



PROJECT NARRATIVE



TOTALLY COMMITTED.

November 8, 2021

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

Re: Request of DISH Wireless LLC for an Order to Approve the Shared Use of an Existing Tower 118C Wintechog Hill Road North Stonington, CT 06359 Latitude: 41'27'35.42" / Longitude: -71'55'38.416"

Dear Ms. Bachman:

Pursuant to Connecticut General Statutes ("C.G.S.") §16-50aa, as amended, DISH Wireless LLC ("DISH") hereby requests an order from the Connecticut Siting Council ("Council") to approve the shared use by DISH of an existing telecommunication tower at 118C Wintechog Hill Road in North Stonington (the "Property"). The existing 250-foot self-support tower is owned by American Tower Corporation ("ATC"). The underlying property is owned by American Tower. DISH requests that the Council find that the proposed shared use of the ATC tower satisfies the criteria of C.G.S. §16-50aa and issue an order approving the proposed shared use. A copy of this filing is being sent to Michael A. Urgo, First Selectman for the Town of North Stonington, Timothy Brennan, Town of North Stonington Building Official and American Tower as the property owner.

Background

The existing ATC facility consists of a 250-foot self-support tower located within an existing leased area. The State of Connecticut currently maintains antennas at the 260-foot level, 200-foot level and 83-foot level. Sprint Nextel currently maintains antennas at the 246-foot level. SIGFOX currently maintains antennas at the 236-foot level. T-Mobile currently maintains antennas at the 225-foot level. AT&T Mobility currently maintains antennas at the 175-foot level. Metro PCS antennas at the 155-foot level are to be removed. Equipment associated with these antennas are located at various positions within the tower and compound.

DISH is licensed by the Federal Communications Commission ("FCC") to provide wireless services throughout the State of Connecticut. DISH and Crown Castle have agreed to the proposed shared use of the 118C Wintechog Hill Roadtower pursuant to mutually acceptable terms and conditions. Likewise, DISH and ATC have agreed to the proposed installation of equipment cabinets on the ground on the south side of the tower within the existing compound. ATC has authorized DISH to apply for all necessary permits and approvals that may be required to share the existing tower. (See attached Letter of Authorization)



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DISH proposes to install three (3) antennas, (1) Tower platform mount, (6) Remote radio units at the 165-foot level along with, (1) over voltage protection device (OVP) and (1) Hybrid cable. DISH will install an equipment cabinet on a 5'x7' equipment platform. DISH's Construction Drawings provide project specifications for all proposed site improvement locations. The construction drawings also include specifications for DISH's proposed antenna and groundwork.

- C.G.S. § 16-50aa(c)(1) provides that, upon written request for approval of a proposed shared use, "if the Council finds that the proposed shared use of the facility is technically, legally, environmentally and economically feasible and meets public safety concerns, the council shall issue an order approving such a shared use." DISH respectfully submits that the shared use of the tower satisfies these criteria.
- A. Technical Feasibility. The existing ATC tower is structurally capable of supporting DISH's proposed improvements. The proposed shared use of this tower is, therefore, technically feasible. A Feasibility Structural Analysis Report ("Structural Report") prepared for this project confirms that this tower can support DISH's proposed loading. A copy of the Structural Report has been included in this application.
- **B.** Legal Feasibility. Under C.G.S. § 16-50aa, the Council has been authorized to issue order approving the shared use of an existing tower such as the ATC tower. This authority complements the Council's prior-existing authority under C.G.S. § 16-50p to issue orders approving the construction of new towers that are subject to the Council's jurisdiction. In addition, § 16-50x(a) directs the Council to "give such consideration to the other state laws and municipal regulations as it shall deem appropriate" in ruling on requests for the shared use of existing tower facilities. Under the statutory authority vested in the Council, an order by the Council approving the requested shared use would permit the Applicant to obtain a building permit for the proposed installations.
- **C. Environmental Feasibility**. The proposed shared use of the ATC tower would have a minimal environmental effect for the following reasons:
 - 1. The proposed installation will have no visual impact on the area of the tower. DISH's equipment cabinet would be installed within the existing facility compound. DISH's shared use of this tower therefore will not cause any significant change or alteration in the physical or environmental characteristics of the existing site.
 - 2. Operation of DISH's antennas at this site would not exceed the RF emissions standard adopted by the Federal Communications Commission ("FCC"). Included in the EME report of this filing are the approximation tables that demonstrate that DISH's proposed facility will operate well within the FCC RF emissions safety standards.
 - 3. Under ordinary operating conditions, the proposed installation would not require the use of any water or sanitary facilities and would not generate air emissions or discharges to water bodies or sanitary facilities. After construction is complete the proposed installations would not generate any increased traffic to the ATC facility other than periodic maintenance. The proposed shared use of the ATC tower, would, therefore, have a minimal environmental effect, and is environmentally feasible.



TOTALLY COMMITTED.

- D. **Economic Feasibility**. As previously mentioned, DISH has entered into an agreement with ATC for the shared use of the existing facility subject to mutually agreeable terms. The proposed tower sharing is, therefore, economically feasible.
- E. **Public Safety Concerns**. As discussed above, the tower is structurally capable of supporting DISH's full array of three (3) antennas, (1) Tower platform mount, (6) Remote radio units, (1) over voltage protection device (OVP) and (1) Hybrid cable and all related equipment. DISH is not aware of any public safety concerns relative to the proposed sharing of the existing ATC tower.

Conclusion

For the reasons discussed above, the proposed shared use of the existing ATC tower at 118C Wintechog Hill Road satisfies the criteria stated in C.G.S. §16-50aa and advances the Council's goal of preventing the unnecessary proliferation of towers in Connecticut. The Applicant, therefore, respectfully requests that the Council issue an order approving the prosed shared use.

Sincerely,

David Hoogasian

David Hoogasian

Project Manager





LETTER OF AUTHORIZATION



LETTER OF AUTHORIZATION LICENSEE: DISH WIRELESS L.L.C.

I, Margaret Robinson, Senior Counsel for American Tower*, owner/operator of the tower facility located at the address identified above (the "Tower Facility"), do hereby authorize DISH WIRELESS L.L.C., its successors and assigns, and/or its agent, (collectively, the "Licensee") to act as American Tower's non-exclusive agent for the sole purpose of filing and consummating any land-use or building permit application(s) as may be required by the applicable permitting authorities for Licensee's telecommunications' installation.

We understand that this application may be denied, modified or approved with conditions. The above authorization is limited to the acceptance by Licensee only of conditions related to Licensee's installation and any such conditions of approval or modifications will be Licensee's sole responsibility.

*American Tower includes all affiliates and subsidiaries of American Tower Corporation.

Project #	ATC Site #	ATC Site Name	ATC Site Address	
13688133	3688133 208450 Enfield		1A Ecology Drive, Enfield CT	
13700322	209115	Ridgefield 2	320 Old Stagecoach Road, Ridgefield, CT	
13688136	209185	Burlington 2	87 Monce Road, Burlington CT	
13700320	209271	Brookfield 2	100 Pocono Road, Brookfield CT	
13693702	243036	WEST HAVEN & RT 162 CT	668 Jones Hill Road, West Haven CT	
13693677	280501	ROXBURY CT	377 Southbury Road, Roxbury CT	
13685406	281416	WILLINGTON CT	196 Tolland Turnpike, Willington CT	
13709418	281862	BRIDGEWATER CT	111 SECOND HILL RD, Bridgewater CT	
13693659	283418	NORTH HAVEN CT	50 Devine Street, North Haven CT	
13694329	283419	PINE ORCHARD BRANFORD CT	123 Pine Orchard Road, Branford CT	
13694332	283422	SHORT BEACH BRANFORD CT	171 Short Beach Road, Branford CT	
13698427	283423	NAUGATUCK CT	880 Andrew Mountain Road, Naugatuck CT	
13685464	283563	MANSFIELD CT	343 Daleville Road, Willington CT	
13692735	284983	OLD LYME CT	61-1 Buttonball Road, Old Lyme CT	
13693120	284984	PAWCATUCK CT	166 Pawcatuck Ave, Pawcatuck CT	
13693144	284988	GUILFORD CT	Moose Hill Road, Guilford CT	
13694582	302465	Colchester CT 6	355 Route 85, Colchester CT	
13683501	302468	Petro Lock	99 Meadow St, Hartford CT	
13685427	302469	Bridgeport CT 2	1069 Connecticut Avenue, Bridgeport CT	
13683503	302472	Andover-bunker Hill Road	104 Bunker Hill Road, Andover CT	
13683507 302473 E H F R - Prestige Park		E H F R - Prestige Park	310 Prestige Park Road, East Hartford CT	



Project#	t# ATC Site# ATC Site Name		ATC Site Address
13683510	302474	South Windsor	391 Niederwerfer Road, South Windsor CT
13683513	302483	Brln - Berlin	286 Beckley Road, Berlin CT
13692185	302488	Cntn - Canton	4 Hoffmann Road, Canton CT
13692173	302495	Tolland CT	56 Ruops Road, Tolland CT
13694579	302496	Clch - Colchester	Chestnut Hill Road, Colchester CT
13701212	302501	Plymouth CT 3	297 North Street, Plymouth CT
13685414	302515	SMFR - North	5 High Ridge Park Road, Stamford CT
13702496	302516	Mlfd - Milford	438 Bridgeport Ave, Milford CT
13688395	302518	Newtown CT 3	25 Meridian Ridge Drive, Newton CT
13692174	302529	Vernon CT 6	777 Talcotville Road, Vernon Rockville CT
13693124	311014	NORWICH CT	202 N Wawecus Hill Rd, Norwich CT
13702522	311305	GLFD-GUILFORD REBUILD CT	10 Tanner Marsh Road, Guilford CT
13693127	370623	MONTVILLE CT	139 Sharp Hill Road, Uncasville CT
13681964	370625	Old Saybrook	77 Springbrook Road, Old Saybrook CT
13702535	383660	North Madison Volunteer FD	864 Opening Hill Road, Madison CT
13702538	411180	Good Hill CT	481 GOOD HILL ROAD, Woodbury CT
13693709	411182	Nepaug CT	20 Antolini Road, New Hartford CT
13693131	411183	WATERFORD CT	53 Dayton Rd., Waterford CT
13693135	411184	SALEM CT SQA	399 West Road, Salem CT
13692177	411186	West Granby, CT CT	207 West Granby Road, Granby CT
13692178	411187	Hartford North 2 CT	811 Blue Hills Avenue, Bloomfield CT
13693705	411188	Southbury CT	111 Upper Fishrock Road, Southbury CT
13692179	411256	CANTON CT	14 CANTON SPRINGS ROAD, Canton CT
13681988	411257	Middle Haddam Road-CROWN CT	191 Middle Haddam Rd, Portland CT
13692180	411258	Farmington North 2 CT	199 Town Farm Road, Farmington CT
13692182	411259	CT Collinsville CAC 802816 CT	650 Albany Turnpike, Collinsville CT
13692182	416862	SUFFIELD SW CT CT	106 South Grand St., West Suffield CT
13692184	6260	NORTH STONINGTON CT	118C Wintechog Hill Rd., off of Rt. 2, North Stonington CT
13681397	88013	Killingworth	131 Little City Road, Killingworth CT

Signature:

Print Name: Margaret Robinson

Senior Counsel American Tower*



LETTER OF AUTHORIZATION LICENSEE: DISH WIRELESS L.L.C.

NOTARY BLOCK

Commonwealth of MASSACHUSETTS County of Middlesex

This instrument was acknowledged before me by Margaret Robinson, Senior Counsel for American Tower*, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same.

WITNESS my hand and official seal, this 10th day of September 2021.

MELISSA ANN METZLER

Notary Public
Commonwealth of Massachusetts
My Commission Expires March 14, 2025

NOTARY SEAL

Notary Public

My Commission Expires: March 14, 2025





ENGINEERING DRAWINGS

dish wireless...

DISH WIRELESS, L.L.C. SITE ID:

BOBOS00884A

DISH WIRELESS, L.L.C. SITE ADDRESS:

118C WINTECHOG HILL RD., OFF OF RT. 2 **NORTH STONINGTON, CT 06359**

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 BUILDING

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

SHEET INDEX SHEET TITLE 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-5 EQUIPMENT DETAILS A-6 EQUIPMENT DETAILS ELECTRICAL/FIBER ROUTE PLAN AND NOTES E-2 E-3 ELECTRICAL ONE-LINE, FAULT CALCS & PANEL SCHEDULE G-1 GROUNDING PLANS AND NOTES G-2 GROUNDING DETAILS G-3 GROUNDING DETAILS RF CABLE COLOR CODE RF-2 RF PLUMBING DIAGRAM LEGEND AND ABBREVIATIONS GN-2GENERAL NOTES GN-3 GENERAL NOTES GN-4 GENERAL NOTES

BIRD WATC | | ITE:

PLEA E CONTACT BIRD WATC BAMERICANTOWER COM OR AMERICAN TOWER NOC AT 077/5100937 OR A0010TANCE

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:

- INSTALL (3) PROPOSED PANEL ANTENNAS (1 PER SECTOR)
- INSTALL (3) PROPOSED ANTENNA SECTOR FRAME MOUNTS (1 PER SECTOR)
- INSTALL PROPOSED JUMPERS
- INSTALL (6) PROPOSED RRHs (2 PER SECTOR)
 INSTALL (1) PROPOSED OVER VOLTAGE PROTECTION DEVICE (OVP)

- GROUND SCOPE OF WORK:

 INSTALL (1) PROPOSED METAL PLATFORM
- INSTALL
- (1) PROPOSED ICE BRIDGE (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
- PROPOSED SAFETY SWITCH (IF REQUIRED) 1) PROPOSED CIENA BOX (IF REQUIRED)
- INSTALL INSTALL (1) PROPOSED METER SOCKET





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

CALL 2 WORKING DAYS UTILITY NOTIFICATION PRIOR TO CONSTRUCTIO

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 STANKET OF PROPERTY.

THE PROJECT DEPICTED IN THESE PLANS QUALIFIES AS AN ELIGIBLE FACILITIES REQUEST ENTITLED TO EXPEDITED REVIEW UNDER 47 U.S.C. § 1455(A) AS A MODIFICATION OF AN EXISTING WIRELESS TOWER THAT INVOLVES THE COLLOCATION, REMOVAL, AND/OR REPLACEMENT OF TRANSMISSION EQUIPMENT THAT IS NOT A SUBSTANTIAL CHANGE UNDER CFR § 1.61000 (B)(7).

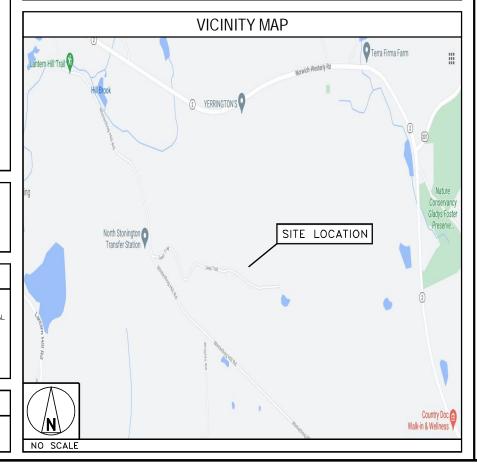
11"x17" PLOT WILL BE HALF SCALE UNLESS OTHERWISE NOTED

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

SITE INF	SITE INFORMATION			PROJECT DIRECTORY	
PROPERTY OWNER: ADDRESS: TOWER TYPE:	AMERICAN TOWER P O BOX 723597 ATLANTA, GA 31139 SELF SUPPORT TOWER	APPLICANT:	5701 S	RELESS, L.L.C. OUTH SANTA FE DRIVE DN, CO 80120 '06-5008	
TOWER CO SITE ID:		TOWER OWNER:	10 PRE	AN TOWER SIDENTIAL WAY N. MA 01801	
TOWER APP NUMBER:	13694578				
COUNTY;	NEW LONDON	ENGINEER:		INGINEERING SERVICES, LLC.	
LATITUDE (NAD 83):	41° 27° 35.420″ N 41.45983887			, NC 27615 557-9131	
LONGITUDE (NAD 83):	71° 55° 38.416″ W -71.92733765				
ZONING JURISDICTION;	CONNECTICUT SITING COUNCIL	SITE ACQUISITION:	:	APRIL PARROTT APRIL.PARROTT@DISH.COM	
ZONING DISTRICT:	R80	CONSTRUCTION M	ANAGER,	JAVIER SOTO	
PARCEL NUMBER:	93-4392	001(011(011)		JAVIER.SOTO@DISH.COM	
OCCUPANCY GROUP:	U	RF ENGINEER:		ARVIN SEBASTIAN ARVIN,SEBASTIAN@DISH,COM	
CONSTRUCTION TYPE:	II-B				
POWER COMPANY:	NORTHEAST UTILITIES				
TELEPHONE COMPANY:	ATT				
DIDECTIONS					

DIRECTIONS

TAKE 1-395 TO EXIT 85 TO RTE 164 SOUTH; RIGHT ON RT 2 EAST. THEN RIGHT ON WINTECHOG HILL RD. LEFT AT THE BUSINESS ENTRANCE OF GREENHOUSE. & FOLLOW THE DIRT RD TO THE TOWER



5701 SOUTH SANTA FE DRIVE



NB+C ENGINEERING SERVICES LLC □□□1 □IX □OR□□ ROAD, □□ITE 5□□

DRAWN BY:	CHECKED BY:	APPROVED BY:
JES	BIW	BI₩
RFDS REV	#:	1

CONSTRUCTION DOCUMENTS

- 1						
I	SUBMITTALS					
	REV	DATE	DESCRIPTION			
1	Α	08/25/2021	ISSUED FOR REVIEW			
ı	0	08/30/2021	ISSUED FOR CONSTRUCTION			
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A&E PROJECT NUMBER

6260-13694578

DISH WIRELESS, L.L.C. PROJECT INFORMATION

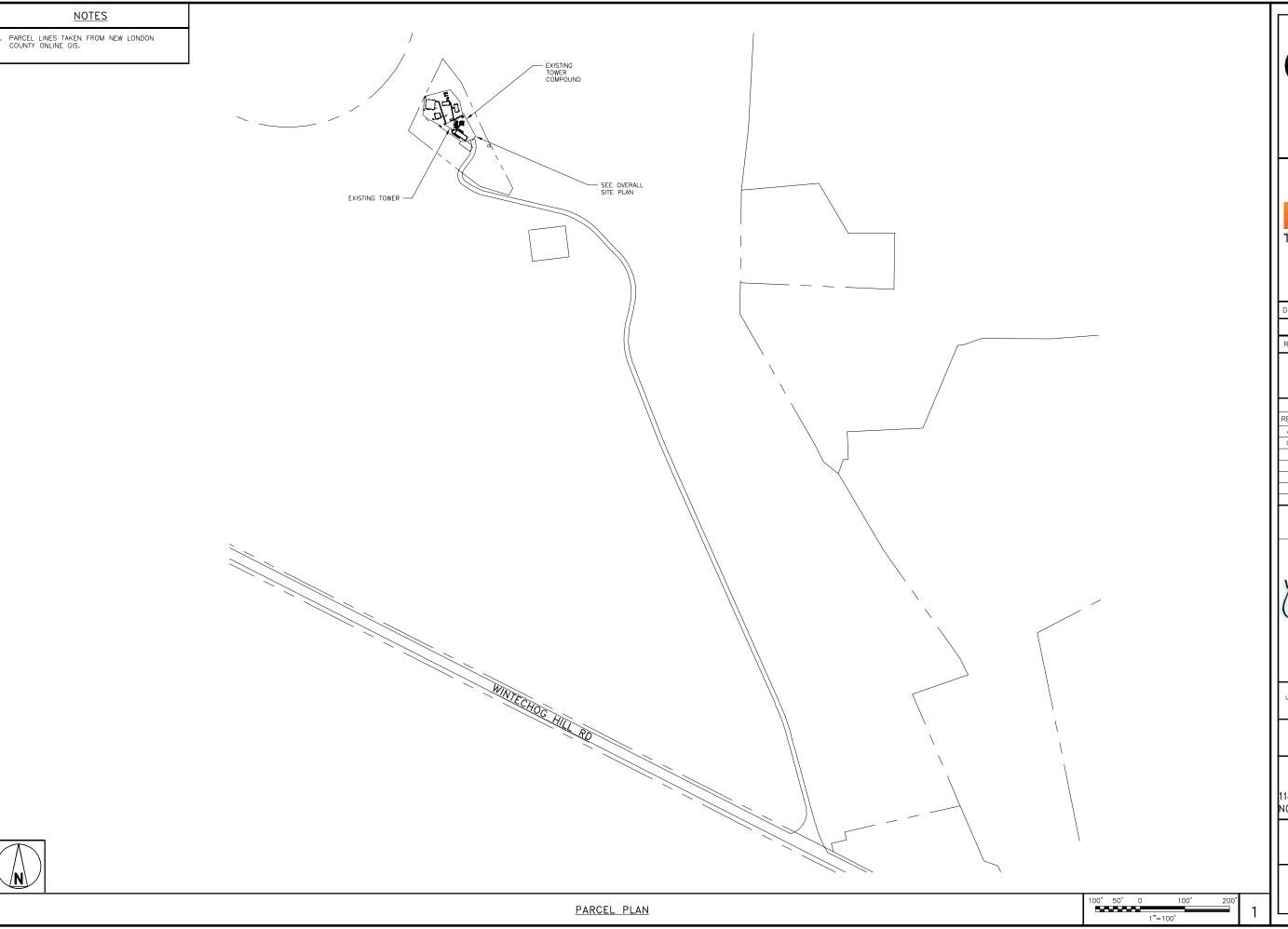
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118C WINTECHOG HILL RD., OFF OF RT. : NORTH STONINGTON, CT 06359

SHEET TITLE

TITLE SHEET

T-1





5701 SOUTH SANTA FE DRIVE LITTLETON, CO 80120



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JES	S	BIW		BI₩	

RFDS REV #:

CONSTRUCTION DOCUMENTS

Ш	SUBMITTALS				
Ш	REV	DATE	DESCRIPTION		
П	Α	08/25/2021	ISSUED FOR REVIEW		
Ш	0	08/30/2021	ISSUED FOR CONSTRUCTION		
П					
П					



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.

A&E PROJECT NUMBER

6260-13694578

DISH WIRELESS, L.L.C. PROJECT INFORMATION BOBOSO0884A

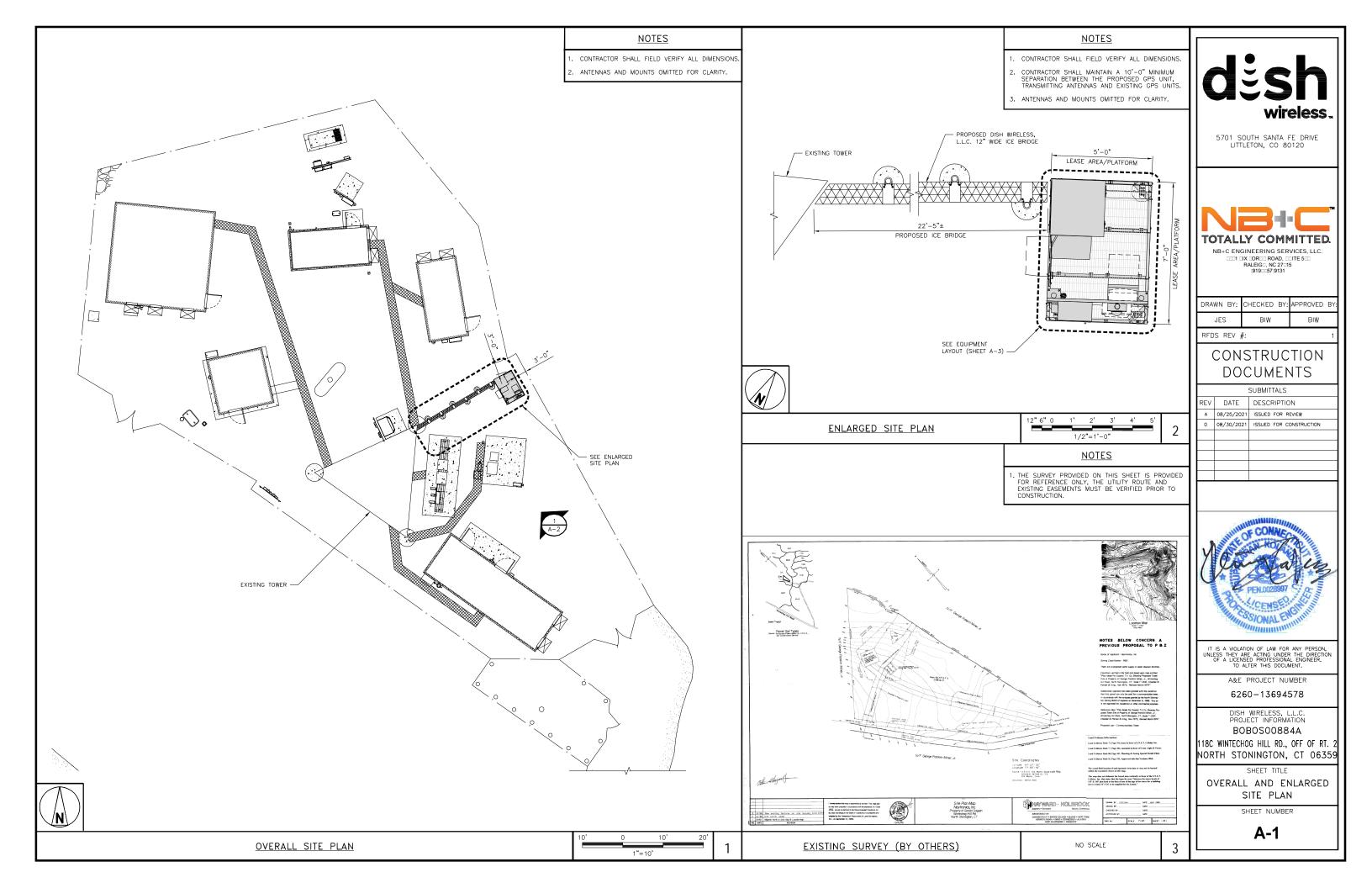
118C WINTECHOG HILL RD., OFF OF RT. 2 NORTH STONINGTON, CT 06359

SHEET TITLE

PARCEL PLAN

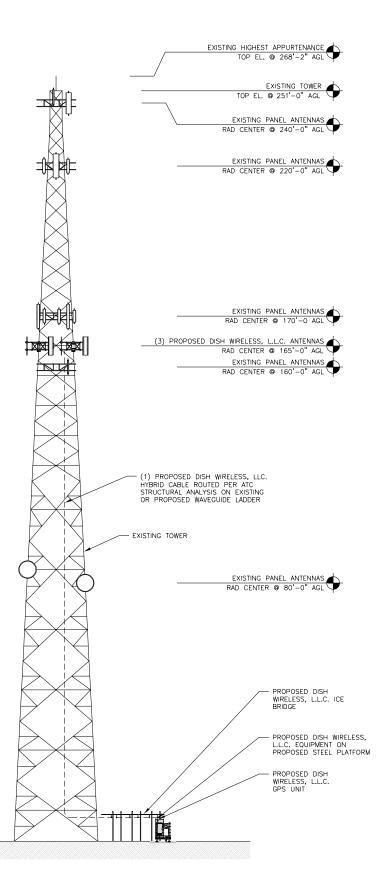
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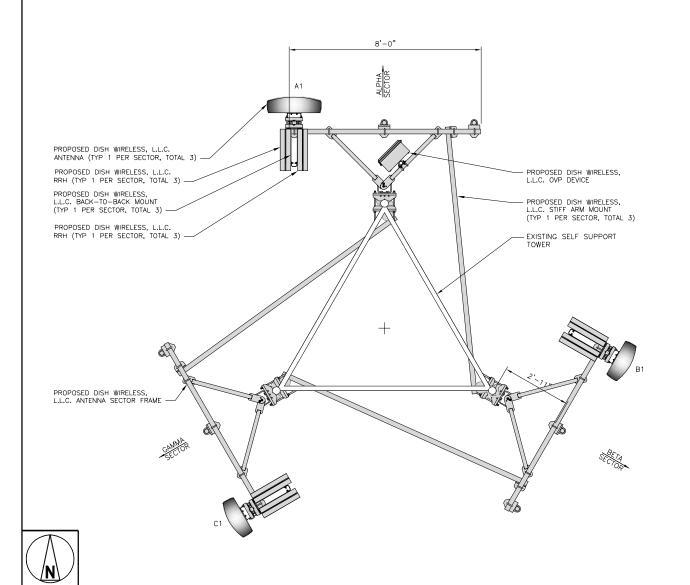
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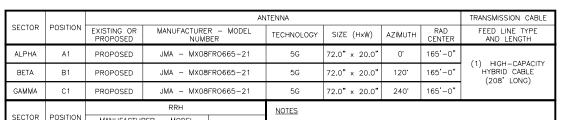
NOTES

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





ANTENNA LAYOUT



	-				
			RRH		NO.
SECTOR	POSITION		RER – MODEL MBER	TECHNOLOGY	1.
ALPHA	A1	FUJITSU -	TA08025-B604	N29,N71	2.
	A1	FUJITSU -	TA08025-B605	N66,N70	۷.
BETA	B1	FUJITSU -	TA08025-B604	N29,N71	
	B1	FUJITSU -	TA08025-B605	N66,N70	
GAMMA	C1	FUJITSU - 1	TA08025-B604	N29,N71	
	C1	FUJITSU -	TA08025-B605	N66,N70	

CONTRACTOR TO REFER TO FINAL CONSTRUCTION RFDS FOR ALL RF DETAILS.

1/2"=1'-0

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.



5701 SOUTH SANTA FE DRIVE LITTLETON, CO 80120



NB+C ENGINEERING SERVICES, LLC. RALEIGO, NC 27:15 □919□□57□9131

DRAWN	BY:	CHECKED	BY:	APPROVED	BY:
JES		BIW		BI₩	

RFDS REV #:

CONSTRUCTION **DOCUMENTS**

	SUBMITTALS				
REV DATE DESCRIPTION					
Α	08/25/2021	ISSUED FOR REVIEW			
0	08/30/2021	ISSUED FOR CONSTRUCTION			



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DISH WIRELESS, L.L.C. PROJECT INFORMATION BOBOSO0884A

118C WINTECHOG HILL RD., OFF OF RT. NORTH STONINGTON, CT 06359

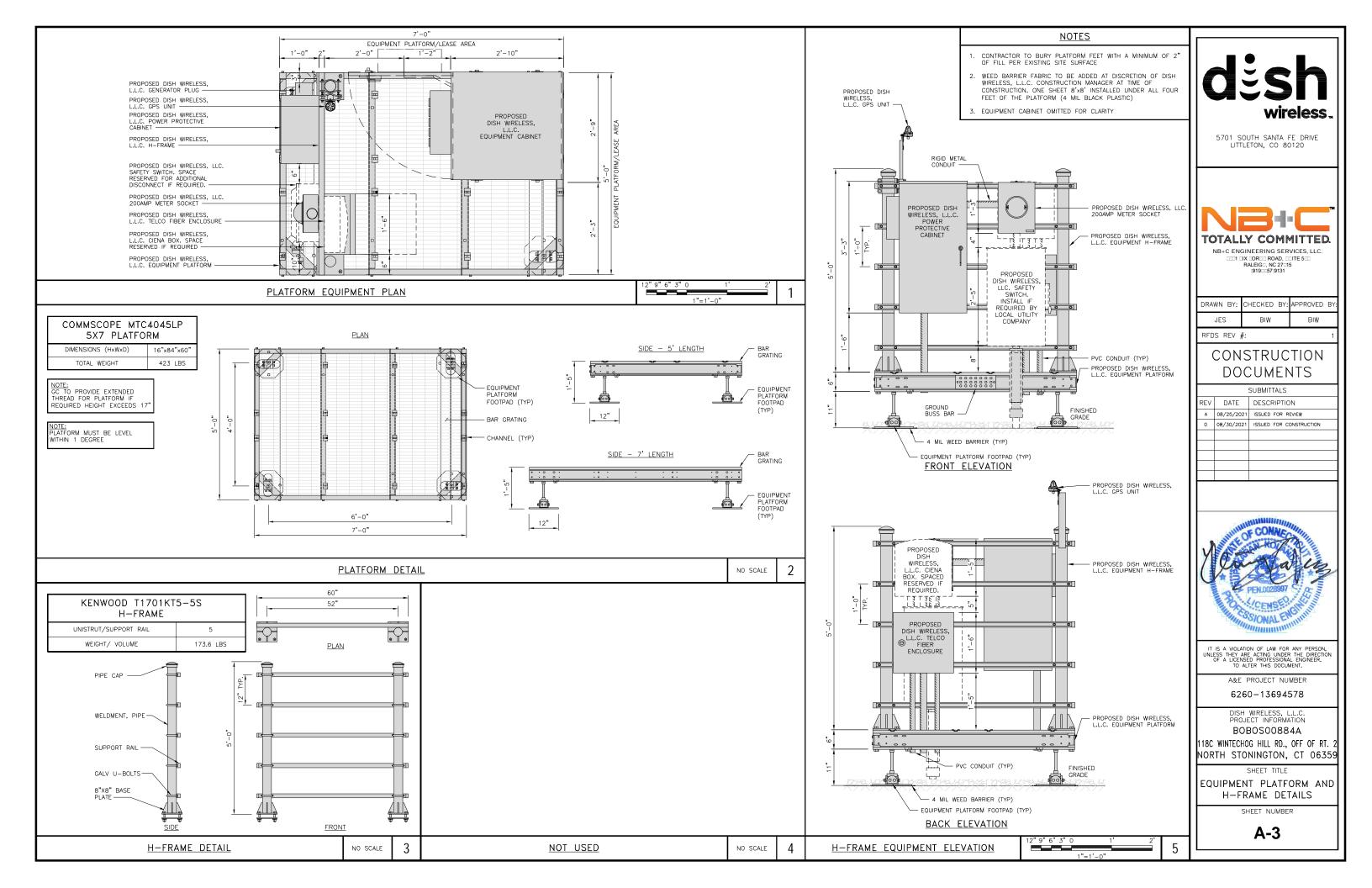
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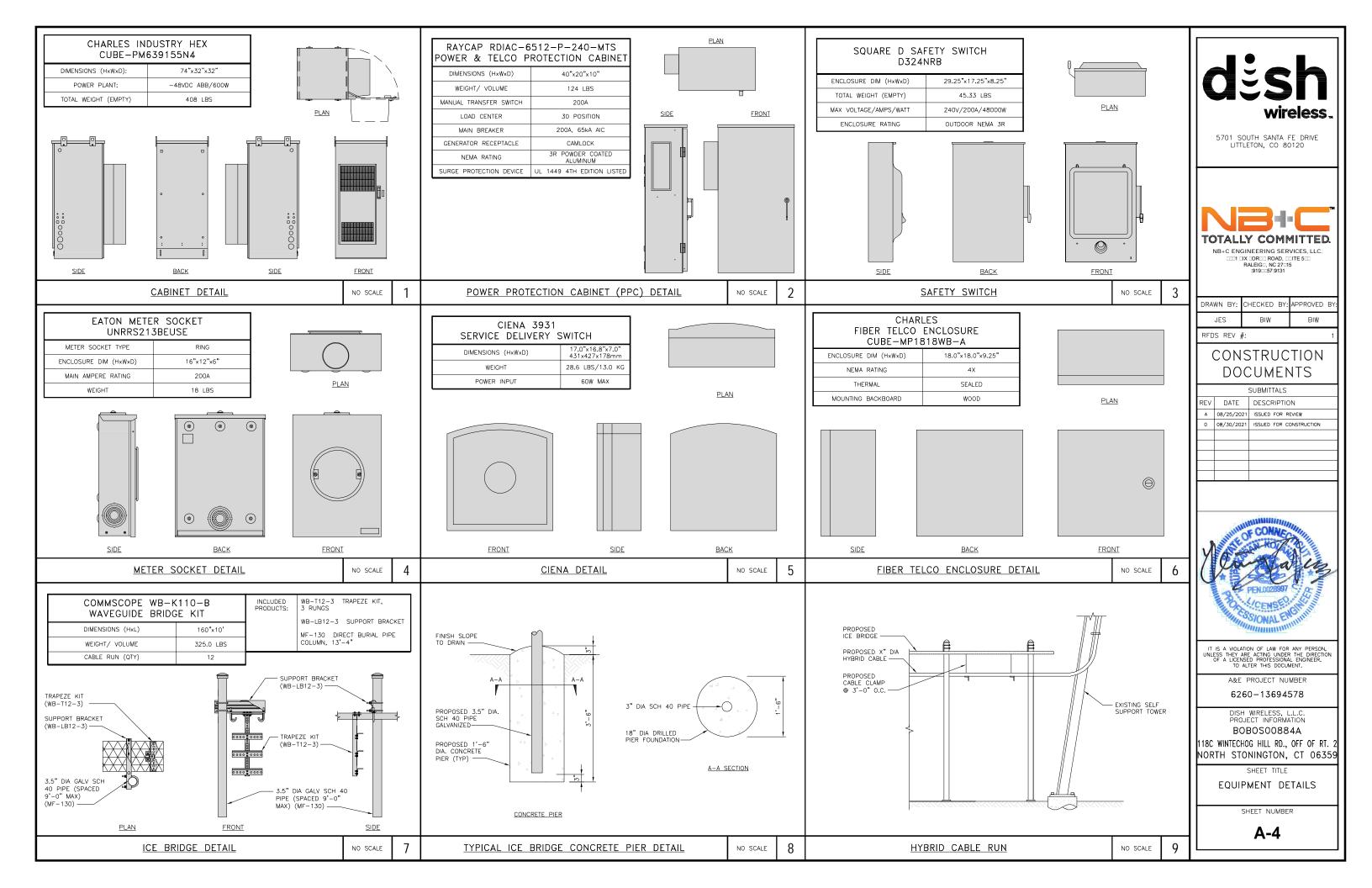
ELEVATION, ANTENNA LAYOUT AND SCHEDULE

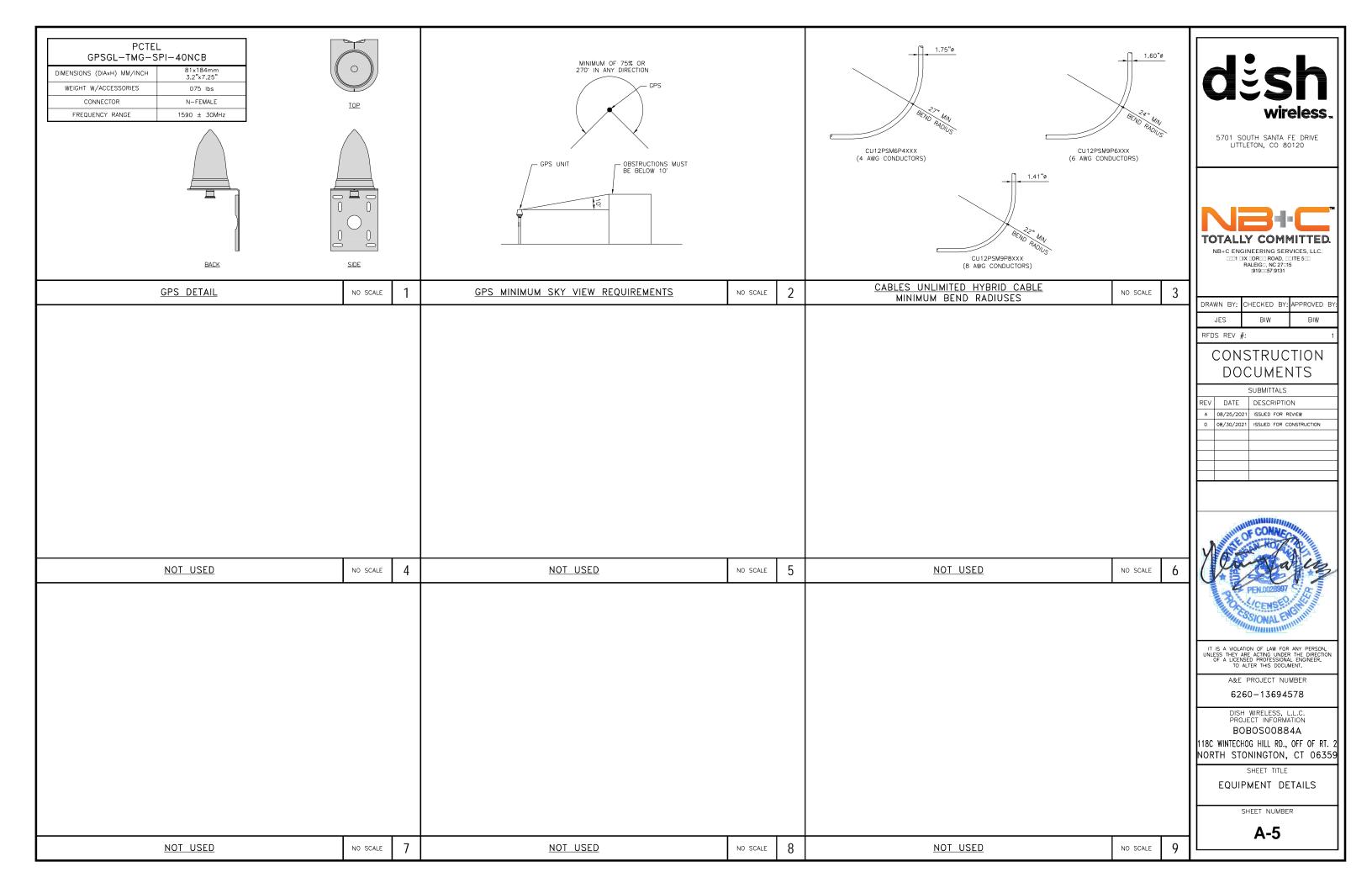
A-2

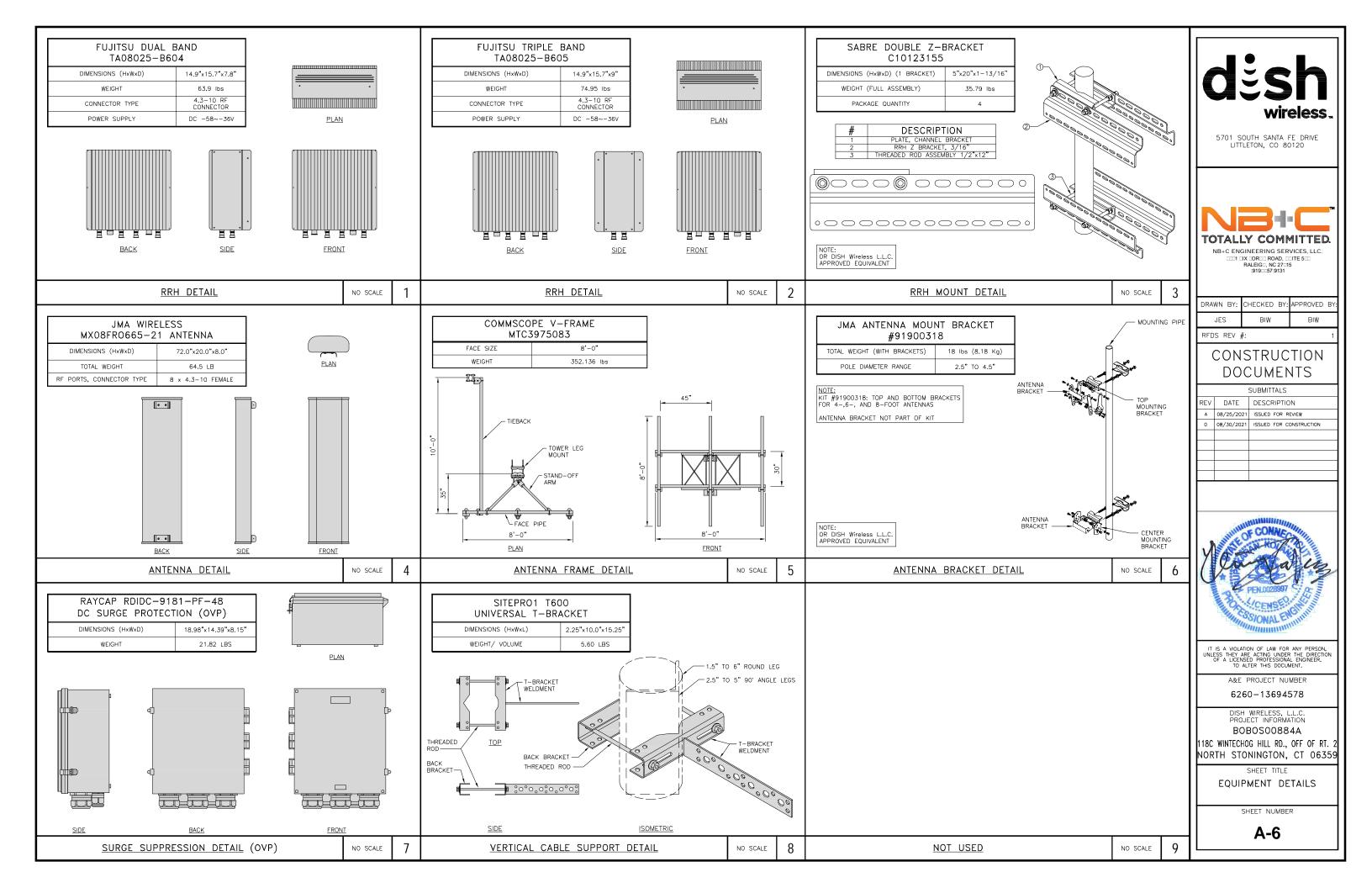
ANTENNA SCHEDULE

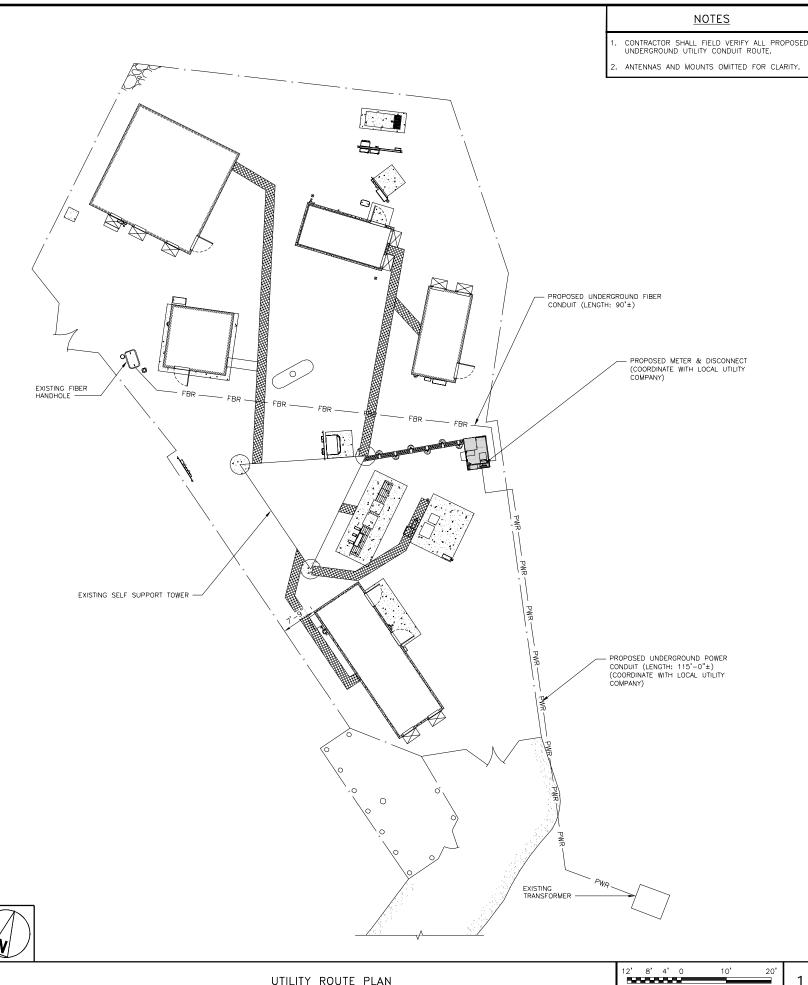
NO SCALE







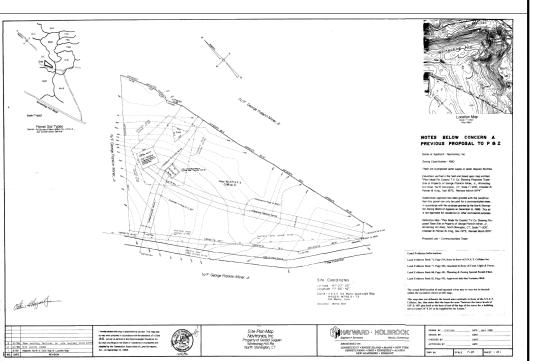




DC POWER WIRING SHALL BE COLOR CODED AT EACH END FOR IDENTIFYING ± 24 V AND ± 48 V CONDUCTORS, RED MARKINGS SHALL IDENTIFY ± 24 V AND BLUE MARKINGS SHALL IDENTIFY ± 48 V.

