April 21, 2022

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

Re: Tower Share Application – Dish Site 13729958
Dish Wireless Telecommunications Facility @ 80 Great Hill Road, Seymour, CT 06483

Dear Ms. Bachman,

Dish Wireless ("Dish") is proposing a wireless telecommunications facility on an existing three hundred thirty five (335) foot guyed tall tower at 80 Great Hill Road, Seymour, CT 06483 (Latitude: 41.361967 Longitude: -73.113125) and within the existing fenced compound. The tower is owned and operated by American Tower Corporation. The subject property is owned by CABLE HOLDCO EXCHANGE III LLC.

Dish proposes to install a five (5) foot by seven (7) foot metal platform within the existing fenced compound and install three (3) antennas, three (3) antenna mounts, eight (8) RRUs, and cables on the existing tower at a one hundred twenty (120) feet as more particularly detailed and described on the enclosed Construction Drawings. The overall height of the existing tower will remain at 335 feet and no changes will be made to the compound dimensions.

The tower was approved in Docket Number 31 on November 5, 1982; a copy of the approval is enclosed.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies 16-50aa, of Dish's intent to share a telecommunications facility pursuant to R.C.S.A. 16-50j-88. In accordance with R.C.S.A §16-50j-73, a copy of this letter is being sent to the following individuals: American Tower Corporation as Tower Operator/Owner; CABLE HOLDCO EXCHANGE III LLC as Property Owner; the Honorable Annemarie Drugonis, as First Selectwoman of Seymour and Mike Marganski, the Seymour Zoning Enforcement Officer.

The applicant's proposal falls squarely within those activities explicitly provided for in R.C.S.A. §16-50j-89. Specifically:

1. The proposed modifications will NOT result in an increase in the height of the existing structure.
2. The proposed modifications will NOT require an extension of the site boundary.
3. The proposed modifications will NOT increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.

Jack Andrews, Zoning Manager 10130 Donleigh Drive, Columbia, MD 21046 (443) 677-0144
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4. The operation of the modified facility will NOT increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. Please see the RF emissions calculation for DISH's modified facility enclosed herewith.

5. The proposed modifications will NOT cause an ineligible change or alteration in the physical or environmental characteristics of the site.

6. The existing structure and its foundation can support the proposed loading. Please see the structural analysis enclosed herewith.

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

A. Technical Feasibility. The existing monopole has been deemed structurally capable of supporting Dish's proposed loading (see attached Structural Analysis).

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

C. Environmental Feasibility. The proposed shared use of this facility would have a minimal environmental impact. The installation of Dish equipment at the 120-foot level of the existing 335-foot tower will have an insignificant visual impact on the area around the tower. Dish ground equipment would be installed within the existing facility compound. The Dish shared use would therefore not cause any significant alteration in the physical or environmental characteristics of the existing site. Additionally, as evidenced by the attached EME study, the proposed antennas would not increase radio frequency emissions to a level at or above the Federal Communications Commission safety standard.

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

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

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For the foregoing reasons, Dish respectfully requests that the Council approve this request for the shared use of this tower located at 80 Great Hill Road, Seymour, CT 06483.

If you have any questions, please feel free to contact me.

Sincerely,

Jack Andrews
Zoning Manager, Centerline Communications
10130 Donleigh Drive
Columbia, MD 21046
443-677-0144

Enclosures:
Exhibit 1 – Letter of Authorization from tower owner
Exhibit 2 – Property Card and GIS
Exhibit 3 – Construction Drawings
Exhibit 4 – Structural Analysis Report
Exhibit 5 – Antenna Mount Analysis Report
Exhibit 6 – EME Study Report
Exhibit 7 – (4) Notice Confirmations

cc: American Tower Corporation - Tower Operator/Owner
CABLE HOLDCO EXCHANGE III LLC - Property Owner
The Honorable Annemarie Drugonis - First Selectwoman of Seymour
Mike Marganski - Seymour Zoning Enforcement Officer

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LETTER OF AUTHORIZATION

SITE NO: See Site List Below **SITE NAME: See Site List Below**

ADDRESS: See Site List Below

I, Margaret Robinson, Senior Counsel, US Tower Division on behalf of American Tower*, owner and/or operator of the tower facilities located at the addresses identified below (the "Tower Facilities"), do hereby authorize Centerline Communications, LLC ("Centerline"), its agents, successors and assigns, to act as American Tower's non-exclusive agent for the purpose of filing and securing any zoning, land-use, building permit and/or electrical permit application(s) and approvals of the applicable jurisdiction for and to conduct the construction of the installation of antennas and related telecommunications equipment owned and operated by DISH Network on the Tower Facilities located at the addresses identified below. This installation shall not affect adjoining lands and will occur only within the areas leased or owned by American Tower.

American Tower understands that the applications may be denied, modified or approved with conditions. The above authorization is limited to the acceptance by American Tower of conditions related to American Tower's installations. Any such conditions of approval or modifications will not be effective unless approved in writing by American Tower.

The above authorization does not permit Centerline to modify or alter any existing permit(s) and/or zoning or land-use conditions or impose any additional conditions unrelated to American Tower's installations of telecommunications equipment without the prior written approval of American Tower.

Site Authorized:

ATC PROJECT#	ATC SITE#	DISH SITE#	ADDRESS
13683503	302472	BOBDL00010A	104 Bunker Hill Road, Andover, Connecticut
13701209	302470	BOHVN00141A	401 Wakelee Ave, Ansonia, Connecticut
13702524	370641	BOHVN00148A	401-411 Lopus Road, Beacon Falls, Connecticut
13709244	88008	BOHVN00151A	9 Meyers Road, Bethany, Connecticut
13694329	283419	BOHVN00136A	123 Pine Orchard Road, Branford, Connecticut
13694332	283422	BOHVN00137A	171 Short Beach Road, Branford, Connecticut
13701211	302484	BOHVN00142A	405 Brushy Plain Rd, Branford, Connecticut
13709418	281862	BOHVN00200A	111 SECOND HILL RD, BRIDGEWATER, Connecticut
13733440	411216	BOBOS00893A	123 Palmer Road, Chaplin, Connecticut
13733449	208478	BOHVN00033A	1325 Cheshire Street, Cheshire, Connecticut
13694579	302496	BOBOS00887A	Chestnut Hill Road, Colchester, Connecticut
13694582	302465	BOBOS00890A	355 Route 85, Colchester, Connecticut
13733436	6270	BOBOS00031A	Rt 101 off Rt. 395 @1385 North Rd., Dayville, Connecticut
13702522	311305	BOHVN00147A	10 Tanner Marsh Road, Guilford, Connecticut
13733446	10029	BOBOS00894A	185 Fisk Road, Hampton, Connecticut
14046283	302466	BOBDL00079B	305 W. Service Rd., Hartford, Connecticut

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13746611	302503	BOBOS00068B	20 Mel Road, Jewett City, Connecticut
13702514	302540	BOHVN00146A	8 Old 79, Madison, Connecticut
OAA745087	411260	Middlefield CT	484 Meriden Rd., Middlefield, Connecticut
13698061	283564	BOHVN00139A	234 Melba Street, Milford, Connecticut
13702496	302516	BOHVN00144A	438 Bridgeport Ave, Milford, Connecticut
13693709	411182	BOHVN00005A	20 Antolini Road, New Hartford, Connecticut
13702509	302523	BOHVN00145A	4 Elkington Farm Rd, New Milford, Connecticut
13693659	283418	BOHVN00135A	50 Devine Street, North Haven, Connecticut
13694578	6260	BOBOS00884A	118C Wintechog Hill Rd., North Stonington, Connecticut
13693124	311014	BOBOS00023A	202 N Wawecus Hill Rd, Norwich, Connecticut
13726721	302532	BOBOS00022A	1337 Route 85, Oakdale, Connecticut
13693120	284984	BOBOS00021A	166 Pawcatuck Ave, Pawcatuck, Connecticut
13701212	302501	BOHVN00143A	297 North Street, Plymouth, Connecticut
13693135	411184	BOBOS00026A	399 West Road, SALEM, Connecticut
13729958	208205	BOHVN00035A	80 Great Hill Road, Seymour, Connecticut
13693705	411188	BOHVN00006A	111 Upper Fishrock Road, Southbury, Connecticut
13733433	415784	BOBOS00029A	165 Elmwood Hill Road, THOMPSON, Connecticut
13693127	370623	BOBOS00024A	139 Sharp Hill Road, Uncasville, Connecticut
13701206	302467	BOHVN00140A	90 North Plains Industrial Rd., Wallingford, Connecticut
13693131	411183	BOBOS00025A	53 Dayton Rd., Waterford, Connecticut
13693702	243036	BOHVN00132A	668 Jones Hill Road, West Haven, Connecticut
13729960	207941	BOHVN00036A	164 County Road, Wolcott, Connecticut
13702538	411180	BOHVN00150A	481 GOOD HILL ROAD, Woodbury, Connecticut
13733429	415439	BOBOS00027A	40 Sherman Road, Woodstock, Connecticut
13733431	415484	BOBOS00028A	445 Prospect St, Woodstock, Connecticut
13733434	418609	BOBOS00030A	87 West Quasset Road, Woodstock, Connecticut
13733438	6300	BOBOS00032A	156 Lebanon Hill Rd., Woodstock, Connecticut
13741553	283425	BOBOS00019A	350 Route 198, WOODSTOCK VALLEY, Connecticut
13743708	305310	BOPWM00004A	491 Court Street, Auburn, Maine
13743725	371976	BOPWM00007A	840 North River Rd, Auburn, Maine
13741457	371989	BOAUG00001A	627 Coldbrook Rd, BANGOR, Maine
13741460	416485	BOAUG00002A	237 Bomarc Rd, BANGOR, Maine
13735679	305311	BOBOS00433A	19 Little Harbor Road, Berwick, Maine
13746623	416552	BOPWM00012A	60 Andrews Road, Biddeford, Maine
13741463	305313	BOBOS00434A	71 Brixham Road, Eliot, Maine
13743702	10044	BOPWM00002A	26 Dorrington Drive, Freeport, Maine
13743704	281252	BOPWM00003A	71 Finn Parker Road, GORHAM, Maine

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13746621	371994	BOPWM00011A	4 Burnham Rd, Gorham, Maine
13746617	371990	BOPWM00009A	58 Buzzell Ln, Greene, Maine
13743722	371965	BOPWM00006A	67 Commercial Street, Lewiston, Maine
13746678	421397	BOPWM00013A	50 Potter Road, Lisbon, Maine
13743712	371964	BOPWM00005A	Pleasant Hill Rd, Sabattus, Maine
13738176	371992	BOBOS00777A	78 York Woods Rd, Rt 236, South Berwick, Maine
13743727	371978	BOPWM00008A	988 Roosevelt Trail, Windham, Maine
13746619	371993	BOPWM00010A	413 Roosevelt Tr, Windham, Maine
13734197	222167	BOBOS00393A	36 Knox trail, Acton, Massachusetts
13738223	371800	BOBOS00698A	107 South Main Street, Acushnet, Massachusetts
13738186	203692	BOBOS00788A	149 Haggets Pond Road, Andover, Massachusetts
13738208	371807	BOBOS00820A	165 South Main Street, ASSONET, Massachusetts
13728723	305010	BOBOS00387C	15 Washington Street, Attleboro, Massachusetts
13729951	92225	BOBOS00135A	55 Starkey Ave, Attleboro, Massachusetts
13729930	91563	BOBOS00133A	21 Parker Drive, Avon, Massachusetts
13738187	371838	BOBOS00791A	30 Shawsheen Ave, Bedford, Massachusetts
13734227	91567	BOBOS00612A	236 Maple Street, Bellingham, Massachusetts
13738231	88025	BOBOS00832A	39 Green Street, Berkley, Massachusetts
13746597	207264	BOBOS00281A	62R Anthony Street, Berkley, Massachusetts
13738152	283474	BOBOS00658A	347 Old Middlesex Turnpike, Billerica, Massachusetts
13734192	371816	BOBOS00616A	500 Morton Street, Boston, Massachusetts
13735268	305088	BOBOS00626A	22 Freeport Way, Boston, Massachusetts
13735650	262364	BOBOS00016A	53 C Pond Street, Boxford, Massachusetts
13729495	371820	BOBOS00004B	#26 Freemans Way Industrial Park, Brewster, Massachusetts
13735663	305054	BOBOS00111A	240 Burrill Avenue, Bridgewater, Massachusetts
13738201	414820	BOBOS00809A	434 Elm St., BRIDGEWATER, Massachusetts
13735259	371833	BOBOS00619A	1001 N Montello Street, Brockton, Massachusetts
13735275	371797	BOBOS00629A	500 Belmont Street, Brockton, Massachusetts
13735419	10008	BOBOS00646A	995 Belmont St., Brockton, Massachusetts
13738182	10342	BOBOS00670A	110 Mulberry Street, Brockton, Massachusetts
13738228	15456	BOBOS00389A	51 North Avenue, Burlington, Massachusetts
13746607	210761	BOBOS00139A	8 Springdale Avenue, Canton, Massachusetts
13734206	5870	BOBOS00395A	Off Montello Street, Carver, Massachusetts
13734212	15482	BOBOS00396A	31R Main Street, Carver, Massachusetts
13741598	10252	BOBOS00428A	31 J Hammond Road, Charlton, Massachusetts
13735290	371819	BOBOS00638A	7 Doris Drive, Chelmsford, Massachusetts
13759832	274893	BOBOS00636A	490 Stafford St., CHERRY VALLEY, Massachusetts

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13729557	412707	BOBOS00125A	40y Annursnac Hill Road, CONCORD, Massachusetts
13738190	240688	BOBOS00793A	323 Locust St, Danvers, Massachusetts
13735284	371805	BOBOS00631A	303 Broadway, Dracut, Massachusetts
13729926	5820	BOBOS00131A	32 Old County Road, East Wareham, Massachusetts
13734265	207267	BOBOS00282A	Upper Union Street, Franklin, Massachusetts
13735297	371782	BOBOS00644A	119 Dean Avenue, Franklin, Massachusetts
13735315	16228	BOBOS00649A	60 EARL'S WAY, Franklin, Massachusetts
13735654	10321	BOBOS00102A	16 Kondelin Rd, Gloucester, Massachusetts
13735670	305111	BOBOS00192B	400 Blackburn Drive, Gloucester, Massachusetts
13746594	210758	BOBOS00137A	434-438 Asbury Street, Hamilton, Massachusetts
13735658	283651	BOBOS00108A	263 Winter Street, Hanover, Massachusetts
13735666	371796	BOBOS00114A	171 Phillips Street, Hanson, Massachusetts
13741290	283476	BOBOS00615A	75 Willow Avenue, Haverhill, Massachusetts
13741718	283472	BOBOS01024A	1 Masys Way, Haverhill, Massachusetts
13743700	15659	BOBOS00903A	260 River Street, Jefferson, Massachusetts
13738229	305004	BOBOS00831A	23 Freetown Steet, Lakeville, Massachusetts
13735281	305117	BOBOS00630A	670 South Union Street, LAWRENCE, Massachusetts
13735286	371778	BOBOS00633A	576 Haverhill St, Lawrence, Massachusetts
13735709	210759	BOBOS00138A	280 New Lancaster Road, Leominster, Massachusetts
13743687	371808	BOBOS00853A	650 Willard Street, Leominster, Massachusetts
13735656	222165	BOBOS00105A	2005 Mass Ave, Lunenburg, Massachusetts
13734270	207263	BOBOS00283A	13 Mill Street, Marion, Massachusetts
13729921	412712	BOBOS00128A	860 BOSTON POST ROAD, Marlborough, Massachusetts
13738193	284981	BOBOS00806A	969 Ocean Street, Marshfield, Massachusetts
13746615	207266	BOBOS00284A	Holyoke Avenue, Marshfield, Massachusetts
13772780	202550	BOBOS01156C	0 Snow Road, Marshfield, Massachusetts
13735659	305027	BOBOS00109A	34 Topalian Street, Mattapan, Massachusetts
13734275	208176	BOBOS00285A	Summer Hill Road, Maynard, Massachusetts
13734201	16489	BOBOS00391A	31 BEDFORD ST, Middleboro, Massachusetts
13738205	305006	BOBOS00813A	164 Everett Street, Middleboro, Massachusetts
13735294	283071	BOBOS00641A	11 Natsue Way, MIDDLETON, Massachusetts
13735657	283070	BOBOS00107A	197 N. Main Street, MIDDLETON, Massachusetts
13743676	283767	BOBOS00842A	120 Highland Street, MILFORD, Massachusetts
13749484	91566	BOBOS00355B	111 Cedar Street, Milford, Massachusetts
13729925	412713	BOBOS00129A	25 Glenwood Street, Natick, Massachusetts
13734249	5762	BOBOS00614A	1555 Central Ave, Needham, Massachusetts
13735272	5860	BOBOS00628A	148 Penniman St., New Bedford, Massachusetts

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13737649	204458	BOBOS00651A	9 Eighth St, NEW BEDFORD, Massachusetts
13742882	305097	BOBOS00426A	127 R Duchaine Blvd., New Bedford, Massachusetts
13735652	1028	BOBOS00101A	1165 Chestnut Street, Newton, Massachusetts
13735266	305113	BOBOS00624A	20 Republic Road, North Billerica, Massachusetts
13742899	91886	BOBOS00758A	411 FAUNCE CORNER RD, North Dartmouth, Massachusetts
13738213	371810	BOBOS00829A	455 Somerset Avenue, North Dighton, Massachusetts
13741485	88027	BOBOS00833A	Maple Street, North Dighton, Massachusetts
13743644	91565	BOBOS00735A	38 Merriam District, North Oxford, Massachusetts
13735264	284980	BOBOS00620A	59 Davis Ave, Norwood, Massachusetts
13746603	207726	BOBOS00287A	15 Locust Road, Orleans, Massachusetts
13738197	15768	BOBOS00807A	171Mattakeesett Street, Pembroke, Massachusetts
13729507	371799	BOBOS00115A	75 Washington Street, Plainville, Massachusetts
13742871	10370	BOBOS00422A	50 Portside Drive, Pocasset, Massachusetts
13734236	10341	BOBOS00613A	106 Mazzeo Drive, Randolph, Massachusetts
13738200	305096	BOBOS00808A	1588 Broadway, Raynham, Massachusetts
13738203	10339	BOBOS00810A	678 Church Street, Raynham, Massachusetts
13738206	310959	BOBOS00817A	153 Cranberry Highway, Rochester, Massachusetts
13734282	207270	BOBOS00288A	320 Pleasant Street, Rockland, Massachusetts
13738199	305035	BOBOS00673A	488R Highland Avenue, Salem, Massachusetts
13742875	273378	BOBOS00423A	413 Rt 130, Sandwich, Massachusetts
13734198	10340	BOBOS00394A	1010 Chief Justice Cushing Highway, Scituate, Massachusetts
13741690	282810	BOBOS01155A	361 TILDEN RD, SCITUATE, Massachusetts
13729506	16459	BOBOS00103A	45 Vineyard Road, Seekonk, Massachusetts
13735664	207271	BOBOS00280A	212 Lake Street, Sherborn, Massachusetts
13738202	305051	BOBOS00674A	16 Kendall Avenue, Sherborn, Massachusetts
13735748	202086	BOBOS00659A	271 Spring Street, Shrewsbury, Massachusetts
13743636	91568	BOBOS00688A	800 Boston Turnpike, Shrewsbury, Massachusetts
13710032	371813	BOBOS00118A	3 Redemption Rock Trail, Sterling, Massachusetts
13741607	416056	BOBOS00866A	199 Raymond Rd., Sudbury, Massachusetts
13870803	371774	BOBOS00013D	142 North Road, Sudbury, Massachusetts
13743641	305009	BOBOS00733A	7 Kamaitas Road, Sutton, Massachusetts
13743672	305014	BOBOS00841A	194 Stone School Road, Sutton, Massachusetts
13742886	5830	BOBOS00427A	28 Dana Street, Taunton, Massachusetts
13729513	388560	BOBOS00122A	89 Progress Avenue, Tyngsboro, Massachusetts
13743680	305104	BOBOS00845A	87 Adams St., Upton, Massachusetts
13743669	305110	BOBOS00838A	70 Quaker Street, Uxbridge, Massachusetts
13734219	275069	BOBOS00601A	110 Bear Hill, Waltham, Massachusetts

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13737625	5810	BOBOS00816A	Thatcher Street, Wareham, Massachusetts
13743683	274897	BOBOS00851A	0 Century Drive, West Boylston, Massachusetts
13749477	305068	BOBOS00664B	225 Rivermoor St., West Roxbury, Massachusetts
13682009	283067	BOBDL00158A	1201 Westfield Street, WEST SPRINGFIELD, Massachusetts
13743698	9238	BOBOS00878A	972 Gilbert Road, West Warren, Massachusetts
13735736	305105	BOBOS00637A	25 Brigham Street, Westborough, Massachusetts
13743638	282319	BOBOS00690A	50 SMITH VALVE PKWY, WESTBOROUGH, Massachusetts
13734203	305034	BOBOS00392A	8 Nixon Rd., Westford, Massachusetts
13734284	274896	BOBOS00334B	19 Oak Street, Weston, Massachusetts
13735662	305041	BOBOS00110A	0 Nonesuch Road, Weston, Massachusetts
13742877	91559	BOBOS00425A	251 State Road, Westport, Massachusetts
13729511	371818	BOBOS00120A	611 Pleasant Street, Weymouth, Massachusetts
13735271	305028	BOBOS00627A	106 Finnell Dr., Weymouth, Massachusetts
13735303	282706	BOBOS00645A	10 Presidential Way, Woburn, Massachusetts
13772775	305060	BOBOS01068A	Green Street, Wrentham, Massachusetts
13741478	15136	BOBOS00443A	73 State Route 111, Atkinson, New Hampshire
13743271	91575	BOBOS00457A	437 Patten Hill Road, Candia, New Hampshire
13743029	306604	BOBOS00446A	359 Chester Street, Chester, New Hampshire
13743257	373098	BOBOS00449A	50 Town Dump Road, Chester, New Hampshire
13743267	88065	BOBOS00455A	674 Haverhill Road, Chester, New Hampshire
13743035	373099	BOBOS00450A	203 Haverhill Road, East Kingston, New Hampshire
13738226	91574	BOBOS00768A	49 Shirking Road, Epping, New Hampshire
13743263	373114	BOBOS00453A	7 CONTINENTAL DRIVE, Exeter, New Hampshire
13738179	373094	BOBOS00781A	789 Main Street, Fremont, New Hampshire
13743264	413027	BOBOS00454A	169 HAYDEN ROAD, HOLLIS, New Hampshire
13741480	15138	BOBOS00444A	36 Depot Road, Kingston, New Hampshire
13738183	273268	BOBOS00785A	242 New Derry Rd, Litchfield, New Hampshire
13738224	373116	BOBOS00705A	94 STONEHEDGE ROAD, Londonderry, New Hampshire
13743269	88069	BOBOS00456A	187A Pillsbury Road, Londonderry, New Hampshire
13738211	91571	BOBOS00683A	20 Daniel Webster Highway, Merrimack, New Hampshire
13741468	10304	BOBOS00441A	211 Ford Farm Road, Milton, New Hampshire
13743256	311757	BOBOS00448A	61 Old Coach Road, New Boston, New Hampshire
13743258	373101	BOBOS00451A	85 South Main Street, Newton, New Hampshire
13743031	311755	BOBOS00447A	34 Tower Hill Road, Pelham, New Hampshire
13741470	15134	BOBOS00442A	36 Cross Road, Rochester, New Hampshire
13743027	240696	BOBOS00445A	40 Jessie Doe Road, Rollinsford, New Hampshire
13743259	373102	BOBOS00452A	393 Main Street, Sandown, New Hampshire

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13714952	307060	SYSYR00023A	200 Irwin Road, Buffalo, New York
13767336	415364	SYSYR00507B	183 Saltonstall Street, Canandaigua, New York
13702046	373349	ALALB00011A	75 Van Dyke Road, Delmar, New York
13973540	392593	SYSYR00038A	571 Main Street, East Aurora, New York
13752077	413141	SYSYR00517B	91 Railroad Ave, Hamlin, New York
13713785	16467	SYSYR00015A	3181 Southwestern Blvd, Orchard Park, New York
13714492	414560	SYSYR00061A	4248 S. Taylor Road, Orchard Park, New York
13870807	91916	SYSYR00081A	County Route 6 and Fox Dr, Phoenix, New York
13712307	413140	SYSYR00407A	3830 Monroe Avenue, Pittsford, New York
13704766	91936	ALALB00020A	1245 Kings Road, SCHENECTADY, New York
OAA745429	280868	0190112-A	10790 Taylors Store Rd, Nashville, North Carolina
13741714	91582	BOBOS00881A	395 Woodville Road, Ashaway, Rhode Island
13738163	91983	BOBOS00662A	99 Tupelo Street, Bristol, Rhode Island
13743277	308765	BOBOS00586B	6 Minturn Farm Road, Bristol, Rhode Island
13742900	281265	BOBOS00899A	1380 Putnam Pike, CHEPACHET, Rhode Island
13735691	374117	BOBOS00522A	149 Laten Knight Road, Cranston, Rhode Island
13738222	374136	BOBOS00697A	1000 New London Avenue, Cranston, Rhode Island
13735296	374138	BOBOS00642A	500 Veterans Memorial Parkway, East Providence, Rhode Island
13738188	308768	BOBOS00672A	1 Dexter Road, East Providence, Rhode Island
13742895	1031	BOBOS00677A	2 Sunderland Road, Exeter, Rhode Island
13741622	374114	BOBOS00898A	2185 Putnam Pike, Glocester, Rhode Island
13743044	308772	BOBOS00519A	1677 Maple Valley Road, Greene, Rhode Island
13774131	91984	BOBOS00518B	2612 Victory Hwy, Harrisville, Rhode Island
13737644	91985	BOBOS00650A	74 Maria Ave., JOHNSTON, Rhode Island
13738150	273282	BOBOS00654A	32 Breakneck Hill Road, Lincoln, Rhode Island
13735720	6350	BOBOS00525A	1230 Chopmist Hill Rd. Rt. 102, North Scituate, Rhode Island
13743039	308766	BOBOS00517A	316 South Main St., Pascoag, Rhode Island
13738157	91581	BOBOS00661A	10 Dunnell Lane, Pawtucket, Rhode Island
13741493	91584	BOBOS00836A	205 Farnum Pike, Smithfield, Rhode Island
14049070	308759	BOBOS00587C	2935 Tower Hill Road, South Kingstown, Rhode Island
13738210	374137	BOBOS00828A	408 Stafford Road, Tiverton, Rhode Island
13738221	91986	BOBOS00696A	15 New Industrial Road, Warren, Rhode Island
13743273	308757	BOBOS00584B	289 Kilvert Street, Warwick, Rhode Island
13735687	374115	BOBOS00521A	244 Plain Road, West Greenwich, Rhode Island
13735723	91578	BOBOS00583A	830 Nooseneck Hill Road, West Greenwich, Rhode Island
13735700	374133	BOBOS00524A	226C Cowesett Avenue, West Warwick, Rhode Island
13735726	91579	BOBOS00585B	195 J.P. Murphy Highway, West Warwick, Rhode Island

AMERICAN TOWER®
CORPORATION

13742891	207962	BOBOS00552A	37 Laurel Avenue, Westerly, Rhode Island
13735695	374119	BOBOS00523A	9 New Kings Factory Road, Wood River Junction, Rhode Island

Signature: _____

Margaret Robinson, Senior Counsel
US Tower Division

NOTARY BLOCK

COMMONWEALTH OF MASSACHUSETTS
County of Middlesex

This instrument was acknowledged before me by Margaret Robinson, Senior Counsel of American Tower (owner and/or operator of the above referenced Tower Facilities), 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/she executed the same.

WITNESS my hand and official seal, this 24th day of March, 2022.

NOTARY SEAL

GERARD T. HEFFRON
Notary Public
Commonwealth of Massachusetts
My Commission Expires
August 9, 2024

Notary Public Gerard T. Heffron
My Commission Expires: August 9th, 2024

* American Tower as used herein is defined as American Tower Corporation and any of its affiliates or subsidiaries.

Town of Seymour, CT

Property Listing Report

Map Block Lot	4-04-46A-0	Building #	1	PID	1491	Account	034760

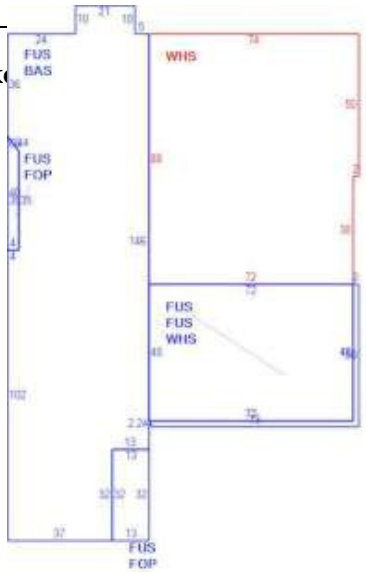
Property Information

Property Location	80 GREAT HILL RD
Owner	CABLE HOLDCO EXCHANGE III LLC
Co-Owner	ATTN: TAX DEPARTMENT
Mailing Address	ONE COMCAST CENTER PHILADELPHIA PA 19103
Land Use	3400 Office Bld
Land Class	C
Zoning Code	R-40
Census Tract	

Neighborhood	A
Acreage	4.22
Utilities	Well,Septic
Lot Setting/Desc	Below
Book / Page	399/820
Additional Info	

Photo

Sk



Primary Construction Details

Year Built	1985
Building Desc.	Office Bld
Building Style	Office Bldg
Building Grade	Average +20
Stories	2
Occupancy	2.00
Exterior Walls	Precast Panel
Exterior Walls 2	Pre-finsh Metl
Roof Style	Flat
Roof Cover	T+G/Rubber
Interior Walls	Drywall/Sheet
Interior Walls 2	Minim/Masonry
Interior Floors 1	Carpet
Interior Floors 2	Concr-Finished

Heating Fuel	Electric
Heating Type	Forced Air-Duc
AC Type	Heat Pump
Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Extra Fixtures	0
Total Rooms	
Bath Style	NA
Kitchen Style	NA
Rec Rm Area	NA
Rec Rm Quality	NA
Bsmt Gar	NA
Fireplaces	NA

(*Industrial / Commercial Details)

Building Use	Comm/Ind
Building Condition	G
Sprinkler %	NA
Heat / AC	Heat/AC Pkg
Frame Type	Steel
Baths / Plumbing	Average
Ceiling / Wall	Sus Ceil Wall
Rooms / Prtns	Average
Wall Height	9.00
First Floor Use	3400
Foundation	NA

Report Created On 4/14/2022

Town of Seymour, CT

Property Listing Report

Map Block Lot	4-04-46A-0	Building #	1	PID	1491	Account	034760

Valuation Summary

(Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	1315100	920570
Extras	110800	77560
Improvements		
Outbuildings	51500	36050
Land	145400	101780
Total	1622800	1135960

Outbuilding and Extra Features

Type	Description
Paving Asph.	53600 S.F.
Lights 1	6 UNITS
Lights 2	5 UNITS
Paving Conc.	120 S.F.
Fence 6 Ft	770 L.F.
Elevator, Freight	2 FLOORS
Mezzanine	992 S.F.

Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
First Floor	8544	8544
Porch, Open	566	0
Upper Story, Finished	12809	12809
Warehouse	9892	0
Total Area	31811	21353

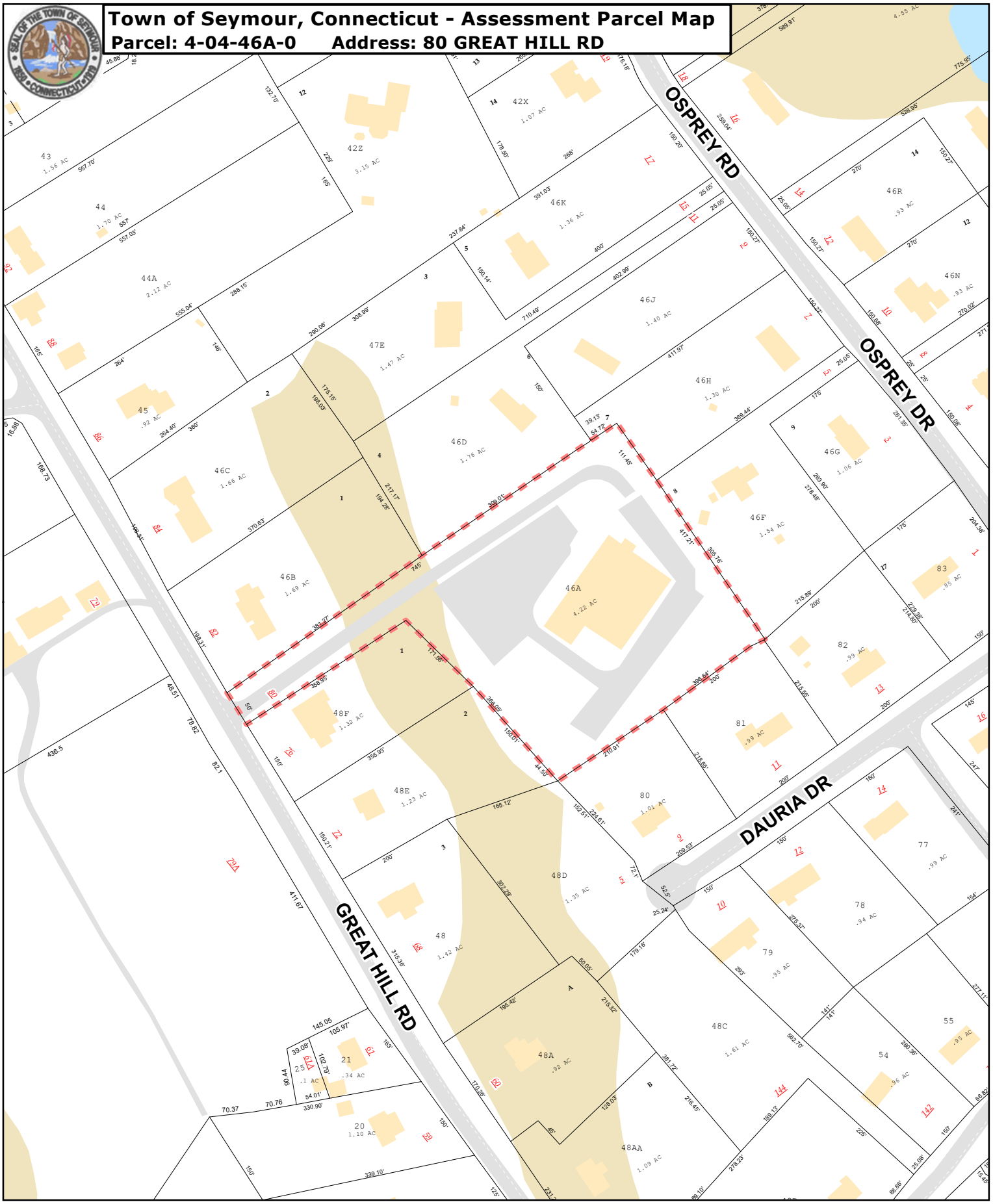
Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
CABLE HOLDCO EXCHANGE III LLC	399/820	2006-08-29	1281980
TELE-MEDIA COMPANY OF WESTERN	124/153		0

Report Created On 4/14/2022

Town of Seymour, Connecticut - Assessment Parcel Map

Parcel: 4-04-46A-0 Address: 80 GREAT HILL RD



Approximate Scale: 1 inch = 200 feet

0 125 250 375 Feet

Map Produced: November 2021

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

TOWN OF SEYMOUR CONNECTICUT
GEOGRAPHIC & PROPERTY INFORMATION NETWORK

1 FIRST STREET
SEYMOUR, CT 06483
203.888.2511
E-MAIL: GENERAL INFORMATION

GIS PARCEL MAPS UPDATED
October 1st Annually

PROPERTY INFO DATA UPDATED
Daily

CURRENT PARCEL COUNT
6,659 +/-

SUMMARY PARCEL INFORMATION & MAP DOCUMENTS

Detailed Parcel Information

Parcel No
4-04-46A-0

Unique ID
1491

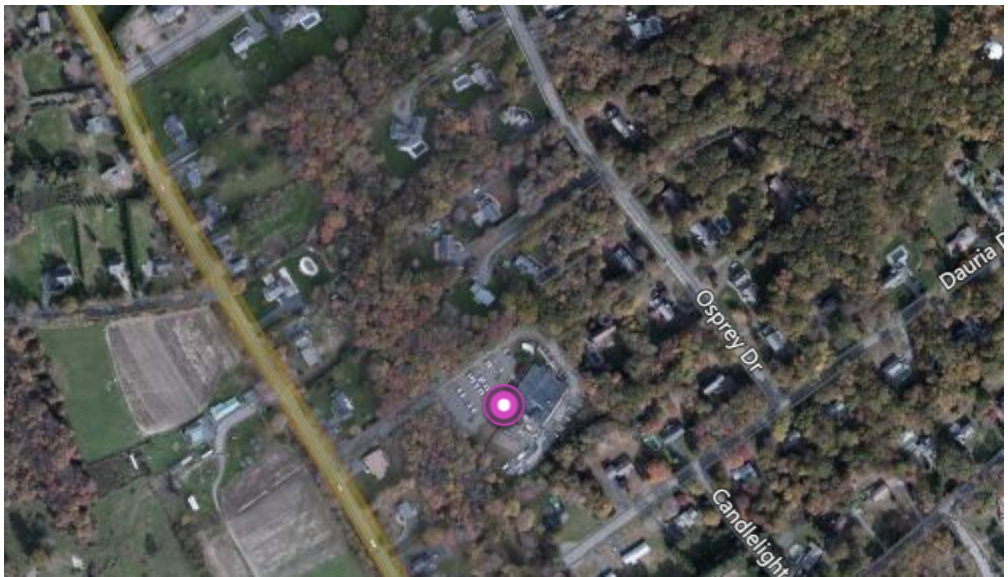
Account
034760

Owner
CABLE HOLDCO EXCHANGE III LLC

Location
80 GREAT HILL RD

MAILING ADDRESS
ONE COMCAST CENTER
PHILADELPHIA PA 19103

Scroll Down For Complete Property Detail



Click on the Bing logo to go to Big Map!

Parcel Documents

Create Parcel Map | Property Summary Card | 200 Scale Assessor Map

Interactive GIS Map of Property

GO TO VIRTUAL EARTH BIRDS EYE!

GO TO INTERACTIVE MAP!

PARCEL VALUATIONS

	Appraised Value	Assessed Value
Buildings	1315100	920570
Outbuildings	51500	36050
Improvements	1477400	1034180
Extra Features	110800	77560
Land	145400	101780
TOTAL:	1622800	1135960

PROPERTY INFORMATION

Land Acres	4.22
Land Use	Office Bld
Land Class	C
Zoning	R-40
Neighborhood	A
Lot Description	Below Street,Rolling
Lot Setting	
Lot Utilities	Well,Septic
Street Description	Paved

SALE INFORMATION

Sale Date	2006-08-29 00:00:00.0000000
Sale Price	1281980
Book / Page	399/820

BUILDING AREA

Total Living Area	21353

CONSTRUCTION DETAILS

Building Style	Office Bldg
Building Use	Comm/Ind
Building Condition	G
Number of Rooms	
Number of Bedrooms	0
Number of Bathrooms	0
Bathroom Style	NA
Kitchen Style	NA
Stories	2
Roof Style	Flat
Roof Cover	T+G/Rubber
Primary Exterior Wall Type	Precast Panel
Secondary Exterior Wall Type	Pre-finsh Metl
Primary Interior Wall Type	Drywall/Sheet
Secondary Interior Wall Type	Minim/Masonry
Primary Floor Type	Carpet
Secondary Floor Type	Concr-Finished
Heating Type	Forced Air-Duc
Heating Fuel	Electric
Air Conditioning Type	Heat Pump

Back | New Search | Town of Seymour

DOCKET NO. 31

AN APPLICATION OF VALLEY CABLE VISION, INCORPORATED, FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR A MODIFICATION TO ITS EXISTING CATV TOWER.	:	CONNECTICUT SITING COUNCIL
	:	November 5, 1982

FINDINGS OF FACT

1. Valley Cable Vision, Incorporated, (VCV) in accordance with the provisions of section 16-50j-70 et seq of the Regulations of State Agencies, applied to the Connecticut Siting Council on June 21, 1982, for a certificate of environmental compatibility and public need for the modification of its existing head-end facility on Great Hill Road, in Seymour, Connecticut. (Record)
2. The fee of $500.00 accompanied the application. (Record)
3. The application was accompanied by proof of service as required by section 16-501(b) of the general statutes of the state of Connecticut. (Record)
4. Affidavits of newspaper notices were filed as required by section 16-50e(f) of the General Statutes. (Record)
5. Council members and staff made a ground inspection of the proposed site on September 23, 1982. (Record)
6. Pursuant to section 16-50m of the General Statutes, the Connecticut Siting Council, after giving due notice thereof, held a public hearing at Center School, 100 Bank Street, Seymour, Connecticut, on September 23, 1982. (Record)
7. The parties to the proceedings are listed in the decision and order which accompanies these findings. (Record)
8. Limited appearances in favor of the application were filed by the Griffin Hospital in Derby, the Valley Regional Planning Agency,

WLNV FM Radio, and the First Selectman of the Town of Seymour. A limited appearance against the proposal was presented orally by Josephine Sypniewski. (Record; Tr. p. 183)

9. Pursuant to section 16-50j(f) of the General Statutes, written comments were filed by the Department of Transportation (DOT), Department of Economic Development (DED), and the Department of Environmental Protection (DEP). (Record)

10. The applicant is a regulated public service company, as defined in section 16-1 of the General Statutes, with a franchise issued under section 16-331 of the General Statutes to provide Cable Antenna Television (CATV) service in the towns of Seymour, Ansonia, Derby, Oxford, Beacon Falls, Bethany, Naugatuck, and Shelton. (VCV Exhibit 1, p. 2)

11. The applicant proposes to modify its existing head-end facility by building a new CATV tower 250 feet high, transferring the equipment on an existing tower to the new tower, and dismantling the existing 200 foot high tower. In addition, the applicant proposes to construct a building at the base of the new tower to house the electronic equipment associated with the facilities on the new tower and possibly install a new generator, and to relocate, and perhaps replace, three existing receive-only earth stations presently on the site. A six to eight-foot screened fence will surround the tower and earth station equipment. (VCV Exhibit 1, pp. 7,8, Exhibit E revised; VCV Exhibit 2, p. 3; Tr. pp. 56-57,114)

12. The proposed tower will be capable of supporting twenty-five various antennae for VCV, five various antennae for Bridgeways

Communications Corporation (Bridgeways), and five radio antennae for C-MED and Seymour Police and Fire Departments. (VCV 1, pp. 10-11; Tr. pp. 71, 132)

13. The replacement tower would support the following VCV equipment: six four-foot and two 10-foot parabolic UHF receive antennae; several two way mobile radio antennae; one high band and one low band VHF four-antenna array; one UHF/VHF search antenna; two log-periodic antennae; one eight-foot, and two ten-foot, microwave transmit antennae; and one five-foot microwave receive antenna. (VCV 1, pp. 10-11)

14. The tower would be able to support additional equipment. (VCV 1, pp. 10,11; Tr. pp. 71, 132)

15. The proposed tower would be three-faced and six feet wide; it would have two sets of guy wires and a pivot base resting on a concrete foundation. It will resist a wind load of 50 pounds per square foot, which will exceed the minimum design load recommended for this region. (VCV 1, p. 8; Tr. p. 96)

16. The proposed site is the VCV headquarters at 80 Great Hill Road in Seymour, Connecticut. The 4.14 acre parcel consists of the company's administrative offices, studio, tower, earth stations, head-end, and storage and parking areas. (VCV 1, pp. 2, 19,20, Exhibit E, revised Exhibit D)

17. An access road and utility service already exist. (VCV 1, p.11)

18. The proposed tower will be visible from the area surrounding the site. (VCV 1, p. 21; DEP comments, 9/23/82)

19. The additional height of the proposed tower will increase its visibility, especially in the Tomlinson Road area. (DEP comments,

9/23/82)

20. The existing tower is visible from various distant locations in the surrounding area. It is also visible from selected locations in the following nearby areas: Davis Road, Great Hill Road, Candlewood Lane, Dauria Drive, Tomlinson Road, and Laural Lane. (Tr. pp. 64-65)

21. The visual impact of the proposed tower will have the greatest effect on the residents immediately southeast of the site, who already have an unobstructed view of the tower, and those to the west along Tomlinson Road and Spindle Road. (DEP comments 9/23/82)

22. The triangular tower with a six foot face will have a cleaner appearance and a more uniform silhouette than the existing tower or a four-foot face tower with guying triangles and antenna mounts. (DEP comments 9/23/82; VCV 1, p. 9, F-1, F-2)

23. The land-use surrounding the site was open space and woods when the existing tower was erected. The surrounding land-use now is agricultural, residential, and light industrial. (VCV Exhibit 1, pp. 20,21; Tr. pp. 55,56)

24. The homes adjacent to the tower site located in Dauria Acres were built after the existing tower was built. (Tr. p. 142)

25. The applicant took an option on the existing tower site when the site was zoned for light industry. The site is now zoned R-40 residential which permits public utility structures with site plan approval. (VCV 1, p. 20; Tr. pp. 54,55)

26. The Seymour Planning and Zoning Commission is reviewing a site plan which deals with the building, shrubs, parking, lighting, and

sewage. (Tr. pp. 152-153)

27. Power densities associated with the VCV equipment only will be .0052 milliwatts per square centimeter or less at 500 feet from the tower base. (Tr. p. 105)

28. Radiation from the proposed tower would be substantially less than the World Health Organization standard of 1.0mw/cm^2, the American National Standards Institute standards of 1.0 mw/cm^2 between 300-1500 megahertz and 5.0 mw/cm^2 between 1500-100,000 megahertz, the Environmental Protection Agency proposed standard of 0.10 mw/cm^2, and the OSHA standard of 10.0 mw/cm^2. (VCV 1, p. 30)

29. The applicant is willing to consider joint use of the proposed tower for radio facilities now located on Tomlinson Road. (Tr. p. 59)

30. No special scenic, historical, or recreational characteristics have been identified in the vicinity of the site. (VCV 1, p. 21)

31. The applicant intends to surround its vehicle parking area, the storage area, and the tower or station structures with fencing, probably a chain link fence with screening, 6'-8' high. (Tr. pp. 108,115,116; VCV 1, p. 11)

32. An abutting owner expressed concern regarding radiation from the proposed tower, adverse effect on property values, and the possibility of the tower falling on his property. (Reshetar 1, pp. 1,2)

33. The Great Hill Area Civic Association is concerned about radiation emitted from the proposed facility and the possibility that the tower will fall and damage personal property in the adjacent area. The Civic Association believes the application should be denied.

(Great Hill Area Civic Association post-hearing correspondence 9/28/82, 10/19/82)

34. VCV's engineer, in 45 years of experience, has never seen or heard of a tower rated for a 50-pound wind load falling over completely. The Great Hill Civic Association commented that a tower fell straight over in a tornado in Windsor Locks, Connecticut, but tower specifications were not provided. (Tr. p. 96; Great Hills Civic Association, post-hearing correspondence)

35. VCV has discussed concerns with some neighbors and is willing to meet with others to address concerns. (Tr. pp. 115, 135)

36. A 250' tower would be required for Valley's proposed microwave interconnection with the Fairfield County cable system. The present 200' tower is inadequate for this purpose. (Tr. p. 43, VCV 1, p. 13)

37. A microwave link to area 9 from the existing tower would probably require two intermediate microwave relay stations, with construction of additional tower facilities. (VCV 1, p. 14)

38. Path studies were conducted to determine the best microwave interconnection with the area 9 franchise holder. The height needed to establish paths to several potential tower sites was determined to be 240 feet. VCV submitted preliminary path profile studies showing ample clearance to 100 foot or 200 foot towers at three possible sites. (VCV 1, p. 14, VCV 2, p. 4; VCV Exhibit 3; Tr. p. 43)

39. This interconnection could be implemented by the second or third quarter of 1983. (VCV 2, p. 4; Tr. p. 69)

40. An interconnection using cable instead of microwave would require a large number of amplifiers to maintain signal strength arranged in cascade. This amplifies not only the signal but the interference, resulting also in unacceptable picture quality. (Tr. p. 124)

41. A cable interconnection with Area 9 would be too long to be economically feasible, and the picture quality would be unacceptable. (Tr. p. 126)

42. In fifteen years of experience, the applicant has yet to see extension of cable for transmissions of cable TV pictures beyond 20-25 miles. (Tr. p. 126)

43. There are no alternatives better than microwave to minimize the number of towers or antennae needed to reach existing or proposed sites for VCV interconnections. (Tr. p. 60)

44. The VCV proposal does not include the microwave dish needed for the interconnection system. (Tr. p. 67)

45. Through the existing facility, Valley supplies other cable franchises in New Britain, Hartford, Meriden, and Manchester with New York T.V. off-the-air signals. (Tr. p. 60)

46. The existing statewide microwave interconnection system involves multiple connections with seven other CATV systems besides the applicant, who share programming by providing commercial insertion on two cable services carried by all those systems. (Tr. pp. 123-125, 66)

47. The microwave interconnection with other microwave sites in the system permits statewide distribution of live or taped local programming throughout the state, as evidenced by recent political

candidate debates televised from Seymour High School. (Tr. pp. 45-46)

48. VCV interconnection with the Fairfield County head-end will also allow viewers to receive the sports channel which carries major league sporting events from New York City. (Tr. p. 67, VCV 1, p. 14)

49. Relays from Groton are transmitted through the existing facility to New Milford. (Tr. p. 60)

50. It is expected that other cable systems around the state will also be interconnected until the entire state is interconnected from any point. (Tr. p. 67)

51. VCV has no plans in the immediate future for adding channels to its service other than those obtained from the Fairfield County interconnections. (Tr. p. 50)

52. Because their head-end is located in the center of the franchise area, VCV is able to serve all of the area with trunk cable. (Tr. p. 125)

53. Service to VCV subscribers would be improved by the increased elevation of the antennae which are oriented toward the World Trade Center in New York City. (Tr. pp. 45,47; Valley 1, p. 14)

54. The 6-foot face tower would allow elimination of some of the hardware located on the existing tower, particularly star mounts used for placement of microwave dishes. The design would allow more space for future equipment and sharing of the facility. (Tr. pp. 43-44, 71; VCV 1, p. 14)

55. The existing 3-foot face tower is fully loaded. There is no climbing space inside it for workmen to service the antennae, and

safety is a concern to VCV. The wider face tower would allow climbing inside, which is considered safer. (Tr. pp. 44, 141)

56. The proposal could allow a consolidation of telecommunication uses on a single tower, thereby achieving both environmental and financial savings. (VCV 1, p. 2, Tr. pp. 94-95)

57. VCV has received complaints regarding the quality of its service or reception, which the taller tower would serve to improve. (Tr. pp. 46-47)

58. Service would be interrupted when the old tower antennae are dismantled and reassembled on the new tower. This interruption will occur on one channel at a time and only for a matter of hours for each. To avoid this, off air reception from New York channels could be provided via an alternative antenna similar to a homeowner's broad band antenna, which would cause only momentary interruptions of service with some reduced quality. (Tr. pp. 50-51)

59. A plan to disassemble the old tower, pour a new foundation, and erect a new tower was rejected as economically unfeasible because this would put the facility off the air for a period of time, and other users would be unable to obtain the VCV signals. (Tr. p. 121)

60. CATV operation on the new tower could commence 136 days following Siting Council approval. (VCV 1, p. 24)

61. Designs for an alternate tower with a 4-foot face were submitted, but the 6-foot face is preferable for environmental, safety, and operational considerations. (VCV 1, p. 9)

62. VCV is agreeable to using a 3-guy support system instead of the

proposed 2-guy system if the Council so ordered. Engineering design would not be a problem. (Tr. p. 45)

63. The relocation of the earth station dishes would be necessary to accomodate the construction of a new building facility on the site. (Tr. p. 147)

64. VCV is considering either relocating its three earth station satellite reception dishes or consolidating the three into a single reception antenna if the signal quality is acceptable. (Tr. p. 56)

65. If the three existing earth dishes are consolidated into one unit, it would be rectangular in shape and larger than any one existing dish; it would be approximately 28' by 10' to 15'. The three existing earth dishes would be dismantled and removed. (Tr. p. 148)

66. The rectangular earth antenna could independently track several satellites. (Tr. p. 150)

67. The cost of the tower, guys, and anchors is estimated at $75,000. Various towers prices range from $50,000 to $80,000. (Tr. pp. 49, 122)

68. The delivered cost of the new tower, with construction, guy work, foundation, site preparation, transfer of equipment from the old tower the new tower, and dismantling of the old tower would total $124,350. (Tr. p. 53; VCV 1, p. 16)

69. The cost of the tower could be financed by advance rental fees from Bridgeways so that VCV would not need to invest capital. VCV would own the tower. (Tr. 48, 122)

70. VCV has negotiated with Bridgeways regarding possible advance

rental payments totaling $174,350 for leased space on the tower. (VCV 2, p. 4)

71. VCV would have to pay the cost of the new tower if the Bridgeways' proposal is not included. (Tr. pp. 49, 52; VCV 1, p. 16)

72. The cost of erecting separate towers for VCV and Bridgeways, excluding antennae, associated equipment, and land acquisition, would be approximately $265,000. A consolidated tower would cost approximately $124,000. (VCV 1, p. 16-17)

73. Two separate towers would not be erected on the same site. (Tr. p. 51)

74. All revenues generated by the tower expansion will be reported to the DPUC in VCV's annual report. (Tr. p. 122-123)

75. VCV has not conducted nor is it aware of any economic studies assessing impacts on the surrounding area that might be attributable to their facility such as changes in land values. (Tr. p. 48)

76. VCV has received only one letter from the public regarding the placement of a new tower on its site. (Tr. p. 46)

77. The Cable Television Advisory Council for VCV's franchise area supports the application for the proposed tower. (Tr. p. 26; Cable TV Advisory Council Exhibit 1, p. 2)

78. The Seymour Ambulance Corporation will be improved by placing their antenna on the proposed tower. (Tr. pp. 177-178)

79. The South Central Connecticut Regional Emergency Medical Communications System (CMED) supports the proposed application. (Tr. p. 175)

EBI Consulting

environmental | engineering | due diligence

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

Dish Wireless Existing Facility

Site ID: BOHVN00035A

BOHVN00035A
80 Great Hill Road
Seymour, Connecticut 06401

April 19, 2022

EBI Project Number: 6222002457

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general population allowable limit:	**3.31%**

EBI Consulting

environmental | engineering | due diligence

April 19, 2022

Dish Wireless

Emissions Analysis for Site: BOHVN00035A - BOHVN00035A

EBI Consulting was directed to analyze the proposed Dish Wireless facility located at **80 Great Hill Road** in **Seymour, Connecticut** for the purpose of determining whether the emissions from the Proposed Dish Wireless Antenna Installation located on this property are within specified federal limits.

