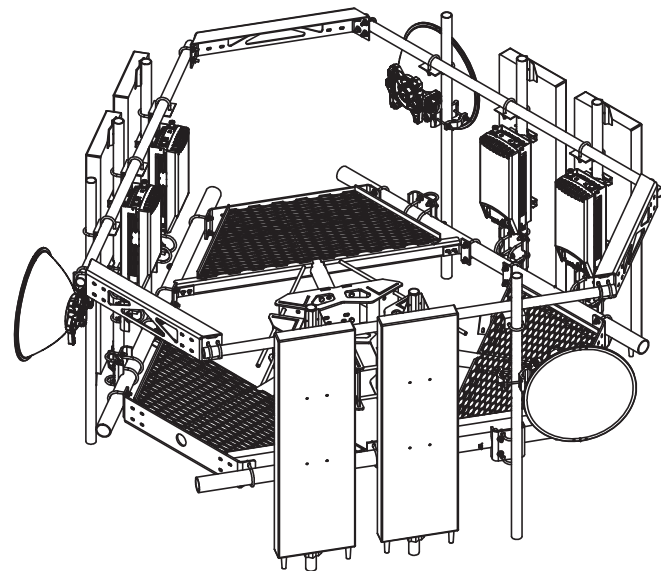
DETAIL A
SCALE 1 : 8



DETAIL B
SCALE 1 : 8




DETAIL C
SCALE 1 : 8



WITH ANTENNAS

NOTES:
1. ALL METRIC DIMENSIONS ARE IN BRACKETS.

<small>These drawings and specifications are the proprietary property of ANDREW CORPORATION and may be used only for the specific purpose authorized in writing by Andrew Corporation.</small>		<small>DRAWN BY:</small> MSM	<small>SHEET:</small> 3 of 3	<small>PART NUMBER:</small> MC-PK8-C
<small>ALL DIMENSIONS ARE IN INCHES U.O.S. TOLERANCES UNLESS OTHERWISE SPECIFIED:</small> .X = ± .12 ANGLES ±2° .XX = ± .06 FRACTIONS ±1/32 .XXX = ± .03 REMOVE BURRS AND BREAK EDGES .005 DO NOT SCALE THIS PRINT		<small>CHECKED BY:</small> TP	<small>SCALE:</small> NTS	<small>DESCRIPTION:</small> 25" OD Snub Nose MT-196
		<small>DATE:</small> 10/18/11	<small>MATERIAL:</small> A36, A53	<small>DRAWING TYPE:</small> ASSEMBLY DRAWING
		<small>REVISION:</small> C	<small>FINISH:</small> GALV A123	 WESTCHESTER, IL. 60154 U.S.A.
			<small>WEIGHT:</small> 1361.27 LBS	

8 7 6 5 4 3 2 1

Exhibit F

Power Density/RF Emissions Report

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

Dish Wireless Existing Facility

Site ID: BOBDL00071A

845993

12 Nepaug Road

Burlington, Connecticut 06013

August 30, 2021

EBI Project Number: 6221004793

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	30.82%

August 30, 2021

Dish Wireless

Emissions Analysis for Site: BOBDL00071A - 845993

EBI Consulting was directed to analyze the proposed Dish Wireless facility located at **12 Nepaug Road in Burlington, 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 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The number of $\mu\text{W}/\text{cm}^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits; therefore, it is necessary to report results and limits in terms of percent MPE rather than power density.

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

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

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The general population exposure limits for the 600 MHz and 700 MHz frequency bands are approximately $400 \mu\text{W}/\text{cm}^2$ and $467 \mu\text{W}/\text{cm}^2$, respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 11 GHz frequency bands is $1000 \mu\text{W}/\text{cm}^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure.

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

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed Dish Wireless Wireless antenna facility located at 12 Nepaug Road in Burlington, 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) 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.
- 4) 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.

- 5) The antennas used in this modeling are the JMA MX08FRO665-2I for the 600 MHz / 1900 MHz channel(s) in Sector A, the JMA MX08FRO665-2I for the 600 MHz / 1900 MHz channel(s) in Sector B, the JMA MX08FRO665-2I for the 600 MHz / 1900 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.
- 6) The antenna mounting height centerline of the proposed antennas is 70 feet above ground level (AGL).
- 7) 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.
- 8) 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	Frequency Bands:	600 MHz / 1900 MHz	Frequency Bands:	600 MHz / 1900 MHz
Gain:	17.45 dBd / 22.65 dBd	Gain:	17.45 dBd / 22.65 dBd	Gain:	17.45 dBd / 22.65 dBd
Height (AGL):	70 feet	Height (AGL):	70 feet	Height (AGL):	70 feet
Channel Count:	8	Channel Count:	8	Channel Count:	8
Total TX Power (W):	280 Watts	Total TX Power (W):	280 Watts	Total TX Power (W):	280 Watts
ERP (W):	3,065.51	ERP (W):	3,065.51	ERP (W):	3,065.51
Antenna AI MPE %:	3.87%	Antenna BI MPE %:	3.87%	Antenna CI MPE %:	3.87%