- 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
- 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 ENGRAYED 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 NO SCALE **NOTES** . THE SURVEY PROVIDED ON THIS SHEET IS PROVIDED FOR REFERENCE ONLY, THE UTILITY ROUTE AND EXISTING EASEMENTS MUST BE VERIFIED PRIOR TO CONSTRUCTION.





5701 SOUTH SANTA FE DRIVE LITTLETON, CO 80120



NB+C ENGINEERING SERVICES, LLC. □□□1 □IX □OR□□ ROAD, □□ITE 5□□ RALEIG ... NC 27 15 □919□□57□9131

DRAWN BY:	CHECKED BY:	APPROVED BY:
JES	BIW	Bi₩

RFDS REV #:

CONSTRUCTION **DOCUMENTS**

	SUBMITTALS				
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A&E PROJECT NUMBER

6260-13694578

DISH WIRELESS, L.L.C. PROJECT INFORMATION BOBOSO0884A

118C WINTECHOG HILL RD., OFF OF RT. : NORTH STONINGTON, CT 06359

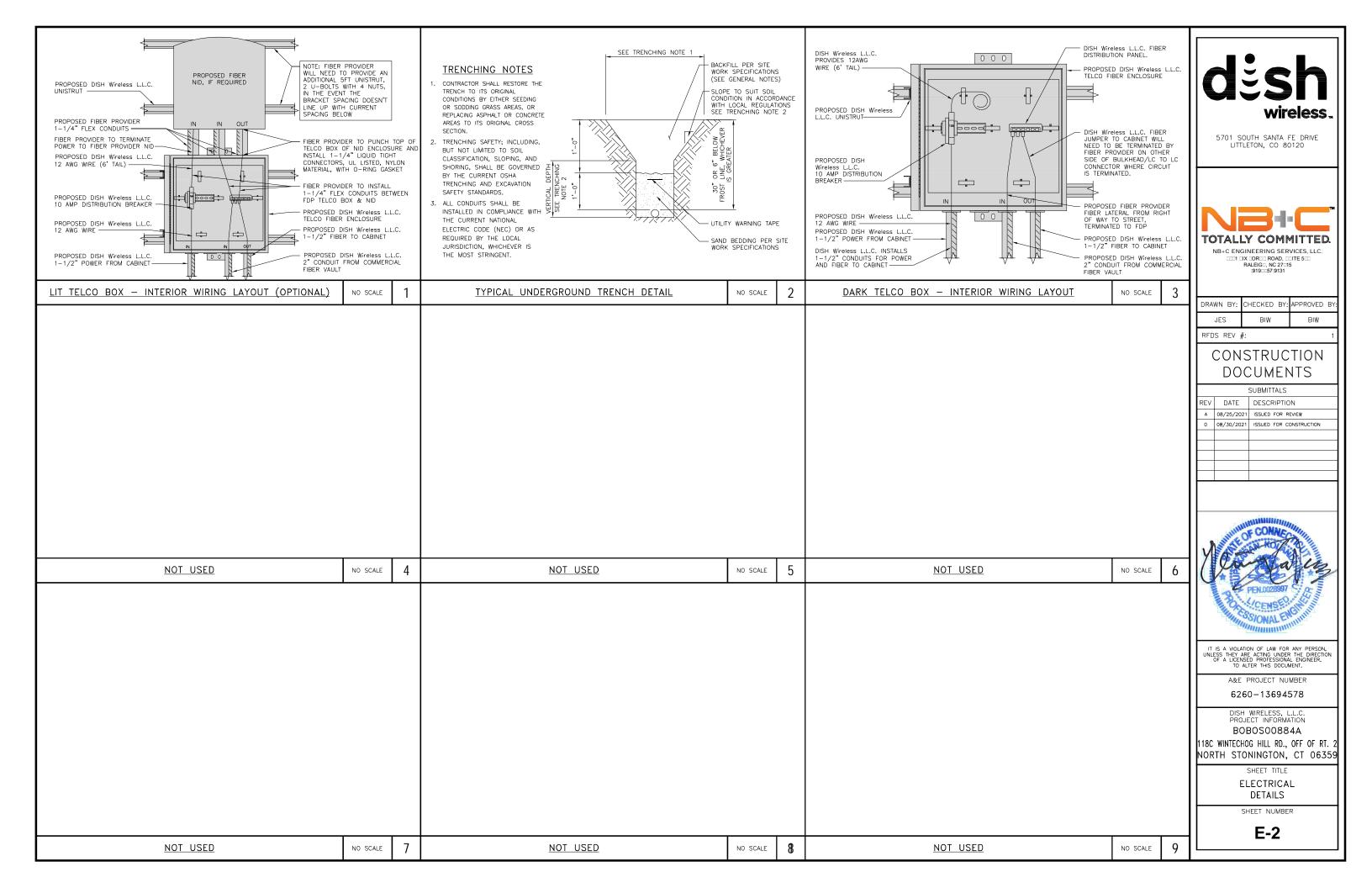
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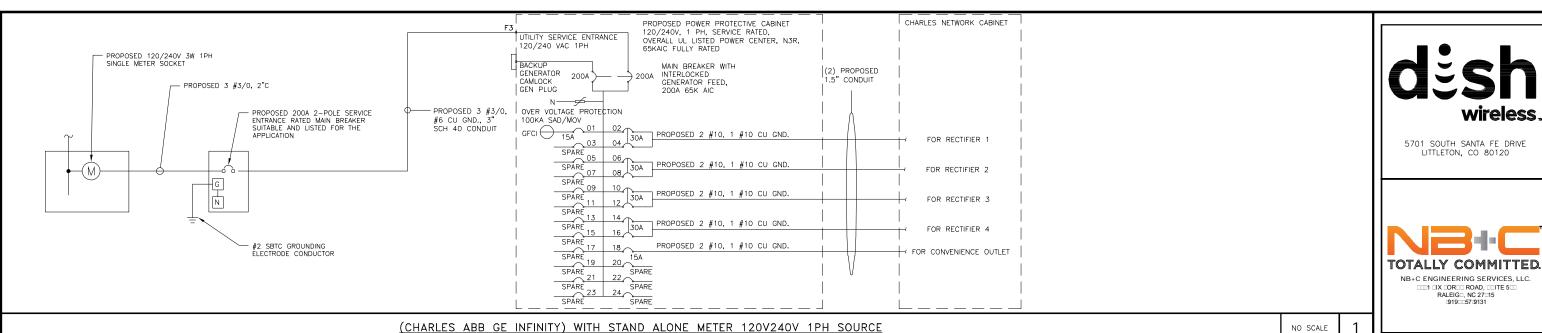
ELECTRICAL/FIBER ROUTE PLAN AND NOTES

SHEET NUMBER

E-1

EXISTING SURVEY (BY OTHERS) 3/32"=1'-0"





DRAWN BY: CHECKED BY: APPROVED BY

JES BI₩ RFDS REV #:

NB+C ENGINEERING SERVICES, LLC. RALEIGO, NC 27:15 □919□□57□9131

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CONSTRUCTION **DOCUMENTS** SURMITTALS

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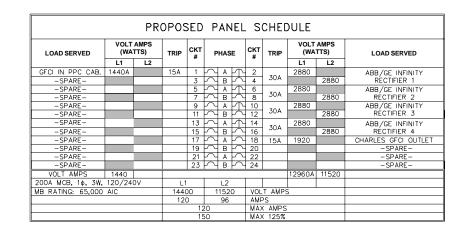
NORTH STONINGTON, CT 06359

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ELECTRICAL ONE-LINE, FAULT CALCS & PANEL SCHEDULE

SHEET NUMBER

E-3

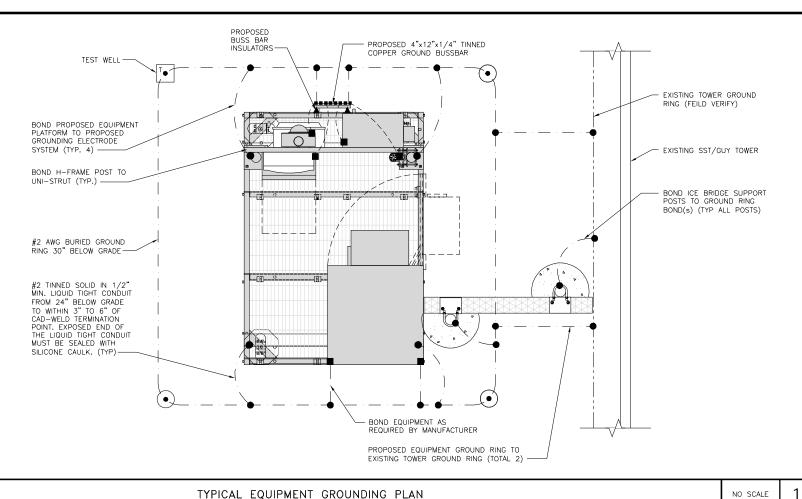


PANEL SCHEDULE (CHARLES ABB GE INFINITY) WITH STAND ALONE METER 120V240V 1PH SOURCE

NO SCALE

2

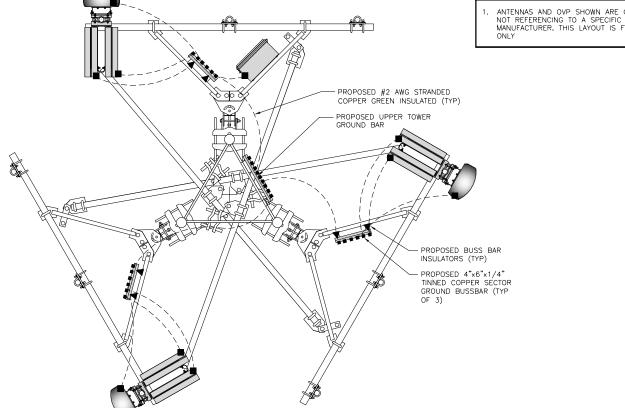
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TYPICAL EQUIPMENT GROUNDING PLAN

NOTES

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



 EXOTHERMIC CONNECTION MECHANICAL CONNECTION

GROUND BUS BAR

GROUND ROD

TEST GROUND ROD WITH INSPECTION SLEEVE

---- #2 AWG STRANDED & INSULATED

— · — #2 AWG SOLID COPPER TINNED

▲ BUSS BAR INSULATOR

GROUNDING LEGEND

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

GROUNDING KEY NOTES

- (A) EXTERIOR GROUND RING: #2 AWG SOLID COPPER, BURIED AT A DEPTH OF AT LEAST 30 INCHES BELOW GRADE, OR 6 INCHES BELOW THE FROST LINE AND APPROXIMATELY 24 INCHES FROM THE EXTERIOR WALL OR FOOTING.
- TOWER GROUND RING: THE GROUND RING SYSTEM SHALL BE INSTALLED AROUND AN ANTENNA TOWER'S LEGS, B TOWER GROUND RING: THE GROUND RING SYSTEM SHALL BE INSTALLED ANOUND AN 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, 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.
- 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
- 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
- (E) GROUND ROD: UL LISTED COPPER CLAD STEEL, MINIMUM 5/8" 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.
- 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.
- 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.
- (J) TELCO GROUND BAR: BOND TO BOTH CELL REFERENCE GROUND BAR OR EXTERIOR GROUND RING.
- K FRAME BONDING: THE BONDING POINT FOR TELECOM EQUIPMENT FRAMES SHALL BE THE GROUND BUS THAT IS NOT ISOLATED FROM THE EQUIPMENTS METAL FRAMEWORK.
- (L) <u>INTERIOR UNIT BONDS:</u> 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
- M 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.
- (N) 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
- P 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
- 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
- (R) TOWER TOP COLLECTOR BUSS BAR IS TO BE MECHANICALLY BONDED TO PROPOSED ANTENNA MOUNT COLLAR. REFER TO DISH WIRELESS, L.L.C. GROUNDING NOTES.

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5701 SOUTH SANTA FE DRIVE LITTLETON, CO 80120



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118C WINTECHOG HILL RD., OFF OF RT. NORTH STONINGTON, CT 06359

SHEET TITLE

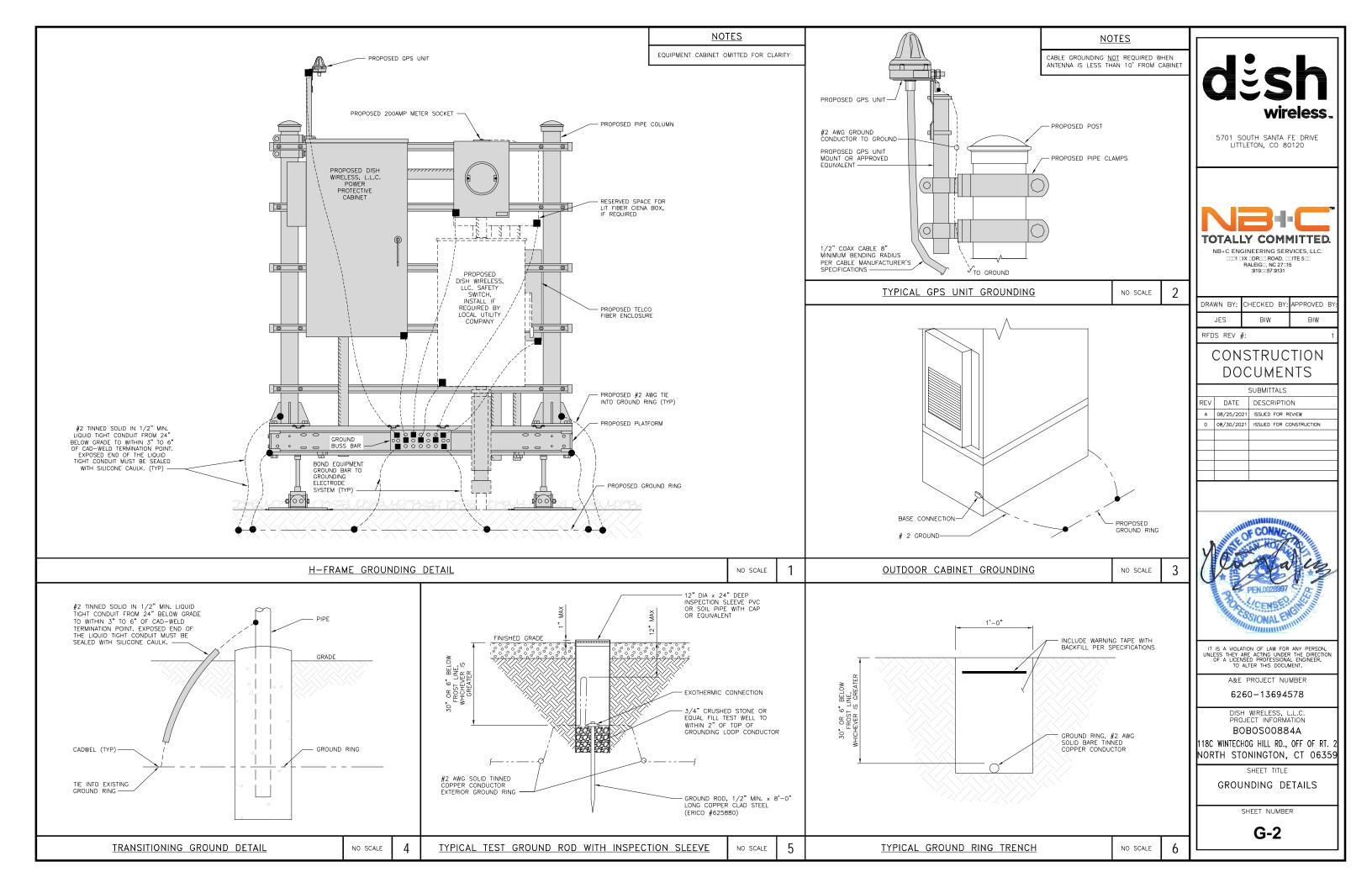
GROUNDING PLANS AND NOTES

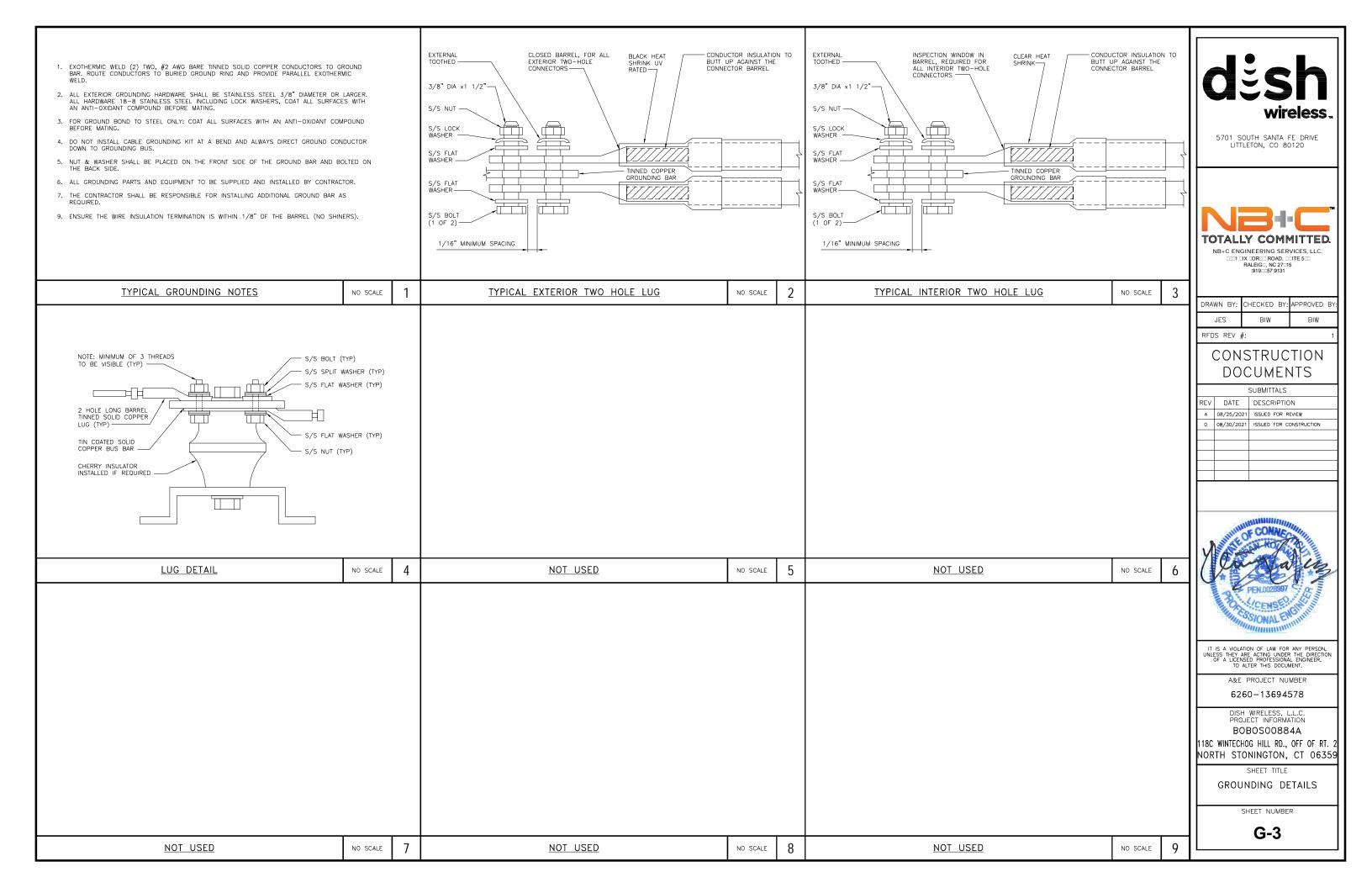
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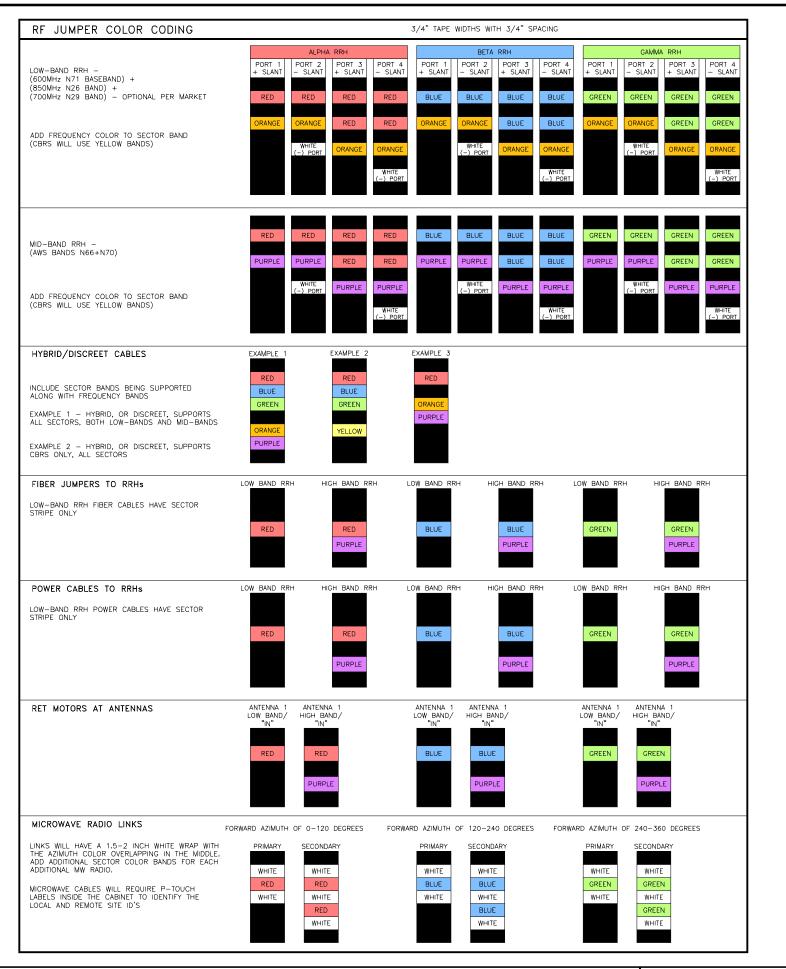
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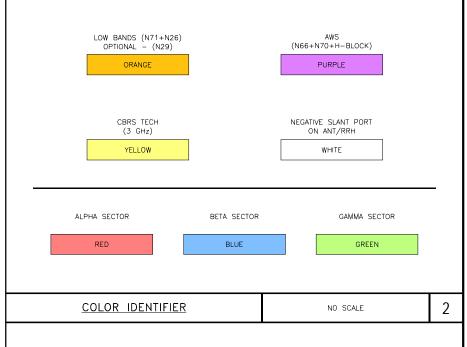
GROUNDING KEY NOTES

NO SCALE









NO SCALE

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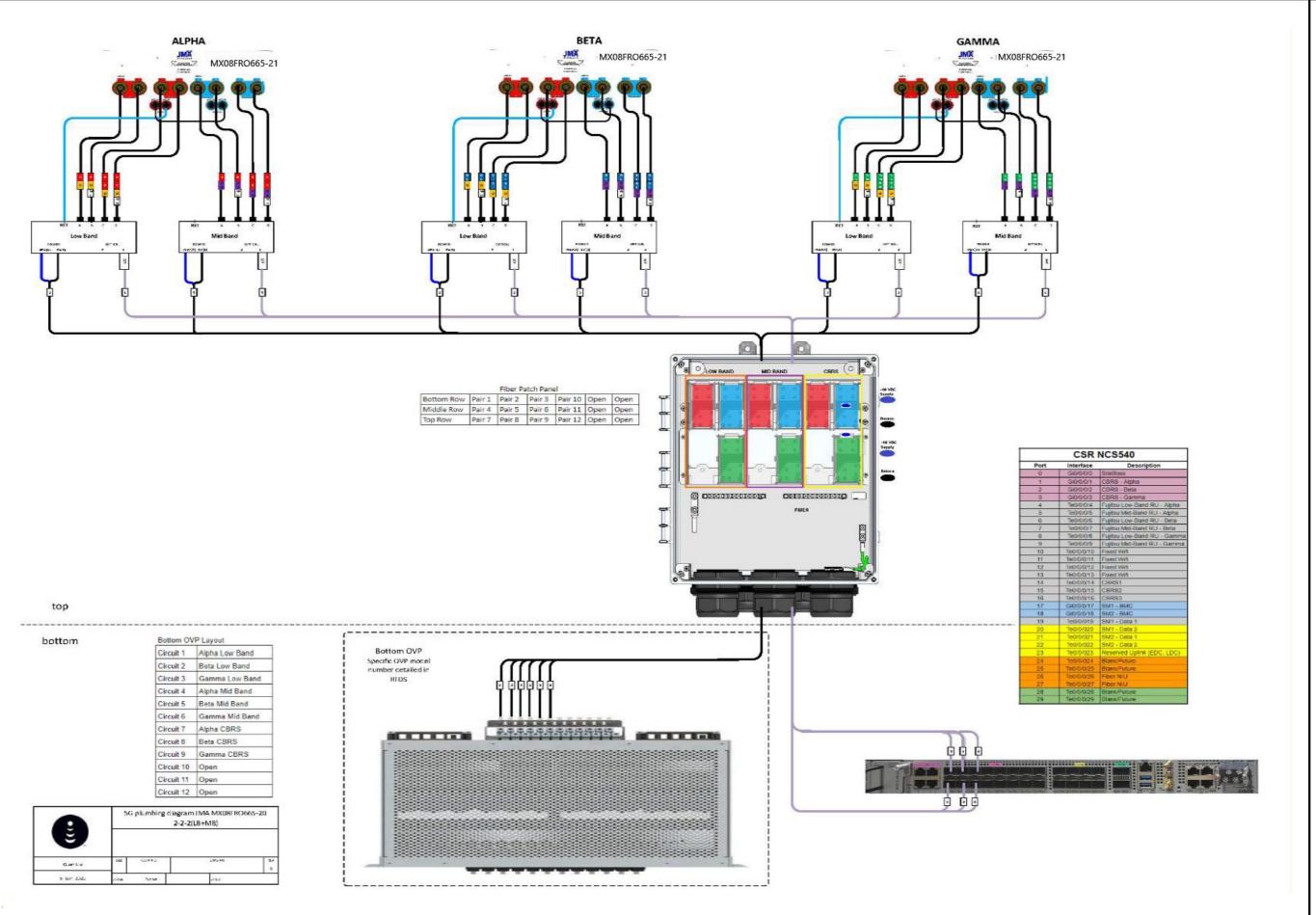
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RF CABLE COLOR CODES

SHEET NUMBER

RF-1





5701 SOUTH SANTA FE DRIVE LITTLETON, CO 80120



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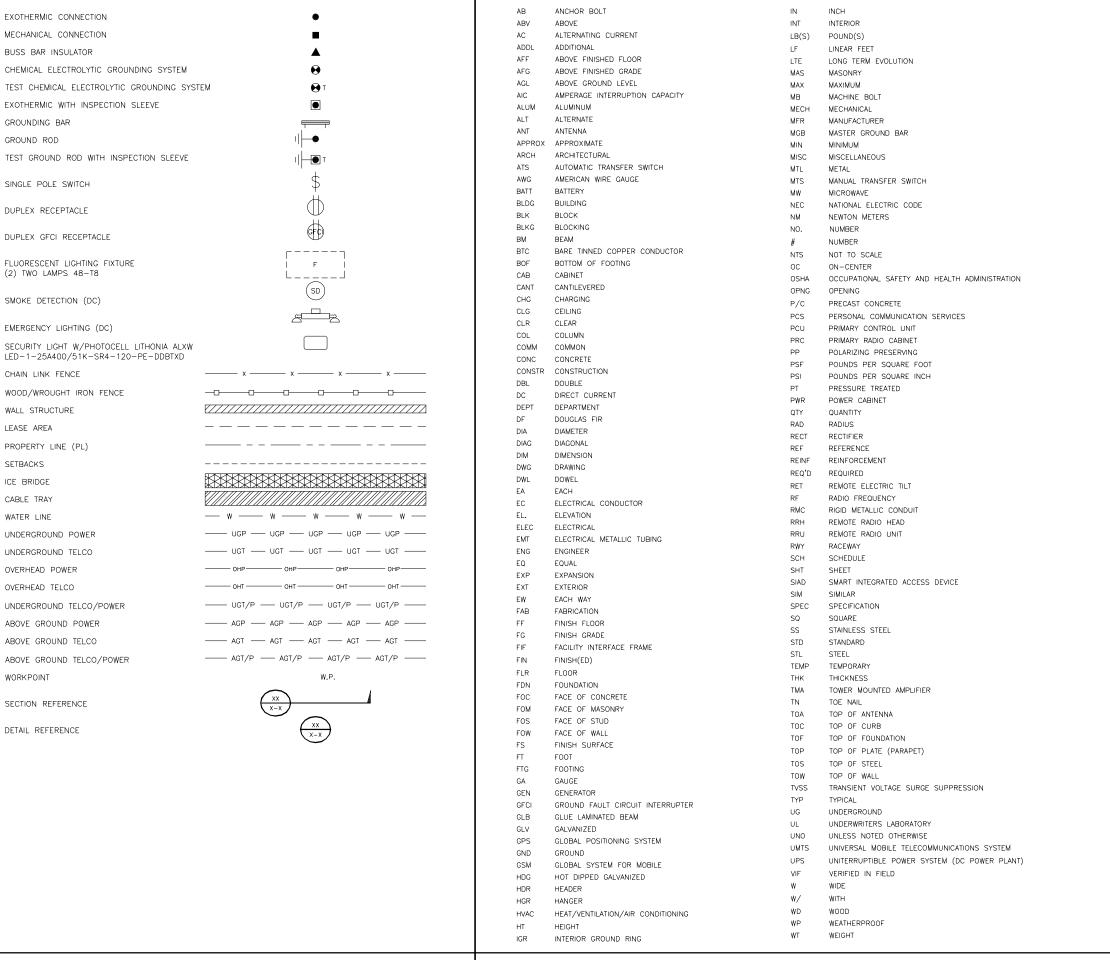
NORTH STONINGTON, CT 06359 SHEET TITLE

RF PLUMBING DIAGRAM

RF-2

PLUMBING DIAGRAM

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5701 SOUTH SANTA FE DRIVE LITTLETON, CO 80120



NB+C ENGINEERING SERVICES, LLC.

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1919057:9131

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118C WINTECHOG HILL RD., OFF OF RT. 2 NORTH STONINGTON, CT 06359

SHEET TITLE

LEGEND AND

ABBREVIATIONS

SHEET NUMBER

GN-1

ABBREVIATIONS

LEGEND

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 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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A&E PROJECT NUMBER

6260-13694578

DISH WIRELESS, L.L.C. PROJECT INFORMATION

BOBOSOO884A 118C WINTECHOG HILL RD.. OFF OF RT.

NORTH STONINGTON, CT 06359

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN-2

CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

- 1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST—IN—PLACE CONCRETE.
- 2. UNLESS NOTED OTHERWISE, SOIL BEARING PRESSURE USED FOR DESIGN OF SLABS AND FOUNDATIONS IS ASSUMED TO BE 1000 psf.
- 3. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (I'c) OF 3000 psi at 28 days, unless noted otherwise. No more than 90 minutes shall elapse from batch time to time of placement unless approved by the engineer of record. Temperature of concrete shall not exceed 90'f at time of placement.
- 4. CONCRETE EXPOSED TO FREEZE-THAW CYCLES SHALL CONTAIN AIR ENTRAINING ADMIXTURES. AMOUNT OF AIR ENTRAINMENT TO BE BASED ON SIZE OF AGGREGATE AND F3 CLASS EXPOSURE (VERY SEVERE). CEMENT USED TO BE TYPE II PORTLAND CEMENT WITH A MAXIMUM WATER-TO-CEMENT RATIO (W/C) OF 0.45.
- 5. ALL STEEL REINFORCING SHALL CONFORM TO ASTM A615. ALL WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A185. ALL SPLICES SHALL BE CLASS "B" TENSION SPLICES, UNLESS NOTED OTHERWISE. ALL HOOKS SHALL BE STANDARD 90 DEGREE HOOKS, UNLESS NOTED OTHERWISE. YIELD STRENGTH (Fy) OF STANDARD DEFORMED BARS ARE AS FOLLOWS:

#4 BARS AND SMALLER 40 ksi

#5 BARS AND LARGER 60 ksi

- 6. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
- CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3"
- CONCRETE EXPOSED TO EARTH OR WEATHER:
- #6 BARS AND LARGER 2"
- #5 BARS AND SMALLER 1-1/2"
- CONCRETE NOT EXPOSED TO EARTH OR WEATHER:
- SLAB AND WALLS 3/4"
- BEAMS AND COLUMNS 1-1/2"
- 7. A TOOLED EDGE OR A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNLESS NOTED OTHERWISE, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

ELECTRICAL INSTALLATION NOTES:

- 1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES/ORDINANCES.
- 2. CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.
- 3. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC.
- 4. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.
- 4.1. ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OF APPROVAL, AND SHALL CONFORM TO REQUIREMENT OF THE NATIONAL ELECTRICAL CODE.
- 4.2. ALL OVERCURRENT DEVICES SHALL HAVE AN INTERRUPTING CURRENT RATING THAT SHALL BE GREATER THAN THE SHORT CIRCUIT CURRENT TO WHICH THEY ARE SUBJECTED, 22,000 AIC MINIMUM. VERIFY AVAILABLE SHORT CIRCUIT CURRENT DOES NOT EXCEED THE RATING OF ELECTRICAL EQUIPMENT IN ACCORDANCE WITH ARTICLE 110.24 NEC OR THE MOST CURRENT ADOPTED CODE PRE THE GOVERNING JURISDICTION.
- 5. EACH END OF EVERY POWER PHASE CONDUCTOR, GROUNDING CONDUCTOR, AND TELCO CONDUCTOR OR CABLE SHALL BE LABELED WITH COLOR—CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2" PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA.
- 6. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH LAMICOID TAGS SHOWING THEIR RATED VOLTAGE, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT ID NUMBERS (i.e. PANEL BOARD AND CIRCUIT ID'S).
- 7. PANEL BOARDS (ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.
- 8. TIE WRAPS ARE NOT ALLOWED.
- 9. ALL POWER AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE COPPER CONDUCTOR (#14 OR LARGER) WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.
- 10. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE COPPER CONDUCTOR (#6 OR LARGER) WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.
- 11. POWER AND CONTROL WIRING IN FLEXIBLE CORD SHALL BE MULTI-CONDUCTOR, TYPE SOOW CORD (#14 OR LARGER) UNLESS OTHERWISE SPECIFIED.
- 12. POWER AND CONTROL WIRING FOR USE IN CABLE TRAY SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#14 OR LARGER), WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.
- 13. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRE NUTS SHALL BE RATED FOR OPERATION NOT LESS THAN 75' C (90' C IF AVAILABLE).
- 14. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
- 15. ELECTRICAL METALLIC TUBING (EMT), INTERMEDIATE METAL CONDUIT (IMC), OR RIGID METAL CONDUIT (RMC) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.

- S. ELECTRICAL METALLIC TUBING (EMT) OR METAL-CLAD CABLE (MC) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
- 17. SCHEDULE 40 PVC UNDERGROUND ON STRAIGHTS AND SCHEDULE 80 PVC FOR ALL ELBOWS/90s AND ALL APPROVED ABOVE GRADE PVC CONDUIT.
- 18. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
- 19. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION—TYPE AND APPROVED FOR THE LOCATION USED, SET SCREW FITTINGS ARE NOT ACCEPTABLE.

 20. CABINETS, BOXES AND WIRE WAYS SHALL BE LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND THE
- NEC.
- 21. WIREWAYS SHALL BE METAL WITH AN ENAMEL FINISH AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS (WIREMOLD SPECMATE WIREWAY).
- 22. SLOTTED WIRING DUCT SHALL BE PVC AND INCLUDE COVER (PANDUIT TYPE E OR EQUAL).
- 23. CONDUITS SHALL BE FASTENED SECURELY IN PLACE WITH APPROVED NON-PERFORATED STRAPS AND HANGERS. EXPLOSIVE DEVICES (i.e. POWDER-ACTUATED) FOR ATTACHING HANGERS TO STRUCTURE WILL NOT BE PERMITTED. CLOSELY FOLLOW THE LINES OF THE STRUCTURE, MAINTAIN CLOSE PROXIMITY TO THE STRUCTURE AND KEEP CONDUITS IN TIGHT ENVELOPES. CHANGES IN DIRECTION TO ROUTE AROUND OBSTACLES SHALL BE MADE WITH CONDUIT OUTLET BODIES. CONDUIT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. PARALLEL AND PERPENDICULAR TO STRUCTURE WALL AND CEILING LINES. ALL CONDUIT SHALL BE FISHED TO CLEAR OBSTRUCTIONS. ENDS OF CONDUITS SHALL BE TEMPORARILY CAPPED FLUSH TO FINISH GRADE TO PREVENT CONCRETE, PLASTER OR DIRT FROM ENTERING. CONDUITS SHALL BE RIGIDLY CLAMPED TO BOXES BY GALVANIZED MALLEABLE IRON BUSHING ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE.
- 24. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES AND PULL BOXES SHALL BE GALVANIZED OR EPOXY—COATED SHEET STEEL. SHALL MEET OR EXCEED UL 50 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND NEMA 3 (OR BETTER) FOR EXTERIOR LOCATIONS.
- 25. METAL RECEPTACLE, SWITCH AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
- 26. NONMETALLIC RECEPTACLE, SWITCH AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2 (NEWEST REVISION) AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
- 27. THE CONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CARRIER AND/OR DISH WIRELESS, L.L.C. AND TOWER OWNER BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
- 28. THE CONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD LIFE AND PROPERTY.
- 29. INSTALL LAMICOID LABEL ON THE METER CENTER TO SHOW "DISH WIRELESS, L.L.C.".
- 30. ALL EMPTY/SPARE CONDUITS THAT ARE INSTALLED ARE TO HAVE A METERED MULE TAPE PULL CORD INSTALLED.



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NB+C ENGINEERING SERVICES, LLC.

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A&E PROJECT NUMBER

6260-13694578

DISH WIRELESS, L.L.C. PROJECT INFORMATION

BOBOSOO884A 118C WINTECHOG HILL RD., OFF OF RT.

NORTH STONINGTON, CT 06359

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 FOLIPMENT.
- 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/O 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.

STRUCTURAL STEEL NOTES:

- 1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
- 2. STRUCTURAL STEEL ROLLED SHAPES, PLATES AND BARS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS:
- A. ASTM A-572, GRADE 50 ALL W SHAPES, UNLESS NOTED OR A992 OTHERWISE
- B. ASTM A-36 ALL OTHER ROLLED SHAPES, PLATES AND BARS UNLESS NOTED OTHERWISE.
- C. ASTM A-500, GRADE B HSS SECTION (SQUARE, RECTANGULAR, AND ROUND)
- D. ASTM A-325, TYPE SC OR N ALL BOLTS FOR CONNECTING STRUCTURAL MEMBERS
- E. ASTM F-1554 07 ALL ANCHOR BOLTS, UNLESS NOTED OTHERWISE
- 3. ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.
- 4. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES AND GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS
- 5. DO NOT DRILL HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
- CONNECTIONS:
- A. ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.
- B. ALL WELDS SHALL BE INSPECTED VISUALLY. 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. REPAIR ALL WELDS AS NECESSARY.
- C. INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
- D. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE BURNING/WELDING PERMITS AS REQUIRED BY LOCAL GOVERNING AUTHORITY AND IF REQUIRED SHALL HAVE FIRE DEPARTMENT DETAIL FOR ANY WELDING ACTIVITY.
- E. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.
- F. MINIMUM WELD SIZE TO BE 0.1875 INCH FILLET WELDS, UNLESS NOTED OTHERWISE.
- G. PRIOR TO FIELD WELDING GALVANIZING MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING ½ BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.
- . THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE REQUIRED DURING CONSTRUCTION UNTIL ALL ONNECTIONS ARE COMPLETE.
- I. ANY FIELD CHANGES OR SUBSTITUTIONS SHALL HAVE PRIOR APPROVAL FROM THE ENGINEER, AND DISH WIRELESS L.L.C. PROJECT MANAGER IN WRITING



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NB+C ENGINEERING SERVICES, LLC.

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A&E PROJECT NUMBER

6260-13694578

DISH WIRELESS, L.L.C. PROJECT INFORMATION

BOBOSO0884A

118C WINTECHOG HILL RD., OFF OF RT. 2 NORTH STONINGTON, CT 06359

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN-4



ENGINEERING:

STRUCTURAL ANALYSIS

MOUNT ANALYSIS



Structural Analysis Report

Structure : 250 ft Self Supported Tower

ATC Site Name : NORTH STONINGTON CT, CT

ATC Asset Number : 6260

Engineering Number : 13694578_C3_02

Proposed Carrier : DISH WIRELESS L.L.C.

Carrier Site Name : BOBOS00884A

Carrier Site Number : BOBOS00884A

Site Location : 118C Wintechog Hill Rd., off of Rt. 2

North Stonington, CT 06359-1228

41.459800,-71.927300

County : New London

Date : June 24, 2021

Max Usage : 56%

Result : Pass

Prepared By:

Lucas Tait

Structural Engineer I

Reviewed By:

COA: PEC.0001553



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Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 250 ft self supported tower to reflect the change in loading by DISH WIRELESS L.L.C..

Supporting Documents

Tower Drawings	FWT Job #19240001, dated September 13, 1999
Foundation Drawing FWT Job #19240001, dated September 13, 1999	
Geotechnical Report Clarence Welti Associates, dated August 31, 1999	
Modifications	CLS Engineering PLLC Project #41124-12927122-01-MR-R1, dated July 3, 2019

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	127 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1" radial ice concurrent
Code:	ANSI/TIA-222-H / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	В
Risk Category:	
Topographic Factor Procedure:	Method 1
Topographic Category:	1
Spectral Response:	$Ss = 0.19, S_1 = 0.05$
Site Class:	D - Stiff Soil

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.



Existing and Reserved Equipment

Elev.1 (ft)	Qty	Equipment	Mount Type	Lines	Carrier
260.0	2	Generic 10' Omni	Leg	(4) 1 5/8" Coax	OTHER
260.0	1	Decibel DB809DK-XT	Leg	(2) 1 5/8" Coax	STATE OF CT
250.0	1	Box Enclosures BEN-92P		(4) 0 04 (5 0	
	3	RFS APXVSPP18-C-A20		(4) 0.21" (5.3mm)	
	3	Alcatel-Lucent TD-RRH8x20-25		Cat 5e	CDDINIT NIEVTEL
246.0	3	Alcatel-Lucent 1900 MHz 4X45 RRH	Sector Frame	(4) 1 1/4" Hybriflex Cable	SPRINT NEXTEL
	6	Alcatel-Lucent RRH2x50-08		(1) 1" conduit	
	3	KMW ETCR-654L12H6		(1) 1 conduit	
	1	Procom CXL 900-3LW			
236.0	1	Generic 5" x 3" x 2" Cavity Filter	Leg	(1) 1/2" Coax	SIGFOX S.A.
	1	Generic Low Noise Amplifier			
	3	Ericsson Radio 4449 B12,B71			T-MOBILE
225.0	3	Ericsson AIR 21, 1.3M, B2A B4P (91.5 lbs)	Coator Framo	(6) 1 5/8" Coax	
225.0	3	Ericsson AIR 21, 1.3M, B4A B2P (90.4 lbs)	Sector Frame	(4) 1 5/8" Hybriflex	
	3	RFS APXVAARR24_43-U-NA20			
207.0	1	Sinclair SC479-HF1LDF(E5765)	Leg	(1) 1 5/8" Coax	
200.0	1	Bird 432E-83I-01-T	Side Arm	(1) 0.51" (13mm) Cable	STATE OF CT
192.0	2	Sinclair SC479-HF1LDF(E5765)	Leg	(2) 1 5/8" Coax	
	1	Raycap DC6-48-60-18-8F (23.5" Height)	-		AT&T MOBILITY
	1	Raycap DC6-48-60-18-8F ("Squid")		(1) 0.39" (10mm) Fiber Trunk (1) 0.39" (9.8mm) Cable (4) 0.78" (19.7mm) 8 AWG 6 (6) 1 5/8" Coax (2) 3" conduit	
	3	Ericsson RRUS 8843 B2, B66A			
	3	Powerwave Allgon 7020			
175.0	6	Powerwave Allgon LGP21901			
	6	Powerwave Allgon LGP17201	Sector Frame		
	3	CCI OPA65R-BU8D			
	3	CCI DMP65R-BU8D			
	3	Ericsson RRUS 4478 B14			
	3	Ericsson RRUS 4449 B5, B12			
	3	Allgon 7770.00			
96.0	1	Generic 24" x 24" Ice Shield	Leg	-	
89.0	1	Generic 6' Dish w/ Radome	Leg	(1) 1/2" Coax (1) EW52	OTHER
83.0	1	RFS PA6-65AC w/ Radome	Leg	(1) WE65	STATE OF CT

Equipment to be Removed

Elev.1 (ft)	Qty	Equipment	Mount Type	Lines	Carrier
155.0	6	Kathrein Scala 860 10025	Sector Frame	(6) 3/8" Coax	METRO PCS INC
155.0	6	Kathrein Scala 800 10504	Sector Frame	(12) 1 5/8" Coax	IVIETRO PCS INC

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Proposed Equipment

Elev.1 (ft)	Qty	Equipment	Mount Type	Lines	Carrier
	1	Commscope RDIDC-9181-PF-48			
165.0	3	Fujitsu TA08025-B604	Sector Frame	(1) 1.60" (40.6mm) Hybrid	DISH WIRELESS L.L.C.
	3	Fujitsu TA08025-B605	Sector Frame		
	3	JMA Wireless MX08FRO665-21			

¹ Contracted elevations are shown for appurtenances within contracted installation tolerances. Appurtenances outside of contract limits are shown at installed elevations.

Install proposed coax anywhere on tower.



Standard Conditions

All engineering services performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

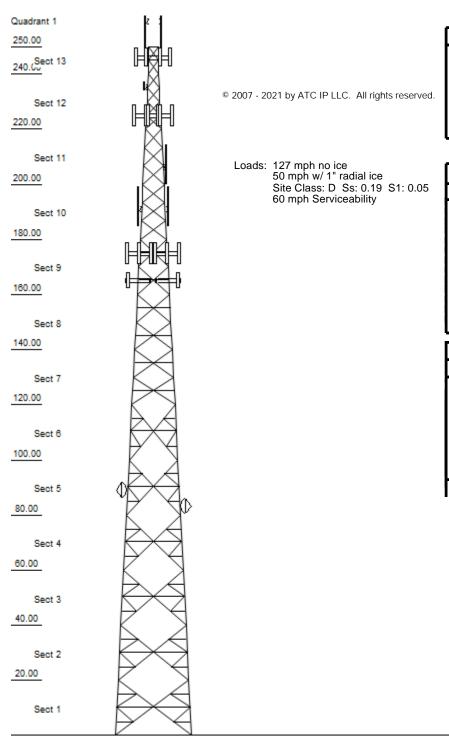
- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

All assets of American Tower Corporation, its affiliates and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and A.T. Engineering Service, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.



Job Information

Client : DISH WIRELESS L.L.C.

Tower: 6260 Location: NORTH Base Width: 28.00 ft Code: ANSI/TIA-222-H Topo Method: Method 1 Top Width: 4.00 ft

Risk Cat : II Topo: 1

Tower Ht: 250.00 ft Shape: Triangle

Exposure: B

Sections Properties													
Section	Leg Membe	ers	Diagonal Members	Horizontal Members									
1	SOL 50 ksi	5 3/4" SOLID	DAE 36 ksi 3X3X0.25										
2	SOL 50 ksi	5 1/2" SOLID	DAE 36 ksi 3X3X0.25										
3	SOL 50 ksi	5 1/4" SOLID	DAE 36 ksi 3X3X0.25										
4 5	SOL 50 ksi SOL 50 ksi	5" SOLID 5" SOLID 4 3/4" SOLID	DAE 36 ksi 3X3X0.1875 DAE 36 ksi 3X3X0.1875										
6	SOL 50 ksi	4 1/2" SOLID	DAE 36 ksi 3X3X0.1875										
7	SOL 50 ksi	4 1/4" SOLID	DAE 36 ksi 2.5X2.5X0.1875										
8	SOL 50 ksi	4" SOLID	DAE 36 ksi 2.5X2.5X0.1875										
9	SOL 50 ksi	3 3/4" SOLID	SAE 36 ksi 3.5X3.5X0.25										
10	SOL 50 ksi	3 3/4" SOLID	SAE 36 ksi 3X3X0.1875										
11	SOL 50 ksi	3 1/4" SOLID	SAE 36 ksi 2.5X2.5X0.1875										
12	SOL 50 ksi	2 1/4" SOLID	SAE 36 ksi 1.75X1.75X0.1875										
13	SOL 50 ksi	2" SOLID	SAE 36 ksi 1.75X1.75X0.1875	SAE 36 ksi 2X2X0.1875									

	Redundant Secondary Bracing														
Section	Sub Diag 1	Sub Horiz 1	Sub Diag 2	Sub Horiz 2	Sub Diag 3	Sub Horiz 3									
1	D2.5X2.5X0.18	75D2.5X2.5X0.187	5D2.5X2.5X0.18	375D3X3X0.1875	-	D2.5X2.5X0.18									
2	D2X2X0.1875	D2X2X0.1875	D2X2X0.1875	D3X3X0.1875	-	D2X2X0.1875									
3	D2X2X0.1875	D2X2X0.1875	D2X2X0.1875	D2.5X2.5X0.1875	; -	D2X2X0.1875									
4	S3X3X0.1875	S2.5X2.5X0.187	5S3X3X0.1875	S3.5X3.5X0.25	-	S2.5X2.5X0.18									
5	S3X3X0.1875	S2.5X2.5X0.187	5S3X3X0.1875	S3X3X0.25	-	S2.5X2.5X0.18									
6	S2.5X2.5X0.18	75S2X2X0.1875	S2.5X2.5X0.18	375 S3X3X0.1875	-	S2X2X0.1875									
7	-	S3X3X0.1875	-	-	-	-									
8	-	S2.5X2.5X0.187	5 -	-	-	-									
9	-	S2X2X0.1875	-	-	-	-									
10 - 13	-	-	-	-	-	-									

I	Discrete Appurtenance
Elev (ft) Type Qty	y Description
250.00 1 246.00 Mounting Frame 3 246.00 Panel 3 246.00 3 246.00 3 246.00 6 236.00 6 236.00 1 236.00 1 236.00 Whip 1 225.00 Mounting Frame 3 225.00 Panel 3	Round Sector Frames RFS APXVSPP18-C-A20 Alcatel-Lucent TD-RRH8x20-25 Alcatel-Lucent 1900 MHz 4X45 R KMW ETCR-654L12H6 Alcatel-Lucent RRH2x50-08 Generic Low Noise Amplifier Generic 5" x 3" x 2" Cavity Fi Procom CXL 900-3LW Round Sector Frames RFS APXVAARR24_43-U-NA20 Ericsson AIR 21, 1.3M, B4A B2P Ericsson AIR 21, 1.3M, B2A B4P Ericsson Radio 4449 B12,B71 Sinclair SC479-HF1LDF(E5765) Flat Side Arm Bird 432E-83I-01-T
	Generic Heavy Sector Frame CCI OPA65R-BU8D CCI DMP65R-BU8D

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Job Information

Client : DISH WIRELESS L.L.C.