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

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

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

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

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

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

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed Dish Wireless Wireless antenna facility located at 80 Great Hill Road in Seymour, 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 120 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.

EBI Consulting

environmental | engineering | due diligence

Dish Wireless Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	JMA MX08FRO665-21	Make / Model:	JMA MX08FRO665-21	Make / Model:	JMA MX08FRO665-21
Frequency Bands:	600 MHz / 1900 MHz / 2190 MHz	Frequency Bands:	600 MHz / 1900 MHz / 2190 MHz	Frequency Bands:	600 MHz / 1900 MHz / 2190 MHz
Gain:	17.45 dBd / 22.65 dBd / 22.65 dBd	Gain:	17.45 dBd / 22.65 dBd / 22.65 dBd	Gain:	17.45 dBd / 22.65 dBd / 22.65 dBd
Height (AGL):	120 feet	Height (AGL):	120 feet	Height (AGL):	120 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 %:	**1.82%**	Antenna B1 MPE %:	**1.82%**	Antenna C1 MPE %:	**1.82%**

Site Composite MPE %	
Carrier	**MPE %**
Dish Wireless (Max at Sector A):	1.82%
Bridgeways Cmcn - UHF Ant	0.96%
Bridgeways Cmcn - 2 way radio	0.04%
Valley Cable Vision - 2 way radio	0.48%
Microwave - 8" dia.	0%
Microwave - 10" dia.	0.01%
Microwave - "10" dia.	0%
Site Total MPE % :	3.31%

Dish Wireless MPE % Per Sector	
Dish Wireless Sector A Total:	1.82%
Dish Wireless Sector B Total:	1.82%
Dish Wireless Sector C Total:	1.82%
Site Total MPE % :	3.31%

Dish Wireless Maximum MPE Power Values (Sector A)

Dish Wireless Frequency Band / Technology (Sector A)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density (μW/cm²)	Frequency (MHz)	Allowable MPE (μW/cm²)	Calculated % MPE
Dish Wireless 600 MHz n71	4	223.68	120.0	2.48	600 MHz n71	400	0.62%
Dish Wireless 1900 MHz n70	4	542.70	120.0	6.01	1900 MHz n70	1000	0.60%
Dish Wireless 2190 MHz n66	4	542.70	120.0	6.01	2190 MHz n66	1000	0.60%
						Total:	**1.82%**

• 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:	1.82%
Sector B:	1.82%
Sector C:	1.82%
Dish Wireless Maximum MPE % (Sector A):	1.82%
Site Total:	3.31%
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **3.31%** 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.

MOUNT ANALYSIS REPORT

February 8, 2022

Dish Wireless Site Name	BOHVN00035A
Dish Wireless Site Number	BOHVN00035A
Infinigy Job Number	1197-F0001-B
Client	ATC
Carrier	Dish Wireless
Site Location	80 Great Hill Road Seymour, CT 06483 New Haven County 41.361967° N NAD83 -73.113125° W NAD83
Structure Type	Guyed Tower
Structure Height	335.0 ft
Mount Type	8.0 ft Sector Frame
Mount Elevation	120.0 ft AGL
Structural Usage Ratio	**41.2%**
Overall Result	**Pass**

The enclosed structural analysis has been performed in accordance with the 2018 Connecticut State Building Code based on an ultimate 3-second gust wind speed of 122 mph. The evaluation criteria and applicable standards are presented in the next section of this report.

Luis Mendoza, P.E.
structural@infinigy.com
CT P.E. License Number: PEN.0035574

CONTENTS

1. INTRODUCTION

Infinigy performed a structural analysis on the Dish Wireless proposed telecommunication equipment supporting Sector Frame 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	122 mph (3-Second Gust)
Wind Speed w/ ice	50 mph (3-Second Gust) w/ 2.0" ice
Adopted Code	2015 IBC / 2018 Connecticut State Building Code
Standard(s)	TIA-222-H
Risk Category	II
Exposure Category	C
Topographic Factor	1.0
Seismic Spectral Response	S_s = 0.196 g / S_1 = 0.064 g
Live Load Wind Speed	300 mph
Man Live Load at Mid/End Points	250 lbs
Man Live Load at Mount Pipes	500 lbs
Ground Elevation (HMSL)	621.5 ft

3. PROPOSED LOADING CONFIGURATION - 120.0 ft. AGL Sector Frame

Centerline (ft)	Qty.	Appurtenance Manufacturers	Appurtenance Models
120.0	3	JMA Wireless	MX08FRO665-21
	3	Fujitsu	TAO8025-B604
	3	Fujitsu	TAO8025-B605
	1	Raycap	RDIDC-9181-PF-48

4. SUPPORTING DOCUMENTATION

Construction Drawings	American Tower Corporation, Site Number: BOHVN00035A, dated February 2, 2022
Mount Manufacturer Drawings	Commscope, Part Number: MTC3975083, dated March 17, 2021

5. RESULTS

Components	Capacity	Pass/Fail
Standoff(s)	40.2%	Pass
Horizontal(s)	11.5%	Pass
Brace(s)	41.2%	Pass
Tieback(s)	12.0%	Pass
Pipe Mount(s)	17.0%	Pass
Connection(s)	19.6%	Pass
RATING =	**41.2%**	**Pass**

Notes:

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

6. RECOMMENDATIONS

Infinigy recommends installing Dish Wireless's proposed equipment loading configuration on the Sector Frame at 120.0 ft. The installation shall be performed in accordance with the construction documents issued for this site.

If you have any questions, require additional information, or believe the actual conditions differ from those detailed in this report, please contact us immediately.

Matt Gall, E.I.T.
Project Engineer II | **INFINIGY**

7. ASSUMPTIONS

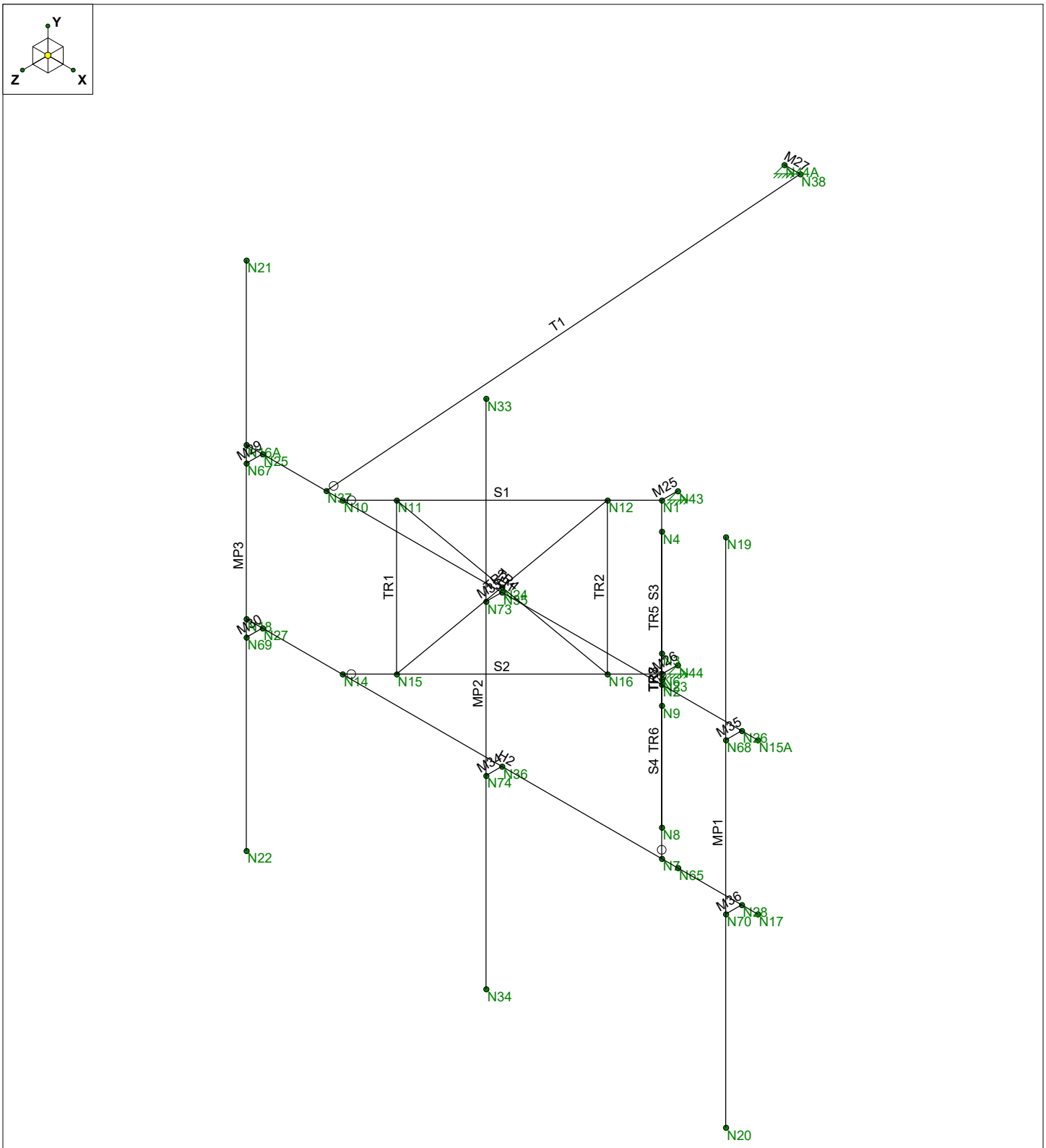
The antenna mounting system was properly fabricated, installed and maintained in accordance with its original design and manufacturer's specifications.
The configuration of antennas, mounts, and other appurtenances are as specified in the proposed loading configuration table.
All member connections are 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 HSS (Circular) — ASTM A500-B GR 42 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.

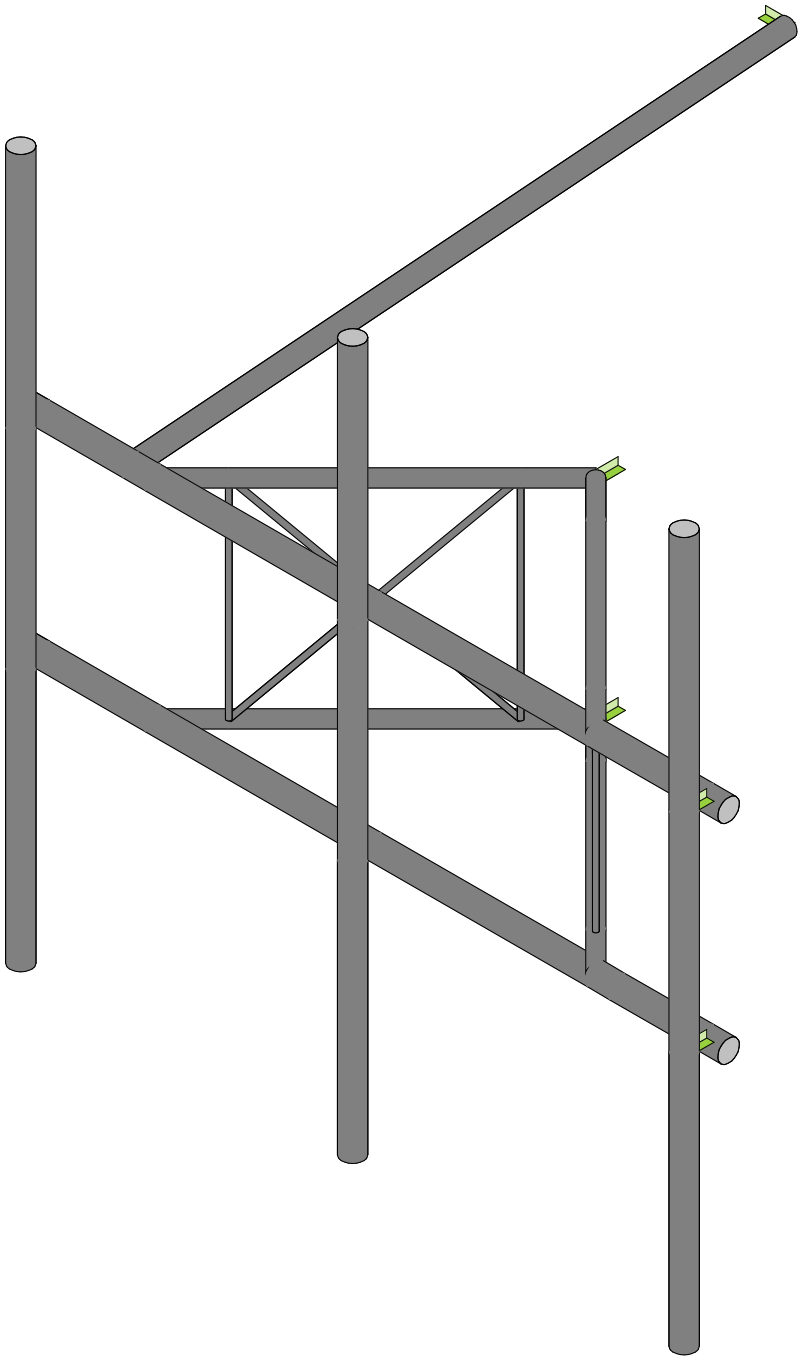
Our evaluation is completed using industry standard methods and procedures. The structural results, conclusions and recommendations contained in this report are proprietary and should not be used by others as their own. Infinigy is not responsible for decisions made by others that are or are not based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



Envelope Only Solution

Infinigy Engineering, PLLC	BOHVN00035A	Wireframe Model
Matt Gall, E.I.T.		Feb 8, 2022 at 11:17 AM
1197-F0001-B		BOHVN00035A_loaded.r3d



Envelope Only Solution

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Matt Gall, E.I.T.		Feb 8, 2022 at 11:18 AM
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Program Inputs

PROJECT INFORMATION	
Client:	ATC
Carrier:	Dish Wireless
Engineer:	Matthew Gall

SITE INFORMATION		
Risk Category:	II	
Exposure Category:	C	
Topo Factor Procedure:	Method 1, Category 1	
Site Class:	D - Stiff Soil (Assumed)	
Ground Elevation:	621.51	ft *Rev H

MOUNT INFORMATION		
Mount Type:	Sector Frame	
Num Sectors:	3	
Centerline AGL:	120.00	ft
Tower Height AGL:	335.00	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):	0.978	*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}):	122	mph
Design Wind (V):	N/A	mph
Ice Wind (V_{ice}):	50	mph
Base Ice Thickness (t_i):	2	in
Flat Pressure:	93.093	psf
Round Pressure:	55.856	psf
Ice Wind Pressure:	9.382	psf

SEISMIC DATA		
Short-Period Accel. (S_s):	0.196	g
1-Second Accel. (S_1):	0.064	g
Short-Period Design (S_{DS}):	0.209	
1-Second Design (S_{D1}):	0.102	
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	

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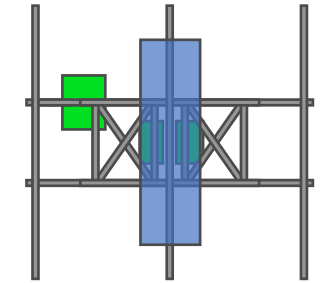
FROM ZERO TO INFINIGY
the solutions are endless

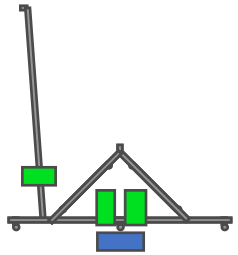
Infinigy Load Calculator V2.1.7

Program Inputs

ELEVATION VIEW



PLAN VIEW



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FROM ZERO TO INFINIGY
the solutions are endless

Infinigy Load Calculator V2.1.7

APPURTENANCE INFORMATION

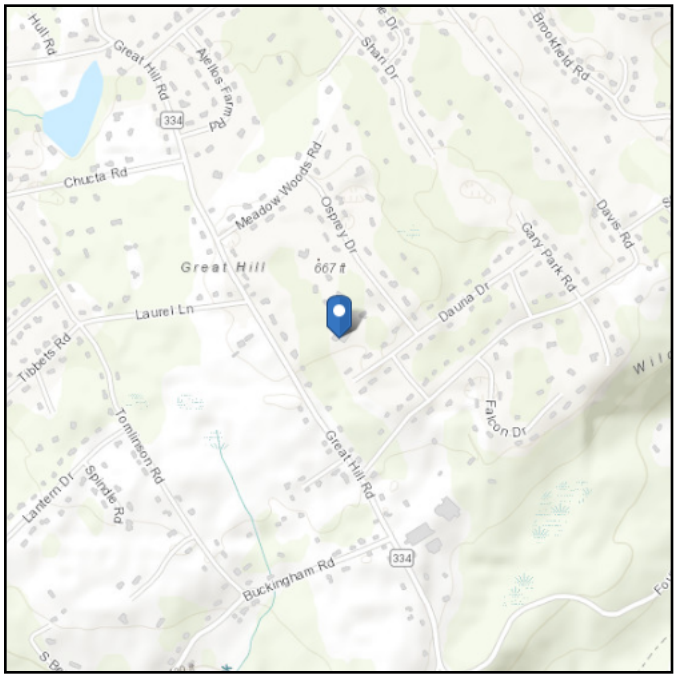
Appurtenance Name	Elevation	Qty.	K_a	q_z (psf)	EPA_N (ft^2)	EPA_T (ft^2)	Wind F_z (lbs)	Wind F_x (lbs)	Weight (lbs)	Seismic F (lbs)	Member (α sector)
JMA WIRELESS MX08FRO665-21	120.0	3	0.90	46.55	12.49	5.87	523.18	245.76	82.50	25.87	MP2
FUJITSU TA08025-B604	120.0	3	0.90	46.55	1.95	0.97	81.66	40.57	63.90	20.04	MP2
FUJITSU TA08025-B605	120.0	3	0.90	46.55	1.95	1.12	81.66	46.81	74.95	23.50	MP2
RAYCAP RDIDC-9181-PF-48	120.0	1	0.90	46.55	2.28	1.29	95.35	54.00	21.82	6.84	S1

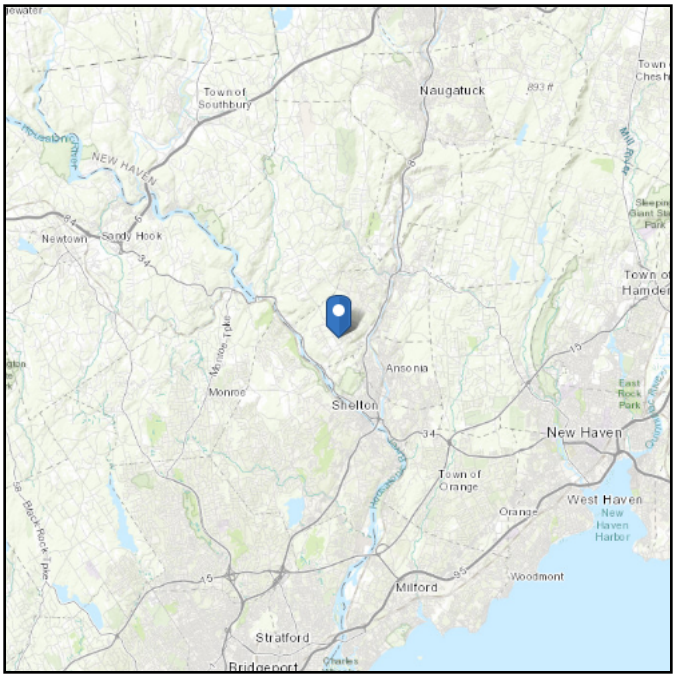
ASCE 7 Hazards Report

Address:
No Address at This Location

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

Elevation: 621.51 ft (NAVD 88)
Latitude: 41.361967
Longitude: -73.113125





Wind

Results:

Wind Speed	122 Vmph
10-year MRI	76 Vmph
25-year MRI	86 Vmph
50-year MRI	92 Vmph
100-year MRI	99 Vmph

Data Source: ASCE/SEI 7-10, Fig. 26.5-1A and Figs. CC-1–CC-4, and Section 26.5.2, incorporating errata of March 12, 2014

Date Accessed: Tue Feb 08 2022

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-10 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.

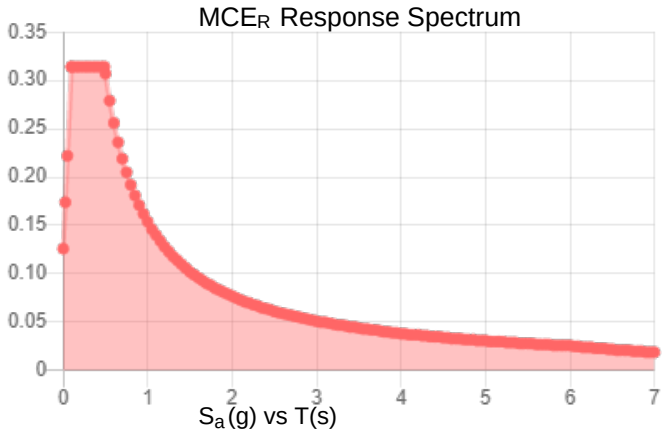
Seismic

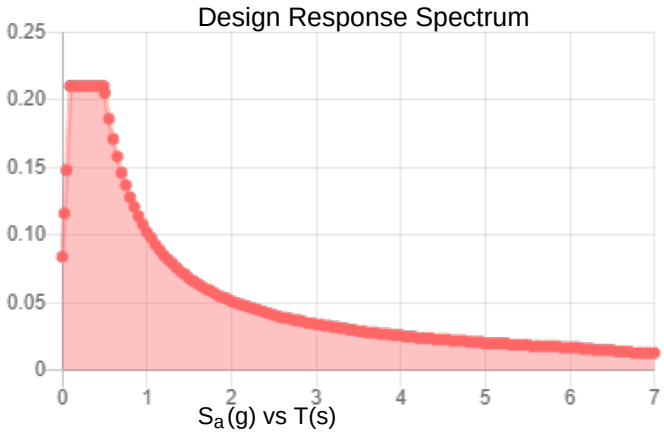
Site Soil Class: D - Stiff Soil

Results:

S_S :	0.196	S_{DS} :	0.21
S_1 :	0.064	S_{D1} :	0.102
F_a :	1.6	T_L :	6
F_v :	2.4	PGA :	0.104
S_{MS} :	0.314	PGA_M :	0.166
S_{M1} :	0.154	F_{PGA} :	1.592
		I_e :	1

Seismic Design Category B





Data Accessed: **Tue Feb 08 2022**

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:	1.00 in.
Concurrent Temperature:	15 F
Gust Speed	50 mph
Data Source:	Standard ASCE/SEI 7-10, Figs. 10-2 through 10-8
Date Accessed:	Tue Feb 08 2022

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

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 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.

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(de...	Section/Shape	Type	Design List	Material	Design Rul...
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 Verti...	None	None	A529 Gr.50	Typical
4	TR5	N4	N9			Standoff Verti...	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 Verti...	None	None	A529 Gr.50	Typical
10	TR2	N12	N16			Standoff Verti...	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 Horizon...	Beam	Pipe	A500 Gr.46	Typical
14	H2	N18	N17			Face Horizon...	Beam	Pipe	A500 Gr.46	Typical
15	MP3	N21	N22			Mount Pipe	Column	Pipe	A500 Gr.46	Typical
16	MP1	N19	N20			Mount Pipe	Column	Pipe	A500 Gr.46	Typical
17	MP2	N33	N34			Mount Pipe	Column	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
27	M27	N44A	N38			RIGID	None	None	RIGID	Typical

Material Takeoff

	Material	Size	Pieces	Length[in]	Weight[LB]
1	General				
2	RIGID		9	27	0
3	Total General		9	27	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

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distribu...	Area(M...	Surface...
1	Self Weight	DL		-1			5			
2	Wind Load AZI 0	WLZ					10			
3	Wind Load AZI 30	None					10			
4	Wind Load AZI 60	None					10			

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distribu...	Area(M...	Surface...
5	Wind Load AZI 90	WLX					10			
6	Wind Load AZI 120	None					10			
7	Wind Load AZI 150	None					10			
8	Wind Load AZI 180	None					10			
9	Wind Load AZI 210	None					10			
10	Wind Load AZI 240	None					10			
11	Wind Load AZI 270	None					10			
12	Wind Load AZI 300	None					10			
13	Wind Load AZI 330	None					10			
14	Distr. Wind Load Z	WLZ						27		
15	Distr. Wind Load X	WLX						27		
16	Ice Weight	OL1					5	27		
17	Ice Wind Load AZI 0	OL2					10			
18	Ice Wind Load AZI 30	None					10			
19	Ice Wind Load AZI 60	None					10			
20	Ice Wind Load AZI 90	OL3					10			
21	Ice Wind Load AZI 120	None					10			
22	Ice Wind Load AZI 150	None					10			
23	Ice Wind Load AZI 180	None					10			
24	Ice Wind Load AZI 210	None					10			
25	Ice Wind Load AZI 240	None					10			
26	Ice Wind Load AZI 270	None					10			
27	Ice Wind Load AZI 300	None					10			
28	Ice Wind Load AZI 330	None					10			
29	Distr. Ice Wind Load Z	OL2						27		
30	Distr. Ice Wind Load X	OL3						27		
31	Seismic Load Z	ELZ			-.314		5			
32	Seismic Load X	ELX	-.314				5			
33	Service Live Loads	LL				1				
34	Maintenance Load 1	LL				1				
35	Maintenance Load 2	LL				1				
36	Maintenance Load 3	LL				1				

Load Combinations

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

Load Combinations (Continued)

	Description	S...	P...	Del...	SRSS	BLC	Fa...	BLC	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
16	0.9DL + 1WL AZI 60	Y...	Y			1	.9	4	1	14	.5	15	.866												
17	0.9DL + 1WL AZI 90	Y...	Y			1	.9	5	1	14		15	1												
18	0.9DL + 1WL AZI 120	Y...	Y			1	.9	6	1	14	-.5	15	.866												
19	0.9DL + 1WL AZI 150	Y...	Y			1	.9	7	1	14	-.8...	15	.5												
20	0.9DL + 1WL AZI 180	Y...	Y			1	.9	8	1	14	-1	15													
21	0.9DL + 1WL AZI 210	Y...	Y			1	.9	9	1	14	-.8...	15	-.5												
22	0.9DL + 1WL AZI 240	Y...	Y			1	.9	10	1	14	-.5	15	-.8...												
23	0.9DL + 1WL AZI 270	Y...	Y			1	.9	11	1	14		15	-1												
24	0.9DL + 1WL AZI 300	Y...	Y			1	.9	12	1	14	.5	15	-.8...												
25	0.9DL + 1WL AZI 330	Y...	Y			1	.9	13	1	14	.866	15	-.5												
26	1.2D + 1.0Di	Y...	Y			1	1.2	16	1																
27	1.2D + 1.0Di +1.0Wi ...	Y...	Y			1	1.2	16	1	17	1	29	1	30											
28	1.2D + 1.0Di +1.0Wi ...	Y...	Y			1	1.2	16	1	18	1	29	.866	30	.5										
29	1.2D + 1.0Di +1.0Wi ...	Y...	Y			1	1.2	16	1	19	1	29	.5	30	.866										
30	1.2D + 1.0Di +1.0Wi ...	Y...	Y			1	1.2	16	1	20	1	29		30	1										
31	1.2D + 1.0Di +1.0Wi ...	Y...	Y			1	1.2	16	1	21	1	29	-.5	30	.866										
32	1.2D + 1.0Di +1.0Wi ...	Y...	Y			1	1.2	16	1	22	1	29	-.8...	30	.5										
33	1.2D + 1.0Di +1.0Wi ...	Y...	Y			1	1.2	16	1	23	1	29	-1	30											
34	1.2D + 1.0Di +1.0Wi ...	Y...	Y			1	1.2	16	1	24	1	29	-.8...	30	-.5										
35	1.2D + 1.0Di +1.0Wi ...	Y...	Y			1	1.2	16	1	25	1	29	-.5	30	-.8...										
36	1.2D + 1.0Di +1.0Wi ...	Y...	Y			1	1.2	16	1	26	1	29		30	-1										
37	1.2D + 1.0Di +1.0Wi ...	Y...	Y			1	1.2	16	1	27	1	29	.5	30	-.8...										
38	1.2D + 1.0Di +1.0Wi ...	Y...	Y			1	1.2	16	1	28	1	29	.866	30	-.5										
39	(1.2 + 0.2Sds)DL + 1...	Y...	Y			1	1....	31	1	32															
40	(1.2 + 0.2Sds)DL + 1...	Y...	Y			1	1....	31	.866	32	.5														
41	(1.2 + 0.2Sds)DL + 1...	Y...	Y			1	1....	31	.5	32	.866														
42	(1.2 + 0.2Sds)DL + 1...	Y...	Y			1	1....	31		32	1														
43	(1.2 + 0.2Sds)DL + 1...	Y...	Y			1	1....	31	-.5	32	.866														
44	(1.2 + 0.2Sds)DL + 1...	Y...	Y			1	1....	31	-.8...	32	.5														
45	(1.2 + 0.2Sds)DL + 1...	Y...	Y			1	1....	31	-1	32															
46	(1.2 + 0.2Sds)DL + 1...	Y...	Y			1	1....	31	-.8...	32	-.5														
47	(1.2 + 0.2Sds)DL + 1...	Y...	Y			1	1....	31	-.5	32	-.8...														
48	(1.2 + 0.2Sds)DL + 1...	Y...	Y			1	1....	31		32	-1														
49	(1.2 + 0.2Sds)DL + 1...	Y...	Y			1	1....	31	.5	32	-.8...														
50	(1.2 + 0.2Sds)DL + 1...	Y...	Y			1	1....	31	.866	32	-.5														
51	(0.9 - 0.2Sds)DL + 1....	Y...	Y			1	.858	31	1	32															
52	(0.9 - 0.2Sds)DL + 1....	Y...	Y			1	.858	31	.866	32	.5														
53	(0.9 - 0.2Sds)DL + 1....	Y...	Y			1	.858	31	.5	32	.866														
54	(0.9 - 0.2Sds)DL + 1....	Y...	Y			1	.858	31		32	1														
55	(0.9 - 0.2Sds)DL + 1....	Y...	Y			1	.858	31	-.5	32	.866														
56	(0.9 - 0.2Sds)DL + 1....	Y...	Y			1	.858	31	-.8...	32	.5														
57	(0.9 - 0.2Sds)DL + 1....	Y...	Y			1	.858	31	-1	32															
58	(0.9 - 0.2Sds)DL + 1....	Y...	Y			1	.858	31	-.8...	32	-.5														
59	(0.9 - 0.2Sds)DL + 1....	Y...	Y			1	.858	31	-.5	32	-.8...														
60	(0.9 - 0.2Sds)DL + 1....	Y...	Y			1	.858	31		32	-1														
61	(0.9 - 0.2Sds)DL + 1....	Y...	Y			1	.858	31	.5	32	-.8...														
62	(0.9 - 0.2Sds)DL + 1....	Y...	Y			1	.858	31	.866	32	-.5														
63	1.0DL + 1.5LL + 1.0S...	Y...	Y			1	1	2	.242	14	.242	15		33	1.5										
64	1.0DL + 1.5LL + 1.0S...	Y...	Y			1	1	3	.242	14	.209	15	.121	33	1.5										
65	1.0DL + 1.5LL + 1.0S...	Y...	Y			1	1	4	.242	14	.121	15	.209	33	1.5										
66	1.0DL + 1.5LL + 1.0S...	Y...	Y			1	1	5	.242	14		15	.242	33	1.5										
67	1.0DL + 1.5LL + 1.0S...	Y...	Y			1	1	6	.242	14	-.1...	15	.209	33	1.5										

Load Combinations (Continued)

	Description	S...	P	Del...	SRSS	BLC	Fa...	BLC	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
68	1.0DL + 1.5LL + 1.0S...	Y...		Y		1	1	7	.242	14	-.2...	15	.121	33	1.5										
69	1.0DL + 1.5LL + 1.0S...	Y...		Y		1	1	8	.242	14	-.2...	15		33	1.5										
70	1.0DL + 1.5LL + 1.0S...	Y...		Y		1	1	9	.242	14	-.2...	15	-.1...	33	1.5										
71	1.0DL + 1.5LL + 1.0S...	Y...		Y		1	1	10	.242	14	-.1...	15	-.2...	33	1.5										
72	1.0DL + 1.5LL + 1.0S...	Y...		Y		1	1	11	.242	14		15	-.2...	33	1.5										
73	1.0DL + 1.5LL + 1.0S...	Y...		Y		1	1	12	.242	14	.121	15	-.2...	33	1.5										
74	1.0DL + 1.5LL + 1.0S...	Y...		Y		1	1	13	.242	14	.209	15	-.1...	33	1.5										
75	1.2DL + 1.5LL	Y...		Y		1	1.2	33	1.5																
76	1.2DL + 1.5LM-MP1 ...	Y...		Y		1	1.2	34	1.5	2	.06	14	.06	15											
77	1.2DL + 1.5LM-MP1 ...	Y...		Y		1	1.2	34	1.5	3	.06	14	.052	15	.03										
78	1.2DL + 1.5LM-MP1 ...	Y...		Y		1	1.2	34	1.5	4	.06	14	.03	15	.052										
79	1.2DL + 1.5LM-MP1 ...	Y...		Y		1	1.2	34	1.5	5	.06	14		15	.06										
80	1.2DL + 1.5LM-MP1 ...	Y...		Y		1	1.2	34	1.5	6	.06	14	-.03	15	.052										
81	1.2DL + 1.5LM-MP1 ...	Y...		Y		1	1.2	34	1.5	7	.06	14	-.0...	15	.03										
82	1.2DL + 1.5LM-MP1 ...	Y...		Y		1	1.2	34	1.5	8	.06	14	-.06	15											
83	1.2DL + 1.5LM-MP1 ...	Y...		Y		1	1.2	34	1.5	9	.06	14	-.0...	15	-.03										
84	1.2DL + 1.5LM-MP1 ...	Y...		Y		1	1.2	34	1.5	10	.06	14	-.03	15	-.0...										
85	1.2DL + 1.5LM-MP1 ...	Y...		Y		1	1.2	34	1.5	11	.06	14		15	-.06										
86	1.2DL + 1.5LM-MP1 ...	Y...		Y		1	1.2	34	1.5	12	.06	14	.03	15	-.0...										
87	1.2DL + 1.5LM-MP1 ...	Y...		Y		1	1.2	34	1.5	13	.06	14	.052	15	-.03										
88	1.2DL + 1.5LM-MP2 ...	Y...		Y		1	1.2	35	1.5	2	.06	14	.06	15											
89	1.2DL + 1.5LM-MP2 ...	Y...		Y		1	1.2	35	1.5	3	.06	14	.052	15	.03										
90	1.2DL + 1.5LM-MP2 ...	Y...		Y		1	1.2	35	1.5	4	.06	14	.03	15	.052										
91	1.2DL + 1.5LM-MP2 ...	Y...		Y		1	1.2	35	1.5	5	.06	14		15	.06										
92	1.2DL + 1.5LM-MP2 ...	Y...		Y		1	1.2	35	1.5	6	.06	14	-.03	15	.052										
93	1.2DL + 1.5LM-MP2 ...	Y...		Y		1	1.2	35	1.5	7	.06	14	-.0...	15	.03										
94	1.2DL + 1.5LM-MP2 ...	Y...		Y		1	1.2	35	1.5	8	.06	14	-.06	15											
95	1.2DL + 1.5LM-MP2 ...	Y...		Y		1	1.2	35	1.5	9	.06	14	-.0...	15	-.03										
96	1.2DL + 1.5LM-MP2 ...	Y...		Y		1	1.2	35	1.5	10	.06	14	-.03	15	-.0...										
97	1.2DL + 1.5LM-MP2 ...	Y...		Y		1	1.2	35	1.5	11	.06	14		15	-.06										
98	1.2DL + 1.5LM-MP2 ...	Y...		Y		1	1.2	35	1.5	12	.06	14	.03	15	-.0...										
99	1.2DL + 1.5LM-MP2 ...	Y...		Y		1	1.2	35	1.5	13	.06	14	.052	15	-.03										
100	1.2DL + 1.5LM-MP3 ...	Y...		Y		1	1.2	36	1.5	2	.06	14	.06	15											
101	1.2DL + 1.5LM-MP3 ...	Y...		Y		1	1.2	36	1.5	3	.06	14	.052	15	.03										
102	1.2DL + 1.5LM-MP3 ...	Y...		Y		1	1.2	36	1.5	4	.06	14	.03	15	.052										
103	1.2DL + 1.5LM-MP3 ...	Y...		Y		1	1.2	36	1.5	5	.06	14		15	.06										
104	1.2DL + 1.5LM-MP3 ...	Y...		Y		1	1.2	36	1.5	6	.06	14	-.03	15	.052										
105	1.2DL + 1.5LM-MP3 ...	Y...		Y		1	1.2	36	1.5	7	.06	14	-.0...	15	.03										
106	1.2DL + 1.5LM-MP3 ...	Y...		Y		1	1.2	36	1.5	8	.06	14	-.06	15											
107	1.2DL + 1.5LM-MP3 ...	Y...		Y		1	1.2	36	1.5	9	.06	14	-.0...	15	-.03										
108	1.2DL + 1.5LM-MP3 ...	Y...		Y		1	1.2	36	1.5	10	.06	14	-.03	15	-.0...										
109	1.2DL + 1.5LM-MP3 ...	Y...		Y		1	1.2	36	1.5	11	.06	14		15	-.06										
110	1.2DL + 1.5LM-MP3 ...	Y...		Y		1	1.2	36	1.5	12	.06	14	.03	15	-.0...										

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N43	max	1243.025	79	1151.635	31	596.804	25	0	110	0	110	0	110
2		min	-1185.397	97	186.473	20	-2810.725	31	0	1	0	1	0	1
3	N44	max	1186.653	91	1125.094	38	2709.74	27	0	110	0	110	0	110
4		min	-1244.036	85	188.669	14	-214.807	20	0	1	0	1	0	1

Envelope Joint Reactions (Continued)

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
5	N44A	max	124.382	17	67.621	36	770.355	17	0	110	0	110	0	110
6		min	-124.79	23	9.928	54	-771.041	23	0	1	0	1	0	1
7	Totals:	max	913.391	5	2338.838	37	1467.713	2						
8		min	-913.391	23	425.117	59	-1467.713	20						

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

	Member	Shape	Code Check	Lo...	LC	She...	Loc[in]	...	LC	phi*P...	phi*P...	phi*...	phi*...	...	Eqn
1	TR4	0.63" SR	.412	39...	38	.043	19.905		30	4409...	1402...	147....	147....	...	H1-...
2	S2	1.9" O...	.402	35...	37	.176	42.4		37	2049...	2777...	1314...	1314...	...	H1-...
3	TR7	0.63" SR	.365	39...	89	.047	19.905		36	4409...	1402...	147....	147....	...	H1-...
4	S1	1.9" O...	.358	35...	35	.172	42.4		35	2049...	2777...	1314...	1314...	...	H1-...
5	S4	1.9" O...	.358	35...	90	.172	42.4		28	2049...	2777...	1314...	1314...	...	H1-...
6	S3	1.9" O...	.338	35...	92	.174	42.4		31	2049...	2777...	1314...	1314...	...	H1-...
7	TR2	0.63" SR	.216	0	33	.027	0		93	5162...	1402...	147....	147....	...	H1-...
8	TR5	0.63" SR	.212	28.3	27	.028	28.3		86	5162...	1402...	147....	147....	...	H1-...
9	TR3	0.63" SR	.191	0	34	.041	19.905		36	2249...	1402...	147....	147....	...	H1-...
10	TR8	0.63" SR	.176	0	32	.046	19.905		30	2249...	1402...	147....	147....	...	H1-...
11	MP2	2.88"x0...	.170	62	8	.034	33		84	2249...	43056	3156...	3156...	...	H1-...
12	T1	Pipe2.3...	.120	96...	17	.016	96.255		36	1328...	3527...	2114...	2114...	...	H1-...
13	H2	PIPE_2...	.115	48	30	.054	18		87	3348...	66654	4726.5	4726.5	...	H1-...
14	H1	PIPE_2...	.111	48	31	.056	15		10	3348...	66654	4726.5	4726.5	...	H1-...
15	MP3	2.88"x0...	.094	33	82	.026	61		85	2249...	43056	3156...	3156...	...	H1-...
16	MP1	2.88"x0...	.093	33	94	.026	33		96	2249...	43056	3156...	3156...	...	H1-...
17	TR1	0.63" SR	.074	28.3	27	.012	28.3		77	5162...	1402...	147....	147....	...	H1-...
18	TR6	0.63" SR	.073	28.3	28	.011	0		96	5162...	1402...	147....	147....	...	H1-...

INFINIGY

FROM ZERO TO INFINIGY

the solutions are endless

Bolt Calculation Tool, V1.5.1

PROJECT DATA	
Site Name:	BOHVN00035A
Site Number:	BOHVN00035A
Connection Description:	Sector Frame to Tower Leg

MAXIMUM BOLT LOADS		
Bolt Tension:	1405.36	lbs
Bolt Shear:	710.86	lbs

WORST CASE BOLT LOADS[1]		
Bolt Tension:	1405.36	lbs
Bolt Shear:	572.49	lbs

WORST CASE CONNECTION SLIP LOADS[2]		
Sliding Force:	1115.38	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:	5.563	in
Threads Excluded?	No	-

[1] *Worst case bolt loads correspond to Load combination #31 on member M25 in RISA-3D, which causes the maximum demand on the bolts.*

[2] *Worst Case slip loads correspond to Load combination #31 on member M25 in RISA 3D, which causes the maximum slip demand on the connection.*

Member Information
I nodes of M25, M26

BOLT CHECK		
Tensile Strength	20340.15	
Shear Strength	13805.83	
Max Tensile Usage	6.9%	
Max Shear Usage	5.1%	
Interaction Check (Worst Case)	0.01	***≤1.05***
Result	Pass	

SLIP CHECK (WORST CASE)		
Torsional Slip Resistance	1315.81	
Sliding Resistance	5676.67	
Torsional Slip Usage	0.0%	
Sliding Usage	19.6%	
Interaction Check	0.04	***≤1.05***
Result	Pass	

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Bolt Calculation Tool, V1.5.1

PROJECT DATA	
Site Name:	BOHVN00035A
Site Number:	BOHVN00035A
Connection Description:	Tieback to Tower Leg

MAXIMUM BOLT LOADS		
Bolt Tension:	62.40	lbs
Bolt Shear:	385.42	lbs

WORST CASE BOLT LOADS[1]		
Bolt Tension:	0.00	lbs
Bolt Shear:	385.42	lbs

WORST CASE CONNECTION SLIP LOADS[2]		
Sliding Force:	67.49	lbs
Torsion About Leg:	0.00	lbs-ft

BOLT PROPERTIES		
Bolt Type:	Threaded Rod	-
Bolt Diameter:	0.5	in
Bolt Grade:	A449	-
# of Threaded Rods:	2	-
Leg Diameter:	5.563	in
Threads Excluded?	No	-

[1] *Worst case bolt loads correspond to Load combination #5 on member M27 in RISA-3D, which causes the maximum demand on the bolts.*

[2] *Worst Case slip loads correspond to Load combination #36 on member M27 in RISA 3D, which causes the maximum slip demand on the connection.*

Member Information
I nodes of M27

BOLT CHECK		
Tensile Strength	12770.86	
Shear Strength	8835.73	
Max Tensile Usage*	0.5%	
Max Shear Usage*	4.4%	
Interaction Check (Worst Case)*	0.00	***≤1.0***
Result	Pass	

SLIP CHECK (WORST CASE)		
Torsional Slip Resistance	1085.67	
Sliding Resistance	4683.82	
Torsional Slip Usage*	0.0%	
Sliding Usage*	1.4%	
Interaction Check*	0.00	***≤1.0***
Result	Pass	

**Usage per TIA-222-H Section 15.5*

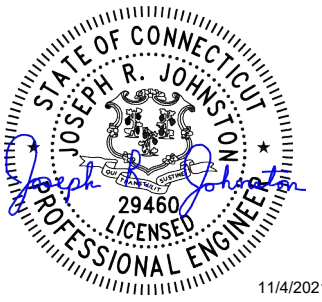
Structural Analysis Report

Structure	:	**250 ft Guyed Tower**
ATC Site Name	:	**Great Hill Road Seymour, CT**
ATC Site Number	:	**208205**
Engineering Number	:	**13729958_C3_03**
Proposed Carrier	:	**DISH WIRELESS L.L.C.**
Carrier Site Name	:	**BOHVN00035A**
Carrier Site Number	:	**BOHVN00035A**
Site Location	:	**80 Great Hill Road** **Seymour, CT 06483** **41.362, -73.1131**
County	:	**New Haven**
Date	:	**November 3, 2021**
Max Usage	:	**97%**
Result	:	**Pass**

Prepared By:

Tiffany Ta
Airosmith Engineering

Reviewed By:



11/4/2021

COA : PEC.0001553

Table of Contents

Introduction

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

Supporting Documents

Tower Drawings	Mapping by FDH Job #14663X1500, dated June 23, 2014 Mapping by Sructural Components Project 180338, dated May 29, 2018
Foundation Drawing	Mapping by FDH Project #146631500, dated June 23, 2014
Geotechnical Report	FDH Project #1466971600, dated June 23, 2014

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:	125 mph (3-second gust)**
Basic Wind Speed w/ Ice:	50 mph (3-second gust) w/ 1.00" radial ice concurrent**
Code:	ANSI/TIA-222-H / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	B
Risk Category:	II
Topographic Factor Procedure:	Method 1
Topographic Category:	1
Crest Height (H):	0 ft
Spectral Response:	Ss = 0.20, S_1 = 0.05
Site Class:	D - Stiff Soil - Default

****Wind load and Ice thickness have been reduced by applicable existing structure load modification factors in accordance with TIA-222-H, Annex S.**

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
240.0	1	Generic 12' Omni-Grid	Side Arm	(1) 7/8" Coax	COMCAST
231.0	1	Generic 5' Omni	Stand-Off	(1) 1 1/4" Coax (2) 7/8" Coax	
229.0	1	Generic 24" x 43" 1 Bay FM	Leg		
227.0	1	Generic 20' Omni	Side Arm		
217.0	1	Generic 20' Dipole	Side Arm	(1) 7/8" Coax	
	3	Commander 458-2N	Leg	(3) 7/8" Coax	NORTHWEST CT PUBLIC SAFETY COMMUNICATIONS CTR, INC
215.0	4	Generic 8' Yagi	Leg	(1) 1/2" Coax	COMCAST
210.0	1	Motorola PTP-600	Leg	(1) 0.24" (6mm) Cat 5	NORTHWEST CT PUBLIC SAFETY COMMUNICATIONS CTR, INC
209.0	1	Generic 4' Yagi	Leg	(1) 1/2" Coax	COMCAST
200.0	1	RFS 220-3AN	Stand-Off	(1) 7/8" Coax	TOWN OF SEYMOUR, CT
190.0	1	Generic Blank Exhibit	Leg	-	UTILITY COMMUNICATIONS
188.0	1	Generic 8' Yagi	Leg	(1) 1/2" Coax	COMCAST
182.0	1	Generic 12' Omni	Side Arm	(1) 1 1/4" Coax	ANTELOPE VALLEY TRANSIT AUTHORITY
180.0	1	Generic 5' Yagi	Leg	(1) 1 1/4" Coax (1) 3/8" Coax (1) 7/8" Coax	COMCAST
177.0	1	Generic 8' Dipole	Side Arm		
175.0	1	Generic 4' Grid Dish	Leg		
171.0	1	Generic 8' Omni	Side Arm		
170.0	1	Generic 10' Omni	Side Arm	(1) 7/8" Coax	C MED, LLC
167.0	4	Generic 8' Yagi	Leg	(1) 3/8" Coax	COMCAST
159.0	1	Generic 12' Omni	Side Arm	(3) 7/8" Coax	
155.0	1	Generic 15' Omni			
153.0	1	Generic 3' Yagi	Leg		
146.0	1	Generic 8' Omni	Leg	(1) 1 5/8" Coax (2) 7/8" Coax	
145.0	1	Generic 20' Dipole	Side Arm		
142.0	1	Generic 12' Omni			
130.0	-	-	-	(1) 7/8" Coax	
114.0	1	Generic 3' Yagi	Leg	(2) 1/2" Coax	
112.0	1	Generic 4' Grid Dish			
107.0	1	Generic 20' Dipole	Side Arm	(1) 7/8" Coax (3) 1/2" Coax	
106.0	1	Generic 4' Grid Dish	Leg		
102.0	1	Generic 8' Yagi			
101.0	1	Generic 8' Yagi			
91.0	1	Generic 24" x 43" 1 Bay FM	Leg	(1) 1/2" Coax (1) 3/8" Coax	
	1	Generic 4' Grid Dish			
84.0	1	Generic 6' Yagi	Leg	(1) 1/2" Coax	
80.0	1	Generic Blank Exhibit	Leg	(1) 7/8" Coax	GREATER NEW HAVEN TRANSIT
	1	Generic 74" x 12" Panel			
78.0	1	Generic 4' Grid Dish	Leg	(2) 1/2" Coax (1) 7/8" Coax	COMCAST
77.0	1	Generic 10' Omni	Side Arm		
73.0	1	Generic 24" x 43" 1 Bay FM	Leg		

Elev.[1] (ft)	Qty	Equipment	Mount Type	Lines	Carrier
67.0	1	Generic 1' Yagi	Leg	(1) 1/2" Coax	
62.0	4	Generic 8' Yagi	Leg	(1) 1/4" Coax	
38.0	1	Generic 3' Yagi	Leg	(3) 1/4" Coax (1) 3/8" Coax (2) 1/2" Coax	
34.0	1	Generic 5' Yagi			
31.0	2	Generic 2" x 4" GPS			
29.0	1	Generic 3' Yagi			
26.0	1	Generic 2" x 4" GPS			
24.0	1	Generic 3' Yagi			
18.0	1	Generic 3' Std. Dish	Leg	(1) 1/4" Coax	
13.0	1	Generic 2" x 4" GPS	Leg	(1) 3/8" Coax	

Equipment to be Removed

Elev.[1] (ft)	Qty	Equipment	Mount Type	Lines	Carrier
No loading was considered as removed as part of this analysis.					