Site Composite MPE %	
Carrier	MPE %
Dish Wireless (Max at Sector A):	3.87%
Sprint	4.25%
AT&T	5.31%
T-Mobile	9.24%
Verizon	8.15%
Site Total MPE % :	30.82%

Dish Wireless MPE % Per Sector	
Dish Wireless Sector A Total:	3.87%
Dish Wireless Sector B Total:	3.87%
Dish Wireless Sector C Total:	3.87%
Site Total MPE % :	30.82%

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 ($\mu\text{W}/\text{cm}^2$)	Frequency (MHz)	Allowable MPE ($\mu\text{W}/\text{cm}^2$)	Calculated % MPE
Dish Wireless 600 MHz n71	4	223.68	70.0	7.85	600 MHz n71	400	1.96%
Dish Wireless 1900 MHz n70	4	542.70	70.0	19.05	1900 MHz n70	1000	1.91%
						Total:	3.87%

• 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:	3.87%
Sector B:	3.87%
Sector C:	3.87%
Dish Wireless Maximum MPE % (Sector A):	3.87%
Site Total:	30.82%
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **30.82%** 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



4545 E River Rd, Suite 320
West Henrietta, NY 14586

Phone: (585) 445-5896
Fax: (724) 416-4461
www.crowncastle.com

Crown Castle 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
Crown Castle telecommunications site at:
12 NEPAUG ROAD, BURLINGTON, CT 06013**

NEW CINGULAR WIRELESS PCS, LLC ("Crown Castle") 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 CT - CONNECTICUT SITING COUNCIL for the existing wireless communications site described below:

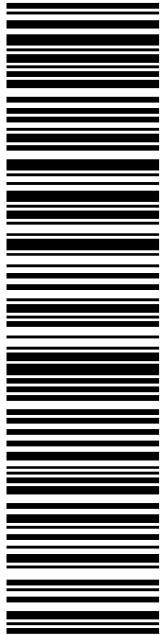
**Crown Site ID/Name: 845993/BURLINGTON-NEPAUG ROAD
Customer Site ID: BOBDL00071A/CT-CCI-T-845993
Site Address: 12 NEPAUG ROAD, BURLINGTON, CT 06013**

Crown Castle

By:  _____ Date: 8/18/2021
Richard Zajac
Site Acquisition Specialist

Exhibit H

Recipient Mailings



USPS TRACKING #

9405 5036 9930 0018 4222 20

Electronic Rate Approved #038555749

P

USPS.com
US POSTAGE
 Flat Rate Env

U.S. POSTAGE PAID
click-n-ship®

Mailed from 01566

Click-N-Ship®

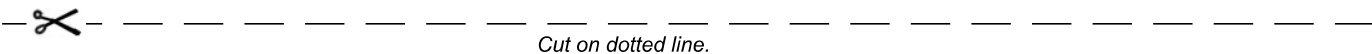
PRIORITY MAIL 2-DAY™

Expected Delivery Date: 10/02/21
 Ref#: DS-801486
0006

R013

SHIP TO: RICH ZAJAC
 CROWN CASTLE
 4545 E RIVER RD
 STE 320
 W HENRIETTA NY 14586-9024

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



Cut on dotted line.

Instructions

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

Click-N-Ship® Label Record

USPS TRACKING # :
9405 5036 9930 0018 4222 20

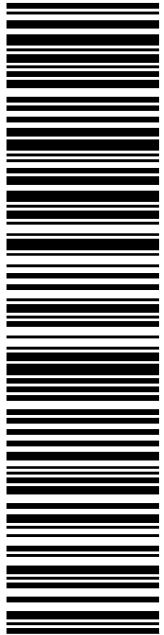
Trans. #: 544790166	Priority Mail® Postage: \$7.95
Print Date: 09/29/2021	Total: \$7.95
Ship Date: 09/29/2021	
Expected Delivery Date: 10/02/2021	

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

Ref#: DS-801486

To: RICH ZAJAC
 CROWN CASTLE
 4545 E RIVER RD
 STE 320
 W HENRIETTA NY 14586-9024

* 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.



USPS TRACKING #

9405 5036 9930 0018 4222 37

Electronic Rate Approved #038555749

SHIP

TO: THEODORE SHAFER
TOWN OF BURLINGTON OFFICE OF THE FIRST
200 SPIELMAN HWY
BURLINGTON CT 06013-1735

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

Expected Delivery Date: 10/02/21
Ref#: 845993
0006

P

09/29/2021

U.S. POSTAGE PAID
click-n-ship®

usps.com 9405 5036 9930 0018 4222 37 0079 5000 0010 6013
US POSTAGE
 Flat Rate Env
\$7.95

Click-N-Ship®

PRIORITY MAIL 2-DAY™

Mailed from 01566

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Click-N-Ship® Label Record

USPS TRACKING # :
9405 5036 9930 0018 4222 37

Trans. #: 544790166	Priority Mail® Postage: \$7.95
Print Date: 09/29/2021	Total: \$7.95
Ship Date: 09/29/2021	
Expected Delivery Date: 10/02/2021	