Tower: 6260 Location: NORTH Base Width: 28.00 ft
Code: ANSI/TIA-222-H Topo Method: Method 1 Top Width: 4.00 ft

Risk Cat : II Topo: 1 Tower Ht : 250.00 ft

Exposure : B Shape : Triangle

175.00	3	Ericsson RRUS 4478 B14
175.00	6	Powerwave Allgon LGP17201
175.00	3	Ericsson RRUS 8843 B2, B66A
175.00	3	Ericsson RRUS 4449 B5, B12
175.00	1	Raycap DC6-48-60-18-8F ("Squid
175.00	1	Raycap DC6-48-60-18-8F (23.5"
175.00	3	Powerwave Allgon 7020
175.00	6	Powerwave Aligon LGP21901
165.00 Mounting Frame		
165.00 Panel	3	JMA Wireless MX08FRO665-21
165.00	3	Fujitsu TA08025-B605
165.00	3	Fujitsu TA08025-B604
165.00	1	Commscope RDIDC-9181-PF-48 Generic 24" x 24" Ice Shield
96.00 Other	1	
89.00 Dish	1	Generic 6' Dish w/ Radome
83.00 Dish	1	RFS PA6-65AC w/ Radome

Linear Appurtenance

Elev (ft)		
From	To	Qty	Description
0.00	260.00	2	1 5/8" Coax
0.00	260.00	4	1 5/8" Coax
0.00	250.00	1	Waveguide
0.00	250.00	1	Climbing Ladder
0.00	246.00	1	Waveguide
0.00	246.00	1	1" conduit
0.00	246.00	4	1 1/4" Hybriflex Cab
0.00	246.00	4	0.21" (5.3mm) Cat 5e
0.00	236.00	1	1/2" Coax
0.00	225.00	1	Waveguide
0.00	225.00	4	1 5/8" Hybriflex
0.00	225.00	6	1 5/8" Coax
0.00	210.00	1	Waveguide
0.00	207.00	1	1 5/8" Coax
10.00	200.00	1	0.51" (13mm) Cable
0.00	192.00	2	1 5/8" Coax
10.00	175.00	2	3" conduit
10.00	175.00	4	0.78" (19.7mm) 8 AWG
10.00	175.00	1	0.39" (10mm) Fiber T
0.00	175.00	1	Waveguide ´
0.00	175.00	6	1 5/8" Coax
0.00	175.00	1	0.39" (9.8mm) Cable
0.00	165.00	1	1.60" (40.6mm) Hybri
0.00	158.00	1	Waveguide
0.00	89.00	1	EW52
0.00	89.00	1	1/2" Coax
0.00	83.00	1	WE65

Global Base Foundation Design Loads												
Load Case	Moment (k-ft)	Vertical (kip)	Horizontal (kip)									
DL + WL	10,876.56	108.33	80.40									
DL + WL + IL	3,369.05	194.34	25.11									

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Job Information

Client : DISH WIRELESS L.L.C.

Tower: 6260 Location: NORTH Base Width: 28.00 ft
Code: ANSI/TIA-222-H Topo Method: Method 1 Top Width: 4.00 ft
Risk Cat: II Topo: 1 Tower Ht: 250.00 ft

Exposure : B Shape : Triangle

Individual Base Foundation Design Loads											
Vertical (kip)	Uplift (kip)	Horizontal (kip)									
484.65	399.07	48.37									

Site Name: NORTH STONINGTON CT, CT

Customer: DISH WIRELESS L.L.C.

Engineering Number: 13694578_C3_02 6/24/2021 12:57:04 PM

Analysis Parameters

Location: New London County, CT Height (ft): 250

Code: ANSI/TIA-222-H Base Elevation (ft): 0.00

Shape: Triangle Bottom Face Width (ft): 28.00

Tower Manufacturer: FWT Top Face Width (ft): 4.00

Tower Type: Self Support Anchor Bolt Detail Type d

Kd: 0.85 Ke: 0.98

Ice & Wind Parameters

Exposure Category: B Design Windspeed Without Ice: 127 mph

Risk Category: II Design Windspeed With Ice: 50 mph
Topographic Factor Procedure: Method 1 Operational Windspeed: 60 mph

Topographic Category: 1 Design Ice Thickness: 1.00 in

Crest Height: 0 ft HMSL: 447.00 ft

Seismic Parameters

Analysis Method: Equivalent Lateral Force Method

Site Class: D - Stiff Soil

Period Based on Rayleigh Method (sec): 0.88

 $T_L(sec)$: 6 p: 1.3 C_S : 0.032 S_S : 0.188 S₁: 0.053 C_S , Max: 0.032

F_a: 1.600 F_V: 2.400 C_S, Min: 0.030

 S_{ds} : 0.201 S_{d1} : 0.085

Load Cases

1.2D + 1.0W Normal 127 mph Normal with No Ice

1.2D + 1.0W 60 deg 127 mph 60 degree with No Ice

1.2D + 1.0W 90 deg 127 mph 90 degree with No Ice

0.9D + 1.0W Normal 127 mph Normal with No Ice (Reduced DL)

0.9D + 1.0W 60 deg 127 mph 60 deg with No Ice (Reduced DL)

0.9D + 1.0W 90 deg 127 mph 90 deg with No Ice (Reduced DL)

1.2D + 1.0Di + 1.0Wi Normal 50 mph Normal with 1.00 in Radial Ice

1.2D + 1.0Di + 1.0Wi 60 deg 50 mph 60 deg with 1.00 in Radial Ice

1.2D + 1.0Di + 1.0Wi 90 deg 50 mph 90 deg with 1.00 in Radial Ice

1.2D + 1.0DI + 1.0WI 90 deg 50 HIPH 90 deg WITH 1.00 III Radia

1.2D + 1.0Ev + 1.0Eh Normal Seismic Normal 1.2D + 1.0Ev + 1.0Eh 60 deg Seismic 60 deg

1.2D + 1.0Ev + 1.0Eh 90 deg Seismic 90 deg

0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL) Normal

0.9D - 1.0Ev + 1.0Eh 60 deg Seismic (Reduced DL) 60 deg

0.9D - 1.0Ev + 1.0Eh 90 deg Seismic (Reduced DL) 90 deg

1.0D + 1.0W Service Normal Serviceability - 60 mph Wind Normal

1.0D + 1.0W Service 60 deg Serviceability - 60 mph Wind 60 deg

1.0D + 1.0W Service 90 deg Serviceability - 60 mph Wind 90 deg

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Site Name: NORTH STONINGTON CT, CT Engineering Number:

13694578_C3_02

DISH WIRELESS L.L.C. Customer:

Site Number: 6260

Tower Loading

Discrete Appurtenance Properties 1.2D + 1.0W

Elevation Description (ft)	Qty	Wt. (Ib)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z I (psf)	F _a (WL) F (Ib)	P _a (DL) (lb)
260.0 Generic 10' Omni	2	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.0	44.84	229	60
260.0 Decibel DB809DK-XT	1	64	6.3	21.2	3.0	3.0	1.00	1.00	0.0	0.0	44.84	242	77
250.0 Box Enclosures BEN-	- 1	2	0.7	0.8	8.0	5.1	0.80	1.00	0.0	0.0	44.34	20	3
246.0 Alcatel-Lucent	6	53	1.7	1.3	13.0	9.8	0.80	0.50	0.0	0.0	44.14	153	381
246.0 Alcatel-Lucent 1900	3	60	2.3	2.1	11.1	10.7	0.80	0.50	0.0	0.0	44.14	105	216
246.0 Alcatel-Lucent TD-	3	66	3.7	2.1	17.5	5.7	0.80	0.50	0.0	0.0	44.14	167	238
246.0 RFS APXVSPP18-C-	3	57	8.0	6.0	11.8	7.0	0.80	0.69	0.0	0.0	44.14	498	205
246.0 Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	44.14	912	1080
246.0 KMW ETCR-	3	85	15.7	7.1	21.0	6.3	0.80	0.61	0.0	0.0	44.14	863	306
236.0 Procom CXL 900-	1	2	0.1	2.3	0.6	0.6	1.00	1.00	0.0	0.0	43.62	5	2
236.0 Generic 5" x 3" x 2"	1	2	0.1	0.4	3.2	1.9	1.00	0.50	0.0	0.0	43.62	3	2
236.0 Generic Low Noise	1	2	0.2	0.4	4.0	2.0	1.00	0.50	0.0	0.0	43.62	3	2
225.0 Ericsson Radio 4449	3	74	1.6	1.2	13.2	9.3	0.80	0.50	0.0	0.0	43.03	72	266
225.0 Ericsson AIR 21,	3	92	6.0	4.7	12.0	7.8	0.80	0.70	0.0	0.0	43.03	371	329
225.0 Ericsson AIR 21,	3	90	6.1	4.7	12.1	7.9	0.80	0.70	0.0	0.0	43.03	374	325
225.0 Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	43.03	889	1080
225.0 RFS	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	43.03	1119	460
207.0 Sinclair SC479-	1	34	5.0	14.4	3.5	3.5	1.00	1.00	0.0	0.0	42.01	180	41
200.0 Bird 432E-83I-01-T	1	25	1.2	1.0	12.0	7.5	0.80	0.67	0.0	0.0	41.60	23	30
200.0 Flat Side Arm	3	150	6.3	0.0	0.0	0.0	1.00	0.67	0.0	0.0	41.60	448	540
192.0 Sinclair SC479-	2	34	5.0	14.4	3.5	3.5	1.00	1.00	0.0	0.0	41.12	352	82
175.0 Powerwave Allgon	6	6	0.2	0.3	6.0	3.0	0.80	0.50	0.0	0.0	40.04	16	40
175.0 Powerwave Allgon	3	2	0.3	0.4	8.3	2.4	0.80	0.50	0.0	0.0	40.04	14	8
175.0 Raycap DC6-48-60-	1	20	1.3	2.0	9.7	9.7	0.80	0.67	0.0	0.0	40.04	23	24
175.0 Raycap DC6-48-60-	1	32	1.5	2.0	11.0	11.0	0.80	1.00	0.0	0.0	40.04	40	38
175.0 Ericsson RRUS 8843	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.0	40.04	67	259
175.0 Powerwave Allgon	6	31	1.7	1.2	14.4	3.7	0.80	0.50	0.0	0.0	40.04	136	223
175.0 Ericsson RRUS 4478	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.0	40.04	75	216
175.0 Ericsson RRUS 4449	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.0	40.04	80	256
175.0 Allgon 7770.00	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	40.04	292	126
175.0 CCI DMP65R-BU8D	3	96	17.9	8.0	20.7	7.7	0.80	0.63	0.0	0.0	40.04	920	345
175.0 CCI OPA65R-BU8D	3	77	18.1	8.0	21.0	7.8	0.80	0.63	0.0	0.0	40.04	931	275
175.0 Generic Heavy	3	500	29.3	0.0	0.0	0.0	0.75	0.75	0.0	0.0	40.04	1683	1800
165.0 Commscope RDIDC-	1	22	1.9	1.3	14.0	8.0	0.80	1.00	0.0	0.0	39.38	50	26
165.0 Fujitsu TA08025-	3	64	2.0	1.3	15.0	7.9	0.80	0.50	0.0	0.0	39.38	79	230
165.0 Fujitsu TA08025-	3	75	2.0	1.3	15.0	9.1	0.80	0.50	0.0	0.0	39.38	79	270
165.0 JMA Wireless	3	65	12.5	6.0	20.0	8.0	0.80	0.64	0.0	0.0	39.38	642	232
165.0 Generic Flat Light	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	39.38	1011	1440
96.00 Generic 24" x 24"	1	50	0.8	0.3	24.0	24.0	1.00	1.00	0.0	0.0	33.73	23	60
89.00 Generic 6' Dish w/	1	250	24.4	6.0	72.0	0.0	1.00	1.00	0.0	0.0	33.01	685	300
83.00 RFS PA6-65AC w/	1	308	24.4	6.0	72.0	0.0	1.00	1.00	0.0	0.0	32.36	671	370
-													

Discrete Appurtenance Properties 0.9D + 1.0W

104

10219 734.6

Totals

Elevation Description (ft)	⊇ty	Wt. (Ib)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z F (psf)	F _a (WL) F (lb)	P _a (DL) (lb)
260.0 Generic 10' Omni	2	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.0	44.84	229	45
260.0 Decibel DB809DK-XT	1	64	6.3	21.2	3.0	3.0	1.00	1.00	0.0	0.0	44.84	242	58
250.0 Box Enclosures BEN-	1	2	0.7	0.8	8.0	5.1	0.80	1.00	0.0	0.0	44.34	20	2
246.0 Alcatel-Lucent	6	53	1.7	1.3	13.0	9.8	0.80	0.50	0.0	0.0	44.14	153	286
246.0 Alcatel-Lucent 1900	3	60	2.3	2.1	11.1	10.7	0.80	0.50	0.0	0.0	44.14	105	162

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Site Name: NORTH STONINGTON CT, CT Engineering Number: 13694578_C3_02

Customer: DISH WIRELESS L.L.C.

Tower Loading

246.0 Alcatel-Lucent TD-	3	66	3.7	2.1	17.5	5.7	0.80	0.50	0.0	0.0	44.14	167	178
246.0 RFS APXVSPP18-C-	3	57	8.0	6.0	11.8	7.0	0.80	0.69	0.0	0.0	44.14	498	154
246.0 Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	44.14	912	810
246.0 KMW ETCR-	3	85	15.7	7.1	21.0	6.3	0.80	0.61	0.0	0.0	44.14	863	229
236.0 Procom CXL 900-	1	2	0.1	2.3	0.6	0.6	1.00	1.00	0.0	0.0	43.62	5	1
236.0 Generic 5" x 3" x 2"	1	2	0.1	0.4	3.2	1.9	1.00	0.50	0.0	0.0	43.62	3	1
236.0 Generic Low Noise	1	2	0.2	0.4	4.0	2.0	1.00	0.50	0.0	0.0	43.62	3	2
225.0 Ericsson Radio 4449	3	74	1.6	1.2	13.2	9.3	0.80	0.50	0.0	0.0	43.03	72	200
225.0 Ericsson AIR 21,	3	92	6.0	4.7	12.0	7.8	0.80	0.70	0.0	0.0	43.03	371	247
225.0 Ericsson AIR 21,	3	90	6.1	4.7	12.1	7.9	0.80	0.70	0.0	0.0	43.03	374	244
225.0 Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	43.03	889	810
225.0 RFS	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	43.03	1119	345
207.0 Sinclair SC479-	1	34	5.0	14.4	3.5	3.5	1.00	1.00	0.0	0.0	42.01	180	31
200.0 Bird 432E-83I-01-T	1	25	1.2	1.0	12.0	7.5	0.80	0.67	0.0	0.0	41.60	23	23
200.0 Flat Side Arm	3	150	6.3	0.0	0.0	0.0	1.00	0.67	0.0	0.0	41.60	448	405
192.0 Sinclair SC479-	2	34	5.0	14.4	3.5	3.5	1.00	1.00	0.0	0.0	41.12	352	61
175.0 Powerwave Allgon	6	6	0.2	0.3	6.0	3.0	0.80	0.50	0.0	0.0	40.04	16	30
175.0 Powerwave Allgon	3	2	0.3	0.4	8.3	2.4	0.80	0.50	0.0	0.0	40.04	14	6
175.0 Raycap DC6-48-60-	1	20	1.3	2.0	9.7	9.7	0.80	0.67	0.0	0.0	40.04	23	18
175.0 Raycap DC6-48-60-	1	32	1.5	2.0	11.0	11.0	0.80	1.00	0.0	0.0	40.04	40	29
175.0 Ericsson RRUS 8843	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.0	40.04	67	194
175.0 Powerwave Allgon	6	31	1.7	1.2	14.4	3.7	0.80	0.50	0.0	0.0	40.04	136	167
175.0 Ericsson RRUS 4478	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.0	40.04	75	162
175.0 Ericsson RRUS 4449	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.0	40.04	80	192
175.0 Allgon 7770.00	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	40.04	292	95
175.0 CCI DMP65R-BU8D	3	96	17.9	8.0	20.7	7.7	0.80	0.63	0.0	0.0	40.04	920	258
175.0 CCI OPA65R-BU8D	3	77	18.1	8.0	21.0	7.8	0.80	0.63	0.0	0.0	40.04	931	207
175.0 Generic Heavy	3	500	29.3	0.0	0.0	0.0	0.75	0.75	0.0	0.0	40.04	1683	1350
165.0 Commscope RDIDC-	1	22	1.9	1.3	14.0	8.0	0.80	1.00	0.0	0.0	39.38	50	20
165.0 Fujitsu TA08025-	3	64	2.0	1.3	15.0	7.9	0.80	0.50	0.0	0.0	39.38	79	173
165.0 Fujitsu TA08025-	3	75	2.0	1.3	15.0	9.1	0.80	0.50	0.0	0.0	39.38	79	203
165.0 JMA Wireless	3	65	12.5	6.0	20.0	8.0	0.80	0.64	0.0	0.0	39.38	642	174
165.0 Generic Flat Light	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	39.38	1011	1080
96.00 Generic 24" x 24"	1	50	0.8	0.3	24.0	24.0	1.00	1.00	0.0	0.0	33.73	23	45
89.00 Generic 6' Dish w/	1	250	24.4	6.0	72.0	0.0	1.00	1.00	0.0	0.0	33.01	685	225
83.00 RFS PA6-65AC w/	1	308	24.4	6.0	72.0	0.0	1.00	1.00	0.0	0.0	32.36	671	277
Totals	104	10219	734.6									14543	9197

Discrete Appurtenance Properties 1.2D + 1.0Di + 1.0Wi

Elevation Description (ft)	Qty	Ice Wt (Ib)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor		M _u (Ib-ft)	Q _z F (psf)	F _a (WL) F (Ib)	P _a (DL) (lb)
260.0 Generic 10' Omni	2	78	5.5	10.0	3.0	3.0	1.00	1.00	0.0	0.0	6.95	65	167
260.0 Decibel DB809DK-XT	1	176	11.6	21.2	3.0	3.0	1.00	1.00	0.0	0.0	6.95	69	188
250.0 Box Enclosures BEN-	1	18	1.1	8.0	8.0	5.1	0.80	1.00	0.0	0.0	6.87	5	18
246.0 Alcatel-Lucent	6	94	2.3	1.3	13.0	9.8	0.80	0.50	0.0	0.0	6.84	32	630
246.0 Alcatel-Lucent 1900	3	117	3.1	2.1	11.1	10.7	0.80	0.50	0.0	0.0	6.84	21	386
246.0 Alcatel-Lucent TD-	3	124	4.6	2.1	17.5	5.7	0.80	0.50	0.0	0.0	6.84	32	413
246.0 RFS APXVSPP18-C-	3	178	10.0	6.0	11.8	7.0	0.80	0.69	0.0	0.0	6.84	96	568
246.0 Round Sector	3	558	26.0	0.0	0.0	0.0	0.75	0.75	0.0	0.0	6.84	255	1854
246.0 KMW ETCR-	3	288	18.0	7.1	21.0	6.3	0.80	0.61	0.0	0.0	6.84	153	915
236.0 Procom CXL 900-	1	5	0.6	2.3	0.6	0.6	1.00	1.00	0.0	0.0	6.76	4	6
236.0 Generic 5" x 3" x 2"	1	5	0.3	0.4	3.2	1.9	1.00	0.50	0.0	0.0	6.76	1	5
236.0 Generic Low Noise	1	6	0.4	0.4	4.0	2.0	1.00	0.50	0.0	0.0	6.76	1	6
225.0 Ericsson Radio 4449	3	113	2.2	1.2	13.2	9.3	0.80	0.50	0.0	0.0	6.67	15	384
225.0 Ericsson AIR 21.	3	193	7.5	4.7	12.0	7.8	0.80	0.70	0.0	0.0	6.67	72	634

Site Name: NORTH STONINGTON CT, CT

Engineering Number: 13694578_C3_02

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Customer: DISH WIRELESS L.L.C.

Tower Loading

225.0 Ericsson AIR 21,	3	192	7.6	4.7	12.1	7.9	0.80	0.70	0.0	0.0	6.67	72	630
225.0 Round Sector	3	556	25.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	6.67	248	1849
225.0 RFS	3	402	22.8	8.0	24.0	8.7	0.80	0.63	0.0	0.0	6.67	196	1282
207.0 Sinclair SC479-	1	120	8.6	14.4	3.5	3.5	1.00	1.00	0.0	0.0	6.51	47	127
200.0 Bird 432E-83I-01-T	1	53	1.7	1.0	12.0	7.5	0.80	0.67	0.0	0.0	6.45	5	58
200.0 Flat Side Arm	3	200	8.0	0.0	0.0	0.0	1.00	0.67	0.0	0.0	6.45	88	690
192.0 Sinclair SC479-	2	119	8.5	14.4	3.5	3.5	1.00	1.00	0.0	0.0	6.37	93	251
175.0 Powerwave Allgon	6	11	0.4	0.3	6.0	3.0	0.80	0.50	0.0	0.0	6.21	5	71
175.0 Powerwave Allgon	3	9	0.6	0.4	8.3	2.4	0.80	0.50	0.0	0.0	6.21	4	29
175.0 Raycap DC6-48-60-	1	56	1.7	2.0	9.7	9.7	0.80	0.67	0.0	0.0	6.21	5	60
175.0 Raycap DC6-48-60-	1	74	1.9	2.0	11.0	11.0	0.80	1.00	0.0	0.0	6.21	8	80
175.0 Ericsson RRUS 8843	3	113	2.2	1.2	13.2	10.9	0.80	0.50	0.0	0.0	6.21	14	384
175.0 Powerwave Allgon	6	57	2.2	1.2	14.4	3.7	0.80	0.50	0.0	0.0	6.21	28	378
175.0 Ericsson RRUS 4478	3	97	2.4	1.4	13.4	7.7	0.80	0.50	0.0	0.0	6.21	16	328
175.0 Ericsson RRUS 4449	3	115	2.6	1.5	13.2	9.4	0.80	0.50	0.0	0.0	6.21	16	386
175.0 Allgon 7770.00	3	120	6.2	4.6	11.0	5.0	0.80	0.65	0.0	0.0	6.21	51	380
175.0 CCI DMP65R-BU8D	3	326	20.4	8.0	20.7	7.7	0.80	0.63	0.0	0.0	6.21	162	1034
175.0 CCI OPA65R-BU8D	3	310	20.6	8.0	21.0	7.8	0.80	0.63	0.0	0.0	6.21	164	975
175.0 Generic Heavy	3	872	41.0	0.0	0.0	0.0	0.75	0.75	0.0	0.0	6.21	365	2917
165.0 Commscope RDIDC-	1	60	2.5	1.3	14.0	8.0	0.80	1.00	0.0	0.0	6.10	10	64
165.0 Fujitsu TA08025-	3	103	2.6	1.3	15.0	7.9	0.80	0.50	0.0	0.0	6.10	16	347
165.0 Fujitsu TA08025-	3	117	2.6	1.3	15.0	9.1	0.80	0.50	0.0	0.0	6.10	16	396
165.0 JMA Wireless	3	236	14.4	6.0	20.0	8.0	0.80	0.64	0.0	0.0	6.10	114	747
165.0 Generic Flat Light	3	601	28.0	0.0	0.0	0.0	0.75	0.75	0.0	0.0	6.10	245	2043
96.00 Generic 24" x 24"	1	109	1.3	0.3	24.0	24.0	1.00	1.00	0.0	0.0	5.23	6	119
89.00 Generic 6' Dish w/	1	689	25.9	6.0	72.0	0.0	1.00	1.00	0.0	0.0	5.12	113	739
83.00 RFS PA6-65AC w/	1	747	25.9	6.0	72.0	0.0	1.00	1.00	0.0	0.0	5.02	110	808
Totals	104	21301	979.5									3041	23344

<u>Discrete Appurtenance Properties</u> 1.0D + 1.0W Service

Elevation Description	Qty	Wt.	EPA	Length			K_{a}	Orient.		M_{u}		F _a (WL) F	
(ft)		(lb)	(sf)	(ft)	(in)	(in)		Factor	Ecc.(ft)	(lb-ft)	(psf)	(lb)	(lb)
260.0 Generic 10' Omni	2	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.0	10.01	51	50
260.0 Decibel DB809DK-XT	1	64	6.3	21.2	3.0	3.0	1.00	1.00	0.0	0.0	10.01	54	64
250.0 Box Enclosures BEN	- 1	2	0.7	8.0	8.0	5.1	0.80	1.00	0.0	0.0	9.90	4	2
246.0 Alcatel-Lucent	6	53	1.7	1.3	13.0	9.8	0.80	0.50	0.0	0.0	9.85	34	317
246.0 Alcatel-Lucent 1900	3	60	2.3	2.1	11.1	10.7	0.80	0.50	0.0	0.0	9.85	23	180
246.0 Alcatel-Lucent TD-	3	66	3.7	2.1	17.5	5.7	0.80	0.50	0.0	0.0	9.85	37	198
246.0 RFS APXVSPP18-C-	3	57	8.0	6.0	11.8	7.0	0.80	0.69	0.0	0.0	9.85	111	171
246.0 Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	9.85	203	900
246.0 KMW ETCR-	3	85	15.7	7.1	21.0	6.3	0.80	0.61	0.0	0.0	9.85	193	255
236.0 Procom CXL 900-	1	2	0.1	2.3	0.6	0.6	1.00	1.00	0.0	0.0	9.74	1	2
236.0 Generic 5" x 3" x 2"	1	2	0.1	0.4	3.2	1.9	1.00	0.50	0.0	0.0	9.74	1	2
236.0 Generic Low Noise	1	2	0.2	0.4	4.0	2.0	1.00	0.50	0.0	0.0	9.74	1	2
225.0 Ericsson Radio 4449	3	74	1.6	1.2	13.2	9.3	0.80	0.50	0.0	0.0	9.60	16	222
225.0 Ericsson AIR 21,	3	92	6.0	4.7	12.0	7.8	0.80	0.70	0.0	0.0	9.60	83	275
225.0 Ericsson AIR 21,	3	90	6.1	4.7	12.1	7.9	0.80	0.70	0.0	0.0	9.60	84	271
225.0 Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	9.60	198	900
225.0 RFS	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	9.60	250	384
207.0 Sinclair SC479-	I	34	5.0	14.4	3.5	3.5	1.00	1.00	0.0	0.0	9.38	40	34
200.0 Bird 432E-83I-01-T	1	25 150	1.2 6.3	1.0	12.0	7.5	0.80	0.67	0.0	0.0	9.29	5	25 450
200.0 Flat Side Arm	3	150	5.0	0.0	0.0	0.0	1.00	0.67	0.0	0.0	9.29	100	450
192.0 Sinclair SC479-	2	34	0.2	14.4	3.5	3.5	1.00	1.00	0.0	0.0	9.18	78	68 33
175.0 Powerwave Allgon	6	6	0.2	0.3	6.0	3.0	0.80	0.50	0.0	0.0	8.94	4	33
175.0 Powerwave Allgon	3	2	0.3	0.4	8.3	2.4	0.80	0.50	0.0	0.0	8.94	3	7

Site Name: NORTH STONINGTON CT, CT Engineering Number: 13694578_C3_02 6/24/2021 12:57:04 PM

Customer: DISH WIRELESS L.L.C.

Tower Loading

175.0 Raycap DC6-48-60-	1	20	1.3	2.0	9.7	9.7	0.80	0.67	0.0	0.0	8.94	5	20	
175.0 Raycap DC6-48-60-	1	32	1.5	2.0	11.0	11.0	0.80	1.00	0.0	0.0	8.94	9	32	
175.0 Ericsson RRUS 8843	3	72	1.6	1.2	13.2	10.9	0.80	0.50	0.0	0.0	8.94	15	216	
175.0 Powerwave Allgon	6	31	1.7	1.2	14.4	3.7	0.80	0.50	0.0	0.0	8.94	30	186	
175.0 Ericsson RRUS 4478	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.0	8.94	17	180	
175.0 Ericsson RRUS 4449	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.0	8.94	18	213	
175.0 Allgon 7770.00	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	8.94	65	105	
175.0 CCI DMP65R-BU8D	3	96	17.9	8.0	20.7	7.7	0.80	0.63	0.0	0.0	8.94	205	287	
175.0 CCI OPA65R-BU8D	3	77	18.1	8.0	21.0	7.8	0.80	0.63	0.0	0.0	8.94	208	230	
175.0 Generic Heavy	3	500	29.3	0.0	0.0	0.0	0.75	0.75	0.0	0.0	8.94	376	1500	
165.0 Commscope RDIDC-	1	22	1.9	1.3	14.0	8.0	0.80	1.00	0.0	0.0	8.79	11	22	
165.0 Fujitsu TA08025-	3	64	2.0	1.3	15.0	7.9	0.80	0.50	0.0	0.0	8.79	18	192	
165.0 Fujitsu TA08025-	3	75	2.0	1.3	15.0	9.1	0.80	0.50	0.0	0.0	8.79	18	225	
165.0 JMA Wireless	3	65	12.5	6.0	20.0	8.0	0.80	0.64	0.0	0.0	8.79	143	194	
165.0 Generic Flat Light	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	8.79	226	1200	
96.00 Generic 24" x 24"	1	50	0.8	0.3	24.0	24.0	1.00	1.00	0.0	0.0	7.53	5	50	
89.00 Generic 6' Dish w/	1	250	24.4	6.0	72.0	0.0	1.00	1.00	0.0	0.0	7.37	153	250	
83.00 RFS PA6-65AC w/	1	308	24.4	6.0	72.0	0.0	1.00	1.00	0.0	0.0	7.22	150	308	
Totals	104	10219	734.6									3246	10219	

Site Name: NORTH STONINGTON CT, CT

Engineering Number: 13694578_C3_02

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Customer: DISH WIRELESS L.L.C.

Tower Loading

Linear Appurtenance Properties

Elev	Elev									Out			
From	То				weight		Spread On	_	Cluster			Orientation	
(ft)	(ft)	Description	Qty	(in)	(lb/ft) I	n Block	Faces	Arrangement	Dia (in)	Zone	(in)	Factor	Override
0.00	260.0	1 5/8" Coax	4	1.98	0.82	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	260.0	1 5/8" Coax	2	1.98	0.82	100	1	Individual	0.00	Ν	1.00	1.00	0.00
0.00	250.0	Climbing Ladder	1	1.50	6.90	100	3	Individual	0.00	Ν	1.00	1.00	0.00
0.00	250.0	Waveguide	1	1.50	6.00	100	3	Individual	0.00	Ν	1.00	1.00	0.00
0.00	246.0	0.21" (5.3mm) Cat	4	0.21	0.02	100	3	Individual	0.00	Ν	1.00	1.00	0.00
0.00	246.0	1 1/4" Hybriflex	4	1.54	1.00	100	3	Individual	0.00	Ν	1.00	1.00	0.00
0.00	246.0	1" conduit	1	1.32	1.68	100	3	Individual	0.00	Ν	1.00	1.00	0.00
0.00	246.0	Waveguide	1	2.00	6.00	100	3	Individual	0.00	Ν	1.00	1.00	0.00
0.00	236.0	1/2" Coax	1	0.63	0.15	100	1	Individual	0.00	Ν	1.00	1.00	0.00
0.00	225.0	1 5/8" Coax	6	1.98	0.82	100	2	Individual	0.00	N	1.00	1.00	0.00
0.00	225.0	1 5/8" Hybriflex	4	1.98	1.30	100	None	Individual	0.00	Ν	1.00	1.00	0.00
0.00	225.0	Waveguide	1	2.00	6.00	100	2	Individual	0.00	Ν	1.00	1.00	0.00
0.00	210.0	Waveguide	1	2.00	6.00	100	3	Individual	0.00	Ν	1.00	1.00	0.00
0.00	207.0	1 5/8" Coax	1	1.98	0.82	100	1	Individual	0.00	Ν	1.00	1.00	0.00
10.00	200.0	0.51" (13mm)	1	0.51	0.14	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	192.0	1 5/8" Coax	2	1.98	0.82	100	1	Individual	0.00	Ν	1.00	1.00	0.00
0.00	175.0	0.39" (9.8mm)	1	0.39	0.07	100	2	Individual	0.00	N	1.00	1.00	0.00
0.00	175.0	1 5/8" Coax	6	1.98	0.82	100	2	Individual	0.00	Ν	1.00	1.00	0.00
0.00	175.0	Waveguide	1	1.50	6.00	100	2	Individual	0.00	N	1.00	1.00	0.00
10.00	175.0	0.39" (10mm) Fibe		0.39	0.06	100	2	Individual	0.00	N	1.00	1.00	0.00
10.00	175.0	0.78" (19.7mm) 8	4	0.78	0.59	100	2	Individual	0.00	N	1.00	1.00	0.00
10.00	175.0	3" conduit	2	3.50	7.58	100	. 2	Individual	0.00	N	1.00	1.00	0.00
0.00	165.0	1.60" (40.6mm)	1	1.60	2.34	100	None	Individual	0.00	N	1.00	1.00	0.00
0.00	158.0	Waveguide	1	1.50	6.00	100	3	Individual	0.00	N	1.00	1.00	0.00
0.00	89.00	1/2" Coax	1	0.63	0.15	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	89.00	EW52	1	2.25	0.59	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	83.00	WE65	1	2.03	0.53	100	1	Individual	0.00	N	1.00	1.00	0.00

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Site Name: NORTH STONINGTON CT, CT Engineering Number: 13694578_C3_02

Customer: DISH WIRELESS L.L.C.

Equivalent Lateral Force Method

Spectral Response Acceleration for Short Period (S):	0.19
Spectral Response Acceleration at 1.0 Second Period (S $_1$):	0.05
Long-Period Transition Period (T - Seconds):	6
Importance Factor (I _e):	1.00
Site Coefficient F _a :	1.60
Site Coefficient F $_{\rm v}$:	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period (S ds):	0.20
Design Spectral Response Acceleration at 1.0 Second Period (S $_{ m d} \eta$):	0.08
Seismic Response Coefficient (C s):	0.03
Upper Limit C _s :	0.03
Lower Limit C s:	0.03
Period based on Rayleigh Method (sec):	0.88
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.19
Total Unfactored Dead Load:	90.27 k
Seismic Base Shear (E):	3.77 k

LoadCase 1.2D + 1.0Ev + 1.0Eh

Seismic

Section	Height Above Base (ft)	Weight (lb)	W _z (Ib-ft)	C_{VX}	Horizontal Force (lb)	Vertical Force (Ib)
13	245.00	762	529,425	0.022	83	945
12	230.00	1,848	1,191,68	0.049	186	2,292
11	210.00	3,214	1,859,82	0.077	291	3,986
10	190.00	4,083	2,097,36	0.087	328	5,063
9	170.00	4,984	2,242,85	0.093	351	6,180
8	150.00	5,833	2,261,96	0.094	354	7,234
7	130.00	6,390	2,090,20	0.087	327	7,925
6	110.00	6,792	1,821,12	0.075	285	8,422
5	90.00	7,436	1,570,47	0.065	246	9,221
4	70.00	8,027	1,257,18	0.052	197	9,954
3	50.00	10,021	1,051,84	0.044	164	12,427
2	30.00	9,985	570,775	0.024	89	12,382
1	10.00	10,679	165,229	0.007	26	13,243
Generic 10' Omni	250.00	50	35,601	0.001	6	62
Decibel DB809DK-XT	250.00	64	45,570	0.002	7	79
Box Enclosures BEN-92P	250.00	2	1,566	0.000	0	3
Alcatel-Lucent RRH2x50-08	246.00	317	221,702	0.009	35	394
Alcatel-Lucent 1900 MHz 4X45 RRH	246.00	180	125,729	0.005	20	223
Alcatel-Lucent TD-RRH8x20-25	246.00	198	138,302	0.006	22	246
RFS APXVSPP18-C-A20	246.00	171	119,442	0.005	19	212
Round Sector Frames	246.00	900	628,644	0.026	98	1,116
KMW ETCR-654L12H6	246.00	255	177,906	0.007	28	316
Procom CXL 900-3LW	236.00	2	997	0.000	0	2
Generic 5" x 3" x 2" Cavity Filter	236.00	2	997	0.000	0	2
Generic Low Noise Amplifier	236.00	2	1,330	0.000	0	2

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Site Name: NORTH STONINGTON CT, CT Engineering Number: 13694578_C3_02 6/24/2021 12:57:04 PM

Customer: DISH WIRELESS L.L.C.

	<u>Equi</u>	valent Late	ral Force M	<u>lethod</u>		
Ericsson Radio 4449 B12,B71	225.00	222	139,449	0.006	22	275
Ericsson AIR 21, 1.3M, B2A B4P (91.5 lbs	225.00	275	172,427	0.007	27	340
Ericsson AIR 21, 1.3M, B4A B2P (90.4 lbs	225.00	271	170,354	0.007	27	336
Round Sector Frames	225.00	900	565,335	0.023	88	1,116
RFS APXVAARR24_43-U-NA20	225.00	384	241,021	0.010	38	476
Sinclair SC479-HF1LDF(E5765)	207.00	34	19,340	0.001	3	42
Bird 432E-83I-01-T	200.00	25	13,651	0.001	2	31
Flat Side Arm	200.00	450	245,712	0.010	38	558
Sinclair SC479-HF1LDF(E5765)	192.00	68	35,370	0.001	6	84
Powerwave Allgon LGP21901	175.00	33	15,372	0.001	2	41
Powerwave Allgon 7020	175.00	7	3,074	0.000	0	8
Raycap DC6-48-60-18-8F (23.5" Height)	175.00	20	9,317	0.000	1	25
Raycap DC6-48-60-18-8F ("Squid")	175.00	32	14,813	0.001	2	39
Ericsson RRUS 8843 B2, B66A	175.00	216	100,620	0.004	16	268
Powerwave Allgon LGP17201	175.00	186	86,645	0.004	14	231
Ericsson RRUS 4478 B14	175.00	180	83,710	0.003	13	223
Ericsson RRUS 4449 B5, B12	175.00	213	99,222	0.004	16	264
Allgon 7770.00	175.00	105	48,912	0.002	8	130
CCI DMP65R-BU8D	175.00	287	133,740	0.006	21	356
CCI OPA65R-BU8D	175.00	229	106,908	0.004	17	285
Generic Heavy Sector Frame	175.00	1,500	698,748	0.029	109	1,860
Commscope RDIDC-9181-PF-48	165.00	22	9,512	0.000	1	27
Fujitsu TA08025-B604	165.00	192	83,263	0.003	13	238
Fujitsu TA08025-B605	165.00	225	97,727	0.004	15	279
JMA Wireless MX08FRO665-21	165.00	193	84,045	0.003	13	240
Generic Flat Light Sector Frame	165.00	1,200	521,210	0.022	82	1,488
Generic 24" x 24" Ice Shield	96.00	50	11,403	0.000	2	62
Generic 6' Dish w/ Radome	89.00	250	52,102	0.002	8	310
RFS PA6-65AC w/ Radome	83.00	308	59,076	0.002	9	382

90,272 24,129,831 1.000 3,773 111,947

<u>LoadCase</u> <u>0.9D - 1.0Ev + 1.0Eh</u>

Seismic (Reduced DL)

Section	Height Above Base (ft)	Weight (Ib)	W _z (Ib-ft)	C_{vx}	Horizontal Force (Ib)	Vertical Force (lb)
13	245.00	762	529,425	0.022	83	655
12	230.00	1,848	1,191,68	0.049	186	1,589
11	210.00	3,214	1,859,82	0.077	291	2,764
10	190.00	4,083	2,097,36	0.087	328	3,511
9	170.00	4,984	2,242,85	0.093	351	4,285
8	150.00	5,833	2,261,96	0.094	354	5,016
7	130.00	6,390	2,090,20	0.087	327	5,495
6	110.00	6,792	1,821,12	0.075	285	5,840
5	90.00	7,436	1,570,47	0.065	246	6,394
4	70.00	8,027	1,257,18	0.052	197	6,902
3	50.00	10,021	1,051,84	0.044	164	8,617
2	30.00	9,985	570,775	0.024	89	8,586
1	10.00	10,679	165,228	0.007	26	9,183
Generic 10' Omni	250.00	50	35,601	0.001	6	43
Decibel DB809DK-XT	250.00	64	45,570	0.002	7	55
Box Enclosures BEN-92P	250.00	2	1,566	0.000	0	2
Alcatel-Lucent RRH2x50-08	246.00	317	221,702	0.009	35	273
Alcatel-Lucent 1900 MHz 4X45 RRH	246.00	180	125,729	0.005	20	155
Alcatel-Lucent TD-RRH8x20-25	246.00	198	138,302	0.006	22	170

Site Name: NORTH STONINGTON CT, CT Engineering Number: 13694578_C3_02 6/24/2021 12:57:04 PM

Customer: DISH WIRELESS L.L.C.

	<u>Equi</u>	valent Late	ral Force N	<u>lethod</u>		
RFS APXVSPP18-C-A20	246.00	171	119,442	0.005	19	147
Round Sector Frames	246.00	900	628,644	0.026	98	774
KMW ETCR-654L12H6	246.00	255	177,906	0.007	28	219
Procom CXL 900-3LW	236.00	2	997	0.000	0	1
Generic 5" x 3" x 2" Cavity Filter	236.00	2	997	0.000	0	1
Generic Low Noise Amplifier	236.00	2	1,330	0.000	0	2
Ericsson Radio 4449 B12,B71	225.00	222	139,449	0.006	22	191
Ericsson AIR 21, 1.3M, B2A B4P (91.5 lbs	225.00	275	172,427	0.007	27	236
Ericsson AIR 21, 1.3M, B4A B2P (90.4 lbs	225.00	271	170,354	0.007	27	233
Round Sector Frames	225.00	900	565,335	0.023	88	774
RFS APXVAARR24_43-U-NA20	225.00	384	241,021	0.010	38	330
Sinclair SC479-HF1LDF(E5765)	207.00	34	19,340	0.001	3	29
Bird 432E-83I-01-T	200.00	25	13,651	0.001	2	21
Flat Side Arm	200.00	450	245,712	0.010	38	387
Sinclair SC479-HF1LDF(E5765)	192.00	68	35,370	0.001	6	58
Powerwave Allgon LGP21901	175.00	33	15,372	0.001	2	28
Powerwave Allgon 7020	175.00	7	3,074	0.000	0	6
Raycap DC6-48-60-18-8F (23.5" Height)	175.00	20	9,317	0.000	1	17
Raycap DC6-48-60-18-8F ("Squid")	175.00	32	14,813	0.001	2	27
Ericsson RRUS 8843 B2, B66A	175.00	216	100,620	0.004	16	186
Powerwave Allgon LGP17201	175.00	186	86,645	0.004	14	160
Ericsson RRUS 4478 B14	175.00	180	83,710	0.003	13	155
Ericsson RRUS 4449 B5, B12	175.00	213	99,222	0.004	16	183
Allgon 7770.00	175.00	105	48,912	0.002	8	90
CCI DMP65R-BU8D	175.00	287	133,740	0.006	21	247
CCI OPA65R-BU8D	175.00	229	106,908	0.004	17	197
Generic Heavy Sector Frame	175.00	1,500	698,748	0.029	109	1,290
Commscope RDIDC-9181-PF-48	165.00	22	9,512	0.000	1	19
Fujitsu TA08025-B604	165.00	192	83,263	0.003	13	165
Fujitsu TA08025-B605	165.00	225	97,727	0.004	15	193
JMA Wireless MX08FRO665-21	165.00	193	84,045	0.003	13	166
Generic Flat Light Sector Frame	165.00	1,200	521,210	0.022	82	1,032
Generic 24" x 24" Ice Shield	96.00	50	11,403	0.000	2	43
Generic 6' Dish w/ Radome	89.00	250	52,102	0.002	8	215
RFS PA6-65AC w/ Radome	83.00	308	59,076	0.002	9	265

90,272

24,129,831

1.000

3,773

77,624

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Site Name: NORTH STONINGTON CT, CT

Customer:

DISH WIRELESS L.L.C.