Proposed Equipment

Elev.[1] (ft)	Qty	Equipment	Mount Type	Lines	Carrier
120.0	1	Raycap RDIDC-9181-PF-48	Sector Frame	(1) 1.60" (40.6mm) Hybrid	DISH WIRELESS L.L.C.
	3	Fujitsu TA08025-B605			
	3	Fujitsu TA08025-B604			
	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 lines on the tower face with the least amount of existing lines.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	46%	Pass
Diagonals	60%	Pass
Horizontals	53%	Pass
Guys	53%	Pass
Leg Bolts	17%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Base Axial (kips)	197.4	30%
Anchor 1 Uplift (kips)	51.2	49%
Anchor 1 Shear (kips)	60.2	97%

The structure base reactions resulting from this analysis were found to be acceptable through analysis based on geotechnical and foundation information, therefore no modification or reinforcement of the foundation will be required.

Deflection, Twist and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Twist (°)	Sway (Rotation) (°)
175.0	Generic 4' Grid Dish	COMCAST	0.079	0.012	0.049
125.0	Generic Dish Reserve	ATC Reserved	0.069	0.056	0.019
120.0	Fujitsu TA08025-B604	DISH WIRELESS L.L.C.	0.069	0.056	0.018
	Fujitsu TA08025-B605				
	JMA Wireless MX08FRO665-21				
	Raycap RDIDC-9181-PF-48				
112.0	Generic 4' Grid Dish	COMCAST	0.064	0.051	0.028
106.0	Generic 4' Grid Dish	COMCAST	0.062	0.056	0.029
91.0	Generic 4' Grid Dish	COMCAST	0.054	0.055	0.064
78.0	Generic 4' Grid Dish	COMCAST	0.054	0.065	0.012
18.0	Generic 3' Std. Dish	COMCAST	0.023	0.060	0.068

***Deflection, Twist and Sway was evaluated considering a design wind speed of 60 mph (3-Second Gust) per ANSI/TIA-222-H**

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.

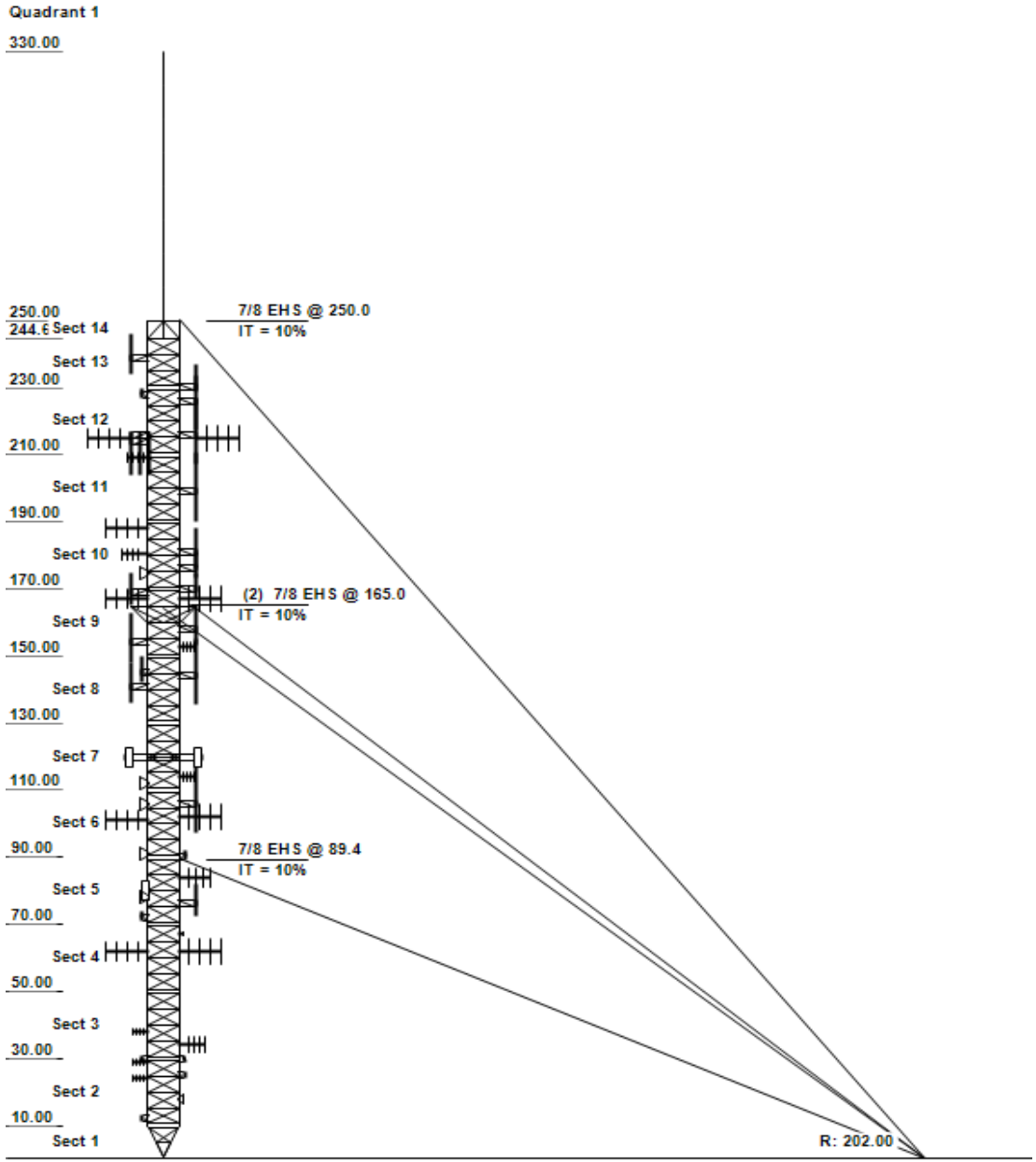
All assets of American Tower Corporation, its affiliates, and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with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

Asset:	208205, Great Hill Road Seymour	Height :	250 ft
Client	DISH WIRELESS L.L.C.	Base Width :	6 ft
Code:	ANSI/TIA-222-H	Shape :	Triangle



SITE PARAMETERS

Nominal Wind : 121.83 mph wind with no ic — Exposure : B — Site Class : D

Ice Wind: 48.73 mph wind with 0.850" — Topo Method: Method 1 — Risk Cat : II

Service Wind : 60 mph Serviceability — Topo Feature : — S_s : 0.202 — S_1 : 0.054

SECTION PROPERTIES

Section	Leg Members	Diagonal Members	Horizontal Members
1	SOL 50 ksi 3" SOLID	SAE 36 ksi 2.5X2.5X0.375	CHN 36 ksi C6 x 8.2
2 - 13	SOL 50 ksi 3" SOLID	SOL 36 ksi 3/4" SOLID	SAE 36 ksi 2.5X2.5X0.25
14	SOL 50 ksi 3" SOLID	DAE 36 ksi 2.5X2.5X0.375	CHN 36 ksi C12 x 20.7

REDUNDANT SECONDARY BRACING

Section	Sub Diag 1	Sub Horiz 1	Sub Diag 2	Sub Horiz 2	Sub Diag 3	Sub Horiz 3
1 - 14	-	-	-	-	-	-

DISCRETE APPURTENANCE

Elev (ft)	Type	Qty	Description
330.00	Other	1	Lightning Protection
330.00	Other	1	Beacon
310.00	Other	1	Top Pole
290.00	Other	1	Mount
290.00	Other	1	Hardline
270.00	Other	1	Base Pole
240.00	OMNI-GRID	1	Generic 12' Omni-Grid
240.00	Side Arm	1	Generic Round Side Arm
231.00	OMNI	1	Generic 5' Omni
231.00	Stand-Off	1	Generic Round Stand-Off
229.00	FM	1	Generic 24" x 43" 1 Bay FM
227.00	OMNI	1	Generic 20' Omni
227.00	Side Arm	1	Generic Round Side Arm
217.00	DIPOLE	1	Generic 20' Dipole
217.00	OMNI	3	Commander 458-2N
217.00	Side Arm	1	Generic Round Side Arm
215.00	T-Arm	1	Generic Round T-Arm
215.00	YAGI	4	Generic 8' Yagi
210.00	Radio/ODU	1	Motorola PTP-600
209.00	YAGI	1	Generic 4' Yagi
200.00	OMNI	1	RFS 220-3AN
200.00	Side Arm	1	Generic Round Side Arm
190.00	Other	1	Generic Blank Exhibit
188.00	YAGI	1	Generic 8' Yagi
182.00	OMNI	1	Generic 12' Omni
182.00	Side Arm	1	Generic Round Side Arm
180.00	YAGI	1	Generic 5' Yagi
177.00	DIPOLE	1	Generic 8' Dipole
177.00	Side Arm	1	Generic Round Side Arm
175.00	DISH-GRID	1	Generic 4' Grid Dish
171.00	OMNI	1	Generic 8' Omni
171.00	Side Arm	1	Generic Round Side Arm
170.00	OMNI	1	Generic 10' Omni
170.00	Side Arm	1	Generic Round Side Arm
167.00	YAGI	4	Generic 8' Yagi

JOB INFORMATION

Asset:	208205, Great Hill Road Seymour	Height :	250 ft
Client	DISH WIRELESS L.L.C.	Base Width :	6 ft
Code:	ANSI/TIA-222-H	Shape :	Triangle

DISCRETE APPURTENANCE

Elev (ft)	Type	Qty	Description
166.00	Torque Arm	1	Generic Torque Arm
159.00	OMNI	1	Generic 12' Omni
159.00	Side Arm	1	Generic Round Side Arm
155.00	OMNI	1	Generic 15' Omni
155.00	Side Arm	1	Generic Round Side Arm
153.00	YAGI	1	Generic 3' Yagi
146.00	OMNI	1	Generic 8' Omni
145.00	DIPOLE	1	Generic 20' Dipole
145.00	Side Arm	1	Generic Round Side Arm
142.00	OMNI	1	Generic 12' Omni
142.00	Side Arm	1	Generic Round Side Arm
120.00	BOB/SSB	1	Raycap RDIDC-9181-PF-48
120.00	PANEL	3	JMA Wireless MX08FRO665-21
120.00	RRU/RRH	3	Fujitsu TA08025-B604
120.00	RRU/RRH	3	Fujitsu TA08025-B605
120.00	Sector Frame	3	Generic Round Sector Frame
114.00	YAGI	1	Generic 3' Yagi
112.00	DISH-GRID	1	Generic 4' Grid Dish
107.00	DIPOLE	1	Generic 20' Dipole
107.00	Side Arm	1	Generic Round Side Arm
106.00	DISH-GRID	1	Generic 4' Grid Dish
102.00	YAGI	1	Generic 8' Yagi
101.00	YAGI	1	Generic 8' Yagi
91.00	DISH-GRID	1	Generic 4' Grid Dish
91.00	FM	1	Generic 24" x 43" 1 Bay FM
84.00	YAGI	1	Generic 6' Yagi
80.00	Other	1	Generic Blank Exhibit
80.00	PANEL	1	Generic 74" x 12" Panel
78.00	DISH-GRID	1	Generic 4' Grid Dish
77.00	OMNI	1	Generic 10' Omni
77.00	Side Arm	1	Generic Round Side Arm
73.00	FM	1	Generic 24" x 43" 1 Bay FM
67.00	YAGI	1	Generic 1' Yagi
62.00	YAGI	4	Generic 8' Yagi
38.00	YAGI	1	Generic 3' Yagi
34.00	YAGI	1	Generic 5' Yagi
31.00	GPS	2	Generic 2" x 4" GPS
29.00	YAGI	1	Generic 3' Yagi
26.00	GPS	1	Generic 2" x 4" GPS
24.00	YAGI	1	Generic 3' Yagi
18.00	DISH-STANDARD	1	Generic 3' Std. Dish
13.00	GPS	1	Generic 2" x 4" GPS

LINEAR APPURTENANCE

Elev (ft) From	To	Qty	Description
0.00	315.00	1	6 1/8" Hard Line
0.00	250.00	1	Climbing Ladder
0.00	240.00	1	7/8" Coax
0.00	231.00	1	1 1/4" Coax
0.00	229.00	1	7/8" Coax
0.00	227.00	1	7/8" Coax
0.00	217.00	4	7/8" Coax
0.00	215.00	1	1/2" Coax

JOB INFORMATION

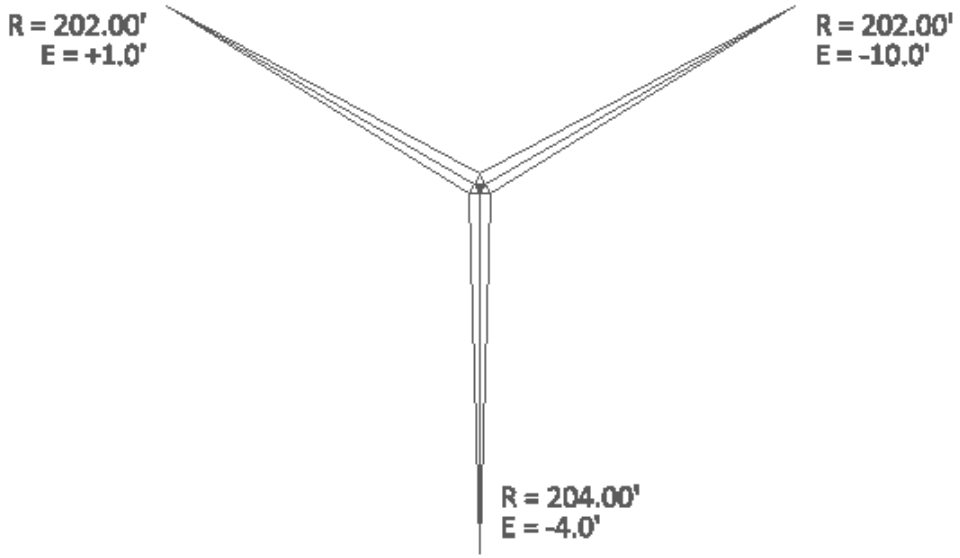
Asset:	208205, Great Hill Road Seymour	Height :	250 ft
Client	DISH WIRELESS L.L.C.	Base Width :	6 ft
Code:	ANSI/TIA-222-H	Shape :	Triangle

LINEAR APPURTENANCE

Elev (ft) From	To	Qty	Description
0.00	210.00	1	0.24" (6mm) Cat 5
0.00	209.00	1	1/2" Coax
0.00	200.00	1	7/8" Coax
0.00	188.00	1	1/2" Coax
0.00	182.00	1	1 1/4" Coax
0.00	177.00	1	1 1/4" Coax
0.00	175.00	1	3/8" Coax
0.00	171.00	1	7/8" Coax
0.00	170.00	1	7/8" Coax
0.00	167.00	1	3/8" Coax
0.00	165.00	1	Waveguide
0.00	159.00	1	7/8" Coax
0.00	155.00	1	7/8" Coax
0.00	153.00	1	7/8" Coax
0.00	146.00	1	1 5/8" Coax
0.00	145.00	1	7/8" Coax
0.00	142.00	1	7/8" Coax
0.00	130.00	1	7/8" Coax
0.00	120.00	1	1.60" (40.6mm) Hybrid
0.00	114.00	1	1/2" Coax
0.00	112.00	1	1/2" Coax
0.00	107.00	1	7/8" Coax
0.00	106.00	1	1/2" Coax
0.00	102.00	1	1/2" Coax
0.00	101.00	1	1/2" Coax
0.00	91.00	1	3/8" Coax
0.00	91.00	1	1/2" Coax
0.00	84.00	1	1/2" Coax
0.00	80.00	1	7/8" Coax
0.00	78.00	1	1/2" Coax
0.00	77.00	1	7/8" Coax
0.00	73.00	1	1/2" Coax
0.00	67.00	1	1/2" Coax
0.00	62.00	1	1/4" Coax
0.00	38.00	1	1/4" Coax
0.00	34.00	1	3/8" Coax
0.00	31.00	1	1/2" Coax
0.00	29.00	1	1/4" Coax
0.00	26.00	1	1/4" Coax
0.00	24.00	1	1/2" Coax
0.00	18.00	1	1/4" Coax
0.00	13.00	1	3/8" Coax

JOB INFORMATION

Asset:	208205, Great Hill Road Seymour	Height :	250 ft
Client	DISH WIRELESS L.L.C.	Base Width :	6 ft
Code:	ANSI/TIA-222-H	Shape :	Triangle



GUY ANCHOR DESIGN LOADS

Radius (ft)	Drop (ft)	Azimuth (o)	Uplift (kip)	Shear (kip)
202.00	-10.00	120	51.17	59.78
202.00	1.00	240	48.35	60.16
204.00	-4.00	0	49.11	59.93

GLOBAL BASE FOUNDATION DESIGN LOADS

Vertical (kip)	Horizontal (kip)
197.39	4.48

ANALYSIS PARAMETERS

Location:	New Haven County, CT	Height:	250 ft
Type and Shape:	Guyed, Triangle	Base Elevation:	0.00 ft
Manufacturer:	Undetermined	Bottom Face Width:	6.00 ft
Kd	0.85	Top Face Width:	6.00 ft
Ke:	0.98		

ICE & WIND PARAMETERS

Exposure Category:	B	Design Wind Speed Without Ice:	122 mph
Risk Category:	II	Design Wind Speed with Ice:	49 mph
Topographic Factor Procedure:	Method 1	Operational Windspeed:	60 mph
Topographic Category:	Flat	Design Ice Thickness:	0.85 in
Crest Height:	0 ft	HMSL:	620 ft

SEISMIC PARAMETERS

Analysis Method:	Equivalent Lateral Force Method				
Site Class:	D - Stiff Soil			Period Based on Rayleigh Method (sec):	1.80
T_L (sec):	6	P:	1.3	$C_{s:}$	0.030
$S_{s:}$	0.202	$S_{1:}$	0.054	$C_{s,}$ Max:	0.030
$F_{a:}$	1.600	$F_{v:}$	2.400	$C_{s,}$ Min:	0.030
$S_{ds:}$	0.215	S_{d1}:	0.086		

LOAD CASES

1.2D + 1.0W Normal	121.83 mph wind with no ice
1.2D + 1.0W 60°	121.83 mph wind with no ice
1.2D + 1.0W 90°	121.83 mph wind with no ice
1.2D + 1.0W 120°	121.83 mph wind with no ice
1.2D + 1.0W 180°	121.83 mph wind with no ice
1.2D + 1.0W 210°	121.83 mph wind with no ice
1.2D + 1.0W 240°	121.83 mph wind with no ice
1.2D + 1.0W 300°	121.83 mph wind with no ice
1.2D + 1.0W 330°	121.83 mph wind with no ice
1.2D + 1.0Di + 1.0Wi Normal	48.73 mph wind with 0.850" radial ice
1.2D + 1.0Di + 1.0Wi 60°	48.73 mph wind with 0.850" radial ice
1.2D + 1.0Di + 1.0Wi 90°	48.73 mph wind with 0.850" radial ice
1.2D + 1.0Di + 1.0Wi 120°	48.73 mph wind with 0.850" radial ice
1.2D + 1.0Di + 1.0Wi 180°	48.73 mph wind with 0.850" radial ice
1.2D + 1.0Di + 1.0Wi 210°	48.73 mph wind with 0.850" radial ice
1.2D + 1.0Di + 1.0Wi 240°	48.73 mph wind with 0.850" radial ice
1.2D + 1.0Di + 1.0Wi 300°	48.73 mph wind with 0.850" radial ice
1.2D + 1.0Di + 1.0Wi 330°	48.73 mph wind with 0.850" radial ice
1.2D + 1.0Ev + 1.0Eh Normal	Seismic
1.2D + 1.0Ev + 1.0Eh 60°	Seismic
1.2D + 1.0Ev + 1.0Eh 90°	Seismic
1.2D + 1.0Ev + 1.0Eh 120°	Seismic
1.2D + 1.0Ev + 1.0Eh 180°	Seismic
1.2D + 1.0Ev + 1.0Eh 210°	Seismic
1.2D + 1.0Ev + 1.0Eh 240°	Seismic
1.2D + 1.0Ev + 1.0Eh 300°	Seismic
1.2D + 1.0Ev + 1.0Eh 330°	Seismic
1.0D + 1.0W Service Normal	60 mph Wind with No Ice
1.0D + 1.0W Service 60°	60 mph Wind with No Ice
1.0D + 1.0W Service 90°	60 mph Wind with No Ice
1.0D + 1.0W Service 120°	60 mph Wind with No Ice
1.0D + 1.0W Service 180°	60 mph Wind with No Ice
1.0D + 1.0W Service 210°	60 mph Wind with No Ice
1.0D + 1.0W Service 240°	60 mph Wind with No Ice
1.0D + 1.0W Service 300°	60 mph Wind with No Ice
1.0D + 1.0W Service 330°	60 mph Wind with No Ice

TOWER LOADING

Discrete Appurtenance Properties 1.2D + 1.0W

Elev (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient Factor	Vert Ecc (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
330.0	Lightning Protection	1	50	1.0	4.0	2.0	2.0	1.00	1.00	0.0	0.00	43.90	37	60
330.0	Beacon	1	100	2.0	2.0	18.0	18.0	1.00	1.00	0.0	0.00	43.90	75	120
310.0	Top Pole	1	5000	48.0	40.0	24.0	24.0	1.00	1.00	0.0	0.00	43.12	1759	6000
290.0	Hardline	1	200	2.0	5.0	6.0	6.0	1.00	1.00	0.0	0.00	42.31	72	240
290.0	Mount	1	500	7.0	5.0	12.0	12.0	1.00	1.00	0.0	0.00	42.31	252	600
270.0	Base Pole	1	10000	96.0	40.0	48.0	48.0	1.00	1.00	0.0	0.00	41.45	3382	12000
240.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	40.08	119	225
240.0	Generic 12' Omni-Grid	1	60	10.7	12.0	15.0	3.0	1.00	1.00	0.0	0.00	40.08	366	72
231.0	Generic 5' Omni	1	10	1.0	5.0	2.0	2.0	1.00	1.00	0.0	0.00	39.64	34	12
231.0	Generic Round Stand-Off	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	39.64	175	225
229.0	Generic 24" x 43" 1 Bay FM	1	15	5.7	2.0	43.0	0.0	1.00	1.00	0.0	0.00	39.54	193	18
227.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	39.45	117	225
227.0	Generic 20' Omni	1	55	6.0	20.0	3.0	3.0	1.00	1.00	0.0	0.00	39.45	201	66
217.0	Commander 458-2N	3	22	3.7	13.3	2.8	2.8	1.00	1.00	-3.0	1,103.79	38.79	368	79
217.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	38.94	115	225
217.0	Generic 20' Dipole	1	60	7.5	20.0	3.0	3.0	1.00	1.00	0.0	0.00	38.94	249	72
215.0	Generic Round T-Arm	1	313	9.7	0.0	0.0	0.0	0.75	0.67	0.0	0.00	38.84	161	375
215.0	Generic 8' Yagi	4	30	12.0	8.0	60.0	3.0	1.00	0.53	0.0	0.00	38.84	840	144
210.0	Motorola PTP-600	1	12	1.8	1.2	14.5	3.8	1.00	1.00	0.0	0.00	38.58	57	15
209.0	Generic 4' Yagi	1	15	4.9	4.0	48.0	3.0	1.00	1.00	0.0	0.00	38.53	160	18
200.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	38.04	113	225
200.0	RFS 220-3AN	1	24	5.7	20.7	2.8	2.8	1.00	1.00	0.0	0.00	38.04	184	29
190.0	Generic Blank Exhibit	1	0	0.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	37.49	0	0
188.0	Generic 8' Yagi	1	30	12.0	8.0	60.0	3.0	1.00	1.00	0.0	0.00	37.38	381	36
182.0	Generic 12' Omni	1	40	3.6	12.0	3.0	3.0	1.00	1.00	0.0	0.00	37.03	113	48
182.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	37.03	110	225
180.0	Generic 5' Yagi	1	20	7.3	5.0	60.0	3.0	1.00	1.00	0.0	0.00	36.92	229	24
177.0	Generic 8' Dipole	1	25	3.0	8.0	3.0	3.0	1.00	1.00	0.0	0.00	36.74	94	30
177.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	36.74	109	225
175.0	Generic 4' Grid Dish	1	51	7.5	4.0	48.0	0.0	1.00	1.00	0.0	0.00	36.62	232	61
171.0	Generic 8' Omni	1	25	2.4	8.0	3.0	3.0	1.00	1.00	0.0	0.00	36.38	74	30
171.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	36.38	108	225
170.0	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.00	36.32	93	30
170.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	36.32	108	225
167.0	Generic 8' Yagi	4	30	12.0	8.0	60.0	3.0	1.00	0.53	0.0	0.00	36.13	781	144
166.0	Generic Torque Arm	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	36.07	460	600
159.0	Generic 12' Omni	1	40	3.6	12.0	3.0	3.0	1.00	1.00	0.0	0.00	35.63	109	48
159.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	35.63	106	225
155.0	Generic 15' Omni	1	40	4.5	15.0	3.0	3.0	1.00	1.00	0.0	0.00	35.37	135	48
155.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	35.37	105	225
153.0	Generic 3' Yagi	1	10	3.0	3.0	36.0	3.0	1.00	1.00	0.0	0.00	35.24	89	12
146.0	Generic 8' Omni	1	25	2.4	8.0	3.0	3.0	1.00	1.00	0.0	0.00	34.77	71	30
145.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	34.70	103	225
145.0	Generic 20' Dipole	1	60	7.5	20.0	3.0	3.0	1.00	1.00	0.0	0.00	34.70	222	72
142.0	Generic 12' Omni	1	40	3.6	12.0	3.0	3.0	1.00	1.00	0.0	0.00	34.50	106	48
142.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	34.50	102	225
120.0	Raycap RDIDC-9181-PF-48	1	22	1.9	1.3	14.0	8.0	0.80	1.00	0.0	0.00	32.88	42	26
120.0	Fujitsu TA08025-B605	3	75	2.0	1.3	15.0	9.1	0.80	0.50	0.0	0.00	32.88	66	270
120.0	Fujitsu TA08025-B604	3	64	2.0	1.3	15.0	7.9	0.80	0.50	0.0	0.00	32.88	66	230
120.0	JMA Wireless MX08FRO665-21	3	65	12.5	6.0	20.0	8.0	0.80	0.64	0.0	0.00	32.88	536	232
120.0	Generic Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.00	32.88	679	1080
114.0	Generic 3' Yagi	1	10	3.0	3.0	36.0	3.0	1.00	1.00	0.0	0.00	32.40	82	12
112.0	Generic 4' Grid Dish	1	51	7.5	4.0	48.0	0.0	1.00	1.00	0.0	0.00	32.24	204	61
107.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	31.82	94	225
107.0	Generic 20' Dipole	1	60	7.5	20.0	3.0	3.0	1.00	1.00	0.0	0.00	31.82	203	72
106.0	Generic 4' Grid Dish	1	51	7.5	4.0	48.0	0.0	1.00	1.00	0.0	0.00	31.73	201	61
102.0	Generic 8' Yagi	1	30	12.0	8.0	60.0	3.0	1.00	1.00	0.0	0.00	31.39	320	36
101.0	Generic 8' Yagi	1	30	12.0	8.0	60.0	3.0	1.00	1.00	0.0	0.00	31.30	319	36
91.0	Generic 24" x 43" 1 Bay FM	1	15	5.7	2.0	43.0	0.0	1.00	1.00	0.0	0.00	30.38	148	18
91.0	Generic 4' Grid Dish	1	51	7.5	4.0	48.0	0.0	1.00	1.00	0.0	0.00	30.38	193	61
84.0	Generic 6' Yagi	1	25	9.0	6.0	60.0	3.0	1.00	1.00	0.0	0.00	29.69	226	30
80.0	Generic Blank Exhibit	1	0	0.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	29.28	0	0
80.0	Generic 74" x 12" Panel	1	45	8.4	6.2	12.0	6.0	1.00	1.00	0.0	0.00	29.28	209	54
78.0	Generic 4' Grid Dish	1	51	7.5	4.0	48.0	0.0	1.00	1.00	0.0	0.00	29.07	184	61
77.0	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.00	28.96	74	30
77.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	28.96	86	225

Elev (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient Factor	Vert Ecc (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
73.0	Generic 24" x 43" 1 Bay FM	1	15	5.7	2.0	43.0	0.0	1.00	1.00	0.0	0.00	28.53	139	18
67.0	Generic 1' Yagi	1	5	0.4	1.0	12.0	2.0	1.00	1.00	0.0	0.00	27.83	9	6
62.0	Generic 8' Yagi	4	30	12.0	8.0	60.0	3.0	1.00	0.53	0.0	0.00	27.22	589	144
38.0	Generic 3' Yagi	1	10	3.0	3.0	36.0	3.0	1.00	1.00	0.0	0.00	23.67	60	12
34.0	Generic 5' Yagi	1	20	7.3	5.0	60.0	3.0	1.00	1.00	0.0	0.00	22.93	142	24
31.0	Generic 2" x 4" GPS	2	5	0.0	0.2	4.0	2.0	1.00	0.50	0.0	0.00	22.33	1	12
29.0	Generic 3' Yagi	1	10	3.0	3.0	36.0	3.0	1.00	1.00	0.0	0.00	22.11	56	12
26.0	Generic 2" x 4" GPS	1	5	0.0	0.2	4.0	2.0	1.00	1.00	0.0	0.00	22.11	1	6
24.0	Generic 3' Yagi	1	10	3.0	3.0	36.0	3.0	1.00	1.00	0.0	0.00	22.11	56	12
18.0	Generic 3' Std. Dish	1	100	11.8	3.0	36.0	0.0	1.00	1.00	0.0	0.00	22.11	221	120
13.0	Generic 2" x 4" GPS	1	5	0.0	0.2	4.0	2.0	1.00	1.00	0.0	0.00	22.11	1	6
	Totals	97	22,749	739.6									18,274	27,299

TOWER LOADING

Discrete Appurtenance Properties 1.2D + 1.0Di + 1.0Wi

Elev (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient Factor	Vert Ecc (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
330.0	Lightning Protection	1	92	1.6	4.0	2.0	2.0	1.00	1.00	0.0	0.00	7.02	10	102
330.0	Beacon	1	249	2.8	2.0	18.0	18.0	1.00	1.00	0.0	0.00	7.02	17	269
310.0	Top Pole	1	6831	56.8	40.0	24.0	24.0	1.00	1.00	0.0	0.00	6.90	333	7831
290.0	Hardline	1	307	3.2	5.0	6.0	6.0	1.00	1.00	0.0	0.00	6.77	18	347
290.0	Mount	1	696	7.7	5.0	12.0	12.0	1.00	1.00	0.0	0.00	6.77	44	796
270.0	Base Pole	1	1515 2	140.2	40.0	48.0	48.0	1.00	1.00	0.0	0.00	6.63	790	17152
240.0	Generic Round Side Arm	1	242	6.8	0.0	0.0	0.0	1.00	0.67	0.0	0.00	6.41	25	279
240.0	Generic 12' Omni-Grid	1	248	37.5	12.0	15.0	3.0	1.00	1.00	0.0	0.00	6.41	205	260
231.0	Generic 5' Omni	1	26	1.8	5.0	2.0	2.0	1.00	1.00	0.0	0.00	6.34	10	28
231.0	Generic Round Stand-Off	1	242	6.8	0.0	0.0	0.0	1.00	1.00	0.0	0.00	6.34	37	279
229.0	Generic 24" x 43" 1 Bay FM	1	158	6.5	2.0	43.0	0.0	1.00	1.00	0.0	0.00	6.33	35	161
227.0	Generic Round Side Arm	1	241	6.8	0.0	0.0	0.0	1.00	0.67	0.0	0.00	6.31	24	279
227.0	Generic 20' Omni	1	144	10.2	20.0	3.0	3.0	1.00	1.00	0.0	0.00	6.31	55	155
217.0	Commander 458-2N	3	78	6.5	13.3	2.8	2.8	1.00	1.00	-3.0	309.28	6.21	103	247
217.0	Generic Round Side Arm	1	241	6.8	0.0	0.0	0.0	1.00	0.67	0.0	0.00	6.23	24	279
217.0	Generic 20' Dipole	1	191	14.5	20.0	3.0	3.0	1.00	1.00	0.0	0.00	6.23	77	203
215.0	Generic Round T-Arm	1	467	14.6	0.0	0.0	0.0	0.75	0.67	0.0	0.00	6.21	39	529
215.0	Generic 8' Yagi	4	230	31.7	8.0	60.0	3.0	1.00	0.53	0.0	0.00	6.21	355	943
210.0	Motorola PTP-600	1	35	2.3	1.2	14.5	3.8	1.00	1.00	0.0	0.00	6.17	12	38
209.0	Generic 4' Yagi	1	100	12.5	4.0	48.0	3.0	1.00	1.00	0.0	0.00	6.16	65	103
200.0	Generic Round Side Arm	1	241	6.8	0.0	0.0	0.0	1.00	0.67	0.0	0.00	6.09	24	278
200.0	RFS 220-3AN	1	108	10.0	20.7	2.8	2.8	1.00	1.00	0.0	0.00	6.09	52	113
190.0	Generic Blank Exhibit	1	0	0.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	6.00	0	0
188.0	Generic 8' Yagi	1	226	31.3	8.0	60.0	3.0	1.00	1.00	0.0	0.00	5.98	159	232
182.0	Generic 12' Omni	1	92	6.1	12.0	3.0	3.0	1.00	1.00	0.0	0.00	5.92	31	101
182.0	Generic Round Side Arm	1	240	6.8	0.0	0.0	0.0	1.00	0.67	0.0	0.00	5.92	23	278
180.0	Generic 5' Yagi	1	143	18.8	5.0	60.0	3.0	1.00	1.00	0.0	0.00	5.91	94	147
177.0	Generic 8' Dipole	1	77	5.7	8.0	3.0	3.0	1.00	1.00	0.0	0.00	5.88	28	82
177.0	Generic Round Side Arm	1	240	6.8	0.0	0.0	0.0	1.00	0.67	0.0	0.00	5.88	23	278
175.0	Generic 4' Grid Dish	1	186	36.3	4.0	48.0	0.0	1.00	1.00	0.0	0.00	5.86	181	197
171.0	Generic 8' Omni	1	60	4.0	8.0	3.0	3.0	1.00	1.00	0.0	0.00	5.82	20	65
171.0	Generic Round Side Arm	1	240	6.8	0.0	0.0	0.0	1.00	0.67	0.0	0.00	5.82	22	278
170.0	Generic 10' Omni	1	68	5.1	10.0	3.0	3.0	1.00	1.00	0.0	0.00	5.81	25	73
170.0	Generic Round Side Arm	1	240	6.8	0.0	0.0	0.0	1.00	0.67	0.0	0.00	5.81	22	277
167.0	Generic 8' Yagi	4	224	31.1	8.0	60.0	3.0	1.00	0.53	0.0	0.00	5.78	324	918
166.0	Generic Torque Arm	1	699	21.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	5.77	103	799
159.0	Generic 12' Omni	1	92	6.1	12.0	3.0	3.0	1.00	1.00	0.0	0.00	5.70	29	100
159.0	Generic Round Side Arm	1	240	6.8	0.0	0.0	0.0	1.00	0.67	0.0	0.00	5.70	22	277
155.0	Generic 15' Omni	1	105	7.6	15.0	3.0	3.0	1.00	1.00	0.0	0.00	5.66	36	113
155.0	Generic Round Side Arm	1	240	6.8	0.0	0.0	0.0	1.00	0.67	0.0	0.00	5.66	22	277
153.0	Generic 3' Yagi	1	61	6.6	3.0	36.0	3.0	1.00	1.00	0.0	0.00	5.64	31	63
146.0	Generic 8' Omni	1	59	3.9	8.0	3.0	3.0	1.00	1.00	0.0	0.00	5.56	19	64
145.0	Generic Round Side Arm	1	239	6.7	0.0	0.0	0.0	1.00	0.67	0.0	0.00	5.55	21	277
145.0	Generic 20' Dipole	1	185	14.2	20.0	3.0	3.0	1.00	1.00	0.0	0.00	5.55	67	197
142.0	Generic 12' Omni	1	91	6.0	12.0	3.0	3.0	1.00	1.00	0.0	0.00	5.52	28	99
142.0	Generic Round Side Arm	1	239	6.7	0.0	0.0	0.0	1.00	0.67	0.0	0.00	5.52	21	277
120.0	Raycap RDIDC-9181-PF-48	1	54	2.4	1.3	14.0	8.0	0.80	1.00	0.0	0.00	5.26	8	58
120.0	Fujitsu TA08025-B605	3	110	2.5	1.3	15.0	9.1	0.80	0.50	0.0	0.00	5.26	13	374

Elev (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient Factor	Vert Ecc (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
120.0	Fujitsu TA08025-B604	3	96	2.5	1.3	15.0	7.9	0.80	0.50	0.0	0.00	5.26	13	327
120.0	JMA Wireless MX08FRO665-21	3	207	14.0	6.0	20.0	8.0	0.80	0.64	0.0	0.00	5.26	96	660
120.0	Generic Round Sector Frame	3	504	23.6	0.0	0.0	0.0	0.75	0.75	0.0	0.00	5.26	178	1693
114.0	Generic 3' Yagi	1	60	6.5	3.0	36.0	3.0	1.00	1.00	0.0	0.00	5.18	28	62
112.0	Generic 4' Grid Dish	1	181	35.2	4.0	48.0	0.0	1.00	1.00	0.0	0.00	5.16	154	191
107.0	Generic Round Side Arm	1	237	6.7	0.0	0.0	0.0	1.00	0.67	0.0	0.00	5.09	19	275
107.0	Generic 20' Dipole	1	181	14.0	20.0	3.0	3.0	1.00	1.00	0.0	0.00	5.09	61	193
106.0	Generic 4' Grid Dish	1	179	34.7	4.0	48.0	0.0	1.00	1.00	0.0	0.00	5.08	150	189
102.0	Generic 8' Yagi	1	215	30.2	8.0	60.0	3.0	1.00	1.00	0.0	0.00	5.02	129	221
101.0	Generic 8' Yagi	1	215	30.2	8.0	60.0	3.0	1.00	1.00	0.0	0.00	5.01	129	221
91.0	Generic 24" x 43" 1 Bay FM	1	147	6.4	2.0	43.0	0.0	1.00	1.00	0.0	0.00	4.86	27	150
91.0	Generic 4' Grid Dish	1	179	34.7	4.0	48.0	0.0	1.00	1.00	0.0	0.00	4.86	143	189
84.0	Generic 6' Yagi	1	161	21.7	6.0	60.0	3.0	1.00	1.00	0.0	0.00	4.75	88	166
80.0	Generic Blank Exhibit	1	0	0.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	4.68	0	0
80.0	Generic 74" x 12" Panel	1	135	9.9	6.2	12.0	6.0	1.00	1.00	0.0	0.00	4.68	40	144
78.0	Generic 4' Grid Dish	1	176	34.1	4.0	48.0	0.0	1.00	1.00	0.0	0.00	4.65	135	186
77.0	Generic 10' Omni	1	65	4.9	10.0	3.0	3.0	1.00	1.00	0.0	0.00	4.63	19	70
77.0	Generic Round Side Arm	1	236	6.6	0.0	0.0	0.0	1.00	0.67	0.0	0.00	4.63	18	274
73.0	Generic 24" x 43" 1 Bay FM	1	144	6.4	2.0	43.0	0.0	1.00	1.00	0.0	0.00	4.56	25	147
67.0	Generic 1' Yagi	1	13	0.9	1.0	12.0	2.0	1.00	1.00	0.0	0.00	4.45	3	14
62.0	Generic 8' Yagi	4	205	29.3	8.0	60.0	3.0	1.00	0.53	0.0	0.00	4.36	230	846
38.0	Generic 3' Yagi	1	55	6.1	3.0	36.0	3.0	1.00	1.00	0.0	0.00	3.79	20	57
34.0	Generic 5' Yagi	1	126	17.2	5.0	60.0	3.0	1.00	1.00	0.0	0.00	3.67	54	130
31.0	Generic 2" x 4" GPS	2	6	0.1	0.2	4.0	2.0	1.00	0.50	0.0	0.00	3.57	0	15
29.0	Generic 3' Yagi	1	52	5.9	3.0	36.0	3.0	1.00	1.00	0.0	0.00	3.54	18	54
26.0	Generic 2" x 4" GPS	1	6	0.1	0.2	4.0	2.0	1.00	1.00	0.0	0.00	3.54	0	7
24.0	Generic 3' Yagi	1	52	5.9	3.0	36.0	3.0	1.00	1.00	0.0	0.00	3.54	18	54
18.0	Generic 3' Std. Dish	1	156	12.8	3.0	36.0	0.0	1.00	1.00	0.0	0.00	3.54	39	176
13.0	Generic 2" x 4" GPS	1	6	0.1	0.2	4.0	2.0	1.00	1.00	0.0	0.00	3.54	0	7
	Totals	97	38,738	1432.2									5559	43,288

TOWER LOADING

Discrete Appurtenance Properties 1.0D + 1.0W Service

Elev (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient Factor	Vert Ecc (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
330.0	Lightning Protection	1	50	1.0	4.0	2.0	2.0	1.00	1.00	0.0	0.00	10.65	9	50
330.0	Beacon	1	100	2.0	2.0	18.0	18.0	1.00	1.00	0.0	0.00	10.65	18	100
310.0	Top Pole	1	5000	48.0	40.0	24.0	24.0	1.00	1.00	0.0	0.00	10.46	427	5000
290.0	Hardline	1	200	2.0	5.0	6.0	6.0	1.00	1.00	0.0	0.00	10.26	17	200
290.0	Mount	1	500	7.0	5.0	12.0	12.0	1.00	1.00	0.0	0.00	10.26	61	500
270.0	Base Pole	1	10000	96.0	40.0	48.0	48.0	1.00	1.00	0.0	0.00	10.05	820	10000
240.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	9.72	29	188
240.0	Generic 12' Omni-Grid	1	60	10.7	12.0	15.0	3.0	1.00	1.00	0.0	0.00	9.72	89	60
231.0	Generic 5' Omni	1	10	1.0	5.0	2.0	2.0	1.00	1.00	0.0	0.00	9.62	8	10
231.0	Generic Round Stand-Off	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	9.62	42	188
229.0	Generic 24" x 43" 1 Bay FM	1	15	5.7	2.0	43.0	0.0	1.00	1.00	0.0	0.00	9.59	47	15
227.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	9.57	28	188
227.0	Generic 20' Omni	1	55	6.0	20.0	3.0	3.0	1.00	1.00	0.0	0.00	9.57	49	55
217.0	Commander 458-2N	3	22	3.7	13.3	2.8	2.8	1.00	1.00	-3.0	267.72	9.41	89	66
217.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	9.44	28	188
217.0	Generic 20' Dipole	1	60	7.5	20.0	3.0	3.0	1.00	1.00	0.0	0.00	9.44	60	60
215.0	Generic Round T-Arm	1	313	9.7	0.0	0.0	0.0	0.75	0.67	0.0	0.00	9.42	39	312
215.0	Generic 8' Yagi	4	30	12.0	8.0	60.0	3.0	1.00	0.53	0.0	0.00	9.42	204	120
210.0	Motorola PTP-600	1	12	1.8	1.2	14.5	3.8	1.00	1.00	0.0	0.00	9.36	14	12
209.0	Generic 4' Yagi	1	15	4.9	4.0	48.0	3.0	1.00	1.00	0.0	0.00	9.34	39	15
200.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	9.23	27	188
200.0	RFS 220-3AN	1	24	5.7	20.7	2.8	2.8	1.00	1.00	0.0	0.00	9.23	45	24
190.0	Generic Blank Exhibit	1	0	0.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	9.09	0	0
188.0	Generic 8' Yagi	1	30	12.0	8.0	60.0	3.0	1.00	1.00	0.0	0.00	9.07	92	30
182.0	Generic 12' Omni	1	40	3.6	12.0	3.0	3.0	1.00	1.00	0.0	0.00	8.98	27	40
182.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	8.98	27	188
180.0	Generic 5' Yagi	1	20	7.3	5.0	60.0	3.0	1.00	1.00	0.0	0.00	8.95	55	20
177.0	Generic 8' Dipole	1	25	3.0	8.0	3.0	3.0	1.00	1.00	0.0	0.00	8.91	23	25
177.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	8.91	26	188
175.0	Generic 4' Grid Dish	1	51	7.5	4.0	48.0	0.0	1.00	1.00	0.0	0.00	8.88	56	51

Elev (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient Factor	Vert Ecc (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
171.0	Generic 8' Omni	1	25	2.4	8.0	3.0	3.0	1.00	1.00	0.0	0.00	8.82	18	25
171.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	8.82	26	188
170.0	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.00	8.81	22	25
170.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	8.81	26	188
167.0	Generic 8' Yagi	4	30	12.0	8.0	60.0	3.0	1.00	0.53	0.0	0.00	8.76	190	120
166.0	Generic Torque Arm	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	8.75	112	500
159.0	Generic 12' Omni	1	40	3.6	12.0	3.0	3.0	1.00	1.00	0.0	0.00	8.64	26	40
159.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	8.64	26	188
155.0	Generic 15' Omni	1	40	4.5	15.0	3.0	3.0	1.00	1.00	0.0	0.00	8.58	33	40
155.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	8.58	25	188
153.0	Generic 3' Yagi	1	10	3.0	3.0	36.0	3.0	1.00	1.00	0.0	0.00	8.55	22	10
146.0	Generic 8' Omni	1	25	2.4	8.0	3.0	3.0	1.00	1.00	0.0	0.00	8.43	17	25
145.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	8.42	25	188
145.0	Generic 20' Dipole	1	60	7.5	20.0	3.0	3.0	1.00	1.00	0.0	0.00	8.42	54	60
142.0	Generic 12' Omni	1	40	3.6	12.0	3.0	3.0	1.00	1.00	0.0	0.00	8.37	26	40
142.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	8.37	25	188
120.0	Raycap RDIDC-9181-PF-48	1	22	1.9	1.3	14.0	8.0	0.80	1.00	0.0	0.00	7.97	10	22
120.0	Fujitsu TA08025-B605	3	75	2.0	1.3	15.0	9.1	0.80	0.50	0.0	0.00	7.97	16	225
120.0	Fujitsu TA08025-B604	3	64	2.0	1.3	15.0	7.9	0.80	0.50	0.0	0.00	7.97	16	192
120.0	JMA Wireless MX08FRO665-21	3	65	12.5	6.0	20.0	8.0	0.80	0.64	0.0	0.00	7.97	130	194
120.0	Generic Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.00	7.97	165	900
114.0	Generic 3' Yagi	1	10	3.0	3.0	36.0	3.0	1.00	1.00	0.0	0.00	7.86	20	10
112.0	Generic 4' Grid Dish	1	51	7.5	4.0	48.0	0.0	1.00	1.00	0.0	0.00	7.82	50	51
107.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	7.72	23	188
107.0	Generic 20' Dipole	1	60	7.5	20.0	3.0	3.0	1.00	1.00	0.0	0.00	7.72	49	60
106.0	Generic 4' Grid Dish	1	51	7.5	4.0	48.0	0.0	1.00	1.00	0.0	0.00	7.70	49	51
102.0	Generic 8' Yagi	1	30	12.0	8.0	60.0	3.0	1.00	1.00	0.0	0.00	7.61	78	30
101.0	Generic 8' Yagi	1	30	12.0	8.0	60.0	3.0	1.00	1.00	0.0	0.00	7.59	77	30
91.0	Generic 24" x 43" 1 Bay FM	1	15	5.7	2.0	43.0	0.0	1.00	1.00	0.0	0.00	7.37	36	15
91.0	Generic 4' Grid Dish	1	51	7.5	4.0	48.0	0.0	1.00	1.00	0.0	0.00	7.37	47	51
84.0	Generic 6' Yagi	1	25	9.0	6.0	60.0	3.0	1.00	1.00	0.0	0.00	7.20	55	25
80.0	Generic Blank Exhibit	1	0	0.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	7.10	0	0
80.0	Generic 74" x 12" Panel	1	45	8.4	6.2	12.0	6.0	1.00	1.00	0.0	0.00	7.10	51	45
78.0	Generic 4' Grid Dish	1	51	7.5	4.0	48.0	0.0	1.00	1.00	0.0	0.00	7.05	45	51
77.0	Generic 10' Omni	1	25	3.0	10.0	3.0	3.0	1.00	1.00	0.0	0.00	7.02	18	25
77.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	0.67	0.0	0.00	7.02	21	188
73.0	Generic 24" x 43" 1 Bay FM	1	15	5.7	2.0	43.0	0.0	1.00	1.00	0.0	0.00	6.92	34	15
67.0	Generic 1' Yagi	1	5	0.4	1.0	12.0	2.0	1.00	1.00	0.0	0.00	6.75	2	5
62.0	Generic 8' Yagi	4	30	12.0	8.0	60.0	3.0	1.00	0.53	0.0	0.00	6.60	143	120
38.0	Generic 3' Yagi	1	10	3.0	3.0	36.0	3.0	1.00	1.00	0.0	0.00	5.74	15	10
34.0	Generic 5' Yagi	1	20	7.3	5.0	60.0	3.0	1.00	1.00	0.0	0.00	5.56	34	20
31.0	Generic 2" x 4" GPS	2	5	0.0	0.2	4.0	2.0	1.00	0.50	0.0	0.00	5.42	0	10
29.0	Generic 3' Yagi	1	10	3.0	3.0	36.0	3.0	1.00	1.00	0.0	0.00	5.36	14	10
26.0	Generic 2" x 4" GPS	1	5	0.0	0.2	4.0	2.0	1.00	1.00	0.0	0.00	5.36	0	5
24.0	Generic 3' Yagi	1	10	3.0	3.0	36.0	3.0	1.00	1.00	0.0	0.00	5.36	14	10
18.0	Generic 3' Std. Dish	1	100	11.8	3.0	36.0	0.0	1.00	1.00	0.0	0.00	5.36	54	100
13.0	Generic 2" x 4" GPS	1	5	0.0	0.2	4.0	2.0	1.00	1.00	0.0	0.00	5.36	0	5
	Totals	97	22,749	739.6									4,432	22,749