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

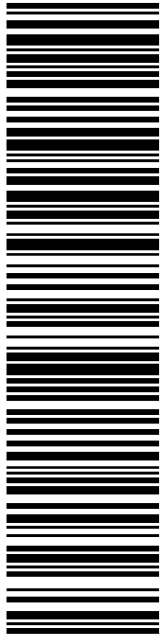
Ref#: 845993

To: THEODORE SHAFER
 TOWN OF BURLINGTON OFFICE OF THE FIRST
 SELECTMAN
 200 SPIELMAN HWY
 BURLINGTON CT 06013-1735

* 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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USPS TRACKING #

9405 5036 9930 0018 4222 44

Electronic Rate Approved #038555749

SHIP

TO: JERRY BURNS
TOWN OF BURLINGTON ZONING OFFICER
200 SPIELMAN HWY
BURLINGTON CT 06013-1735

P

USPS.com
US POSTAGE
 Flat Rate Env

09/29/2021

Mailed from 01566


U.S. POSTAGE PAID
click-n-ship®

9405 5036 9930 0018 4222 44 0079 5000 0010 6013

PRIORITY MAIL 2-DAY™

Expected Delivery Date: 10/02/21
 Ref#: 845993
0006

R001



**UNITED STATES
 POSTAL SERVICE®**

Click-N-Ship®



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Click-N-Ship® Label Record

USPS TRACKING # :
9405 5036 9930 0018 4222 44

Trans. #: 544790166	Priority Mail® Postage: \$7.95
Print Date: 09/29/2021	Total: \$7.95
Ship Date: 09/29/2021	
Expected Delivery Date: 10/02/2021	

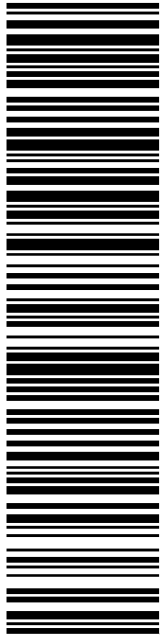
From: DEBORAH CHASE Ref#: 845993
 NORTHEAST SITE SOLUTIONS
 420 MAIN ST
 STE 1
 STURBRIDGE MA 01566-1359

To: JERRY BURNS
 TOWN OF BURLINGTON ZONING OFFICER
 200 SPIELMAN HWY
 BURLINGTON CT 06013-1735

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USPS TRACKING #
9405 5036 9930 0018 4222 68

Electronic Rate Approved #038555749

P

USPS.com
US POSTAGE
Flat Rate Env

U.S. POSTAGE PAID
click-n-ship®

Mailed from 01566

Click-N-Ship®

PRIORITY MAIL 2-DAY™

Expected Delivery Date: 10/02/21
Ref#: 845993
0006

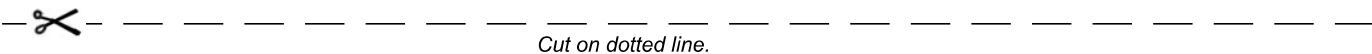
R007

SHIP TO:
REGIONAL SCHOOL DISTRICT #10
24 LYON RD
BURLINGTON CT 06013-1330

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

USPS TRACKING #

09/29/2021



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Click-N-Ship® Label Record

USPS TRACKING # :
9405 5036 9930 0018 4222 68

Trans. #: 544790166	Priority Mail® Postage: \$7.95
Print Date: 09/29/2021	Total: \$7.95
Ship Date: 09/29/2021	
Expected Delivery Date: 10/02/2021	

From: DEBORAH CHASE Ref#: 845993
NORTHEAST SITE SOLUTIONS
420 MAIN ST
STE 1
STURBRIDGE MA 01566-1359

To: REGIONAL SCHOOL DISTRICT #10
24 LYON RD
BURLINGTON CT 06013-1330

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UNIONVILLE
24 MILL ST
UNIONVILLE, CT 06085-9998
(800)275-8777

09/30/2021 02:31 PM

Product	Qty	Unit Price	Price
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Prepaid Mail	1		\$0.00
Burlington, CT 06013			
Weight: 0 lb 13.20 oz			
Acceptance Date:			
Thu 09/30/2021			
Tracking #:			
9405 5036 9930 0018 4222 68			

Prepaid Mail	1		\$0.00
Burlington, CT 06013			
Weight: 0 lb 13.20 oz			
Acceptance Date:			
Thu 09/30/2021			
Tracking #:			
9405 5036 9930 0018 4222 44			

Prepaid Mail	1		\$0.00
Burlington, CT 06013			
Weight: 0 lb 13.20 oz			
Acceptance Date:			
Thu 09/30/2021			
Tracking #:			
9405 5036 9930 0018 4222 37			

Prepaid Mail	1		\$0.00
West Henrietta, NY 14586			
Weight: 0 lb 1.90 oz			
Acceptance Date:			
Thu 09/30/2021			
Tracking #:			
9405 5036 9930 0018 4222 20			

845993 Crown-Dish

Grand Total: \$0.00