Engineering Number: 13694578_C3_02 6/24/2021 12:57:04 PM

Section: 1 Bar	ase	Bot Elev	(ft): 0.0	00		Hei	ght (f	t): 20.	.000							
												Shear				
	Pu		Len		cing			,	Phic Pn				•			
Max Compression Member	er (kip)	Load Case	(ft)	Х	Υ	Z	KL/R	(ksi)	(kip)	Bolts	Holes	(kip)	(kip)	%	Controls	_
LEG SOL - 5 3/4" SOLID		1.2D + 1.0W Normal		25	25	25	41.8		1,028.3		0	0.00	0.00		5 Member :	Χ
HORIZ	0.00		0.000	0	0	0	0.0		0.00		0	0.00	0.00)	
DIAG DAE - 3X3X0.25	-16.47	1.2D + 1.0W 90 deg	33.60	25	49	13	167.5	36.0	29.39	4	2	55.22	69.60	5	6 Member	Y
	Pu		Fy	Fu	Dh	it Dn	Num	Num	She phiR		Bear phiRn		Shear it Pn	Use		
Max Tension Member	(kip)	Load Case	(ksi)	(ksi)		(ip)		Holes			(kip)		kip)	%	Controls	
LEG SOL - 5 3/4" SOLID	377.21	1.2D + 1.0W 60 deg	50	6	5 1,1	68.5	0	0	(0.00	0.0	0		32	Member	_
HORIZ	0.00	_	0		0	0.00	0	0	C	0.00	0.0	0	0.00	0		
DIAG DAE - 3X3X0.25	15.63	1.2D + 1.0W 90 deg	36	5	8 8	2.75	4	2	55	5.22	55.6	8	41.05	38	Blk Shea	r
Max Splice Forces	Pu	Cooo		phiR				Num	D 11 T							
·	(kip) Load			(kip				Bolts	Bolt Ty	ype						_
Top Tension		+ 1.0W 60 deg			.00		0	0								
Top Compression Bot Tension		+ 1.0W Normal + 1.0W 60 deg		1287	.00		0 10	6	2.75" A	126						
Bot Compression		+ 1.0W Normal		1065			48	6	2.75 F							
			(6:)													
Section: 2 1		Bot Elev	(ft): 20	.00		Hei	ght (f	t): 20.	000							
Section: 2 1	Du	Bot Elev	. ,				ght (f	•		Num	Num	Shear		Heo		
	Pu (kin)		Len	Bra	cing	%		F'y I	Phic Pn			phiRnv	/phiRn		Controls	
Max Compression Membe	er (kip)	Load Case	Len (ft)	Bra X	cing Y	% Z	KL/R	F'y I (ksi)	Phic Pn (kip)	Bolts	Holes	phiRnv (kip)	phiRn (kip)	%	Controls	
Max Compression Member	er (kip) -426.63	Load Case 1.2D + 1.0W Normal	Len (ft) 20.03	Bra X	cing Y 25	% Z 25	KL/R 43.7	F'y (ksi)	Phic Pn (kip) 929.73	Bolts 0	Holes 0	phiRnv (kip) 0.00	phiRn (kip) 0.00	% 4	5 Member :	X
Max Compression Member LEG SOL - 5 1/2" SOLID HORIZ	er (kip) -426.63 0.00	Load Case 1.2D + 1.0W Normal	Len (ft) 20.03 0.000	Brad X 25 0	cing Y 25 0	% Z 25 0	KL/R 43.7 0.0	F'y (ksi) 50.0 0.0	Phic Pn (kip) 929.73 0.00	Bolts 0 0	Holes 0 0	0.00 0.00	phiRn (kip) 0.00 0.00	4	5 Member :	
Max Compression Member	er (kip) -426.63 0.00	Load Case 1.2D + 1.0W Normal	Len (ft) 20.03	Bra X	cing Y 25	% Z 25 0	KL/R 43.7	F'y (ksi) 50.0 0.0	Phic Pn (kip) 929.73	Bolts 0 0	Holes 0	0.00 0.00	phiRn (kip) 0.00	4	5 Member :	
Max Compression Member LEG SOL - 5 1/2" SOLID HORIZ	er (kip) -426.63 0.00	Load Case 1.2D + 1.0W Normal	Len (ft) 20.03 0.000	Brad X 25 0	cing Y 25 0	% Z 25 0	KL/R 43.7 0.0	F'y (ksi) 50.0 0.0	Phic Pn (kip) 929.73 0.00 31.43	0 0 4	Holes 0 0 2	0.00 0.00 0.55.22	(phiRn (kip) 0.00 0.00 69.60	4	5 Member :	
Max Compression Member LEG SOL - 5 1/2" SOLIE HORIZ DIAG DAE - 3X3X0.25	er (kip) -426.63 0.00	Load Case 1.2D + 1.0W Normal 1.2D + 1.0W 90 deg	Len (ft) 20.03 0.000 32.02	Brad X 25 0	25 0 50	% Z 25 0 13	KL/R 43.7 0.0	F'y (ksi) 50.0 0.0 36.0	Phic Pn (kip) 929.73 0.00 31.43	Bolts 0 0 4 ar	Holes 0 0	9hiRnv (kip) 0.00 0.00 55.22	phiRn (kip) 0.00 0.00	4	5 Member 3 0 3 Member 3	
Max Compression Member LEG SOL - 5 1/2" SOLID HORIZ	er (kip) -426.63 0.00 -16.87	Load Case 1.2D + 1.0W Normal	Len (ft) 20.03 0.000	Bra X 25 0 25	cing Y 25 0 50	% Z 25 0 13	43.7 0.0 161.9	F'y (ksi) 50.0 0.0 36.0	Phic Pn (kip) 929.73 0.00 31.43 She	O 0 4 ar	Holes 0 0 2 Bear	phiRnv (kip) 0.00 0.00 55.22 Blk	0.00 0.00 0.00 69.60 Shear	% 4 5	5 Member :	
Max Compression Member LEG SOL - 5 1/2" SOLID HORIZ DIAG DAE - 3X3X0.25 Max Tension Member LEG SOL - 5 1/2" SOLID	er (kip) -426.63 0.00 -16.87 Pu (kip) 0 344.74	Load Case 1.2D + 1.0W Normal 1.2D + 1.0W 90 deg	Len (ft) 20.03 0.000 32.02 Fy (ksi)	Bra X 25 0 25 Fu (ksi)	25 0 50 Ph (k	% Z 25 0 13 sit Pn kip)	43.7 0.0 161.9 Num Bolts	F'y (ksi) 50.0 0.0 36.0 Num Holes 0	Phic Pn (kip) 929.73 0.00 31.43 She phiR s (kip	0 0 4 ar (nv 0)	Holes 0 0 2 Bear phiRn (kip) 0.0	9hiRnv (kip) 0.00 0.00 55.22 Blk: ph (k	yphiRn (kip) 0.00 0.00 69.60 Shear it Pn kip)	% 4 5 Use %	5 Member 3 3 Member Controls	
Max Compression Member LEG SOL - 5 1/2" SOLID HORIZ DIAG DAE - 3X3X0.25 Max Tension Member LEG SOL - 5 1/2" SOLID HORIZ	Pu (kip) Pu (kip) 344.74 0.00	Load Case 1.2D + 1.0W Normal 1.2D + 1.0W 90 deg Load Case 1.2D + 1.0W 60 deg	Len (ft) 20.03 0.000 32.02 Fy (ksi) 50 0	Bra X 25 0 25 Fu (ksi) 6	25 0 50 Ph (k	% Z 25 0 13 wit Pn kip) 69.1 0.00	KL/R 43.7 0.0 161.9 Num Bolts	50.0 0.0 36.0 Num Holes	Phic Pn (kip) 929.73 0.00 31.43 She phiR s (kip	0 0 4 ar (nv 0)	Holes 0 0 2 Bear phiRn (kip) 0.0 0.0	phiRnv (kip) 0.00 0.00 55.22 Blk: phi (k	yphiRn (kip) 0.00 0.00 69.60 Shear it Pn kip)	% 4 5 Use %	5 Member 3 3 Member 3 Controls	Y
Max Compression Member LEG SOL - 5 1/2" SOLID HORIZ DIAG DAE - 3X3X0.25 Max Tension Member LEG SOL - 5 1/2" SOLID	Pu (kip) Pu (kip) 344.74 0.00	Load Case 1.2D + 1.0W Normal 1.2D + 1.0W 90 deg Load Case	Len (ft) 20.03 0.000 32.02 Fy (ksi)	Bra X 25 0 25 Fu (ksi)	25 0 50 Ph (k	% Z 25 0 13 sit Pn kip)	43.7 0.0 161.9 Num Bolts	F'y (ksi) 50.0 0.0 36.0 Num Holes 0	Phic Pn (kip) 929.73 0.00 31.43 She phiR s (kip	0 0 4 ar (nv 0)	Holes 0 0 2 Bear phiRn (kip) 0.0	phiRnv (kip) 0.00 0.00 55.22 Blk: phi (k	yphiRn (kip) 0.00 0.00 69.60 Shear it Pn kip)	% 4 5 Use %	5 Member 3 3 Member Controls	Y
Max Compression Member LEG SOL - 5 1/2" SOLID HORIZ DIAG DAE - 3X3X0.25 Max Tension Member LEG SOL - 5 1/2" SOLID HORIZ	Pu (kip) 344.74 0.00 16.78	Load Case 1.2D + 1.0W Normal 1.2D + 1.0W 90 deg Load Case 1.2D + 1.0W 60 deg	Len (ft) 20.03 0.000 32.02 Fy (ksi) 50 0	Bra- X 25 0 25 Fu (ksi) 6	25 0 50 Ph (k	% Z 25 0 13 13 13 14 15 16 16 19 16 16 16 16 16 16 16 16 16 16 16 16 16	KL/R 43.7 0.0 161.9 Num Bolts 0 0	F'y (ksi) 50.0 0.0 36.0 Num Holes 0 0 2	Phic Pn (kip) 929.73 0.00 31.43 She phiR s (kip	0 0 4 ar (nv 0)	Holes 0 0 2 Bear phiRn (kip) 0.0 0.0	phiRnv (kip) 0.00 0.00 55.22 Blk: phi (k	yphiRn (kip) 0.00 0.00 69.60 Shear it Pn kip)	% 4 5 Use %	5 Member 3 3 Member 3 Controls	Y
Max Compression Member LEG SOL - 5 1/2" SOLID HORIZ DIAG DAE - 3X3X0.25 Max Tension Member LEG SOL - 5 1/2" SOLID HORIZ	Pu (kip) 344.74 0.00 16.78	Load Case 1.2D + 1.0W Normal 1.2D + 1.0W 90 deg Load Case 1.2D + 1.0W 60 deg 1.2D + 1.0W 90 deg	Len (ft) 20.03 0.000 32.02 Fy (ksi) 50 0	Brack X 25 0 25 Fu (ksi) 6	25 0 50 Ph (k	% Z 25 0 13 13 14 Pn (iit Pn (ip) 169.1 0.00 12.75	KL/R 43.7 0.0 161.9 Num Bolts 0 0 4	F'y (ksi) 50.0 0.0 36.0 Num Holes 0 2 Num	Phic Pn (kip) 929.73 0.00 31.43 She phis (kip) ((55	Bolts 0 0 4 ar thrv 0) 0.00 0.00 5.22	Holes 0 0 2 Bear phiRn (kip) 0.0 0.0	phiRnv (kip) 0.00 0.00 55.22 Blk: phi (k	yphiRn (kip) 0.00 0.00 69.60 Shear it Pn kip)	% 4 5 Use %	5 Member 3 3 Member 3 Controls	Y
Max Compression Member LEG SOL - 5 1/2" SOLIE HORIZ DIAG DAE - 3X3X0.25 Max Tension Member LEG SOL - 5 1/2" SOLIE HORIZ DIAG DAE - 3X3X0.25 Max Splice Forces	Pu (kip) Load	Load Case 1.2D + 1.0W Normal 1.2D + 1.0W 90 deg Load Case 1.2D + 1.0W 60 deg 1.2D + 1.0W 90 deg Case	Len (ft) 20.03 0.000 32.02 Fy (ksi) 50 0	Bra X 25 0 25 Fu (ksi) 6 5 phiRr (kip)	25 0 50 Ph (k) 5 1,00 0 8 8 8	% Z 25 0 13 13 14 Pn (iit Pn (ip) 169.1 0.00 12.75	KL/R 43.7 0.0 161.9 Num Bolts 0 4	F'y (ksi) 50.0 0.0 36.0 Num Holes 0 2 Num Bolts Sign Control Control	Phic Pn (kip) 929.73 0.00 31.43 She phiR s (kip	Bolts 0 0 4 ar thrv 0) 0.00 0.00 5.22	Holes 0 0 2 Bear phiRn (kip) 0.0 0.0	phiRnv (kip) 0.00 0.00 55.22 Blk: phi (k	yphiRn (kip) 0.00 0.00 69.60 Shear it Pn kip)	% 4 5 Use %	5 Member 3 3 Member 3 Controls	Y
Max Compression Member LEG SOL - 5 1/2" SOLID HORIZ DIAG DAE - 3X3X0.25 Max Tension Member LEG SOL - 5 1/2" SOLID HORIZ DIAG DAE - 3X3X0.25 Max Splice Forces Top Tension	Pu (kip) Load 333.47 0.9D	Load Case 1.2D + 1.0W Normal 1.2D + 1.0W 90 deg Load Case 1.2D + 1.0W 60 deg 1.2D + 1.0W 90 deg Case + 1.0W 60 deg	Len (ft) 20.03 0.000 32.02 Fy (ksi) 50 0	25 0 25 Fu (ksi) 6 5 phiRi (kip) 0	25 0 50 Ph (k 5 1,0 0 8 8 8	% Z 25 0 13 13 14 Pn (iit Pn (ip) 169.1 0.00 12.75	KL/R 43.7 0.0 161.9 Num Bolts 0 4 se %	F'y (ksi) 50.0 0.0 36.0 Num Holes 0 2 Num	Phic Pn (kip) 929.73 0.00 31.43 She phis (kip) ((55	Bolts 0 0 4 ar thrv 0) 0.00 0.00 5.22	Holes 0 0 2 Bear phiRn (kip) 0.0 0.0	phiRnv (kip) 0.00 0.00 55.22 Blk: phi (k	yphiRn (kip) 0.00 0.00 69.60 Shear it Pn kip)	% 4 5 Use %	5 Member 3 3 Member 3 Controls	Y
Max Compression Member LEG SOL - 5 1/2" SOLIE HORIZ DIAG DAE - 3X3X0.25 Max Tension Member LEG SOL - 5 1/2" SOLIE HORIZ DIAG DAE - 3X3X0.25 Max Splice Forces	Pu (kip) Load 333.47 0.9D 407.03 1.2D	Load Case 1.2D + 1.0W Normal 1.2D + 1.0W 90 deg Load Case 1.2D + 1.0W 60 deg 1.2D + 1.0W 90 deg Case	Len (ft) 20.03 0.000 32.02 Fy (ksi) 50 0	25 0 25 Fu (ksi) 6 5 phiRi (kip) 0	25 0 50 Ph (k 5 1,0 0 8 8 8 8	% Z 25 0 13 13 14 Pn (iit Pn (ip) 169.1 0.00 12.75	KL/R 43.7 0.0 161.9 Num Bolts 0 4	F'y (ksi) 50.0 0.0 36.0 Num Holes 0 2 Num Bolts Sign Control Control	Phic Pn (kip) 929.73 0.00 31.43 She phis (kip) ((55	Bolts 0 0 4 er (nv) 0) 0.00 0.00 5.22	Holes 0 0 2 Bear phiRn (kip) 0.0 0.0	phiRnv (kip) 0.00 0.00 55.22 Blk: phi (k	yphiRn (kip) 0.00 0.00 69.60 Shear it Pn kip)	% 4 5 Use %	5 Member 3 3 Member 3 Controls	Y
Max Compression Member LEG SOL - 5 1/2" SOLIE HORIZ DIAG DAE - 3X3X0.25 Max Tension Member LEG SOL - 5 1/2" SOLIE HORIZ DIAG DAE - 3X3X0.25 Max Splice Forces Top Tension Top Compression	Pu (kip) Load 333.47 0.9D 407.03 1.2D	Load Case 1.2D + 1.0W Normal 1.2D + 1.0W 90 deg Load Case 1.2D + 1.0W 60 deg 1.2D + 1.0W 90 deg Case + 1.0W 60 deg + 1.0W Normal	Len (ft) 20.03 0.000 32.02 Fy (ksi) 50 0	25 0 25 Fu (ksi) 6 5 phiRi (kip) 0 0 1349	25 0 50 Ph (k 5 1,0 0 8 8 8 8	% Z 25 0 13 13 14 Pn (iit Pn (ip) 169.1 0.00 12.75	KL/R 43.7 0.0 161.9 Num Bolts 0 4 se % 0 0	F'y (ksi) 50.0 0.0 36.0 Num Holes 0 2 Num Bolts 0	Phic Pn (kip) 929.73 0.00 31.43 She phiR s (kip (Bolts 0 0 4 er (nv) 0) 0.00 0.00 5.22	Holes 0 0 2 Bear phiRn (kip) 0.0 0.0	phiRnv (kip) 0.00 0.00 55.22 Blk: phi (k	yphiRn (kip) 0.00 0.00 69.60 Shear it Pn kip)	% 4 5 Use %	5 Member 3 3 Member 3 Controls	Y

Site Name: NORTH STONINGTON CT, CT

Customer: DISH WIRELESS L.L.C.

Engineering Number: 13694578_C3_02

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Section: 3 2		Bot Elev	(ft): 40	.00		Heig	ght (f	t): 20.	000						
												Shear			
	Pu	Load Coop	Len		cing		KL /D					•	phiRn		Camtuala
Max Compression Member		Load Case	(ft)	Х	Υ		KL/R	. ,			Holes	(kip)	(kip)	%	Controls
LEG SOL - 5 1/4" SOLIE HORIZ	383.30 -383.30 0.00	1.2D + 1.0W Norma	0.000	25 0	25 0	25 0	45.8 0.0		835.70 0.00	0	0 0	0.00	0.00		5 Member X 0
DIAG DAE - 3X3X0.25		1.2D + 1.0W 90 deg	30.48	25	50		154.2		34.68		2		69.60		9 Member Y
		G													
									She		Bear		Shear		
Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)		it Pn .ip)	Num Bolts	Num Holes	phiR kip)		phiRn (kip)		it Pn (ip)	Use %	Controls
LEG SOL - 5 1/4" SOLID	312.21	1.2D + 1.0W 60 deg	50	6	5 97	4.16	0	0	(0.00	0.0	10		32	Member
HORIZ	0.00		0			0.00	0	0		0.00	0.0		0.00	0	
DIAG DAE - 3X3X0.25	16.49	1.2D + 1.0W 90 deg	36	5	8 8	2.75	4	2	55	5.22	55.6	8	41.05	40	Blk Shear
	Dec					11.		Nicona							
Max Splice Forces	Pu (kip) Load	l Case		phiR (kip				Num Bolts	Bolt Ty	уре					
Top Tension	298.81 0.9D	+ 1.0W 60 deg		C	.00		0	0							
Top Compression		+ 1.0W Normal			.00		0			_					
Bot Tension Bot Compression	0.00	+ 1.0W 60 deg		1349	0.04 0.00		25 0	6	2" A32	5					
	0.00		(6:)												
Section: 4 3	0.00	Bot Elev	(ft): 60			Heiç		t): 20.	000				_		
	Pu	Bot Elev	. ,	.00				,		Num	Num	Shear phiRny		Use	
	Pu	Bot Elev	(ft): 60 Len (ft)	.00		%		F'y F	Phic Pn		Num Holes		Bear phiRn (kip)	Use %	Controls
Section: 4 3	Pu _{er} (kip)		Len (ft)	.00 Bra	cing	%	ght (f	F'y F (ksi)	Phic Pn			phiRnv	phiRn	%	Controls 5 Member X
Section: 4 3 Max Compression Member LEG SOL - 5" SOLID HORIZ	Pu er (kip) -337.89 0.00	Load Case 1.2D + 1.0W Norma	Len (ft) 1 20.03 0.000	.00 Bra X 25 0	cing Y 25 0	% Z 25 0	ght (f KL/R 48.1 0.0	F'y F (ksi) 50.0 0.0	Phic Pn (kip) 746.17 0.00	Bolts 0 0	Holes 0 0	0.00 0.00	phiRn (kip) 0.00 0.00	4	5 Member X
Section: 4 3 Max Compression Member LEG SOL - 5" SOLID	Pu er (kip) -337.89 0.00	Load Case	Len (ft)	.00 Bra X 25	cing Y 25	% Z 25 0	ght (f KL/R 48.1	F'y F (ksi) 50.0 0.0	Phic Pn (kip) 746.17	Bolts 0 0	Holes 0	phiRnv (kip) 0.00	phiRn (kip) 0.00 0.00	4	5 Member X
Section: 4 3 Max Compression Member LEG SOL - 5" SOLID HORIZ	Pu er (kip) -337.89 0.00	Load Case 1.2D + 1.0W Norma	Len (ft) 1 20.03 0.000	.00 Bra X 25 0	cing Y 25 0	% Z 25 0	ght (f KL/R 48.1 0.0	F'y F (ksi) 50.0 0.0	Phic Pn (kip) 746.17 0.00 29.66	Bolts 0 0 4	Holes 0 0 2	0.00 0.00 0.55.22	(kip) 0.00 0.00 52.20	4	5 Member X
Section: 4 3 Max Compression Member LEG SOL - 5" SOLID HORIZ DIAG DAE - 3X3X0.1875	Pu (kip) -337.89 0.00 -16.85	Load Case 1.2D + 1.0W Norma 1.2D + 1.0W 90 deg	Len (ft) 1 20.03 0.000 29.00	.00 Bra X 25 0 25	cing Y 25 0 49	% Z 25 0 13	ght (f KL/R 48.1 0.0	F'y F (ksi) 50.0 0.0 36.0	Phic Pn (kip) 746.17 0.00	Bolts 0 0 4 ar	Holes 0 0	0.00 0.00 55.22	phiRn (kip) 0.00 0.00	% 4 5	5 Member X 0 6 Member Y
Section: 4 3 Max Compression Member LEG SOL - 5" SOLID HORIZ DIAG DAE - 3X3X0.1875 Max Tension Member	Pu (kip) -337.89 0.00 -16.85 Pu (kip)	Load Case 1.2D + 1.0W Norma 1.2D + 1.0W 90 deg Load Case	Len (ft) 1 20.03 0.000 29.00 Fy (ksi)	.00 Bra X 25 0 25 Fu (ksi)	cing Y 25 0 49 Phi (k	% Z 25 0 13 it Pn ip)	ght (f KL/R 48.1 0.0 145.0 Num Bolts	F'y F (ksi) 50.0 0.0 36.0 Num Holes	Phic Pn (kip) 746.17 0.00 29.66 She phiR	Bolts 0 0 4 ar	Holes 0 0 2 Bear phiRn (kip)	phiRnv (kip) 0.00 0.00 55.22 Blk: ph (k	(kip) 0.00 0.00 52.20 Shear	% 4 5 Use %	5 Member X 0 6 Member Y Controls
Section: 4 3 Max Compression Member LEG SOL - 5" SOLID HORIZ DIAG DAE - 3X3X0.1875 Max Tension Member LEG SOL - 5" SOLID	Pu (kip) -337.89 0.00 -16.85 Pu (kip)	Load Case 1.2D + 1.0W Norma 1.2D + 1.0W 90 deg Load Case 1.2D + 1.0W 60 deg	Len (ft) 20.03	.00 Bra X 25 0 25 Fu (ksi)	cing Y 25 0 49 Phi (k	% Z 25 0 13 it Pn ip) 3.58	9ht (f KL/R 48.1 0.0 145.0 Num Bolts	F'y F (ksi) 50.0 0.0 36.0 Num Holes	Phic Pn (kip) 746.17 0.00 29.66 She phis (kip	0 0 4 ar (nv 0)	Holes 0 0 2 Bear phiRn (kip) 0.0	900 phiRnv (kip) 0.00 0.00 55.22 Blk: phi (k	ophiRn (kip) 0.00 0.00 52.20 Shear tt Pn kip)	% 4 5 Use %	5 Member X 0 6 Member Y Controls
Section: 4 3 Max Compression Member LEG SOL - 5" SOLID HORIZ DIAG DAE - 3X3X0.1875 Max Tension Member	Pu (kip) -337.89 0.00 -16.85 Pu (kip) 277.15 0.00	Load Case 1.2D + 1.0W Norma 1.2D + 1.0W 90 deg Load Case 1.2D + 1.0W 60 deg	Len (ft) 1 20.03 0.000 29.00 Fy (ksi)	.00 Bra X 25 0 25 Fu (ksi)	cing Y 25 0 49 Phi (k 5 88	% Z 25 0 13 it Pn ip)	ght (f KL/R 48.1 0.0 145.0 Num Bolts	F'y F (ksi) 50.0 0.0 36.0 Num Holes	Phic Pn (kip) 746.17 0.00 29.66 She phiR 6 (kip	Bolts 0 0 4 ar	Holes 0 0 2 Bear phiRn (kip)	phiRnv (kip) 0.00 0.00 55.22 Blk: ph (k	(kip) 0.00 0.00 52.20 Shear	% 4 5 Use %	5 Member X 0 6 Member Y Controls
Section: 4 3 Max Compression Member LEG SOL - 5" SOLID HORIZ DIAG DAE - 3X3X0.1875 Max Tension Member LEG SOL - 5" SOLID HORIZ	Pu (kip) -337.89 0.00 -16.85 Pu (kip) 277.15 0.00	Load Case 1.2D + 1.0W Norma 1.2D + 1.0W 90 deg Load Case 1.2D + 1.0W 60 deg	Len (ft) 20.03	.00 Bra X 25 0 25 Fu (ksi)	cing Y 25 0 49 Phi (k 5 88	% Z 25 0 13 it Pn iip) 3.58 0.00	9ht (f KL/R 48.1 0.0 145.0 Num Bolts 0	F'y F (ksi) 50.0 0.0 36.0 Num Holes	Phic Pn (kip) 746.17 0.00 29.66 She phiR 6 (kip	0 0 4 ar (nv b)	Holes 0 0 2 Bear phiRn (kip) 0.0 0.0	phiRnv (kip) 0.00 0.00 55.22 Blk: ph (k	phiRn (kip) 0.00 0.00 52.20 Shear it Pn kip)	% 4 5 Use %	5 Member X 0 6 Member Y Controls
Section: 4 3 Max Compression Member LEG SOL - 5" SOLID HORIZ DIAG DAE - 3X3X0.1875 Max Tension Member LEG SOL - 5" SOLID HORIZ DIAG DAE - 3X3X0.1875	Pu -337.89 0.00 -16.85 Pu (kip) 277.15 0.00 16.43	Load Case 1.2D + 1.0W Norma 1.2D + 1.0W 90 deg Load Case 1.2D + 1.0W 60 deg 1.2D + 1.0W 90 deg	Len (ft) 20.03	.00 Bra x 25 0 25 Fu (ksi) 6 5	cing Y 25 0 49 Ph (k 5 88 0 8 6.	% Z 25 0 13 iit Pn iip) 3.58 0.00 2.71	ght (f KL/R 48.1 0.0 145.0 Num Bolts 0 0 4	F'y F (ksi) 50.0 0.0 36.0 Num Holes 0 2	Phic Pn (kip) 746.17 0.00 29.66 She phis (kip (Bolts 0 0 4 ar 2nv 0) 0.00 0.00 5.22	Holes 0 0 2 Bear phiRn (kip) 0.0 0.0	phiRnv (kip) 0.00 0.00 55.22 Blk: ph (k	phiRn (kip) 0.00 0.00 52.20 Shear it Pn kip)	% 4 5 Use %	5 Member X 0 6 Member Y Controls
Section: 4 3 Max Compression Member LEG SOL - 5" SOLID HORIZ DIAG DAE - 3X3X0.1875 Max Tension Member LEG SOL - 5" SOLID HORIZ DIAG DAE - 3X3X0.1875 Max Splice Forces	Pu -337.89 0.00 -16.85 Pu (kip) 277.15 0.00 16.43 Pu (kip) Load	Load Case 1.2D + 1.0W Norma 1.2D + 1.0W 90 deg Load Case 1.2D + 1.0W 60 deg 1.2D + 1.0W 90 deg	Len (ft) 20.03	.00 Bra X 25 0 25 Fu (ksi) 6 5 phiR (kip	Cing Y 25 0 49 Ph: (k 5 88 0 8 6.	% Z 25 0 13 iit Pn iip) 3.58 0.00 2.71	See %	F'y F (ksi) 50.0 0.0 36.0 Num Holes 0 0 2 Num Bolts	Phic Pn (kip) 746.17 0.00 29.66 She phiR 6 (kip	Bolts 0 0 4 ar 2nv 0) 0.00 0.00 5.22	Holes 0 0 2 Bear phiRn (kip) 0.0 0.0	phiRnv (kip) 0.00 0.00 55.22 Blk: ph (k	phiRn (kip) 0.00 0.00 52.20 Shear it Pn kip)	% 4 5 Use %	5 Member X 0 6 Member Y Controls
Section: 4 3 Max Compression Member LEG SOL - 5" SOLID HORIZ DIAG DAE - 3X3X0.1875 Max Tension Member LEG SOL - 5" SOLID HORIZ DIAG DAE - 3X3X0.1875 Max Splice Forces Top Tension	Pu -337.89 0.00 -16.85 Pu (kip) 277.15 0.00 16.43 Pu (kip) Load 262.65 0.9D	Load Case 1.2D + 1.0W Norma 1.2D + 1.0W 90 deg Load Case 1.2D + 1.0W 60 deg 1.2D + 1.0W 90 deg 1.2D + 1.0W 90 deg	Len (ft) 20.03	.00 Bra X 25 0 25 Fu (ksi) 6 5 phiR (kip	cing Y 25 0 49 Ph (k 5 88 0 8 6.	% Z 25 0 13 iit Pn iip) 3.58 0.00 2.71	9ht (f KL/R 48.1 0.0 145.0 Num Bolts 0 4	F'y F (ksi) 50.0 0.0 36.0 Num Holes 0 2	Phic Pn (kip) 746.17 0.00 29.66 She phis (kip (Bolts 0 0 4 ar 2nv 0) 0.00 0.00 5.22	Holes 0 0 2 Bear phiRn (kip) 0.0 0.0	phiRnv (kip) 0.00 0.00 55.22 Blk: ph (k	phiRn (kip) 0.00 0.00 52.20 Shear it Pn kip)	% 4 5 Use %	5 Member X 0 6 Member Y Controls
Section: 4 3 Max Compression Member LEG SOL - 5" SOLID HORIZ DIAG DAE - 3X3X0.1875 Max Tension Member LEG SOL - 5" SOLID HORIZ DIAG DAE - 3X3X0.1875 Max Splice Forces	Pu -337.89 0.00 -16.85 Pu (kip) 277.15 0.00 16.43 Pu (kip) Load 262.65 0.9D 317.34 1.2D	Load Case 1.2D + 1.0W Norma 1.2D + 1.0W 90 deg Load Case 1.2D + 1.0W 60 deg 1.2D + 1.0W 90 deg	Len (ft) 20.03	.00 Bra X 25 0 25 Fu (ksi) 6 5 phiR (kip	cing Y 25 0 49 Ph (k 5 88 0 8 6.	% Z 25 0 13 iit Pn iip) 3.58 0.00 2.71	See %	F'y F (ksi) 50.0 0.0 36.0 Num Holes 0 0 2 Num Bolts	Phic Pn (kip) 746.17 0.00 29.66 She phis (kip (Bolts 0 0 4 ar 2nv 0) 0.00 0.00 5.22	Holes 0 0 2 Bear phiRn (kip) 0.0 0.0	phiRnv (kip) 0.00 0.00 55.22 Blk: ph (k	phiRn (kip) 0.00 0.00 52.20 Shear it Pn kip)	% 4 5 Use %	5 Member X 0 6 Member Y Controls

Site Name: NORTH STONINGTON CT, CT

Customer: DISH WIRELESS L.L.C.

Engineering Number: 13694578_C3_02

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Section: 5 4		Bot Elev	(ft): 80	.00		Heiç	ght (f	t): 20.	000						
												Shear	Bear		
	Pu		Len		cing							•	phiRn		
Max Compression Member	er (kip)	Load Case	(ft)	Х	Υ	Z	KL/R	(ksi)	(kip)	Bolts	Holes	(kip)	(kip)	%	Controls
LEG SOL - 4 3/4" SOLID		1.2D + 1.0W Norma		25	25	25	50.6		661.25		0	0.00	0.00		4 Member X
HORIZ DIAG DAE - 3X3X0.1875	0.00 -15.84) 1.2D + 1.0W 90 deg	0.000 27.59	0 25	0 50	0 13	0.0		0.00 31.82		0 2	0.00 55.22	0.00 52.20		O 9 Member Y
DING DIL GNONG.1070	10.04	1.2D 1 1.0W 70 deg	27.07	20	50	13	140.0	30.0	31.02		_	55.22	32.20	7	7 Wember 1
									She	ar	Bear	Blk :	Shear		
Mary Taylor Manulage	Pu	1 1 0	Fy	Fu			Num		phiF	nv	phiRn	ph	it Pn	Use	Controls
Max Tension Member	(kip)		(ksi)	(ksi)		(ip)		Holes	` '	-	(kip)		(ip)	%	
LEG SOL - 4 3/4" SOLIE HORIZ) 241.80 0.00) 1.2D + 1.0W 60 deg	50 0		5 79 0	0.00	0	0		0.00	0.0		0.00	30 0	Member
DIAG DAE - 3X3X0.1875		, 1.2D + 1.0W 90 deg	36			2.71	4	2		5.22	41.7		30.79		Blk Shear
	Pu			phiR	nt	U:	se	Num							
Max Splice Forces	(kip) Load	l Case		ˈ(kip		9	6	Bolts	Bolt T	ype					
Top Tension		+ 1.0W 60 deg			0.00		0	0							
Top Compression Bot Tension		+ 1.0W Normal + 1.0W 60 deg			0.00 3.83		0 35	6	OA						
Bot Compression	0.00	+ 1.000 deg			0.00		0	U	OA						
Section: 6 5		Pot Floy	(f+) · 10	$\cap \cap$		Lامic	aht (f	+)· 20	000						
Section: 6 5		Bot Elev	(ft): 10	0.0		Heiç	ght (f	t): 20.	000			Choor	Door		
Section: 6 5	Pu	Bot Elev	(ft): 10 Len				ght (f	,		Num	Num	Shear phiRn\	Bear /phiRn	Use	
Section: 6 5 Max Compression Member	41.1	Bot Elev Load Case			cing Y	%	ght (f _{KL/R}	F'y F	Phic Pn		Num Holes			Use %	Controls
	er (kip)		Len (ft)	Bra	cing	%		F'y F (ksi)	Phic Pn	Bolts		phiRnv	phiRn	%	Controls 2 Member X
Max Compression Member LEG SOL - 4 1/2" SOLID HORIZ	er (kip) 0 -248.22 0.00	Load Case 2 1.2D + 1.0W Norma	Len (ft) 20.03 0.000	Bra X 25 0	rcing Y 25 0	% Z 25 0	KL/R 53.4 0.0	F'y F (ksi) 50.0 0.0	Phic Pn (kip) 580.89 0.00	Bolts 0 0	Holes 0 0	0.00 0.00	phiRn (kip) 0.00 0.00	4	2 Member X
Max Compression Member	er (kip) 0 -248.22 0.00	Load Case 2 1.2D + 1.0W Norma	Len (ft)	Bra X	cing Y 25	% Z 25 0	KL/R 53.4	F'y F (ksi) 50.0 0.0	Phic Pn (kip) 580.89	Bolts 0 0	Holes 0	phiRnv (kip) 0.00	phiRn (kip) 0.00 0.00	4	2 Member X
Max Compression Member LEG SOL - 4 1/2" SOLID HORIZ	er (kip) 0 -248.22 0.00	Load Case 2 1.2D + 1.0W Norma	Len (ft) 20.03 0.000	Bra X 25 0	rcing Y 25 0	% Z 25 0	KL/R 53.4 0.0	F'y F (ksi) 50.0 0.0	Phic Pn (kip) 580.89 0.00 35.15	Bolts 0 0 4	Holes 0 0 2	0.00 0.00 55.22	(kip) 0.00 0.00 52.20	4	2 Member X
Max Compression Member LEG SOL - 4 1/2" SOLID HORIZ	er (kip) 0 -248.22 0.00	Load Case 2 1.2D + 1.0W Norma	Len (ft) 20.03 0.000 26.25	Bra X 25 0 25	25 0 50	% Z 25 0 13	53.4 0.0 133.2	F'y F (ksi) 50.0 0.0 36.0	Phic Pn (kip) 580.89 0.00 35.15	Bolts 0 0 4 ar	Holes 0 0 2 Bear	0.00 0.00 55.22	vphiRn (kip) 0.00 0.00 52.20 Shear	4	2 Member X
Max Compression Member LEG SOL - 4 1/2" SOLID HORIZ	er (kip) 0 -248.22 0.00 -15.68	Load Case 2 1.2D + 1.0W Norma	Len (ft) 20.03 0.000	Bra X 25 0	Y 25 0 50	% Z 25 0 13	53.4 0.0 133.2 Num	F'y F (ksi) 50.0 0.0 36.0	Phic Pn (kip) 580.89 0.00 35.15 She phis	Bolts 0 0 4 ar	Holes 0 0 2	9hiRnv (kip) 0.00 0.00 55.22 Blk	(kip) 0.00 0.00 52.20	4	2 Member X
Max Compression Member LEG SOL - 4 1/2" SOLID HORIZ DIAG DAE - 3X3X0.1875 Max Tension Member LEG SOL - 4 1/2" SOLID	er (kip) -248.22 0.00 -15.68 Pu (kip) 0 209.07	Load Case 2 1.2D + 1.0W Norma 3 1.2D + 1.0W 90 deg 4 Load Case 4 0.9D + 1.0W 60 deg	Len (ft) 20.03 0.000 26.25 Fy (ksi) 50	Bra X 25 0 25 Fu (ksi) 6	25 0 50 Ph (k	% Z 25 0 13 it Pn cip) 5.68	53.4 0.0 133.2 Num Bolts	F'y F (ksi) 50.0 0.0 36.0 Num Holes	Phic Pn (kip) 580.89 0.00 35.15 She phir s (kip	0 0 4 4 ar 2nv 0)	Holes 0 0 2 Bear phiRn (kip) 0.0	phiRnv (kip) 0.00 0.00 55.22 Blk: phi (k	yphiRn (kip) 0.00 0.00 52.20 Shear it Pn kip)	% 4 Use %	2 Member X 0 4 Member Y Controls
Max Compression Member LEG SOL - 4 1/2" SOLID HORIZ DIAG DAE - 3X3X0.1875 Max Tension Member LEG SOL - 4 1/2" SOLID HORIZ	Pu (kip) 20 -248.22 0.00 -15.68 Pu (kip) 209.07 0.00	Load Case 2 1.2D + 1.0W Normal 3 1.2D + 1.0W 90 deg Load Case 7 0.9D + 1.0W 60 deg	Len (ft) 20.03 0.000 26.25 Fy (ksi) 50 0	Bra X 25 0 25 Fu (ksi)	25 0 50 Ph (k	% Z 25 0 13 it Pn (ip) 5.68 0.00	53.4 0.0 133.2 Num Bolts	F'y F (ksi) 50.0 0.0 36.0 Num Holes	Phic Pn (kip) 580.89 0.00 35.15 She phis (kip	0 0 4 ar Rnv 0)	Holes 0 0 2 Bear phiRn (kip) 0.0 0.0	phiRnv (kip) 0.00 0.00 55.22 Blk: ph (k	yphiRn (kip) 0.00 0.00 52.20 Shear it Pn kip)	% 4 Use %	2 Member X 0 4 Member Y Controls
Max Compression Member LEG SOL - 4 1/2" SOLID HORIZ DIAG DAE - 3X3X0.1875 Max Tension Member LEG SOL - 4 1/2" SOLID	Pu (kip) 20 -248.22 0.00 -15.68 Pu (kip) 209.07 0.00	Load Case 2 1.2D + 1.0W Norma 3 1.2D + 1.0W 90 deg 4 Load Case 4 0.9D + 1.0W 60 deg	Len (ft) 20.03 0.000 26.25 Fy (ksi) 50	Bra X 25 0 25 Fu (ksi)	25 0 50 Ph (k	% Z 25 0 13 it Pn cip) 5.68	53.4 0.0 133.2 Num Bolts	F'y F (ksi) 50.0 0.0 36.0 Num Holes	Phic Pn (kip) 580.89 0.00 35.15 She phis (kip	0 0 4 4 ar 2nv 0)	Holes 0 0 2 Bear phiRn (kip) 0.0	phiRnv (kip) 0.00 0.00 55.22 Blk: ph (k	yphiRn (kip) 0.00 0.00 52.20 Shear it Pn kip)	% 4 Use %	2 Member X 0 4 Member Y Controls
Max Compression Member LEG SOL - 4 1/2" SOLID HORIZ DIAG DAE - 3X3X0.1875 Max Tension Member LEG SOL - 4 1/2" SOLID HORIZ	Pu (kip) 20 -248.22 0.00 -15.68 Pu (kip) 209.07 0.00 15.00	Load Case 2 1.2D + 1.0W Normal 3 1.2D + 1.0W 90 deg Load Case 7 0.9D + 1.0W 60 deg	Len (ft) 20.03 0.000 26.25 Fy (ksi) 50 0	25 0 25 Fu (ksi)	25 0 50 Ph (k	% Z 25 0 13 it Pn sip) 5.68 0.00 2.71	53.4 0.0 133.2 Num Bolts 0 0	F'y F (ksi) 50.0 0.0 36.0 Num Holes 0 0 2	Phic Pn (kip) 580.89 0.00 35.15 She phis (kip	0 0 4 ar Rnv 0)	Holes 0 0 2 Bear phiRn (kip) 0.0 0.0	phiRnv (kip) 0.00 0.00 55.22 Blk: ph (k	yphiRn (kip) 0.00 0.00 52.20 Shear it Pn kip)	% 4 Use %	2 Member X 0 4 Member Y Controls
Max Compression Member LEG SOL - 4 1/2" SOLID HORIZ DIAG DAE - 3X3X0.1875 Max Tension Member LEG SOL - 4 1/2" SOLID HORIZ	Pu (kip) 20 -248.22 0.00 -15.68 Pu (kip) 209.07 0.00 15.00	Load Case 2 1.2D + 1.0W Normal 3 1.2D + 1.0W 90 deg Load Case 7 0.9D + 1.0W 60 deg	Len (ft) 20.03 0.000 26.25 Fy (ksi) 50 0	Bra X 25 0 25 Fu (ksi)	25 0 50 Ph (k 5 71 0 8 6	% Z 25 0 13 iit Pn iiip) 5.68 0.00 2.71	53.4 0.0 133.2 Num Bolts 0 0 4	F'y F (ksi) 50.0 0.0 36.0 Num Holes	Phic Pn (kip) 580.89 0.00 35.15 She phis (kip	Bolts 0 0 4 ar 2nv 0) 0.00 0.00 5.22	Holes 0 0 2 Bear phiRn (kip) 0.0 0.0	phiRnv (kip) 0.00 0.00 55.22 Blk: ph (k	yphiRn (kip) 0.00 0.00 52.20 Shear it Pn kip)	% 4 Use %	2 Member X 0 4 Member Y Controls
Max Compression Member LEG SOL - 4 1/2" SOLIE HORIZ DIAG DAE - 3X3X0.1875 Max Tension Member LEG SOL - 4 1/2" SOLIE HORIZ DIAG DAE - 3X3X0.1875	er (kip) 0 -248.22 0.00 -15.68 Pu (kip) 0 209.07 0.00 15.00 Pu (kip) Load	Load Case 2 1.2D + 1.0W Norma 3 1.2D + 1.0W 90 deg 4 Load Case 7 0.9D + 1.0W 60 deg 9 1.2D + 1.0W 90 deg	Len (ft) 20.03 0.000 26.25 Fy (ksi) 50 0	Bra X 25 0 25 Fu (ksi) 6 5 phiR (kip	25 0 50 Ph (k 5 71 0 8 6	% Z 25 0 13 iit Pn iiip) 5.68 0.00 2.71	53.4 0.0 133.2 Num Bolts 0 0 4	F'y F (ksi) 50.0 0.0 36.0 Num Holes 0 0 2	Phic Pn (kip) 580.89 0.00 35.15 She phifs (kip (Bolts 0 0 4 ar 2nv 0) 0.00 0.00 5.22	Holes 0 0 2 Bear phiRn (kip) 0.0 0.0	phiRnv (kip) 0.00 0.00 55.22 Blk: ph (k	yphiRn (kip) 0.00 0.00 52.20 Shear it Pn kip)	% 4 Use %	2 Member X 0 4 Member Y Controls
Max Compression Member LEG SOL - 4 1/2" SOLID HORIZ DIAG DAE - 3X3X0.1875 Max Tension Member LEG SOL - 4 1/2" SOLID HORIZ DIAG DAE - 3X3X0.1875 Max Splice Forces Top Tension Top Compression	Pu (kip) Load 188.88 0.9D 227.79 1.2D	Load Case 2 1.2D + 1.0W Normal 3 1.2D + 1.0W 90 deg Load Case 7 0.9D + 1.0W 60 deg 1 1.2D + 1.0W 90 deg 4 Case + 1.0W 60 deg + 1.0W Normal	Len (ft) 20.03 0.000 26.25 Fy (ksi) 50 0	Brax 25 0 25 Fu (ksi) 6 5 phiR (kip	25 0 50 Ph (k 5 71 0 8 6 nt))	% Z 25 0 13 iit Pn iiip) 5.68 0.00 2.71	See 6 0 0	F'y F (ksi) 50.0 0.0 36.0 Num Holes 0 2 Num Bolts	Phic Pn (kip) 580.89 0.00 35.15 She phiF s (kip (Bolts 0 0 4 ar 2nv 0) 0.00 0.00 5.22	Holes 0 0 2 Bear phiRn (kip) 0.0 0.0	phiRnv (kip) 0.00 0.00 55.22 Blk: ph (k	yphiRn (kip) 0.00 0.00 52.20 Shear it Pn kip)	% 4 Use %	2 Member X 0 4 Member Y Controls
Max Compression Member LEG SOL - 4 1/2" SOLID HORIZ DIAG DAE - 3X3X0.1875 Max Tension Member LEG SOL - 4 1/2" SOLID HORIZ DIAG DAE - 3X3X0.1875 Max Splice Forces Top Tension	Pu (kip) Load 188.88 0.9D 227.79 1.2D	Load Case 2 1.2D + 1.0W Normal 2 1.2D + 1.0W 90 deg Load Case 2 0.9D + 1.0W 60 deg 1 1.2D + 1.0W 90 deg 4 Case + 1.0W 60 deg	Len (ft) 20.03 0.000 26.25 Fy (ksi) 50 0	25 0 25 Fu (ksi) 6 5 phiR (kip C 758	25 0 50 Ph (k 5 71 0 8 6	% Z 25 0 13 iit Pn iiip) 5.68 0.00 2.71	See 6	F'y F (ksi) 50.0 0.0 36.0 Num Holes 0 2 Num Bolts	Phic Pn (kip) 580.89 0.00 35.15 She phifs (kip (Bolts 0 0 4 ar 2nv 0) 0.00 0.00 5.22	Holes 0 0 2 Bear phiRn (kip) 0.0 0.0	phiRnv (kip) 0.00 0.00 55.22 Blk: ph (k	yphiRn (kip) 0.00 0.00 52.20 Shear it Pn kip)	% 4 Use %	2 Member X 0 4 Member Y Controls

Site Name: NORTH STONINGTON CT, CT

Customer:

DISH WIRELESS L.L.C.