TOWER LOADING

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	% In Wind	Spread On Faces	Bundling	Cluster Dia (in)	Out of Zone	Spacing (in)	Orient Factor	K_a Override
0.0	315.0	6 1/8" Hard Line	1	6.13	6.83	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	250.0	Climbing Ladder	1	2.00	6.90	0	2	Individual	0.00	N	1.00	1.00	0.00
0.0	240.0	7/8" Coax	1	1.09	0.33	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	231.0	1 1/4" Coax	1	1.55	0.63	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	229.0	7/8" Coax	1	1.09	0.33	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	227.0	7/8" Coax	1	1.09	0.33	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	217.0	7/8" Coax	1	1.09	0.33	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	217.0	7/8" Coax	3	1.09	0.33	100	1	Individual	0.00	N	1.00	1.00	0.00
0.0	215.0	1/2" Coax	1	0.63	0.15	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	210.0	0.24" (6mm) Cat 5	1	0.24	0.04	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	209.0	1/2" Coax	1	0.63	0.15	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	200.0	7/8" Coax	1	1.09	0.33	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	188.0	1/2" Coax	1	0.63	0.15	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	182.0	1 1/4" Coax	1	1.55	0.63	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	177.0	1 1/4" Coax	1	1.55	0.63	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	175.0	3/8" Coax	1	0.44	0.08	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	171.0	7/8" Coax	1	1.09	0.33	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	170.0	7/8" Coax	1	1.09	0.33	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	167.0	3/8" Coax	1	0.44	0.08	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	165.0	Waveguide	1	2.00	6.00	100	Lin App	Individual	0.00	Y	1.00	1.00	0.00
0.0	159.0	7/8" Coax	1	1.09	0.33	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	155.0	7/8" Coax	1	1.09	0.33	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	153.0	7/8" Coax	1	1.09	0.33	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	146.0	1 5/8" Coax	1	1.98	0.82	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	145.0	7/8" Coax	1	1.09	0.33	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	142.0	7/8" Coax	1	1.09	0.33	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	130.0	7/8" Coax	1	1.09	0.33	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	120.0	1.60" (40.6mm) Hybrid	1	1.60	2.34	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	114.0	1/2" Coax	1	0.63	0.15	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	112.0	1/2" Coax	1	0.63	0.15	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	107.0	7/8" Coax	1	1.09	0.33	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	106.0	1/2" Coax	1	0.63	0.15	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	102.0	1/2" Coax	1	0.63	0.15	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	101.0	1/2" Coax	1	0.63	0.15	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	91.0	1/2" Coax	1	0.63	0.15	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	91.0	3/8" Coax	1	0.44	0.08	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	84.0	1/2" Coax	1	0.63	0.15	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	80.0	7/8" Coax	1	1.09	0.33	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	78.0	1/2" Coax	1	0.63	0.15	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	77.0	7/8" Coax	1	1.09	0.33	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	73.0	1/2" Coax	1	0.63	0.15	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	67.0	1/2" Coax	1	0.63	0.15	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	62.0	1/4" Coax	1	0.34	0.06	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	38.0	1/4" Coax	1	0.34	0.06	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	34.0	3/8" Coax	1	0.44	0.08	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	31.0	1/2" Coax	1	0.63	0.15	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	29.0	1/4" Coax	1	0.34	0.06	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	26.0	1/4" Coax	1	0.34	0.06	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	24.0	1/2" Coax	1	0.63	0.15	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	18.0	1/4" Coax	1	0.34	0.06	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	13.0	3/8" Coax	1	0.44	0.08	100	None	Individual	0.00	N	1.00	1.00	0.00

SECTION FORCES

1.2D + 1.0W Normal
121.83 mph wind with no ice
Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
14	247	40.42	7.996	2.667	0.00	0.320	2.24	1.00	1.00	0.0	9.61	21.57	0.00	1740	0	741	85	826
13	237	39.95	4.792	10.096	0.00	0.162	2.73	1.00	1.00	0.0	10.59	28.87	0.00	2118	0	980	259	1239
12	220	39.09	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2883	0	1262	566	1828
11	200	38.04	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2917	0	1228	744	1973
10	180	36.92	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2939	0	1192	831	2023
9	160	35.69	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	3089	0	1152	1158	2310
8	140	34.36	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	3168	0	1109	1359	2469
7	120	32.88	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	3215	0	1061	1413	2475
6	100	31.21	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	3263	0	1008	1478	2486
5	80	29.28	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	3284	0	945	1501	2447
4	60	26.97	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	3304	0	871	1479	2350
3	40	24.02	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	3306	0	776	1337	2113
2	20	22.11	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	3318	0	714	1285	1998
1	5	22.11	8.542	5.292	0.00	0.426	2.02	1.00	1.00	0.0	11.97	24.12	0.00	2059	0	453	608	1061
														40,602	0			27,596

1.2D + 1.0W 60°
121.83 mph wind with no ice
Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
14	247	40.42	7.996	2.667	0.00	0.320	2.24	0.80	1.00	0.0	8.01	17.98	0.00	1740	0	618	85	703
13	237	39.95	4.792	10.096	0.00	0.162	2.73	0.80	1.00	0.0	9.63	26.26	0.00	2118	0	892	259	1151
12	220	39.09	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2883	0	1153	566	1719
11	200	38.04	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2917	0	1122	744	1866
10	180	36.92	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2939	0	1089	831	1919
9	160	35.69	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	3089	0	1053	1158	2210
8	140	34.36	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	3168	0	1013	1359	2373
7	120	32.88	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	3215	0	970	1413	2383
6	100	31.21	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	3263	0	920	1478	2398
5	80	29.28	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	3284	0	864	1501	2365
4	60	26.97	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	3304	0	795	1479	2275
3	40	24.02	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	3306	0	708	1337	2046
2	20	22.11	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	3318	0	652	1285	1937
1	5	22.11	8.542	5.292	0.00	0.426	2.02	0.80	1.00	0.0	10.26	20.68	0.00	2059	0	389	630	1019
														40,602	0			26,363

1.2D + 1.0W 90°
121.83 mph wind with no ice
Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
14	247	40.42	7.996	2.667	0.00	0.320	2.24	0.85	1.00	0.0	8.41	18.87	0.00	1740	0	649	85	734
13	237	39.95	4.792	10.096	0.00	0.162	2.73	0.85	1.00	0.0	9.87	26.91	0.00	2118	0	914	259	1173
12	220	39.09	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2883	0	1180	566	1746
11	200	38.04	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2917	0	1149	744	1893
10	180	36.92	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2939	0	1114	831	1945
9	160	35.69	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	3089	0	1078	1158	2235
8	140	34.36	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	3168	0	1037	1359	2397
7	120	32.88	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	3215	0	993	1413	2406
6	100	31.21	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	3263	0	942	1478	2420
5	80	29.28	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	3284	0	884	1501	2385
4	60	26.97	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	3304	0	814	1479	2294

SECTION FORCES

Sect #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
3	40	24.02	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	3306	0	725	1337	2062
2	20	22.11	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	3318	0	667	1285	1952
1	5	22.11	8.542	5.292	0.00	0.426	2.02	0.85	1.00	0.0	10.69	21.54	0.00	2059	0	405	630	1035
														40,602	0			26,677

1.2D + 1.0W 120° Gust Response Factor (Gh): 0.85
121.83 mph wind with no ice Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
14	247	40.42	7.996	2.667	0.00	0.320	2.24	1.00	1.00	0.0	9.61	21.57	0.00	1740	0	741	85	826
13	237	39.95	4.792	10.096	0.00	0.162	2.73	1.00	1.00	0.0	10.59	28.87	0.00	2118	0	980	259	1239
12	220	39.09	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2883	0	1262	566	1828
11	200	38.04	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2917	0	1228	744	1973
10	180	36.92	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2939	0	1192	831	2023
9	160	35.69	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	3089	0	1152	1158	2310
8	140	34.36	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	3168	0	1109	1359	2469
7	120	32.88	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	3215	0	1061	1413	2475
6	100	31.21	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	3263	0	1008	1478	2486
5	80	29.28	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	3284	0	945	1501	2447
4	60	26.97	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	3304	0	871	1479	2350
3	40	24.02	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	3306	0	776	1337	2113
2	20	22.11	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	3318	0	714	1285	1998
1	5	22.11	8.542	5.292	0.00	0.426	2.02	1.00	1.00	0.0	11.97	24.12	0.00	2059	0	453	630	1084
														40,602	0			27,619

1.2D + 1.0W 180° Gust Response Factor (Gh): 0.85
121.83 mph wind with no ice Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
14	247	40.42	7.996	2.667	0.00	0.320	2.24	0.80	1.00	0.0	8.01	17.98	0.00	1740	0	618	85	703
13	237	39.95	4.792	10.096	0.00	0.162	2.73	0.80	1.00	0.0	9.63	26.26	0.00	2118	0	892	259	1151
12	220	39.09	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2883	0	1153	566	1719
11	200	38.04	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2917	0	1122	744	1866
10	180	36.92	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2939	0	1089	831	1919
9	160	35.69	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	3089	0	1053	1158	2210
8	140	34.36	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	3168	0	1013	1359	2373
7	120	32.88	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	3215	0	970	1413	2383
6	100	31.21	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	3263	0	920	1478	2398
5	80	29.28	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	3284	0	864	1501	2365
4	60	26.97	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	3304	0	795	1479	2275
3	40	24.02	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	3306	0	708	1337	2046
2	20	22.11	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	3318	0	652	1285	1937
1	5	22.11	8.542	5.292	0.00	0.426	2.02	0.80	1.00	0.0	10.26	20.68	0.00	2059	0	389	630	1019
														40,602	0			26,363

1.2D + 1.0W 210° Gust Response Factor (Gh): 0.85
121.83 mph wind with no ice Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
14	247	40.42	7.996	2.667	0.00	0.320	2.24	0.85	1.00	0.0	8.41	18.87	0.00	1740	0	649	85	734
13	237	39.95	4.792	10.096	0.00	0.162	2.73	0.85	1.00	0.0	9.87	26.91	0.00	2118	0	914	259	1173
12	220	39.09	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2883	0	1180	566	1746
11	200	38.04	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2917	0	1149	744	1893
10	180	36.92	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2939	0	1114	831	1945
9	160	35.69	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	3089	0	1078	1158	2235
8	140	34.36	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	3168	0	1037	1359	2397

SECTION FORCES

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
7	120	32.88	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	3215	0	993	1413	2406
6	100	31.21	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	3263	0	942	1478	2420
5	80	29.28	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	3284	0	884	1501	2385
4	60	26.97	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	3304	0	814	1479	2294
3	40	24.02	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	3306	0	725	1337	2062
2	20	22.11	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	3318	0	667	1285	1952
1	5	22.11	8.542	5.292	0.00	0.426	2.02	0.85	1.00	0.0	10.69	21.54	0.00	2059	0	405	630	1035
														40,602	0			26,677

1.2D + 1.0W 240° Gust Response Factor (Gh): 0.85
121.83 mph wind with no ice Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
14	247	40.42	7.996	2.667	0.00	0.320	2.24	1.00	1.00	0.0	9.61	21.57	0.00	1740	0	741	85	826
13	237	39.95	4.792	10.096	0.00	0.162	2.73	1.00	1.00	0.0	10.59	28.87	0.00	2118	0	980	259	1239
12	220	39.09	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2883	0	1262	566	1828
11	200	38.04	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2917	0	1228	744	1973
10	180	36.92	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2939	0	1192	831	2023
9	160	35.69	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	3089	0	1152	1158	2310
8	140	34.36	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	3168	0	1109	1359	2469
7	120	32.88	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	3215	0	1061	1413	2475
6	100	31.21	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	3263	0	1008	1478	2486
5	80	29.28	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	3284	0	945	1501	2447
4	60	26.97	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	3304	0	871	1479	2350
3	40	24.02	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	3306	0	776	1337	2113
2	20	22.11	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	3318	0	714	1285	1998
1	5	22.11	8.542	5.292	0.00	0.426	2.02	1.00	1.00	0.0	11.97	24.12	0.00	2059	0	453	630	1084
														40,602	0			27,619

1.2D + 1.0W 300° Gust Response Factor (Gh): 0.85
121.83 mph wind with no ice Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
14	247	40.42	7.996	2.667	0.00	0.320	2.24	0.80	1.00	0.0	8.01	17.98	0.00	1740	0	618	85	703
13	237	39.95	4.792	10.096	0.00	0.162	2.73	0.80	1.00	0.0	9.63	26.26	0.00	2118	0	892	259	1151
12	220	39.09	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2883	0	1153	566	1719
11	200	38.04	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2917	0	1122	744	1866
10	180	36.92	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2939	0	1089	831	1919
9	160	35.69	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	3089	0	1053	1158	2210
8	140	34.36	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	3168	0	1013	1359	2373
7	120	32.88	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	3215	0	970	1413	2383
6	100	31.21	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	3263	0	920	1478	2398
5	80	29.28	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	3284	0	864	1501	2365
4	60	26.97	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	3304	0	795	1479	2275
3	40	24.02	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	3306	0	708	1337	2046
2	20	22.11	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	3318	0	652	1285	1937
1	5	22.11	8.542	5.292	0.00	0.426	2.02	0.80	1.00	0.0	10.26	20.68	0.00	2059	0	389	630	1019
														40,602	0			26,363

1.2D + 1.0W 330° Gust Response Factor (Gh): 0.85
121.83 mph wind with no ice Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
14	247	40.42	7.996	2.667	0.00	0.320	2.24	0.85	1.00	0.0	8.41	18.87	0.00	1740	0	649	85	734
13	237	39.95	4.792	10.096	0.00	0.162	2.73	0.85	1.00	0.0	9.87	26.91	0.00	2118	0	914	259	1173
12	220	39.09	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2883	0	1180	566	1746

SECTION FORCES

Sect #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
11	200	38.04	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2917	0	1149	744	1893
10	180	36.92	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2939	0	1114	831	1945
9	160	35.69	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	3089	0	1078	1158	2235
8	140	34.36	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	3168	0	1037	1359	2397
7	120	32.88	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	3215	0	993	1413	2406
6	100	31.21	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	3263	0	942	1478	2420
5	80	29.28	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	3284	0	884	1501	2385
4	60	26.97	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	3304	0	814	1479	2294
3	40	24.02	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	3306	0	725	1337	2062
2	20	22.11	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	3318	0	667	1285	1952
1	5	22.11	8.542	5.292	0.00	0.426	2.02	0.85	1.00	0.0	10.69	21.54	0.00	2059	0	405	630	1035
														40,602	0			26,677

1.2D + 1.0Di + 1.0Wi Normal — Gust Response Factor (Gh): 0.85 — Ice Importance Factor: 1.00
48.73 mph wind with 0.850" radial ice — Wind Importance Factor (Iw): 1.00 — Ice Dead Load Factor: 1.00

Sect #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
14	247	6.47	7.996	7.676	5.01	0.458	1.96	1.00	1.00	1.0	13.09	25.66	5.01	2566	826	141	20	161	
13	237	6.39	4.792	27.187	17.09	0.339	2.20	1.00	1.00	1.0	21.49	47.21	17.09	3221	1104	256	77	334	
12	220	6.25	5.990	36.126	22.44	0.328	2.22	1.00	1.00	1.0	28.03	62.36	22.44	4583	1700	332	212	544	
11	200	6.09	5.990	35.914	22.22	0.326	2.23	1.00	1.00	1.0	27.89	62.13	22.22	4869	1952	321	326	647	
10	180	5.91	5.990	35.680	21.99	0.325	2.23	1.00	1.00	1.0	27.72	61.89	21.99	4999	2059	311	370	681	
9	160	5.71	5.990	35.423	21.73	0.323	2.24	1.00	1.00	1.0	27.54	61.62	21.73	5436	2348	299	514	813	
8	140	5.50	5.990	35.135	21.45	0.321	2.24	1.00	1.00	1.0	27.34	61.32	21.45	5727	2559	287	597	884	
7	120	5.26	5.990	34.807	21.12	0.318	2.25	1.00	1.00	1.0	27.12	60.98	21.12	5855	2640	273	619	892	
6	100	4.99	5.990	34.425	20.74	0.315	2.26	1.00	1.00	0.9	26.85	60.58	20.74	6044	2782	257	663	921	
5	80	4.68	5.990	33.968	20.28	0.312	2.26	1.00	1.00	0.9	26.54	60.10	20.28	6171	2887	239	689	929	
4	60	4.32	5.990	33.392	19.70	0.308	2.28	1.00	1.00	0.9	26.14	59.50	19.70	6231	2928	218	683	901	
3	40	3.84	5.990	32.610	18.92	0.302	2.29	1.00	1.00	0.9	25.61	58.68	18.92	6104	2798	192	610	802	
2	20	3.54	5.990	31.342	17.65	0.292	2.32	1.00	1.00	0.8	24.76	57.36	17.65	5992	2674	172	592	765	
1	5	3.54	8.542	11.410	6.12	0.592	1.81	1.00	1.00	0.7	16.97	30.70	6.12	3286	1227	92	169	213	**
** = Section Force Exceeds Solidity Ratio Criteria														71,085	30,483			9,484	

1.2D + 1.0Di + 1.0Wi 60° — Gust Response Factor (Gh): 0.85 — Ice Importance Factor: 1.00
48.73 mph wind with 0.850" radial ice — Wind Importance Factor (Iw): 1.00 — Ice Dead Load Factor: 1.00

Sect #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
14	247	6.47	7.996	7.676	5.01	0.458	1.96	0.80	1.00	1.0	11.49	22.53	5.01	2566	826	124	20	143	
13	237	6.39	4.792	27.187	17.09	0.339	2.20	0.80	1.00	1.0	20.53	45.10	17.09	3221	1104	245	77	322	
12	220	6.25	5.990	36.126	22.44	0.328	2.22	0.80	1.00	1.0	26.84	59.69	22.44	4583	1700	317	212	530	
11	200	6.09	5.990	35.914	22.22	0.326	2.23	0.80	1.00	1.0	26.69	59.47	22.22	4869	1952	308	326	633	
10	180	5.91	5.990	35.680	21.99	0.325	2.23	0.80	1.00	1.0	26.52	59.22	21.99	4999	2059	297	370	668	
9	160	5.71	5.990	35.423	21.73	0.323	2.24	0.80	1.00	1.0	26.35	58.94	21.73	5436	2348	286	514	800	
8	140	5.50	5.990	35.135	21.45	0.321	2.24	0.80	1.00	1.0	26.14	58.63	21.45	5727	2559	274	597	871	
7	120	5.26	5.990	34.807	21.12	0.318	2.25	0.80	1.00	1.0	25.92	58.28	21.12	5855	2640	261	619	880	
6	100	4.99	5.990	34.425	20.74	0.315	2.26	0.80	1.00	0.9	25.65	57.88	20.74	6044	2782	246	663	909	
5	80	4.68	5.990	33.968	20.28	0.312	2.26	0.80	1.00	0.9	25.34	57.39	20.28	6171	2887	229	689	918	
4	60	4.32	5.990	33.392	19.70	0.308	2.28	0.80	1.00	0.9	24.95	56.78	19.70	6231	2928	208	683	891	
3	40	3.84	5.990	32.610	18.92	0.302	2.29	0.80	1.00	0.9	24.42	55.94	18.92	6104	2798	183	610	793	
2	20	3.54	5.990	31.342	17.65	0.292	2.32	0.80	1.00	0.8	23.56	54.59	17.65	5992	2674	164	592	756	
1	5	3.54	8.542	11.410	6.12	0.592	1.81	0.80	1.00	0.7	15.27	27.61	6.12	3286	1227	83	169	213	**
** = Section Force Exceeds Solidity Ratio Criteria														71,085	30,483			9,327	

1.2D + 1.0Di + 1.0Wi 90° — Gust Response Factor (Gh): 0.85 — Ice Importance Factor: 1.00
48.73 mph wind with 0.850" radial ice — Wind Importance Factor (Iw): 1.00 — Ice Dead Load Factor: 1.00

Sect	Elev	Q_z	A_f	A_r	Ice A_r	e	C_f	D_f	D_r	T_{iz}	A_e	EPA_a	EPA_{ai}	Wt.	Ice Wt	F_{st}	F_a	Force (lb)

SECTION FORCES

#	(ft)	(psf)	(sf)	(sf)	(sf)					(in)	(sf)	(sf)	(sf)	(lb)	(lb)	(lb)	(lb)		
14	247	6.47	7.996	7.676	5.01	0.458	1.96	0.85	1.00	1.0	11.89	23.31	5.01	2566	826	128	20	148	
13	237	6.39	4.792	27.187	17.09	0.339	2.20	0.85	1.00	1.0	20.77	45.63	17.09	3221	1104	248	77	325	
12	220	6.25	5.990	36.126	22.44	0.328	2.22	0.85	1.00	1.0	27.14	60.36	22.44	4583	1700	321	212	533	
11	200	6.09	5.990	35.914	22.22	0.326	2.23	0.85	1.00	1.0	26.99	60.13	22.22	4869	1952	311	326	637	
10	180	5.91	5.990	35.680	21.99	0.325	2.23	0.85	1.00	1.0	26.82	59.89	21.99	4999	2059	301	370	671	
9	160	5.71	5.990	35.423	21.73	0.323	2.24	0.85	1.00	1.0	26.64	59.61	21.73	5436	2348	289	514	803	
8	140	5.50	5.990	35.135	21.45	0.321	2.24	0.85	1.00	1.0	26.44	59.31	21.45	5727	2559	277	597	875	
7	120	5.26	5.990	34.807	21.12	0.318	2.25	0.85	1.00	1.0	26.22	58.96	21.12	5855	2640	264	619	883	
6	100	4.99	5.990	34.425	20.74	0.315	2.26	0.85	1.00	0.9	25.95	58.55	20.74	6044	2782	248	663	912	
5	80	4.68	5.990	33.968	20.28	0.312	2.26	0.85	1.00	0.9	25.64	58.07	20.28	6171	2887	231	689	921	
4	60	4.32	5.990	33.392	19.70	0.308	2.28	0.85	1.00	0.9	25.25	57.46	19.70	6231	2928	211	683	894	
3	40	3.84	5.990	32.610	18.92	0.302	2.29	0.85	1.00	0.9	24.72	56.63	18.92	6104	2798	185	610	795	
2	20	3.54	5.990	31.342	17.65	0.292	2.32	0.85	1.00	0.8	23.86	55.28	17.65	5992	2674	166	592	758	
1	5	3.54	8.542	11.410	6.12	0.592	1.81	0.85	1.00	0.7	15.69	28.38	6.12	3286	1227	85	169	213	**
** = Section Force Exceeds Solidity Ratio Criteria														71,085	30,483			9,366	

1.2D + 1.0Di + 1.0Wi 120° Gust Response Factor (Gh): 0.85 Ice Importance Factor: 1.00
48.73 mph wind with 0.850" radial ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
14	247	6.47	7.996	7.676	5.01	0.458	1.96	1.00	1.00	1.0	13.09	25.66	5.01	2566	826	141	20	161	
13	237	6.39	4.792	27.187	17.09	0.339	2.20	1.00	1.00	1.0	21.49	47.21	17.09	3221	1104	256	77	334	
12	220	6.25	5.990	36.126	22.44	0.328	2.22	1.00	1.00	1.0	28.03	62.36	22.44	4583	1700	332	212	544	
11	200	6.09	5.990	35.914	22.22	0.326	2.23	1.00	1.00	1.0	27.89	62.13	22.22	4869	1952	321	326	647	
10	180	5.91	5.990	35.680	21.99	0.325	2.23	1.00	1.00	1.0	27.72	61.89	21.99	4999	2059	311	370	681	
9	160	5.71	5.990	35.423	21.73	0.323	2.24	1.00	1.00	1.0	27.54	61.62	21.73	5436	2348	299	514	813	
8	140	5.50	5.990	35.135	21.45	0.321	2.24	1.00	1.00	1.0	27.34	61.32	21.45	5727	2559	287	597	884	
7	120	5.26	5.990	34.807	21.12	0.318	2.25	1.00	1.00	1.0	27.12	60.98	21.12	5855	2640	273	619	892	
6	100	4.99	5.990	34.425	20.74	0.315	2.26	1.00	1.00	0.9	26.85	60.58	20.74	6044	2782	257	663	921	
5	80	4.68	5.990	33.968	20.28	0.312	2.26	1.00	1.00	0.9	26.54	60.10	20.28	6171	2887	239	689	929	
4	60	4.32	5.990	33.392	19.70	0.308	2.28	1.00	1.00	0.9	26.14	59.50	19.70	6231	2928	218	683	901	
3	40	3.84	5.990	32.610	18.92	0.302	2.29	1.00	1.00	0.9	25.61	58.68	18.92	6104	2798	192	610	802	
2	20	3.54	5.990	31.342	17.65	0.292	2.32	1.00	1.00	0.8	24.76	57.36	17.65	5992	2674	172	592	765	
1	5	3.54	8.542	11.410	6.12	0.592	1.81	1.00	1.00	0.7	16.97	30.70	6.12	3286	1227	92	169	213	**
** = Section Force Exceeds Solidity Ratio Criteria														71,085	30,483			9,484	

1.2D + 1.0Di + 1.0Wi 180° Gust Response Factor (Gh): 0.85 Ice Importance Factor: 1.00
48.73 mph wind with 0.850" radial ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
14	247	6.47	7.996	7.676	5.01	0.458	1.96	0.80	1.00	1.0	11.49	22.53	5.01	2566	826	124	20	143	
13	237	6.39	4.792	27.187	17.09	0.339	2.20	0.80	1.00	1.0	20.53	45.10	17.09	3221	1104	245	77	322	
12	220	6.25	5.990	36.126	22.44	0.328	2.22	0.80	1.00	1.0	26.84	59.69	22.44	4583	1700	317	212	530	
11	200	6.09	5.990	35.914	22.22	0.326	2.23	0.80	1.00	1.0	26.69	59.47	22.22	4869	1952	308	326	633	
10	180	5.91	5.990	35.680	21.99	0.325	2.23	0.80	1.00	1.0	26.52	59.22	21.99	4999	2059	297	370	668	
9	160	5.71	5.990	35.423	21.73	0.323	2.24	0.80	1.00	1.0	26.35	58.94	21.73	5436	2348	286	514	800	
8	140	5.50	5.990	35.135	21.45	0.321	2.24	0.80	1.00	1.0	26.14	58.63	21.45	5727	2559	274	597	871	
7	120	5.26	5.990	34.807	21.12	0.318	2.25	0.80	1.00	1.0	25.92	58.28	21.12	5855	2640	261	619	880	
6	100	4.99	5.990	34.425	20.74	0.315	2.26	0.80	1.00	0.9	25.65	57.88	20.74	6044	2782	246	663	909	
5	80	4.68	5.990	33.968	20.28	0.312	2.26	0.80	1.00	0.9	25.34	57.39	20.28	6171	2887	229	689	918	
4	60	4.32	5.990	33.392	19.70	0.308	2.28	0.80	1.00	0.9	24.95	56.78	19.70	6231	2928	208	683	891	
3	40	3.84	5.990	32.610	18.92	0.302	2.29	0.80	1.00	0.9	24.42	55.94	18.92	6104	2798	183	610	793	
2	20	3.54	5.990	31.342	17.65	0.292	2.32	0.80	1.00	0.8	23.56	54.59	17.65	5992	2674	164	592	756	
1	5	3.54	8.542	11.410	6.12	0.592	1.81	0.80	1.00	0.7	15.27	27.61	6.12	3286	1227	83	169	213	**
** = Section Force Exceeds Solidity Ratio Criteria														71,085	30,483			9,327	

1.2D + 1.0Di + 1.0Wi 210° Gust Response Factor (Gh): 0.85 Ice Importance Factor: 1.00
48.73 mph wind with 0.850" radial ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

SECTION FORCES

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
14	247	6.47	7.996	7.676	5.01	0.458	1.96	0.85	1.00	1.0	11.89	23.31	5.01	2566	826	128	20	148	
13	237	6.39	4.792	27.187	17.09	0.339	2.20	0.85	1.00	1.0	20.77	45.63	17.09	3221	1104	248	77	325	
12	220	6.25	5.990	36.126	22.44	0.328	2.22	0.85	1.00	1.0	27.14	60.36	22.44	4583	1700	321	212	533	
11	200	6.09	5.990	35.914	22.22	0.326	2.23	0.85	1.00	1.0	26.99	60.13	22.22	4869	1952	311	326	637	
10	180	5.91	5.990	35.680	21.99	0.325	2.23	0.85	1.00	1.0	26.82	59.89	21.99	4999	2059	301	370	671	
9	160	5.71	5.990	35.423	21.73	0.323	2.24	0.85	1.00	1.0	26.64	59.61	21.73	5436	2348	289	514	803	
8	140	5.50	5.990	35.135	21.45	0.321	2.24	0.85	1.00	1.0	26.44	59.31	21.45	5727	2559	277	597	875	
7	120	5.26	5.990	34.807	21.12	0.318	2.25	0.85	1.00	1.0	26.22	58.96	21.12	5855	2640	264	619	883	
6	100	4.99	5.990	34.425	20.74	0.315	2.26	0.85	1.00	0.9	25.95	58.55	20.74	6044	2782	248	663	912	
5	80	4.68	5.990	33.968	20.28	0.312	2.26	0.85	1.00	0.9	25.64	58.07	20.28	6171	2887	231	689	921	
4	60	4.32	5.990	33.392	19.70	0.308	2.28	0.85	1.00	0.9	25.25	57.46	19.70	6231	2928	211	683	894	
3	40	3.84	5.990	32.610	18.92	0.302	2.29	0.85	1.00	0.9	24.72	56.63	18.92	6104	2798	185	610	795	
2	20	3.54	5.990	31.342	17.65	0.292	2.32	0.85	1.00	0.8	23.86	55.28	17.65	5992	2674	166	592	758	
1	5	3.54	8.542	11.410	6.12	0.592	1.81	0.85	1.00	0.7	15.69	28.38	6.12	3286	1227	85	169	213	**
** = Section Force Exceeds Solidity Ratio Criteria														71,085	30,483			9,366	

1.2D + 1.0Di + 1.0Wi 240° | Gust Response Factor (Gh): 0.85 | Ice Importance Factor: 1.00
48.73 mph wind with 0.850" radial ice | Wind Importance Factor (Iw): 1.00 | Ice Dead Load Factor: 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
14	247	6.47	7.996	7.676	5.01	0.458	1.96	1.00	1.00	1.0	13.09	25.66	5.01	2566	826	141	20	161	
13	237	6.39	4.792	27.187	17.09	0.339	2.20	1.00	1.00	1.0	21.49	47.21	17.09	3221	1104	256	77	334	
12	220	6.25	5.990	36.126	22.44	0.328	2.22	1.00	1.00	1.0	28.03	62.36	22.44	4583	1700	332	212	544	
11	200	6.09	5.990	35.914	22.22	0.326	2.23	1.00	1.00	1.0	27.89	62.13	22.22	4869	1952	321	326	647	
10	180	5.91	5.990	35.680	21.99	0.325	2.23	1.00	1.00	1.0	27.72	61.89	21.99	4999	2059	311	370	681	
9	160	5.71	5.990	35.423	21.73	0.323	2.24	1.00	1.00	1.0	27.54	61.62	21.73	5436	2348	299	514	813	
8	140	5.50	5.990	35.135	21.45	0.321	2.24	1.00	1.00	1.0	27.34	61.32	21.45	5727	2559	287	597	884	
7	120	5.26	5.990	34.807	21.12	0.318	2.25	1.00	1.00	1.0	27.12	60.98	21.12	5855	2640	273	619	892	
6	100	4.99	5.990	34.425	20.74	0.315	2.26	1.00	1.00	0.9	26.85	60.58	20.74	6044	2782	257	663	921	
5	80	4.68	5.990	33.968	20.28	0.312	2.26	1.00	1.00	0.9	26.54	60.10	20.28	6171	2887	239	689	929	
4	60	4.32	5.990	33.392	19.70	0.308	2.28	1.00	1.00	0.9	26.14	59.50	19.70	6231	2928	218	683	901	
3	40	3.84	5.990	32.610	18.92	0.302	2.29	1.00	1.00	0.9	25.61	58.68	18.92	6104	2798	192	610	802	
2	20	3.54	5.990	31.342	17.65	0.292	2.32	1.00	1.00	0.8	24.76	57.36	17.65	5992	2674	172	592	765	
1	5	3.54	8.542	11.410	6.12	0.592	1.81	1.00	1.00	0.7	16.97	30.70	6.12	3286	1227	92	169	213	**
** = Section Force Exceeds Solidity Ratio Criteria														71,085	30,483			9,484	

1.2D + 1.0Di + 1.0Wi 300° | Gust Response Factor (Gh): 0.85 | Ice Importance Factor: 1.00
48.73 mph wind with 0.850" radial ice | Wind Importance Factor (Iw): 1.00 | Ice Dead Load Factor: 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
14	247	6.47	7.996	7.676	5.01	0.458	1.96	0.80	1.00	1.0	11.49	22.53	5.01	2566	826	124	20	143	
13	237	6.39	4.792	27.187	17.09	0.339	2.20	0.80	1.00	1.0	20.53	45.10	17.09	3221	1104	245	77	322	
12	220	6.25	5.990	36.126	22.44	0.328	2.22	0.80	1.00	1.0	26.84	59.69	22.44	4583	1700	317	212	530	
11	200	6.09	5.990	35.914	22.22	0.326	2.23	0.80	1.00	1.0	26.69	59.47	22.22	4869	1952	308	326	633	
10	180	5.91	5.990	35.680	21.99	0.325	2.23	0.80	1.00	1.0	26.52	59.22	21.99	4999	2059	297	370	668	
9	160	5.71	5.990	35.423	21.73	0.323	2.24	0.80	1.00	1.0	26.35	58.94	21.73	5436	2348	286	514	800	
8	140	5.50	5.990	35.135	21.45	0.321	2.24	0.80	1.00	1.0	26.14	58.63	21.45	5727	2559	274	597	871	
7	120	5.26	5.990	34.807	21.12	0.318	2.25	0.80	1.00	1.0	25.92	58.28	21.12	5855	2640	261	619	880	
6	100	4.99	5.990	34.425	20.74	0.315	2.26	0.80	1.00	0.9	25.65	57.88	20.74	6044	2782	246	663	909	
5	80	4.68	5.990	33.968	20.28	0.312	2.26	0.80	1.00	0.9	25.34	57.39	20.28	6171	2887	229	689	918	
4	60	4.32	5.990	33.392	19.70	0.308	2.28	0.80	1.00	0.9	24.95	56.78	19.70	6231	2928	208	683	891	
3	40	3.84	5.990	32.610	18.92	0.302	2.29	0.80	1.00	0.9	24.42	55.94	18.92	6104	2798	183	610	793	
2	20	3.54	5.990	31.342	17.65	0.292	2.32	0.80	1.00	0.8	23.56	54.59	17.65	5992	2674	164	592	756	
1	5	3.54	8.542	11.410	6.12	0.592	1.81	0.80	1.00	0.7	15.27	27.61	6.12	3286	1227	83	169	213	**
** = Section Force Exceeds Solidity Ratio Criteria														71,085	30,483			9,327	

SECTION FORCES

1.2D + 1.0Di + 1.0Wi 330°
48.73 mph wind with 0.850" radial ice
Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00
Ice Importance Factor: 1.00
Ice Dead Load Factor: 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)	
14	247	6.47	7.996	7.676	5.01	0.458	1.96	0.85	1.00	1.0	11.89	23.31	5.01	2566	826	128	20	148	
13	237	6.39	4.792	27.187	17.09	0.339	2.20	0.85	1.00	1.0	20.77	45.63	17.09	3221	1104	248	77	325	
12	220	6.25	5.990	36.126	22.44	0.328	2.22	0.85	1.00	1.0	27.14	60.36	22.44	4583	1700	321	212	533	
11	200	6.09	5.990	35.914	22.22	0.326	2.23	0.85	1.00	1.0	26.99	60.13	22.22	4869	1952	311	326	637	
10	180	5.91	5.990	35.680	21.99	0.325	2.23	0.85	1.00	1.0	26.82	59.89	21.99	4999	2059	301	370	671	
9	160	5.71	5.990	35.423	21.73	0.323	2.24	0.85	1.00	1.0	26.64	59.61	21.73	5436	2348	289	514	803	
8	140	5.50	5.990	35.135	21.45	0.321	2.24	0.85	1.00	1.0	26.44	59.31	21.45	5727	2559	277	597	875	
7	120	5.26	5.990	34.807	21.12	0.318	2.25	0.85	1.00	1.0	26.22	58.96	21.12	5855	2640	264	619	883	
6	100	4.99	5.990	34.425	20.74	0.315	2.26	0.85	1.00	0.9	25.95	58.55	20.74	6044	2782	248	663	912	
5	80	4.68	5.990	33.968	20.28	0.312	2.26	0.85	1.00	0.9	25.64	58.07	20.28	6171	2887	231	689	921	
4	60	4.32	5.990	33.392	19.70	0.308	2.28	0.85	1.00	0.9	25.25	57.46	19.70	6231	2928	211	683	894	
3	40	3.84	5.990	32.610	18.92	0.302	2.29	0.85	1.00	0.9	24.72	56.63	18.92	6104	2798	185	610	795	
2	20	3.54	5.990	31.342	17.65	0.292	2.32	0.85	1.00	0.8	23.86	55.28	17.65	5992	2674	166	592	758	
1	5	3.54	8.542	11.410	6.12	0.592	1.81	0.85	1.00	0.7	15.69	28.38	6.12	3286	1227	85	169	213	**
** = Section Force Exceeds Solidity Ratio Criteria														71,085	30,483			9,366	

1.0D + 1.0W Service Normal
60 mph Wind with No Ice
Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
14	247	9.80	7.996	2.667	0.00	0.320	2.24	1.00	1.00	0.0	9.61	21.57	0.00	1450	0	180	33	212
13	237	9.69	4.792	10.096	0.00	0.162	2.73	1.00	1.00	0.0	10.59	28.87	0.00	1765	0	238	95	333
12	220	9.48	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2403	0	306	179	485
11	200	9.23	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2430	0	298	220	518
10	180	8.95	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2449	0	289	239	528
9	160	8.66	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2574	0	280	280	560
8	140	8.33	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2640	0	269	328	597
7	120	7.97	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2679	0	257	340	597
6	100	7.57	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2719	0	244	354	598
5	80	7.10	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2737	0	229	358	587
4	60	6.54	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2753	0	211	350	561
3	40	5.83	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2755	0	188	315	503
2	20	5.36	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2765	0	173	303	476
1	5	5.36	8.542	5.292	0.00	0.426	2.02	1.00	1.00	0.0	11.97	24.12	0.00	1716	0	110	148	258
** = Section Force Exceeds Solidity Ratio Criteria														33,835	0			6,813

1.0D + 1.0W Service 60°
60 mph Wind with No Ice
Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
14	247	9.80	7.996	2.667	0.00	0.320	2.24	0.80	1.00	0.0	8.01	17.98	0.00	1450	0	150	33	182
13	237	9.69	4.792	10.096	0.00	0.162	2.73	0.80	1.00	0.0	9.63	26.26	0.00	1765	0	216	95	311
12	220	9.48	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2403	0	280	179	459
11	200	9.23	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2430	0	272	220	492
10	180	8.95	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2449	0	264	239	503
9	160	8.66	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2574	0	255	280	535
8	140	8.33	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2640	0	246	328	574
7	120	7.97	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2679	0	235	340	575
6	100	7.57	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2719	0	223	354	577
5	80	7.10	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2737	0	209	358	567
4	60	6.54	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2753	0	193	350	543
3	40	5.83	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2755	0	172	315	487
2	20	5.36	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2765	0	158	303	461

SECTION FORCES

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
1	5	5.36	8.542	5.292	0.00	0.426	2.02	0.80	1.00	0.0	10.26	20.68	0.00	1716	0	94	148	242
** = Section Force Exceeds Solidity Ratio Criteria														33,835	0			6,509

1.0D + 1.0W Service 90° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
14	247	9.80	7.996	2.667	0.00	0.320	2.24	0.85	1.00	0.0	8.41	18.87	0.00	1450	0	157	33	190
13	237	9.69	4.792	10.096	0.00	0.162	2.73	0.85	1.00	0.0	9.87	26.91	0.00	1765	0	222	95	316
12	220	9.48	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2403	0	286	179	465
11	200	9.23	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2430	0	279	220	499
10	180	8.95	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2449	0	270	239	510
9	160	8.66	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2574	0	261	280	541
8	140	8.33	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2640	0	252	328	579
7	120	7.97	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2679	0	241	340	580
6	100	7.57	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2719	0	229	354	582
5	80	7.10	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2737	0	214	358	572
4	60	6.54	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2753	0	197	350	548
3	40	5.83	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2755	0	176	315	491
2	20	5.36	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2765	0	162	303	465
1	5	5.36	8.542	5.292	0.00	0.426	2.02	0.85	1.00	0.0	10.69	21.54	0.00	1716	0	98	148	246
** = Section Force Exceeds Solidity Ratio Criteria														33,835	0			6,585

1.0D + 1.0W Service 120° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
14	247	9.80	7.996	2.667	0.00	0.320	2.24	1.00	1.00	0.0	9.61	21.57	0.00	1450	0	180	33	212
13	237	9.69	4.792	10.096	0.00	0.162	2.73	1.00	1.00	0.0	10.59	28.87	0.00	1765	0	238	95	333
12	220	9.48	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2403	0	306	179	485
11	200	9.23	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2430	0	298	220	518
10	180	8.95	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2449	0	289	239	528
9	160	8.66	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2574	0	280	280	560
8	140	8.33	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2640	0	269	328	597
7	120	7.97	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2679	0	257	340	597
6	100	7.57	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2719	0	244	354	598
5	80	7.10	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2737	0	229	358	587
4	60	6.54	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2753	0	211	350	561
3	40	5.83	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2755	0	188	315	503
2	20	5.36	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2765	0	173	303	476
1	5	5.36	8.542	5.292	0.00	0.426	2.02	1.00	1.00	0.0	11.97	24.12	0.00	1716	0	110	148	258
** = Section Force Exceeds Solidity Ratio Criteria														33,835	0			6,813

1.0D + 1.0W Service 180° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
14	247	9.80	7.996	2.667	0.00	0.320	2.24	0.80	1.00	0.0	8.01	17.98	0.00	1450	0	150	33	182
13	237	9.69	4.792	10.096	0.00	0.162	2.73	0.80	1.00	0.0	9.63	26.26	0.00	1765	0	216	95	311
12	220	9.48	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2403	0	280	179	459
11	200	9.23	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2430	0	272	220	492
10	180	8.95	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2449	0	264	239	503
9	160	8.66	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2574	0	255	280	535
8	140	8.33	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2640	0	246	328	574
7	120	7.97	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2679	0	235	340	575
6	100	7.57	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2719	0	223	354	577

SECTION FORCES

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
5	80	7.10	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2737	0	209	358	567
4	60	6.54	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2753	0	193	350	543
3	40	5.83	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2755	0	172	315	487
2	20	5.36	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2765	0	158	303	461
1	5	5.36	8.542	5.292	0.00	0.426	2.02	0.80	1.00	0.0	10.26	20.68	0.00	1716	0	94	148	242
** = Section Force Exceeds Solidity Ratio Criteria														33,835	0			6,509

1.0D + 1.0W Service 210° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
14	247	9.80	7.996	2.667	0.00	0.320	2.24	0.85	1.00	0.0	8.41	18.87	0.00	1450	0	157	33	190
13	237	9.69	4.792	10.096	0.00	0.162	2.73	0.85	1.00	0.0	9.87	26.91	0.00	1765	0	222	95	316
12	220	9.48	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2403	0	286	179	465
11	200	9.23	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2430	0	279	220	499
10	180	8.95	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2449	0	270	239	510
9	160	8.66	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2574	0	261	280	541
8	140	8.33	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2640	0	252	328	579
7	120	7.97	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2679	0	241	340	580
6	100	7.57	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2719	0	229	354	582
5	80	7.10	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2737	0	214	358	572
4	60	6.54	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2753	0	197	350	548
3	40	5.83	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2755	0	176	315	491
2	20	5.36	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2765	0	162	303	465
1	5	5.36	8.542	5.292	0.00	0.426	2.02	0.85	1.00	0.0	10.69	21.54	0.00	1716	0	98	148	246
** = Section Force Exceeds Solidity Ratio Criteria														33,835	0			6,585

1.0D + 1.0W Service 240° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
14	247	9.80	7.996	2.667	0.00	0.320	2.24	1.00	1.00	0.0	9.61	21.57	0.00	1450	0	180	33	212
13	237	9.69	4.792	10.096	0.00	0.162	2.73	1.00	1.00	0.0	10.59	28.87	0.00	1765	0	238	95	333
12	220	9.48	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2403	0	306	179	485
11	200	9.23	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2430	0	298	220	518
10	180	8.95	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2449	0	289	239	528
9	160	8.66	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2574	0	280	280	560
8	140	8.33	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2640	0	269	328	597
7	120	7.97	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2679	0	257	340	597
6	100	7.57	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2719	0	244	354	598
5	80	7.10	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2737	0	229	358	587
4	60	6.54	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2753	0	211	350	561
3	40	5.83	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2755	0	188	315	503
2	20	5.36	5.990	13.688	0.00	0.157	2.74	1.00	1.00	0.0	13.84	37.98	0.00	2765	0	173	303	476
1	5	5.36	8.542	5.292	0.00	0.426	2.02	1.00	1.00	0.0	11.97	24.12	0.00	1716	0	110	148	258
** = Section Force Exceeds Solidity Ratio Criteria														33,835	0			6,813

1.0D + 1.0W Service 300° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
14	247	9.80	7.996	2.667	0.00	0.320	2.24	0.80	1.00	0.0	8.01	17.98	0.00	1450	0	150	33	182
13	237	9.69	4.792	10.096	0.00	0.162	2.73	0.80	1.00	0.0	9.63	26.26	0.00	1765	0	216	95	311
12	220	9.48	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2403	0	280	179	459
11	200	9.23	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2430	0	272	220	492
10	180	8.95	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2449	0	264	239	503

SECTION FORCES

Sect #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
9	160	8.66	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2574	0	255	280	535
8	140	8.33	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2640	0	246	328	574
7	120	7.97	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2679	0	235	340	575
6	100	7.57	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2719	0	223	354	577
5	80	7.10	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2737	0	209	358	567
4	60	6.54	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2753	0	193	350	543
3	40	5.83	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2755	0	172	315	487
2	20	5.36	5.990	13.688	0.00	0.157	2.74	0.80	1.00	0.0	12.64	34.70	0.00	2765	0	158	303	461
1	5	5.36	8.542	5.292	0.00	0.426	2.02	0.80	1.00	0.0	10.26	20.68	0.00	1716	0	94	148	242
** = Section Force Exceeds Solidity Ratio Criteria														33,835	0			6,509

1.0D + 1.0W Service 330°
60 mph Wind with No Ice

Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Sect #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt. (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
14	247	9.80	7.996	2.667	0.00	0.320	2.24	0.85	1.00	0.0	8.41	18.87	0.00	1450	0	157	33	190
13	237	9.69	4.792	10.096	0.00	0.162	2.73	0.85	1.00	0.0	9.87	26.91	0.00	1765	0	222	95	316
12	220	9.48	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2403	0	286	179	465
11	200	9.23	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2430	0	279	220	499
10	180	8.95	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2449	0	270	239	510
9	160	8.66	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2574	0	261	280	541
8	140	8.33	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2640	0	252	328	579
7	120	7.97	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2679	0	241	340	580
6	100	7.57	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2719	0	229	354	582
5	80	7.10	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2737	0	214	358	572
4	60	6.54	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2753	0	197	350	548
3	40	5.83	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2755	0	176	315	491
2	20	5.36	5.990	13.688	0.00	0.157	2.74	0.85	1.00	0.0	12.94	35.52	0.00	2765	0	162	303	465
1	5	5.36	8.542	5.292	0.00	0.426	2.02	0.85	1.00	0.0	10.69	21.54	0.00	1716	0	98	148	246
** = Section Force Exceeds Solidity Ratio Criteria														33,835	0			6,585

EQUIVALENT LATERAL FORCE METHOD

Spectral Response Acceleration for Short Period (S_S):	0.20
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.05
Long-Period Transition Period (T_L – Seconds):	6
Importance Factor (I_e):	1.00
Site Coefficient F_a:	1.60
Site Coefficient F_v:	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.22
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.09
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):	1.80
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.65
Total Unfactored Dead Load:	56.58 k
Seismic Base Shear (E):	2.21 k

SEISMIC

Load Case: 1.2D + 1.0Ev + 1.0Eh Seismic

Section	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	Cvx	Horizontal Force (lb)	Vertical Force (lb)
14	247.34	1,450	12,747,550	0.045	99	1,803
13	237.34	1,765	14,492,958	0.051	113	2,194
12	220.00	2,403	17,413,838	0.061	135	2,987
11	200.00	2,430	15,054,147	0.053	117	3,021
10	180.00	2,449	12,752,804	0.045	99	3,045
9	160.00	2,574	11,037,068	0.039	86	3,200
8	140.00	2,640	9,085,688	0.032	71	3,282
7	120.00	2,679	7,150,153	0.025	56	3,330
6	100.00	2,719	5,373,985	0.019	42	3,380
5	80.00	2,737	3,744,891	0.013	29	3,402
4	60.00	2,753	2,344,748	0.008	18	3,422
3	40.00	2,755	1,202,830	0.004	9	3,425
2	20.00	2,765	385,178	0.001	3	3,437
1	5.00	1,716	24,338	0.000	0	2,133
Lightning Protection	250.00	50	447,341	0.002	3	62
Beacon	250.00	100	894,682	0.003	7	124
Top Pole	250.00	5,000	44,734,116	0.158	348	6,215
Hardline	250.00	200	1,789,365	0.006	14	249
Mount	250.00	500	4,473,412	0.016	35	622
Base Pole	250.00	10,000	89,468,232	0.315	695	12,431
Generic Round Side Arm	240.00	188	1,568,390	0.006	12	233
Generic 12' Omni-Grid	240.00	60	501,885	0.002	4	75
Generic 5' Omni	231.00	10	78,541	0.000	1	12
Generic Round Stand-Off	231.00	188	1,472,650	0.005	11	233
Generic 24" x 43" 1 Bay FM	229.00	15	116,136	0.000	1	19
Generic Round Side Arm	227.00	188	1,430,863	0.005	11	233
Generic 20' Omni	227.00	55	419,720	0.002	3	68
Commander 458-2N	217.00	66	467,624	0.002	4	82
Generic Round Side Arm	217.00	188	1,328,477	0.005	10	233
Generic 20' Dipole	217.00	60	425,113	0.002	3	75
Generic Round T-Arm	215.00	312	2,180,600	0.008	17	388
Generic 8' Yagi	215.00	120	837,350	0.003	7	149

Motorola PTP-600	210.00	12	81,221	0.000	1	15
Generic 4' Yagi	209.00	15	99,899	0.000	1	19
Generic Round Side Arm	200.00	188	1,161,363	0.004	9	233
RFS 220-3AN	200.00	24	148,654	0.000	1	30
Generic Blank Exhibit	190.00	0	0	0.000	0	0
Generic 8' Yagi	188.00	30	167,805	0.001	1	37
Generic 12' Omni	182.00	40	212,094	0.001	2	50
Generic Round Side Arm	182.00	188	994,192	0.004	8	233
Generic 5' Yagi	180.00	20	104,134	0.000	1	25
Generic 8' Dipole	177.00	25	126,611	0.000	1	31
Generic Round Side Arm	177.00	188	949,584	0.003	7	233
Generic 4' Grid Dish	175.00	51	253,495	0.001	2	63
Generic 8' Omni	171.00	25	119,616	0.000	1	31
Generic Round Side Arm	171.00	188	897,123	0.003	7	233
Generic 10' Omni	170.00	25	118,466	0.000	1	31
Generic Round Side Arm	170.00	188	888,494	0.003	7	233
Generic 8' Yagi	167.00	120	552,194	0.002	4	149
Generic Torque Arm	166.00	500	2,278,148	0.008	18	622
Generic 12' Omni	159.00	40	169,761	0.001	1	50
Generic Round Side Arm	159.00	188	795,754	0.003	6	233
Generic 15' Omni	155.00	40	162,780	0.001	1	50
Generic Round Side Arm	155.00	188	763,033	0.003	6	233
Generic 3' Yagi	153.00	10	39,833	0.000	0	12
Generic 8' Omni	146.00	25	92,187	0.000	1	31
Generic Round Side Arm	145.00	188	683,617	0.002	5	233
Generic 20' Dipole	145.00	60	218,757	0.001	2	75
Generic 12' Omni	142.00	40	140,899	0.000	1	50
Generic Round Side Arm	142.00	188	660,466	0.002	5	233
Raycap RDIDC-9181-PF-48	120.00	22	58,454	0.000	0	27
Fujitsu TA08025-B605	120.00	225	600,558	0.002	5	280
Fujitsu TA08025-B604	120.00	192	511,676	0.002	4	238
JMA Wireless MX08FRO665-21	120.00	194	516,480	0.002	4	241
Generic Round Sector Frame	120.00	900	2,402,233	0.008	19	1,119
Generic 3' Yagi	114.00	10	24,528	0.000	0	12
Generic 4' Grid Dish	112.00	51	121,497	0.000	1	63
Generic Round Side Arm	107.00	188	414,296	0.002	3	233
Generic 20' Dipole	107.00	60	132,575	0.000	1	75
Generic 4' Grid Dish	106.00	51	110,958	0.000	1	63
Generic 8' Yagi	102.00	30	61,260	0.000	0	37
Generic 8' Yagi	101.00	30	60,274	0.000	0	37
Generic 24" x 43" 1 Bay FM	91.00	15	25,379	0.000	0	19
Generic 4' Grid Dish	91.00	51	86,290	0.000	1	63
Generic 6' Yagi	84.00	25	37,072	0.000	0	31
Generic Blank Exhibit	80.00	0	0	0.000	0	0
Generic 74" x 12" Panel	80.00	45	61,574	0.000	0	56
Generic 4' Grid Dish	78.00	51	66,932	0.000	1	63
Generic 10' Omni	77.00	25	32,120	0.000	0	31
Generic Round Side Arm	77.00	188	240,897	0.001	2	233
Generic 24" x 43" 1 Bay FM	73.00	15	17,650	0.000	0	19
Generic 1' Yagi	67.00	5	5,108	0.000	0	6
Generic 8' Yagi	62.00	120	107,880	0.000	1	149
Generic 3' Yagi	38.00	10	4,012	0.000	0	12
Generic 5' Yagi	34.00	20	6,681	0.000	0	25
Generic 2" x 4" GPS	31.00	10	2,869	0.000	0	12
Generic 3' Yagi	29.00	10	2,570	0.000	0	12
Generic 2" x 4" GPS	26.00	5	1,073	0.000	0	6
Generic 3' Yagi	24.00	10	1,882	0.000	0	12
Generic 3' Std. Dish	18.00	100	11,712	0.000	0	124
Generic 2" x 4" GPS	13.00	5	343	0.000	0	6
Totals		56,584	284,051,685	1.000	2,207	70,339

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Section 1 – Bolt Elevation 0.0 (ft) and Height 10.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 3" SOLID	-62.81	1.2D + 1.0Di + 1.0Wi N	4.586	100	100	100	73.38	50.0	214.58	0.00	0.00	0	0	29	Member X
D SAE - 2.5X2.5X0.375	-8.13	1.2D + 1.0W N	4.733	100	100	100	118.32	36.0	34.86	0.00	0.00	0	0	0	Member Z

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H CHN - C6 x 8.2	10.15	1.2D + 1.0Di + 1.0Wi N	36.0	58	77.76	0.00	0.00	0.00	0	0	13	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

Section 2 – Bolt Elevation 10.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 3" SOLID	-72.01	1.2D + 1.0Di + 1.0Wi 60	4.709	100	0	100	75.34	50.0	210.06	0.00	0.00	0	0	34	Member X
H SAE - 2.5X2.5X0.25	-2.45	1.2D + 1.0W 90°	6	100	100	100	146.64	36.0	15.84	27.61	34.80	2	1	15	Member Z
D SOL - 3/4" SOLID	-0.09	1.2D + 1.0W N	7.627	100	100	100	488.12	36.0	0.42	0.00	104.40	2	1	0	Member X

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2.5X2.5X0.25	6.53	1.2D + 1.0Di + 1.0Wi N	36.0	58	33.22	27.61	27.84	19.17	2	1	34	Blk Shear
D SOL - 3/4" SOLID	3.21	1.2D + 1.0W 90°	36.0	58	14.31	0.00	83.52	0.00	2	1	22	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

Section 3 – Bolt Elevation 30.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 3" SOLID	-71.72	1.2D + 1.0Di + 1.0Wi 60	4.709	100	0	100	75.34	50.0	210.06	0.00	0.00	0	0	34	Member X
H SAE - 2.5X2.5X0.25	-0.73	1.2D + 1.0W N	6	100	100	100	146.64	36.0	15.84	27.61	34.80	2	1	4	Member Z
D SOL - 3/4" SOLID	-0.14	1.2D + 1.0W N	7.627	100	100	100	488.12	36.0	0.42	0.00	104.40	2	1	0	Member X

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2.5X2.5X0.25	0.20	1.2D + 1.0W 60°	36.0	58	33.22	27.61	27.84	19.17	2	1	1	Blk Shear
D SOL - 3/4" SOLID	1.18	1.2D + 1.0W N	36.0	58	14.31	0.00	83.52	0.00	2	1	8	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

Section 4 – Bolt Elevation 50.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 3" SOLID	-70.33	1.2D + 1.0Di + 1.0Wi 60	4.709	100	0	100	75.34	50.0	210.06	0.00	0.00	0	0	33	Member X
H SAE - 2.5X2.5X0.25	-2.10	1.2D + 1.0W 90°	6	100	100	100	146.64	36.0	15.84	27.61	34.80	2	1	13	Member Z
D SOL - 3/4" SOLID	-0.04	1.2D + 1.0W N	7.627	100	100	100	488.12	36.0	0.42	0.00	104.40	2	1	0	Member X

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Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2.5X2.5X0.25	0.49	1.2D + 1.0W 60°	36.0	58	33.22	27.61	27.84	19.17	2	1	2	Blk Shear
D SOL - 3/4" SOLID	3.15	1.2D + 1.0W 330°	36.0	58	14.31	0.00	83.52	0.00	2	1	22	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

Section 5 – Bolt Elevation 70.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 3" SOLID	-65.62	1.2D + 1.0Di + 1.0Wi 60	4.709	100	0	100	75.34	50.0	210.06	0.00	0.00	0	0	31	Member X
H SAE - 2.5X2.5X0.25	-3.85	1.2D + 1.0W 90°	6	100	100	100	146.64	36.0	15.84	27.61	34.80	2	1	24	Member Z
D SOL - 3/4" SOLID	-0.08	1.2D + 1.0W N	7.627	100	100	100	488.12	36.0	0.42	0.00	104.40	2	1	0	Member X

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2.5X2.5X0.25	7.79	1.2D + 1.0W N	36.0	58	33.22	27.61	27.84	19.17	2	1	40	Blk Shear
D SOL - 3/4" SOLID	5.24	1.2D + 1.0W 210°	36.0	58	14.31	0.00	83.52	0.00	2	1	36	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

Section 6 – Bolt Elevation 90.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 3" SOLID	-52.63	1.2D + 1.0Di + 1.0Wi N	4.709	100	0	100	75.34	50.0	210.06	0.00	0.00	0	0	25	Member X
H SAE - 2.5X2.5X0.25	-2.24	1.2D + 1.0W 330°	6	100	100	100	146.64	36.0	15.84	27.61	34.80	2	1	14	Member Z
D SOL - 3/4" SOLID	-0.13	1.2D + 1.0W 60°	7.627	100	100	100	488.12	36.0	0.42	0.00	104.40	2	1	0	Member X

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2.5X2.5X0.25	0.52	1.2D + 1.0W 60°	36.0	58	33.22	27.61	27.84	19.17	2	1	2	Blk Shear
D SOL - 3/4" SOLID	3.20	1.2D + 1.0W 330°	36.0	58	14.31	0.00	83.52	0.00	2	1	22	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

Section 7 – Bolt Elevation 110.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 3" SOLID	-50.99	1.2D + 1.0W N	4.709	100	0	100	75.34	50.0	210.06	0.00	0.00	0	0	24	Member X
H SAE - 2.5X2.5X0.25	-2.47	1.2D + 1.0W N	6	100	100	100	146.64	36.0	15.84	27.61	34.80	2	1	15	Member Z
D SOL - 3/4" SOLID	-0.07	1.2D + 1.0W N	7.627	100	100	100	488.12	36.0	0.42	0.00	104.40	2	1	0	Member X

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2.5X2.5X0.25	0.48	1.2D + 1.0W 60°	36.0	58	33.22	27.61	27.84	19.17	2	1	2	Blk Shear
D SOL - 3/4" SOLID	3.50	1.2D + 1.0W N	36.0	58	14.31	0.00	83.52	0.00	2	1	24	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

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Section 8 – Bolt Elevation 130.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Φc Pn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 3" SOLID	-73.29	1.2D + 1.0W N	4.709	100	0	100	75.34	50.0	210.06	0.00	0.00	0	0	34	Member X
H SAE - 2.5X2.5X0.25	-4.45	1.2D + 1.0W 120°	6	100	100	100	146.64	36.0	15.84	27.61	34.80	2	1	28	Member Z
D SOL - 3/4" SOLID	-0.08	1.2D + 1.0W N	7.627	100	100	100	488.12	36.0	0.42	0.00	104.40	2	1	0	Member X

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	ΦcPn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	Blk Shear Φt Pn (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2.5X2.5X0.25	0.97	1.2D + 1.0W 60°	36.0	58	33.22	27.61	27.84	19.17	2	1	5	Blk Shear
D SOL - 3/4" SOLID	6.30	1.2D + 1.0W 90°	36.0	58	14.31	0.00	83.52	0.00	2	1	44	Member

Max Splice Forces	Pu (kip)	Load Case	ΦRnt (kip)	Use %	Num Bolts	Bolt Type

Section 9 – Bolt Elevation 150.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Φc Pn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 3" SOLID	-96.92	1.2D + 1.0W N	4.709	100	0	100	75.34	50.0	210.06	0.00	0.00	0	0	46	Member X
H SAE - 2.5X2.5X0.25	-8.45	1.2D + 1.0W 210°	6	100	100	100	146.64	36.0	15.84	27.61	34.80	2	1	53	Member Z
D SOL - 3/4" SOLID	-0.39	1.2D + 1.0W N	7.627	100	100	100	488.12	36.0	0.42	0.00	104.40	2	1	0	Member X

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	ΦcPn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	Blk Shear Φt Pn (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 3" SOLID	32.23	1.2D + 1.0W 300°	50.0	65	318.10	0.00	0.00		0	0	10	Member
H SAE - 2.5X2.5X0.25	7.34	1.2D + 1.0W 300°	36.0	58	33.22	27.61	27.84	19.17	2	1	38	Blk Shear
D SOL - 3/4" SOLID	8.24	1.2D + 1.0W 330°	36.0	58	14.31	0.00	83.52	0.00	2	1	57	Member

Max Splice Forces	Pu (kip)	Load Case	ΦRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	28.26	1.2D + 1.0W 300°	0.00	0	0	

Section 10 – Bolt Elevation 170.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Φc Pn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 3" SOLID	-86.55	1.2D + 1.0W N	4.709	100	0	100	75.34	50.0	210.06	0.00	0.00	0	0	41	Member X
H SAE - 2.5X2.5X0.25	-5.07	1.2D + 1.0W N	6	100	100	100	146.64	36.0	15.84	27.61	34.80	2	1	32	Member Z
D SOL - 3/4" SOLID	-0.06	1.2D + 1.0W N	7.627	100	100	100	488.12	36.0	0.42	0.00	104.40	2	1	0	Member X

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	ΦcPn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	Blk Shear Φt Pn (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 3" SOLID	28.66	1.2D + 1.0W 300°	50.0	65	318.10	0.00	0.00		0	0	9	Member
H SAE - 2.5X2.5X0.25	0.98	1.2D + 1.0W N	36.0	58	33.22	27.61	27.84	19.17	2	1	5	Blk Shear
D SOL - 3/4" SOLID	7.63	1.2D + 1.0W 330°	36.0	58	14.31	0.00	83.52	0.00	2	1	53	Member

Max Splice Forces	Pu (kip)	Load Case	ΦRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	6.21	1.2D + 1.0W 300°	0.00	0	0	
Bot Tension	28.26	1.2D + 1.0W 300°	166.22	17	4	0.875" A325

Section 11 – Bolt Elevation 190.0 (ft) and Height 20.00 (ft)

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Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 3" SOLID	-58.01	1.2D + 1.0W N	4.709	100	0	100	75.34	50.0	210.06	0.00	0.00	0	0	27	Member X
H SAE - 2.5X2.5X0.25	-3.20	1.2D + 1.0W N	6	100	100	100	146.64	36.0	15.84	27.61	34.80	2	1	20	Member Z
D SOL - 3/4" SOLID	-0.27	1.2D + 1.0W N	7.627	100	100	100	488.12	36.0	0.42	0.00	104.40	2	1	0	Member X

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 3" SOLID	6.38	1.2D + 1.0W 300°	50.0	65	318.10	0.00	0.00		0	0	2	Member
H SAE - 2.5X2.5X0.25	0.67	1.2D + 1.0W N	36.0	58	33.22	27.61	27.84	19.17	2	1	3	Blk Shear
D SOL - 3/4" SOLID	4.45	1.2D + 1.0W N	36.0	58	14.31	0.00	83.52	0.00	2	1	31	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	6.21	1.2D + 1.0W 300°	166.22	4	4	0.875" A325

Section 12 – Bolt Elevation 210.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 3" SOLID	-40.80	1.2D + 1.0W N	4.709	100	0	100	75.34	50.0	210.06	0.00	0.00	0	0	19	Member X
H SAE - 2.5X2.5X0.25	-0.97	1.2D + 1.0W 120°	6	100	100	100	146.64	36.0	15.84	27.61	34.80	2	1	6	Member Z
D SOL - 3/4" SOLID	-0.20	1.2D + 1.0W N	7.627	100	100	100	488.12	36.0	0.42	0.00	104.40	2	1	0	Member X

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 2.5X2.5X0.25	0.66	1.2D + 1.0W N	36.0	58	33.22	27.61	27.84	19.17	2	1	3	Blk Shear
D SOL - 3/4" SOLID	2.14	1.2D + 1.0W 120°	36.0	58	14.31	0.00	83.52	0.00	2	1	14	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

Section 13 – Bolt Elevation 230.0 (ft) and Height 14.67 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 3" SOLID	-43.37	1.2D + 1.0W N	4.694	100	0	100	75.11	50.0	210.59	0.00	0.00	0	0	20	Member X
H SAE - 2.5X2.5X0.25	-4.60	1.2D + 1.0W 300°	6	100	100	100	146.64	36.0	15.84	27.61	34.80	2	1	29	Member Z
D SOL - 3/4" SOLID	-0.15	1.2D + 1.0W N	7.618	100	100	100	487.56	36.0	0.42	0.00	104.40	2	1	0	Member X

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 3" SOLID	3.84	1.2D + 1.0W 60°	50.0	65	318.10	0.00	0.00		0	0	1	Member
H SAE - 2.5X2.5X0.25	4.49	1.2D + 1.0W N	36.0	58	33.22	27.61	27.84	19.17	2	1	23	Blk Shear
D SOL - 3/4" SOLID	2.66	1.2D + 1.0W 60°	36.0	58	14.31	0.00	83.52	0.00	2	1	18	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Top Tension	7.06	1.2D + 1.0W 60°	0.00	0	0	

Section 14 – Bolt Elevation 244.7 (ft) and Height 5.33 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 3" SOLID	-22.72	1.2D + 1.0W 60°	5.334	100	0	100	85.34	50.0	186.76	0.00	0.00	0	0	12	Member X
H CHN - C12 x 20.7	-10.02	1.2D + 1.0W 60°	3	100	0	0	7.81	36.0	218.82	0.00	0.00	0	0	4	Member X
D DAE - 2.5X2.5X0.375	-22.58	1.2D + 1.0W 90°	6.12	100	100	100	162.55	36.0	37.59	55.22	104.40	4	2	60	Member Y

FORCE/STRESS SUMMARY

Max Tension Member	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H CHN - C12 x 20.7	12.69	1.2D + 1.0W N	36.0	58	197.32	0.00	0.00	0.00	0	0	6	Member
D DAE - 2.5X2.5X0.375	22.26	1.2D + 1.0W 90°	36.0	58	96.39	55.22	83.52	57.50	4	2	40	Bolt Shear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	7.06	1.2D + 1.0W 60°	0.00	0	0	

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	*(-) Uplift and (+) Down *F_X (kip)	*F_Y (kip)	*F_Z (kip)
1.2D + 1.0W Normal	0.00	0.00		1	-0.02	153.16	-4.44
	204.00	-4.00	0	A1	0.00	-1.84	2.49
	202.00	-10.00	120	A1a	40.21	-40.36	-24.65
	202.00	1.00	240	A1b	-40.16	-37.81	-24.62
1.2D + 1.0W 60°	0.00	0.00		1	-3.77	148.44	-2.19
	204.00	-4.00	0	A1	-1.17	-13.53	16.57
	202.00	-10.00	120	A1a	13.73	-14.15	-9.28
	202.00	1.00	240	A1b	-52.10	-48.35	-30.08
1.2D + 1.0W 90°	0.00	0.00		1	-4.28	150.82	-0.13
	204.00	-4.00	0	A1	-1.49	-26.25	32.01
	202.00	-10.00	120	A1a	5.39	-5.68	-3.75
	202.00	1.00	240	A1b	-49.93	-46.12	-28.13
1.2D + 1.0W 120°	0.00	0.00		1	-3.88	151.44	2.24
	204.00	-4.00	0	A1	-1.24	-38.57	47.05
	202.00	-10.00	120	A1a	2.07	-1.92	-1.19
	202.00	1.00	240	A1b	-41.35	-37.82	-22.45
1.2D + 1.0W 180°	0.00	0.00		1	0.01	148.55	4.36
	204.00	-4.00	0	A1	0.00	-49.11	59.93
	202.00	-10.00	120	A1a	14.69	-13.94	-7.13
	202.00	1.00	240	A1b	-14.73	-13.05	-7.16
1.2D + 1.0W 210°	0.00	0.00		1	2.03	151.74	3.77
	204.00	-4.00	0	A1	0.61	-46.73	56.99
	202.00	-10.00	120	A1a	28.19	-27.16	-14.55
	202.00	1.00	240	A1b	-5.71	-5.03	-2.68
1.2D + 1.0W 240°	0.00	0.00		1	3.85	153.90	2.24
	204.00	-4.00	0	A1	1.24	-38.57	47.10
	202.00	-10.00	120	A1a	41.45	-40.37	-22.49
	202.00	1.00	240	A1b	-2.17	-1.78	-1.25
1.2D + 1.0W 300°	0.00	0.00		1	3.75	149.61	-2.15
	204.00	-4.00	0	A1	1.17	-13.12	16.08
	202.00	-10.00	120	A1a	51.77	-51.17	-29.89
	202.00	1.00	240	A1b	-13.37	-12.84	-9.06
1.2D + 1.0W 330°	0.00	0.00		1	2.24	152.40	-3.62
	204.00	-4.00	0	A1	0.54	-5.17	6.30
	202.00	-10.00	120	A1a	49.15	-48.94	-29.09
	202.00	1.00	240	A1b	-26.75	-25.47	-17.17
1.2D + 1.0Di + 1.0Wi Normal	0.00	0.00		1	-0.01	197.32	-1.78
	204.00	-4.00	0	A1	0.00	-15.78	21.67
	202.00	-10.00	120	A1a	31.44	-28.78	-18.83
	202.00	1.00	240	A1b	-31.42	-26.83	-18.82
1.2D + 1.0Di + 1.0Wi 60°	0.00	0.00		1	-1.41	196.47	-0.82
	204.00	-4.00	0	A1	-0.58	-19.68	26.45
	202.00	-10.00	120	A1a	22.59	-20.66	-13.72
	202.00	1.00	240	A1b	-35.85	-30.56	-20.70
1.2D + 1.0Di + 1.0Wi 90°	0.00	0.00		1	-1.69	196.61	0.07
	204.00	-4.00	0	A1	-0.73	-23.55	31.51
	202.00	-10.00	120	A1a	19.72	-17.74	-11.71
	202.00	1.00	240	A1b	-34.95	-29.59	-19.86
1.2D + 1.0Di + 1.0Wi 120°	0.00	0.00		1	-1.54	196.90	0.87
	204.00	-4.00	0	A1	-0.59	-27.47	36.70
	202.00	-10.00	120	A1a	18.79	-16.63	-10.85
	202.00	1.00	240	A1b	-32.06	-26.88	-17.84
1.2D + 1.0Di + 1.0Wi 180°	0.00	0.00		1	0.01	196.48	1.61
	204.00	-4.00	0	A1	0.00	-31.15	41.31
	202.00	-10.00	120	A1a	23.08	-20.58	-12.65
	202.00	1.00	240	A1b	-23.11	-19.18	-12.67
1.2D + 1.0Di + 1.0Wi 210°	0.00	0.00		1	0.91	196.88	1.43
	204.00	-4.00	0	A1	0.28	-30.11	40.06
	202.00	-10.00	120	A1a	27.52	-24.60	-15.05
	202.00	1.00	240	A1b	-19.90	-16.40	-11.18
1.2D + 1.0Di + 1.0Wi 240°	0.00	0.00		1	1.54	197.39	0.88
	204.00	-4.00	0	A1	0.59	-27.36	36.55
	202.00	-10.00	120	A1a	31.96	-28.72	-17.77
	202.00	1.00	240	A1b	-18.70	-15.37	-10.80
1.2D + 1.0Di + 1.0Wi 300°	0.00	0.00		1	1.39	196.83	-0.81
	204.00	-4.00	0	A1	0.59	-19.53	26.25
	202.00	-10.00	120	A1a	35.73	-32.61	-20.63
	202.00	1.00	240	A1b	-22.45	-19.10	-13.63

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	*(-) Uplift and (+) Down *F_X (kip)	*F_Y (kip)	*F_Z (kip)
1.2D + 1.0Di + 1.0Wi 330°	0.00	0.00		1	0.78	197.03	-1.50
	204.00	-4.00	0	A1	0.28	-16.76	22.81
	202.00	-10.00	120	A1a	34.57	-31.60	-20.28
	202.00	1.00	240	A1b	-26.79	-22.92	-16.31
1.2D + 1.0Ev + 1.0Eh Normal	0.00	0.00		1	0.01	145.53	0.06
	204.00	-4.00	0	A1	0.00	-15.33	20.49
	202.00	-10.00	120	A1a	19.70	-18.59	-11.37
	202.00	1.00	240	A1b	-19.70	-17.37	-11.38
1.2D + 1.0Ev + 1.0Eh 60°	0.00	0.00		1	0.04	145.51	0.03
	204.00	-4.00	0	A1	0.00	-16.15	21.26
	202.00	-10.00	120	A1a	18.41	-16.94	-10.63
	202.00	1.00	240	A1b	-20.36	-18.17	-11.76
1.2D + 1.0Ev + 1.0Eh 90°	0.00	0.00		1	0.06	145.51	-0.01
	204.00	-4.00	0	A1	0.00	-16.96	22.02
	202.00	-10.00	120	A1a	17.93	-16.34	-10.35
	202.00	1.00	240	A1b	-20.20	-17.97	-11.66
1.2D + 1.0Ev + 1.0Eh 120°	0.00	0.00		1	0.06	145.52	-0.02
	204.00	-4.00	0	A1	0.00	-17.76	22.77
	202.00	-10.00	120	A1a	17.76	-16.11	-10.25
	202.00	1.00	240	A1b	-19.73	-17.40	-11.39
1.2D + 1.0Ev + 1.0Eh 180°	0.00	0.00		1	0.00	145.47	-0.08
	204.00	-4.00	0	A1	0.00	-18.52	23.50
	202.00	-10.00	120	A1a	18.39	-16.92	-10.61
	202.00	1.00	240	A1b	-18.39	-15.78	-10.62
1.2D + 1.0Ev + 1.0Eh 210°	0.00	0.00		1	-0.03	145.48	-0.04
	204.00	-4.00	0	A1	0.00	-18.30	23.28
	202.00	-10.00	120	A1a	19.04	-17.74	-10.99
	202.00	1.00	240	A1b	-17.91	-15.19	-10.34
1.2D + 1.0Ev + 1.0Eh 240°	0.00	0.00		1	-0.04	145.50	-0.03
	204.00	-4.00	0	A1	0.00	-17.71	22.72
	202.00	-10.00	120	A1a	19.68	-18.56	-11.36
	202.00	1.00	240	A1b	-17.73	-14.98	-10.24
1.2D + 1.0Ev + 1.0Eh 300°	0.00	0.00		1	-0.05	145.49	0.03
	204.00	-4.00	0	A1	0.00	-16.10	21.21
	202.00	-10.00	120	A1a	20.33	-19.39	-11.74
	202.00	1.00	240	A1b	-18.37	-15.75	-10.61
1.2D + 1.0Ev + 1.0Eh 330°	0.00	0.00		1	-0.02	145.51	0.06
	204.00	-4.00	0	A1	0.00	-15.52	20.67
	202.00	-10.00	120	A1a	20.16	-19.18	-11.64
	202.00	1.00	240	A1b	-19.04	-16.56	-10.99
1.0D + 1.0W Service Normal	0.00	0.00		1	0.00	115.09	-1.20
	204.00	-4.00	0	A1	0.00	-11.62	15.62
	202.00	-10.00	120	A1a	22.78	-21.65	-13.48
	202.00	1.00	240	A1b	-22.77	-20.22	-13.47
1.0D + 1.0W Service 60°	0.00	0.00		1	-0.94	114.83	-0.55
	204.00	-4.00	0	A1	-0.28	-14.79	19.29
	202.00	-10.00	120	A1a	16.55	-15.51	-9.88
	202.00	1.00	240	A1b	-25.91	-23.12	-14.96
1.0D + 1.0W Service 90°	0.00	0.00		1	-1.12	114.83	0.02
	204.00	-4.00	0	A1	-0.35	-17.73	22.87
	202.00	-10.00	120	A1a	14.40	-13.23	-8.47
	202.00	1.00	240	A1b	-25.24	-22.38	-14.42
1.0D + 1.0W Service 120°	0.00	0.00		1	-1.03	114.91	0.60
	204.00	-4.00	0	A1	-0.28	-20.74	26.55
	202.00	-10.00	120	A1a	13.58	-12.28	-7.84
	202.00	1.00	240	A1b	-23.13	-20.30	-13.03
1.0D + 1.0W Service 180°	0.00	0.00		1	0.00	114.79	1.10
	204.00	-4.00	0	A1	0.00	-23.54	29.84
	202.00	-10.00	120	A1a	16.76	-15.44	-9.35
	202.00	1.00	240	A1b	-16.77	-14.40	-9.36
1.0D + 1.0W Service 210°	0.00	0.00		1	0.59	114.90	0.97
	204.00	-4.00	0	A1	0.14	-22.73	28.92
	202.00	-10.00	120	A1a	19.85	-18.46	-11.05
	202.00	1.00	240	A1b	-14.43	-12.21	-8.18
1.0D + 1.0W Service 240°	0.00	0.00		1	1.04	115.08	0.60
	204.00	-4.00	0	A1	0.29	-20.59	26.38
	202.00	-10.00	120	A1a	23.00	-21.58	-12.95
	202.00	1.00	240	A1b	-13.47	-11.31	-7.78
1.0D + 1.0W Service 300°	0.00	0.00		1	0.95	114.93	-0.55

DETAILED REACTIONS

*(-) Uplift and (+) Down

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	*F_X (kip)	*F_Y (kip)	*F_Z (kip)
	204.00	-4.00	0	A1	0.28	-14.63	19.10
	202.00	-10.00	120	A1a	25.77	-24.57	-14.88
	202.00	1.00	240	A1b	-16.40	-14.31	-9.79
1.0D + 1.0W Service 330°	0.00	0.00		1	0.55	114.98	-1.00
	204.00	-4.00	0	A1	0.13	-12.48	16.57
	202.00	-10.00	120	A1a	24.96	-23.79	-14.57
	202.00	1.00	240	A1b	-19.49	-17.21	-11.66

GUY ANCHOR DESIGN LOADS

Radius (ft)	Drop (ft)	Azimuth (deg)	Uplift (kip)	Shear (kip)
202.00	-10.00	120	51.17	59.78
202.00	1.00	240	48.35	60.16
204.00	-4.00	0	49.11	59.93

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
1.2D + 1.0W Normal	89.42	7/8 EHS	A1	28	47.82	1.89	4
		7/8 EHS	A1a	28a	47.82	14.17	30
		7/8 EHS	A1b	28b	47.82	13.82	29
	164.71	7/8 EHS	A1	T2	47.82	0.4	1
		7/8 EHS	A1a	T2	47.82	14.84	31
		7/8 EHS	A1a	T2a	47.82	15.06	31
		7/8 EHS	A1b	T2a	47.82	14.56	30
		7/8 EHS	A1b	T2b	47.82	14.46	30
		7/8 EHS	A1	T2b	47.82	0.4	1
	250.00	7/8 EHS	A1	76	47.82	1.64	3
		7/8 EHS	A1a	76a	47.82	19.96	42
		7/8 EHS	A1b	76b	47.82	19.52	41
1.2D + 1.0W 60°	89.42	7/8 EHS	A1	28	47.82	5.15	11
		7/8 EHS	A1a	28a	47.82	5.23	11
		7/8 EHS	A1b	28b	47.82	17.86	37
	164.71	7/8 EHS	A1	T2	47.82	5.83	12
		7/8 EHS	A1a	T2	47.82	5.95	12
		7/8 EHS	A1a	T2a	47.82	5.71	12
		7/8 EHS	A1b	T2a	47.82	18.3	38
		7/8 EHS	A1b	T2b	47.82	18.26	38
		7/8 EHS	A1	T2b	47.82	5.63	12
	250.00	7/8 EHS	A1	76	47.82	6.23	13
		7/8 EHS	A1a	76a	47.82	6.34	13
		7/8 EHS	A1b	76b	47.82	24.96	52
1.2D + 1.0W 90°	89.42	7/8 EHS	A1	28	47.82	9.36	20
		7/8 EHS	A1a	28a	47.82	2.43	5
		7/8 EHS	A1b	28b	47.82	16.82	35
	164.71	7/8 EHS	A1	T2	47.82	10.45	22
		7/8 EHS	A1a	T2	47.82	2.43	5
		7/8 EHS	A1a	T2a	47.82	2.18	5
		7/8 EHS	A1b	T2a	47.82	17.33	36
		7/8 EHS	A1b	T2b	47.82	17.58	37
		7/8 EHS	A1	T2b	47.82	10.44	22
	250.00	7/8 EHS	A1	76	47.82	12.85	27
		7/8 EHS	A1a	76a	47.82	2.94	6
		7/8 EHS	A1b	76b	47.82	23.98	50
1.2D + 1.0W 120°	89.42	7/8 EHS	A1	28	47.82	13.86	29
		7/8 EHS	A1a	28a	47.82	1.89	4
		7/8 EHS	A1b	28b	47.82	13.76	29
	164.71	7/8 EHS	A1	T2	47.82	14.47	30
		7/8 EHS	A1a	T2	47.82	0.33	1
		7/8 EHS	A1a	T2a	47.82	0.33	1
		7/8 EHS	A1b	T2a	47.82	14.44	30
		7/8 EHS	A1b	T2b	47.82	14.5	30
		7/8 EHS	A1	T2b	47.82	14.74	31
	250.00	7/8 EHS	A1	76	47.82	19.72	41
		7/8 EHS	A1a	76a	47.82	1.79	4
		7/8 EHS	A1b	76b	47.82	19.62	41
1.2D + 1.0W 180°	89.42	7/8 EHS	A1	28	47.82	17.91	37
		7/8 EHS	A1a	28a	47.82	5.15	11
		7/8 EHS	A1b	28b	47.82	5.05	11
	164.71	7/8 EHS	A1	T2	47.82	18.35	38
		7/8 EHS	A1a	T2	47.82	5.64	12
		7/8 EHS	A1a	T2a	47.82	5.84	12
		7/8 EHS	A1b	T2a	47.82	5.72	12
		7/8 EHS	A1b	T2b	47.82	5.47	11
		7/8 EHS	A1	T2b	47.82	18.42	39
	250.00	7/8 EHS	A1	76	47.82	24.97	52
		7/8 EHS	A1a	76a	47.82	6.27	13
		7/8 EHS	A1b	76b	47.82	6.1	13
1.2D + 1.0W 210°	89.42	7/8 EHS	A1	28	47.82	16.86	35
		7/8 EHS	A1a	28a	47.82	9.44	20
		7/8 EHS	A1b	28b	47.82	2.35	5
	164.71	7/8 EHS	A1	T2	47.82	17.68	37
		7/8 EHS	A1a	T2	47.82	10.52	22
		7/8 EHS	A1b	T2a	47.82	2.23	5

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
		7/8 EHS	A1a	T2a	47.82	10.57	22
		7/8 EHS	A1	T2b	47.82	17.36	36
		7/8 EHS	A1b	T2b	47.82	2.01	4
	250.00	7/8 EHS	A1	76	47.82	23.92	50
		7/8 EHS	A1a	76a	47.82	12.92	27
		7/8 EHS	A1b	76b	47.82	2.72	6
1.2D + 1.0W 240°	89.42	7/8 EHS	A1	28	47.82	13.91	29
		7/8 EHS	A1a	28a	47.82	14.14	30
		7/8 EHS	A1b	28b	47.82	1.86	4
	164.71	7/8 EHS	A1a	T2	47.82	15.03	31
		7/8 EHS	A1	T2	47.82	14.76	31
		7/8 EHS	A1b	T2a	47.82	0.42	1
		7/8 EHS	A1a	T2a	47.82	14.9	31
		7/8 EHS	A1	T2b	47.82	14.55	30
		7/8 EHS	A1b	T2b	47.82	0.42	1
	250.00	7/8 EHS	A1	76	47.82	19.62	41
		7/8 EHS	A1a	76a	47.82	19.95	42
		7/8 EHS	A1b	76b	47.82	1.57	3
1.2D + 1.0W 300°	89.42	7/8 EHS	A1	28	47.82	5.03	11
		7/8 EHS	A1a	28a	47.82	18.16	38
		7/8 EHS	A1b	28b	47.82	5.01	10
	164.71	7/8 EHS	A1a	T2	47.82	18.64	39
		7/8 EHS	A1	T2	47.82	5.46	11
		7/8 EHS	A1b	T2a	47.82	5.37	11
		7/8 EHS	A1a	T2a	47.82	18.76	39
		7/8 EHS	A1b	T2b	47.82	5.65	12
		7/8 EHS	A1	T2b	47.82	5.64	12
	250.00	7/8 EHS	A1	76	47.82	6.06	13
		7/8 EHS	A1a	76a	47.82	25.28	53
		7/8 EHS	A1b	76b	47.82	5.99	13
1.2D + 1.0W 330°	89.42	7/8 EHS	A1	28	47.82	2.36	5
		7/8 EHS	A1a	28a	47.82	17.16	36
		7/8 EHS	A1b	28b	47.82	9.28	19
	164.71	7/8 EHS	A1	T2	47.82	2.05	4
		7/8 EHS	A1a	T2	47.82	17.71	37
		7/8 EHS	A1a	T2a	47.82	18.15	38
		7/8 EHS	A1b	T2a	47.82	10.17	21
		7/8 EHS	A1b	T2b	47.82	10.33	22
		7/8 EHS	A1	T2b	47.82	2.26	5
	250.00	7/8 EHS	A1	76	47.82	2.76	6
		7/8 EHS	A1a	76a	47.82	24.31	51
		7/8 EHS	A1b	76b	47.82	12.61	26
1.2D + 1.0Di + 1.0Wi Normal	89.42	7/8 EHS	A1	28	47.82	7.76	16
		7/8 EHS	A1a	28a	47.82	12.98	27
		7/8 EHS	A1b	28b	47.82	12.65	26
	164.71	7/8 EHS	A1	T2	47.82	7.61	16
		7/8 EHS	A1a	T2	47.82	12.23	26
		7/8 EHS	A1a	T2a	47.82	12.06	25
		7/8 EHS	A1b	T2a	47.82	11.72	25
		7/8 EHS	A1b	T2b	47.82	11.91	25
		7/8 EHS	A1	T2b	47.82	7.62	16
	250.00	7/8 EHS	A1	76	47.82	6.7	14
		7/8 EHS	A1a	76a	47.82	12.53	26
		7/8 EHS	A1b	76b	47.82	12.22	26
1.2D + 1.0Di + 1.0Wi 60°	89.42	7/8 EHS	A1	28	47.82	9.27	19
		7/8 EHS	A1a	28a	47.82	9.41	20
		7/8 EHS	A1b	28b	47.82	14.26	30
	164.71	7/8 EHS	A1a	T2	47.82	9.23	19
		7/8 EHS	A1	T2	47.82	9.03	19
		7/8 EHS	A1b	T2a	47.82	13.16	28
		7/8 EHS	A1a	T2a	47.82	9.05	19
		7/8 EHS	A1	T2b	47.82	8.88	19
		7/8 EHS	A1b	T2b	47.82	13.16	28
	250.00	7/8 EHS	A1	76	47.82	8.75	18
		7/8 EHS	A1a	76a	47.82	8.9	19
		7/8 EHS	A1b	76b	47.82	14.04	29
1.2D + 1.0Di + 1.0Wi 90°	89.42	7/8 EHS	A1	28	47.82	10.99	23
		7/8 EHS	A1a	28a	47.82	8.27	17

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
		7/8 EHS	A1b	28b	47.82	13.87	29
	164.71	7/8 EHS	A1	T2	47.82	10.53	22
		7/8 EHS	A1a	T2	47.82	8.17	17
		7/8 EHS	A1a	T2a	47.82	8.1	17
		7/8 EHS	A1b	T2a	47.82	12.85	27
		7/8 EHS	A1b	T2b	47.82	12.78	27
		7/8 EHS	A1	T2b	47.82	10.33	22
	250.00	7/8 EHS	A1	76	47.82	10.55	22
		7/8 EHS	A1a	76a	47.82	7.44	16
		7/8 EHS	A1b	76b	47.82	13.56	28
1.2D + 1.0Di + 1.0Wi 120°	89.42	7/8 EHS	A1	28	47.82	12.8	27
		7/8 EHS	A1a	28a	47.82	7.89	16
		7/8 EHS	A1b	28b	47.82	12.66	26
	164.71	7/8 EHS	A1	T2	47.82	12	25
		7/8 EHS	A1a	T2	47.82	7.79	16
		7/8 EHS	A1a	T2a	47.82	7.78	16
		7/8 EHS	A1b	T2a	47.82	11.92	25
		7/8 EHS	A1b	T2b	47.82	11.74	25
		7/8 EHS	A1	T2b	47.82	11.85	25
	250.00	7/8 EHS	A1	76	47.82	12.33	26
		7/8 EHS	A1a	76a	47.82	6.84	14
		7/8 EHS	A1b	76b	47.82	12.26	26
1.2D + 1.0Di + 1.0Wi 180°	89.42	7/8 EHS	A1	28	47.82	14.35	30
		7/8 EHS	A1a	28a	47.82	9.36	20
		7/8 EHS	A1b	28b	47.82	9.15	19
	164.71	7/8 EHS	A1	T2	47.82	13.24	28
		7/8 EHS	A1a	T2	47.82	9.02	19
		7/8 EHS	A1a	T2a	47.82	9.19	19
		7/8 EHS	A1b	T2a	47.82	8.94	19
		7/8 EHS	A1b	T2b	47.82	8.77	18
		7/8 EHS	A1	T2b	47.82	13.25	28
	250.00	7/8 EHS	A1	76	47.82	14.1	29
		7/8 EHS	A1a	76a	47.82	8.88	19
		7/8 EHS	A1b	76b	47.82	8.65	18
1.2D + 1.0Di + 1.0Wi 210°	89.42	7/8 EHS	A1	28	47.82	13.93	29
		7/8 EHS	A1a	28a	47.82	11.1	23
		7/8 EHS	A1b	28b	47.82	8.02	17
	164.71	7/8 EHS	A1	T2	47.82	12.85	27
		7/8 EHS	A1a	T2	47.82	10.48	22
		7/8 EHS	A1a	T2a	47.82	10.71	22
		7/8 EHS	A1b	T2a	47.82	7.88	16
		7/8 EHS	A1b	T2b	47.82	7.84	16
		7/8 EHS	A1	T2b	47.82	12.93	27
	250.00	7/8 EHS	A1	76	47.82	13.6	28
		7/8 EHS	A1a	76a	47.82	10.7	22
		7/8 EHS	A1b	76b	47.82	7.21	15
1.2D + 1.0Di + 1.0Wi 240°	89.42	7/8 EHS	A1	28	47.82	12.74	27
		7/8 EHS	A1a	28a	47.82	12.92	27
		7/8 EHS	A1b	28b	47.82	7.65	16
	164.71	7/8 EHS	A1	T2	47.82	11.79	25
		7/8 EHS	A1a	T2	47.82	12.04	25
		7/8 EHS	A1b	T2a	47.82	7.52	16
		7/8 EHS	A1a	T2a	47.82	12.22	26
		7/8 EHS	A1	T2b	47.82	11.97	25
		7/8 EHS	A1b	T2b	47.82	7.53	16
	250.00	7/8 EHS	A1	76	47.82	12.3	26
		7/8 EHS	A1a	76a	47.82	12.51	26
		7/8 EHS	A1b	76b	47.82	6.62	14
1.2D + 1.0Di + 1.0Wi 300°	89.42	7/8 EHS	A1	28	47.82	9.2	19
		7/8 EHS	A1a	28a	47.82	14.57	30
		7/8 EHS	A1b	28b	47.82	9.12	19
	164.71	7/8 EHS	A1a	T2	47.82	13.48	28
		7/8 EHS	A1	T2	47.82	8.82	18
		7/8 EHS	A1b	T2a	47.82	8.73	18
		7/8 EHS	A1a	T2a	47.82	13.49	28
		7/8 EHS	A1	T2b	47.82	8.99	19
		7/8 EHS	A1b	T2b	47.82	8.92	19
	250.00	7/8 EHS	A1	76	47.82	8.68	18

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
		7/8 EHS	A1a	76a	47.82	14.33	30
		7/8 EHS	A1b	76b	47.82	8.62	18
1.2D + 1.0Di + 1.0Wi 330°	89.42	7/8 EHS	A1	28	47.82	8.1	17
		7/8 EHS	A1a	28a	47.82	14.18	30
		7/8 EHS	A1b	28b	47.82	10.84	23
	164.71	7/8 EHS	A1	T2	47.82	7.9	17
		7/8 EHS	A1a	T2	47.82	13.17	28
		7/8 EHS	A1a	T2a	47.82	13.11	27
		7/8 EHS	A1b	T2a	47.82	10.17	21
		7/8 EHS	A1b	T2b	47.82	10.42	22
		7/8 EHS	A1	T2b	47.82	7.95	17
	250.00	7/8 EHS	A1	76	47.82	7.26	15
		7/8 EHS	A1a	76a	47.82	13.84	29
		7/8 EHS	A1b	76b	47.82	10.42	22
1.2D + 1.0Ev + 1.0Eh Normal	89.42	7/8 EHS	A1	28	47.82	7.58	16
		7/8 EHS	A1a	28a	47.82	7.76	16
		7/8 EHS	A1b	28b	47.82	7.58	16
	164.71	7/8 EHS	A1	T2	47.82	6.79	14
		7/8 EHS	A1a	T2	47.82	7.53	16
		7/8 EHS	A1a	T2a	47.82	7.61	16
		7/8 EHS	A1b	T2a	47.82	7.39	15
		7/8 EHS	A1b	T2b	47.82	7.33	15
		7/8 EHS	A1	T2b	47.82	6.81	14
	250.00	7/8 EHS	A1	76	47.82	5.84	12
		7/8 EHS	A1a	76a	47.82	7.99	17
		7/8 EHS	A1b	76b	47.82	7.81	16
1.2D + 1.0Ev + 1.0Eh 60°	89.42	7/8 EHS	A1	28	47.82	7.6	16
		7/8 EHS	A1a	28a	47.82	7.73	16
		7/8 EHS	A1b	28b	47.82	7.58	16
	164.71	7/8 EHS	A1	T2	47.82	6.98	15
		7/8 EHS	A1a	T2	47.82	7.12	15
		7/8 EHS	A1b	T2a	47.82	7.57	16
		7/8 EHS	A1a	T2a	47.82	7.18	15
		7/8 EHS	A1b	T2b	47.82	7.57	16
		7/8 EHS	A1	T2b	47.82	7.06	15
	250.00	7/8 EHS	A1	76	47.82	6.51	14
		7/8 EHS	A1a	76a	47.82	6.64	14
		7/8 EHS	A1b	76b	47.82	8.48	18
1.2D + 1.0Ev + 1.0Eh 90°	89.42	7/8 EHS	A1	28	47.82	7.62	16
		7/8 EHS	A1a	28a	47.82	7.71	16
		7/8 EHS	A1b	28b	47.82	7.59	16
	164.71	7/8 EHS	A1	T2	47.82	7.19	15
		7/8 EHS	A1a	T2	47.82	6.97	15
		7/8 EHS	A1a	T2a	47.82	7.01	15
		7/8 EHS	A1b	T2a	47.82	7.5	16
		7/8 EHS	A1b	T2b	47.82	7.54	16
		7/8 EHS	A1	T2b	47.82	7.28	15
	250.00	7/8 EHS	A1	76	47.82	7.18	15
		7/8 EHS	A1a	76a	47.82	6.15	13
		7/8 EHS	A1b	76b	47.82	8.32	17
1.2D + 1.0Ev + 1.0Eh 120°	89.42	7/8 EHS	A1	28	47.82	7.62	16
		7/8 EHS	A1a	28a	47.82	7.71	16
		7/8 EHS	A1b	28b	47.82	7.58	16
	164.71	7/8 EHS	A1	T2	47.82	7.4	15
		7/8 EHS	A1a	T2	47.82	6.92	14
		7/8 EHS	A1a	T2a	47.82	6.93	14
		7/8 EHS	A1b	T2a	47.82	7.34	15
		7/8 EHS	A1b	T2b	47.82	7.4	15
		7/8 EHS	A1	T2b	47.82	7.49	16
	250.00	7/8 EHS	A1	76	47.82	7.86	16
		7/8 EHS	A1a	76a	47.82	5.98	13
		7/8 EHS	A1b	76b	47.82	7.82	16
1.2D + 1.0Ev + 1.0Eh 180°	89.42	7/8 EHS	A1	28	47.82	7.7	16
		7/8 EHS	A1a	28a	47.82	7.71	16
		7/8 EHS	A1b	28b	47.82	7.51	16
	164.71	7/8 EHS	A1	T2	47.82	7.6	16
		7/8 EHS	A1a	T2	47.82	7.18	15
		7/8 EHS	A1b	T2a	47.82	6.92	14

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
		7/8 EHS	A1a	T2a	47.82	7.12	15
		7/8 EHS	A1b	T2b	47.82	7	15
		7/8 EHS	A1	T2b	47.82	7.62	16
	250.00	7/8 EHS	A1	76	47.82	8.51	18
		7/8 EHS	A1a	76a	47.82	6.61	14
		7/8 EHS	A1b	76b	47.82	6.46	14
1.2D + 1.0Ev + 1.0Eh 210°	89.42	7/8 EHS	A1	28	47.82	7.65	16
		7/8 EHS	A1a	28a	47.82	7.74	16
		7/8 EHS	A1b	28b	47.82	7.52	16
	164.71	7/8 EHS	A1a	T2	47.82	7.4	15
		7/8 EHS	A1	T2	47.82	7.58	16
		7/8 EHS	A1b	T2a	47.82	6.78	14
		7/8 EHS	A1a	T2a	47.82	7.32	15
		7/8 EHS	A1	T2b	47.82	7.55	16
		7/8 EHS	A1b	T2b	47.82	6.82	14
	250.00	7/8 EHS	A1	76	47.82	8.33	17
		7/8 EHS	A1a	76a	47.82	7.28	15
		7/8 EHS	A1b	76b	47.82	5.97	12
1.2D + 1.0Ev + 1.0Eh 240°	89.42	7/8 EHS	A1	28	47.82	7.64	16
		7/8 EHS	A1a	28a	47.82	7.76	16
		7/8 EHS	A1b	28b	47.82	7.52	16
	164.71	7/8 EHS	A1a	T2	47.82	7.6	16
		7/8 EHS	A1	T2	47.82	7.45	16
		7/8 EHS	A1b	T2a	47.82	6.73	14
		7/8 EHS	A1a	T2a	47.82	7.53	16
		7/8 EHS	A1	T2b	47.82	7.39	15
		7/8 EHS	A1b	T2b	47.82	6.74	14
	250.00	7/8 EHS	A1	76	47.82	7.83	16
		7/8 EHS	A1a	76a	47.82	7.96	17
		7/8 EHS	A1b	76b	47.82	5.79	12
1.2D + 1.0Ev + 1.0Eh 300°	89.42	7/8 EHS	A1	28	47.82	7.6	16
		7/8 EHS	A1a	28a	47.82	7.79	16
		7/8 EHS	A1b	28b	47.82	7.53	16
	164.71	7/8 EHS	A1a	T2	47.82	7.77	16
		7/8 EHS	A1	T2	47.82	7.03	15
		7/8 EHS	A1b	T2a	47.82	6.97	15
		7/8 EHS	A1a	T2a	47.82	7.78	16
		7/8 EHS	A1	T2b	47.82	6.98	15
		7/8 EHS	A1b	T2b	47.82	6.91	14
	250.00	7/8 EHS	A1	76	47.82	6.47	14
		7/8 EHS	A1a	76a	47.82	8.64	18
		7/8 EHS	A1b	76b	47.82	6.44	13
1.2D + 1.0Ev + 1.0Eh 330°	89.42	7/8 EHS	A1	28	47.82	7.57	16
		7/8 EHS	A1a	28a	47.82	7.79	16
		7/8 EHS	A1b	28b	47.82	7.56	16
	164.71	7/8 EHS	A1	T2	47.82	6.86	14
		7/8 EHS	A1a	T2	47.82	7.69	16
		7/8 EHS	A1a	T2a	47.82	7.74	16
		7/8 EHS	A1b	T2a	47.82	7.2	15
		7/8 EHS	A1b	T2b	47.82	7.12	15
		7/8 EHS	A1	T2b	47.82	6.85	14
	250.00	7/8 EHS	A1	76	47.82	6	13
		7/8 EHS	A1a	76a	47.82	8.48	18
		7/8 EHS	A1b	76b	47.82	7.12	15
1.0D + 1.0W Service Normal	89.42	7/8 EHS	A1	28	47.82	5.75	12
		7/8 EHS	A1a	28a	47.82	9.01	19
		7/8 EHS	A1b	28b	47.82	8.79	18
	164.71	7/8 EHS	A1	T2	47.82	5.43	11
		7/8 EHS	A1a	T2	47.82	8.73	18
		7/8 EHS	A1a	T2a	47.82	8.68	18
		7/8 EHS	A1b	T2a	47.82	8.42	18
		7/8 EHS	A1b	T2b	47.82	8.51	18
		7/8 EHS	A1	T2b	47.82	5.43	11
	250.00	7/8 EHS	A1	76	47.82	4.21	9
		7/8 EHS	A1a	76a	47.82	9.34	20
		7/8 EHS	A1b	76b	47.82	9.13	19
1.0D + 1.0W Service 60°	89.42	7/8 EHS	A1	28	47.82	6.75	14
		7/8 EHS	A1a	28a	47.82	6.84	14