Engineering Number: 13694578_C3_02

6/24/2021 12:57:04 PM

Section: 7 6		Bot Elev	(ft): 12	0.0		Heig	ght (f	t): 20.	000						
												Shear			
	Pu (kim)	Load Coop	Len		cing		KI /D		Phic Pn			•			Cambuala
Max Compression Member	(kip)	Load Case	(ft)	Х	Υ	Z	KL/R				Holes	(kip)	(kip)	%	Controls
LEG SOL - 4 1/4" SOLID HORIZ	-215.40 0.00	1.2D + 1.0W Normal	10.02	50 0	50 0	50 0	56.6 0.0	50.0 0.0	505.21	0	0 0	0.00	0.00		2 Member X 0
DIAG DAE - 2.5X2.5X0.1875		1.2D + 1.0W 90 deg	18.44	50	50		145.9	36.0	24.19	4	2	55.22			3 Member Y
		J													
									Shea		Bear		Shear		
Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)		iit Pn (ip)	Num Bolts	Num Holes	phiR kip;		phiRn (kip)		it Pn kip)	Use %	Controls
LEG SOL - 4 1/4" SOLID	181.75	0.9D + 1.0W 60 deg	50	6	5 63	88.37	0	0	0	.00	0.0	10		28	3 Member
HORIZ	0.00		0			0.00	0	0		.00	0.0		0.00	C	
DIAG DAE - 2.5X2.5X0.1875	10.51	1.2D + 1.0W 90 deg	36	5	8 5	0.31	4	2	55	.22	41.7	6	28.75	36	Blk Shear
Pu				I- ! D		1.1	se	Num							
Max Splice Forces (kip		l Case		phiR (kip				Bolts	Bolt Ty	/pe					
•		+ 1.0W 60 deg			0.00		0	0							
' '		+ 1.0W Normal			0.00		0	,	1 275"	A 225					
	.00	+ 1.0W 60 deg			3.64).00		30 0	6	1.375"	A325					
Coation: 0 7		Dot Flore	/f+\. 1 /	0.0		Hair	- h + /f	+). 20	000						
Section: 8 7		Bot Elev	(ft): 14	0.0		Heiç	ght (f	t): 20.	000			Cla a au	D		
Section: 8 7	Pu	Bot Elev	(ft): 14 Len			,	ght (f	•	000 Phic Pn	Num	Num	Shear phiRn\		Use	
Section: 8 7 Max Compression Member	Pu (kip)	Bot Elev Load Case	. ,		cing Y	%	ght (f KL/R	F'y F	Phic Pn		Num Holes			Use %	Controls
	(kip)		Len (ft)	Bra X	cing Y 50	% Z 50	KL/R 60.1	F'y F (ksi)	Phic Pn (kip) 434.22	Bolts 0	Holes 0	phiRnv (kip) 0.00	phiRn	%	Controls 9 Member X
Max Compression Member LEG SOL - 4" SOLID HORIZ	(kip) -171.26 0.00	Load Case 1.2D + 1.0W Normal	Len (ft) 10.02 0.000	Bra X 50 0	y 50 0	% Z 50 0	KL/R 60.1 0.0	F'y F (ksi) 50.0 0.0	Phic Pn (kip) 434.22 0.00	Bolts 0 0	Holes 0 0	0.00 0.00	phiRn (kip) 0.00 0.00	3	9 Member X
Max Compression Member LEG SOL - 4" SOLID	(kip) -171.26 0.00	Load Case 1.2D + 1.0W Normal	Len (ft)	Bra X	cing Y 50	% Z 50 0	KL/R 60.1	F'y F (ksi)	Phic Pn (kip) 434.22	Bolts 0	Holes 0	phiRnv (kip) 0.00	phiRn (kip) 0.00 0.00	3	9 Member X
Max Compression Member LEG SOL - 4" SOLID HORIZ	(kip) -171.26 0.00	Load Case 1.2D + 1.0W Normal	Len (ft) 10.02 0.000	Bra X 50 0	y 50 0	% Z 50 0	KL/R 60.1 0.0	F'y F (ksi) 50.0 0.0	Phic Pn (kip) 434.22 0.00 29.16	O O 4	Holes 0 0 2	0.00 0.00 0.55.22	(kip) 0.00 0.00 52.20	3	9 Member X
Max Compression Member LEG SOL - 4" SOLID HORIZ DIAG DAE - 2.5X2.5X0.1875	-171.26 0.00 -9.91	Load Case 1.2D + 1.0W Normal 1.2D + 1.0W 90 deg	Len (ft) 10.02 0.000 16.80	Bra X 50 0 50	Y 50 0 50	% Z 50 0 25	60.1 0.0 132.9	F'y F (ksi) 50.0 0.0 36.0 Num	Phic Pn (kip) 434.22 0.00 29.16 Shea phiR	Bolts 0 0 4 ar	Holes 0 0 2 Bear phiRn	9hiRnv (kip) 0.00 0.00 55.22 Blk	vphiRn (kip) 0.00 0.00 52.20 Shear it Pn	% 3 Use	9 Member X 0 3 Member Y
Max Compression Member LEG SOL - 4" SOLID HORIZ DIAG DAE - 2.5X2.5X0.1875 Max Tension Member	(kip) -171.26 0.00 -9.91 Pu (kip)	Load Case 1.2D + 1.0W Normal 1.2D + 1.0W 90 deg Load Case	Len (ft) 10.02 0.000 16.80 Fy (ksi)	Bra X 50 0 50 Fu (ksi)	So So So Ph	% Z 50 0 25 sit Pn	KL/R 60.1 0.0 132.9 Num Bolts	F'y F (ksi) 50.0 0.0 36.0 Num Holes	Phic Pn (kip) 434.22 0.00 29.16 Shea phiR	Bolts 0 0 4 ar nv	Holes 0 0 2 Bear phiRn (kip)	phiRnv (kip) 0.00 0.00 55.22 Blk: ph (k	vphiRn (kip) 0.00 0.00 52.20 Shear	% 3 Use %	9 Member X 0 3 Member Y Controls
Max Compression Member LEG SOL - 4" SOLID HORIZ DIAG DAE - 2.5X2.5X0.1875 Max Tension Member LEG SOL - 4" SOLID	(kip) -171.26 0.00 -9.91 Pu (kip) 144.02	Load Case 1.2D + 1.0W Normal 1.2D + 1.0W 90 deg Load Case 2.0.9D + 1.0W 60 deg	Len (ft) 10.02 0.000 16.80 Fy (ksi)	Bra X 50 0 50 Fu (ksi) 6	50 0 50 Ph (k	% Z 50 0 25 sit Pn kip)	60.1 0.0 132.9 Num Bolts	F'y F (ksi) 50.0 0.0 36.0 Num Holes	Phic Pn (kip) 434.22 0.00 29.16 Shea phiR 5 (kip	0 0 4 ar nv)	Holes 0 0 2 Bear phiRn (kip) 0.0	900 phiRnv (kip) 0.00 0.00 55.22 Blk: phi (k	yphiRn (kip) 0.00 0.00 52.20 Shear it Pn kip)	% 3 Use %	9 Member X 0 3 Member Y Controls
Max Compression Member LEG SOL - 4" SOLID HORIZ DIAG DAE - 2.5X2.5X0.1875 Max Tension Member	(kip) -171.26 0.00 -9.91 Pu (kip) 144.02 0.00	Load Case 1.2D + 1.0W Normal 1.2D + 1.0W 90 deg Load Case 2.0.9D + 1.0W 60 deg	Len (ft) 10.02 0.000 16.80 Fy (ksi)	Bra X 50 0 50 Fu (ksi)	50 0 50 50 Ph (k	% Z 50 0 25 sit Pn	KL/R 60.1 0.0 132.9 Num Bolts	F'y F (ksi) 50.0 0.0 36.0 Num Holes	Phic Pn (kip) 434.22 0.00 29.16 Shea phiR 6 (kip	Bolts 0 0 4 ar nv	Holes 0 0 2 Bear phiRn (kip)	phiRnv (kip) 0.00 0.00 55.22 Blk: ph (k	vphiRn (kip) 0.00 0.00 52.20 Shear it Pn	% 3 Use %	9 Member X 0 3 Member Y Controls
Max Compression Member LEG SOL - 4" SOLID HORIZ DIAG DAE - 2.5X2.5X0.1875 Max Tension Member LEG SOL - 4" SOLID HORIZ	(kip) -171.26 0.00 -9.91 Pu (kip) 144.02 0.00	Load Case 1.2D + 1.0W Normal 1.2D + 1.0W 90 deg Load Case 2.0.9D + 1.0W 60 deg	Len (ft) 10.02 0.000 16.80 Fy (ksi) 50 0	Bra X 50 0 50 Fu (ksi)	50 0 50 50 Ph (k	% Z 50 0 25 sit Pn kip) 55.47 0.00	KL/R 60.1 0.0 132.9 Num Bolts	F'y F (ksi) 50.0 0.0 36.0 Num Holes	Phic Pn (kip) 434.22 0.00 29.16 Shea phiR 6 (kip	0 0 4 ar nv)	Holes 0 0 2 Bear phiRn (kip) 0.0 0.0	phiRnv (kip) 0.00 0.00 55.22 Blk: ph (k	yphiRn (kip) 0.00 0.00 52.20 Shear it Pn kip)	% 3 Use %	9 Member X 0 3 Member Y Controls
Max Compression Member LEG SOL - 4" SOLID HORIZ DIAG DAE - 2.5X2.5X0.1875 Max Tension Member LEG SOL - 4" SOLID HORIZ DIAG DAE - 2.5X2.5X0.1875	(kip) -171.26 0.00 -9.91 Pu (kip) 144.02 0.00 9.90	Load Case 1.2D + 1.0W Normal 1.2D + 1.0W 90 deg Load Case 2.0.9D + 1.0W 60 deg 1.2D + 1.0W 90 deg	Len (ft) 10.02 0.000 16.80 Fy (ksi) 50 0	Bra X 50 0 50 Fu (ksi) 6 5 phiR	50 0 50 Ph (k 5 56 0 8 5	% Z 50 0 25 siit Pn iit Pn 0.00 0.031 U	KL/R 60.1 0.0 132.9 Num Bolts 0 4	F'y F (ksi) 50.0 0.0 36.0 Num Holes 0 0 2	Phic Pn (kip) 434.22 0.00 29.16 Shea phiR (kip) 0	0 0 4 ar nv) .00 .00	Holes 0 0 2 Bear phiRn (kip) 0.0 0.0	phiRnv (kip) 0.00 0.00 55.22 Blk: ph (k	yphiRn (kip) 0.00 0.00 52.20 Shear it Pn kip)	% 3 Use %	9 Member X 0 3 Member Y Controls
Max Compression Member LEG SOL - 4" SOLID HORIZ DIAG DAE - 2.5X2.5X0.1875 Max Tension Member LEG SOL - 4" SOLID HORIZ DIAG DAE - 2.5X2.5X0.1875 Max Splice Forces Pu (kip	(kip) -171.26 0.00 -9.91 Pu (kip) 144.02 0.00 9.90	Load Case 1.2D + 1.0W Normal 1.2D + 1.0W 90 deg Load Case 2.0.9D + 1.0W 60 deg 1.2D + 1.0W 90 deg	Len (ft) 10.02 0.000 16.80 Fy (ksi) 50 0	Bra X 50 0 50 Fu (ksi) 6 5 phiR (kip	50 0 50 Ph (k 5 56 0 8 5	% Z 50 0 25 siit Pn iit Pn 0.00 0.031 U	KL/R 60.1 0.0 132.9 Num Bolts 0 4	F'y F (ksi) 50.0 0.0 36.0 Num Holes 0 0 2 Num Bolts	Phic Pn (kip) 434.22 0.00 29.16 Shea phiR 6 (kip	0 0 4 ar nv) .00 .00	Holes 0 0 2 Bear phiRn (kip) 0.0 0.0	phiRnv (kip) 0.00 0.00 55.22 Blk: ph (k	yphiRn (kip) 0.00 0.00 52.20 Shear it Pn kip)	% 3 Use %	9 Member X 0 3 Member Y Controls
Max Compression Member LEG SOL - 4" SOLID HORIZ DIAG DAE - 2.5X2.5X0.1875 Max Tension Member LEG SOL - 4" SOLID HORIZ DIAG DAE - 2.5X2.5X0.1875 Max Splice Forces Purchasion Member [kip] Top Tension 113.	(kip) -171.26 0.00 -9.91 Pu (kip) 144.02 0.00 9.90 Load 62 0.9D	Load Case 1.2D + 1.0W Normal 1.2D + 1.0W 90 deg Load Case 2.0.9D + 1.0W 60 deg 1.2D + 1.0W 90 deg 1 Case + 1.0W 60 deg	Len (ft) 10.02 0.000 16.80 Fy (ksi) 50 0	Bra X 50 0 50 Fu (ksi) 6 5 phiR (kip C)	50 0 50 Ph (k 5 56 0 8 5	% Z 50 0 25 siit Pn iit Pn 0.00 0.031 U	KL/R 60.1 0.0 132.9 Num Bolts 0 4	F'y F (ksi) 50.0 0.0 36.0 Num Holes 0 0 2	Phic Pn (kip) 434.22 0.00 29.16 Shea phiR (kip) 0	0 0 4 ar nv) .00 .00	Holes 0 0 2 Bear phiRn (kip) 0.0 0.0	phiRnv (kip) 0.00 0.00 55.22 Blk: ph (k	yphiRn (kip) 0.00 0.00 52.20 Shear it Pn kip)	% 3 Use %	9 Member X 0 3 Member Y Controls
Max Compression Member LEG SOL - 4" SOLID HORIZ DIAG DAE - 2.5X2.5X0.1875 Max Tension Member LEG SOL - 4" SOLID HORIZ DIAG DAE - 2.5X2.5X0.1875 Max Splice Forces PL (kip Top Tension 113. Top Compression 137.	(kip) -171.26 0.00 -9.91 Pu (kip) 144.02 0.00 9.90 b) Load 62 0.9D 53 1.2D	Load Case 1.2D + 1.0W Normal 1.2D + 1.0W 90 deg Load Case 2.0.9D + 1.0W 60 deg 1.2D + 1.0W 90 deg	Len (ft) 10.02 0.000 16.80 Fy (ksi) 50 0	Bra X 50 0 50 Fu (ksi) 6 5 phiR (kip C C C C C C C C C C C C C C C C C C C	50 0 50 Ph (k 5 56 0 8 5	% Z 50 0 25 siit Pn iit Pn 0.00 0.031 U	KL/R 60.1 0.0 132.9 Num Bolts 0 4	F'y F (ksi) 50.0 0.0 36.0 Num Holes 0 0 2 Num Bolts	Phic Pn (kip) 434.22 0.00 29.16 Shea phiR (kip) 0	0 0 4 ar nv) .00 .00 .22	Holes 0 0 2 Bear phiRn (kip) 0.0 0.0	phiRnv (kip) 0.00 0.00 55.22 Blk: ph (k	yphiRn (kip) 0.00 0.00 52.20 Shear it Pn kip)	% 3 Use %	9 Member X 0 3 Member Y Controls

Site Name: NORTH STONINGTON CT, CT

Customer:

DISH WIRELESS L.L.C.

Engineering Number: 13694578_C3_02

6/24/2021 12:57:04 PM

Section: 9 8		Bot Elev	(ft): 16	0.0		Hei	ght (1	ft): 20.	.000							
	5			-		0.4		E's a				Shear				
Max Compression Membe	Pu r (kip)	Load Case	Len (ft)	X X	cing Y		KL/R				Num Holes	pnıknı (kip)	/pniRn (kip)	use %	Controls	
LEG SOL - 3 3/4" SOLID	•	1.2D + 1.0W Normal	10.02	50	50	50			368.03	3 0	0	0.00	0.00	3	4 Member X	-
HORIZ	0.00		0.000	0	0	0			0.00		0	0.00	0.00)	
DIAG SAE - 3.5X3.5X0.25	-8.70	1.2D + 1.0W 90 deg	15.24	50	50	50	132.9	36.0	27.37	2	1	27.61	34.80	3	1 Member Z	
									She	ar	Bear	Blk :	Shear			
Max Tension Member	Pu (kin)	Load Case	Fy (ksi)	Fu (ksi)		it Pn .ip)	Num	Num Holes	phiF	₹nv	phiRn (kip)		it Pn <ip)< td=""><td>Use %</td><td>Controls</td><td></td></ip)<>	Use %	Controls	
LEG SOL - 3 3/4" SOLID	· 17	0.9D + 1.0W 60 deg	50		5 49	•	0		<u> </u>	0.00	0.0		(ip)	21	Member	•
HORIZ	0.00		0			0.00	0			0.00	0.0		0.00	0		
DIAG SAE - 3.5X3.5X0.25	8.61	1.2D + 1.0W 90 deg	36	5	8 4	9.53	2	1	2	7.61	27.8	4	23.25	37	Blk Shear	
Max Splice Forces	Pu (kip) Load	I Case		phiR (kip			se %	Num Bolts	Bolt T	vpe						
Top Tension	` ' '	+ 1.0W 60 deg			0.00		0	0		<i>7</i> 1° °						-
Top Compression		+ 1.0W Normal		C	0.00		0									
Bot Tension Bot Compression	113.62 0.9D 0.00	+ 1.0W 60 deg			2.17).00		28 0	6	1 1/8 <i>A</i>	\ 325						
Dot compression	0.00				,.00		O									
																_
Section: 10 10		Bot Elev	(ft): 18	0.0		Hei	ght (1	ft): 20.	.000							
Section: 10 10	Pu	Bot Elev	. ,			•	ght (i			Num	Num	Shear		Use		
Section: 10 10 Max Compression Member	Pu r (kip)	Bot Elev Load Case	(ft): 18 Len (ft)		cing Y	%	ght (1 KL/R	F'y	Phic Pn		Num Holes			Use %	Controls	
	r (kip)		Len (ft)	Bra	cing	%	KL/R	F'y (ksi)	Phic Pn	Bolts		phiRn	/ phiRn	%	Controls 1 Member X	_
Max Compression Member LEG SOL - 3 3/4" SOLID HORIZ	r (kip) -91.81 0.00	Load Case 1.2D + 1.0W Normal	Len (ft) 6.68 0.000	Bra X 100 0	cing Y 100 0	% Z 100 0	KL/R 85.5 0.0	F'y (ksi) 50.0	Phic Pn (kip) 291.33	Bolts 0 0	Holes 0 0	phiRn\ (kip) 0.00 0.00	/ phiRn (kip) 0.00 0.00	3	1 Member X	_
Max Compression Member LEG SOL - 3 3/4" SOLID	r (kip) -91.81 0.00	Load Case 1.2D + 1.0W Normal	Len (ft)	Bra X	cing Y	% Z 100 0	KL/R 85.5	F'y (ksi) 50.0	Phic Pn (kip) 291.33	Bolts 0 0	Holes 0	phiRnv (kip) 0.00	/ phiRn (kip) 0.00 0.00	3	1 Member X	-
Max Compression Member LEG SOL - 3 3/4" SOLID HORIZ	r (kip) -91.81 0.00	Load Case 1.2D + 1.0W Normal	Len (ft) 6.68 0.000	Bra X 100 0	cing Y 100 0	% Z 100 0	KL/R 85.5 0.0	F'y (ksi) 50.0	Phic Pn (kip) 291.33 0.00 21.86	Bolts 0 0 5 2	Holes 0 0 1	0.00 0.00 0.7.61	/ phiRn (kip) 0.00 0.00 26.10	3	1 Member X	_
Max Compression Member LEG SOL - 3 3/4" SOLID HORIZ DIAG SAE - 3X3X0.1875	-91.81 0.00 -4.89	Load Case 1.2D + 1.0W Normal 1.2D + 1.0W 90 deg	Len (ft) 6.68 0.000 11.74	Bra X 100 0 50	cing Y 100 0 50	% Z 100 0 50	KL/R 85.5 0.0 118.7	F'y (ksi) 50.0 0.0 36.0 Num	Phic Pn (kip) 291.33 0.00 21.86 She phiF	Bolts 0 0 0 2 ar	O 0 1 Bear phiRn	9hiRnv (kip) 0.00 0.00 27.61 Blk	/ phiRn (kip) 0.00 0.00 26.10 Shear it Pn	% 3 2 Use	1 Member X) 2 Member Z	-
Max Compression Member LEG SOL - 3 3/4" SOLID HORIZ DIAG SAE - 3X3X0.1875 Max Tension Member	r (kip) -91.81 0.00 -4.89 Pu (kip)	Load Case 1.2D + 1.0W Normal 1.2D + 1.0W 90 deg Load Case	Len (ft) 6.68 0.000 11.74 Fy (ksi)	Bra X 100 0 50 Fu (ksi)	cing Y 100 0 50 Ph (k	% Z 100 0 50 it Pn .ip)	85.5 0.0 118.7 Num Bolts	F'y (ksi) 50.0 0.0 36.0 Nums Holes	Phic Pn (kip) 291.33 0.00 21.86 She phiF s (kip	Bolts 0 0 2 ar Rnv 0)	Holes 0 0 1 Bear phiRn (kip)	phiRnv (kip) 0.00 0.00 27.61 Blk: ph (k	/ phiRn (kip) 0.00 0.00 26.10 Shear	% 3 2 Use %	1 Member X 0 2 Member Z Controls	-
Max Compression Member LEG SOL - 3 3/4" SOLID HORIZ DIAG SAE - 3X3X0.1875 Max Tension Member LEG SOL - 3 3/4" SOLID	r (kip) -91.81 0.00 -4.89 Pu (kip) 77.36	Load Case 1.2D + 1.0W Normal 1.2D + 1.0W 90 deg Load Case 1.2D + 1.0W 60 deg	Len (ft) 6.68 0.000 11.74 Fy (ksi)	Bra X 100 0 50 Fu (ksi)	cing Y 100 0 50 Ph (k	% Z 100 0 50 it Pn ip) 7.02	KL/R 85.5 0.0 118.7 Num Bolts	F'y (ksi) 50.0 0.0 36.0 Nums Holes	Phic Pn (kip) 291.33 0.00 21.86 She phiF s (kip	Bolts 3 0 0 0 5 2 ar Rnv 0) 0.00	Holes 0 0 1 Bear phiRn (kip) 0.0	900 phiRnv (kip) 0.00 0.00 27.61 Blk phi (k	/ phiRn (kip) 0.00 0.00 26.10 Shear it Pn kip)	% 3 2 Use %	1 Member X 2 Member Z Controls Member	-
Max Compression Member LEG SOL - 3 3/4" SOLID HORIZ DIAG SAE - 3X3X0.1875 Max Tension Member	-91.81 0.00 -4.89 Pu (kip) 77.36 0.00	Load Case 1.2D + 1.0W Normal 1.2D + 1.0W 90 deg Load Case 1.2D + 1.0W 60 deg	Len (ft) 6.68 0.000 11.74 Fy (ksi)	Bra X 100 0 50 Fu (ksi)	cing Y 100 0 50 Ph (k 5 49	% Z 100 0 50 it Pn .ip)	85.5 0.0 118.7 Num Bolts	F'y (ksi) 50.0 0.0 36.0 Nums Holes	Phic Pn (kip) 291.33 0.00 21.86 She phiF s (kip	Bolts 0 0 2 ar Rnv 0)	Holes 0 0 1 Bear phiRn (kip)	phiRnv (kip) 0.00 0.00 27.61 Blk: ph (k	/phiRn (kip) 0.00 0.00 26.10 Shear it Pn	% 3 0 2 Use %	1 Member X 2 Member Z Controls Member	-
Max Compression Member LEG SOL - 3 3/4" SOLID HORIZ DIAG SAE - 3X3X0.1875 Max Tension Member LEG SOL - 3 3/4" SOLID HORIZ	-91.81 0.00 -4.89 Pu (kip) 77.36 0.00	Load Case 1.2D + 1.0W Normal 1.2D + 1.0W 90 deg Load Case 1.2D + 1.0W 60 deg	Len (ft) 6.68 0.000 11.74 Fy (ksi) 50 0	Bra X 100 0 50 Fu (ksi)	cing Y 100 0 50 Ph (k 5 49	% Z 100 0 50 it Pn ip) 7.02 0.00	85.5 0.0 118.7 Num Bolts	F'y (ksi) 50.0 0.0 36.0 Nums Holes	Phic Pn (kip) 291.33 0.00 21.86 She phiF s (kip	Bolts B 0 0 0 0 2 2 ar Rnv 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Holes 0 0 1 Bear phiRn (kip) 0.0 0.0	phiRnv (kip) 0.00 0.00 27.61 Blk: ph (k	/ phiRn (kip) 0.00 0.00 26.10 Shear it Pn kip)	% 3 0 2 Use %	1 Member X 2 Member Z Controls	-
Max Compression Member LEG SOL - 3 3/4" SOLID HORIZ DIAG SAE - 3X3X0.1875 Max Tension Member LEG SOL - 3 3/4" SOLID HORIZ DIAG SAE - 3X3X0.1875	Pu (kip) 77.36 0.00 4.88	Load Case 1.2D + 1.0W Normal 1.2D + 1.0W 90 deg Load Case 1.2D + 1.0W 60 deg 1.2D + 1.0W 90 deg	Len (ft) 6.68 0.000 11.74 Fy (ksi) 50 0	Bra X 100 0 50 Fu (ksi) 6 5 phiR	cing Y 100 0 50 Ph (k 5 49 0 8 3	% Z 100 0 50 stt Pn ip) 7.02 0.00 1.36	85.5 0.0 118.7 Num Bolts 0 0	F'y (ksi) 50.0 0.0 36.0 Nums Holes 0 0 1	Phic Pn (kip) 291.33 0.00 21.86 She phiF s (kip (Bolts 0 0 0 2 ar Rnv 0) 0.00 0.00 7.61	Holes 0 0 1 Bear phiRn (kip) 0.0 0.0	phiRnv (kip) 0.00 0.00 27.61 Blk: ph (k	/ phiRn (kip) 0.00 0.00 26.10 Shear it Pn kip)	% 3 0 2 Use %	1 Member X 2 Member Z Controls	-
Max Compression Member LEG SOL - 3 3/4" SOLID HORIZ DIAG SAE - 3X3X0.1875 Max Tension Member LEG SOL - 3 3/4" SOLID HORIZ DIAG SAE - 3X3X0.1875 Max Splice Forces	Pu (kip) Load	Load Case 1.2D + 1.0W Normal 1.2D + 1.0W 90 deg Load Case 1.2D + 1.0W 60 deg 1.2D + 1.0W 90 deg	Len (ft) 6.68 0.000 11.74 Fy (ksi) 50 0	Bra X 100 0 50 Fu (ksi) 6 5 phiR (kip	cing Y 100 0 50 Ph (k 5 49 0 8 3	% Z 100 0 50 stt Pn ip) 7.02 0.00 1.36	85.5 0.0 118.7 Num Bolts 0 0 2	F'y (ksi) 50.0 0.0 36.0 Num Holes 0 0 1 Num Bolts	Phic Pn (kip) 291.33 0.00 21.86 She phiF s (kip	Bolts 0 0 0 2 ar Rnv 0) 0.00 0.00 7.61	Holes 0 0 1 Bear phiRn (kip) 0.0 0.0	phiRnv (kip) 0.00 0.00 27.61 Blk: ph (k	/ phiRn (kip) 0.00 0.00 26.10 Shear it Pn kip)	% 3 0 2 Use %	1 Member X 2 Member Z Controls	<u> </u>
Max Compression Member LEG SOL - 3 3/4" SOLID HORIZ DIAG SAE - 3X3X0.1875 Max Tension Member LEG SOL - 3 3/4" SOLID HORIZ DIAG SAE - 3X3X0.1875	Pu (kip) Load 55.19 0.90	Load Case 1.2D + 1.0W Normal 1.2D + 1.0W 90 deg Load Case 1.2D + 1.0W 60 deg 1.2D + 1.0W 90 deg	Len (ft) 6.68 0.000 11.74 Fy (ksi) 50 0	Bra X 100 0 50 Fu (ksi) 6 5 phiR (kip	cing Y 100 0 50 Ph (k 5 49 0 8 3	% Z 100 0 50 stt Pn ip) 7.02 0.00 1.36	85.5 0.0 118.7 Num Bolts 0 0	F'y (ksi) 50.0 0.0 36.0 Nums Holes 0 0 1	Phic Pn (kip) 291.33 0.00 21.86 She phiF s (kip (Bolts 0 0 0 2 ar Rnv 0) 0.00 0.00 7.61	Holes 0 0 1 Bear phiRn (kip) 0.0 0.0	phiRnv (kip) 0.00 0.00 27.61 Blk: ph (k	/ phiRn (kip) 0.00 0.00 26.10 Shear it Pn kip)	% 3 0 2 Use %	1 Member X 2 Member Z Controls	
Max Compression Member LEG SOL - 3 3/4" SOLID HORIZ DIAG SAE - 3X3X0.1875 Max Tension Member LEG SOL - 3 3/4" SOLID HORIZ DIAG SAE - 3X3X0.1875 Max Splice Forces Top Tension	Pu (kip) Load 55.19 0.9D 65.36 1.2D	Load Case 1.2D + 1.0W Normal 1.2D + 1.0W 90 deg Load Case 1.2D + 1.0W 60 deg 1.2D + 1.0W 90 deg	Len (ft) 6.68 0.000 11.74 Fy (ksi) 50 0	Bra X 100 0 50 Fu (ksi) 6 5 phiR (kip (kip 412	cing Y 100 0 50 Ph (k 5 49 0 8 3 nt)	% Z 100 0 50 stt Pn ip) 7.02 0.00 1.36	85.5 0.0 118.7 Num Bolts 0 0 2	F'y (ksi) 50.0 0.0 36.0 Num Holes 0 0 1 Num Bolts	Phic Pn (kip) 291.33 0.00 21.86 She phiF s (kip (Bolts B 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Holes 0 0 1 Bear phiRn (kip) 0.0 0.0	phiRnv (kip) 0.00 0.00 27.61 Blk: ph (k	/ phiRn (kip) 0.00 0.00 26.10 Shear it Pn kip)	% 3 0 2 Use %	1 Member X 2 Member Z Controls	

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Site Name: NORTH STONINGTON CT, CT

Customer: DISH WIRELESS L.L.C.

Engineering Number: 13694578_C3_02 6/24/2021 12:57:04 PM

		Bot Elev	(ft): 20	0.0		Heiç	ght (f	t): 20.	000						
							-					Shear			
	Pu	1 1 0	Len		cing		KL /D		Phic Pn				-		0 t 1 -
Max Compression Member	(kip)	Load Case	(ft)	Х	Υ		KL/R				Holes	(kip)	(kip)	%	
LEG SOL - 3 1/4" SOLID HORIZ	-59.97 0.00	1.2D + 1.0W Normal	6.68	100	100	100	98.6 0.0		183.32	0	0 0	0.00	0.00		2 Member X
DIAG SAE - 2.5X2.5X0.1875		1.2D + 1.0W 90 deg	10.16	50	50		123.2		16.98	2	1	27.61	26.10		4 Member Z
		o .													
									Shea		Bear	Blk S	Shear		
Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)		it Pn .ip)	Num Bolts				phiRn (kip)		t Pn (ip)	Use %	Controls
LEG SOL - 3 1/4" SOLID	50.42	1.2D + 1.0W 60 deg	50	6	5 37	3.32	0	0	0	.00	0.0	0		13	Member
HORIZ	0.00		0			0.00	0	0		.00	0.0		0.00	0	
DIAG SAE - 2.5X2.5X0.1875	4.07	1.2D + 1.0W 90 deg	36	5	8 2	5.22	2	1	27	.61	20.8	8	14.38	28	Blk Shear
Du						11.		Nicona							
Max Splice Forces (kip)	Load	l Case		phiR (kip			se %	Num Bolts	Bolt Ty	pe					
Top Tension 28.	15 0.9D	+ 1.0W 60 deg		` '	0.00		0	0							
Top Compression 34.5		+ 1.0W Normal			0.00		0								
Bot Tension 55.7 Bot Compression 0.0		+ 1.0W 60 deg			'.10).00		17 0	6	1 A325						
	,,,				7.00		U								
Section: 12 12		Bot Elev	(ft): 22	0.0		Heig	ght (f	t): 20.	000						
								•							
	Du		Lon	Dro	cina	0/.		Ε'ν ε		Num		Shear		Heo	
May Compression Momber	Pu (kip)	Load Case	Len (ft)		cing '		KL/R		Phic Pn		Num _I	ohiRnv	phiRn		Controls
Max Compression Member	(kip)	Load Case	(ft)	Χ	Υ	Z	KL/R	(ksi)	Phic Pn (kip)	Bolts	Num Holes	ohiRnv (kip)	phiRn (kip)	%	Controls
Max Compression Member LEG SOL - 2 1/4" SOLID HORIZ	(kip)	1.2D + 1.0W Normal	(ft)	Χ	U	Z	KL/R 106.8 0.0	(ksi) 50.0	Phic Pn		Num _I	ohiRnv	phiRn	%	Controls 8 Member X
LEG SOL - 2 1/4" SOLID	-30.10 0.00	1.2D + 1.0W Normal	(ft) 5.01	X 100	Y 100	Z 100 0	106.8	50.0 0.0	Phic Pn (kip) 77.66	Bolts 0	Num Holes	ohiRnv (kip) 0.00	phiRn (kip) 0.00	3	8 Member X
LEG SOL - 2 1/4" SOLID HORIZ	-30.10 0.00	1.2D + 1.0W Normal	5.01 0.000	100 0	Y 100 0	Z 100 0	106.8 0.0	50.0 0.0	Phic Pn (kip) 77.66 0.00	Bolts 0 0	Num Holes	0.00 0.00 0.00	phiRn (kip) 0.00 0.00	3	8 Member X
LEG SOL - 2 1/4" SOLID HORIZ	-30.10 0.00 -3.31	1.2D + 1.0W Normal	5.01 0.000 7.621	100 0 50	Y 100 0 50	Z 100 0 50	106.8 0.0 133.3	50.0 0.0 36.0	Phic Pn (kip) 77.66 0.00 10.00	Bolts 0 0 2	Num Holes 0 0 1	0.00 0.00 0.00 17.67	0.00 0.00 0.00 20.88	3	8 Member X
LEG SOL - 2 1/4" SOLID HORIZ	-30.10 0.00 -3.31	1.2D + 1.0W Normal	5.01 0.000	100 0	Y 100 0 50 Ph	Z 100 0 50	106.8 0.0 133.3 Num	50.0 0.0 36.0	Phic Pn (kip) 77.66 0.00 10.00 Shea phiR	Bolts 0 0 2	Num Holes 0 0	0.00 0.00 0.00 17.67 Blk S	phiRn (kip) 0.00 0.00 20.88	3	8 Member X
LEG SOL - 2 1/4" SOLID HORIZ DIAG SAE - 1.75X1.75X0.18	-30.10 0.00 -3.31 Pu (kip)	1.2D + 1.0W Normal 1.2D + 1.0W 90 deg	5.01 0.000 7.621	X 100 0 50 Fu (ksi)	Y 100 0 50 Ph	Z 100 0 50 it Pn ip)	106.8 0.0 133.3 Num	50.0 0.0 36.0 Num	Phic Pn (kip) 77.66 0.00 10.00 Shea phiR 6 (kip	Bolts 0 0 2	Num Holes 0 0 1 Bear phiRn	0.00 0.00 0.00 17.67 Blk 5 phi	phiRn (kip) 0.00 0.00 20.88 Shear t Pn	3 3 Use %	8 Member X) 3 Member Z
LEG SOL - 2 1/4" SOLID HORIZ DIAG SAE - 1.75X1.75X0.18 Max Tension Member LEG SOL - 2 1/4" SOLID HORIZ	-30.10 0.00 -3.31 Pu (kip) 24.02 0.00	1.2D + 1.0W Normal 1.2D + 1.0W 90 deg Load Case 1.2D + 1.0W 60 deg	Fy (ksi)	X 100 0 50 Fu (ksi)	Y 100 0 50 Phi (k	Z 100 0 50 it Pn ip) 8.92 0.00	106.8 0.0 133.3 Num Bolts	(ksi) 50.0 0.0 36.0 Num Holes	Phic Pn (kip) 77.66 0.00 10.00 Shea phiR 6 (kip)	0 0 2 ar nv)	Num Holes 0 0 1 Bear phiRn (kip) 0.0	0.00 0.00 0.00 17.67 Blk 5 phi (k	9 phiRn (kip) 0.00 0.00 20.88 Shear t Pn kip)	% 3 Use %	8 Member X 3 Member Z Controls Member
LEG SOL - 2 1/4" SOLID HORIZ DIAG SAE - 1.75X1.75X0.18 Max Tension Member LEG SOL - 2 1/4" SOLID	-30.10 0.00 -3.31 Pu (kip) 24.02 0.00	1.2D + 1.0W Normal 1.2D + 1.0W 90 deg Load Case 1.2D + 1.0W 60 deg	5.01 0.000 7.621 Fy (ksi)	X 100 0 50 Fu (ksi)	Y 100 0 50 Phi (k	Z 100 0 50 it Pn ip) 8.92	106.8 0.0 133.3 Num Bolts	50.0 0.0 36.0 Num Holes	Phic Pn (kip) 77.66 0.00 10.00 Shea phiR 6 (kip)	0 0 2 ar nv)	Num Holes 0 0 1 Bear phiRn (kip)	0.00 0.00 0.00 17.67 Blk 5 phi (k	ophiRn (kip) 0.00 0.00 20.88 Shear t Pn kip)	% 3 Use %	8 Member X 3 Member Z Controls Member
LEG SOL - 2 1/4" SOLID HORIZ DIAG SAE - 1.75X1.75X0.18 Max Tension Member LEG SOL - 2 1/4" SOLID HORIZ DIAG SAE - 1.75X1.75X0.18	-30.10 0.00 -3.31 Pu (kip) 24.02 0.00	1.2D + 1.0W Normal 1.2D + 1.0W 90 deg Load Case 1.2D + 1.0W 60 deg	Fy (ksi)	X 100 0 50 Fu (ksi)	Y 100 0 50 Phi (k 5 17 0 8 1	Z 100 0 50 it Pn ip) 8.92 0.00 6.82	106.8 0.0 133.3 Num Bolts 0 0	(ksi) 50.0 0.0 36.0 Num Holes 0 0	Phic Pn (kip) 77.66 0.00 10.00 Shea phiR 6 (kip)	0 0 2 ar nv)	Num Holes 0 0 1 Bear phiRn (kip) 0.0	0.00 0.00 0.00 17.67 Blk 5 phi (k	9 phiRn (kip) 0.00 0.00 20.88 Shear t Pn kip)	% 3 Use %	8 Member X 3 Member Z Controls Member
LEG SOL - 2 1/4" SOLID HORIZ DIAG SAE - 1.75X1.75X0.18 Max Tension Member LEG SOL - 2 1/4" SOLID HORIZ	-30.10 0.00 -3.31 Pu (kip) 24.02 0.00 3.26	1.2D + 1.0W Normal 1.2D + 1.0W 90 deg Load Case 1.2D + 1.0W 60 deg	Fy (ksi)	X 100 0 50 Fu (ksi)	Y 100 0 50 Phi (k 5 17 0 8 1	Z 100 0 50 it Pn ip) 8.92 0.00 6.82	106.8 0.0 133.3 Num Bolts 0 0	(ksi) 50.0 0.0 36.0 Num Holes	Phic Pn (kip) 77.66 0.00 10.00 Shea phiR 6 (kip)	0 0 2 arr nv) .00 .00	Num Holes 0 0 1 Bear phiRn (kip) 0.0	0.00 0.00 0.00 17.67 Blk 5 phi (k	9 phiRn (kip) 0.00 0.00 20.88 Shear t Pn kip)	% 3 Use %	8 Member X 3 Member Z Controls Member
LEG SOL - 2 1/4" SOLID HORIZ DIAG SAE - 1.75X1.75X0.18 Max Tension Member LEG SOL - 2 1/4" SOLID HORIZ DIAG SAE - 1.75X1.75X0.18 Max Splice Forces Pu (kip) Top Tension 6.5	(kip) -30.10 0.00 -3.31 Pu (kip) 24.02 0.00 3.26	1.2D + 1.0W Normal 1.2D + 1.0W 90 deg Load Case 1.2D + 1.0W 60 deg 1.2D + 1.0W 90 deg	Fy (ksi)	X 100 0 50 Fu (ksi) 6 5 phiR (kip	Y 100 0 50 Phi (k 5 17 0 8 1	Z 100 0 50 it Pn ip) 8.92 0.00 6.82	106.8 0.0 133.3 Num Bolts 0 0	(ksi) 50.0 0.0 36.0 Num Holes 0 0 1	Phic Pn (kip) 77.66 0.00 10.00 Shea phiR s (kip 0 17	0 0 2 arr nv) .00 .00	Num Holes 0 0 1 Bear phiRn (kip) 0.0	0.00 0.00 0.00 17.67 Blk 5 phi (k	9 phiRn (kip) 0.00 0.00 20.88 Shear t Pn kip)	% 3 Use %	8 Member X 3 Member Z Controls Member
LEG SOL - 2 1/4" SOLID HORIZ DIAG SAE - 1.75X1.75X0.18 Max Tension Member LEG SOL - 2 1/4" SOLID HORIZ DIAG SAE - 1.75X1.75X0.18 Max Splice Forces (kip) Top Tension 6.5 Top Compression 9.0	(kip) -30.10 0.00 -3.31 Pu (kip) 24.02 0.00 3.26 Load 55 0.9D 98 1.2D	1.2D + 1.0W Normal 1.2D + 1.0W 90 deg Load Case 1.2D + 1.0W 60 deg 1.2D + 1.0W 90 deg	Fy (ksi)	X 100 0 50 Fu (ksi) 6 5 phiR (kip	Y 100 0 50 Phi (k 5 17 0 8 1 0)	Z 100 0 50 sit Pn ip) 8.92 0.00 6.82	106.8 0.0 133.3 Num Bolts 0 2	50.0 0.0 36.0 Num Holes 0 0 1 Num Bolts	Phic Pn (kip) 77.66 0.00 10.00 Shea phiR s (kip 0 17	0 0 2 arrnnv) 000.000.667	Num Holes 0 0 1 Bear phiRn (kip) 0.0	0.00 0.00 0.00 17.67 Blk 5 phi (k	9 phiRn (kip) 0.00 0.00 20.88 Shear t Pn kip)	% 3 Use %	8 Member X 3 Member Z Controls Member

Site Name: NORTH STONINGTON CT, CT

Customer: DISH WIRELESS L.L.C.

Bot Compression

0.00

Engineering Number: 13694578_C3_02

6/24/2021 12:57:04 PM

Force/Stress Summary

Section: 13	13		Bot Elev	(ft): 24	0.0		Hei	ght (1	ft): 10.	000						
		Pu		Len	Bra	ıcing	j %		F'y F	Phic Pn	Num	Num		Bear phiRn	Use	
Max Compression Mem	ber	(kip)	Load Case	(ft)	Χ	Υ	Z	KL/R	(ksi)	(kip)	Bolts	Holes	(kip)	(kip)	%	Controls
LEG SOL - 2" SOLID HORIZ SAE - 2X2X0.187 DIAG SAE - 1.75X1.75X		-0.21	1.2D + 1.0W Normal 1.2D + 1.0W Normal 1.2D + 1.0W 90 deg		100	100 100 50	100	120.0 121.8 114.0	36.0	49.29 13.73 13.22	0 1 2	0 1 1	0.00 13.81 17.67	0.00 13.05 20.88		1 Member X 1 Bolt Bear 7 Member Z
Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)		hit Pn kip)	Num Bolts			nv	Bear phiRn (kip)	ph	Shear it Pn kip)	Use %	Controls
LEG SOL - 2" SOLID			1.2D + 1.0W 60 deg	50			41.37	0	0		.00	0.0				Member
HORIZ SAE - 2X2X0.187			1.2D + 1.0W 60 deg	36			19.12	1	1	13		7.8		6.83	2	Dir. Orroan
DIAG SAE - 1.75X1.75X	X0.18	2.24	1.2D + 1.0W 90 deg	36	5	8	16.82	2	1	17	.67	16.6	4	9.99	22	Blk Shear
Max Splice Forces	Pu (kip)	Load	Case		phiR (kip			se %	Num Bolts	Bolt Ty	ре					
Top Tension	0.00					0.00		0	0							
Top Compression			+ 1.0Ev + 1.0Eh			0.00		0			_					
Bot Tension	6.55		+ 1.0W 60 deg			1.36		8	4	5/8 A32	25					

0.00

0

Site Name: NORTH STONINGTON CT, CT

Customer: DISH WIRELESS L.L.C.