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
		7/8 EHS	A1b	28b	47.82	9.77	20
	164.71	7/8 EHS	A1	T2	47.82	6.49	14
		7/8 EHS	A1a	T2	47.82	6.64	14
		7/8 EHS	A1a	T2a	47.82	6.56	14
		7/8 EHS	A1b	T2a	47.82	9.44	20
		7/8 EHS	A1b	T2b	47.82	9.44	20
		7/8 EHS	A1	T2b	47.82	6.44	13
	250.00	7/8 EHS	A1	76	47.82	6.05	13
		7/8 EHS	A1a	76a	47.82	6.15	13
		7/8 EHS	A1b	76b	47.82	10.77	23
1.0D + 1.0W Service 90°	89.42	7/8 EHS	A1	28	47.82	7.79	16
		7/8 EHS	A1a	28a	47.82	6.12	13
		7/8 EHS	A1b	28b	47.82	9.54	20
	164.71	7/8 EHS	A1	T2	47.82	7.54	16
		7/8 EHS	A1a	T2	47.82	5.87	12
		7/8 EHS	A1a	T2a	47.82	5.84	12
		7/8 EHS	A1b	T2a	47.82	9.21	19
		7/8 EHS	A1b	T2b	47.82	9.18	19
		7/8 EHS	A1	T2b	47.82	7.47	16
	250.00	7/8 EHS	A1	76	47.82	7.62	16
		7/8 EHS	A1a	76a	47.82	4.88	10
		7/8 EHS	A1b	76b	47.82	10.35	22
1.0D + 1.0W Service 120°	89.42	7/8 EHS	A1	28	47.82	8.88	19
		7/8 EHS	A1a	28a	47.82	5.86	12
		7/8 EHS	A1b	28b	47.82	8.8	18
	164.71	7/8 EHS	A1	T2	47.82	8.59	18
		7/8 EHS	A1a	T2	47.82	5.56	12
		7/8 EHS	A1a	T2a	47.82	5.55	12
		7/8 EHS	A1b	T2a	47.82	8.54	18
		7/8 EHS	A1b	T2b	47.82	8.46	18
		7/8 EHS	A1	T2b	47.82	8.55	18
	250.00	7/8 EHS	A1	76	47.82	9.23	19
		7/8 EHS	A1a	76a	47.82	4.32	9
		7/8 EHS	A1b	76b	47.82	9.17	19
1.0D + 1.0W Service 180°	89.42	7/8 EHS	A1	28	47.82	9.81	21
		7/8 EHS	A1a	28a	47.82	6.83	14
		7/8 EHS	A1b	28b	47.82	6.66	14
	164.71	7/8 EHS	A1	T2	47.82	9.5	20
		7/8 EHS	A1a	T2	47.82	6.53	14
		7/8 EHS	A1a	T2a	47.82	6.59	14
		7/8 EHS	A1b	T2a	47.82	6.42	13
		7/8 EHS	A1b	T2b	47.82	6.35	13
		7/8 EHS	A1	T2b	47.82	9.51	20
	250.00	7/8 EHS	A1	76	47.82	10.81	23
		7/8 EHS	A1a	76a	47.82	6.12	13
		7/8 EHS	A1b	76b	47.82	5.97	12
1.0D + 1.0W Service 210°	89.42	7/8 EHS	A1	28	47.82	9.57	20
		7/8 EHS	A1a	28a	47.82	7.88	16
		7/8 EHS	A1b	28b	47.82	5.94	12
	164.71	7/8 EHS	A1	T2	47.82	9.22	19
		7/8 EHS	A1a	T2	47.82	7.56	16
		7/8 EHS	A1b	T2a	47.82	5.67	12
		7/8 EHS	A1a	T2a	47.82	7.64	16
		7/8 EHS	A1	T2b	47.82	9.24	19
		7/8 EHS	A1b	T2b	47.82	5.65	12
	250.00	7/8 EHS	A1	76	47.82	10.35	22
		7/8 EHS	A1a	76a	47.82	7.71	16
		7/8 EHS	A1b	76b	47.82	4.69	10
1.0D + 1.0W Service 240°	89.42	7/8 EHS	A1	28	47.82	8.84	18
		7/8 EHS	A1a	28a	47.82	8.98	19
		7/8 EHS	A1b	28b	47.82	5.67	12
	164.71	7/8 EHS	A1a	T2	47.82	8.65	18
		7/8 EHS	A1	T2	47.82	8.48	18
		7/8 EHS	A1b	T2a	47.82	5.36	11
		7/8 EHS	A1a	T2a	47.82	8.71	18
		7/8 EHS	A1	T2b	47.82	8.54	18
		7/8 EHS	A1b	T2b	47.82	5.38	11
	250.00	7/8 EHS	A1	76	47.82	9.16	19

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
		7/8 EHS	A1a	76a	47.82	9.32	19
		7/8 EHS	A1b	76b	47.82	4.15	9
1.0D + 1.0W Service 300°	89.42	7/8 EHS	A1	28	47.82	6.69	14
		7/8 EHS	A1a	28a	47.82	9.96	21
		7/8 EHS	A1b	28b	47.82	6.65	14
	164.71	7/8 EHS	A1a	T2	47.82	9.65	20
		7/8 EHS	A1	T2	47.82	6.38	13
		7/8 EHS	A1b	T2a	47.82	6.31	13
		7/8 EHS	A1a	T2a	47.82	9.67	20
		7/8 EHS	A1	T2b	47.82	6.44	13
		7/8 EHS	A1b	T2b	47.82	6.4	13
	250.00	7/8 EHS	A1	76	47.82	5.97	12
		7/8 EHS	A1a	76a	47.82	10.95	23
		7/8 EHS	A1b	76b	47.82	5.92	12
1.0D + 1.0W Service 330°	89.42	7/8 EHS	A1	28	47.82	6	13
		7/8 EHS	A1a	28a	47.82	9.72	20
		7/8 EHS	A1b	28b	47.82	7.69	16
	164.71	7/8 EHS	A1	T2	47.82	5.69	12
		7/8 EHS	A1a	T2	47.82	9.42	20
		7/8 EHS	A1b	T2a	47.82	7.34	15
		7/8 EHS	A1a	T2a	47.82	9.41	20
		7/8 EHS	A1	T2b	47.82	5.7	12
		7/8 EHS	A1b	T2b	47.82	7.44	16
	250.00	7/8 EHS	A1	76	47.82	4.73	10
		7/8 EHS	A1a	76a	47.82	10.51	22
		7/8 EHS	A1b	76b	47.82	7.5	16

MAXIMUM CABLE FORCES SUMMARY

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Allowed Tension (kip)	Applied Tension (kip)	Use (%)
1.2D + 1.0W 300°	89.42	7/8 EHS	A1a	28a	47.82	18.16	38
1.2D + 1.0W 180°	164.71	7/8 EHS	A1	T2b	47.82	18.42	39
1.2D + 1.0W 300°	250.00	7/8 EHS	A1a	76a	47.82	25.28	53

MAXIMUM TORQUE ARM STRESS SUMMARY

Load Case	Elevation (ft)	Member	Type	Compression %	Tension %
1.2D + 1.0W Normal	165.00	C8 x 13.75	Horiz	0	13
1.2D + 1.0W 300°	165.00	3X3X0.375	Kicker	77	0

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0W Normal 121.83 mph wind with no ice	15.29	0.0677	0.0600	0.2640	0.2702
1.2D + 1.0W Normal 121.83 mph wind with no ice	20.00	0.0883	0.0546	0.2567	0.2618
1.2D + 1.0W Normal 121.83 mph wind with no ice	24.71	0.1091	0.0603	0.2424	0.2498
1.2D + 1.0W Normal 121.83 mph wind with no ice	29.42	0.1292	0.0678	0.2662	0.2745
1.2D + 1.0W Normal 121.83 mph wind with no ice	30.58	0.1346	0.0682	0.2602	0.2688
1.2D + 1.0W Normal 121.83 mph wind with no ice	35.29	0.1522	0.0645	0.2063	0.2158
1.2D + 1.0W Normal 121.83 mph wind with no ice	40.00	0.1681	0.0552	0.2033	0.2105
1.2D + 1.0W Normal 121.83 mph wind with no ice	60.00	0.2221	0.0634	0.1193	0.1351
1.2D + 1.0W Normal 121.83 mph wind with no ice	64.71	0.2312	0.0704	0.1162	0.135
1.2D + 1.0W Normal 121.83 mph wind with no ice	75.29	0.2443	0.0752	0.0927	0.1193
1.2D + 1.0W Normal 121.83 mph wind with no ice	80.00	0.2501	0.0833	0.0665	0.1066
1.2D + 1.0W Normal 121.83 mph wind with no ice	84.71	0.2547	0.0872	0.0406	0.0948
1.2D + 1.0W Normal 121.83 mph wind with no ice	90.58	0.263	0.0817	0.2000	0.2143
1.2D + 1.0W Normal 121.83 mph wind with no ice	100.00	0.2876	0.0603	0.1585	0.1687
1.2D + 1.0W Normal 121.83 mph wind with no ice	104.71	0.2991	0.0499	0.1509	0.1585
1.2D + 1.0W Normal 121.83 mph wind with no ice	110.58	0.3122	0.0397	0.1158	0.1219
1.2D + 1.0W Normal 121.83 mph wind with no ice	115.29	0.3207	0.0369	0.1072	0.1134
1.2D + 1.0W Normal 121.83 mph wind with no ice	120.00	0.3293	0.0405	0.0974	0.1055

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0W Normal 121.83 mph wind with no ice	140.00	0.3571	0.0484	0.0830	0.093
1.2D + 1.0W Normal 121.83 mph wind with no ice	144.71	0.3641	0.0407	0.1294	0.1346
1.2D + 1.0W Normal 121.83 mph wind with no ice	155.29	0.3759	0.0213	0.1379	0.1389
1.2D + 1.0W Normal 121.83 mph wind with no ice	160.00	0.3843	0.0119	0.1372	0.1375
1.2D + 1.0W Normal 121.83 mph wind with no ice	164.71	0.3981	0.0110	0.2183	0.2184
1.2D + 1.0W Normal 121.83 mph wind with no ice	170.00	0.4331	-0.0081	0.5931	0.5931
1.2D + 1.0W Normal 121.83 mph wind with no ice	170.58	0.4389	-0.0089	0.5460	0.546
1.2D + 1.0W Normal 121.83 mph wind with no ice	175.29	0.4705	-0.0159	0.3403	0.3407
1.2D + 1.0W Normal 121.83 mph wind with no ice	180.00	0.5021	-0.0214	0.4038	0.4043
1.2D + 1.0W Normal 121.83 mph wind with no ice	189.42	0.5691	-0.0350	0.5178	0.5188
1.2D + 1.0W Normal 121.83 mph wind with no ice	190.00	0.5744	-0.0361	0.5424	0.5434
1.2D + 1.0W Normal 121.83 mph wind with no ice	200.00	0.6497	-0.0511	0.4339	0.4369
1.2D + 1.0W Normal 121.83 mph wind with no ice	209.42	0.7208	-0.0559	0.4966	0.4996
1.2D + 1.0W Normal 121.83 mph wind with no ice	210.00	0.7228	-0.0552	0.5111	0.5141
1.2D + 1.0W Normal 121.83 mph wind with no ice	215.29	0.7666	-0.0585	0.3893	0.3937
1.2D + 1.0W Normal 121.83 mph wind with no ice	224.71	0.8342	-0.0648	0.4199	0.4248
1.2D + 1.0W Normal 121.83 mph wind with no ice	229.42	0.8682	-0.0678	0.3944	0.4001
1.2D + 1.0W Normal 121.83 mph wind with no ice	230.58	0.8761	-0.0689	0.3914	0.3974
1.2D + 1.0W Normal 121.83 mph wind with no ice	239.97	0.944	-0.0797	0.4571	0.4626
1.2D + 1.0W Normal 121.83 mph wind with no ice	270.00	1.2117	-0.0717	0.5757	0.5801
1.2D + 1.0W Normal 121.83 mph wind with no ice	290.00	1.4182	-0.0717	0.6038	0.608
1.2D + 1.0W Normal 121.83 mph wind with no ice	310.00	1.6311	-0.0717	0.6133	0.6175
1.2D + 1.0W Normal 121.83 mph wind with no ice	330.00	1.8452	-0.0717	0.6138	0.618
1.2D + 1.0W 60° 121.83 mph wind with no ice	15.29	0.0593	0.0543	0.2332	0.2392
1.2D + 1.0W 60° 121.83 mph wind with no ice	20.00	0.0786	0.0596	0.2328	0.2398
1.2D + 1.0W 60° 121.83 mph wind with no ice	24.71	0.097	0.0636	0.2064	0.216
1.2D + 1.0W 60° 121.83 mph wind with no ice	29.42	0.1139	0.0591	0.2402	0.2473
1.2D + 1.0W 60° 121.83 mph wind with no ice	30.58	0.1185	0.0578	0.2344	0.2414
1.2D + 1.0W 60° 121.83 mph wind with no ice	35.29	0.1338	0.0538	0.1734	0.1815
1.2D + 1.0W 60° 121.83 mph wind with no ice	40.00	0.1485	0.0570	0.1790	0.1878
1.2D + 1.0W 60° 121.83 mph wind with no ice	60.00	0.1896	0.0560	0.0858	0.1015
1.2D + 1.0W 60° 121.83 mph wind with no ice	64.71	0.1962	0.0598	0.0862	0.1042
1.2D + 1.0W 60° 121.83 mph wind with no ice	75.29	0.2032	0.0464	0.0611	0.0767
1.2D + 1.0W 60° 121.83 mph wind with no ice	80.00	0.2056	0.0370	0.0391	0.0538
1.2D + 1.0W 60° 121.83 mph wind with no ice	84.71	0.2071	0.0266	0.0198	0.0332
1.2D + 1.0W 60° 121.83 mph wind with no ice	90.58	0.2138	0.0133	0.2153	0.2157
1.2D + 1.0W 60° 121.83 mph wind with no ice	100.00	0.2357	-0.0034	0.1332	0.1332
1.2D + 1.0W 60° 121.83 mph wind with no ice	104.71	0.2458	0.0014	0.1238	0.1238
1.2D + 1.0W 60° 121.83 mph wind with no ice	110.58	0.2583	0.0096	0.1256	0.126
1.2D + 1.0W 60° 121.83 mph wind with no ice	115.29	0.2672	0.0173	0.0942	0.0956
1.2D + 1.0W 60° 121.83 mph wind with no ice	120.00	0.2739	0.0250	0.0712	0.0751
1.2D + 1.0W 60° 121.83 mph wind with no ice	140.00	0.29	0.0116	0.0485	0.0499
1.2D + 1.0W 60° 121.83 mph wind with no ice	144.71	0.2942	0.0067	0.0797	0.0798
1.2D + 1.0W 60° 121.83 mph wind with no ice	155.29	0.2995	-0.0034	0.0826	0.0827
1.2D + 1.0W 60° 121.83 mph wind with no ice	160.00	0.3043	-0.0081	0.0761	0.0764
1.2D + 1.0W 60° 121.83 mph wind with no ice	164.71	0.3133	-0.0146	0.1470	0.1477
1.2D + 1.0W 60° 121.83 mph wind with no ice	170.00	0.3386	-0.0168	0.4556	0.4559
1.2D + 1.0W 60° 121.83 mph wind with no ice	170.58	0.3431	-0.0183	0.4158	0.4162
1.2D + 1.0W 60° 121.83 mph wind with no ice	175.29	0.3656	-0.0284	0.2365	0.2377
1.2D + 1.0W 60° 121.83 mph wind with no ice	180.00	0.3882	-0.0388	0.2901	0.2921
1.2D + 1.0W 60° 121.83 mph wind with no ice	189.42	0.4359	-0.0579	0.3691	0.3732
1.2D + 1.0W 60° 121.83 mph wind with no ice	190.00	0.4398	-0.0591	0.3846	0.3889
1.2D + 1.0W 60° 121.83 mph wind with no ice	200.00	0.4921	-0.0701	0.2967	0.3049
1.2D + 1.0W 60° 121.83 mph wind with no ice	209.42	0.5397	-0.0577	0.3365	0.3414
1.2D + 1.0W 60° 121.83 mph wind with no ice	210.00	0.5372	-0.0567	0.3426	0.3472
1.2D + 1.0W 60° 121.83 mph wind with no ice	215.29	0.5701	-0.0485	0.2886	0.2927
1.2D + 1.0W 60° 121.83 mph wind with no ice	224.71	0.6147	-0.0458	0.2833	0.2869
1.2D + 1.0W 60° 121.83 mph wind with no ice	229.42	0.6366	-0.0435	0.2353	0.2392
1.2D + 1.0W 60° 121.83 mph wind with no ice	230.58	0.6412	-0.0439	0.2305	0.2344
1.2D + 1.0W 60° 121.83 mph wind with no ice	239.97	0.6859	-0.0627	0.2998	0.3062
1.2D + 1.0W 60° 121.83 mph wind with no ice	270.00	0.8809	-0.0633	0.4334	0.438
1.2D + 1.0W 60° 121.83 mph wind with no ice	290.00	1.0376	-0.0633	0.4613	0.4656
1.2D + 1.0W 60° 121.83 mph wind with no ice	310.00	1.2008	-0.0633	0.4708	0.475
1.2D + 1.0W 60° 121.83 mph wind with no ice	330.00	1.3652	-0.0633	0.4713	0.4755
1.2D + 1.0W 90° 121.83 mph wind with no ice	15.29	0.0619	0.0512	0.2414	0.2468
1.2D + 1.0W 90° 121.83 mph wind with no ice	20.00	0.082	0.0597	0.2428	0.25
1.2D + 1.0W 90° 121.83 mph wind with no ice	24.71	0.1013	0.0691	0.2222	0.2326
1.2D + 1.0W 90° 121.83 mph wind with no ice	29.42	0.1198	0.0782	0.2458	0.2579

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0W 90° 121.83 mph wind with no ice	30.58	0.1249	0.0805	0.2404	0.2534
1.2D + 1.0W 90° 121.83 mph wind with no ice	35.29	0.1418	0.0894	0.1897	0.2096
1.2D + 1.0W 90° 121.83 mph wind with no ice	40.00	0.1575	0.0977	0.1894	0.2131
1.2D + 1.0W 90° 121.83 mph wind with no ice	60.00	0.2005	0.0789	0.0934	0.1214
1.2D + 1.0W 90° 121.83 mph wind with no ice	64.71	0.2069	0.0701	0.0995	0.1217
1.2D + 1.0W 90° 121.83 mph wind with no ice	75.29	0.2153	0.0505	0.0738	0.0879
1.2D + 1.0W 90° 121.83 mph wind with no ice	80.00	0.2186	0.0412	0.0531	0.0653
1.2D + 1.0W 90° 121.83 mph wind with no ice	84.71	0.2211	0.0335	0.0278	0.0435
1.2D + 1.0W 90° 121.83 mph wind with no ice	90.58	0.2287	0.0293	0.2132	0.2149
1.2D + 1.0W 90° 121.83 mph wind with no ice	100.00	0.2542	0.0384	0.1508	0.1554
1.2D + 1.0W 90° 121.83 mph wind with no ice	104.71	0.2662	0.0436	0.1440	0.1504
1.2D + 1.0W 90° 121.83 mph wind with no ice	110.58	0.28	0.0482	0.1147	0.1241
1.2D + 1.0W 90° 121.83 mph wind with no ice	115.29	0.2879	0.0460	0.0995	0.1096
1.2D + 1.0W 90° 121.83 mph wind with no ice	120.00	0.2963	0.0473	0.0891	0.1009
1.2D + 1.0W 90° 121.83 mph wind with no ice	140.00	0.3189	0.0229	0.0738	0.0764
1.2D + 1.0W 90° 121.83 mph wind with no ice	144.71	0.325	0.0178	0.1146	0.116
1.2D + 1.0W 90° 121.83 mph wind with no ice	155.29	0.3352	0.0106	0.1194	0.1199
1.2D + 1.0W 90° 121.83 mph wind with no ice	160.00	0.3426	0.0080	0.1183	0.1185
1.2D + 1.0W 90° 121.83 mph wind with no ice	164.71	0.3549	0.0123	0.1938	0.1938
1.2D + 1.0W 90° 121.83 mph wind with no ice	170.00	0.3864	0.0134	0.5267	0.5269
1.2D + 1.0W 90° 121.83 mph wind with no ice	170.58	0.3915	0.0137	0.4840	0.4841
1.2D + 1.0W 90° 121.83 mph wind with no ice	175.29	0.4195	0.0196	0.3017	0.3023
1.2D + 1.0W 90° 121.83 mph wind with no ice	180.00	0.4473	0.0247	0.3552	0.356
1.2D + 1.0W 90° 121.83 mph wind with no ice	189.42	0.5061	0.0351	0.4501	0.4514
1.2D + 1.0W 90° 121.83 mph wind with no ice	190.00	0.5108	0.0359	0.4706	0.4719
1.2D + 1.0W 90° 121.83 mph wind with no ice	200.00	0.5721	0.0489	0.3748	0.378
1.2D + 1.0W 90° 121.83 mph wind with no ice	209.42	0.6392	0.0667	0.4260	0.4312
1.2D + 1.0W 90° 121.83 mph wind with no ice	210.00	0.6435	0.0678	0.4337	0.4389
1.2D + 1.0W 90° 121.83 mph wind with no ice	215.29	0.6794	0.0759	0.3752	0.3828
1.2D + 1.0W 90° 121.83 mph wind with no ice	224.71	0.7374	0.0791	0.3642	0.3727
1.2D + 1.0W 90° 121.83 mph wind with no ice	229.42	0.7664	0.0799	0.3300	0.3395
1.2D + 1.0W 90° 121.83 mph wind with no ice	230.58	0.773	0.0802	0.3263	0.336
1.2D + 1.0W 90° 121.83 mph wind with no ice	239.97	0.8304	0.0825	0.3974	0.4034
1.2D + 1.0W 90° 121.83 mph wind with no ice	270.00	1.0668	0.0711	0.5158	0.5207
1.2D + 1.0W 90° 121.83 mph wind with no ice	290.00	1.2522	0.0710	0.5436	0.5482
1.2D + 1.0W 90° 121.83 mph wind with no ice	310.00	1.4441	0.0710	0.5530	0.5575
1.2D + 1.0W 90° 121.83 mph wind with no ice	330.00	1.6372	0.0710	0.5535	0.558
1.2D + 1.0W 120° 121.83 mph wind with no ice	15.29	0.0664	-0.0698	0.2566	0.2654
1.2D + 1.0W 120° 121.83 mph wind with no ice	20.00	0.0864	-0.0645	0.2493	0.2569
1.2D + 1.0W 120° 121.83 mph wind with no ice	24.71	0.1065	-0.0701	0.2348	0.2451
1.2D + 1.0W 120° 121.83 mph wind with no ice	29.42	0.126	-0.0778	0.2587	0.2699
1.2D + 1.0W 120° 121.83 mph wind with no ice	30.58	0.1313	-0.0784	0.2527	0.2644
1.2D + 1.0W 120° 121.83 mph wind with no ice	35.29	0.1484	-0.0759	0.1985	0.2121
1.2D + 1.0W 120° 121.83 mph wind with no ice	40.00	0.1637	-0.0672	0.1965	0.2074
1.2D + 1.0W 120° 121.83 mph wind with no ice	60.00	0.2153	-0.0773	0.1122	0.1362
1.2D + 1.0W 120° 121.83 mph wind with no ice	64.71	0.2239	-0.0842	0.1094	0.1371
1.2D + 1.0W 120° 121.83 mph wind with no ice	75.29	0.2357	-0.0886	0.0879	0.1248
1.2D + 1.0W 120° 121.83 mph wind with no ice	80.00	0.241	-0.0948	0.0549	0.1087
1.2D + 1.0W 120° 121.83 mph wind with no ice	84.71	0.2442	-0.0901	0.0339	0.0932
1.2D + 1.0W 120° 121.83 mph wind with no ice	90.58	0.252	-0.0840	0.1887	0.2046
1.2D + 1.0W 120° 121.83 mph wind with no ice	100.00	0.2757	-0.0662	0.1503	0.1633
1.2D + 1.0W 120° 121.83 mph wind with no ice	104.71	0.2867	-0.0571	0.1438	0.1542
1.2D + 1.0W 120° 121.83 mph wind with no ice	110.58	0.2991	-0.0464	0.1108	0.1196
1.2D + 1.0W 120° 121.83 mph wind with no ice	115.29	0.3069	-0.0413	0.1012	0.1084
1.2D + 1.0W 120° 121.83 mph wind with no ice	120.00	0.315	-0.0439	0.0908	0.1009
1.2D + 1.0W 120° 121.83 mph wind with no ice	140.00	0.3411	-0.0589	0.0732	0.092
1.2D + 1.0W 120° 121.83 mph wind with no ice	144.71	0.3476	-0.0530	0.1240	0.1334
1.2D + 1.0W 120° 121.83 mph wind with no ice	155.29	0.3582	-0.0307	0.1328	0.1354
1.2D + 1.0W 120° 121.83 mph wind with no ice	160.00	0.3662	-0.0205	0.1328	0.134
1.2D + 1.0W 120° 121.83 mph wind with no ice	164.71	0.3796	-0.0193	0.2140	0.2145
1.2D + 1.0W 120° 121.83 mph wind with no ice	170.00	0.4139	-0.0105	0.5885	0.5885
1.2D + 1.0W 120° 121.83 mph wind with no ice	170.58	0.4195	-0.0094	0.5410	0.541
1.2D + 1.0W 120° 121.83 mph wind with no ice	175.29	0.4502	-0.0047	0.3358	0.3358
1.2D + 1.0W 120° 121.83 mph wind with no ice	180.00	0.4813	0.0064	0.3984	0.3984
1.2D + 1.0W 120° 121.83 mph wind with no ice	189.42	0.5475	0.0151	0.5138	0.514
1.2D + 1.0W 120° 121.83 mph wind with no ice	190.00	0.5528	0.0157	0.5384	0.5386
1.2D + 1.0W 120° 121.83 mph wind with no ice	200.00	0.6253	0.0242	0.4291	0.4298
1.2D + 1.0W 120° 121.83 mph wind with no ice	209.42	0.698	0.0355	0.4892	0.4904

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0W 120° 121.83 mph wind with no ice	210.00	0.7031	0.0360	0.4973	0.4986
1.2D + 1.0W 120° 121.83 mph wind with no ice	215.29	0.7438	0.0402	0.4152	0.4171
1.2D + 1.0W 120° 121.83 mph wind with no ice	224.71	0.8109	0.0449	0.4188	0.4212
1.2D + 1.0W 120° 121.83 mph wind with no ice	229.42	0.8447	0.0481	0.3929	0.3959
1.2D + 1.0W 120° 121.83 mph wind with no ice	230.58	0.8526	0.0491	0.3895	0.3926
1.2D + 1.0W 120° 121.83 mph wind with no ice	239.97	0.9199	0.0570	0.4550	0.4576
1.2D + 1.0W 120° 121.83 mph wind with no ice	270.00	1.1878	0.0483	0.5737	0.5758
1.2D + 1.0W 120° 121.83 mph wind with no ice	290.00	1.3936	0.0483	0.6018	0.6037
1.2D + 1.0W 120° 121.83 mph wind with no ice	310.00	1.6058	0.0483	0.6113	0.6133
1.2D + 1.0W 120° 121.83 mph wind with no ice	330.00	1.8193	0.0483	0.6119	0.6138
1.2D + 1.0W 180° 121.83 mph wind with no ice	15.29	0.0615	-0.0770	0.2408	0.2528
1.2D + 1.0W 180° 121.83 mph wind with no ice	20.00	0.0803	-0.0735	0.2331	0.2442
1.2D + 1.0W 180° 121.83 mph wind with no ice	24.71	0.0989	-0.0776	0.2167	0.2295
1.2D + 1.0W 180° 121.83 mph wind with no ice	29.42	0.1169	-0.0821	0.2386	0.252
1.2D + 1.0W 180° 121.83 mph wind with no ice	30.58	0.1218	-0.0822	0.2327	0.2468
1.2D + 1.0W 180° 121.83 mph wind with no ice	35.29	0.1373	-0.0779	0.1832	0.1991
1.2D + 1.0W 180° 121.83 mph wind with no ice	40.00	0.1516	-0.0751	0.1755	0.1909
1.2D + 1.0W 180° 121.83 mph wind with no ice	60.00	0.1972	-0.1095	0.0891	0.1412
1.2D + 1.0W 180° 121.83 mph wind with no ice	64.71	0.2033	-0.1061	0.0891	0.1376
1.2D + 1.0W 180° 121.83 mph wind with no ice	75.29	0.2116	-0.1018	0.0641	0.1203
1.2D + 1.0W 180° 121.83 mph wind with no ice	80.00	0.2144	-0.0929	0.0421	0.102
1.2D + 1.0W 180° 121.83 mph wind with no ice	84.71	0.2161	-0.0809	0.0244	0.0845
1.2D + 1.0W 180° 121.83 mph wind with no ice	90.58	0.2228	-0.0644	0.2175	0.2266
1.2D + 1.0W 180° 121.83 mph wind with no ice	100.00	0.2442	-0.0452	0.1372	0.1445
1.2D + 1.0W 180° 121.83 mph wind with no ice	104.71	0.255	-0.0461	0.1257	0.1335
1.2D + 1.0W 180° 121.83 mph wind with no ice	110.58	0.2678	-0.0511	0.1273	0.1371
1.2D + 1.0W 180° 121.83 mph wind with no ice	115.29	0.2768	-0.0541	0.0940	0.1084
1.2D + 1.0W 180° 121.83 mph wind with no ice	120.00	0.283	-0.0519	0.0702	0.087
1.2D + 1.0W 180° 121.83 mph wind with no ice	140.00	0.3024	-0.0709	0.0473	0.0852
1.2D + 1.0W 180° 121.83 mph wind with no ice	144.71	0.3062	-0.0618	0.0905	0.1096
1.2D + 1.0W 180° 121.83 mph wind with no ice	155.29	0.31	-0.0274	0.0905	0.0945
1.2D + 1.0W 180° 121.83 mph wind with no ice	160.00	0.3149	-0.0134	0.0803	0.0813
1.2D + 1.0W 180° 121.83 mph wind with no ice	164.71	0.3242	-0.0142	0.1507	0.1513
1.2D + 1.0W 180° 121.83 mph wind with no ice	170.00	0.3496	-0.0068	0.4611	0.4612
1.2D + 1.0W 180° 121.83 mph wind with no ice	170.58	0.3542	-0.0070	0.4212	0.4213
1.2D + 1.0W 180° 121.83 mph wind with no ice	175.29	0.3768	-0.0058	0.2373	0.2373
1.2D + 1.0W 180° 121.83 mph wind with no ice	180.00	0.3991	0.0099	0.2986	0.2987
1.2D + 1.0W 180° 121.83 mph wind with no ice	189.42	0.4478	0.0395	0.3811	0.3828
1.2D + 1.0W 180° 121.83 mph wind with no ice	190.00	0.4518	0.0416	0.3970	0.3989
1.2D + 1.0W 180° 121.83 mph wind with no ice	200.00	0.5055	0.0653	0.3044	0.3113
1.2D + 1.0W 180° 121.83 mph wind with no ice	209.42	0.5543	0.0647	0.3390	0.3452
1.2D + 1.0W 180° 121.83 mph wind with no ice	210.00	0.5547	0.0642	0.3468	0.3527
1.2D + 1.0W 180° 121.83 mph wind with no ice	215.29	0.5854	0.0638	0.2589	0.2666
1.2D + 1.0W 180° 121.83 mph wind with no ice	224.71	0.6314	0.0780	0.2886	0.299
1.2D + 1.0W 180° 121.83 mph wind with no ice	229.42	0.6542	0.0854	0.2406	0.2553
1.2D + 1.0W 180° 121.83 mph wind with no ice	230.58	0.6589	0.0875	0.2389	0.2545
1.2D + 1.0W 180° 121.83 mph wind with no ice	239.97	0.7042	0.1084	0.3031	0.3219
1.2D + 1.0W 180° 121.83 mph wind with no ice	270.00	0.8983	0.1089	0.4363	0.4496
1.2D + 1.0W 180° 121.83 mph wind with no ice	290.00	1.056	0.1089	0.4641	0.4767
1.2D + 1.0W 180° 121.83 mph wind with no ice	310.00	1.2202	0.1089	0.4736	0.4859
1.2D + 1.0W 180° 121.83 mph wind with no ice	330.00	1.3856	0.1089	0.4741	0.4864
1.2D + 1.0W 210° 121.83 mph wind with no ice	15.29	0.0629	0.0421	0.2473	0.2509
1.2D + 1.0W 210° 121.83 mph wind with no ice	20.00	0.0835	0.0506	0.2489	0.2539
1.2D + 1.0W 210° 121.83 mph wind with no ice	24.71	0.1033	0.0600	0.2281	0.2358
1.2D + 1.0W 210° 121.83 mph wind with no ice	29.42	0.1223	0.0693	0.2521	0.2614
1.2D + 1.0W 210° 121.83 mph wind with no ice	30.58	0.1275	0.0716	0.2466	0.2567
1.2D + 1.0W 210° 121.83 mph wind with no ice	35.29	0.1449	0.0807	0.1959	0.2118
1.2D + 1.0W 210° 121.83 mph wind with no ice	40.00	0.1611	0.0897	0.1933	0.213
1.2D + 1.0W 210° 121.83 mph wind with no ice	60.00	0.2076	0.0866	0.0988	0.1306
1.2D + 1.0W 210° 121.83 mph wind with no ice	64.71	0.2144	0.0778	0.1045	0.1303
1.2D + 1.0W 210° 121.83 mph wind with no ice	75.29	0.2238	0.0590	0.0779	0.0961
1.2D + 1.0W 210° 121.83 mph wind with no ice	80.00	0.2276	0.0519	0.0564	0.0746
1.2D + 1.0W 210° 121.83 mph wind with no ice	84.71	0.2307	0.0471	0.0322	0.0571
1.2D + 1.0W 210° 121.83 mph wind with no ice	90.58	0.2391	0.0475	0.2141	0.2188
1.2D + 1.0W 210° 121.83 mph wind with no ice	100.00	0.2657	0.0636	0.1577	0.1699
1.2D + 1.0W 210° 121.83 mph wind with no ice	104.71	0.2783	0.0716	0.1493	0.1654
1.2D + 1.0W 210° 121.83 mph wind with no ice	110.58	0.2925	0.0767	0.1183	0.1406
1.2D + 1.0W 210° 121.83 mph wind with no ice	115.29	0.3006	0.0716	0.1056	0.1269

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0W 210° 121.83 mph wind with no ice	120.00	0.3082	0.0649	0.0945	0.1138
1.2D + 1.0W 210° 121.83 mph wind with no ice	140.00	0.3323	0.0366	0.0784	0.0852
1.2D + 1.0W 210° 121.83 mph wind with no ice	144.71	0.3388	0.0312	0.1193	0.1233
1.2D + 1.0W 210° 121.83 mph wind with no ice	155.29	0.3498	0.0235	0.1240	0.1262
1.2D + 1.0W 210° 121.83 mph wind with no ice	160.00	0.3575	0.0207	0.1220	0.1237
1.2D + 1.0W 210° 121.83 mph wind with no ice	164.71	0.3695	0.0252	0.1974	0.198
1.2D + 1.0W 210° 121.83 mph wind with no ice	170.00	0.4025	0.0308	0.5310	0.5318
1.2D + 1.0W 210° 121.83 mph wind with no ice	170.58	0.4076	0.0316	0.4887	0.4897
1.2D + 1.0W 210° 121.83 mph wind with no ice	175.29	0.4361	0.0400	0.3073	0.3099
1.2D + 1.0W 210° 121.83 mph wind with no ice	180.00	0.4645	0.0490	0.3634	0.3666
1.2D + 1.0W 210° 121.83 mph wind with no ice	189.42	0.5247	0.0693	0.4562	0.4614
1.2D + 1.0W 210° 121.83 mph wind with no ice	190.00	0.5295	0.0708	0.4735	0.4788
1.2D + 1.0W 210° 121.83 mph wind with no ice	200.00	0.5964	0.0917	0.3840	0.3948
1.2D + 1.0W 210° 121.83 mph wind with no ice	209.42	0.659	0.0998	0.4291	0.4404
1.2D + 1.0W 210° 121.83 mph wind with no ice	210.00	0.6537	0.0996	0.4330	0.4444
1.2D + 1.0W 210° 121.83 mph wind with no ice	215.29	0.6992	0.1057	0.3594	0.3746
1.2D + 1.0W 210° 121.83 mph wind with no ice	224.71	0.7584	0.1153	0.3650	0.3828
1.2D + 1.0W 210° 121.83 mph wind with no ice	229.42	0.7875	0.1154	0.3308	0.3504
1.2D + 1.0W 210° 121.83 mph wind with no ice	230.58	0.7941	0.1158	0.3281	0.348
1.2D + 1.0W 210° 121.83 mph wind with no ice	239.97	0.8523	0.1235	0.3992	0.4142
1.2D + 1.0W 210° 121.83 mph wind with no ice	270.00	1.0872	0.1130	0.5177	0.5299
1.2D + 1.0W 210° 121.83 mph wind with no ice	290.00	1.2733	0.1129	0.5454	0.557
1.2D + 1.0W 210° 121.83 mph wind with no ice	310.00	1.4658	0.1129	0.5548	0.5662
1.2D + 1.0W 210° 121.83 mph wind with no ice	330.00	1.6595	0.1129	0.5553	0.5667
1.2D + 1.0W 240° 121.83 mph wind with no ice	15.29	0.0662	0.0134	0.2671	0.2673
1.2D + 1.0W 240° 121.83 mph wind with no ice	20.00	0.087	0.0037	0.2678	0.2678
1.2D + 1.0W 240° 121.83 mph wind with no ice	24.71	0.1079	-0.0076	0.2393	0.2394
1.2D + 1.0W 240° 121.83 mph wind with no ice	29.42	0.1276	-0.0077	0.2691	0.2692
1.2D + 1.0W 240° 121.83 mph wind with no ice	30.58	0.1329	-0.0062	0.2635	0.2636
1.2D + 1.0W 240° 121.83 mph wind with no ice	35.29	0.1508	0.0051	0.2120	0.212
1.2D + 1.0W 240° 121.83 mph wind with no ice	40.00	0.1681	0.0163	0.2056	0.2062
1.2D + 1.0W 240° 121.83 mph wind with no ice	60.00	0.2241	0.0428	0.1217	0.1282
1.2D + 1.0W 240° 121.83 mph wind with no ice	64.71	0.2323	0.0331	0.1225	0.1261
1.2D + 1.0W 240° 121.83 mph wind with no ice	75.29	0.2447	0.0121	0.0939	0.0941
1.2D + 1.0W 240° 121.83 mph wind with no ice	80.00	0.2498	0.0066	0.0645	0.0645
1.2D + 1.0W 240° 121.83 mph wind with no ice	84.71	0.2545	0.0078	0.0429	0.0432
1.2D + 1.0W 240° 121.83 mph wind with no ice	90.58	0.2636	0.0111	0.2002	0.2005
1.2D + 1.0W 240° 121.83 mph wind with no ice	100.00	0.2909	0.0259	0.1618	0.1639
1.2D + 1.0W 240° 121.83 mph wind with no ice	104.71	0.3037	0.0310	0.1503	0.1532
1.2D + 1.0W 240° 121.83 mph wind with no ice	110.58	0.3172	0.0262	0.1212	0.1237
1.2D + 1.0W 240° 121.83 mph wind with no ice	115.29	0.3259	0.0229	0.1102	0.1126
1.2D + 1.0W 240° 121.83 mph wind with no ice	120.00	0.3349	0.0271	0.1014	0.105
1.2D + 1.0W 240° 121.83 mph wind with no ice	140.00	0.3638	0.0305	0.0858	0.0891
1.2D + 1.0W 240° 121.83 mph wind with no ice	144.71	0.3713	0.0260	0.1338	0.1357
1.2D + 1.0W 240° 121.83 mph wind with no ice	155.29	0.3846	0.0171	0.1421	0.1428
1.2D + 1.0W 240° 121.83 mph wind with no ice	160.00	0.3937	0.0125	0.1413	0.1417
1.2D + 1.0W 240° 121.83 mph wind with no ice	164.71	0.4079	0.0134	0.2225	0.2226
1.2D + 1.0W 240° 121.83 mph wind with no ice	170.00	0.4437	0.0187	0.5969	0.597
1.2D + 1.0W 240° 121.83 mph wind with no ice	170.58	0.4495	0.0189	0.5497	0.5499
1.2D + 1.0W 240° 121.83 mph wind with no ice	175.29	0.4812	0.0212	0.3425	0.3431
1.2D + 1.0W 240° 121.83 mph wind with no ice	180.00	0.5129	0.0230	0.4059	0.4063
1.2D + 1.0W 240° 121.83 mph wind with no ice	189.42	0.58	0.0268	0.5204	0.5209
1.2D + 1.0W 240° 121.83 mph wind with no ice	190.00	0.5853	0.0270	0.5448	0.5454
1.2D + 1.0W 240° 121.83 mph wind with no ice	200.00	0.6605	0.0310	0.4335	0.4346
1.2D + 1.0W 240° 121.83 mph wind with no ice	209.42	0.7315	0.0258	0.4943	0.4949
1.2D + 1.0W 240° 121.83 mph wind with no ice	210.00	0.734	0.0236	0.4997	0.5003
1.2D + 1.0W 240° 121.83 mph wind with no ice	215.29	0.7774	0.0233	0.4197	0.4204
1.2D + 1.0W 240° 121.83 mph wind with no ice	224.71	0.8452	0.0246	0.4226	0.4233
1.2D + 1.0W 240° 121.83 mph wind with no ice	229.42	0.8793	0.0248	0.3948	0.3955
1.2D + 1.0W 240° 121.83 mph wind with no ice	230.58	0.8871	0.0252	0.3914	0.3921
1.2D + 1.0W 240° 121.83 mph wind with no ice	239.97	0.9553	0.0354	0.4590	0.4598
1.2D + 1.0W 240° 121.83 mph wind with no ice	270.00	1.2265	0.0275	0.5778	0.5785
1.2D + 1.0W 240° 121.83 mph wind with no ice	290.00	1.4337	0.0275	0.6059	0.6065
1.2D + 1.0W 240° 121.83 mph wind with no ice	310.00	1.6473	0.0275	0.6154	0.6161
1.2D + 1.0W 240° 121.83 mph wind with no ice	330.00	1.8622	0.0275	0.6159	0.6166
1.2D + 1.0W 300° 121.83 mph wind with no ice	15.29	0.0596	0.0174	0.2447	0.2453
1.2D + 1.0W 300° 121.83 mph wind with no ice	20.00	0.0796	0.0253	0.2392	0.2404
1.2D + 1.0W 300° 121.83 mph wind with no ice	24.71	0.0987	0.0332	0.2196	0.2218

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0W 300° 121.83 mph wind with no ice	29.42	0.1171	0.0404	0.2469	0.2501
1.2D + 1.0W 300° 121.83 mph wind with no ice	30.58	0.1221	0.0420	0.2416	0.245
1.2D + 1.0W 300° 121.83 mph wind with no ice	35.29	0.1388	0.0460	0.1824	0.1879
1.2D + 1.0W 300° 121.83 mph wind with no ice	40.00	0.1535	0.0425	0.1841	0.1889
1.2D + 1.0W 300° 121.83 mph wind with no ice	60.00	0.2002	0.0455	0.0944	0.1048
1.2D + 1.0W 300° 121.83 mph wind with no ice	64.71	0.2066	0.0424	0.0941	0.1027
1.2D + 1.0W 300° 121.83 mph wind with no ice	75.29	0.2169	0.0563	0.0710	0.0882
1.2D + 1.0W 300° 121.83 mph wind with no ice	80.00	0.2211	0.0615	0.0464	0.0753
1.2D + 1.0W 300° 121.83 mph wind with no ice	84.71	0.2232	0.0547	0.0302	0.0625
1.2D + 1.0W 300° 121.83 mph wind with no ice	90.58	0.2306	0.0416	0.2233	0.227
1.2D + 1.0W 300° 121.83 mph wind with no ice	100.00	0.2532	0.0257	0.1422	0.1445
1.2D + 1.0W 300° 121.83 mph wind with no ice	104.71	0.2645	0.0278	0.1324	0.135
1.2D + 1.0W 300° 121.83 mph wind with no ice	110.58	0.278	0.0331	0.1320	0.136
1.2D + 1.0W 300° 121.83 mph wind with no ice	115.29	0.2875	0.0385	0.1030	0.1098
1.2D + 1.0W 300° 121.83 mph wind with no ice	120.00	0.295	0.0446	0.0784	0.0896
1.2D + 1.0W 300° 121.83 mph wind with no ice	140.00	0.317	0.0697	0.0586	0.0875
1.2D + 1.0W 300° 121.83 mph wind with no ice	144.71	0.3224	0.0706	0.0919	0.1153
1.2D + 1.0W 300° 121.83 mph wind with no ice	155.29	0.3276	0.0382	0.0993	0.1064
1.2D + 1.0W 300° 121.83 mph wind with no ice	160.00	0.3325	0.0237	0.0878	0.0907
1.2D + 1.0W 300° 121.83 mph wind with no ice	164.71	0.3424	0.0249	0.1585	0.1604
1.2D + 1.0W 300° 121.83 mph wind with no ice	170.00	0.3693	0.0200	0.4735	0.4739
1.2D + 1.0W 300° 121.83 mph wind with no ice	170.58	0.3738	0.0206	0.4326	0.4331
1.2D + 1.0W 300° 121.83 mph wind with no ice	175.29	0.3973	0.0240	0.2493	0.25
1.2D + 1.0W 300° 121.83 mph wind with no ice	180.00	0.4208	0.0249	0.3011	0.3021
1.2D + 1.0W 300° 121.83 mph wind with no ice	189.42	0.4688	0.0023	0.3906	0.3906
1.2D + 1.0W 300° 121.83 mph wind with no ice	190.00	0.4729	-0.0022	0.4067	0.4067
1.2D + 1.0W 300° 121.83 mph wind with no ice	200.00	0.5272	-0.0261	0.3125	0.3136
1.2D + 1.0W 300° 121.83 mph wind with no ice	209.42	0.5806	-0.0486	0.3571	0.3603
1.2D + 1.0W 300° 121.83 mph wind with no ice	210.00	0.5843	-0.0495	0.3639	0.3672
1.2D + 1.0W 300° 121.83 mph wind with no ice	215.29	0.614	-0.0610	0.3048	0.3108
1.2D + 1.0W 300° 121.83 mph wind with no ice	224.71	0.6621	-0.0774	0.3032	0.313
1.2D + 1.0W 300° 121.83 mph wind with no ice	229.42	0.686	-0.0840	0.2541	0.2677
1.2D + 1.0W 300° 121.83 mph wind with no ice	230.58	0.6911	-0.0847	0.2499	0.2639
1.2D + 1.0W 300° 121.83 mph wind with no ice	239.97	0.7371	-0.0816	0.3147	0.3219
1.2D + 1.0W 300° 121.83 mph wind with no ice	270.00	0.9389	-0.0666	0.4483	0.4532
1.2D + 1.0W 300° 121.83 mph wind with no ice	290.00	1.1008	-0.0666	0.4762	0.4808
1.2D + 1.0W 300° 121.83 mph wind with no ice	310.00	1.2692	-0.0666	0.4857	0.4902
1.2D + 1.0W 300° 121.83 mph wind with no ice	330.00	1.4388	-0.0666	0.4862	0.4907
1.2D + 1.0W 330° 121.83 mph wind with no ice	15.29	0.0719	0.1760	0.2511	0.3067
1.2D + 1.0W 330° 121.83 mph wind with no ice	20.00	0.0928	0.1845	0.2523	0.3125
1.2D + 1.0W 330° 121.83 mph wind with no ice	24.71	0.1129	0.1940	0.2318	0.302
1.2D + 1.0W 330° 121.83 mph wind with no ice	29.42	0.1322	0.2033	0.2553	0.3263
1.2D + 1.0W 330° 121.83 mph wind with no ice	30.58	0.1375	0.2056	0.2499	0.3234
1.2D + 1.0W 330° 121.83 mph wind with no ice	35.29	0.1552	0.2145	0.1997	0.293
1.2D + 1.0W 330° 121.83 mph wind with no ice	40.00	0.1716	0.2227	0.1967	0.2971
1.2D + 1.0W 330° 121.83 mph wind with no ice	60.00	0.2194	0.1993	0.1025	0.223
1.2D + 1.0W 330° 121.83 mph wind with no ice	64.71	0.2265	0.1904	0.1083	0.219
1.2D + 1.0W 330° 121.83 mph wind with no ice	75.29	0.2366	0.1708	0.0812	0.1883
1.2D + 1.0W 330° 121.83 mph wind with no ice	80.00	0.2407	0.1618	0.0615	0.1709
1.2D + 1.0W 330° 121.83 mph wind with no ice	84.71	0.2437	0.1510	0.0368	0.1554
1.2D + 1.0W 330° 121.83 mph wind with no ice	90.58	0.2518	0.1414	0.2246	0.2641
1.2D + 1.0W 330° 121.83 mph wind with no ice	100.00	0.2784	0.1439	0.1577	0.213
1.2D + 1.0W 330° 121.83 mph wind with no ice	104.71	0.291	0.1464	0.1501	0.2092
1.2D + 1.0W 330° 121.83 mph wind with no ice	110.58	0.3057	0.1491	0.1293	0.1974
1.2D + 1.0W 330° 121.83 mph wind with no ice	115.29	0.3152	0.1494	0.1099	0.1846
1.2D + 1.0W 330° 121.83 mph wind with no ice	120.00	0.3231	0.1421	0.1014	0.1734
1.2D + 1.0W 330° 121.83 mph wind with no ice	140.00	0.3481	0.0975	0.0854	0.1277
1.2D + 1.0W 330° 121.83 mph wind with no ice	144.71	0.3546	0.0848	0.1260	0.1519
1.2D + 1.0W 330° 121.83 mph wind with no ice	155.29	0.3649	0.0504	0.1347	0.1428
1.2D + 1.0W 330° 121.83 mph wind with no ice	160.00	0.3722	0.0377	0.1273	0.1326
1.2D + 1.0W 330° 121.83 mph wind with no ice	164.71	0.3846	0.0387	0.2029	0.2049
1.2D + 1.0W 330° 121.83 mph wind with no ice	170.00	0.4175	0.0318	0.5459	0.5468
1.2D + 1.0W 330° 121.83 mph wind with no ice	170.58	0.4226	0.0309	0.5027	0.5037
1.2D + 1.0W 330° 121.83 mph wind with no ice	175.29	0.4511	0.0283	0.3092	0.3105
1.2D + 1.0W 330° 121.83 mph wind with no ice	180.00	0.4795	0.0262	0.3672	0.3682
1.2D + 1.0W 330° 121.83 mph wind with no ice	189.42	0.5393	0.0171	0.4699	0.4702
1.2D + 1.0W 330° 121.83 mph wind with no ice	190.00	0.544	0.0163	0.4914	0.4917
1.2D + 1.0W 330° 121.83 mph wind with no ice	200.00	0.6102	0.0055	0.3900	0.3901