Engineering Number: 13694578_C3_02

6/24/2021 12:57:04 PM

Detailed Reactions

16.17 00.00 120 1a 15.55 -188.16 -16.02	Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX (kip)	FY (kip)	FZ (kip)	(-) = Uplift (+) = Down
1.2D + 1.0W 60 deg	1.2D + 1.0W Normal	16.17	00.00	0	1	0.00	484.65	-48.37	
1.2D + 1.0W 60 deg					1a				
16.17 00.00 120 1a -23.45 249.40 6.63 1.2D + 1.0W 90 deg 16.17 00.00 240 1b -36.26 -390.47 -20.93 1.2D + 1.0W 90 deg 16.17 00.00 10 1 -6.87 36.11 -1.64 16.17 00.00 120 1a -36.77 410.29 17.10 16.17 00.00 120 1a -36.77 410.29 17.10 16.17 00.00 120 1a -36.77 410.29 17.10 16.17 00.00 120 1a 16.00 475.21 -47.91 16.17 00.00 120 1a 16.00 -196.98 -16.28 0.9D + 1.0W Normal 16.17 00.00 10 1 -5.97 240.16 -23.13 16.17 00.00 120 1a -23.02 240.16 6.39 16.17 00.00 120 1a -36.37 -380.00 -16.39 16.17 00.00 240 1b -36.07 -399.07 -21.19 0.9D + 1.0W 90 deg 16.17 00.00 10 1 -5.97 240.16 6.39 16.17 00.00 120 1a -38.34 400.90 16.86 16.17 00.00 120 1a -38.34 400.90 16.86 16.17 00.00 120 1a -38.34 400.90 16.86 16.17 00.00 120 1a -26.86 27.08 -1.14 16.17 00.00 120 1a -26.86 -4.69 -37.6 12D + 1.0Wi 60 deg 16.17 00.00 120 1a -26.86 -4.69 -37.6 12D + 1.0Wi 60 deg 16.17 00.00 120 1a -26.86 -4.69 -37.6 12D + 1.0Wi 90 deg 16.17 00.00 120 1a -26.86 -4.69 -37.6 12D + 1.0Wi 90 deg 16.17 00.00 120 1a -26.86 -4.69 -37.6 12D + 1.0Wi 90 deg 16.17 00.00 120 1a -38.34 40.90 -5.53 12D + 1.0Wi 90 deg 16.17 00.00 120 1a -38.36 183.11 6.75 12D + 1.0Wi 90 deg 16.17 00.00 120 1a -38.36 183.11 6.75 12D + 1.0Wi 90 deg 16.17 00.00 120 1a -38.36 183.11 6.75 12D + 1.0Eh Normal M1 16.17 00.00 120 1a -38.54 47.4 -3.20 12D + 1.0Eh Normal M1 16.17 00.00 120 1a -3.55 56.99 1.90 1.2D + 1.0Ev + 1.0Eh Normal M1 16.17 00.00 120 1a -3.55 56.99 1.90 1.2D + 1.0Ev + 1.0Eh Normal M1 16.17 00.00 120 1a -3.55 56.99 1.90 1.2D + 1.0Ev + 1.0Eh Normal M1 16.17 00.00 120 1a -3.35 36.96 1.10 1.2D + 1.0Ev + 1.0Eh Normal M1 16.17 00.00 120 1a -3.33 36.96 1.10 1.2D + 1.0Ev + 1.0Eh Normal M1 16.17 00.00 120 1a -3.33 36.96 1.10 1.2D + 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 120 1a -3.33 36.96 1.10 1.2D + 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 120 1a -3.33 36.96 1.10 1.2D + 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 120 1a -3.33 36.96 1.10 1.2D + 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 120 1a		16.17	00.00	240	1b	-15.55	-188.16	-16.02	
1.2D + 1.0W 90 deg	1.2D + 1.0W 60 deg			-					
1.2D + 1.0W 90 deg									
16.17 00.00 120 1a 36.77 100.29 171.10 16.17 00.00 240 1b 33.37 338.08 1-15.46 0.9D + 1.0W Normal 16.17 00.00 10 1 0.00 475.21 47.91 16.17 00.00 240 1b 16.00 195.98 16.28 0.9D + 1.0W 60 deg 16.17 00.00 240 1b 1.6.00 195.98 16.28 0.9D + 1.0W 60 deg 16.17 00.00 240 1b 1.6.00 195.98 16.28 0.9D + 1.0W 60 deg 16.17 00.00 120 1a 2.3.02 240.16 6.39 16.17 00.00 240 1b 3.6.70 399.07 22.119 0.9D + 1.0W 90 deg 16.17 00.00 10 1 6.86 27.08 1.14 16.17 00.00 120 1a 3.6.34 400.90 16.86 16.17 00.00 240 1b 3.3.80 3.346.74 15.72 1.2D + 1.0Di + 1.0Wi Normal 16.17 00.00 120 1a 3.6.34 400.90 16.86 16.17 00.00 240 1b 3.3.80 3.346.74 15.72 1.2D + 1.0Di + 1.0Wi 60 deg 16.17 00.00 120 1a 2.68 4.69 3.76 1.2D + 1.0Di + 1.0Wi 60 deg 16.17 00.00 120 1a 2.68 4.89 3.76 1.2D + 1.0Di + 1.0Wi 90 deg 16.17 00.00 120 1a 2.68 3.3.60 1.2D + 1.0Di + 1.0Wi 90 deg 16.17 00.00 120 1a 9.71 132.72 3.44 16.17 00.00 120 1a -1.88 132.71 -10.13 16.17 00.00 120 1a -1.88 132.71 -10.13 16.17 00.00 120 1a -1.89 183.11 6.75 16.17 00.00 120 1a -1.89 183.11 6.75 16.17 00.00 120 1a -1.3.89 183.11 6.75 16.17 00.00 120 1a -1.3.89 183.11 6.75 16.17 00.00 120 1a -2.28 4.74 0.29 1.2D + 1.0Ev + 1.0Eh Normal M1 16.17 00.00 10 1 0.02 47.74 0.29 1.2D + 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 10 1 0.02 47.74 0.29 1.2D + 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 10 1 0.00 49.58 -3.69 1.1D + 1.0Ev + 1.0Eh Normal M1 16.17 00.00 10 1 0.00 49.58 -3.69 1.1D + 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 10 1 0.02 36.96 1.10 0.9D - 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 10 1 0.02 36.96 1.10 0.9D - 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 10 1 0.02 52.33 36.96 1.10 0.9D - 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 10 1 0.02 52.34 4 0.08		16.17	00.00	240	1b	-36.26	-390.47	-20.93	
16.17 00.00 240 1b -33.37 -338.08 -15.46 0.9D + 1.0W Normal 16.17 00.00 0 1 1 0.00 196.98 -16.28 0.9D + 1.0W 60 deg 16.17 00.00 10 1 1 -5.97 240.16 -23.13 16.17 00.00 120 1a -23.02 240.16 -6.39 16.17 00.00 120 1a -36.70 -399.07 -21.19 0.9D + 1.0W 90 deg 16.17 00.00 0 0 1 -6.86 27.08 -1.14 16.17 00.00 120 1a -36.34 400.90 16.86 16.17 00.00 120 1a -36.34 400.90 16.86 16.17 00.00 120 1a -36.34 400.90 -16.86 16.17 00.00 120 1a -26.8 -4.69 -3.76 16.17 00.00 120 1a -26.8 -4.69 -3.76 16.17 00.00 240 1b -26.8 -4.69 -3.76 16.17 00.00 240 1b -26.8 -4.69 -3.76 16.17 00.00 240 1b -26.8 -4.69 -3.76 1.2D + 1.0Di + 1.0Wi 60 deg 16.17 00.00 240 1b -9.58 -71.09 -5.53 1.2D + 1.0Di + 1.0Wi 90 deg 16.17 00.00 120 1a -9.71 132.72 3.44 16.17 00.00 120 1a -3.89 183.11 -6.75 16.17 00.00 120 1a -1.88 133.11 -6.75 16.17 00.00 120 1a -1.89 183.11 -6.75 16.17 00.00 120 1a -0.55 -5.55 1.2D + 1.0Eh Normal M1 16.17 00.00 120 1a -0.94 22.47 0.29 1.2D + 1.0Eh Normal M1 16.17 00.00 120 1a -0.94 22.47 0.29 1.2D + 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 10 1 -0.25 35.11 -2.08 1.2D + 1.0Ev + 1.0Eh Normal M1 16.17 00.00 10 1 -0.25 35.11 -2.08 1.2D + 1.0Ev + 1.0Eh Normal M1 16.17 00.00 10 1 -0.25 35.11 -2.08 1.2D + 1.0Ev + 1.0Eh Normal M1 16.17 00.00 10 1 -0.25 35.11 -2.08 1.2D + 1.0Ev + 1.0Eh Normal M1 16.17 00.00 10 1 -0.25 35.11 -2.08 1.2D - 1.0Ev + 1.0Eh Normal M1 16.17 00.00 10 1 -0.25 35.11 -2.08 1.2D - 1.0Ev + 1.0Eh So deg M1 16.17 00.00 10 1 -0.22 36.96 -2.57 16.17 00.00 120 1a -0.38 11.73 -0.03 0.9D - 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 10 1 -0.25 36.96 1.10 0.9D - 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 10 1 -0.25 36.96 -2.57 16.17 00.00 120 1a -0.38 11.73 -0.03	1.2D + 1.0W 90 deg								
0.9D + 1.0W Normal 16.17 00.00 0 1 1 0.00 475.21 -47.91 16.17 00.00 120 1a 16.00 -196.98 -16.28 16.28 16.17 00.00 240 1b -16.00 -196.98 -16.28 16.28 16.17 00.00 120 1a -22.02 240.16 6.39 16.17 00.00 120 1a -22.02 240.16 6.39 16.17 00.00 120 1a -36.34 400.90 16.86 16.17 00.00 120 1a -2.68 -4.69 -3.76 16.17 00.00 120 1a -9.71 132.72 3.44 16.17 00.00 120 1a -9.58 71.09 -5.53 1.2D +1.0Di +1.0Wi 90 deg 16.17 00.00 120 1a -9.58 71.09 -5.53 1.2D +1.0Di +1.0Wi 90 deg 16.17 00.00 120 1a -33.90 183.11 6.75 16.17 00.00 120 1a -33.90 183.11 6.75 16.17 00.00 120 1a -38.90 183.11 6.75 16.17 00.00 120 1a -3.89 183.11 6.75 16.17 00.00 120 1a -3.88 47.47 0.29 18.10									
16.17 00.00 120 1a 16.00 -196.98 -16.28 0.9D + 1.0W 60 deg		16.17	00.00	240	1b	-33.37	-338.08	-15.46	
16.17 00.00 240 1b -16.00 -196.98 -16.28 0.9D + 1.0W 60 deg	0.9D + 1.0W Normal								
0.9D + 1.0W 60 deg									
16.17 00.00 120 1a 23.02 240.16 6.39 16.17 00.00 240 1b 36.70 -399.07 -21.19 0.9D + 1.0W 90 deg 16.17 00.00 0 1 1 -6.86 27.08 -1.14 16.17 00.00 120 1a -36.34 400.90 16.86 16.17 00.00 240 1b -33.80 -346.74 -15.72 1.2D + 1.0Di + 1.0Wi Normal 16.17 00.00 0 1 1 0.00 203.72 -17.59 16.17 00.00 120 1a 2.68 -4.69 -3.76 16.17 00.00 240 1b -2.68 -4.69 -3.76 12D + 1.0Di + 1.0Wi 60 deg 16.17 00.00 0 1 1 -1.88 132.71 -10.13 1.2D + 1.0Di + 1.0Wi 60 deg 16.17 00.00 120 1a -9.71 132.72 3.44 16.17 00.00 240 1b -9.58 -71.09 -5.53 1.2D + 1.0Di + 1.0Wi 90 deg 16.17 00.00 240 1b -9.58 -71.09 -5.53 1.2D + 1.0Di + 1.0Wi 90 deg 16.17 00.00 10 1 -2.17 64.78 -3.05 16.17 00.00 120 1a -1.389 183.11 6.75 16.17 00.00 120 1a -1.389 183.11 6.75 16.17 00.00 120 1a -0.94 22.47 0.29 1.2D + 1.0Ev + 1.0Eh Normal M1 16.17 00.00 0 1 1 0.00 60.38 -4.32 1.2D + 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 0 1 1 -0.22 447.74 0.29 1.2D + 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 0 1 1 -0.22 47.74 3.20 1.2D + 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 0 1 1 0.00 49.58 -3.69 1.2D + 1.0Ev + 1.0Eh Normal M1 16.17 00.00 0 1 1 0.00 49.58 -56.99 1.90 1.2D + 1.0Ev + 1.0Eh Normal M1 16.17 00.00 0 1 1 0.00 49.58 -3.69 1.2D + 1.0Ev + 1.0Eh Normal M1 16.17 00.00 0 1 1 0.00 49.58 -3.69 1.2D - 1.0Ev + 1.0Eh Normal M1 16.17 00.00 0 1 1 0.00 49.58 -3.69 1.2D - 1.0Ev + 1.0Eh Normal M1 16.17 00.00 0 1 1 0.00 49.58 -3.69 1.2D - 1.0Ev + 1.0Eh Normal M1 16.17 00.00 0 1 1 0.00 49.58 -3.69 1.2D - 1.0Ev + 1.0Eh Normal M1 16.17 00.00 0 1 1 0.00 49.58 -3.69 1.2D - 1.0Ev + 1.0Eh So deg M1 16.17 00.00 120 1a -2.33 36.96 -2.57 16.17 00.00 240 1b 0.38 11.73 0.03		16.17	00.00	240	1b	-16.00	-196.98	-16.28	
16.17 00.00 240 1b -36.70 -399.07 -21.19 0.9D + 1.0W 90 deg 16.17 00.00 0 1 -6.86 27.08 -1.14 16.17 00.00 120 1a -36.34 400.90 16.86 15.72 1.2D + 1.0Di + 1.0Wi Normal 16.17 00.00 0 1 0 1 0.00 203.72 -17.59 16.17 00.00 120 1a 2.68 4.69 -3.76 16.17 00.00 240 1b -26.88 4.69 -3.76 16.17 00.00 120 1a 2.68 4.69 -3.76 16.17 00.00 120 1a 2.68 4.69 -3.76 16.17 00.00 120 1a 9.71 132.72 3.44 16.17 00.00 120 1a 9.75 71.09 -5.53 1.2D + 1.0Di + 1.0Wi 90 deg 16.17 00.00 120 1a 13.97 1 132.72 3.44 16.17 00.00 120 1a 13.83 183.11 6.75 16.17 00.00 120 1a 13.85 183.11 6.75 16.17 00.00 120 1a 10.00 60.38 4.32 16.17 00.00 120 1a 2.247 0.29 16.17 00.00 120 1a 2.88 47.74 0.29 16.17 00.00 120 1a 2.88 47.74 1.41 1.41 16.17 00.00 120 1a 3.55 56.99 1.90 1.00 120 1a 3.55 56.99 1.90 1.00 120 1a 2.88 47.74 1.41 1.41 16.17 00.00 120 1a 3.55 56.99 1.90 1.90 1.00 120 1a 2.35 56.99 1.90 1.00 120 1a 2.36 47.74 1.41 1.41 1.41 1.41 1.41 1.41 1.4	0.9D + 1.0W 60 deg								
0.9D + 1.0W 90 deg									
16.17 00.00 120 1a -36.34 400.90 18.86 16.17 00.00 240 1b -33.80 -346.74 -15.72 1.2D + 1.0Di + 1.0Wi Normal 16.17 00.00 120 1a 2.68 -4.69 -3.76 1.2D + 1.0Di + 1.0Wi 60 deg 16.17 00.00 240 1b -2.68 -4.69 -3.76 1.2D + 1.0Di + 1.0Wi 60 deg 16.17 00.00 120 1a 9.71 132.72 3.44 16.17 00.00 120 1a 13.89 183.11 6.75 16.17 00.00 120 1a -13.89 183.11 6.75 16.17 00.00 120 1a -13.89 183.11 6.75 16.17 00.00 120 1a -55.55 -33.70 1.2D + 1.0Ev + 1.0Eh Normal M1 16.17 00.00 240 1b -8.56 -53.55 -3.70 1.2D + 1.0Ev + 1.0Eh Odeg M1 16.17 00.00 120 1a -0.94 22.47 0.29 1.2D + 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 120 1a -2.8 47.74 3.20 1.2D + 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 120 1a -2.8 47.74 141 16.17 00.00 120 1a -2.8 47.74 141 16.17 00.00 120 1a -2.8 47.74 -3.20 1.2D + 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 120 1a -2.8 47.74 141 16.17 00.00 120 1a -2.8 47.74 -3.00 1.2D + 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 120 1a -2.8 47.74 141 16.17 00.00 120 1a -2.8 47.74 141 16.17 00.00 120 1a -3.55 56.99 1.90 1.2D + 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 240 1b -0.14 9.84 -0.08 1.2D + 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 120 1a -3.85 56.99 1.90 1.2D - 1.0Ev + 1.0Eh 00 deg M1 16.17 00.00 120 1a -0.25 35.11 -2.08 16.17 00.00 120 1a -3.55 56.99 1.90 16.17 00.00 120 1a -3.55 56.99 1.90 16.17 00.00 120 1a -3.55 56.99 1.90 16.17 00.00 120 1a -3.35 36.96 -2.57 16.17 00.00 120 1a -3.35 36.96 -2.57 16.17 00.00 120 1a -2.2 36.96 -2.57 16.17 00.00 120 1a -2.3 36.96 1.10 16.17 00.00 240 1b -0.70 -0.89 -0.40 0.9D - 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 0 1 -0.25 24.34 -1.44		16.17	00.00	240	1b	-36.70	-399.07	-21.19	
16.17 00.00 240 1b -33.80 -346.74 -15.72 1.2D + 1.0Di + 1.0Wi Normal 16.17 00.00 120 1a 2.68 -4.69 -3.76 16.17 00.00 240 1b -2.68 -4.69 -3.76 1.2D + 1.0Di + 1.0Wi 60 deg 16.17 00.00 120 1a 2.68 -4.69 -3.76 1.2D + 1.0Di + 1.0Wi 60 deg 16.17 00.00 120 1a -9.71 132.72 3.44 16.17 00.00 120 1a -9.71 132.72 3.44 16.17 00.00 240 1b -9.58 -71.09 -5.53 1.2D + 1.0Di + 1.0Wi 90 deg 16.17 00.00 0 0 1 -2.17 64.78 -3.05 16.17 00.00 120 1a -13.89 183.11 6.75 16.17 00.00 240 1b -8.56 -53.55 -3.70 1.2D + 1.0Ev + 1.0Eh Normal M1 16.17 00.00 120 1a -13.89 183.11 6.75 16.17 00.00 240 1b -8.56 -53.55 -3.70 1.2D + 1.0Ev + 1.0Eh Normal M1 16.17 00.00 120 1a -0.94 22.47 0.29 16.17 00.00 240 1b 0.94 22.47 0.29 1.2D + 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 120 1a -2.88 47.74 1.41 16.17 00.00 240 1b 0.94 22.47 0.29 1.2D + 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 120 1a -2.88 47.74 1.41 16.17 00.00 120 1a -3.55 56.99 1.90 1.2D + 1.0Ev + 1.0Eh Normal M1 16.17 00.00 120 1a -3.55 56.99 1.90 1.2D + 1.0Ev + 1.0Eh Normal M1 16.17 00.00 120 1a -3.55 56.99 1.90 1.2D - 1.0Ev + 1.0Eh Normal M1 16.17 00.00 120 1a -3.55 56.99 1.90 1.61.7 00.00 240 1b 0.05 13.23 0.17 0.9D - 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 120 1a -3.55 56.99 1.90 1.61.7 00.00 240 1b 0.38 11.73 -0.03 16.17 00.00 240 1b 0.38 11.73 -0.03 16.17 00.00 120 1a -2.23 36.96 1.10 16.17 00.00 120 1a -2.23 36.96 1.10 16.17 00.00 120 1a -2.23 36.96 1.10 16.17 00.00 240 1b -0.70 -0.89 -0.40 0.9D - 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 0 1 -0.25 24.34 -1.44	0.9D + 1.0W 90 deg	16.17	00.00	0	1	-6.86	27.08	-1.14	
1.2D + 1.0Di + 1.0Wi Normal 16.17 00.00 120 1a 2.68 4.69 -3.76 16.17 00.00 240 1b -2.68 4.69 -3.76 1.2D + 1.0Di + 1.0Wi 60 deg 16.17 00.00 0 1 -1.88 132.71 -10.13 16.17 00.00 120 1a -9.71 132.72 3.44 16.17 00.00 240 1b -9.58 -71.09 -5.53 1.2D + 1.0Di + 1.0Wi 90 deg 16.17 00.00 0 1 -2.17 64.78 -3.05 16.17 00.00 120 1a -9.71 132.72 3.44 16.17 00.00 120 1a -13.89 183.11 6.75 16.17 00.00 120 1a -13.89 183.11 6.75 16.17 00.00 240 1b -8.56 -53.55 -3.70 1.2D + 1.0Ev + 1.0Eh Normal M1 16.17 00.00 120 1a -0.94 22.47 0.29 1.2D + 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 0 1 -0.22 47.74 -3.20 1.2D + 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 120 1a -2.88 47.74 1.41 16.17 00.00 120 1a -3.55 56.99 1.90 1.2D + 1.0Ev + 1.0Eh Normal M1 16.17 00.00 120 1a -3.55 56.99 1.90 1.2D + 1.0Ev + 1.0Eh Normal M1 16.17 00.00 120 1a -3.55 56.99 1.90 1.2D + 1.0Ev + 1.0Eh Normal M1 16.17 00.00 120 1a -3.55 56.99 1.90 0.9D - 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 120 1a -0.38 11.73 -0.03 0.9D - 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 120 1a -0.38 11.73 -0.03 0.9D - 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 120 1a -0.32 35.11 -0.08 16.17 00.00 120 1a -0.38 11.73 -0.03 0.9D - 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 120 1a -0.32 36.96 1.10 16.17 00.00 120 1a -0.33 36.96 1.10 16.17 00.00 240 1b -0.70 -0.89 -0.40									
16.17 00.00 120 1a 2.68 -4.69 -3.76 16.17 00.00 240 1b -2.68 -4.69 -3.76 1.2D + 1.0Di + 1.0Wi 60 deg 16.17 00.00 120 1a -1.88 132.71 -10.13 16.17 00.00 120 1a -9.71 132.72 3.44 16.17 00.00 240 1b -9.58 -71.09 -5.53 1.2D + 1.0Di + 1.0Wi 90 deg 16.17 00.00 120 1a -13.89 183.11 6.75 16.17 00.00 120 1a -13.89 183.11 6.75 16.17 00.00 240 1b -8.56 -53.55 -3.70 1.2D + 1.0Ev + 1.0Eh Normal M1 16.17 00.00 10 1 0.00 60.38 -4.32 16.17 00.00 120 1a -0.94 22.47 0.29 16.17 00.00 120 1a -0.94 22.47 0.29 1.2D + 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 120 1a -2.88 47.74 1.41 16.17 00.00 120 1a -2.88 47.74 1.41 16.17 00.00 240 1b -0.14 9.84 -0.08 1.2D + 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 120 1a -2.85 56.99 1.90 1.2D + 1.0Ev + 1.0Eh Normal M1 16.17 00.00 120 1a -0.25 35.11 -2.08 16.17 00.00 120 1a -0.35 56.99 1.90 16.17 00.00 120 1a -0.35 56.99 1.90 16.17 00.00 120 1a -0.38 11.73 -0.03 0.9D - 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 120 1a -0.33 11.73 -0.03 0.9D - 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 120 1a -0.33 11.73 -0.03 0.9D - 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 120 1a -0.23 36.96 1.10 16.17 00.00 120 1a -0.33 11.73 -0.03		16.17	00.00	240	1b	-33.80	-346.74	-15.72	
16.17 00.00 240 1b -2.68 -4.69 -3.76 1.2D + 1.0Di + 1.0Wi 60 deg	1.2D + 1.0Di + 1.0Wi Normal				1				
1.2D + 1.0Di + 1.0Wi 60 deg									
16.17 00.00 120 1a -9.71 132.72 3.44 16.17 00.00 240 1b -9.58 -71.09 -5.53 1.2D + 1.0Di + 1.0Wi 90 deg 16.17 00.00 0 1 -2.17 64.78 -3.05 16.17 00.00 120 1a -13.89 183.11 6.75 16.17 00.00 240 1b -8.56 -53.55 -3.70 1.2D + 1.0Ev + 1.0Eh Normal M1 16.17 00.00 0 1 0.00 60.38 -4.32 16.17 00.00 120 1a -0.94 22.47 0.29 16.17 00.00 240 1b 0.94 22.47 0.29 16.17 00.00 120 1a -0.94 22.47 0.29 16.17 00.00 120 1a -2.88 47.74 1.41 16.17 00.00 120 1a -2.88 47.74 1.41 16.17 00.00 240 1b -0.14 9.84 -0.08 1.2D + 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 0 1 -0.25 35.11 -2.08 16.17 00.00 120 1a -3.55 56.99 1.90 16.17 00.00 240 1b 0.05 13.23 0.17 0.9D - 1.0Ev + 1.0Eh Normal M1 16.17 00.00 0 1 0.00 49.58 -3.69 16.17 00.00 240 1b 0.38 11.73 -0.03 16.17 00.00 240 1b 0.38 11.73 -0.03 0.9D - 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 120 1a -0.38 11.73 -0.03 0.9D - 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 240 1b 0.38 11.73 -0.03 0.9D - 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 120 1a -0.38 11.73 -0.03 0.9D - 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 240 1b 0.38 11.73 -0.03 0.9D - 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 120 1a -2.33 36.96 1.10 16.17 00.00 240 1b -0.70 -0.89 -0.40 0.9D - 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 120 1a -2.33 36.96 1.10 16.17 00.00 240 1b -0.70 -0.89 -0.40 0.9D -1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 120 1a -2.33 36.96 1.10 16.17 00.00 240 1b -0.70 -0.89 -0.40 0.9D -1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 120 1a -2.33 36.96 1.10 16.17 00.00 240 1b -0.70 -0.89 -0.40		16.17	00.00	240	1b	-2.68	-4.69	-3.76	
1.2D + 1.0Ev + 1.0Eh Normal M1 16.17 00.00 10.00 10.11 10.17 10.00 11.2D + 1.0Ev + 1.0Eh Normal M1 16.17 10.00	1.2D + 1.0Di + 1.0Wi 60 deg								
1.2D + 1.0Di + 1.0Wi 90 deg									
16.17 00.00 120 1a -13.89 183.11 6.75 16.17 00.00 240 1b -8.56 -53.55 -3.70 1.2D + 1.0Ev + 1.0Eh Normal M1 16.17 00.00 0 1 0.00 60.38 -4.32 16.17 00.00 120 1a -0.94 22.47 0.29 16.17 00.00 240 1b 0.94 22.47 0.29 1.2D + 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 0 1 -0.22 47.74 -3.20 16.17 00.00 120 1a -2.88 47.74 1.41 16.17 00.00 120 1a -2.88 47.74 1.41 16.17 00.00 120 1a -3.55 56.99 1.90 16.17 00.00 120 1a -3.55 56.99 1.90 16.17 00.00 120 1a -3.55 56.99 1.90 16.17 00.00 240 1b 0.05 13.23 0.17 0.9D - 1.0Ev + 1.0Eh Normal M1 16.17 00.00 0 1 0 0.00 49.58 -3.69 16.17 00.00 120 1a -0.38 11.73 -0.03 16.17 00.00 240 1b 0.38 11.73 -0.03 16.17 00.00 240 1b 0.38 11.73 -0.03 16.17 00.00 120 1a -2.33 36.96 1.10 16.17 00.00 120 1a -2.33 36.96 1.10 16.17 00.00 240 1b 0.70 -0.89 -0.40 0.9D - 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 120 1a -2.33 36.96 1.10 16.17 00.00 240 1b -0.70 -0.89 -0.40 0.9D - 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 0 1 1 -0.25 24.34 -1.44		16.17	00.00	240	1b	-9.58	-71.09	-5.53	
1.2D + 1.0Ev + 1.0Eh Normal M1 16.17 00.00 120 1a -0.94 22.47 0.29 16.17 00.00 240 1b 0.00 60.38 -4.32 16.17 00.00 120 1a -0.94 22.47 0.29 1.2D + 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 120 1a -2.88 47.74 1.41 16.17 00.00 120 1a -2.88 47.74 1.41 16.17 00.00 240 1b -0.14 9.84 -0.08 1.2D + 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 100 100 100 100 100 100	1.2D + 1.0Di + 1.0Wi 90 deg			0					
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16.17 00.00 120 1a -0.94 22.47 0.29 1.2D + 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 0 1 -0.22 47.74 -3.20 16.17 00.00 120 1a -2.88 47.74 1.41 16.17 00.00 240 1b -0.14 9.84 -0.08 1.2D + 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 0 1 -0.25 35.11 -2.08 16.17 00.00 120 1a -3.55 56.99 1.90 16.17 00.00 240 1b 0.05 13.23 0.17 0.9D - 1.0Ev + 1.0Eh Normal M1 16.17 00.00 0 1 0.00 49.58 -3.69 16.17 00.00 120 1a -0.38 11.73 -0.03 16.17 00.00 120 1a -0.38 11.73 -0.03 16.17 00.00 240 1b 0.38 11.73 -0.03 16.17 00.00 240 1b 0.38 11.73 -0.03 16.17 00.00 240 1b 0.38 11.73 -0.03 0.9D - 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 0 1 -0.22 36.96 -2.57 16.17 00.00 120 1a -2.33 36.96 1.10 16.17 00.00 240 1b -0.70 -0.89 -0.40 0.9D - 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 0 1 -0.25 24.34 -1.44		16.17	00.00	240	1b	-8.56	-53.55	-3.70	
1.2D + 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 1	1.2D + 1.0Ev + 1.0Eh Normal M1				1				
1.2D + 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 120 1a -2.88 47.74 1.41 16.17 00.00 240 1b -0.14 9.84 -0.08 1.2D + 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 0 1 -0.25 35.11 -2.08 16.17 00.00 120 1a -3.55 56.99 1.90 16.17 00.00 240 1b 0.05 13.23 0.17 0.9D - 1.0Ev + 1.0Eh Normal M1 16.17 00.00 0 1 0.00 49.58 -3.69 16.17 00.00 120 1a -0.38 11.73 -0.03 16.17 00.00 240 1b 0.38 11.73 -0.03 16.17 00.00 240 1b 0.38 11.73 -0.03 0.9D - 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 0 1 -0.22 36.96 -2.57 16.17 00.00 120 1a -2.33 36.96 1.10 16.17 00.00 240 1b -0.70 -0.89 -0.40 0.9D - 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 240 1b -0.70 -0.89 -0.40									
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16.17 00.00 240 1b -0.14 9.84 -0.08 1.2D + 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 0 1 -0.25 35.11 -2.08 16.17 00.00 120 1a -3.55 56.99 1.90 16.17 00.00 240 1b 0.05 13.23 0.17 0.9D - 1.0Ev + 1.0Eh Normal M1 16.17 00.00 0 1 0.00 49.58 -3.69 16.17 00.00 120 1a -0.38 11.73 -0.03 16.17 00.00 240 1b 0.38 11.73 -0.03 16.17 00.00 240 1b 0.38 11.73 -0.03 0.9D - 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 0 1 -0.22 36.96 -2.57 16.17 00.00 120 1a -2.33 36.96 1.10 16.17 00.00 240 1b -0.70 -0.89 -0.40 0.9D - 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 0 1 -0.25 24.34 -1.44	1.2D + 1.0Ev + 1.0Eh 60 deg M1								
1.2D + 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 0 1 -0.25 35.11 -2.08 16.17 00.00 120 1a -3.55 56.99 1.90 16.17 00.00 240 1b 0.05 13.23 0.17 0.9D - 1.0Ev + 1.0Eh Normal M1 16.17 00.00 0 1 0.00 49.58 -3.69 16.17 00.00 120 1a -0.38 11.73 -0.03 16.17 00.00 240 1b 0.38 11.73 -0.03 16.17 00.00 240 1b 0.38 11.73 -0.03 0.9D - 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 0 1 -0.22 36.96 -2.57 16.17 00.00 120 1a -2.33 36.96 1.10 16.17 00.00 240 1b -0.70 -0.89 -0.40 0.9D - 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 0 1 -0.25 24.34 -1.44									
16.17 00.00 120 1a -3.55 56.99 1.90 16.17 00.00 240 1b 0.05 13.23 0.17 0.9D - 1.0Ev + 1.0Eh Normal M1 16.17 00.00 0 1 0.00 49.58 -3.69 16.17 00.00 120 1a -0.38 11.73 -0.03 16.17 00.00 240 1b 0.38 11.73 -0.03 0.9D - 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 0 1 -0.22 36.96 -2.57 16.17 00.00 120 1a -2.33 36.96 1.10 16.17 00.00 240 1b -0.70 -0.89 -0.40 0.9D - 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 0 1 -0.25 24.34 -1.44		16.17	00.00	240	1b	-0.14	9.84	-0.08	
16.17 00.00 240 1b 0.05 13.23 0.17 0.9D - 1.0Ev + 1.0Eh Normal M1 16.17 00.00 0 1 0.00 49.58 -3.69 16.17 00.00 120 1a -0.38 11.73 -0.03 16.17 00.00 240 1b 0.38 11.73 -0.03 0.9D - 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 0 1 -0.22 36.96 -2.57 16.17 00.00 120 1a -2.33 36.96 1.10 16.17 00.00 240 1b -0.70 -0.89 -0.40 0.9D - 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 0 1 -0.25 24.34 -1.44	1.2D + 1.0Ev + 1.0Eh 90 deg M1								
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16.17 00.00 240 1b 0.38 11.73 -0.03 0.9D - 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 0 1 -0.22 36.96 -2.57 16.17 00.00 120 1a -2.33 36.96 1.10 16.17 00.00 240 1b -0.70 -0.89 -0.40 0.9D - 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 0 1 -0.25 24.34 -1.44	0.9D - 1.0Ev + 1.0Eh Normal M1								
0.9D - 1.0Ev + 1.0Eh 60 deg M1 16.17 00.00 0 1 -0.22 36.96 -2.57 16.17 00.00 120 1a -2.33 36.96 1.10 16.17 00.00 240 1b -0.70 -0.89 -0.40 0.9D - 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 0 1 -0.25 24.34 -1.44									
16.17 00.00 120 1a -2.33 36.96 1.10 16.17 00.00 240 1b -0.70 -0.89 -0.40 0.9D - 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 0 1 -0.25 24.34 -1.44		16.17	00.00	240	1b	0.38	11.73	-0.03	
16.17 00.00 240 1b -0.70 -0.89 -0.40 0.9D - 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 0 1 -0.25 24.34 -1.44	0.9D - 1.0Ev + 1.0Eh 60 deg M1				1				
0.9D - 1.0Ev + 1.0Eh 90 deg M1 16.17 00.00 0 1 -0.25 24.34 -1.44									
		16.17	00.00	240	1b	-0.70	-0.89	-0.40	
	0.9D - 1.0Ev + 1.0Eh 90 deg M1					-0.25	24.34		
	-	16.17	00.00	120	1a	-3.00	46.20	1.59	

© 2007 - 2021 by ATC IP LLC. All rights reserved. Site Number: 6260 Code: ANSI/TIA-222-H Site Name: NORTH STONINGTON CT, CT **Engineering Number:** 13694578_C3_02 6/24/2021 12:57:04 PM Customer: DISH WIRELESS L.L.C. 16.17 00.00 240 1b -0.50 2.49 -0.14 1.0D + 1.0W Service Normal 16.17 00.00 0 1 0.00 129.07 -11.94 00.00 120 -19.40 16.17 2.33 -2.93 1a 16.17 00.00 240 1b -2.33 -19.40 -2.93 00.00 -1.29 -6.50 1.0D + 1.0W Service 60 deg 16.17 0 1 77.13 16.17 00.00 120 1a -6.28 77.13 2.13

240

0

120

240

1b

1

1a

1b

-64.00

30.09

112.63

-52.45

-4.01

-1.65

4.43

-2.78

-6.95

-1.51

-9.20

-6.31

Max Uplift: 399.07 (kip) Moment Ice: 3,369.05 (kip-ft) Moment: 10,876.56 (kip-ft) 1.2D + 1.0W Normal

00.00

00.00

00.00

00.00

Max Down: 484.65 (kip) Total Down Ice: 194.34 (kip) Total Down: 108.33 (kip)
Max Shear: 48.37 (kip) Total Shear Ice: 25.11 (kip) Total Shear: 80.40 (kip)

16.17

16.17

16.17

16.17

1.0D + 1.0W Service 90 deg

Site Name: NORTH STONINGTON CT, CT

Engineering Number: 13694578_C3_02

6/24/2021 12:57:04 PM

Customer: DISH WIRELESS L.L.C.

Deflections and Rotations

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
127 mph Normal with No Ice	80.00	0.157	0.0094	0.2131	0.2133
127 mph Normal with No Ice	100.00	0.241	0.0107	0.2623	0.2623
127 mph Normal with No Ice	160.00	0.599	0.0167	0.4264	0.4268
127 mph Normal with No Ice	170.00	0.676	0.0171	0.4515	0.4515
127 mph Normal with No Ice	193.33	0.873	0.0183	0.5132	0.5132
127 mph Normal with No Ice	200.00	0.933	0.0186	0.5276	0.5279
127 mph Normal with No Ice	206.67	0.996	0.0186	0.5475	0.5478
127 mph Normal with No Ice	225.00	1.179	0.0156	0.5985	0.5987
127 mph Normal with No Ice	235.00	1.285	0.0097	0.6253	0.6254
127 mph Normal with No Ice	245.00	1.395	0.0062	0.6402	0.6402
127 mph Normal with No Ice	250.00	1.450	0.0062	0.6297	0.6297
127 mph 60 degree with No Ice	80.00	0.149	0.0089	0.2040	0.2042
127 mph 60 degree with No Ice	100.00	0.229	0.0099	0.2496	0.2496
127 mph 60 degree with No Ice	160.00	0.572	0.0157	0.4101	0.4104
127 mph 60 degree with No Ice	170.00	0.646	0.0160	0.4337	0.4337
127 mph 60 degree with No Ice	193.33	0.836	0.0170	0.4931	0.4931
127 mph 60 degree with No Ice	200.00	0.894	0.0172	0.5070	0.5073
127 mph 60 degree with No Ice	206.67	0.954	0.0171	0.5267	0.5270
127 mph 60 degree with No Ice	225.00	1.130	0.0137	0.5760	0.5762
127 mph 60 degree with No Ice	235.00	1.232	0.0074	0.6026	0.6027
127 mph 60 degree with No Ice	245.00	1.338	0.0036	0.6176	0.6176
127 mph 60 degree with No Ice	250.00	1.391	0.0039	0.6087	0.6087
127 mph 90 degree with No Ice	80.00	0.151	-0.0104	0.2081	0.2083
127 mph 90 degree with No Ice	100.00	0.230	-0.0117	0.2504	0.2505
127 mph 90 degree with No Ice	160.00	0.578	-0.0185	0.4144	0.4148
127 mph 90 degree with No Ice	170.00	0.653	-0.0188	0.4378	0.4379
127 mph 90 degree with No Ice	193.33	0.844	-0.0201	0.4976	0.4977
127 mph 90 degree with No Ice	200.00	0.903	-0.0204	0.5123	0.5127
127 mph 90 degree with No Ice	206.67	0.964	-0.0203	0.5319	0.5323
127 mph 90 degree with No Ice	225.00	1.142	-0.0166	0.5822	0.5824
127 mph 90 degree with No Ice	235.00	1.245	-0.0095	0.6100	0.6101
127 mph 90 degree with No Ice	245.00	1.352	-0.0054	0.6263	0.6264
127 mph 90 degree with No Ice	250.00	1.405	-0.0055	0.6088	0.6088
127 mph Normal with No Ice (Reduced DL)	80.00	0.157	0.0094	0.2127	0.2129
127 mph Normal with No Ice (Reduced DL)	100.00	0.241	0.0107	0.2618	0.2618
127 mph Normal with No Ice (Reduced DL)	160.00	0.598	0.0167	0.4258	0.4261
127 mph Normal with No Ice (Reduced DL)	170.00	0.675	0.0171	0.4508	0.4508
127 mph Normal with No Ice (Reduced DL)	193.33	0.871	0.0183	0.5124	0.5124
127 mph Normal with No Ice (Reduced DL)	200.00	0.932	0.0186	0.5267	0.5270
127 mph Normal with No Ice (Reduced DL)	206.67	0.995	0.0186	0.5466	0.5469
127 mph Normal with No Ice (Reduced DL)	225.00	1.177	0.0156	0.5974	0.5976
127 mph Normal with No Ice (Reduced DL)	235.00	1.283	0.0097	0.6242	0.6243
127 mph Normal with No Ice (Reduced DL)	245.00	1.393	0.0063	0.6391	0.6391
127 mph Normal with No Ice (Reduced DL)	250.00	1.447	0.0062	0.6289	0.6289
127 mph 60 deg with No Ice (Reduced DL)	80.00	0.149	0.0089	0.2038	0.2040
127 mph 60 deg with No Ice (Reduced DL)	100.00	0.229	0.0099	0.2494	0.2494
127 mph 60 deg with No Ice (Reduced DL)	160.00	0.572	0.0157	0.4094	0.4097
127 mph 60 deg with No Ice (Reduced DL)	170.00	0.645	0.0159	0.4330	0.4330
127 mph 60 deg with No Ice (Reduced DL)	193.33	0.834	0.0170	0.4924	0.4924
127 mph 60 deg with No Ice (Reduced DL)	200.00	0.892	0.0172	0.5062	0.5065
127 mph 60 deg with No Ice (Reduced DL)	206.67	0.953	0.0171	0.5258	0.5261
127 mph 60 deg with No Ice (Reduced DL) 127 mph 60 deg with No Ice (Reduced DL)	225.00 235.00	1.128 1.230	0.0137 0.0074	0.5751 0.6016	0.5753 0.6017
127 mph 60 deg with No Ice (Reduced DL) 127 mph 60 deg with No Ice (Reduced DL)	245.00	1.230	0.0074	0.6165	0.6165
127 mph 60 deg with No Ice (Reduced DL) 127 mph 60 deg with No Ice (Reduced DL)	250.00	1.336	0.0037	0.6074	0.6074
127 Hiph oo deg with No ice (Reduced DL)	250.00	1.307	0.0040	0.0074	0.0074

Site Number: 6260	Code:	ANSI/TIA-222-H	© 2	007 - 2021 by AT	C IP LLC. All rights reserved.
Site Name: NORTH STONINGTON CT, CT	Engineering Number:	13694578_C3_02			6/24/2021 12:57:04 PM
Customer: DISH WIRELESS L.L.C.	3 3				
127 mph 90 deg with No Ice (Reduced DL)	80.00	0.151	-0.0104	0.2078	0.2080
127 mph 90 deg with No Ice (Reduced DL)	100.00	0.230	-0.0117	0.2499	0.2500
127 mph 90 deg with No Ice (Reduced DL)	160.00	0.578	-0.0184	0.4137	0.4141
127 mph 90 deg with No Ice (Reduced DL)	170.00	0.652	-0.0188	0.4371	0.4372
127 mph 90 deg with No Ice (Reduced DL)	193.33	0.843	-0.0201	0.4968	0.4969
127 mph 90 deg with No Ice (Reduced DL)	200.00	0.902	-0.0204	0.5115	0.5119
127 mph 90 deg with No Ice (Reduced DL)	206.67	0.963	-0.0203	0.5310	0.5314
127 mph 90 deg with No Ice (Reduced DL)	225.00	1.140	-0.0166	0.5812	0.5814
127 mph 90 deg with No Ice (Reduced DL) 127 mph 90 deg with No Ice (Reduced DL)	235.00 245.00	1.243 1.350	-0.0096 -0.0054	0.6090 0.6252	0.6090 0.6253
127 mph 90 deg with No Ice (Reduced DL)	250.00	1.403	-0.0054	0.6075	0.6075
50 mph Normal with 1.00 in Radial Ice	80.00	0.048	0.0030	0.0680	0.0680
50 mph Normal with 1.00 in Radial Ice	100.00	0.073	0.0035	0.0792	0.0793
50 mph Normal with 1.00 in Radial Ice	160.00	0.184	0.0054	0.1315	0.1315
50 mph Normal with 1.00 in Radial Ice	170.00	0.208	0.0056	0.1374	0.1375
50 mph Normal with 1.00 in Radial Ice	193.33	0.267	0.0061	0.1556	0.1556
50 mph Normal with 1.00 in Radial Ice	200.00	0.286	0.0062	0.1595	0.1597
50 mph Normal with 1.00 in Radial Ice	206.67	0.304	0.0063	0.1651	0.1651
50 mph Normal with 1.00 in Radial Ice 50 mph Normal with 1.00 in Radial Ice	225.00 235.00	0.359 0.390	0.0057 0.0044	0.1789 0.1857	0.1790 0.1857
50 mph Normal with 1.00 in Radial Ice	245.00	0.423	0.0044	0.1888	0.1888
50 mph Normal with 1.00 in Radial Ice	250.00	0.439	0.0036	0.1848	0.1848
50 mph 60 deg with 1.00 in Radial Ice	80.00	0.048	-0.0030	0.0666	0.0667
50 mph 60 deg with 1.00 in Radial Ice	100.00	0.075	-0.0034	0.0806	0.0806
50 mph 60 deg with 1.00 in Radial Ice	160.00	0.181	-0.0053	0.1280	0.1281
50 mph 60 deg with 1.00 in Radial Ice	170.00	0.204	-0.0055	0.1357	0.1357
50 mph 60 deg with 1.00 in Radial Ice	193.33	0.262	-0.0060	0.1522	0.1523
50 mph 60 deg with 1.00 in Radial Ice	200.00	0.281	-0.0061	0.1576	0.1576
50 mph 60 deg with 1.00 in Radial Ice	206.67	0.299	-0.0061	0.1619	0.1621
50 mph 60 deg with 1.00 in Radial Ice 50 mph 60 deg with 1.00 in Radial Ice	225.00 235.00	0.352 0.383	-0.0055 -0.0042	0.1765 0.1821	0.1765 0.1821
50 mph 60 deg with 1.00 in Radial Ice	245.00	0.415	-0.0042	0.1858	0.1859
50 mph 60 deg with 1.00 in Radial Ice	250.00	0.431	-0.0034	0.1855	0.1855
50 mph 90 deg with 1.00 in Radial Ice	80.00	0.048	-0.0035	0.0671	0.0671
50 mph 90 deg with 1.00 in Radial Ice	100.00	0.074	-0.0040	0.0801	0.0801
50 mph 90 deg with 1.00 in Radial Ice	160.00	0.182	-0.0062	0.1294	0.1294
50 mph 90 deg with 1.00 in Radial Ice	170.00	0.205	-0.0064	0.1361	0.1361
50 mph 90 deg with 1.00 in Radial Ice	193.33	0.264	-0.0070	0.1534	0.1534
50 mph 90 deg with 1.00 in Radial Ice 50 mph 90 deg with 1.00 in Radial Ice	200.00 206.67	0.282 0.300	-0.0071 -0.0071	0.1581 0.1629	0.1581 0.1629
50 mph 90 deg with 1.00 in Radial Ice	225.00	0.354	-0.0071	0.1771	0.1771
50 mph 90 deg with 1.00 in Radial Ice	235.00	0.385	-0.0049	0.1832	0.1833
50 mph 90 deg with 1.00 in Radial Ice	245.00	0.417	-0.0040	0.1872	0.1873
50 mph 90 deg with 1.00 in Radial Ice	250.00	0.433	-0.0040	0.1848	0.1849
Seismic Normal M1	80.00	0.009	0.0006	0.0128	0.0129
Seismic Normal M1	100.00	0.015	0.0007	0.0167	0.0167
Seismic Normal M1	160.00	0.036	0.0012	0.0276	0.0276
Seismic Normal M1 Seismic Normal M1	170.00 193.33	0.041 0.054	0.0013 0.0015	0.0297 0.0337	0.0297 0.0337
Seismic Normal M1	200.00	0.054	0.0015	0.0337	0.0348
Seismic Normal M1	206.67	0.062	0.0016	0.0364	0.0364
Seismic Normal M1	225.00	0.074	0.0016	0.0408	0.0409
Seismic Normal M1	235.00	0.082	0.0015	0.0430	0.0430
Seismic Normal M1	245.00	0.089	0.0014	0.0446	0.0446
Seismic Normal M1	250.00	0.093	0.0014	0.0444	0.0445
Seismic 60 deg M1	80.00	0.009	-0.0006	0.0129	0.0129
Seismic 60 deg M1	100.00	0.014	-0.0007	0.0158	0.0158
Seismic 60 deg M1 Seismic 60 deg M1	160.00 170.00	0.036 0.041	-0.0012 -0.0013	0.0273 0.0296	0.0273 0.0296
Seismic 60 deg M1	193.33	0.054	-0.0015	0.0240	0.0290
Seismic 60 deg M1	200.00	0.058	-0.0015	0.0330	0.0337
Seismic 60 deg M1	206.67	0.062	-0.0016	0.0363	0.0363
<u> </u>					

Site Number: 6260	Code:	ANSI/TIA-222-H	© 2007	- 2021 by AT	C IP LLC. All rights reserved.
Site Name: NORTH STONINGTON CT, CT	Engineering Number:	13694578_C3_02			6/24/2021 12:57:04 PM
Customer: DISH WIRELESS L.L.C.					
Seismic 60 deg M1	225.00	0.074	-0.0016	0.0409	0.0409
Seismic 60 deg M1	235.00	0.082	-0.0015	0.0431	0.0431
Seismic 60 deg M1	245.00	0.089	-0.0014	0.0443	0.0443
Seismic 60 deg M1	250.00	0.093	-0.0014	0.0454	0.0454
Seismic 90 deg M1 Seismic 90 deg M1	80.00	0.009 0.014	-0.0007	0.0129	0.0129
Seismic 90 deg M1	100.00 160.00	0.036	-0.0008 -0.0014	0.0164 0.0275	0.0164 0.0275
Seismic 90 deg M1	170.00	0.041	-0.0016	0.0297	0.0297
Seismic 90 deg M1	193.33	0.054	-0.0017	0.0337	0.0337
Seismic 90 deg M1	200.00	0.058	-0.0018	0.0348	0.0349
Seismic 90 deg M1	206.67	0.062	-0.0018	0.0364	0.0364
Seismic 90 deg M1 Seismic 90 deg M1	225.00 235.00	0.074 0.082	-0.0019 -0.0018	0.0409 0.0431	0.0409 0.0431
Seismic 90 deg M1	245.00	0.082	-0.0016	0.0431	0.0445
Seismic 90 deg M1	250.00	0.093	-0.0016	0.0452	0.0452
Seismic (Reduced DL) Normal M1	80.00	0.009	0.0006	0.0127	0.0127
Seismic (Reduced DL) Normal M1	100.00	0.014	0.0007	0.0164	0.0164
Seismic (Reduced DL) Normal M1	160.00	0.036	0.0012	0.0275	0.0275
Seismic (Reduced DL) Normal M1 Seismic (Reduced DL) Normal M1	170.00 193.33	0.041 0.054	0.0013 0.0015	0.0296 0.0336	0.0296 0.0336
Seismic (Reduced DL) Normal M1	200.00	0.054	0.0015	0.0330	0.0330
Seismic (Reduced DL) Normal M1	206.67	0.062	0.0016	0.0363	0.0363
Seismic (Reduced DL) Normal M1	225.00	0.074	0.0016	0.0407	0.0407
Seismic (Reduced DL) Normal M1	235.00	0.081	0.0015	0.0428	0.0428
Seismic (Reduced DL) Normal M1	245.00	0.089	0.0014	0.0443	0.0443
Seismic (Reduced DL) Normal M1 Seismic (Reduced DL) 60 deg M1	250.00 80.00	0.093 0.009	0.0014 -0.0006	0.0441 0.0127	0.0441 0.0127
Seismic (Reduced DL) 60 deg M1	100.00	0.014	-0.0007	0.0127	0.0156
Seismic (Reduced DL) 60 deg M1	160.00	0.036	-0.0012	0.0272	0.0272
Seismic (Reduced DL) 60 deg M1	170.00	0.041	-0.0013	0.0295	0.0295
Seismic (Reduced DL) 60 deg M1	193.33	0.054	-0.0015	0.0336	0.0336
Seismic (Reduced DL) 60 deg M1	200.00	0.058	-0.0015	0.0348	0.0348
Seismic (Reduced DL) 60 deg M1 Seismic (Reduced DL) 60 deg M1	206.67 225.00	0.062 0.074	-0.0016 -0.0016	0.0362 0.0407	0.0362 0.0407
Seismic (Reduced DL) 60 deg M1	235.00	0.081	-0.0015	0.0429	0.0429
Seismic (Reduced DL) 60 deg M1	245.00	0.089	-0.0014	0.0441	0.0441
Seismic (Reduced DL) 60 deg M1	250.00	0.093	-0.0014	0.0448	0.0448
Seismic (Reduced DL) 90 deg M1	80.00	0.009	-0.0007	0.0127	0.0127
Seismic (Reduced DL) 90 deg M1 Seismic (Reduced DL) 90 deg M1	100.00 160.00	0.014 0.036	-0.0008 -0.0014	0.0161 0.0274	0.0162 0.0274
Seismic (Reduced DL) 90 deg M1	170.00	0.041	-0.0014	0.0274	0.0274
Seismic (Reduced DL) 90 deg M1	193.33	0.054	-0.0017	0.0336	0.0336
Seismic (Reduced DL) 90 deg M1	200.00	0.058	-0.0018	0.0347	0.0348
Seismic (Reduced DL) 90 deg M1	206.67	0.062	-0.0018	0.0363	0.0363
Seismic (Reduced DL) 90 deg M1 Seismic (Reduced DL) 90 deg M1	225.00 235.00	0.074 0.081	-0.0019 -0.0018	0.0407 0.0429	0.0407 0.0429
Seismic (Reduced DL) 70 deg M1	245.00	0.089	-0.0016	0.0423	0.0443
Seismic (Reduced DL) 90 deg M1	250.00	0.093	-0.0016	0.0446	0.0446
Serviceability - 60 mph Wind Normal	80.00	0.035	0.0021	0.0473	0.0473
Serviceability - 60 mph Wind Normal	100.00	0.054	0.0024	0.0584	0.0584
Serviceability - 60 mph Wind Normal	160.00	0.132	0.0039	0.0943	0.0944
Serviceability - 60 mph Wind Normal Serviceability - 60 mph Wind Normal	170.00 193.33	0.149 0.193	0.0040 0.0043	0.0998 0.1136	0.0998 0.1136
Serviceability - 60 mph Wind Normal	200.00	0.206	0.0043	0.1168	0.1169
Serviceability - 60 mph Wind Normal	206.67	0.220	0.0044	0.1211	0.1212
Serviceability - 60 mph Wind Normal	225.00	0.261	0.0037	0.1327	0.1327
Serviceability - 60 mph Wind Normal	235.00	0.284	0.0024	0.1385	0.1386
Serviceability - 60 mph Wind Normal Serviceability - 60 mph Wind Normal	245.00 250.00	0.308 0.320	0.0015 0.0015	0.1417 0.1388	0.1417 0.1388
Serviceability - 60 mph Wind 60 deg	80.00	0.320	-0.0015	0.1388	0.0446
Serviceability - 60 mph Wind 60 deg	100.00	0.050	-0.0020	0.0544	0.0544
Serviceability - 60 mph Wind 60 deg	160.00	0.126	-0.0037	0.0904	0.0905

Site Number:	6260	Code:	ANSI/TIA-222-H	© 2007	7 - 2021 by AT	C IP LLC. All rights reserved.
Site Name:	NORTH STONINGTON CT, CT	Engineering Number:	13694578_C3_02			6/24/2021 12:57:04 PM
Customer: [DISH WIRELESS L.L.C.					
Serviceability -	60 mph Wind 60 deg	170.00	0.142	-0.0038	0.0959	0.0959
Serviceability -	60 mph Wind 60 deg	193.33	0.184	-0.0041	0.1090	0.1090
Serviceability -	60 mph Wind 60 deg	200.00	0.197	-0.0041	0.1121	0.1121
Serviceability -	60 mph Wind 60 deg	206.67	0.210	-0.0041	0.1164	0.1165
Serviceability -	60 mph Wind 60 deg	225.00	0.249	-0.0035	0.1275	0.1275
Serviceability -	60 mph Wind 60 deg	235.00	0.272	-0.0021	0.1330	0.1330
Serviceability -	60 mph Wind 60 deg	245.00	0.295	-0.0013	0.1366	0.1366
Serviceability -	60 mph Wind 60 deg	250.00	0.307	-0.0013	0.1351	0.1351
Serviceability -	60 mph Wind 90 deg	80.00	0.033	-0.0024	0.0458	0.0459
Serviceability -	60 mph Wind 90 deg	100.00	0.051	-0.0027	0.0558	0.0558
Serviceability -	60 mph Wind 90 deg	160.00	0.128	-0.0043	0.0915	0.0916
Serviceability -	60 mph Wind 90 deg	170.00	0.144	-0.0044	0.0968	0.0968
Serviceability -	60 mph Wind 90 deg	193.33	0.186	-0.0048	0.1100	0.1101
Serviceability -	60 mph Wind 90 deg	200.00	0.199	-0.0048	0.1133	0.1134
Serviceability -	60 mph Wind 90 deg	206.67	0.213	-0.0049	0.1176	0.1177
Serviceability -	60 mph Wind 90 deg	225.00	0.252	-0.0041	0.1288	0.1289
Serviceability -	60 mph Wind 90 deg	235.00	0.275	-0.0025	0.1349	0.1349
Serviceability -	60 mph Wind 90 deg	245.00	0.299	-0.0015	0.1385	0.1386
Serviceability -	60 mph Wind 90 deg	250.00	0.310	-0.0016	0.1351	0.1351

Maximum Reactions Summary

Vertical (kip)					Horizor	ntal (kip)	Moment	Moment (kip-ft)		
Anchor Group	DL+WL	DL+WL+IL	UpLift	Shear	DL+WL	DL+WL+IL	DL+WL	DL+WL+IL		
Base	108.33	194.34	484.65	48.37	80.40	25.11	10876.56	3369.05		

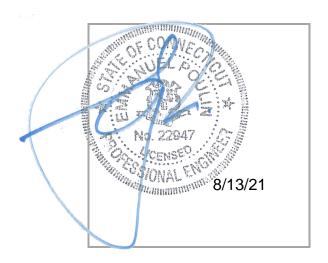
INFINIGY8

MOUNT ANALYSIS REPORT

August 13, 2021

Dish Wireless Site Name	BOBOS00884A
Dish Wireless Site Number	BOBOS00884A
ATC Site Name	North Stonington CT, CT
ATC Site Number	6260
Infinigy Job Number	1197-F0001-C
Client	ATC
Carrier	Dish Wireless
	118C Wintechog Hill Rd., off of Rt. 2
	North Stonington, CT 06359
Site Location	New London County
	41.459830 N NAD83
	71.927300 W NAD83
Mount Type	8.0 ft Sector Frames
Mount Elevation	165.0 ft AGL
Structural Usage Ratio	43.0
Overall Result	Pass

The enclosed mount structural analysis has been performed in accordance with the 2018 Connecticut State Building Code (2015 IBC) based on an ultimate 3-second gust wind speed of 135 mph. The evaluation criteria and applicable codes are presented in the next section of this report.



CONTENTS

- 1. Introduction
- 2. Design/Analysis Parameters
- 3. Proposed Loading Configuration
- 4. Supporting Documentation
- 5. Results
- 6. Recommendations
- 7. Assumptions
- 8. Liability Waiver and Limitations
- 9. Calculations

1. INTRODUCTION

Infinigy performed a structural analysis on the Dish Wireless proposed telecommunication equipment supporting Sector Frames mounted to the existing structure located at the aforementioned address. All referenced supporting documents have been obtained from the client and are assumed to be accurate and applicable to this site. The mount was analyzed using Risa-3D version 17.0.4 analysis software.

2. DESIGN/ANALYSIS PARAMETERS

Wind Speed	135 mph (3-Second Gust)
Wind Speed w/ ice	50 mph (3-Second Gust) w/ 1.5" ice
Code / Standard	TIA-222-H
Adopted Code	2018 Connecticut State Building Code (2015 IBC)
Risk Category	
Exposure Category	В
Topographic Category	1
Calculated Crest Height	0 ft.
Seismic Spectral Response	$S_s = 0.163 \text{ g} / S_1 = 0.059 \text{ g}$
Live Load Wind Speed	60 mph
Man Live Load at Mid/End Points	250 lbs
Man Live Load at Mount Pipes	500 lbs

3. PROPOSED LOADING CONFIGURATION - 165.0 ft. AGL Sector Frames

Antenna Centerline (ft)	Qty.	Appurtenance Manufacturers	Appurtenance Models
	3	JMA WIRELESS	MX08FRO665-21
165.0	3	FUJITSU	TA08025-B605
165.0	3	FUJITSU	TA08025-B604
	1	RAYCAP	RDIDC-9181-PF-48

4. SUPPORTING DOCUMENTATION

Proposed Loading	Dish Wireless Asset ID CT-ATC-T-6260 Rev 0, Site #BOBOS00884A, dated June 14, 2021	
Mount Manufacturer Drawings Commscope Document # MTC3975083, dated March 17, 2021		
Structural Analysis Report American Tower Corporation, Site #6260, dated June 24,		

5. RESULTS

Components	Capacity	Pass/Fail
Mount Pipes	27.9%	Pass
Horizontals	16.2%	Pass
Standoffs	43.0%	Pass
Connections	14.6%	Pass
MOUNT RATING =	43.0 %	Pass

Notes:

6. RECOMMENDATIONS

Infinigy recommends installing Dish Wireless's proposed equipment loading configuration on the mount at 165.0 ft. The installation shall be performed in accordance with the construction documents issued for this site.

Pradin Suinyal Magar Project Engineer II | INFINIGY

^{1.} See additional documentation in Appendix for calculations supporting the capacity consumed and detailed mount connection calculations.

7. ASSUMPTIONS

The antenna mounting system was properly fabricated, installed and maintained in accordance with its original design and manufacturer's specifications.

The configuration of antennas, mounts, and other appurtenances are as specified in the proposed loading configuration table.

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.

The analysis will require revisions 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.

Steel grades have been assumed as follows, unless noted otherwise:

Channel, Plate, Built-up Angle ASTM A1011 36 KSI Solid Round ASTM A529 Gr 50 Structural Angle ASTM A529 Gr. 50 HSS (Rectangular) **ASTM A500-B GR 46 ASTM A500-B GR 42** HSS (Circular) Pipe ASTM A500 Gr 46 **Connection Bolts** ASTM A449 **U-Bolts** ASTM A307

All bolted connections are pretensioned in accordance with Table 8.2 of the RCSC 2014 Standard

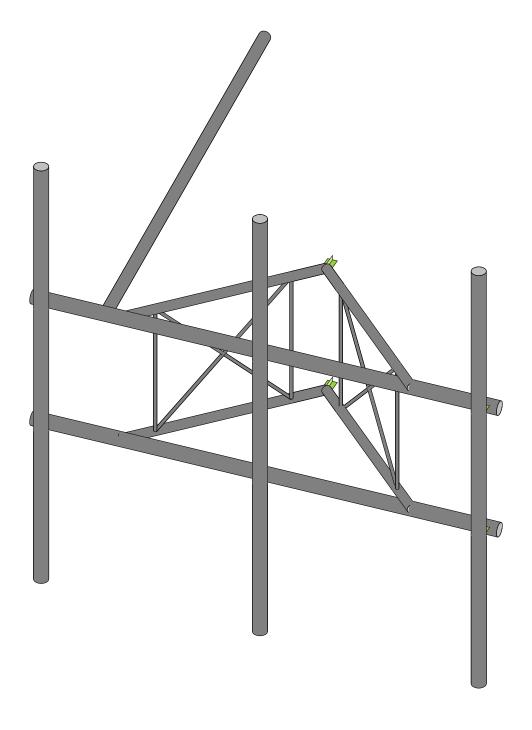
8. LIABILITY WAIVER AND LIMITATIONS

Our structural calculations are completed assuming all information provided to Infinigy is accurate and applicable to this site. For the purposes of calculations, we assume an overall structure condition as erected and all members and connections to be free of corrosion and/or structural defects. The structure owner and/or contractor shall verify the structure's condition prior to installation of any proposed equipment. If actual conditions differ from those described in this report, Infinigy should be notified immediately to assess the impact on the results of this report.

Our evaluation is completed using industry standard methods and procedures. The structural results, conclusions and recommendations contained in this report are proprietary and should not be used by others as their own. Infinigy is not responsible for decisions made by others that are or are not based on the stated assumptions and conclusions in this report.

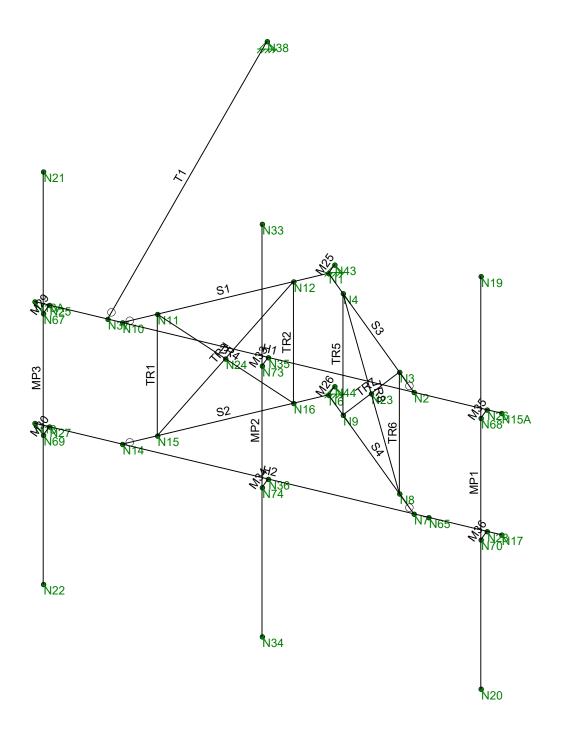
This report is an evaluation of the mount structure only and does not determine the adequacy of the supporting structure, other carrier mounts or cable mounting attachments. The analysis of these elements is outside the scope of this analysis, are assumed to be adequate for the purpose of this report and to have been installed per their manufacturer requirements. This document is not for construction purposes.





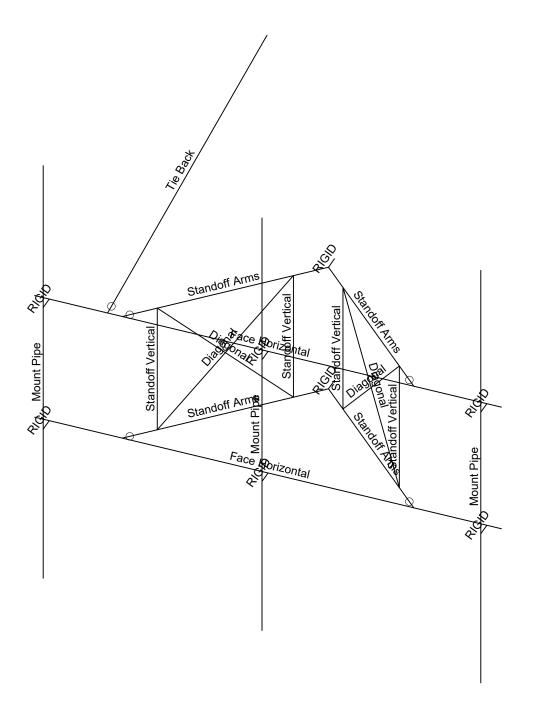
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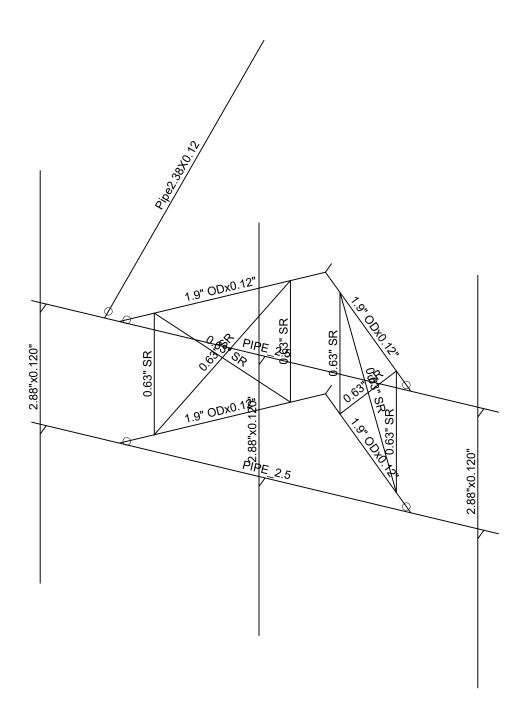
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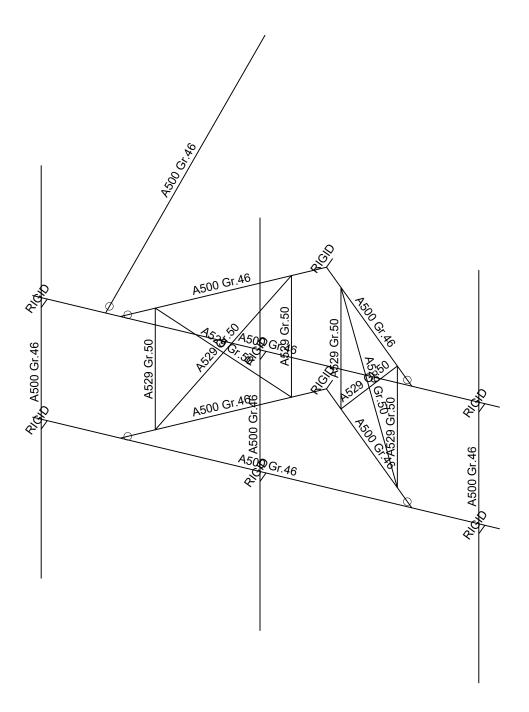
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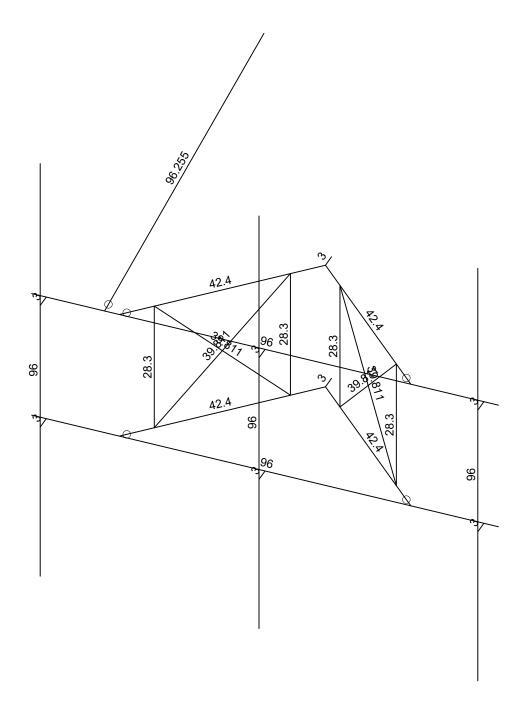
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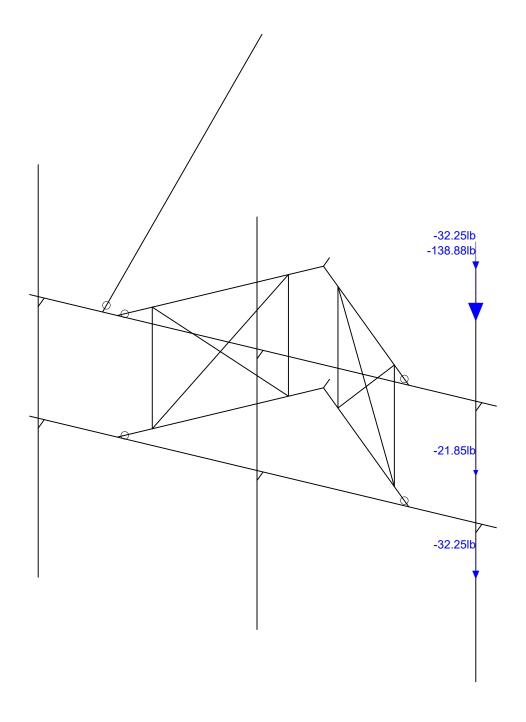




Member Length (in) Displayed Envelope Only Solution

Infinigy Engineering, PLLC		Member Lengths
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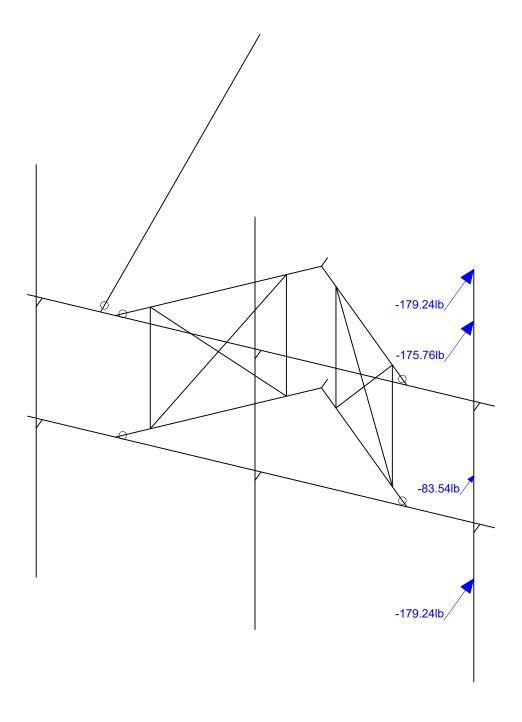




Loads: BLC 1, Self Weight Envelope Only Solution

Infinigy Engineering, PLLC		Self Weight
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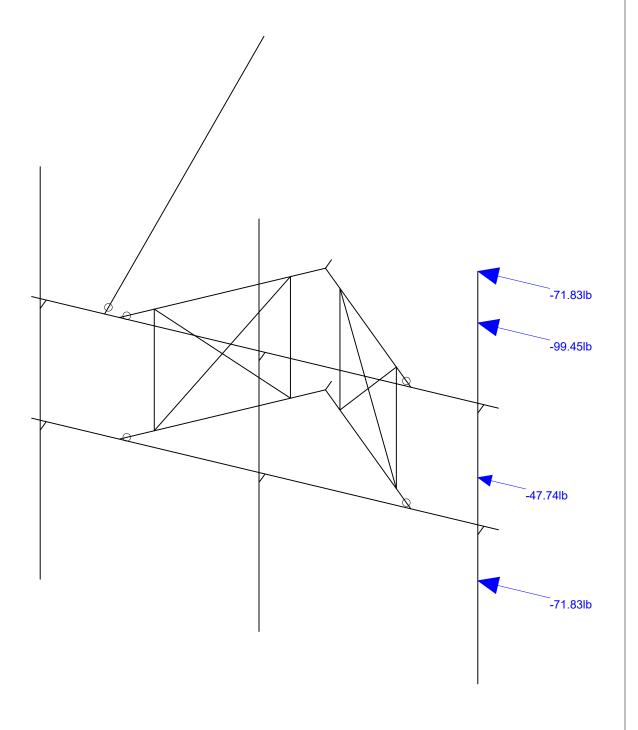




Loads: BLC 2, Wind Load AZI 0 Envelope Only Solution

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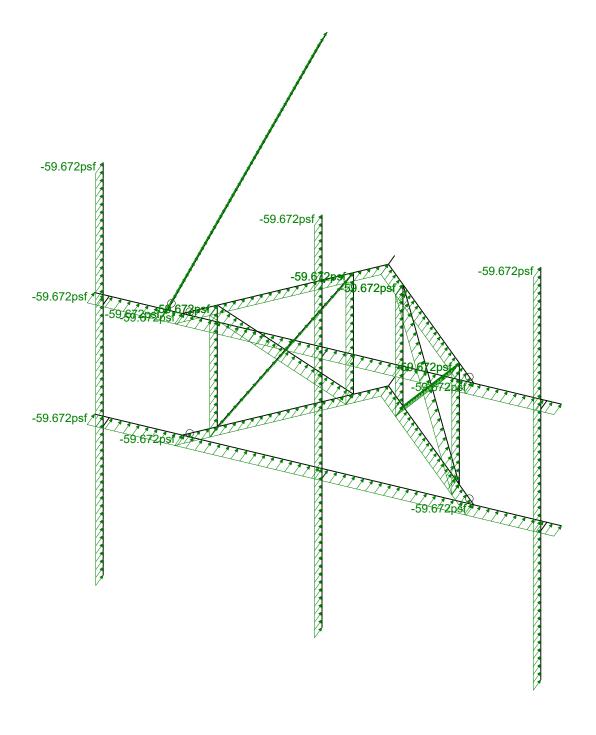




Loads: BLC 5, Wind Load AZI 90 Envelope Only Solution

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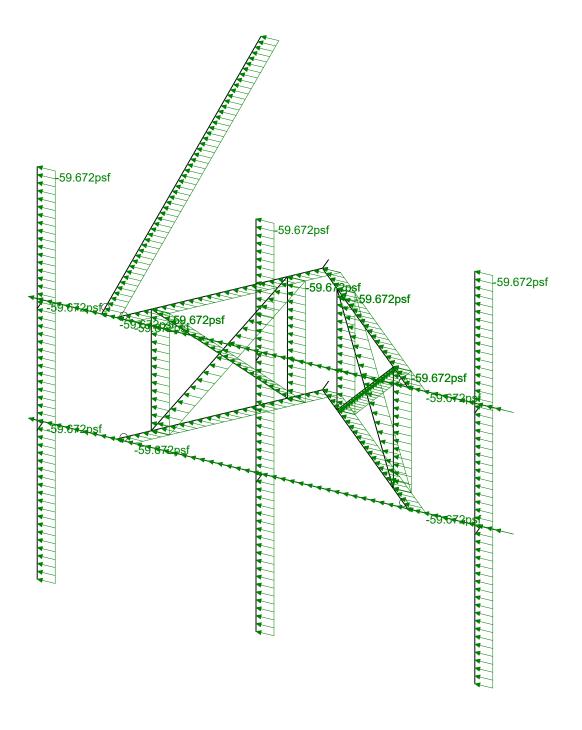




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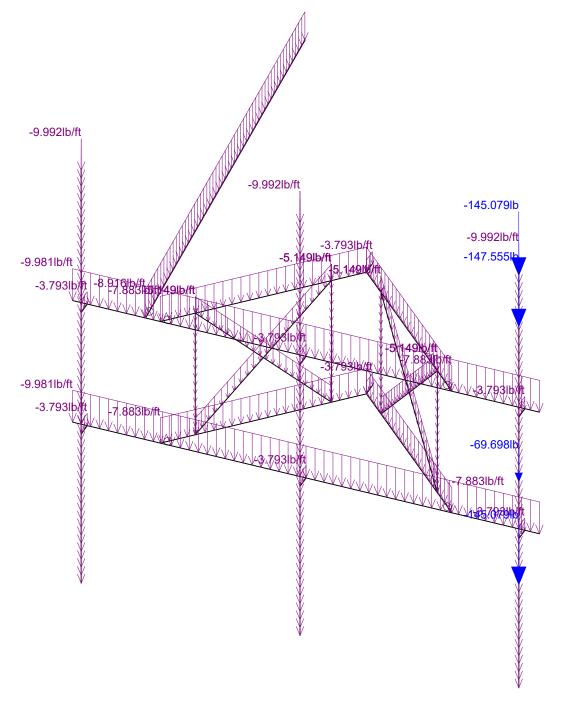




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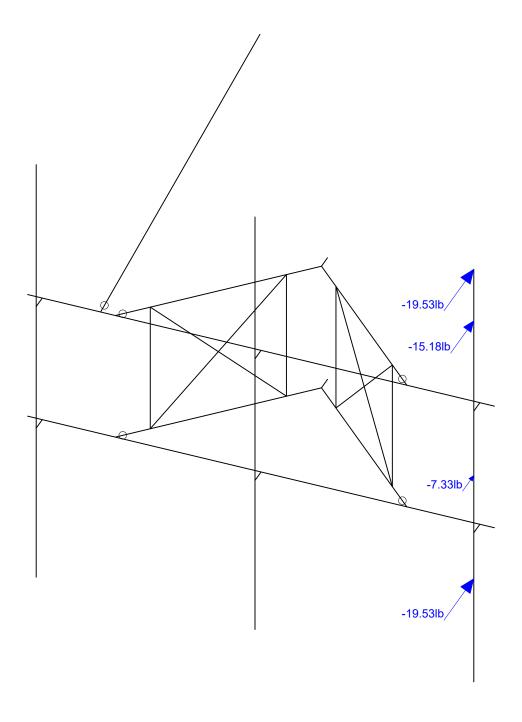




Loads: BLC 16, Ice Weight Envelope Only Solution

Infinigy Engineering, PLLC		Ice Weight
PSM	BOBOS00884A	Aug 13, 2021 at 1:29 PM
1197-F0001-C		BOBOS00884A_loaded.r3d

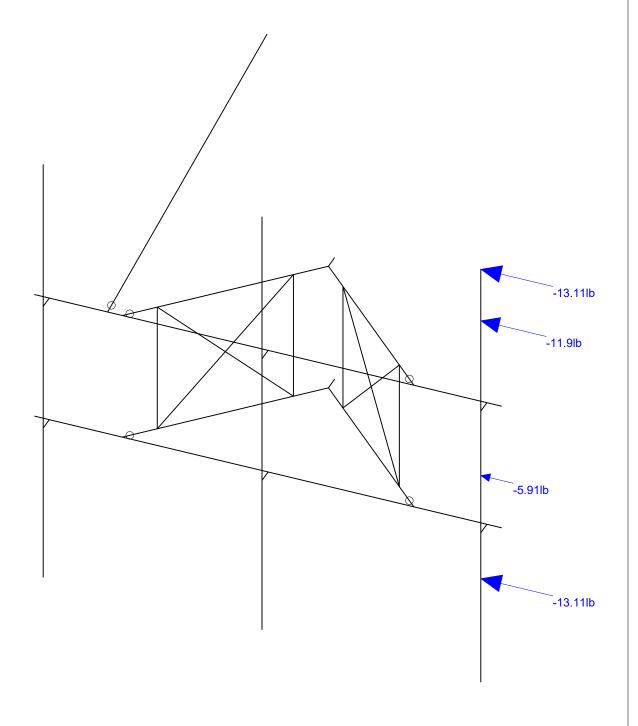




Loads: BLC 17, Ice Wind Load AZI 0 Envelope Only Solution

Infinigy Engineering, PLLC		Wind +Ice Load AZI 000
PSM	BOBOS00884A	Aug 13, 2021 at 1:30 PM
1197-F0001-C		BOBOS00884A_loaded.r3d

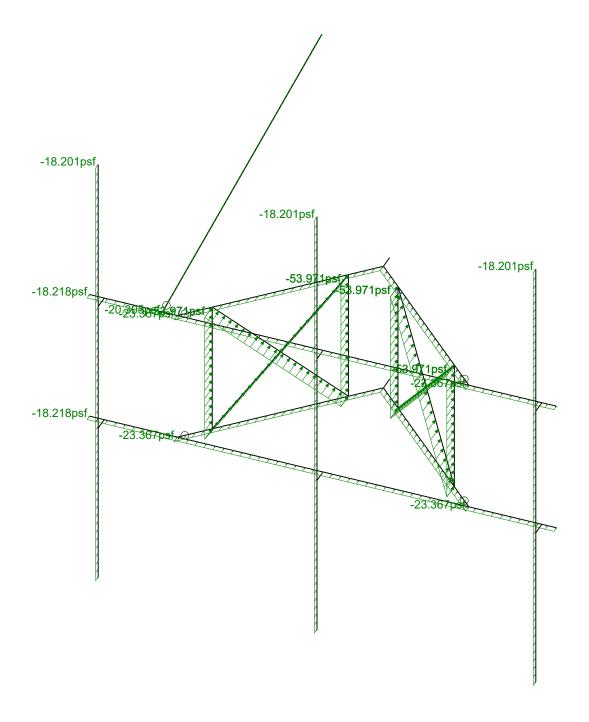




Loads: BLC 20, Ice Wind Load AZI 90 Envelope Only Solution

Infinigy Engineering, PLLC		Wind +Ice Load AZI 090
PSM	BOBOS00884A	Aug 13, 2021 at 1:30 PM
1197-F0001-C		BOBOS00884A_loaded.r3d





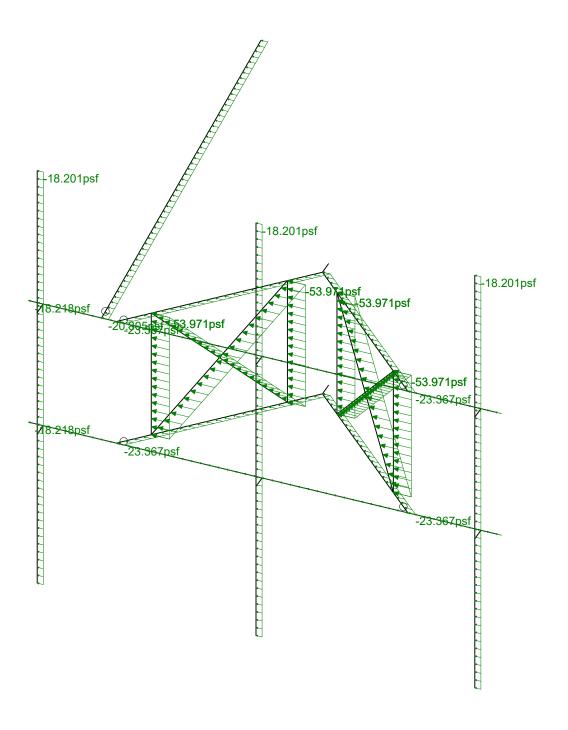
Loads: BLC 29, Distr. Ice Wind Load Z Envelope Only Solution

Infinigy Engineering, PLLC	
PSM	
1197-F0001-C	

BOBOS00884A

Distr Wind +Ice Load AZI 000
Aug 13, 2021 at 1:30 PM
BOBOS00884A_loaded.r3d

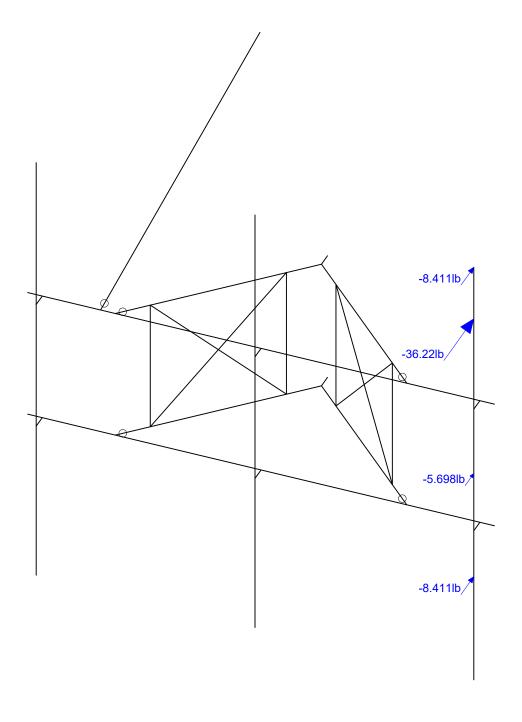




Loads: BLC 30, Distr. Ice Wind Load X Envelope Only Solution

Infinigy Engineering, PLLC		Distr Wind +Ice Load AZI 090
PSM	BOBOS00884A	Aug 13, 2021 at 1:30 PM
1197-F0001-C		BOBOS00884A_loaded.r3d

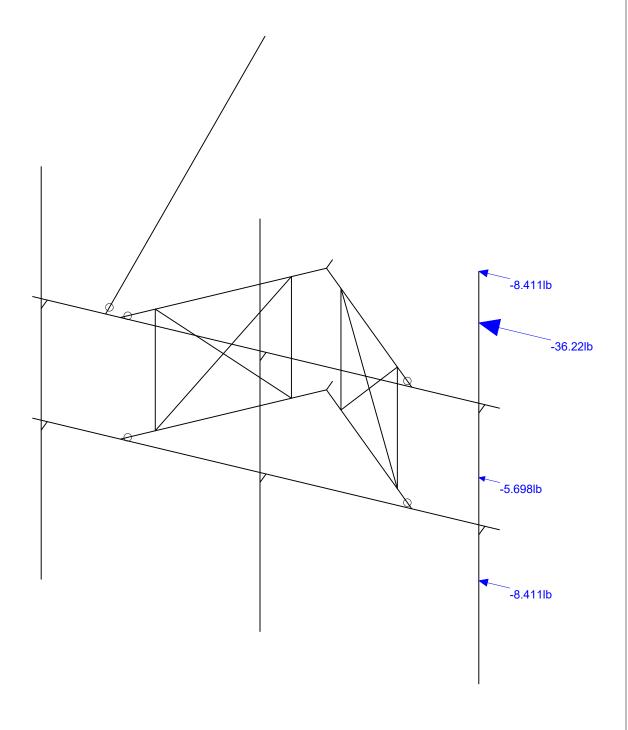




Loads: BLC 31, Seismic Load Z Envelope Only Solution

Infinigy Engineering, PLLC		Seismic Load AZI 000
PSM	BOBOS00884A	Aug 13, 2021 at 1:31 PM
1197-F0001-C		BOBOS00884A_loaded.r3d

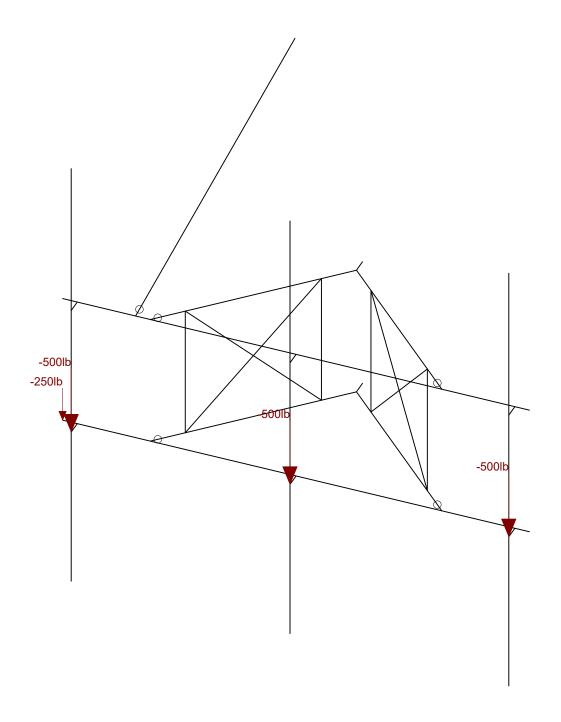




Loads: BLC 32, Seismic Load X Envelope Only Solution

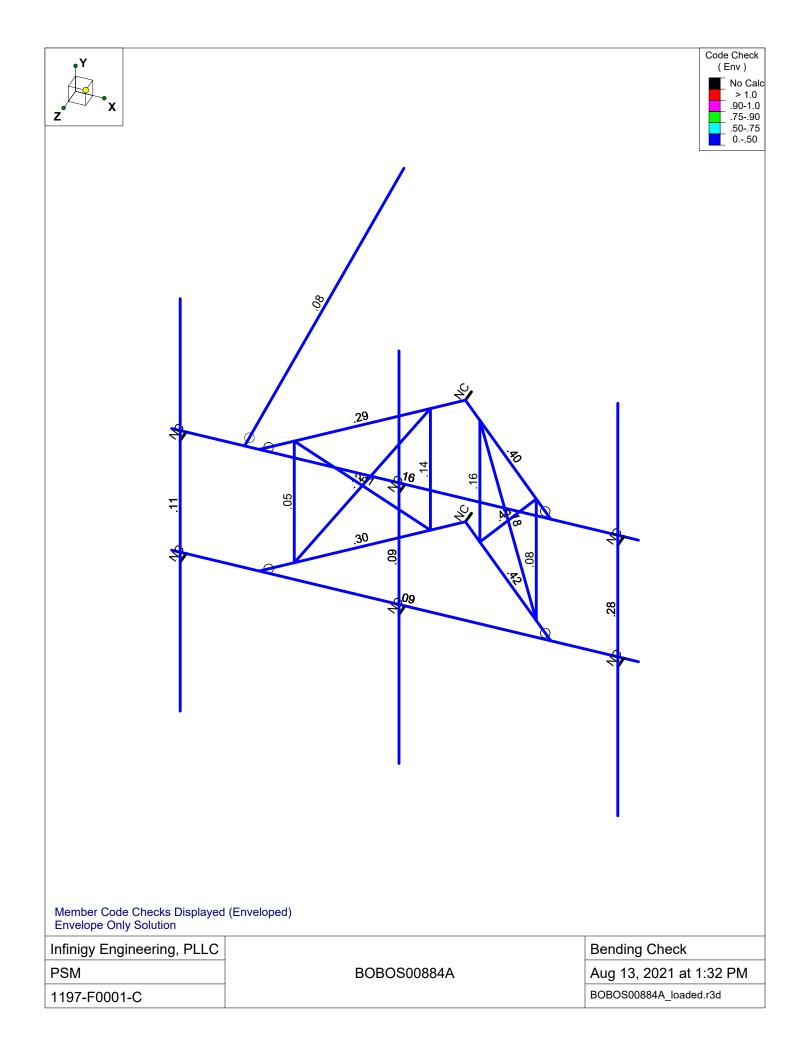
Infinigy Engineering, PLLC		Seismic Load AZI 090
PSM	BOBOS00884A	Aug 13, 2021 at 1:31 PM
1197-F0001-C		BOBOS00884A_loaded.r3d

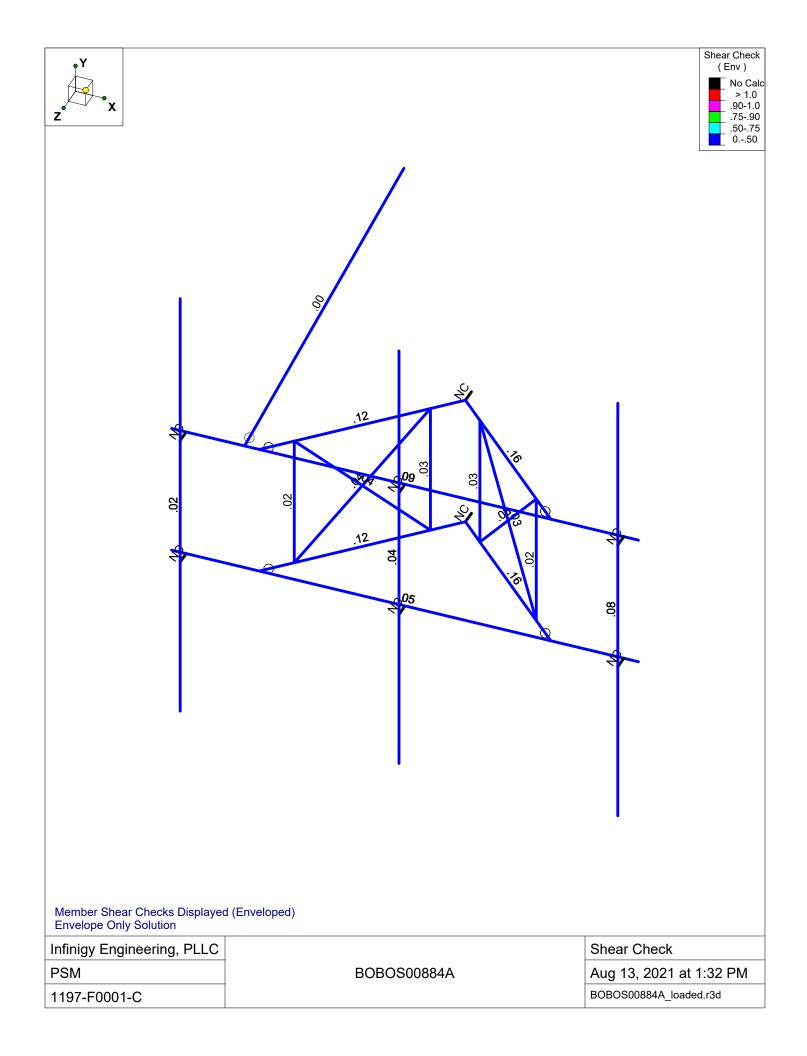




Loads: LL - Live Load Envelope Only Solution

Infinigy Engineering, PLLC		Non-concurrent Live Loads
PSM	BOBOS00884A	Aug 13, 2021 at 1:31 PM
1197-F0001-C		BOBOS00884A_loaded.r3d





Program Inputs

PROJECT INFORMATION							
Client:	ATC						
Carrier:	Dish Wireless						
Engineer:	Pradin Suinyal Magar, M.S						

SITE INFORMATION							
Risk Category:	П						
Exposure Category:	В						
Topo Factor Procedure: Method 1, Category 2							
Site Class:	: D - Stiff Soil (Assumed)						
Ground Elevation:	: 447.53 ft *Rev H						

MOUNT INFORMATION							
Mount Type: Sector Frame							
Num Sectors:	lum Sectors: 3						
Centerline AGL:	165.00	ft					
Tower Height AGL:	250.00	ft					

TOPOGRAPHIC DATA							
Topo Feature: N/A							
Slope Distance:	N/A	ft					
Crest Distance:	N/A	ft					
Crest Height:	N/A	ft					

FACTORS								
Directionality Fact. (K _d):	0.950							
Ground Ele. Factor (K _e):	0.984	*Rev H Only						
Rooftop Speed-Up (K _s):	1.000	*Rev H Only						
Topographic Factor (K _{zt}):	1.000							
Gust Effect Factor (G _h):	1.000							

CODE STANDARDS								
Building Code:	2015 IBC							
TIA Standard:	TIA-222-H							
ASCE Standard:	ASCE 7-10							

WIND AND ICE DATA							
Ultimate Wind (V _{ult}):	135	mph					
Design Wind (V):	N/A	mph					
Ice Wind (V _{ice}):	50	mph					
Base Ice Thickness (t _i):	1.5	in					
Flat Pressure:	99.454	psf					
Round Pressure:	59.672	psf					
Ice Wind Pressure:	8.186	psf					

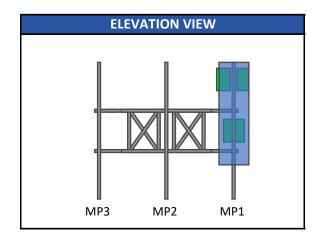
SEISMIC DATA								
Short-Period Accel. (S _s):	0.163	g						
1-Second Accel. (S ₁):	0.059	g						
Short-Period Design (S _{DS}):	0.174							
1-Second Design (S _{D1}):	0.094							
Short-Period Coeff. (F _a):	1.600							
1-Second Coeff. (F _v):	2.400							
Amplification Factor (A _s):	3.000							
Response Mod. Coeff. (R):	2 000							

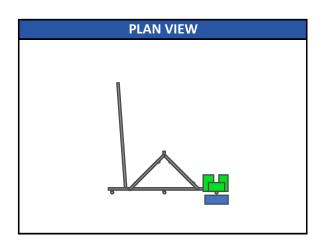


Infinigy Load Calculator V2.1.7

BOBOS00884A_BOBOS00884A 8/13/2021

Program Inputs







Infinigy Load Calculator V2.1.7

	APPURTENANCE INFORMATION										
Appurtenance Name	Elevation	Qty.	K _a	q _z (psf)	EPA _N (ft ²)	EPA _T (ft ²)	Wind F _z (lbs)	Wind F _x (lbs)	Weight (lbs)	Seismic F (lbs)	Member (α sector)
JMA WIRELESS MX08FRO665-21	165.0	3	0.90	49.73	8.01	3.21	358.48	143.66	64.50	16.82	MP1
FUJITSU TA08025-B605	165.0	3	0.90	49.73	1.96	1.19	87.88	53.22	74.95	19.55	MP1
FUJITSU TA08025-B604	165.0	3	0.90	49.73	1.96	1.03	87.88	46.23	63.93	16.67	MP1
RAYCAP RDIDC-9181-PF-48	165.0	1	0.90	49.73	1.87	1.07	83.54	47.74	21.85	5.70	MP1

BOBOS00884A_BOBOS00884A 8/13/2021



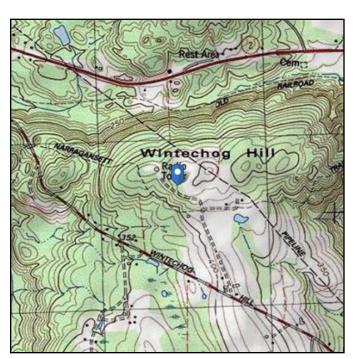
Address:

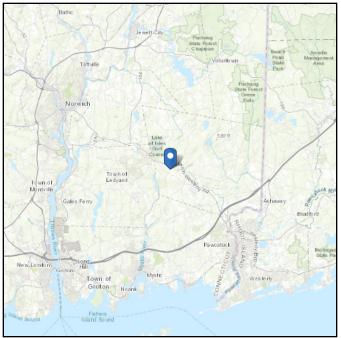
No Address at This Location

ASCE 7 Hazards Report

ASCE/SEI 7-10 Standard: Elevation: 447.53 ft (NAVD 88)

Risk Category: || Latitude: 41.45983 D - Stiff Soil Soil Class: **Longitude:** -71.9273





Wind

Results:

135 mph per North Stonington City Requirements in WSEL Wind Speed:

10-year MRI 80 Vmph 25-year MRI 90 Vmph 50-year MRI 99 Vmph 100-year MRI 109 Vmph

Date &ocessed: **ASGE 2020**, Fig. 26.5-1A and Figs. CC-1-CC-4, and Section 26.5.2,

incorporating errata of March 12, 2014

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-10 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

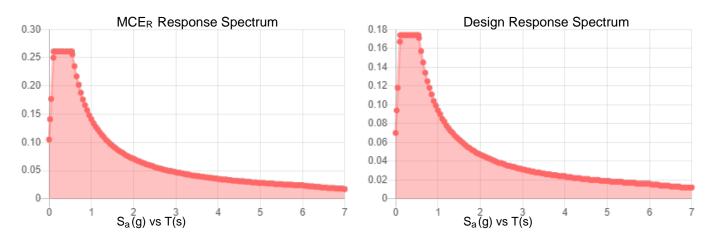
Site is in a hurricane-prone region as defined in ASCE/SEI 7-10 Section 26.2. Glazed openings need not be protected against wind-borne debris.



Seismic

Site Soil Class: Results:	D - Stiff Soil			
S _S :	0.163	S _{DS} :	0.174	
S_1 :	0.059	S_{D1} :	0.094	
F _a :	1.6	T_L :	6	
F _v :	2.4	PGA:	0.082	
S_{MS} :	0.261	PGA _M :	0.131	
S _{M1} :	0.141	F _{PGA} :	1.6	
		l. :	1	

Seismic Design Category B



Data Accessed: Fri Aug 13 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: 15 F

Gust Speed: 50 mph

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

Date Accessed: Fri Aug 13 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.