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0W 330° 121.83 mph wind with no ice	209.42	0.6743	0.0047	0.4435	0.4435
1.2D + 1.0W 330° 121.83 mph wind with no ice	210.00	0.6782	0.0043	0.4553	0.4553
1.2D + 1.0W 330° 121.83 mph wind with no ice	215.29	0.7152	0.0028	0.3537	0.3537
1.2D + 1.0W 330° 121.83 mph wind with no ice	224.71	0.7752	-0.0086	0.3775	0.3776
1.2D + 1.0W 330° 121.83 mph wind with no ice	229.42	0.8055	-0.0139	0.3436	0.3438
1.2D + 1.0W 330° 121.83 mph wind with no ice	230.58	0.8123	-0.0153	0.3402	0.3405
1.2D + 1.0W 330° 121.83 mph wind with no ice	239.97	0.8726	-0.0258	0.4100	0.4108
1.2D + 1.0W 330° 121.83 mph wind with no ice	270.00	1.1188	-0.0231	0.5282	0.5287
1.2D + 1.0W 330° 121.83 mph wind with no ice	290.00	1.3086	-0.0232	0.5560	0.5564
1.2D + 1.0W 330° 121.83 mph wind with no ice	310.00	1.5048	-0.0232	0.5654	0.5659
1.2D + 1.0W 330° 121.83 mph wind with no ice	330.00	1.7022	-0.0232	0.5659	0.5664
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	15.29	0.026	-0.0179	0.1200	0.1211
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	20.00	0.0343	-0.0063	0.1209	0.121
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	24.71	0.0431	0.0061	0.1043	0.1044
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	29.42	0.0517	0.0108	0.1187	0.1191
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	30.58	0.054	0.0104	0.1161	0.1165
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	35.29	0.0611	0.0026	0.0915	0.0915
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	40.00	0.0683	-0.0101	0.0917	0.0923
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	60.00	0.0941	-0.0484	0.0434	0.0647
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	64.71	0.0951	-0.0394	0.0313	0.0497
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	75.29	0.0946	-0.0132	0.0206	0.0237
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	80.00	0.0939	-0.0020	0.0213	0.0214
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	84.71	0.0938	0.0094	0.0286	0.0301
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	90.58	0.0952	0.0123	0.0838	0.0844
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	100.00	0.1026	-0.0084	0.0509	0.0516
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	104.71	0.1064	-0.0187	0.0412	0.0452
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	110.58	0.1105	-0.0306	0.0425	0.0523
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	115.29	0.1129	-0.0365	0.0193	0.0413
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	120.00	0.1131	-0.0321	0.0102	0.0337
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	140.00	0.1056	-0.0201	0.0328	0.0376
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	144.71	0.1035	-0.0205	0.0255	0.0327
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	155.29	0.0956	-0.0077	0.0353	0.0362
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	160.00	0.0926	-0.0018	0.0320	0.032
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	164.71	0.0915	0.0017	0.0077	0.0078
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	170.00	0.0962	-0.0085	0.1058	0.1061
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	170.58	0.0973	-0.0093	0.0925	0.0929
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	175.29	0.1011	-0.0157	0.0322	0.0358
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	180.00	0.1045	-0.0215	0.0451	0.05
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	189.42	0.1115	-0.0324	0.0618	0.0695
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	190.00	0.1121	-0.0328	0.0669	0.0742
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	200.00	0.1187	-0.0360	0.0356	0.0506
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	209.42	0.1236	-0.0306	0.0404	0.0502
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	210.00	0.1217	-0.0298	0.0421	0.0516
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	215.29	0.1264	-0.0277	0.0129	0.0297
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	224.71	0.1279	-0.0283	0.0115	0.0302
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	229.42	0.1283	-0.0287	0.0125	0.0305
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	230.58	0.1281	-0.0289	0.0134	0.0313
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	239.97	0.1286	-0.0315	0.0673	0.0725
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	270.00	0.1423	-0.0286	0.0427	0.0514
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	290.00	0.1583	-0.0286	0.0481	0.056
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	310.00	0.1754	-0.0286	0.0499	0.0576
1.2D + 1.0Di + 1.0Wi Normal 48.73 mph wind with 0.850" radial ice	330.00	0.1929	-0.0286	0.0500	0.0577
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	15.29	0.0242	0.0285	0.1094	0.1129
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	20.00	0.0325	0.0253	0.1070	0.11
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	24.71	0.0403	0.0160	0.1015	0.1028
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	29.42	0.048	0.0054	0.1176	0.1177
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	30.58	0.0503	0.0033	0.1165	0.1166
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	35.29	0.0573	-0.0022	0.0652	0.0652
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	40.00	0.0612	-0.0004	0.0434	0.0434
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	60.00	0.0822	0.0399	0.0393	0.0559
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	64.71	0.0837	0.0432	0.0161	0.0458
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	75.29	0.0831	0.0287	0.0169	0.0333
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	80.00	0.0827	0.0182	0.0170	0.0238
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	84.71	0.0821	0.0079	0.0282	0.0291
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	90.58	0.0836	-0.0033	0.1000	0.1
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	100.00	0.0921	-0.0124	0.0508	0.0523
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	104.71	0.0958	-0.0058	0.0491	0.0494
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	110.58	0.0999	0.0079	0.0466	0.0473

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	115.29	0.1019	0.0240	0.0190	0.0305
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	120.00	0.1026	0.0349	0.0126	0.0371
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	140.00	0.0991	0.0338	0.0237	0.0401
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	144.71	0.0975	0.0255	0.0158	0.0287
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	155.29	0.0931	0.0071	0.0216	0.0222
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	160.00	0.0917	-0.0008	0.0163	0.0163
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	164.71	0.092	-0.0040	0.0221	0.0221
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	170.00	0.0977	0.0021	0.1236	0.1236
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	170.58	0.0989	0.0028	0.1096	0.1096
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	175.29	0.1038	0.0076	0.0494	0.0498
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	180.00	0.1084	0.0102	0.0600	0.0609
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	189.42	0.1177	0.0006	0.0836	0.0836
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	190.00	0.1186	-0.0011	0.0878	0.0878
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	200.00	0.1281	-0.0088	0.0553	0.0561
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	209.42	0.1371	-0.0020	0.0644	0.0645
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	210.00	0.1367	-0.0015	0.0661	0.0661
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	215.29	0.1424	0.0031	0.0421	0.0421
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	224.71	0.1476	0.0043	0.0339	0.0341
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	229.42	0.1499	0.0043	0.0145	0.015
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	230.58	0.1501	0.0042	0.0146	0.015
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	239.97	0.1544	0.0033	0.0811	0.0812
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	270.00	0.1815	-0.0007	0.0655	0.0655
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	290.00	0.2054	-0.0007	0.0709	0.0709
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	310.00	0.2305	-0.0007	0.0727	0.0727
1.2D + 1.0Di + 1.0Wi 60° 48.73 mph wind with 0.850" radial ice	330.00	0.2559	-0.0007	0.0728	0.0728
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	15.29	0.0235	0.0080	0.1107	0.111
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	20.00	0.0327	0.0193	0.1144	0.116
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	24.71	0.0418	0.0316	0.1030	0.1077
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	29.42	0.0506	0.0436	0.1210	0.1286
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	30.58	0.0531	0.0461	0.1202	0.1287
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	35.29	0.061	0.0528	0.0757	0.0923
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	40.00	0.0661	0.0459	0.0805	0.0923
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	60.00	0.0876	0.0653	0.0203	0.0683
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	64.71	0.0879	0.0592	0.0214	0.0627
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	75.29	0.0859	0.0351	0.0099	0.0365
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	80.00	0.0847	0.0239	0.0178	0.0294
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	84.71	0.0829	0.0140	0.0296	0.0327
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	90.58	0.0838	0.0089	0.0928	0.0931
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	100.00	0.0928	0.0240	0.0522	0.0573
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	104.71	0.0968	0.0332	0.0446	0.0556
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	110.58	0.1014	0.0480	0.0442	0.0652
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	115.29	0.1041	0.0673	0.0272	0.0723
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	120.00	0.105	0.0756	0.0152	0.077
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	140.00	0.0963	0.0410	0.0330	0.0523
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	144.71	0.0938	0.0318	0.0250	0.0401
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	155.29	0.0863	0.0126	0.0316	0.0338
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	160.00	0.0841	0.0060	0.0271	0.0277
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	164.71	0.0838	0.0053	0.0187	0.0194
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	170.00	0.0887	0.0105	0.1116	0.1121
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	170.58	0.0898	0.0111	0.1002	0.1009
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	175.29	0.0945	0.0175	0.0422	0.0456
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	180.00	0.0988	0.0234	0.0551	0.0597
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	189.42	0.1075	0.0350	0.0730	0.0808
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	190.00	0.1083	0.0357	0.0767	0.0845
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	200.00	0.1122	0.0479	0.0432	0.0645
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	209.42	0.1252	0.0602	0.0553	0.0817
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	210.00	0.1257	0.0609	0.0568	0.0832
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	215.29	0.1299	0.0654	0.0345	0.074
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	224.71	0.1328	0.0616	0.0266	0.0671
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	229.42	0.134	0.0590	0.0168	0.0612
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	230.58	0.134	0.0585	0.0170	0.0609
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	239.97	0.136	0.0541	0.0807	0.0972
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	270.00	0.1553	0.0491	0.0550	0.0737
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	290.00	0.1755	0.0491	0.0603	0.0777
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	310.00	0.197	0.0491	0.0621	0.0791
1.2D + 1.0Di + 1.0Wi 90° 48.73 mph wind with 0.850" radial ice	330.00	0.2187	0.0491	0.0622	0.0792
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	15.29	0.0239	-0.0033	0.1154	0.1155
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	20.00	0.0332	-0.0150	0.1155	0.1165

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	24.71	0.0422	-0.0273	0.1029	0.1065
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	29.42	0.0508	-0.0376	0.1159	0.1218
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	30.58	0.0532	-0.0383	0.1112	0.1175
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	35.29	0.0601	-0.0341	0.0863	0.0925
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	40.00	0.0659	-0.0232	0.0880	0.0908
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	60.00	0.0879	0.0162	0.0384	0.0415
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	64.71	0.0886	0.0075	0.0272	0.028
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	75.29	0.0894	-0.0196	0.0183	0.0268
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	80.00	0.0896	-0.0291	0.0151	0.0309
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	84.71	0.0887	-0.0308	0.0287	0.0421
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	90.58	0.0892	-0.0247	0.0805	0.0836
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	100.00	0.0954	-0.0053	0.0478	0.048
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	104.71	0.0985	0.0055	0.0404	0.0408
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	110.58	0.1021	0.0129	0.0299	0.0325
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	115.29	0.1025	0.0082	0.0097	0.0126
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	120.00	0.1017	0.0034	0.0182	0.0185
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	140.00	0.0956	-0.0313	0.0340	0.0451
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	144.71	0.0932	-0.0307	0.0264	0.0405
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	155.29	0.0846	-0.0130	0.0366	0.0388
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	160.00	0.0812	-0.0050	0.0316	0.032
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	164.71	0.08	-0.0033	0.0072	0.008
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	170.00	0.0845	0.0055	0.1033	0.1034
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	170.58	0.0854	0.0062	0.0897	0.0899
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	175.29	0.0892	0.0120	0.0306	0.0328
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	180.00	0.0924	0.0170	0.0430	0.0462
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	189.42	0.0991	0.0274	0.0602	0.0661
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	190.00	0.0998	0.0279	0.0644	0.0702
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	200.00	0.1034	0.0307	0.0329	0.045
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	209.42	0.111	0.0338	0.0393	0.0518
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	210.00	0.1114	0.0343	0.0403	0.0529
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	215.29	0.1142	0.0388	0.0201	0.0437
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	224.71	0.1153	0.0409	0.0102	0.042
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	229.42	0.1156	0.0413	0.0148	0.043
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	230.58	0.1153	0.0415	0.0151	0.0439
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	239.97	0.1155	0.0432	0.0671	0.0798
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	270.00	0.128	0.0401	0.0417	0.0578
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	290.00	0.1436	0.0401	0.0470	0.0618
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	310.00	0.1605	0.0401	0.0489	0.0632
1.2D + 1.0Di + 1.0Wi 120° 48.73 mph wind with 0.850" radial ice	330.00	0.1776	0.0401	0.0490	0.0633
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	15.29	0.0235	-0.0178	0.1125	0.1138
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	20.00	0.0322	-0.0287	0.1082	0.1117
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	24.71	0.0409	-0.0398	0.1007	0.1079
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	29.42	0.0493	-0.0489	0.1109	0.121
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	30.58	0.0516	-0.0496	0.1059	0.1167
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	35.29	0.0583	-0.0458	0.0847	0.0963
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	40.00	0.0642	-0.0364	0.0857	0.0932
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	60.00	0.0854	-0.0040	0.0362	0.0364
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	64.71	0.0868	-0.0118	0.0232	0.0257
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	75.29	0.0876	-0.0315	0.0082	0.0319
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	80.00	0.0873	-0.0305	0.0146	0.0329
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	84.71	0.0861	-0.0230	0.0289	0.0365
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	90.58	0.0876	-0.0170	0.0993	0.1007
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	100.00	0.0965	-0.0280	0.0494	0.0564
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	104.71	0.1	-0.0251	0.0497	0.0556
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	110.58	0.1036	-0.0173	0.0314	0.0359
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	115.29	0.1043	-0.0170	0.0054	0.0177
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	120.00	0.1047	-0.0233	0.0112	0.0255
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	140.00	0.1027	-0.0403	0.0250	0.0462
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	144.71	0.1011	-0.0319	0.0159	0.0342
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	155.29	0.0966	-0.0108	0.0220	0.0238
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	160.00	0.0953	-0.0032	0.0159	0.016
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	164.71	0.0957	-0.0024	0.0228	0.0229
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	170.00	0.1015	-0.0041	0.1248	0.1249
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	170.58	0.1027	-0.0046	0.1107	0.1108
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	175.29	0.1077	-0.0084	0.0495	0.05
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	180.00	0.1123	-0.0101	0.0612	0.062
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	189.42	0.1217	0.0027	0.0856	0.0856
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	190.00	0.1225	0.0035	0.0902	0.0903

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	200.00	0.1318	0.0073	0.0520	0.0525
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	209.42	0.1409	0.0096	0.0649	0.0656
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	210.00	0.1415	0.0099	0.0633	0.0641
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	215.29	0.146	0.0150	0.0342	0.0372
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	224.71	0.1513	0.0243	0.0344	0.0419
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	229.42	0.1537	0.0285	0.0158	0.0324
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	230.58	0.1539	0.0294	0.0156	0.0332
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	239.97	0.1584	0.0387	0.0796	0.0875
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	270.00	0.1835	0.0415	0.0637	0.0761
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	290.00	0.2067	0.0415	0.0691	0.0806
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	310.00	0.2313	0.0415	0.0710	0.0823
1.2D + 1.0Di + 1.0Wi 180° 48.73 mph wind with 0.850" radial ice	330.00	0.256	0.0415	0.0711	0.0824
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	15.29	0.0248	-0.0076	0.1144	0.1146
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	20.00	0.0333	0.0047	0.1178	0.1179
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	24.71	0.0424	0.0171	0.1066	0.108
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	29.42	0.0514	0.0295	0.1224	0.1259
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	30.58	0.0539	0.0325	0.1200	0.1243
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	35.29	0.0622	0.0449	0.0926	0.1029
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	40.00	0.0699	0.0572	0.0913	0.1078
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	60.00	0.0945	0.1000	0.0233	0.1024
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	64.71	0.0951	0.0932	0.0235	0.0961
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	75.29	0.0936	0.0689	0.0108	0.0696
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	80.00	0.0926	0.0580	0.0153	0.0596
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	84.71	0.0911	0.0486	0.0282	0.0552
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	90.58	0.0921	0.0445	0.0939	0.1034
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	100.00	0.1018	0.0618	0.0552	0.0828
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	104.71	0.106	0.0714	0.0488	0.0865
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	110.58	0.1106	0.0821	0.0347	0.0892
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	115.29	0.1119	0.0861	0.0040	0.0862
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	120.00	0.1112	0.0803	0.0144	0.0815
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	140.00	0.1033	0.0418	0.0293	0.0508
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	144.71	0.1011	0.0329	0.0214	0.039
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	155.29	0.0941	0.0146	0.0281	0.0315
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	160.00	0.0917	0.0083	0.0252	0.0264
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	164.71	0.0913	0.0079	0.0196	0.0211
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	170.00	0.0969	0.0146	0.1158	0.1167
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	170.58	0.0981	0.0153	0.1039	0.105
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	175.29	0.1029	0.0226	0.0443	0.0497
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	180.00	0.1073	0.0299	0.0577	0.0648
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	189.42	0.1164	0.0445	0.0759	0.0879
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	190.00	0.1172	0.0454	0.0799	0.0918
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	200.00	0.1263	0.0598	0.0502	0.0781
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	209.42	0.1339	0.0689	0.0506	0.0855
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	210.00	0.129	0.0687	0.0495	0.0847
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	215.29	0.1375	0.0670	0.0227	0.0706
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	224.71	0.1401	0.0616	0.0244	0.0662
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	229.42	0.1411	0.0588	0.0152	0.0606
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	230.58	0.141	0.0583	0.0155	0.0603
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	239.97	0.1427	0.0552	0.0795	0.0967
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	270.00	0.1606	0.0504	0.0531	0.0732
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	290.00	0.1801	0.0504	0.0584	0.0771
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	310.00	0.2008	0.0504	0.0602	0.0785
1.2D + 1.0Di + 1.0Wi 210° 48.73 mph wind with 0.850" radial ice	330.00	0.2219	0.0504	0.0603	0.0786
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	15.29	0.0278	0.0516	0.1208	0.131
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	20.00	0.0376	0.0627	0.1217	0.1369
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	24.71	0.047	0.0723	0.1028	0.1257
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	29.42	0.0553	0.0734	0.1208	0.1408
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	30.58	0.0576	0.0719	0.1209	0.1402
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	35.29	0.0646	0.0608	0.0947	0.112
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	40.00	0.0708	0.0484	0.0934	0.1049
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	60.00	0.0952	0.0565	0.0488	0.0747
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	64.71	0.0976	0.0663	0.0241	0.0706
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	75.29	0.098	0.0574	0.0213	0.0597
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	80.00	0.0973	0.0467	0.0199	0.0508
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	84.71	0.0962	0.0373	0.0275	0.0463
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	90.58	0.0973	0.0337	0.0843	0.0908
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	100.00	0.1064	0.0471	0.0454	0.0654
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	104.71	0.1093	0.0425	0.0481	0.0634

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	110.58	0.1122	0.0369	0.0224	0.0432
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	115.29	0.1129	0.0443	0.0155	0.0465
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	120.00	0.1131	0.0531	0.0175	0.0552
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	140.00	0.1061	0.0358	0.0327	0.0485
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	144.71	0.1037	0.0275	0.0259	0.0378
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	155.29	0.0962	0.0103	0.0327	0.0343
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	160.00	0.0933	0.0035	0.0298	0.03
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	164.71	0.0923	0.0024	0.0095	0.0098
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	170.00	0.0972	0.0087	0.1073	0.1076
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	170.58	0.0982	0.0094	0.0935	0.0939
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	175.29	0.1021	0.0146	0.0333	0.0364
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	180.00	0.1056	0.0194	0.0459	0.0498
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	189.42	0.1126	0.0290	0.0624	0.0688
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	190.00	0.1133	0.0295	0.0671	0.073
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	200.00	0.1198	0.0308	0.0317	0.0443
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	209.42	0.1245	0.0211	0.0401	0.0451
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	210.00	0.1227	0.0199	0.0412	0.0457
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	215.29	0.1271	0.0155	0.0244	0.0285
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	224.71	0.1283	0.0122	0.0109	0.0159
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	229.42	0.1286	0.0120	0.0143	0.0181
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	230.58	0.1283	0.0122	0.0147	0.0186
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	239.97	0.1285	0.0147	0.0686	0.0692
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	270.00	0.1424	0.0119	0.0414	0.0431
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	290.00	0.1579	0.0119	0.0467	0.0482
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	310.00	0.1746	0.0119	0.0486	0.05
1.2D + 1.0Di + 1.0Wi 240° 48.73 mph wind with 0.850" radial ice	330.00	0.1916	0.0119	0.0487	0.0501
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	15.29	0.0257	0.0373	0.1174	0.1232
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	20.00	0.0338	0.0267	0.1136	0.1167
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	24.71	0.042	0.0150	0.1052	0.1063
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	29.42	0.0501	0.0032	0.1196	0.1197
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	30.58	0.0524	0.0005	0.1171	0.1171
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	35.29	0.0599	-0.0109	0.0912	0.0918
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	40.00	0.0671	-0.0202	0.0878	0.09
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	60.00	0.0905	0.0007	0.0456	0.0456
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	64.71	0.0922	0.0116	0.0274	0.0295
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	75.29	0.094	0.0326	0.0155	0.0348
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	80.00	0.0942	0.0336	0.0075	0.0344
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	84.71	0.0932	0.0262	0.0252	0.0359
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	90.58	0.0949	0.0159	0.1042	0.1053
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	100.00	0.104	-0.0035	0.0595	0.0596
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	104.71	0.1081	-0.0112	0.0512	0.0523
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	110.58	0.1124	-0.0129	0.0346	0.0369
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	115.29	0.1133	-0.0060	0.0158	0.017
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	120.00	0.114	0.0023	0.0139	0.014
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	140.00	0.1133	0.0340	0.0135	0.0366
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	144.71	0.1124	0.0320	0.0104	0.0327
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	155.29	0.1082	0.0126	0.0185	0.0215
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	160.00	0.1071	0.0049	0.0139	0.0145
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	164.71	0.1077	0.0044	0.0250	0.0254
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	170.00	0.1138	0.0040	0.1294	0.1295
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	170.58	0.1151	0.0041	0.1150	0.1151
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	175.29	0.1203	0.0017	0.0495	0.0495
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	180.00	0.1252	0.0042	0.0678	0.0679
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	189.42	0.1353	0.0097	0.0851	0.0856
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	190.00	0.1362	0.0095	0.0910	0.0914
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	200.00	0.1467	0.0005	0.0583	0.0583
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	209.42	0.1559	-0.0046	0.0697	0.0698
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	210.00	0.1558	-0.0049	0.0713	0.0714
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	215.29	0.1615	-0.0109	0.0469	0.0481
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	224.71	0.1671	-0.0202	0.0389	0.0436
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	229.42	0.1699	-0.0241	0.0190	0.0303
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	230.58	0.1702	-0.0246	0.0184	0.0304
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	239.97	0.1748	-0.0250	0.0833	0.087
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	270.00	0.2023	-0.0210	0.0669	0.0701
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	290.00	0.2267	-0.0210	0.0723	0.0753
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	310.00	0.2524	-0.0210	0.0742	0.0771
1.2D + 1.0Di + 1.0Wi 300° 48.73 mph wind with 0.850" radial ice	330.00	0.2783	-0.0210	0.0743	0.0772
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	15.29	0.0254	-0.0036	0.1169	0.117

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	20.00	0.0343	0.0087	0.1207	0.121
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	24.71	0.0438	0.0211	0.1097	0.1116
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	29.42	0.0531	0.0335	0.1255	0.1299
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	30.58	0.0557	0.0365	0.1231	0.1284
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	35.29	0.0643	0.0489	0.0955	0.1073
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	40.00	0.0722	0.0613	0.0943	0.1124
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	60.00	0.0981	0.1067	0.0253	0.1096
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	64.71	0.0989	0.1006	0.0262	0.1039
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	75.29	0.0979	0.0765	0.0136	0.0777
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	80.00	0.0971	0.0652	0.0128	0.0661
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	84.71	0.0957	0.0547	0.0267	0.0607
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	90.58	0.0969	0.0487	0.0987	0.1096
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	100.00	0.1069	0.0631	0.0565	0.0846
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	104.71	0.1113	0.0716	0.0510	0.0878
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	110.58	0.116	0.0813	0.0331	0.0878
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	115.29	0.1174	0.0876	0.0145	0.0888
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	120.00	0.1183	0.0911	0.0034	0.0911
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	140.00	0.1112	0.0528	0.0298	0.0605
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	144.71	0.1091	0.0424	0.0229	0.048
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	155.29	0.1022	0.0186	0.0299	0.0351
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	160.00	0.1	0.0099	0.0264	0.0282
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	164.71	0.0998	0.0091	0.0216	0.0234
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	170.00	0.1053	0.0120	0.1171	0.1176
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	170.58	0.1064	0.0123	0.1035	0.1041
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	175.29	0.1113	0.0165	0.0450	0.0479
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	180.00	0.1158	0.0206	0.0578	0.0612
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	189.42	0.1249	0.0274	0.0745	0.0794
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	190.00	0.1257	0.0278	0.0795	0.0842
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	200.00	0.1329	0.0339	0.0484	0.0591
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	209.42	0.1431	0.0419	0.0568	0.0706
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	210.00	0.1391	0.0423	0.0553	0.0696
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	215.29	0.1479	0.0445	0.0313	0.0543
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	224.71	0.151	0.0382	0.0286	0.0477
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	229.42	0.1523	0.0345	0.0174	0.0385
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	230.58	0.1524	0.0337	0.0164	0.0375
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	239.97	0.1548	0.0292	0.0802	0.0853
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	270.00	0.1761	0.0243	0.0561	0.0612
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	290.00	0.1968	0.0243	0.0614	0.066
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	310.00	0.2186	0.0243	0.0632	0.0677
1.2D + 1.0Di + 1.0Wi 330° 48.73 mph wind with 0.850" radial ice	330.00	0.2407	0.0243	0.0633	0.0678
1.2D + 1.0Ev + 1.0Eh Normal Seismic	15.29	0.0039	-0.0337	0.0195	0.0389
1.2D + 1.0Ev + 1.0Eh Normal Seismic	20.00	0.0033	-0.0258	0.0162	0.0304
1.2D + 1.0Ev + 1.0Eh Normal Seismic	24.71	0.0033	-0.0180	0.0113	0.0212
1.2D + 1.0Ev + 1.0Eh Normal Seismic	29.42	0.0033	-0.0131	0.0053	0.0141
1.2D + 1.0Ev + 1.0Eh Normal Seismic	30.58	0.0032	-0.0128	0.0031	0.0132
1.2D + 1.0Ev + 1.0Eh Normal Seismic	35.29	0.0032	-0.0160	0.0087	0.0181
1.2D + 1.0Ev + 1.0Eh Normal Seismic	40.00	0.0032	-0.0234	0.0124	0.0264
1.2D + 1.0Ev + 1.0Eh Normal Seismic	60.00	0.004	-0.0528	0.0008	0.0528
1.2D + 1.0Ev + 1.0Eh Normal Seismic	64.71	0.0036	-0.0501	0.0090	0.0509
1.2D + 1.0Ev + 1.0Eh Normal Seismic	75.29	0.0035	-0.0334	0.0115	0.0353
1.2D + 1.0Ev + 1.0Eh Normal Seismic	80.00	0.0036	-0.0254	0.0121	0.0281
1.2D + 1.0Ev + 1.0Eh Normal Seismic	84.71	0.0036	-0.0179	0.0151	0.0233
1.2D + 1.0Ev + 1.0Eh Normal Seismic	90.58	0.0037	-0.0109	0.0270	0.0291
1.2D + 1.0Ev + 1.0Eh Normal Seismic	100.00	0.0039	-0.0007	0.0129	0.0129
1.2D + 1.0Ev + 1.0Eh Normal Seismic	104.71	0.0042	-0.0050	0.0124	0.0133
1.2D + 1.0Ev + 1.0Eh Normal Seismic	110.58	0.0052	-0.0132	0.0124	0.0181
1.2D + 1.0Ev + 1.0Eh Normal Seismic	115.29	0.0061	-0.0185	0.0100	0.0211
1.2D + 1.0Ev + 1.0Eh Normal Seismic	120.00	0.0066	-0.0188	0.0103	0.0213
1.2D + 1.0Ev + 1.0Eh Normal Seismic	140.00	0.0086	0.0055	0.0152	0.0162
1.2D + 1.0Ev + 1.0Eh Normal Seismic	144.71	0.0099	0.0086	0.0185	0.0203
1.2D + 1.0Ev + 1.0Eh Normal Seismic	155.29	0.0135	-0.0022	0.0200	0.0202
1.2D + 1.0Ev + 1.0Eh Normal Seismic	160.00	0.0145	-0.0003	0.0186	0.0186
1.2D + 1.0Ev + 1.0Eh Normal Seismic	164.71	0.0161	0.0004	0.0309	0.0309
1.2D + 1.0Ev + 1.0Eh Normal Seismic	170.00	0.02	-0.0048	0.0578	0.058
1.2D + 1.0Ev + 1.0Eh Normal Seismic	170.58	0.0205	-0.0053	0.0550	0.0552
1.2D + 1.0Ev + 1.0Eh Normal Seismic	175.29	0.0241	-0.0097	0.0418	0.043
1.2D + 1.0Ev + 1.0Eh Normal Seismic	180.00	0.0277	-0.0141	0.0461	0.0482
1.2D + 1.0Ev + 1.0Eh Normal Seismic	189.42	0.0351	-0.0224	0.0544	0.0589

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Ev + 1.0Eh Normal Seismic	190.00	0.0357	-0.0229	0.0564	0.0609
1.2D + 1.0Ev + 1.0Eh Normal Seismic	200.00	0.0435	-0.0234	0.0417	0.0478
1.2D + 1.0Ev + 1.0Eh Normal Seismic	209.42	0.0503	-0.0159	0.0516	0.0539
1.2D + 1.0Ev + 1.0Eh Normal Seismic	210.00	0.0501	-0.0152	0.0514	0.0536
1.2D + 1.0Ev + 1.0Eh Normal Seismic	215.29	0.0547	-0.0110	0.0443	0.0455
1.2D + 1.0Ev + 1.0Eh Normal Seismic	224.71	0.0612	-0.0032	0.0440	0.0441
1.2D + 1.0Ev + 1.0Eh Normal Seismic	229.42	0.0646	0.0004	0.0452	0.0452
1.2D + 1.0Ev + 1.0Eh Normal Seismic	230.58	0.0655	0.0009	0.0446	0.0446
1.2D + 1.0Ev + 1.0Eh Normal Seismic	239.97	0.0719	0.0015	0.0866	0.0866
1.2D + 1.0Ev + 1.0Eh Normal Seismic	270.00	0.0897	0.0010	0.0334	0.0334
1.2D + 1.0Ev + 1.0Eh Normal Seismic	290.00	0.1013	0.0010	0.0335	0.0335
1.2D + 1.0Ev + 1.0Eh Normal Seismic	310.00	0.113	0.0010	0.0335	0.0335
1.2D + 1.0Ev + 1.0Eh Normal Seismic	330.00	0.1247	0.0010	0.0335	0.0335
1.2D + 1.0Ev + 1.0Eh 60° Seismic	15.29	0.0021	0.0113	0.0181	0.0213
1.2D + 1.0Ev + 1.0Eh 60° Seismic	20.00	0.0019	0.0080	0.0085	0.0116
1.2D + 1.0Ev + 1.0Eh 60° Seismic	24.71	0.0018	0.0076	0.0045	0.0088
1.2D + 1.0Ev + 1.0Eh 60° Seismic	29.42	0.0018	0.0108	0.0096	0.0145
1.2D + 1.0Ev + 1.0Eh 60° Seismic	30.58	0.0018	0.0123	0.0110	0.0165
1.2D + 1.0Ev + 1.0Eh 60° Seismic	35.29	0.0019	0.0202	0.0135	0.0243
1.2D + 1.0Ev + 1.0Eh 60° Seismic	40.00	0.002	0.0278	0.0105	0.0297
1.2D + 1.0Ev + 1.0Eh 60° Seismic	60.00	0.003	0.0162	0.0108	0.0194
1.2D + 1.0Ev + 1.0Eh 60° Seismic	64.71	0.0032	0.0134	0.0025	0.0136
1.2D + 1.0Ev + 1.0Eh 60° Seismic	75.29	0.0036	0.0234	0.0136	0.027
1.2D + 1.0Ev + 1.0Eh 60° Seismic	80.00	0.0038	0.0284	0.0037	0.0286
1.2D + 1.0Ev + 1.0Eh 60° Seismic	84.71	0.0039	0.0248	0.0174	0.0302
1.2D + 1.0Ev + 1.0Eh 60° Seismic	90.58	0.0038	0.0210	0.0292	0.036
1.2D + 1.0Ev + 1.0Eh 60° Seismic	100.00	0.0041	0.0265	0.0186	0.0324
1.2D + 1.0Ev + 1.0Eh 60° Seismic	104.71	0.0041	0.0231	0.0214	0.0315
1.2D + 1.0Ev + 1.0Eh 60° Seismic	110.58	0.0049	0.0194	0.0094	0.0215
1.2D + 1.0Ev + 1.0Eh 60° Seismic	115.29	0.0056	0.0252	0.0107	0.0273
1.2D + 1.0Ev + 1.0Eh 60° Seismic	120.00	0.0065	0.0322	0.0117	0.0341
1.2D + 1.0Ev + 1.0Eh 60° Seismic	140.00	0.0076	0.0264	0.0141	0.0299
1.2D + 1.0Ev + 1.0Eh 60° Seismic	144.71	0.0079	0.0197	0.0160	0.0254
1.2D + 1.0Ev + 1.0Eh 60° Seismic	155.29	0.0088	0.0056	0.0170	0.0179
1.2D + 1.0Ev + 1.0Eh 60° Seismic	160.00	0.0096	0.0008	0.0159	0.0159
1.2D + 1.0Ev + 1.0Eh 60° Seismic	164.71	0.0111	-0.0010	0.0280	0.028
1.2D + 1.0Ev + 1.0Eh 60° Seismic	170.00	0.0146	0.0045	0.0534	0.0536
1.2D + 1.0Ev + 1.0Eh 60° Seismic	170.58	0.0151	0.0051	0.0508	0.051
1.2D + 1.0Ev + 1.0Eh 60° Seismic	175.29	0.0184	0.0099	0.0380	0.0392
1.2D + 1.0Ev + 1.0Eh 60° Seismic	180.00	0.0217	0.0143	0.0430	0.0452
1.2D + 1.0Ev + 1.0Eh 60° Seismic	189.42	0.0282	0.0157	0.0488	0.0513
1.2D + 1.0Ev + 1.0Eh 60° Seismic	190.00	0.0287	0.0158	0.0496	0.052
1.2D + 1.0Ev + 1.0Eh 60° Seismic	200.00	0.0337	0.0207	0.0401	0.0451
1.2D + 1.0Ev + 1.0Eh 60° Seismic	209.42	0.0421	0.0145	0.0472	0.0494
1.2D + 1.0Ev + 1.0Eh 60° Seismic	210.00	0.0426	0.0137	0.0435	0.0456
1.2D + 1.0Ev + 1.0Eh 60° Seismic	215.29	0.046	0.0110	0.0380	0.0396
1.2D + 1.0Ev + 1.0Eh 60° Seismic	224.71	0.0522	0.0101	0.0368	0.0382
1.2D + 1.0Ev + 1.0Eh 60° Seismic	229.42	0.0553	0.0099	0.0385	0.0397
1.2D + 1.0Ev + 1.0Eh 60° Seismic	230.58	0.0561	0.0099	0.0388	0.04
1.2D + 1.0Ev + 1.0Eh 60° Seismic	239.97	0.0618	0.0100	0.0719	0.0724
1.2D + 1.0Ev + 1.0Eh 60° Seismic	270.00	0.0766	0.0094	0.0285	0.03
1.2D + 1.0Ev + 1.0Eh 60° Seismic	290.00	0.0866	0.0094	0.0286	0.0301
1.2D + 1.0Ev + 1.0Eh 60° Seismic	310.00	0.0965	0.0094	0.0286	0.0301
1.2D + 1.0Ev + 1.0Eh 60° Seismic	330.00	0.1065	0.0094	0.0286	0.0301
1.2D + 1.0Ev + 1.0Eh 90° Seismic	15.29	0.0053	0.0672	0.0170	0.0693
1.2D + 1.0Ev + 1.0Eh 90° Seismic	20.00	0.0042	0.0590	0.0147	0.0608
1.2D + 1.0Ev + 1.0Eh 90° Seismic	24.71	0.0036	0.0501	0.0133	0.0519
1.2D + 1.0Ev + 1.0Eh 90° Seismic	29.42	0.0035	0.0413	0.0139	0.0436
1.2D + 1.0Ev + 1.0Eh 90° Seismic	30.58	0.0034	0.0393	0.0140	0.0417
1.2D + 1.0Ev + 1.0Eh 90° Seismic	35.29	0.0033	0.0325	0.0109	0.0342
1.2D + 1.0Ev + 1.0Eh 90° Seismic	40.00	0.0033	0.0308	0.0094	0.0322
1.2D + 1.0Ev + 1.0Eh 90° Seismic	60.00	0.0055	0.0638	0.0227	0.0676
1.2D + 1.0Ev + 1.0Eh 90° Seismic	64.71	0.0051	0.0687	0.0067	0.069
1.2D + 1.0Ev + 1.0Eh 90° Seismic	75.29	0.0048	0.0545	0.0092	0.0553
1.2D + 1.0Ev + 1.0Eh 90° Seismic	80.00	0.0046	0.0465	0.0100	0.0475
1.2D + 1.0Ev + 1.0Eh 90° Seismic	84.71	0.0044	0.0394	0.0104	0.0407
1.2D + 1.0Ev + 1.0Eh 90° Seismic	90.58	0.004	0.0361	0.0219	0.0422
1.2D + 1.0Ev + 1.0Eh 90° Seismic	100.00	0.0031	0.0498	0.0299	0.0581

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Ev + 1.0Eh 90° Seismic	104.71	0.0055	0.0572	0.0316	0.0653
1.2D + 1.0Ev + 1.0Eh 90° Seismic	110.58	0.0081	0.0631	0.0083	0.0636
1.2D + 1.0Ev + 1.0Eh 90° Seismic	115.29	0.0079	0.0585	0.0069	0.0589
1.2D + 1.0Ev + 1.0Eh 90° Seismic	120.00	0.0076	0.0522	0.0071	0.0527
1.2D + 1.0Ev + 1.0Eh 90° Seismic	140.00	0.0072	0.0248	0.0090	0.0264
1.2D + 1.0Ev + 1.0Eh 90° Seismic	144.71	0.0073	0.0184	0.0113	0.0216
1.2D + 1.0Ev + 1.0Eh 90° Seismic	155.29	0.0077	0.0051	0.0128	0.0138
1.2D + 1.0Ev + 1.0Eh 90° Seismic	160.00	0.0083	0.0004	0.0160	0.016
1.2D + 1.0Ev + 1.0Eh 90° Seismic	164.71	0.0099	-0.0013	0.0289	0.0289
1.2D + 1.0Ev + 1.0Eh 90° Seismic	170.00	0.0137	0.0015	0.0519	0.0519
1.2D + 1.0Ev + 1.0Eh 90° Seismic	170.58	0.0142	0.0015	0.0491	0.0491
1.2D + 1.0Ev + 1.0Eh 90° Seismic	175.29	0.0171	-0.0021	0.0354	0.0354
1.2D + 1.0Ev + 1.0Eh 90° Seismic	180.00	0.0203	-0.0051	0.0400	0.0403
1.2D + 1.0Ev + 1.0Eh 90° Seismic	189.42	0.0269	0.0008	0.0512	0.0512
1.2D + 1.0Ev + 1.0Eh 90° Seismic	190.00	0.0274	0.0013	0.0527	0.0528
1.2D + 1.0Ev + 1.0Eh 90° Seismic	200.00	0.0344	0.0096	0.0409	0.042
1.2D + 1.0Ev + 1.0Eh 90° Seismic	209.42	0.0426	0.0174	0.0490	0.052
1.2D + 1.0Ev + 1.0Eh 90° Seismic	210.00	0.0431	0.0178	0.0499	0.053
1.2D + 1.0Ev + 1.0Eh 90° Seismic	215.29	0.0473	0.0221	0.0422	0.0476
1.2D + 1.0Ev + 1.0Eh 90° Seismic	224.71	0.0543	0.0296	0.0419	0.0512
1.2D + 1.0Ev + 1.0Eh 90° Seismic	229.42	0.0578	0.0332	0.0432	0.0544
1.2D + 1.0Ev + 1.0Eh 90° Seismic	230.58	0.0587	0.0339	0.0429	0.0546
1.2D + 1.0Ev + 1.0Eh 90° Seismic	239.97	0.0648	0.0373	0.0798	0.0881
1.2D + 1.0Ev + 1.0Eh 90° Seismic	270.00	0.0789	0.0369	0.0305	0.0478
1.2D + 1.0Ev + 1.0Eh 90° Seismic	290.00	0.0895	0.0369	0.0305	0.0479
1.2D + 1.0Ev + 1.0Eh 90° Seismic	310.00	0.1002	0.0369	0.0305	0.0479
1.2D + 1.0Ev + 1.0Eh 90° Seismic	330.00	0.1108	0.0369	0.0305	0.0479
1.2D + 1.0Ev + 1.0Eh 120° Seismic	15.29	0.0067	0.0972	0.0194	0.099
1.2D + 1.0Ev + 1.0Eh 120° Seismic	20.00	0.0062	0.0901	0.0149	0.0913
1.2D + 1.0Ev + 1.0Eh 120° Seismic	24.71	0.0061	0.0848	0.0103	0.0853
1.2D + 1.0Ev + 1.0Eh 120° Seismic	29.42	0.0051	0.0771	0.0250	0.081
1.2D + 1.0Ev + 1.0Eh 120° Seismic	30.58	0.0052	0.0753	0.0249	0.0793
1.2D + 1.0Ev + 1.0Eh 120° Seismic	35.29	0.0058	0.0704	0.0102	0.0711
1.2D + 1.0Ev + 1.0Eh 120° Seismic	40.00	0.0064	0.0751	0.0173	0.077
1.2D + 1.0Ev + 1.0Eh 120° Seismic	60.00	0.0067	0.0723	0.0138	0.0736
1.2D + 1.0Ev + 1.0Eh 120° Seismic	64.71	0.0061	0.0640	0.0129	0.0653
1.2D + 1.0Ev + 1.0Eh 120° Seismic	75.29	0.0051	0.0455	0.0118	0.047
1.2D + 1.0Ev + 1.0Eh 120° Seismic	80.00	0.0046	0.0373	0.0131	0.0396
1.2D + 1.0Ev + 1.0Eh 120° Seismic	84.71	0.0043	0.0298	0.0126	0.0323
1.2D + 1.0Ev + 1.0Eh 120° Seismic	90.58	0.0035	0.0227	0.0255	0.0341
1.2D + 1.0Ev + 1.0Eh 120° Seismic	100.00	0.0023	0.0100	0.0268	0.0286
1.2D + 1.0Ev + 1.0Eh 120° Seismic	104.71	0.0034	0.0063	0.0230	0.0238
1.2D + 1.0Ev + 1.0Eh 120° Seismic	110.58	0.0053	0.0121	0.0157	0.0199
1.2D + 1.0Ev + 1.0Eh 120° Seismic	115.29	0.0058	0.0193	0.0099	0.0216
1.2D + 1.0Ev + 1.0Eh 120° Seismic	120.00	0.0064	0.0260	0.0134	0.0292
1.2D + 1.0Ev + 1.0Eh 120° Seismic	140.00	0.007	0.0134	0.0117	0.0175
1.2D + 1.0Ev + 1.0Eh 120° Seismic	144.71	0.0073	0.0071	0.0136	0.0152
1.2D + 1.0Ev + 1.0Eh 120° Seismic	155.29	0.0088	-0.0037	0.0113	0.0118
1.2D + 1.0Ev + 1.0Eh 120° Seismic	160.00	0.0092	-0.0014	0.0177	0.0178
1.2D + 1.0Ev + 1.0Eh 120° Seismic	164.71	0.0108	-0.0006	0.0290	0.029
1.2D + 1.0Ev + 1.0Eh 120° Seismic	170.00	0.0145	0.0038	0.0561	0.0562
1.2D + 1.0Ev + 1.0Eh 120° Seismic	170.58	0.0151	0.0042	0.0535	0.0536
1.2D + 1.0Ev + 1.0Eh 120° Seismic	175.29	0.0186	0.0066	0.0367	0.0373
1.2D + 1.0Ev + 1.0Eh 120° Seismic	180.00	0.0216	0.0043	0.0445	0.0446
1.2D + 1.0Ev + 1.0Eh 120° Seismic	189.42	0.0284	-0.0039	0.0519	0.0521
1.2D + 1.0Ev + 1.0Eh 120° Seismic	190.00	0.0289	-0.0043	0.0538	0.0539
1.2D + 1.0Ev + 1.0Eh 120° Seismic	200.00	0.036	-0.0082	0.0423	0.0431
1.2D + 1.0Ev + 1.0Eh 120° Seismic	209.42	0.0435	-0.0088	0.0481	0.0488
1.2D + 1.0Ev + 1.0Eh 120° Seismic	210.00	0.0431	-0.0077	0.0486	0.0493
1.2D + 1.0Ev + 1.0Eh 120° Seismic	215.29	0.0479	-0.0088	0.0399	0.0408
1.2D + 1.0Ev + 1.0Eh 120° Seismic	224.71	0.0546	-0.0086	0.0396	0.0405
1.2D + 1.0Ev + 1.0Eh 120° Seismic	229.42	0.0578	-0.0084	0.0422	0.0429
1.2D + 1.0Ev + 1.0Eh 120° Seismic	230.58	0.0587	-0.0084	0.0436	0.0443
1.2D + 1.0Ev + 1.0Eh 120° Seismic	239.97	0.065	-0.0083	0.0856	0.0859
1.2D + 1.0Ev + 1.0Eh 120° Seismic	270.00	0.0819	-0.0077	0.0325	0.0334
1.2D + 1.0Ev + 1.0Eh 120° Seismic	290.00	0.0932	-0.0077	0.0325	0.0335
1.2D + 1.0Ev + 1.0Eh 120° Seismic	310.00	0.1046	-0.0077	0.0326	0.0335
1.2D + 1.0Ev + 1.0Eh 120° Seismic	330.00	0.1159	-0.0077	0.0326	0.0335

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Ev + 1.0Eh 180° Seismic	15.29	0.0016	0.0075	0.0166	0.0182
1.2D + 1.0Ev + 1.0Eh 180° Seismic	20.00	0.0015	0.0107	0.0098	0.0145
1.2D + 1.0Ev + 1.0Eh 180° Seismic	24.71	0.0012	0.0110	0.0067	0.0128
1.2D + 1.0Ev + 1.0Eh 180° Seismic	29.42	0.0011	0.0077	0.0125	0.0147
1.2D + 1.0Ev + 1.0Eh 180° Seismic	30.58	0.0011	0.0064	0.0139	0.0153
1.2D + 1.0Ev + 1.0Eh 180° Seismic	35.29	0.0012	-0.0003	0.0145	0.0145
1.2D + 1.0Ev + 1.0Eh 180° Seismic	40.00	0.0019	-0.0034	0.0146	0.015
1.2D + 1.0Ev + 1.0Eh 180° Seismic	60.00	0.0038	-0.0262	0.0101	0.0279
1.2D + 1.0Ev + 1.0Eh 180° Seismic	64.71	0.0037	-0.0344	0.0169	0.0383
1.2D + 1.0Ev + 1.0Eh 180° Seismic	75.29	0.0036	-0.0348	0.0135	0.0372
1.2D + 1.0Ev + 1.0Eh 180° Seismic	80.00	0.0036	-0.0274	0.0126	0.0301
1.2D + 1.0Ev + 1.0Eh 180° Seismic	84.71	0.0036	-0.0220	0.0155	0.0269
1.2D + 1.0Ev + 1.0Eh 180° Seismic	90.58	0.0049	-0.0248	0.0268	0.0365
1.2D + 1.0Ev + 1.0Eh 180° Seismic	100.00	0.0057	-0.0365	0.0121	0.0384
1.2D + 1.0Ev + 1.0Eh 180° Seismic	104.71	0.0055	-0.0393	0.0156	0.0423
1.2D + 1.0Ev + 1.0Eh 180° Seismic	110.58	0.0055	-0.0375	0.0112	0.0391
1.2D + 1.0Ev + 1.0Eh 180° Seismic	115.29	0.0063	-0.0428	0.0133	0.0448
1.2D + 1.0Ev + 1.0Eh 180° Seismic	120.00	0.0071	-0.0479	0.0086	0.0485
1.2D + 1.0Ev + 1.0Eh 180° Seismic	140.00	0.0082	-0.0270	0.0148	0.0308
1.2D + 1.0Ev + 1.0Eh 180° Seismic	144.71	0.0086	-0.0201	0.0165	0.026
1.2D + 1.0Ev + 1.0Eh 180° Seismic	155.29	0.01	-0.0057	0.0177	0.0186
1.2D + 1.0Ev + 1.0Eh 180° Seismic	160.00	0.0109	-0.0008	0.0171	0.0171
1.2D + 1.0Ev + 1.0Eh 180° Seismic	164.71	0.0124	0.0012	0.0291	0.0291
1.2D + 1.0Ev + 1.0Eh 180° Seismic	170.00	0.0159	-0.0042	0.0543	0.0545
1.2D + 1.0Ev + 1.0Eh 180° Seismic	170.58	0.0165	-0.0048	0.0516	0.0518
1.2D + 1.0Ev + 1.0Eh 180° Seismic	175.29	0.0198	-0.0094	0.0390	0.04
1.2D + 1.0Ev + 1.0Eh 180° Seismic	180.00	0.0231	-0.0136	0.0440	0.0459
1.2D + 1.0Ev + 1.0Eh 180° Seismic	189.42	0.0297	-0.0148	0.0493	0.0514
1.2D + 1.0Ev + 1.0Eh 180° Seismic	190.00	0.0302	-0.0148	0.0505	0.0526
1.2D + 1.0Ev + 1.0Eh 180° Seismic	200.00	0.0359	-0.0130	0.0447	0.0465
1.2D + 1.0Ev + 1.0Eh 180° Seismic	209.42	0.0435	-0.0048	0.0486	0.0488
1.2D + 1.0Ev + 1.0Eh 180° Seismic	210.00	0.0438	-0.0042	0.0470	0.0472
1.2D + 1.0Ev + 1.0Eh 180° Seismic	215.29	0.0475	-0.0014	0.0378	0.0378
1.2D + 1.0Ev + 1.0Eh 180° Seismic	224.71	0.0539	-0.0031	0.0378	0.0379
1.2D + 1.0Ev + 1.0Eh 180° Seismic	229.42	0.057	-0.0031	0.0394	0.0394
1.2D + 1.0Ev + 1.0Eh 180° Seismic	230.58	0.0578	-0.0031	0.0396	0.0397
1.2D + 1.0Ev + 1.0Eh 180° Seismic	239.97	0.0637	-0.0033	0.0719	0.072
1.2D + 1.0Ev + 1.0Eh 180° Seismic	270.00	0.0792	-0.0028	0.0292	0.0293
1.2D + 1.0Ev + 1.0Eh 180° Seismic	290.00	0.0894	-0.0028	0.0292	0.0294
1.2D + 1.0Ev + 1.0Eh 180° Seismic	310.00	0.0996	-0.0028	0.0292	0.0294
1.2D + 1.0Ev + 1.0Eh 180° Seismic	330.00	0.1098	-0.0028	0.0292	0.0294
1.2D + 1.0Ev + 1.0Eh 210° Seismic	15.29	0.0062	0.0651	0.0136	0.0665
1.2D + 1.0Ev + 1.0Eh 210° Seismic	20.00	0.0053	0.0569	0.0113	0.058
1.2D + 1.0Ev + 1.0Eh 210° Seismic	24.71	0.0045	0.0480	0.0096	0.0489
1.2D + 1.0Ev + 1.0Eh 210° Seismic	29.42	0.0037	0.0390	0.0094	0.0401
1.2D + 1.0Ev + 1.0Eh 210° Seismic	30.58	0.0035	0.0369	0.0093	0.038
1.2D + 1.0Ev + 1.0Eh 210° Seismic	35.29	0.0027	0.0280	0.0092	0.0295
1.2D + 1.0Ev + 1.0Eh 210° Seismic	40.00	0.0019	0.0191	0.0090	0.0211
1.2D + 1.0Ev + 1.0Eh 210° Seismic	60.00	0.0012	-0.0177	0.0077	0.0192
1.2D + 1.0Ev + 1.0Eh 210° Seismic	64.71	0.0018	-0.0259	0.0077	0.027
1.2D + 1.0Ev + 1.0Eh 210° Seismic	75.29	0.0026	-0.0344	0.0115	0.0362
1.2D + 1.0Ev + 1.0Eh 210° Seismic	80.00	0.0031	-0.0283	0.0193	0.0342
1.2D + 1.0Ev + 1.0Eh 210° Seismic	84.71	0.0037	-0.0209	0.0208	0.0294
1.2D + 1.0Ev + 1.0Eh 210° Seismic	90.58	0.0043	-0.0143	0.0208	0.0252
1.2D + 1.0Ev + 1.0Eh 210° Seismic	100.00	0.0039	-0.0041	0.0170	0.0174
1.2D + 1.0Ev + 1.0Eh 210° Seismic	104.71	0.0041	0.0027	0.0186	0.0188
1.2D + 1.0Ev + 1.0Eh 210° Seismic	110.58	0.0052	0.0079	0.0070	0.0106
1.2D + 1.0Ev + 1.0Eh 210° Seismic	115.29	0.0051	0.0029	0.0099	0.0103
1.2D + 1.0Ev + 1.0Eh 210° Seismic	120.00	0.0055	-0.0038	0.0093	0.01
1.2D + 1.0Ev + 1.0Eh 210° Seismic	140.00	0.0089	-0.0166	0.0126	0.0207
1.2D + 1.0Ev + 1.0Eh 210° Seismic	144.71	0.0099	-0.0196	0.0142	0.0242
1.2D + 1.0Ev + 1.0Eh 210° Seismic	155.29	0.0123	-0.0072	0.0241	0.0251
1.2D + 1.0Ev + 1.0Eh 210° Seismic	160.00	0.0135	-0.0018	0.0212	0.0212
1.2D + 1.0Ev + 1.0Eh 210° Seismic	164.71	0.0152	0.0004	0.0294	0.0294
1.2D + 1.0Ev + 1.0Eh 210° Seismic	170.00	0.0186	-0.0037	0.0539	0.054
1.2D + 1.0Ev + 1.0Eh 210° Seismic	170.58	0.0191	-0.0039	0.0532	0.0534
1.2D + 1.0Ev + 1.0Eh 210° Seismic	175.29	0.0224	-0.0050	0.0369	0.0372
1.2D + 1.0Ev + 1.0Eh 210° Seismic	180.00	0.0257	-0.0143	0.0423	0.0446