The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided "as is" and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

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Company : Infinigy Engineer
Designer : PSM
Job Number : 1197-F0001-C
Model Name : BOBOS00884A

Aug 13, 2021 1:14 PM Checked By:_

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(Section/Shape	Type	Design List	Material	Design Rules
1	S3	N2	N1		,	Standoff Arms	Beam	Pipe	A500 Gr.46	Typical
2	S4	N7	N6			Standoff Arms	Beam	Pipe	A500 Gr.46	Typical
3	TR6	N3	N8			Standoff Vertical	None	None	A529 Gr.50	Typical
4	TR5	N4	N9			Standoff Vertical	None	None	A529 Gr.50	Typical
5	TR8	N4	N8			Diagonal	None	None	A529 Gr.50	Typical
6	TR7	N3	N9			Diagonal	None	None	A529 Gr.50	Typical
7	S1	N10	N1			Standoff Arms	Beam	Pipe	A500 Gr.46	Typical
8	S2	N14	N6			Standoff Arms	Beam	Pipe	A500 Gr.46	Typical
9	TR1	N11	N15			Standoff Vertical	None	None	A529 Gr.50	Typical
10	TR2	N12	N16			Standoff Vertical	None	None	A529 Gr.50	Typical
11	TR3	N12	N15			Diagonal	None	None	A529 Gr.50	Typical
12	TR4	N11	N16			Diagonal	None	None	A529 Gr.50	Typical
13	H1	N16A	N15A			Face Horizontal	Beam	Pipe	A500 Gr.46	Typical
14	H2	N18	N17			Face Horizontal	Beam	Pipe	A500 Gr.46	Typical
15	MP3	N21	N22			Mount Pipe	Colu	Pipe	A500 Gr.46	Typical
16	MP1	N19	N20			Mount Pipe	Colu	Pipe	A500 Gr.46	Typical
17	MP2	N33	N34			Mount Pipe	Colu	Pipe	A500 Gr.46	Typical
18	T1	N37	N38			Tie Back	None	None	A500 Gr.46	Typical
19	M29	N25	N67			RIGID	None	None	RIGID	Typical
20	M30	N27	N69			RIGID	None	None	RIGID	Typical
21	M33	N35	N73			RIGID	None	None	RIGID	Typical
22	M34	N36	N74			RIGID	None	None	RIGID	Typical
23	M35	N26	N68			RIGID	None	None	RIGID	Typical
24	M36	N28	N70			RIGID	None	None	RIGID	Typical
25	M25	N43	N1			RIGID	None	None	RIGID	Typical
26	M26	N44	N6			RIGID	None	None	RIGID	Typical

Hot Rolled Steel Design Parameters

	Label	Shape	Lengt	Lbyy[in]	Lbzz[in]	Lcomp t	Lcomp b	L-tor	. Куу	Kzz	Cb	Func
1	S3	Standoff Arms	42.4	,,,,		Lbyy						Late
2	S4	Standoff Arms	42.4			Lbyy						Late
3	TR6	Standoff Vertical	28.3			Lbyy			.65	.65		Late
4	TR5	Standoff Vertical	28.3			Lbyy			.65	.65		Late
5	TR8	Diagonal	39.811			Lbyy			.7	.7		Late
6	TR7	Diagonal	39.811			Lbyy			.5	.5		Late
7	S1	Standoff Arms	42.4			Lbyy						Late
8	S2	Standoff Arms	42.4			Lbyy						Late
9	TR1	Standoff Vertical	28.3			Lbyy			.65	.65		Late
10	TR2	Standoff Vertical	28.3			Lbyy			.65	.65		Late
11	TR3	Diagonal	39.811			Lbyy			.7	.7		Late



Company : Infinigy Engineer
Designer : PSM
Job Number : 1197-F0001-C
Model Name : BOBOS00884A

: Infinigy Engineering, PLLC : PSM

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Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Lengt	Lbyy[in]	Lbzz[in]	Lcomp t	Lcomp b	L-tor	. Kyy	Kzz	Cb	Func
12	TR4	Diagonal	39.811			Lbyy			.5	.5		Late
13	H1	Face Horizontal	96			Lbyy						Late
14	H2	Face Horizontal	96			Lbyy						Late
15	MP3	Mount Pipe	96			Lbyy						Late
16	MP1	Mount Pipe	96			Lbyy						Late
17	MP2	Mount Pipe	96			Lbyy						Late
18	T1	Tie Back	96.255			Lbyy						Late

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only Physical	Defl RaAnal	ysis	Inactive	Seismi
1	S3	BenPIN				Yes	Default			None
2	S4	BenPIN				Yes	Default			None
3	TR6					Yes	** NA **			None
4	TR5					Yes	** NA **			None
5	TR8					Yes	** NA **			None
6	TR7					Yes	** NA **			None
7	S1	BenPIN				Yes	Default			None
8	S2	BenPIN				Yes	Default			None
9	TR1					Yes	** NA **			None
10	TR2					Yes	** NA **			None
11	TR3					Yes	** NA **			None
12	TR4					Yes	** NA **			None
13	H1					Yes				None
14	H2					Yes				None
15	MP3					Yes	** NA **			None
16	MP1					Yes	** NA **			None
17	MP2					Yes	** NA **			None
18	T1	BenPIN				Yes	** NA **			None
19	M29					Yes	** NA **			None
20	M30					Yes	** NA **			None
21	M33					Yes	** NA **			None
22	M34					Yes	** NA **			None
23	M35					Yes	** NA **			None
24	M36					Yes	** NA **			None
25	M25					Yes	** NA **			None
26	M26					Yes	** NA **			None



Company : Infinigy Engineer
Designer : PSM
Job Number : 1197-F0001-C
Model Name : BOBOS00884A

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Material Takeoff

	Material	Size	Pieces	Length[in]	Weight[LB]
1	General				
2	RIGID		8	24	0
3	Total General		8	24	0
4					
5	Hot Rolled Steel				
6	A500 Gr.46	1.9" ODx0.12"	4	169.6	32.27
7	A500 Gr.46	PIPE 2.5	2	192	87.656
8	A500 Gr.46	2.88"x0.120"	3	288	84.933
9	A500 Gr.46	Pipe2.38X0.12	1	96.3	23.255
10	A529 Gr.50	0.63" SR	8	272.4	24.082
11	Total HR Steel		18	1018.3	252.196

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material Des	signA [in2]	lyy [in	.lzz [in	. J [in4]
1	Face Horizontal	PIPE 2.5	Beam	Pipe		pical 1.61	1.45		2.89
2	Standoff Arms	1.9" ODx0.12"	Beam	Pipe	A500 G Ty	pical .671	.267	.267	.534
3	Diagonal	0.63" SR	None	None	A529 G Ty	.312 pical	.008	.008	.015
4	Mount Pipe	2.88"x0.120"	Colu	Pipe	A500 G Ty	pical 1.04	.993	.993	1.985
5	Tie Back	Pipe2.38X0.12	None	None	A500 G Ty	pical .852	.545	.545	1.091
6	End Support Pipe	3.5"x0.120	None	None	A500 G Ty	pical 1.274	1.822	1.822	3.644
7	Standoff Vertical	0.63" SR	None	None	A529 G Ty	pical .312	.008	.008	.015

Basic Load Cases

	BLC Description	Category	X Gr	Y Gr	Z Gr	Joint	Point	Distributed	Area(Memb	Surface(Plate/Wall)
1	Self Weight	DĽ		-1			5		,	,
2	Wind Load AZI 0	WLZ					10			
3	Wind Load AZI 30	None					10			
4	Wind Load AZI 60	None					10			
5	Wind Load AZI 90	WLX					10			
6	Wind Load AZI 1	None					10			
7	Wind Load AZI 1	1 10110					10			
8	Wind Load AZI 1	None					10			
	Wind Load AZI 2						10			
	Wind Load AZI 2						10			
11	Wind Load AZI 2	None					10			
	Wind Load AZI 3					·	10			
13	Wind Load AZI 3	None					10			
14	Distr. Wind Load Z	WLZ						26		



Company : Infinigy Engineer
Designer : PSM
Job Number : 1197-F0001-C
Model Name : BOBOS00884A

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Basic Load Cases (Continued)

	BLC Description	Category	X Gr	Y Gr	Z Gr	Joint	Point	Distributed	Area(Memb	Surface(Plate/Wall)
15	Distr. Wind Load X	WLX						26	,	, ,
16	Ice Weight	OL1					5	26		
17	Ice Wind Load A	OL2					10			
18	Ice Wind Load A	None					10			
19	Ice Wind Load A	None					10			
20	Ice Wind Load A	OL3					10			
21	Ice Wind Load A	None					10			
22	Ice Wind Load A	None					10			
23	Ice Wind Load A	None					10			
24	Ice Wind Load A	None					10			
25	Ice Wind Load A	None					10			
26	Ice Wind Load A	None					10			
27	Ice Wind Load A	None					10			
28	Ice Wind Load A	None					10			
29	Distr. Ice Wind L	OL2						26		
30	Distr. Ice Wind L	OL3						26		
31	Seismic Load Z	ELZ			261		5			
32	Seismic Load X	ELX	261				5			
33	Service Live Loa	LL				1				
34	Maintenance Loa	LL				1				
35	Maintenance Loa	LL				1				
36	Maintenance Loa	LL				1				

Load Combinations

	Description	S	P	S	В	Fa	В	Fa	.B	Fa	.B	Fa	В	Fa	В	Fa	.B	Fa	.B	Fa	.B	.Fa	В	Fa
1	1.4ĎL	Y	Υ		1	1.4																		
2	1.2DL + 1WL AZI 0	Y	Υ		1	1.2	2	1	14	1	15													
3	1.2DL + 1WL AZI 30	Y	Υ		1	1.2	3	1	14	.866	15	.5												
4	1.2DL + 1WL AZI 60	Y	Υ		1	1.2	4	1	14	.5	15	.866												
5	1.2DL + 1WL AZI 90	Y	Υ		1	1.2	5	1	14		15	1												
6	1.2DL + 1WL AZI 120	Υ	Υ		1	1.2	6	1	14	5	15	.866												
7	1.2DL + 1WL AZI 150	Y	Υ		1	1.2	7	1	14	8	15	.5												
8	1.2DL + 1WL AZI 180	Y	Υ		1	1.2	8	1		-1														
9	1.2DL + 1WL AZI 210	Υ	Υ		1	1.2	9	1	14	8	15	5												
10	1.2DL + 1WL AZI 240	Υ	Υ		1	1.2	10	1	14	5	15	8												
11	1.2DL + 1WL AZI 270	Υ	Υ		1	1.2	11	1	14		15	-1												
12	1.2DL + 1WL AZI 300	Υ	Υ		1	1.2	12	1	14			8												
13	1.2DL + 1WL AZI 330	Y	Υ		1	1.2	13	1	14	.866	15	5												
14	0.9DL + 1WL AZI 0	Y	Υ		1	.9	2	1	14	1	15													
15	0.9DL + 1WL AZI 30	Y	Υ		1	.9	3	1	14	.866	15	.5												
16	0.9DL + 1WL AZI 60	Y	Υ		1	.9	4	1	14	.5	15	.866												



Company : Infinigy Engineering, PLLC
Designer : PSM
Job Number : 1197-F0001-C
Model Name : BOBOS00884A

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Load Combinations (Continued)

	Description	S	P	.SB	F	- а	В	Fa	.B	Fa	.B	Fa	.B	Fa	В	Fa	В	Fa	.B	Fa	.B	Fa	В	Fa.
17	0.9DL + 1WL AZI 90	Υ					5		14		15													
18	0.9DL + 1WL AZI 120	Υ	Υ				6	1	14	5	15	.866												
19	0.9DL + 1WL AZI 150	_			_	.9	7	1	14	8	15	.5												
20					_		8	1	14	-1	15													
21	0.9DL + 1WL AZI 210				_		9		14	8	15	5											П	
22	0.9DL + 1WL AZI 240						10		14	5	15	8												
23	0.9DL + 1WL AZI 270	_			-		11	1	14		15												П	
24	0.9DL + 1WL AZI 300		_		_		12	1	14	.5	15													
25	0.9DL + 1WL AZI 330					.9	13	1	14	.866	15	5												
26	1.2D + 1.0Di	Y	Υ		_	1.2		_																
27	1.2D + 1.0Di +1.0Wi AZI 0	Υ			1	1.2	16	1	17	1	29	1	30											
28	1.2D + 1.0Di +1.0Wi AZI 30	Y	Υ		1	1.2	16	1	18	1	29	.866	30	.5										
29	1.2D + 1.0Di +1.0Wi AZI 60	Y	Υ		1	1.2	16		19	1	29	.5	30	.866										
30	1.2D + 1.0Di +1.0Wi AZI 90	Y	Υ		1	1.2	16		20	1	29		30											
31	1.2D + 1.0Di +1.0Wi AZI 120	Y	Υ		1	1.2	16	1	21	1	29			.866										
32	1.2D + 1.0Di +1.0Wi AZI 150				1	1.2	16	1	22	1	29	8	.30	.5										
33	1.2D + 1.0Di +1.0Wi AZI 180				1	1.2	16	1	23	1	29	-1	30											
34	1.2D + 1.0Di +1.0Wi AZI 210	Y	Υ		1	1.2	16	1	24	1	29	8	30	5										
35	1.2D + 1.0Di +1.0Wi AZI 240				1	1.2	16	1	25	1	29	5	30	8										
36	1.2D + 1.0Di +1.0Wi AZI 270	Y	Υ		1	1.2	16	1	26	1	29		30	-1										
37	1.2D + 1.0Di +1.0Wi AZI 300	Y	Υ		1 '	1.2	16	1	27	1	29			8										
38	1.2D + 1.0Di +1.0Wi AZI 330	Y	Υ	•	1	1.2	16	1	28	1	29	.866	30	5										
39	(1.2 + 0.2Sds)DL + 1.0E AZI 0	Y	Υ			.2			32															
40	(1.2 + 0.2Sds)DL + 1.0E AZI 30) Y	Υ		1 1	.2	.31	.866	32	.5														
	(1.2 + 0.2Sds)DL + 1.0E AZI 60	1			1 1	.2	.31	.5	32	.866														
	(1.2 + 0.2Sds)DL + 1.0E AZI 90				1 1	.2	.31		32	1														
	(1.2 + 0.2Sds)DL + 1.0E AZI 1.									.866														
	(1.2 + 0.2Sds)DL + 1.0E AZI 1.				1 1	.2	.31	8	.32	.5														
45	(1.2 + 0.2Sds)DL + 1.0E AZI 1.	Y	Υ		1 1	.2	.31	-1	32															
	(1.2 + 0.2Sds)DL + 1.0E AZI 2.				1 1	.2	.31	8	.32	5														
	(1.2 + 0.2Sds)DL + 1.0E AZI 2.			•	1 1	.2	.31	5		8														
	(1.2 + 0.2Sds)DL + 1.0E AZI 2.				1 1	.2	.31		32	-1														
	(1.2 + 0.2Sds)DL + 1.0E AZI 3.									8														
50	(1.2 + 0.2Sds)DL + 1.0E AZI 3.	Y	Υ						32	5														
51	(0.9 - 0.2Sds)DL + 1.0E AZI 0				- 1	- 1			32	1														
52	(0.9 - 0.2Sds)DL + 1.0E AZI 30	Y	Υ					.866																
				•	-					.866														
	(0.9 - 0.2Sds)DL + 1.0E AZI 90			•	1 .8	365	31		32	1														
	(0.9 - 0.2Sds)DL + 1.0E AZI 1			•						.866														
	(0.9 - 0.2Sds)DL + 1.0E AZI 1							8																
57	(0.9 - 0.2Sds)DL + 1.0E AZI 1	Y	Υ		- 1	- 1		-1		1														
58	(0.9 - 0.2Sds)DL + 1.0E AZI 2	Y	Υ		1 .8	365	31	8	.32	5														



Company : Infinigy Engineering, PLLC
Designer : PSM
Job Number : 1197-F0001-C
Model Name : BOBOS00884A

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Load Combinations (Continued)

	Description	SP.	S	R	Fa	R F	Fa	R	Fa	R	Fa	R	Fa	R	Fa	R	Fa	R	Fa	R	Fa	B.	Fa
59	(0.9 - 0.2Sds)DL + 1.0E AZI 2			1	.865					J	. u		. u		. u		. u	J	. u		. u		. и.
	(0.9 - 0.2Sds)DL + 1.0E AZI 2	Y Y		1	.865				-1														
	(0.9 - 0.2Sds)DL + 1.0E AZI 3			1	.865	31																	
	(0.9 - 0.2Sds)DL + 1.0E AZI 3			1	.865																		
	1.0DL + 1.5LL + 1.0SWL (60 .			<u>†</u>					.198	15		33	1.5										
	1.0DL + 1.5LL + 1.0SWL (60 .			1	1				.171			33	1.5										
	1.0DL + 1.5LL + 1.0SWL (60 .		_	†	1				.099														
	1.0DL + 1.5LL + 1.0SWL (60 .			<u>†</u>	1		198				.198												
	1.0DL + 1.5LL + 1.0SWL (60 .			1	1				0			1											
	1.0DL + 1.5LL + 1.0SWL (60 .			1	1				1			1											
	1.0DL + 1.5LL + 1.0SWL (60		_	 					1				1.5										
	1.0DL + 1.5LL + 1.0SWL (60			1	1				1														
71	1.0DL + 1.5LL + 1.0SWL (60			<u>+</u>	1	_			0														
	1.0DL + 1.5LL + 1.0SWL (60			1			198		$\overline{}$		1												
	1.0DL + 1.5LL + 1.0SWL (60			<u> </u>					.099														
	1.0DL + 1.5LL + 1.0SWL (60			<u> </u> 1					.171														
75	1.2DL + 1.5LL	Y Y	_	<u> </u>	1.2																		
	1.2DL + 1.5LM-MP1 + 1SWL		-	1				2	.049	14	049	15											
77	1.2DL + 1.5LM-MP1 + 1SWL			<u> </u>					.049				025										
	1.2DL + 1.5LM-MP1 + 1SWL			1					.049														
	1.2DL + 1.5LM-MP1 + 1SWL		_	<u> </u>					.049				.049										
	1.2DL + 1.5LM-MP1 + 1SWL			1	-	$\overline{}$		_	.049														
	1.2DL + 1.5LM-MP1 + 1SWL			<u> </u>					.049														
				1					.049				.023										
82	1.2DL + 1.5LM-MP1 + 1SWL		_	1				_	.049				0										
00		`		1					.049														
84	1.2DL + 1.5LM-MP1 + 1SWL	` I		1					.049				0										
				1					.049														
	1.2DL + 1.5LM-MP1 + 1SWL 1.2DL + 1.5LM-MP1 + 1SWL			1					.049			1											
0.				1					1 1	- 1		1											
				1	1.2	35	1.5	2	.049	14	049	15	025										
	1.2DL + 1.5LM-MP2 + 1SWL			1					.049														
	1.2DL + 1.5LM-MP2 + 1SWL			1					.049														
	1.2DL + 1.5LM-MP2 + 1SWL			1					.049				.049										
	1.2DL + 1.5LM-MP2 + 1SWL			1					.049														
	1.2DL + 1.5LM-MP2 + 1SWL			1				•	.049														
	1.2DL + 1.5LM-MP2 + 1SWL			1					.049														
	1.2DL + 1.5LM-MP2 + 1SWL			1					.049														
	1.2DL + 1.5LM-MP2 + 1SWL			1					.049														
	1.2DL + 1.5LM-MP2 + 1SWL			1					.049				0										
	1.2DL + 1.5LM-MP2 + 1SWL			1					.049														
	1.2DL + 1.5LM-MP2 + 1SWL			1					.049	- 1													
100	1.2DL + 1.5LM-MP3 + 1SWL	(_. Y . Y		1	1.2	36	1.5	2	.049	14	.049	15											



Company : Infinigy Engineer
Designer : PSM
Job Number : 1197-F0001-C
Model Name : BOBOS00884A

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Load Combinations (Continued)

	Description	S	Ρ	S	В	.Fa	В	Fa	В	Fa	В	Fa	В	Fa	В	Fa	В	Fa	В	Fa	.B	Fa	В	Fa
1	1.2DL + 1.5LM-MP3 + 1SWL (_	.049														
	1.2DL + 1.5LM-MP3 + 1SWL (1	1.2	36	1.5	4	.049	14	.025	15	.043										
	1.2DL + 1.5LM-MP3 + 1SWL (•	.049				.049										
104	1.2DL + 1.5LM-MP3 + 1SWL (Y	Υ		1	1.2	36	1.5	6	.049	14	0	15	.043										
	1.2DL + 1.5LM-MP3 + 1SWL (1	1.2	36	1.5	7	.049	14	0	15	.025										
	1.2DL + 1.5LM-MP3 + 1SWL ()	.049														
	1.2DL + 1.5LM-MP3 + 1SWL (1	1.2	36	1.5	9	.049	14	0	15	0										
	1.2DL + 1.5LM-MP3 + 1SWL (1	1.2	36	1.5	10	.049	14	0	15	0										
1	1.2DL + 1.5LM-MP3 + 1SWL (1	1.2	36	1.5	11	.049	14		15	0										
110	1.2DL + 1.5LM-MP3 + 1SWL (Y	Υ		1	1.2	36	1.5	12	.049	14	.025	15	0						·				

Joint Boundary Conditions

	Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
1	N1					_	
2	N6						
3	N38	Reaction	Reaction	Reaction			
4	N43	Reaction	Reaction	Reaction			
5	N44	Reaction	Reaction	Reaction			

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	N38	 110.717	6	49.768	37	1084.3	7	0	110	0	110	0	110
2		 -111.111	12	10.052	55	-1085.3	25	0	1	0	1	0	1
3	N43	 805.844	78	891.595	31	1408.04	25	0	110	0	110	0	110
4		 -1631.903	96	179.573	20	-2552.7	- 7	0	1	0	1	0	1
5	N44	 1615.139				2118.47	27	0	110	0	110	0	110
6		 -788.769	85	176.216	14	165.56	20	0	1	0	1	0	1
7	Totals:	 853.062	5	1787.2	33	1350.5	2						
8		 -853.062	23	413.083	53	-1350.5	20						

Member Point Loads (BLC 1 : Self Weight)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Υ	-32.25	0
2	MP1	Υ	-32.25	72
3	MP1	Υ	-74.95	12
4	MP1	Υ	-63.93	12
5	MP1	Υ	-21.85	48



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Member Point Loads (BLC 2: Wind Load AZI 0)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	0	0
2	MP1	Z	-179.24	0
3	MP1	X	0	72
4	MP1	Z	-179.24	72
5	MP1	X	0	12
6	MP1	Z	-87.88	12
7	MP1	X	0	12
8	MP1	Z	-87.88	12
9	MP1	X	0	48
10	MP1	Z	-83.54	48

Member Point Loads (BLC 3: Wind Load AZI 30)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-76.19	0
2	MP1	Z	-131.97	0
3	MP1	X	-76.19	72
4	MP1	Z	-131.97	72
5	MP1	X	-39.61	12
6	MP1	Z	-68.6	12
7	MP1	X	-38.73	12
8	MP1	Z	-67.09	12
9	MP1	X	-37.3	48
10	MP1	Z	-64.6	48

Member Point Loads (BLC 4: Wind Load AZI 60)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-85.46	0
2	MP1	Z	-49.34	0
3	MP1	X	-85.46	72
4	MP1	Z	-49.34	72
5	MP1	X	-53.59	12
6	MP1	Z	-30.94	12
7	MP1	X	-49.05	12
8	MP1	Z	-28.32	12
9	MP1	X	-49.09	48
10	MP1	Z	-28.34	48

Member Point Loads (BLC 5: Wind Load AZI 90)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-71.83	0
2	MP1	Z	0	0



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Member Point Loads (BLC 5: Wind Load AZI 90) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
3	MP1	X	-71.83	72
4	MP1	Z	0	72
5	MP1	X	-53.22	12
6	MP1	Z	0	12
7	MP1	X	-46.23	12
8	MP1	Z	0	12
9	MP1	X	-47.74	48
10	MP1	Z	0	48

Member Point Loads (BLC 6: Wind Load AZI 120)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-85.46	0
2	MP1	Z	49.34	0
3	MP1	X	-85.46	72
4	MP1	Z	49.34	72
5	MP1	X	-53.59	12
6	MP1	Z	30.94	12
7	MP1	X	-49.05	12
8	MP1	Z	28.32	12
9	MP1	X	-49.09	48
10	MP1	Z	28.34	48

Member Point Loads (BLC 7: Wind Load AZI 150)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-76.19	0
2	MP1	Z	131.97	0
3	MP1	X	-76.19	72
4	MP1	Z	131.97	72
5	MP1	X	-39.61	12
6	MP1	Z	68.6	12
7	MP1	X	-38.73	12
8	MP1	Z	67.09	12
9	MP1	X	-37.3	48
10	MP1	Z	64.6	48

Member Point Loads (BLC 8: Wind Load AZI 180)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	0	0
2	MP1	Z	179.24	0
3	MP1	X	0	72
4	MP1	Z	179.24	72



Company : Infinigy Engineer
Designer : PSM
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Member Point Loads (BLC 8: Wind Load AZI 180) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
5	MP1	X	0	12
6	MP1	Z	87.88	12
7	MP1	X	0	12
8	MP1	Z	87.88	12
9	MP1	X	0	48
10	MP1	Z	83.54	48

Member Point Loads (BLC 9: Wind Load AZI 210)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	76.19	0
2	MP1	Z	131.97	0
3	MP1	X	76.19	72
4	MP1	Z	131.97	72
5	MP1	X	39.61	12
6	MP1	Z	68.6	12
7	MP1	X	38.73	12
8	MP1	Z	67.09	12
9	MP1	X	37.3	48
10	MP1	Z	64.6	48

Member Point Loads (BLC 10 : Wind Load AZI 240)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	85.46	0
2	MP1	Z	49.34	0
3	MP1	X	85.46	72
4	MP1	Z	49.34	72
5	MP1	X	53.59	12
6	MP1	Z	30.94	12
7	MP1	X	49.05	12
8	MP1	Z	28.32	12
9	MP1	X	49.09	48
10	MP1	Z	28.34	48

Member Point Loads (BLC 11 : Wind Load AZI 270)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	71.83	0
2	MP1	Z	0	0
3	MP1	X	71.83	72
4	MP1	Z	0	72
5	MP1	X	53.22	12
6	MP1	Z	0	12



Company : Infinigy Enginee
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Member Point Loads (BLC 11: Wind Load AZI 270) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
7	MP1	X	46.23	12
8	MP1	Z	0	12
9	MP1	X	47.74	48
10	MP1	Z	0	48

Member Point Loads (BLC 12: Wind Load AZI 300)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	85.46	0
2	MP1	Z	-49.34	0
3	MP1	X	85.46	72
4	MP1	Z	-49.34	72
5	MP1	X	53.59	12
6	MP1	Z	-30.94	12
7	MP1	X	49.05	12
8	MP1	Z	-28.32	12
9	MP1	X	49.09	48
10	MP1	Z	-28.34	48

Member Point Loads (BLC 13: Wind Load AZI 330)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	76.19	0
2	MP1	Z	-131.97	0
3	MP1	X	76.19	72
4	MP1	Z	-131.97	72
5	MP1	X	39.61	12
6	MP1	Z	-68.6	12
7	MP1	X	38.73	12
8	MP1	Z	-67.09	12
9	MP1	X	37.3	48
10	MP1	Z	-64.6	48

Member Point Loads (BLC 16 : Ice Weight)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Υ	-145.079	0
2	MP1	Υ	-145.079	72
3	MP1	Υ	-76.104	12
4	MP1	Υ	-71.452	12
5	MP1	Υ	-69.698	48

Member Point Loads (BLC 17 : Ice Wind Load AZI 0)

Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
	50))))))	\ \DODOOO0044	



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Member Point Loads (BLC 17 : Ice Wind Load AZI 0) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	0	0
2	MP1	Z	-19.53	0
3	MP1	X	0	72
4	MP1	Z	-19.53	72
5	MP1	X	0	12
6	MP1	Z	-7.59	12
7	MP1	X	0	12
8	MP1	Z	-7.59	12
9	MP1	X	0	48
10	MP1	Z	-7.33	48

Member Point Loads (BLC 18: Ice Wind Load AZI 30)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-8.96	0
2	MP1	Z	-15.53	0
3	MP1	X	-8.96	72
4	MP1	Z	-15.53	72
5	MP1	X	-3.61	12
6	MP1	Z	-6.25	12
7	MP1	X	-3.57	12
8	MP1	Z	-6.19	12
9	MP1	X	-3.49	48
10	MP1	Z	-6.04	48

Member Point Loads (BLC 19 : Ice Wind Load AZI 60)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-12.74	0
2	MP1	Z	-7.36	0
3	MP1	X	-12.74	72
4	MP1	Z	-7.36	72
5	MP1	X	-5.61	12
6	MP1	Z	-3.24	12
7	MP1	X	-5.41	12
8	MP1	Z	-3.12	12
9	MP1	X	-5.42	48
10	MP1	Z	-3.13	48

Member Point Loads (BLC 20 : Ice Wind Load AZI 90)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-13.11	0
2	MP1	Z	0	0



Company : Infinigy Engine Designer : PSM Job Number : 1197-F0001-C

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Member Point Loads (BLC 20 : Ice Wind Load AZI 90) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
3	MP1	X	-13.11	72
4	MP1	Z	0	72
5	MP1	X	-6.1	12
6	MP1	Z	0	12
7	MP1	X	-5.8	12
8	MP1	Z	0	12
9	MP1	X	-5.91	48
10	MP1	Z	0	48

Member Point Loads (BLC 21 : Ice Wind Load AZI 120)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-12.74	0
2	MP1	Z	7.36	0
3	MP1	X	-12.74	72
4	MP1	Z	7.36	72
5	MP1	X	-5.61	12
6	MP1	Z	3.24	12
7	MP1	X	-5.41	12
8	MP1	Z	3.12	12
9	MP1	X	-5.42	48
10	MP1	Z	3.13	48

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-8.96	0
2	MP1	Z	15.53	0
3	MP1	X	-8.96	72
4	MP1	Z	15.53	72
5	MP1	X	-3.61	12
6	MP1	Z	6.25	12
7	MP1	X	-3.57	12
8	MP1	Z	6.19	12
9	MP1	X	-3.49	48
10	MP1	Z	6.04	48

Member Point Loads (BLC 23 : Ice Wind Load AZI 180)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	0	0
2	MP1	Z	19.53	0
3	MP1	X	0	72
4	MP1	Z	19.53	72



Company : Infinigy Engine Designer : PSM Job Number : 1197-F0001-C Model Name: BOBOS00884A

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Member Point Loads (BLC 23 : Ice Wind Load AZI 180) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
5	MP1	X	0	12
6	MP1	Z	7.59	12
7	MP1	X	0	12
8	MP1	Z	7.59	12
9	MP1	X	0	48
10	MP1	Z	7.33	48

Member Point Loads (BLC 24 : Ice Wind Load AZI 210)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	8.96	0
2	MP1	Z	15.53	0
3	MP1	X	8.96	72
4	MP1	Z	15.53	72
5	MP1	X	3.61	12
6	MP1	Z	6.25	12
7	MP1	X	3.57	12
8	MP1	Z	6.19	12
9	MP1	X	3.49	48
10	MP1	Z	6.04	48

Member Point Loads (BLC 25 : Ice Wind Load AZI 240)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	12.74	0
2	MP1	Z	7.36	0
3	MP1	X	12.74	72
4	MP1	Z	7.36	72
5	MP1	X	5.61	12
6	MP1	Z	3.24	12
7	MP1	X	5.41	12
8	MP1	Z	3.12	12
9	MP1	X	5.42	48
10	MP1	Z	3.13	48

Member Point Loads (BLC 26 : Ice Wind Load AZI 270)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	13.11	0
2	MP1	Z	0	0
3	MP1	X	13.11	72
4	MP1	Z	0	72
5	MP1	X	6.1	12
6	MP1	Z	0	12



Company : Infinigy Enginee
Designer : PSM
Job Number : 1197-F0001-C
Model Name : BOBOS00884A

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Member Point Loads (BLC 26 : Ice Wind Load AZI 270) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
7	MP1	X	5.8	12
8	MP1	Z	0	12
9	MP1	X	5.91	48
10	MP1	Z	0	48

Member Point Loads (BLC 27 : Ice Wind Load AZI 300)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	12.74	0
2	MP1	Z	-7.36	0
3	MP1	X	12.74	72
4	MP1	Z	-7.36	72
5	MP1	X	5.61	12
6	MP1	Z	-3.24	12
7	MP1	X	5.41	12
8	MP1	Z	-3.12	12
9	MP1	X	5.42	48
10	MP1	Z	-3.13	48

Member Point Loads (BLC 28 : Ice Wind Load AZI 330)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	8.96	0
2	MP1	Z	-15.53	0
3	MP1	X	8.96	72
4	MP1	Z	-15.53	72
5	MP1	X	3.61	12
6	MP1	Z	-6.25	12
7	MP1	X	3.57	12
8	MP1	Z	-6.19	12
9	MP1	X	3.49	48
10	MP1	Z	-6.04	48

Member Point Loads (BLC 31 : Seismic Load Z)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-8.411	0
2	MP1	Z	-8.411	72
3	MP1	Z	-19.547	12
4	MP1	Z	-16.673	12
5	MP1	Z	-5.698	48

Member Point Loads (BLC 32 : Seismic Load X)

Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
	50 1 1 1 1 1 1 1	12020000011	



Company

: Infinigy Engineering, PLLC

Job Number : 1197-F0001-C Model Name: BOBOS00884A Aug 13, 2021 1:14 PM Checked By:

Member Point Loads (BLC 32 : Seismic Load X) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-8.411	0
2	MP1	X	-8.411	72
3	MP1	X	-19.547	12
4	MP1	X	-16.673	12
5	MP1	Χ	-5.698	48

Joint Loads and Enforced Displacements (BLC 33: Service Live Loads)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^2/in, lb*s^2*in)]
1	N18	L	Υ	-250

Joint Loads and Enforced Displacements (BLC 34 : Maintenance Load 1)

_		Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^2/in, lb*s^2*in)]
	1	N69	L	Υ	-500

Joint Loads and Enforced Displacements (BLC 35 : Maintenance Load 2)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^2/in, lb*s^2*in)]
1	N70	L	Υ	-500

Joint Loads and Enforced Displacements (BLC 36 : Maintenance Load 3)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^2/in, lb*s^2*in)]
1	N74	L	Υ	-500

Member Distributed Loads (BLC 14 : Distr. Wind Load Z)

	Member Label	Direction	Start Magnitude[lb/ft,	End Magn	.Start Location	End Location[in,%]
1	S3	SZ	-59.672	-59.672	0	%100
2	S4	SZ	-59.672	-59.672	0	%100
3	TR6	SZ	-59.672	-59.672	0	%100
4	TR5	SZ	-59.672	-59.672	0	%100
5	TR8	SZ	-59.672	-59.672	0	%100
6	TR7	SZ	-59.672	-59.672	0	%100
7	S 1	SZ	-59.672	-59.672	0	%100
8	S2	SZ	-59.672	-59.672	0	%100
9	TR1	SZ	-59.672	-59.672	0	%100
10	TR2	SZ	-59.672	-59.672	0	%100
11	TR3	SZ	-59.672	-59.672	0	%100
12	TR4	SZ	-59.672	-59.672	0	%100
13	H1	SZ	-59.672	-59.672	0	%100
14	H2	SZ	-59.672	-59.672	0	%100



: Infinigy Engineering, PLLC : PSM

Company : Infinigy Engineer
Designer : PSM
Job Number : 1197-F0001-C
Model Name : BOBOS00884A

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Member Distributed Loads (BLC 14: Distr. Wind Load Z) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,	End Magn	Start Location	End Location[in,%]
15	MP3	SZ	-59.672	-59.672	0	%100
16	MP1	SZ	-59.672	-59.672	0	%100
17	MP2	SZ	-59.672	-59.672	0	%100
18	T1	SZ	-59.672	-59.672	0	%100
19	M29	SZ	0	0	0	%100
20	M30	SZ	0	0	0	%100
21	M33	SZ	0	0	0	%100
22	M34	SZ	0	0	0	%100
23	M35	SZ	0	0	0	%100
24	M36	SZ	0	0	0	%100
25	M25	SZ	0	0	0	%100
26	M26	SZ	0	0	0	%100

Member Distributed Loads (BLC 15 : Distr. Wind Load X)

	Member Label	Direction	Start Magnitude[lb/ft,	End Magn	Start Location.	End Location[in,%]
1	S3	SX	-59.672	-59.672	0	%100
2	S4	SX	-59.672	-59.672	0	%100
3	TR6	SX	-59.672	-59.672	0	%100
4	TR5	SX	-59.672	-59.672	0	%100
5	TR8	SX	-59.672	-59.672	0	%100
6	TR7	SX	-59.672	-59.672	0	%100
7	S 1	SX	-59.672	-59.672	0	%100
8	S2	SX	-59.672	-59.672	0	%100
9	TR1	SX	-59.672	-59.672	0	%100
10	TR2	SX	-59.672	-59.672	0	%100
11	TR3	SX	-59.672	-59.672	0	%100
12	TR4	SX	-59.672	-59.672	0	%100
13	H1	SX	-59.672	-59.672	0	%100
14	H2	SX	-59.672	-59.672	0	%100
15	MP3	SX	-59.672	-59.672	0	%100
16	MP1	SX	-59.672	-59.672	0	%100
17	MP2	SX	-59.672	-59.672	0	%100
18	T1	SX	-59.672	-59.672	0	%100
19	M29	SX	0	0	0	%100
20	M30	SX	0	0	0	%100
21	M33	SX	0	0	0	%100
22	M34	SX	0	0	0	%100
23	M35	SX	0	0	0	%100
24	M36	SX	0	0	0	%100
25	M25	SX	0	0	0	%100
26	M26	SX	0	0	0	%100



: Infinigy Engineering, PLLC: PSM

Company : Infinigy Engineer
Designer : PSM
Job Number : 1197-F0001-C
Model Name : BOBOS00884A

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Member Distributed Loads (BLC 16 : Ice Weight)

	Member Label	Direction	Start Magnitude[lb/ft,	End Magn	Start Location	End Location[in,%]
1	S3	Υ	-7.883	-7.883	0	%100
2	S4	Υ	-7.883	-7.883	0	%100
3	TR6	Υ	-5.149	-5.149	0	%100
4	TR5	Υ	-5.149	-5.149	0	%100
5	TR8	Υ	-5.149	-5.149	0	%100
6	TR7	Υ	-5.149	-5.149	0	%100
7	S 1	Υ	-7.883	-7.883	0	%100
8	S2	Υ	-7.883	-7.883	0	%100
9	TR1	Υ	-5.149	-5.149	0	%100
10	TR2	Υ	-5.149	-5.149	0	%100
11	TR3	Υ	-5.149	-5.149	0	%100
12	TR4	Υ	-5.149	-5.149	0	%100
13	H1	Υ	-9.981	-9.981	0	%100
14	H2	Υ	-9.981	-9.981	0	%100
15	MP3	Υ	-9.992	-9.992	0	%100
16	MP1	Υ	-9.992	-9.992	0	%100
17	MP2	Υ	-9.992	-9.992	0	%100
18	T1	Υ	-8.916	-8.916	0	%100
19	M29	Υ	-3.793	-3.793	0	%100
20	M30	Υ	-3.793	-3.793	0	%100
21	M33	Υ	-3.793	-3.793	0	%100
22	M34	Υ	-3.793	-3.793	0	%100
23	M35	Υ	-3.793	-3.793	0	%100
24	M36	Υ	-3.793	-3.793	0	%100
25	M25	Υ	-3.793	-3.793	0	%100
26	M26	Υ	-3.793	-3.793	0	%100

Member Distributed Loads (BLC 29 : Distr. Ice Wind Load Z)

	Member Label	Direction	Start Magnitude[lb/ft,	End Magn	Start Location	End Location[in,%]
1	S3	SZ	-23.367	-23.367	0	%100
2	S4	SZ	-23.367	-23.367	0	%100
3	TR6	SZ	-53.971	-53.971	0	%100
4	TR5	SZ	-53.971	-53.971	0	%100
5	TR8	SZ	-53.971	-53.971	0	%100
6	TR7	SZ	-53.971	-53.971	0	%100
7	S1	SZ	-23.367	-23.367	0	%100
8	S2	SZ	-23.367	-23.367	0	%100
9	TR1	SZ	-53.971	-53.971	0	%100
10	TR2	SZ	-53.971	-53.971	0	%100
11	TR3	SZ	-53.971	-53.971	0	%100
12	TR4	SZ	-53.971	-53.971	0	%100
13	H1	SZ	-18.218	-18.218	0	%100



Company : Infinigy Engined Designer : PSM Job Number : 1197-F0001-C

: Infinigy Engineering, PLLC: PSM

Model Name: BOBOS00884A

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Member Distributed Loads (BLC 29 : Distr. Ice Wind Load Z) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,	End Magn	Start Location	End Location[in,%]
14	H2	SZ	-18.218	-18.218	0	%100
15	MP3	SZ	-18.201	-18.201	0	%100
16	MP1	SZ	-18.201	-18.201	0	%100
17	MP2	SZ	-18.201	-18.201	0	%100
18	T1	SZ	-20.305	-20.305	0	%100
19	M29	SZ	0	0	0	%100
20	M30	SZ	0	0	0	%100
21	M33	SZ	0	0	0	%100
22	M34	SZ	0	0	0	%100
23	M35	SZ	0	0	0	%100
24	M36	SZ	0	0	0	%100
25	M25	SZ	0	0	0	%100
26	M26	SZ	0	0	0	%100

Member Distributed Loads (BLC 30 : Distr. Ice Wind Load X)

	Member Label	Direction	Start Magnitude[lb/ft,	End Magn	Start Location	End Location[in,%]
1	S3	SX	-23.367	-23.367	0	%100
2	S4	SX	-23.367	-23.367	0	%100
3	TR6	SX	-53.971	-53.971	0	%100
4	TR5	SX	-53.971	-53.971	0	%100
5	TR8	SX	-53.971	-53.971	0	%100
6	TR7	SX	-53.971	-53.971	0	%100
7	S 1	SX	-23.367	-23.367	0	%100
8	S2	SX	-23.367	-23.367	0	%100
9	TR1	SX	-53.971	-53.971	0	%100
10	TR2	SX	-53.971	-53.971	0	%100
11	TR3	SX	-53.971	-53.971	0	%100
12	TR4	SX	-53.971	-53.971	0	%100
13	H1	SX	-18.218	-18.218	0	%100
14	H2	SX	-18.218	-18.218	0	%100
15	MP3	SX	-18.201	-18.201	0	%100
16	MP1	SX	-18.201	-18.201	0	%100
17	MP2	SX	-18.201	-18.201	0	%100
18	T1	SX	-20.305	-20.305	0	%100
19	M29	SX	0	0	0	%100
20	M30	SX	0	0	0	%100
21	M33	SX	0	0	0	%100
22	M34	SX	0	0	0	%100
23	M35	SX	0	0	0	%100
24	M36	SX	0	0	0	%100
25	M25	SX	0	0	0	%100
26	M26	SX	0	0	0	%100



: Infinigy Engineering, PLLC : PSM

Company : Infinigy Engineer
Designer : PSM
Job Number : 1197-F0001-C
Model Name : BOBOS00884A

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Member Area Loads

Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
		No I	Data to Print			, , ,

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

	Member	Shape	Code Check	Loc[in]	LC	She	.Loc[in]	Dir	LC	phi*P	phi*P	.phi*M	phi*Mn z-z [lb.	Cb Eqn
1	TR7	0.63" SR	.430	39.811	27	.025	19.905		85	4409	1402	147.2	147.295	2 H1-1a
2	S4	1.9" ODx0.1	.417	35.333	30	.159	42.4		28	2049	2777	1314	1314.45	1 H1-1b
3	S3	1.9" ODx0.1	.397	35.333	31	.160	42.4		30	2049	2777	1314	1314.45	1 H1-1b
4	TR4	0.63" SR	.311	39.811	87	.038	19.905		30	4409	.1402	147.2	147.295	2 H1-1a
5	S2	1.9" ODx0.1	.299	35.333	85	.117	42.4		84	2049	2777	1314	1314.45	1 H1-1b
6	S1	1.9" ODx0.1	.287	35.333	81	.118	42.4		87	2049	2777	1314	1314.45	1.83H1-1b
7	MP1	2.88"x0.120"	.279	33	2	.076	33		2	2249	43056	3156	3156.75	3 H1-1b
8	TR8	0.63" SR	.178	0	32	.025	19.905		81	2249	.1402	147.2	147.295	2 H1-1b
9	H1	PIPE 2.5	.162	77	8	.091	78		2	3348	66654	4726.5	4726.5	1 H1-1b
10	TR5	0.63" SR	.160	28.3	27	.034	0		95	5162	.1402	147.2	147.295	2 H1-1b
11	TR2	0.63" SR	.139	0	32	.035	0		95	5162	.1402	147.2	147.295	2 H1-1b
12	TR3	0.63" SR	.122	0	81	.037	19.905		36	2249	.1402	147.2	147.295	2 H1-1b
13	MP3	2.88"x0.120"	.109	33	81	.022	61		87	2249	43056	3156	3156.75	4 H1-1b
14	H2	PIPE 2.5	.090	93	96	.048	78		94	3348	66654	4726.5	4726.5	2 H1-1b
15	MP2	2.88"x0.120"	.089	33	8	.039	33		93	2249	43056	3156	3156.75	4 H1-1b
16	T1	Pipe2.38X0	.082	0	7	.005	96.255		36	1328	3527	2114	2114.85	1 H1-1
17	TR6	0.63" SR	.078	0	93	.016	28.3		98	5162	1402	147.2	147.295	2 H1-1b
18	TR1	0.63" SR	.054	28.3	77	.015	0		98	5162	.1402	147.2	147.295	2 H1-1b



Bolt Calculation Tool, V1.5.1

Boit Calculation 1001, VI.5.1							
PROJECT DATA							
Site Name:	BOBOS00884A						
Site Number:	BOBOS00884A						
Connection Description:	Sector Frame to Tower Leg						

MAXIMUM BOLT LOADS								
Bolt Tension: 1276.35 lbs								
Bolt Shear:	875.84	lbs						

WORST CASE BOLT LOADS ¹									
Bolt Tension: 802.81 lbs									
Bolt Shear:	Bolt Shear: 875.84 lbs								

WORST CASE CONNECTION SLIP LOADS ²								
Sliding Force: 869.44 lbs								
Torsion About Leg:	0.00	lbs-ft						

BOLT PROPERTIES					
Bolt Type:	Threaded Rod	-			
Bolt Diameter:	0.625	in			
Bolt Grade:	A449	-			
# of Threaded Rods:	2	-			
Leg Diameter:	3.75	in			
Threads Excluded?	No	-			

¹ Worst case bolt loads correspond to Load combination #96 on member M25 in RISA-3D, which causes the maximum demand on the bolts.

Member Information

I nodes of M25, M26

BOLT CHECK		
Tensile Strength	20340.15	
Shear Strength	13805.83	
Max Tensile Usage	6.3%	
Max Shear Usage	6.3%	
Interaction Check (Worst Case)	0.01	≤1.05
Result	Pass	

SLIP CHECK (WORST CASE	E)	
Torsional Slip Resistance	933.10	
Sliding Resistance	5971.83	
Torsional Slip Usage	0.0%	
Sliding Usage	14.6%	
Interaction Check	0.02	≤1.05
Result	Pass	



² Worst Case slip loads correspond to Load combination #32 on member M25 in RISA 3D, which causes the maximum slip demand on the connection.





POWER DENSITY STUDY



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

Dish Wireless Existing Facility

Site ID: BOBOS00884A

BOBOS00884A

118C Wintechog Hill Road, Off Rt. 2 North Stonington, Connecticut 06359

October 12, 2021

EBI Project Number: 6221003993

Site Compliance Summary			
Compliance Status:	COMPLIANT		
Site total MPE% of FCC general population allowable limit:	13.80%		



October 12, 2021

Dish Wireless

Emissions Analysis for Site: BOBOS00884A - BOBOS00884A

EBI Consulting was directed to analyze the proposed Dish Wireless facility located at I 18C Wintechog Hill Road, Off Rt. 2 in North Stonington, 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 (μ W/cm²). The number of μ W/cm² 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 (μ W/cm²). The general population exposure limits for the 600 MHz and 700 MHz frequency bands are approximately 400 μ W/cm² and 467 μ W/cm², respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 11 GHz frequency bands is 1000 μ W/cm². 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 118C Wintechog Hill Road, Off Rt. 2 in North Stonington, Connecticut using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since Dish Wireless is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 20 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was focused at the base of the tower. For this report, the sample point is the top of a 6-foot person standing at the base of the tower.

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

- 1) 4 n71 channels (600 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 2) 4 n70 channels (PCS Band 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.
- 3) 4 n66 channels (AWS Band 2190 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.
- 4) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 5) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 20 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used in this direction. This value is a very conservative



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

- 6) The antennas used in this modeling are the JMA MX08FRO665-21 for the 600 MHz / 1900 MHz / 2190 MHz channel(s) in Sector A, the JMA MX08FRO665-21 for the 600 MHz / 1900 MHz / 2190 MHz channel(s) in Sector B, the JMA MX08FRO665-21 for the 600 MHz / 1900 MHz / 2190 MHz channel(s) in Sector C. This is based on feedback from the carrier with regard to anticipated antenna selection. All Antenna gain values and associated transmit power levels are shown in the Site Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 20 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 7) The antenna mounting height centerline of the proposed antennas is 165 feet above ground level (AGL).
- 8) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.
- 9) All calculations were done with respect to uncontrolled / general population threshold limits.



Dish Wireless Site Inventory and Power Data

Sector:	Α	Sector:	В	Sector:	С
Antenna #:	I	Antenna #:	I	Antenna #:	1
Make / Model:	JMA MX08FRO665- 21	Make / Model:	JMA MX08FRO665- 21	Make / Model:	JMA MX08FRO665- 21
Frequency Bands:	600 MHz / 1900 MHz / 2190 MHz	Frequency Bands:	600 MHz / 1900 MHz / 2190 MHz	Frequency Bands:	600 MHz / 1900 MHz / 2190 MHz
Gain:	17.45 dBd / 22.65 dBd / 22.65 dBd	Gain:	17.45 dBd / 22.65 dBd / 22.65 dBd	Gain:	17.45 dBd / 22.65 dBd / 22.65 dBd
Height (AGL):	165 feet	Height (AGL):	165 feet	Height (AGL):	165 feet
Channel Count:	12	Channel Count:	12	Channel Count:	12
Total TX Power (W):	440 Watts	Total TX Power (W):	440 Watts	Total TX Power (W):	440 Watts
ERP (W):	5,236.31	ERP (W):	5,236.31	ERP (W):	5,236.31
Antenna A1 MPE %:	0.94%	Antenna B1 MPE %:	0.94%	Antenna C1 MPE %:	0.94%

Site Composite MPE %					
Carrier	MPE %				
Dish Wireless (Max at Sector A):	0.94%				
AT&T	3.36%				
Metro PCS	0.22%				
T-Mobile	1.24%				
Sprint	0.8%				
State Police	0.67%				
Mobile Comm	0.33%				
PageNet	0.11%				
Destineer	0.09%				
TSR Paging	0.1%				
Air Touch	3.46%				
Nextel	0.14				
FM Broadcast	1.97				
PageMart	0.38				
Site Total MPE % :	13.80%				

Dish Wireless MPE % Per Sector					
Dish Wireless Sector A Total:	0.94%				
Dish Wireless Sector B Total:	0.94%				
Dish Wireless Sector C Total:	0.94%				
Site Total MPE % :	13.80%				

Dish Wireless Maximum MPE Power Values (Sector A)							
Dish Wireless Frequency Band / Technology (Sector A)	# Channels	Watts ERP (Per Channel)	Height (feet)	otal Power Density (µW/cm²)	Frequency (MHz)	Allowable MPE (μW/cm²)	Calculated % MPE
Dish Wireless 600 MHz n71	4	223.68	165.0	1.27	600 MHz n71	400	0.32%
Dish Wireless 1900 MHz n70	4	542.70	165.0	3.09	1900 MHz n70	1000	0.31%
Dish Wireless 2190 MHz n66	4	542.70	165.0	3.09	2190 MHz n66	1000	0.31%
						Total:	0.94%

[•] 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:	0.94%
Sector B:	0.94%
Sector C:	0.94%
Dish Wireless Maximum MPE % (Sector A):	0.94%
Cia a Tarah	12.00%
Site Total:	13.80%
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **13.80**% 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.



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Receptionist/Front Desk

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Tracking number: 775150442951 **Ship Date:** Nov 8, 2021

Weight: 1.0 LB/0.45 KG

Recipient:

Timothy Brennan - Building Official, 40 Main Street NORTH STONINGTON, CT, US, 06359 Shipper:

Delivered To:

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Tracking number: 775150415340 **Ship Date:** Nov 8, 2021

Weight: 1.0 LB/0.45 KG

Recipient:
Michael A. Urgo - First Selectman,
40 Main Street
NORTH STONINGTON, CT, US, 06359

Shipper: Corey Milan, NB+C 100 Apollo Dr. Suite 303 CHELMSFORD, MA, US, 01824

Delivered To:

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