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Ev + 1.0Eh 210° Seismic	189.42	0.0325	-0.0243	0.0530	0.0581
1.2D + 1.0Ev + 1.0Eh 210° Seismic	190.00	0.033	-0.0245	0.0529	0.0581
1.2D + 1.0Ev + 1.0Eh 210° Seismic	200.00	0.0371	-0.0336	0.0306	0.0455
1.2D + 1.0Ev + 1.0Eh 210° Seismic	209.42	0.0472	-0.0404	0.0533	0.0668
1.2D + 1.0Ev + 1.0Eh 210° Seismic	210.00	0.0477	-0.0400	0.0485	0.0629
1.2D + 1.0Ev + 1.0Eh 210° Seismic	215.29	0.0515	-0.0358	0.0435	0.0562
1.2D + 1.0Ev + 1.0Eh 210° Seismic	224.71	0.058	-0.0277	0.0433	0.0513
1.2D + 1.0Ev + 1.0Eh 210° Seismic	229.42	0.0612	-0.0237	0.0449	0.0508
1.2D + 1.0Ev + 1.0Eh 210° Seismic	230.58	0.062	-0.0228	0.0445	0.0499
1.2D + 1.0Ev + 1.0Eh 210° Seismic	239.97	0.068	-0.0154	0.0828	0.0842
1.2D + 1.0Ev + 1.0Eh 210° Seismic	270.00	0.0844	-0.0120	0.0316	0.0338
1.2D + 1.0Ev + 1.0Eh 210° Seismic	290.00	0.0955	-0.0120	0.0316	0.0339
1.2D + 1.0Ev + 1.0Eh 210° Seismic	310.00	0.1065	-0.0120	0.0317	0.0339
1.2D + 1.0Ev + 1.0Eh 210° Seismic	330.00	0.1176	-0.0120	0.0317	0.0339
1.2D + 1.0Ev + 1.0Eh 240° Seismic	15.29	0.0022	-0.0072	0.0189	0.0202
1.2D + 1.0Ev + 1.0Eh 240° Seismic	20.00	0.0028	-0.0150	0.0165	0.0222
1.2D + 1.0Ev + 1.0Eh 240° Seismic	24.71	0.0035	-0.0220	0.0096	0.024
1.2D + 1.0Ev + 1.0Eh 240° Seismic	29.42	0.0035	-0.0240	0.0057	0.0247
1.2D + 1.0Ev + 1.0Eh 240° Seismic	30.58	0.0033	-0.0233	0.0087	0.0249
1.2D + 1.0Ev + 1.0Eh 240° Seismic	35.29	0.0023	-0.0161	0.0136	0.0211
1.2D + 1.0Ev + 1.0Eh 240° Seismic	40.00	0.0012	-0.0075	0.0124	0.0145
1.2D + 1.0Ev + 1.0Eh 240° Seismic	60.00	0.0032	0.0261	0.0070	0.027
1.2D + 1.0Ev + 1.0Eh 240° Seismic	64.71	0.0032	0.0259	0.0075	0.027
1.2D + 1.0Ev + 1.0Eh 240° Seismic	75.29	0.0013	0.0139	0.0115	0.018
1.2D + 1.0Ev + 1.0Eh 240° Seismic	80.00	0.0017	0.0180	0.0246	0.0305
1.2D + 1.0Ev + 1.0Eh 240° Seismic	84.71	0.0034	0.0227	0.0245	0.0334
1.2D + 1.0Ev + 1.0Eh 240° Seismic	90.58	0.0044	0.0192	0.0233	0.0302
1.2D + 1.0Ev + 1.0Eh 240° Seismic	100.00	0.0047	0.0078	0.0081	0.0112
1.2D + 1.0Ev + 1.0Eh 240° Seismic	104.71	0.0049	0.0076	0.0078	0.0109
1.2D + 1.0Ev + 1.0Eh 240° Seismic	110.58	0.0052	0.0142	0.0112	0.0181
1.2D + 1.0Ev + 1.0Eh 240° Seismic	115.29	0.0057	0.0205	0.0121	0.0238
1.2D + 1.0Ev + 1.0Eh 240° Seismic	120.00	0.0063	0.0243	0.0128	0.0273
1.2D + 1.0Ev + 1.0Eh 240° Seismic	140.00	0.0088	-0.0012	0.0125	0.0126
1.2D + 1.0Ev + 1.0Eh 240° Seismic	144.71	0.0099	-0.0073	0.0257	0.0267
1.2D + 1.0Ev + 1.0Eh 240° Seismic	155.29	0.0144	-0.0069	0.0281	0.0289
1.2D + 1.0Ev + 1.0Eh 240° Seismic	160.00	0.0158	-0.0018	0.0218	0.0219
1.2D + 1.0Ev + 1.0Eh 240° Seismic	164.71	0.0174	-0.0004	0.0283	0.0283
1.2D + 1.0Ev + 1.0Eh 240° Seismic	170.00	0.0212	0.0046	0.0568	0.057
1.2D + 1.0Ev + 1.0Eh 240° Seismic	170.58	0.0217	0.0051	0.0538	0.0541
1.2D + 1.0Ev + 1.0Eh 240° Seismic	175.29	0.0252	0.0090	0.0412	0.0421
1.2D + 1.0Ev + 1.0Eh 240° Seismic	180.00	0.0287	0.0117	0.0426	0.044
1.2D + 1.0Ev + 1.0Eh 240° Seismic	189.42	0.0356	0.0135	0.0541	0.0557
1.2D + 1.0Ev + 1.0Eh 240° Seismic	190.00	0.0362	0.0139	0.0558	0.0575
1.2D + 1.0Ev + 1.0Eh 240° Seismic	200.00	0.0438	0.0140	0.0405	0.0428
1.2D + 1.0Ev + 1.0Eh 240° Seismic	209.42	0.0504	0.0062	0.0507	0.0511
1.2D + 1.0Ev + 1.0Eh 240° Seismic	210.00	0.0503	0.0054	0.0519	0.0522
1.2D + 1.0Ev + 1.0Eh 240° Seismic	215.29	0.0546	0.0016	0.0434	0.0434
1.2D + 1.0Ev + 1.0Eh 240° Seismic	224.71	0.0615	-0.0030	0.0403	0.0404
1.2D + 1.0Ev + 1.0Eh 240° Seismic	229.42	0.0648	-0.0034	0.0430	0.0431
1.2D + 1.0Ev + 1.0Eh 240° Seismic	230.58	0.0657	-0.0037	0.0442	0.0444
1.2D + 1.0Ev + 1.0Eh 240° Seismic	239.97	0.0722	-0.0066	0.0856	0.0858
1.2D + 1.0Ev + 1.0Eh 240° Seismic	270.00	0.0891	-0.0063	0.0322	0.0329
1.2D + 1.0Ev + 1.0Eh 240° Seismic	290.00	0.1003	-0.0063	0.0323	0.0329
1.2D + 1.0Ev + 1.0Eh 240° Seismic	310.00	0.1116	-0.0063	0.0323	0.0329
1.2D + 1.0Ev + 1.0Eh 240° Seismic	330.00	0.1228	-0.0063	0.0323	0.0329
1.2D + 1.0Ev + 1.0Eh 300° Seismic	15.29	0.0027	0.0071	0.0164	0.0178
1.2D + 1.0Ev + 1.0Eh 300° Seismic	20.00	0.0024	0.0074	0.0081	0.011
1.2D + 1.0Ev + 1.0Eh 300° Seismic	24.71	0.0021	0.0078	0.0047	0.0091
1.2D + 1.0Ev + 1.0Eh 300° Seismic	29.42	0.0019	0.0081	0.0043	0.0092
1.2D + 1.0Ev + 1.0Eh 300° Seismic	30.58	0.0018	0.0079	0.0041	0.0089
1.2D + 1.0Ev + 1.0Eh 300° Seismic	35.29	0.0015	0.0055	0.0055	0.0077
1.2D + 1.0Ev + 1.0Eh 300° Seismic	40.00	0.0009	0.0001	0.0103	0.0103
1.2D + 1.0Ev + 1.0Eh 300° Seismic	60.00	0.0029	-0.0271	0.0042	0.0274
1.2D + 1.0Ev + 1.0Eh 300° Seismic	64.71	0.0024	-0.0235	0.0109	0.0259
1.2D + 1.0Ev + 1.0Eh 300° Seismic	75.29	0.0009	-0.0068	0.0107	0.0127
1.2D + 1.0Ev + 1.0Eh 300° Seismic	80.00	0.0007	-0.0020	0.0217	0.0218
1.2D + 1.0Ev + 1.0Eh 300° Seismic	84.71	0.0027	-0.0056	0.0313	0.0318
1.2D + 1.0Ev + 1.0Eh 300° Seismic	90.58	0.0046	-0.0084	0.0232	0.0247

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Ev + 1.0Eh 300° Seismic	100.00	0.0046	0.0019	0.0086	0.0088
1.2D + 1.0Ev + 1.0Eh 300° Seismic	104.71	0.0048	0.0015	0.0090	0.0092
1.2D + 1.0Ev + 1.0Eh 300° Seismic	110.58	0.0053	-0.0038	0.0070	0.0079
1.2D + 1.0Ev + 1.0Eh 300° Seismic	115.29	0.0057	-0.0030	0.0101	0.0106
1.2D + 1.0Ev + 1.0Eh 300° Seismic	120.00	0.006	0.0026	0.0147	0.0149
1.2D + 1.0Ev + 1.0Eh 300° Seismic	140.00	0.0101	0.0169	0.0128	0.0212
1.2D + 1.0Ev + 1.0Eh 300° Seismic	144.71	0.0105	0.0104	0.0250	0.0271
1.2D + 1.0Ev + 1.0Eh 300° Seismic	155.29	0.0153	-0.0024	0.0270	0.0271
1.2D + 1.0Ev + 1.0Eh 300° Seismic	160.00	0.0168	-0.0005	0.0206	0.0206
1.2D + 1.0Ev + 1.0Eh 300° Seismic	164.71	0.0184	0.0008	0.0273	0.0273
1.2D + 1.0Ev + 1.0Eh 300° Seismic	170.00	0.0223	0.0055	0.0578	0.058
1.2D + 1.0Ev + 1.0Eh 300° Seismic	170.58	0.0229	0.0060	0.0550	0.0553
1.2D + 1.0Ev + 1.0Eh 300° Seismic	175.29	0.0264	0.0090	0.0369	0.0378
1.2D + 1.0Ev + 1.0Eh 300° Seismic	180.00	0.0294	0.0069	0.0459	0.0464
1.2D + 1.0Ev + 1.0Eh 300° Seismic	189.42	0.0363	0.0060	0.0517	0.052
1.2D + 1.0Ev + 1.0Eh 300° Seismic	190.00	0.0368	0.0060	0.0526	0.053
1.2D + 1.0Ev + 1.0Eh 300° Seismic	200.00	0.0439	-0.0013	0.0422	0.0423
1.2D + 1.0Ev + 1.0Eh 300° Seismic	209.42	0.0512	-0.0084	0.0480	0.0486
1.2D + 1.0Ev + 1.0Eh 300° Seismic	210.00	0.0517	-0.0081	0.0484	0.049
1.2D + 1.0Ev + 1.0Eh 300° Seismic	215.29	0.0554	-0.0069	0.0406	0.0412
1.2D + 1.0Ev + 1.0Eh 300° Seismic	224.71	0.062	-0.0053	0.0407	0.041
1.2D + 1.0Ev + 1.0Eh 300° Seismic	229.42	0.065	-0.0028	0.0428	0.0429
1.2D + 1.0Ev + 1.0Eh 300° Seismic	230.58	0.0659	-0.0025	0.0423	0.0424
1.2D + 1.0Ev + 1.0Eh 300° Seismic	239.97	0.0719	-0.0021	0.0737	0.0737
1.2D + 1.0Ev + 1.0Eh 300° Seismic	270.00	0.0882	-0.0015	0.0305	0.0305
1.2D + 1.0Ev + 1.0Eh 300° Seismic	290.00	0.0988	-0.0015	0.0305	0.0305
1.2D + 1.0Ev + 1.0Eh 300° Seismic	310.00	0.1095	-0.0015	0.0305	0.0306
1.2D + 1.0Ev + 1.0Eh 300° Seismic	330.00	0.1201	-0.0015	0.0305	0.0306
1.2D + 1.0Ev + 1.0Eh 330° Seismic	15.29	0.0027	0.0141	0.0149	0.0205
1.2D + 1.0Ev + 1.0Eh 330° Seismic	20.00	0.0018	0.0058	0.0125	0.0138
1.2D + 1.0Ev + 1.0Eh 330° Seismic	24.71	0.0012	-0.0032	0.0110	0.0114
1.2D + 1.0Ev + 1.0Eh 330° Seismic	29.42	0.0014	-0.0121	0.0111	0.0164
1.2D + 1.0Ev + 1.0Eh 330° Seismic	30.58	0.0014	-0.0142	0.0109	0.0179
1.2D + 1.0Ev + 1.0Eh 330° Seismic	35.29	0.0018	-0.0227	0.0109	0.0251
1.2D + 1.0Ev + 1.0Eh 330° Seismic	40.00	0.0022	-0.0298	0.0086	0.031
1.2D + 1.0Ev + 1.0Eh 330° Seismic	60.00	0.0033	-0.0084	0.0055	0.01
1.2D + 1.0Ev + 1.0Eh 330° Seismic	64.71	0.0028	-0.0048	0.0125	0.0134
1.2D + 1.0Ev + 1.0Eh 330° Seismic	75.29	0.0022	0.0125	0.0162	0.0204
1.2D + 1.0Ev + 1.0Eh 330° Seismic	80.00	0.0031	0.0207	0.0181	0.0274
1.2D + 1.0Ev + 1.0Eh 330° Seismic	84.71	0.0043	0.0283	0.0204	0.0349
1.2D + 1.0Ev + 1.0Eh 330° Seismic	90.58	0.0056	0.0358	0.0231	0.0426
1.2D + 1.0Ev + 1.0Eh 330° Seismic	100.00	0.0075	0.0486	0.0127	0.0502
1.2D + 1.0Ev + 1.0Eh 330° Seismic	104.71	0.0079	0.0481	0.0078	0.0486
1.2D + 1.0Ev + 1.0Eh 330° Seismic	110.58	0.0077	0.0414	0.0071	0.042
1.2D + 1.0Ev + 1.0Eh 330° Seismic	115.29	0.0077	0.0347	0.0089	0.0358
1.2D + 1.0Ev + 1.0Eh 330° Seismic	120.00	0.0076	0.0280	0.0089	0.0293
1.2D + 1.0Ev + 1.0Eh 330° Seismic	140.00	0.0096	0.0143	0.0113	0.0182
1.2D + 1.0Ev + 1.0Eh 330° Seismic	144.71	0.01	0.0083	0.0223	0.0237
1.2D + 1.0Ev + 1.0Eh 330° Seismic	155.29	0.0145	-0.0040	0.0239	0.0242
1.2D + 1.0Ev + 1.0Eh 330° Seismic	160.00	0.0158	-0.0019	0.0194	0.0195
1.2D + 1.0Ev + 1.0Eh 330° Seismic	164.71	0.0175	-0.0014	0.0304	0.0304
1.2D + 1.0Ev + 1.0Eh 330° Seismic	170.00	0.0215	0.0034	0.0581	0.0582
1.2D + 1.0Ev + 1.0Eh 330° Seismic	170.58	0.022	0.0039	0.0554	0.0555
1.2D + 1.0Ev + 1.0Eh 330° Seismic	175.29	0.0257	0.0082	0.0425	0.0433
1.2D + 1.0Ev + 1.0Eh 330° Seismic	180.00	0.0294	0.0124	0.0465	0.0481
1.2D + 1.0Ev + 1.0Eh 330° Seismic	189.42	0.0371	0.0192	0.0514	0.0548
1.2D + 1.0Ev + 1.0Eh 330° Seismic	190.00	0.0376	0.0192	0.0534	0.0568
1.2D + 1.0Ev + 1.0Eh 330° Seismic	200.00	0.0434	0.0195	0.0431	0.0473
1.2D + 1.0Ev + 1.0Eh 330° Seismic	209.42	0.0527	0.0270	0.0516	0.0582
1.2D + 1.0Ev + 1.0Eh 330° Seismic	210.00	0.0507	0.0274	0.0503	0.0573
1.2D + 1.0Ev + 1.0Eh 330° Seismic	215.29	0.0576	0.0316	0.0443	0.0544
1.2D + 1.0Ev + 1.0Eh 330° Seismic	224.71	0.065	0.0390	0.0439	0.0586
1.2D + 1.0Ev + 1.0Eh 330° Seismic	229.42	0.0686	0.0425	0.0456	0.0622
1.2D + 1.0Ev + 1.0Eh 330° Seismic	230.58	0.0696	0.0432	0.0452	0.0624
1.2D + 1.0Ev + 1.0Eh 330° Seismic	239.97	0.076	0.0465	0.0818	0.0941
1.2D + 1.0Ev + 1.0Eh 330° Seismic	270.00	0.0904	0.0460	0.0322	0.0562
1.2D + 1.0Ev + 1.0Eh 330° Seismic	290.00	0.1016	0.0460	0.0322	0.0562
1.2D + 1.0Ev + 1.0Eh 330° Seismic	310.00	0.1129	0.0460	0.0322	0.0562

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Ev + 1.0Eh 330° Seismic	330.00	0.1241	0.0460	0.0322	0.0562
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	15.29	0.0148	-0.0157	0.0685	0.0701
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	20.00	0.0198	-0.0134	0.0635	0.0647
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	24.71	0.0246	-0.0131	0.0553	0.0568
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	29.42	0.0294	-0.0143	0.0660	0.0675
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	30.58	0.0307	-0.0148	0.0657	0.0674
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	35.29	0.0351	-0.0176	0.0404	0.044
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	40.00	0.0377	-0.0205	0.0266	0.0336
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	60.00	0.049	-0.0121	0.0275	0.0299
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	64.71	0.0496	-0.0051	0.0169	0.0175
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	75.29	0.0504	0.0110	0.0128	0.0169
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	80.00	0.0507	0.0163	0.0067	0.0164
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	84.71	0.0504	0.0168	0.0151	0.0226
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	90.58	0.0511	0.0143	0.0539	0.0554
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	100.00	0.0556	0.0022	0.0361	0.0362
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	104.71	0.0581	-0.0029	0.0259	0.026
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	110.58	0.0605	-0.0021	0.0260	0.0261
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	115.29	0.0626	-0.0062	0.0275	0.0282
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	120.00	0.0644	-0.0096	0.0097	0.0137
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	140.00	0.0625	-0.0031	0.0143	0.0144
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	144.71	0.0622	-0.0066	0.0027	0.0071
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	155.29	0.0596	-0.0024	0.0095	0.0097
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	160.00	0.059	0.0013	0.0063	0.0063
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	164.71	0.0596	0.0023	0.0223	0.0223
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	170.00	0.0646	-0.0012	0.0979	0.0979
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	170.58	0.0655	-0.0013	0.0878	0.0878
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	175.29	0.0698	-0.0031	0.0428	0.0429
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	180.00	0.074	-0.0045	0.0543	0.0544
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	189.42	0.0828	-0.0079	0.0722	0.0725
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	190.00	0.0836	-0.0082	0.0765	0.0768
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	200.00	0.0931	-0.0120	0.0535	0.0548
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	209.42	0.1017	-0.0132	0.0588	0.0601
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	210.00	0.1016	-0.0129	0.0599	0.0613
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	215.29	0.1065	-0.0136	0.0381	0.0405
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	224.71	0.1138	-0.0148	0.0443	0.0467
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	229.42	0.1169	-0.0155	0.0260	0.0303
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	230.58	0.1174	-0.0159	0.0247	0.0293
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	239.97	0.1234	-0.0189	0.0739	0.0757
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	270.00	0.1566	-0.0162	0.0794	0.0811
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	290.00	0.1856	-0.0162	0.0861	0.0876
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	310.00	0.2162	-0.0162	0.0884	0.0899
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	330.00	0.247	-0.0162	0.0885	0.09
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	15.29	0.0138	0.0206	0.0610	0.0643
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	20.00	0.0186	0.0210	0.0590	0.0625
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	24.71	0.0232	0.0233	0.0562	0.0606
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	29.42	0.0279	0.0285	0.0576	0.0642
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	30.58	0.029	0.0298	0.0511	0.0592
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	35.29	0.0317	0.0344	0.0235	0.0416
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	40.00	0.0338	0.0340	0.0367	0.0499
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	60.00	0.0457	0.0293	0.0232	0.0373
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	64.71	0.0467	0.0353	0.0132	0.0373
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	75.29	0.0469	0.0396	0.0077	0.0403
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	80.00	0.0464	0.0346	0.0120	0.0361
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	84.71	0.0457	0.0299	0.0171	0.0339
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	90.58	0.0468	0.0290	0.0610	0.0674
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	100.00	0.052	0.0274	0.0375	0.0465
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	104.71	0.0541	0.0222	0.0270	0.0349
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	110.58	0.0559	0.0179	0.0266	0.0321
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	115.29	0.0581	0.0198	0.0250	0.0318
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	120.00	0.0596	0.0172	0.0181	0.0249
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	140.00	0.0587	0.0111	0.0051	0.0123
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	144.71	0.0588	0.0124	0.0050	0.013
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	155.29	0.0569	0.0035	0.0079	0.0085
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	160.00	0.0568	-0.0014	0.0055	0.0056
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	164.71	0.058	-0.0036	0.0268	0.0268
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	170.00	0.0632	-0.0031	0.1005	0.1005
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	170.58	0.0642	-0.0033	0.0906	0.0907
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	175.29	0.0687	-0.0040	0.0454	0.0455

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	180.00	0.0732	-0.0046	0.0579	0.0579
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	189.42	0.0826	-0.0053	0.0753	0.0754
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	190.00	0.0834	-0.0054	0.0796	0.0797
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	200.00	0.0936	-0.0049	0.0581	0.0583
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	209.42	0.103	-0.0047	0.0633	0.0635
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	210.00	0.1032	-0.0046	0.0637	0.0639
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	215.29	0.1085	-0.0040	0.0509	0.051
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	224.71	0.1167	-0.0042	0.0517	0.0518
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	229.42	0.1204	-0.0041	0.0333	0.0336
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	230.58	0.121	-0.0041	0.0333	0.0336
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	239.97	0.1283	-0.0056	0.0719	0.0721
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	270.00	0.166	-0.0044	0.0862	0.0864
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	290.00	0.1974	-0.0044	0.0929	0.093
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	310.00	0.2304	-0.0044	0.0952	0.0953
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	330.00	0.2636	-0.0044	0.0953	0.0954
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	15.29	0.0148	0.0378	0.0612	0.0719
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	20.00	0.02	0.0441	0.0626	0.0765
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	24.71	0.025	0.0507	0.0581	0.0771
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	29.42	0.0297	0.0557	0.0579	0.0803
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	30.58	0.0309	0.0556	0.0552	0.0783
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	35.29	0.0339	0.0501	0.0431	0.0658
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	40.00	0.0365	0.0434	0.0422	0.0603
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	60.00	0.0492	0.0532	0.0173	0.0558
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	64.71	0.0493	0.0495	0.0100	0.0505
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	75.29	0.0478	0.0356	0.0065	0.0361
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	80.00	0.0469	0.0289	0.0116	0.0309
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	84.71	0.0459	0.0233	0.0180	0.0293
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	90.58	0.0464	0.0209	0.0574	0.0609
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	100.00	0.0523	0.0297	0.0354	0.0462
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	104.71	0.0549	0.0329	0.0239	0.0406
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	110.58	0.0568	0.0313	0.0239	0.0393
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	115.29	0.059	0.0349	0.0286	0.0451
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	120.00	0.0609	0.0377	0.0097	0.0388
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	140.00	0.0578	0.0186	0.0120	0.0219
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	144.71	0.057	0.0137	0.0062	0.015
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	155.29	0.0542	0.0041	0.0075	0.0083
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	160.00	0.0537	0.0007	0.0042	0.0042
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	164.71	0.0546	-0.0014	0.0241	0.0241
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	170.00	0.0597	0.0034	0.0956	0.0956
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	170.58	0.0606	0.0037	0.0875	0.0876
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	175.29	0.0653	0.0076	0.0467	0.0473
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	180.00	0.0698	0.0111	0.0575	0.0585
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	189.42	0.0792	0.0180	0.0736	0.0757
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	190.00	0.08	0.0184	0.0767	0.0788
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	200.00	0.0877	0.0246	0.0541	0.0594
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	209.42	0.0989	0.0261	0.0578	0.0633
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	210.00	0.0994	0.0262	0.0571	0.0628
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	215.29	0.104	0.0270	0.0503	0.0571
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	224.71	0.1118	0.0319	0.0504	0.0596
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	229.42	0.1156	0.0365	0.0360	0.0512
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	230.58	0.1163	0.0375	0.0345	0.051
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	239.97	0.1233	0.0435	0.0747	0.0846
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	270.00	0.1571	0.0417	0.0833	0.0931
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	290.00	0.1875	0.0417	0.0900	0.0992
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	310.00	0.2194	0.0417	0.0922	0.1012
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	330.00	0.2516	0.0417	0.0924	0.1013
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	15.29	0.0147	-0.0227	0.0661	0.0697
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	20.00	0.0191	-0.0159	0.0655	0.0672
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	24.71	0.0234	-0.0084	0.0578	0.0583
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	29.42	0.0275	-0.0009	0.0667	0.0667
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	30.58	0.0288	0.0013	0.0663	0.0663
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	35.29	0.0332	0.0083	0.0419	0.0427
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	40.00	0.0359	0.0142	0.0260	0.0296
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	60.00	0.0461	-0.0019	0.0252	0.0253
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	64.71	0.0472	-0.0094	0.0153	0.018
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	75.29	0.0481	-0.0255	0.0113	0.0279
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	80.00	0.0483	-0.0315	0.0095	0.0318
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	84.71	0.0479	-0.0338	0.0163	0.0375

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	90.58	0.0486	-0.0325	0.0510	0.0597
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	100.00	0.0529	-0.0214	0.0329	0.0388
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	104.71	0.0548	-0.0156	0.0294	0.033
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	110.58	0.057	-0.0110	0.0240	0.0263
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	115.29	0.0589	-0.0147	0.0253	0.0293
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	120.00	0.0606	-0.0194	0.0149	0.0245
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	140.00	0.0592	-0.0262	0.0095	0.0278
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	144.71	0.0583	-0.0227	0.0089	0.0244
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	155.29	0.055	-0.0098	0.0098	0.0138
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	160.00	0.0539	-0.0045	0.0069	0.0082
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	164.71	0.0546	-0.0032	0.0224	0.0225
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	170.00	0.0595	-0.0024	0.0969	0.0969
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	170.58	0.0604	-0.0022	0.0867	0.0867
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	175.29	0.0646	-0.0014	0.0422	0.0422
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	180.00	0.0687	0.0016	0.0533	0.0533
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	189.42	0.0773	0.0037	0.0714	0.0714
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	190.00	0.0781	0.0038	0.0756	0.0756
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	200.00	0.0871	0.0057	0.0527	0.053
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	209.42	0.096	0.0085	0.0569	0.0575
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	210.00	0.0966	0.0086	0.0547	0.0554
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	215.29	0.1008	0.0095	0.0452	0.0461
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	224.71	0.108	0.0135	0.0445	0.0465
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	229.42	0.1112	0.0152	0.0257	0.0299
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	230.58	0.1117	0.0156	0.0243	0.0289
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	239.97	0.1176	0.0178	0.0739	0.0755
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	270.00	0.1509	0.0150	0.0797	0.0811
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	290.00	0.1801	0.0150	0.0864	0.0877
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	310.00	0.2107	0.0150	0.0886	0.0899
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	330.00	0.2417	0.0150	0.0888	0.09
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	15.29	0.0144	-0.0216	0.0627	0.0663
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	20.00	0.0193	-0.0209	0.0612	0.0646
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	24.71	0.0239	-0.0191	0.0549	0.0581
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	29.42	0.0282	-0.0158	0.0647	0.0666
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	30.58	0.0294	-0.0146	0.0651	0.0667
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	35.29	0.0331	-0.0088	0.0409	0.0419
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	40.00	0.035	-0.0032	0.0285	0.0286
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	60.00	0.0461	-0.0138	0.0246	0.0282
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	64.71	0.0472	-0.0200	0.0148	0.0246
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	75.29	0.0477	-0.0253	0.0072	0.0263
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	80.00	0.0474	-0.0206	0.0108	0.0228
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	84.71	0.0467	-0.0155	0.0157	0.0216
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	90.58	0.0479	-0.0140	0.0618	0.0633
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	100.00	0.0538	-0.0226	0.0373	0.0433
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	104.71	0.0565	-0.0273	0.0238	0.0362
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	110.58	0.0584	-0.0331	0.0255	0.0418
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	115.29	0.0606	-0.0356	0.0266	0.0444
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	120.00	0.0622	-0.0323	0.0185	0.0372
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	140.00	0.0622	-0.0282	0.0028	0.0283
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	144.71	0.0619	-0.0241	0.0133	0.0275
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	155.29	0.06	-0.0091	0.0114	0.0146
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	160.00	0.0598	-0.0033	0.0070	0.0076
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	164.71	0.0611	-0.0027	0.0282	0.0284
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	170.00	0.0665	0.0007	0.1023	0.1023
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	170.58	0.0675	0.0010	0.0924	0.0924
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	175.29	0.0721	0.0029	0.0473	0.0474
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	180.00	0.0767	0.0044	0.0599	0.0599
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	189.42	0.0865	0.0076	0.0781	0.0783
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	190.00	0.0873	0.0079	0.0816	0.0819
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	200.00	0.0978	0.0101	0.0597	0.0605
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	209.42	0.1074	0.0123	0.0645	0.0656
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	210.00	0.1074	0.0121	0.0624	0.0635
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	215.29	0.113	0.0127	0.0445	0.0462
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	224.71	0.1212	0.0138	0.0512	0.053
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	229.42	0.1249	0.0143	0.0335	0.0362
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	230.58	0.1256	0.0144	0.0336	0.0364
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	239.97	0.1328	0.0161	0.0719	0.0737
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	270.00	0.1698	0.0150	0.0860	0.0873
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	290.00	0.2011	0.0150	0.0927	0.0939

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	310.00	0.234	0.0150	0.0950	0.0961
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	330.00	0.2672	0.0150	0.0951	0.0963
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	15.29	0.0144	0.0182	0.0644	0.0668
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	20.00	0.0198	0.0247	0.0658	0.0703
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	24.71	0.025	0.0317	0.0592	0.0671
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	29.42	0.03	0.0386	0.0689	0.079
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	30.58	0.0315	0.0402	0.0697	0.0804
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	35.29	0.0359	0.0447	0.0335	0.0559
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	40.00	0.0378	0.0440	0.0329	0.0549
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	60.00	0.0513	0.0552	0.0228	0.0597
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	64.71	0.0515	0.0489	0.0110	0.0501
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	75.29	0.0504	0.0343	0.0059	0.0347
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	80.00	0.0498	0.0281	0.0092	0.0293
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	84.71	0.0489	0.0231	0.0168	0.028
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	90.58	0.0498	0.0217	0.0582	0.0619
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	100.00	0.056	0.0321	0.0393	0.0507
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	104.71	0.0587	0.0360	0.0185	0.0405
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	110.58	0.0597	0.0348	0.0207	0.0404
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	115.29	0.062	0.0383	0.0315	0.0496
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	120.00	0.0641	0.0411	0.0113	0.0425
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	140.00	0.0617	0.0216	0.0094	0.0233
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	144.71	0.0611	0.0166	0.0066	0.0178
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	155.29	0.0586	0.0066	0.0053	0.0085
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	160.00	0.058	0.0031	0.0041	0.0048
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	164.71	0.0589	0.0032	0.0251	0.0251
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	170.00	0.0645	0.0071	0.0984	0.0987
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	170.58	0.0654	0.0076	0.0899	0.0902
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	175.29	0.0702	0.0121	0.0483	0.0497
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	180.00	0.0748	0.0166	0.0596	0.0618
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	189.42	0.0846	0.0260	0.0760	0.0803
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	190.00	0.0854	0.0267	0.0793	0.0836
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	200.00	0.0958	0.0351	0.0563	0.0663
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	209.42	0.1044	0.0346	0.0596	0.0689
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	210.00	0.1019	0.0341	0.0577	0.067
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	215.29	0.1094	0.0348	0.0433	0.0554
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	224.71	0.1171	0.0399	0.0493	0.0633
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	229.42	0.1209	0.0443	0.0347	0.0563
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	230.58	0.1215	0.0454	0.0334	0.0563
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	239.97	0.1284	0.0525	0.0736	0.0882
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	270.00	0.161	0.0509	0.0821	0.0966
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	290.00	0.191	0.0509	0.0888	0.1023
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	310.00	0.2225	0.0509	0.0910	0.1043
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	330.00	0.2543	0.0509	0.0912	0.1044
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	15.29	0.0142	0.0026	0.0686	0.0686
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	20.00	0.0197	0.0059	0.0630	0.0633
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	24.71	0.0241	0.0015	0.0619	0.0619
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	29.42	0.029	-0.0058	0.0691	0.0694
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	30.58	0.0304	-0.0072	0.0686	0.069
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	35.29	0.0351	-0.0113	0.0461	0.0474
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	40.00	0.038	-0.0080	0.0348	0.0357
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	60.00	0.0504	0.0217	0.0273	0.0349
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	64.71	0.0517	0.0274	0.0133	0.0305
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	75.29	0.0517	0.0223	0.0123	0.0244
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	80.00	0.0514	0.0164	0.0120	0.0203
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	84.71	0.0507	0.0118	0.0158	0.0188
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	90.58	0.0517	0.0121	0.0538	0.0552
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	100.00	0.0577	0.0225	0.0378	0.044
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	104.71	0.0603	0.0262	0.0183	0.0318
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	110.58	0.0614	0.0249	0.0205	0.0322
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	115.29	0.0634	0.0290	0.0282	0.0404
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	120.00	0.0653	0.0339	0.0155	0.0372
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	140.00	0.0637	0.0229	0.0117	0.0257
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	144.71	0.063	0.0179	0.0079	0.0195
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	155.29	0.0604	0.0073	0.0091	0.0117
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	160.00	0.0597	0.0031	0.0057	0.0065
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	164.71	0.0604	0.0023	0.0232	0.0233
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	170.00	0.0654	0.0029	0.0986	0.0986
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	170.58	0.0664	0.0030	0.0885	0.0885

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	175.29	0.0707	0.0036	0.0431	0.0433
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	180.00	0.0749	0.0040	0.0544	0.0545
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	189.42	0.0837	0.0050	0.0722	0.0723
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	190.00	0.0844	0.0051	0.0764	0.0765
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	200.00	0.0939	0.0062	0.0526	0.0529
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	209.42	0.1023	0.0049	0.0571	0.0573
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	210.00	0.1023	0.0043	0.0543	0.0545
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	215.29	0.107	0.0043	0.0446	0.0448
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	224.71	0.1141	0.0046	0.0438	0.0441
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	229.42	0.1172	0.0048	0.0247	0.0249
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	230.58	0.1176	0.0050	0.0234	0.0236
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	239.97	0.1235	0.0078	0.0730	0.0732
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	270.00	0.1568	0.0051	0.0785	0.0787
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	290.00	0.1855	0.0051	0.0852	0.0853
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	310.00	0.2158	0.0051	0.0875	0.0876
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	330.00	0.2463	0.0051	0.0876	0.0877
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	15.29	0.0148	-0.0221	0.0657	0.0693
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	20.00	0.0195	-0.0168	0.0647	0.0669
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	24.71	0.0239	-0.0103	0.0596	0.0605
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	29.42	0.0282	-0.0037	0.0666	0.0667
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	30.58	0.0294	-0.0022	0.0656	0.0656
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	35.29	0.0337	0.0024	0.0488	0.0488
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	40.00	0.0374	0.0019	0.0427	0.0427
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	60.00	0.0492	0.0044	0.0232	0.0236
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	64.71	0.0501	0.0047	0.0132	0.0138
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	75.29	0.0513	0.0154	0.0094	0.0172
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	80.00	0.0514	0.0165	0.0051	0.0173
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	84.71	0.0508	0.0133	0.0147	0.0194
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	90.58	0.0522	0.0125	0.0640	0.0651
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	100.00	0.0581	0.0137	0.0385	0.0409
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	104.71	0.0604	0.0090	0.0272	0.0286
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	110.58	0.0618	0.0045	0.0249	0.0253
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	115.29	0.0641	0.0079	0.0325	0.0335
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	120.00	0.0664	0.0126	0.0182	0.0221
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	140.00	0.0684	0.0303	0.0012	0.0303
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	144.71	0.0682	0.0261	0.0148	0.03
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	155.29	0.0665	0.0108	0.0131	0.0169
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	160.00	0.0664	0.0049	0.0083	0.0096
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	164.71	0.0678	0.0045	0.0292	0.0296
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	170.00	0.0733	0.0021	0.1054	0.1054
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	170.58	0.0744	0.0021	0.0952	0.0952
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	175.29	0.0792	0.0015	0.0493	0.0493
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	180.00	0.084	-0.0015	0.0619	0.0619
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	189.42	0.0939	-0.0036	0.0804	0.0804
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	190.00	0.0948	-0.0038	0.0840	0.0841
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	200.00	0.1055	-0.0059	0.0612	0.0615
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	209.42	0.1158	-0.0085	0.0677	0.0681
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	210.00	0.1165	-0.0081	0.0682	0.0687
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	215.29	0.1217	-0.0093	0.0536	0.0544
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	224.71	0.1304	-0.0103	0.0541	0.055
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	229.42	0.1344	-0.0110	0.0370	0.0385
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	230.58	0.1351	-0.0111	0.0370	0.0386
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	239.97	0.1427	-0.0123	0.0740	0.075
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	270.00	0.1811	-0.0111	0.0882	0.0889
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	290.00	0.2132	-0.0111	0.0949	0.0955
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	310.00	0.2468	-0.0111	0.0972	0.0978
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	330.00	0.2808	-0.0111	0.0973	0.0979
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	15.29	0.0171	0.0532	0.0665	0.0851
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	20.00	0.0228	0.0597	0.0681	0.0905
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	24.71	0.0282	0.0668	0.0623	0.0913
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	29.42	0.0334	0.0738	0.0685	0.1006
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	30.58	0.0348	0.0755	0.0667	0.1007
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	35.29	0.0396	0.0820	0.0576	0.1002
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	40.00	0.044	0.0867	0.0375	0.0944
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	60.00	0.0546	0.0919	0.0232	0.0947
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	64.71	0.055	0.0857	0.0139	0.0868
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	75.29	0.0543	0.0712	0.0084	0.0717
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	80.00	0.0538	0.0647	0.0076	0.0651

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	84.71	0.0531	0.0585	0.0156	0.0604
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	90.58	0.0539	0.0548	0.0613	0.0818
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	100.00	0.0602	0.0597	0.0322	0.0673
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	104.71	0.0621	0.0559	0.0288	0.0623
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	110.58	0.0643	0.0513	0.0280	0.0584
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	115.29	0.0667	0.0542	0.0314	0.0627
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	120.00	0.0688	0.0565	0.0133	0.0579
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	140.00	0.0668	0.0339	0.0105	0.0353
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	144.71	0.0662	0.0273	0.0104	0.0293
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	155.29	0.0635	0.0117	0.0104	0.0156
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	160.00	0.0628	0.0059	0.0063	0.0086
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	164.71	0.0637	0.0054	0.0255	0.0261
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	170.00	0.0693	0.0060	0.1002	0.1003
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	170.58	0.0703	0.0061	0.0904	0.0906
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	175.29	0.075	0.0078	0.0481	0.0487
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	180.00	0.0796	0.0096	0.0589	0.0596
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	189.42	0.0892	0.0116	0.0763	0.0772
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	190.00	0.0899	0.0116	0.0804	0.0813
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	200.00	0.0991	0.0071	0.0567	0.0572
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	209.42	0.1082	-0.0027	0.0630	0.0631
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	210.00	0.1088	-0.0025	0.0640	0.064
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	215.29	0.1136	-0.0042	0.0458	0.046
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	224.71	0.1216	-0.0043	0.0513	0.0515
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	229.42	0.1252	-0.0017	0.0367	0.0367
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	230.58	0.1258	-0.0013	0.0354	0.0354
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	239.97	0.133	0.0055	0.0758	0.0758
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	270.00	0.1695	0.0038	0.0841	0.0842
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	290.00	0.2002	0.0038	0.0908	0.0908
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	310.00	0.2323	0.0038	0.0930	0.0931
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	330.00	0.2648	0.0038	0.0931	0.0932

MAXIMUM REACTIONS SUMMARY

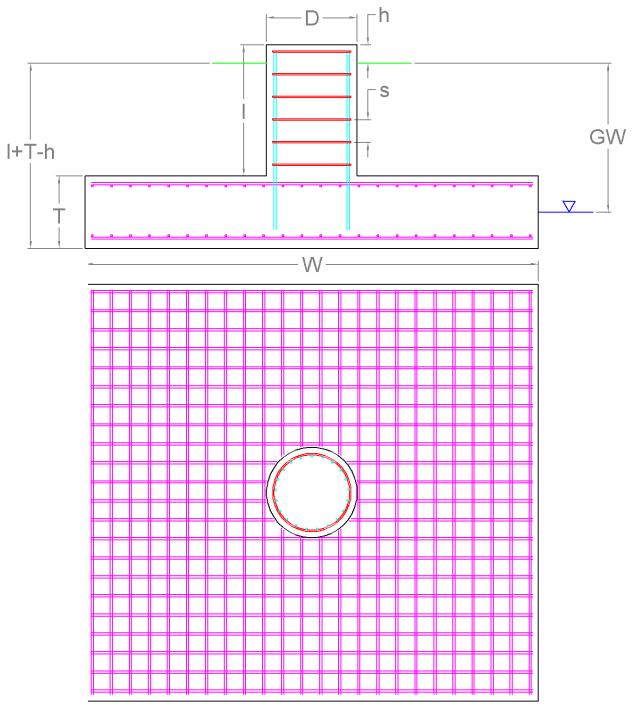
Anchor Group	Uplift	Shear
BASE	197.39	4.48
A1	48.35	60.16

Pad & Pier Foundation Analysis (ANSI/TIA-222-H)

Foundation & Soil Parameters			
Ignore Rebar?		Y	
Pier Diameter	*D*	4.40	ft
Pier Height Above Ground	*h*	0.0	ft
Pad Base Depth	*l+T-h*	5.5	ft
Pad Width	*W*	6.3	ft
Pad Thickness	*T*	1.6	ft
Water Table Depth [BGL]	*GW*	99	ft
Unit Weight of Concrete		150	pcf
Unit Weight of Soil Above Water Table		115.0	pcf
Unit Weight of Water		62.4	pcf
Unit Weight of Soil [Submerged]		52.6	pcf
Cohesion		0	psf
Friction Angle		32	°
Ultimate Skin Friction		0	psf
Ultimate Bearing Pressure		28,000	psf
Conical Failure Angle		30	°
Soil Uplift at _____ of Pad		Top	
Capacity Increase (Transient Loads)		1.00	
Bearing Strength Reduction Factor, ϕ_s		0.60	
Uplift Strength Reduction Factor, ϕ_s		0.75	

Soil Axial Capacities and Design Moment		
Weight of Concrete [Buoyancy Considered]	18.4	k
Weight of Soil [Buoyancy Considered]	26.7	k
Skin Friction Resistance	0.0	k
Controlling Failure Mode	Top	
Compressive Force, P_u	202.6	k
Nominal Compressive Capacity per Leg, $\phi_s P_n$	666.8	k
P_u / $\phi_s P_n$	**30.4%**	
Inflection Point [BGL]	3.5	ft
Design Moment at Inflection Point, M_u	9.0	k-ft

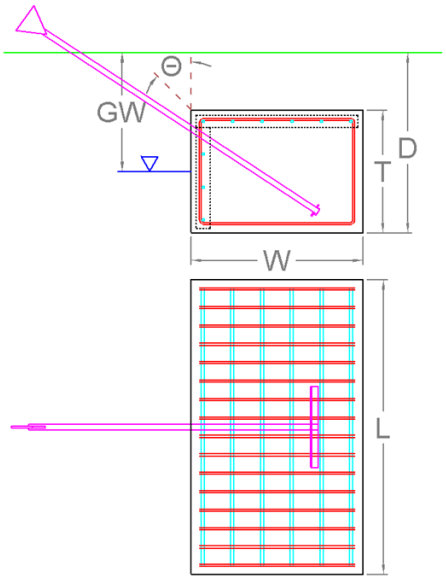
Reactions		
Moment, M_u	0.0	k-ft
Shear, V_u	4.5	k
Compression, P_u	197.4	k
Uplift, T_u	0.0	k



Guy Anchor Block Analysis (ANSI/TIA-222-H)

Anchor Block Parameters			
Include Berm?		N	
Analyze Anchor Rod?		Y	
Ignore Rebar?		Y	
Base Depth	*D*	8.6	ft
Width	*W*	2.7	ft
Length	*L*	12.3	ft
Thickness	*T*	1.6	ft
Water Table Depth [BGL]	*GW*	99	ft
Unit Weight of Concrete		150	pcf
Unit Weight of Soil Above Water Table		125.0	pcf
Unit Weight of Water		62.4	pcf
Unit Weight of Soil [Submerged]		62.6	pcf
Friction Angle		37	°
Cohesion		0	psf
Ultimate Skin Friction		815	psf
Coefficient of Shear Friction		0.35	
Conical Failure Angle	Θ	30	°
Soil Uplift at _____ of Anchor		Top	
Capacity Increase (Transient Loads)		1.00	
Uplift Strength Reduction Factor, ϕ_u		0.75	
Shear Strength Reduction Factor, ϕ_v		0.75	
Dead Load Factor		0.90	

Reactions		
Uplift, T_u	48.4	k
Shear, V_u	60.2	k
Anchor Radius	204	ft
Node	A1	-



Soil Uplift Capacity		
Uplift Resistance from Skin Friction and Soil Shear	20.4	k
Nominal Uplift Resistance, $\phi_u T_n$	99.7	k
$T_u / \phi_u T_n$	**48.5%**	

Soil Shear Capacity		
Shear Resistance from Skin Friction	5.5	k
Shear Friction Resistance Due to Normal Force	0.0	k
Passive Pressure	3,922	psf
Passive Pressure Resistance	77.2	k
Nominal Shear Resistance, $\phi_v V_n$	62.0	k
$V_u / \phi_v V_n$	**97.0%**	

Anchor Rod Capacity		
Anchor Rod Shape	Channel	
Quantity of Rods	2	
Gross Area (Individual)	3.38	in^2
Net Area (Individual)	3.38	in^2
Yield Strength, F_y	36	ksi
Tensile Strength, F_u	58	ksi
Yield Strength Reduction Factor, ϕ_y	0.80	
Tensile Strength Reduction Factor, ϕ_t	0.65	
Resultant Tensile Load, T_u	77.2	k
Tensile Resistance, ϕT_n	194.7	k
T_u / ϕT_n:	**39.6%**	

DISH Wireless L.L.C. SITE ID:

BOHVN00035A

DISH Wireless L.L.C. SITE ADDRESS:

80 GREAT HILL ROAD
SEYMOUR, CT 06483

SCOPE OF WORK

THIS IS NOT AN ALL INCLUSIVE LIST. CONTRACTOR SHALL UTILIZE SPECIFIED EQUIPMENT PART OR ENGINEER APPROVED EQUIVALENT. CONTRACTOR SHALL VERIFY ALL NEEDED EQUIPMENT TO PROVIDE A FUNCTIONAL SITE. THE PROJECT GENERALLY CONSISTS OF THE FOLLOWING:

TOWER SCOPE OF WORK:
- INSTALL (3) PROPOSED PANEL ANTENNAS (1 PER SECTOR)
- INSTALL (3) PROPOSED ANTENNA SECTOR FRAME MOUNTS (1 PER SECTOR)
- INSTALL PROPOSED JUMPERS
- INSTALL (6) PROPOSED RRUs (2 PER SECTOR)
- INSTALL (1) PROPOSED OVER VOLTAGE PROTECTION DEVICE (OVP)
- INSTALL (1) PROPOSED HYBRID CABLE

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

SITE INFORMATION

PROPERTY OWNER:	CABLE HOLDCO EXCHANGE 3
ADDRESS:	80 GREAT HILL RD SEYMOUR, CT 06483
TOWER TYPE:	GUYED TOWER
TOWER CO SITE ID:	208205
TOWER APP NUMBER:	13729958_D2
COUNTY:	NEW HAVEN
LATITUDE (NAD 83):	41° 21' 43.081" N 41.361967
LONGITUDE (NAD 83):	73° 6' 47.250" W -73.113125
ZONING JURISDICTION:	CITY OF SEYMOUR
ZONING DISTRICT:	RESIDENTIAL
PARCEL NUMBER:	SEYM-000404-000000-000046-A000000
OCCUPANCY GROUP:	U
CONSTRUCTION TYPE:	II-B
POWER COMPANY:	EVERSOURCE CT ELECTRIC
TELEPHONE COMPANY:	CROWN CASTLE

PROJECT DIRECTORY

APPLICANT:	DISH Wireless L.L.C. 5701 SOUTH SANTA FE DRIVE LITTLETON, CO 80120
TOWER OWNER:	AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801
ENGINEER:	ATC TOWER SERVICES, LLC 3500 REGENCY PARKWAY SUITE 100 CARY, NC 27518
SITE ACQUISITION:	DAVID GOODFELLOW DAVID.GOODFELLOW@DISH.COM
CONSTRUCTION MANAGER:	CHAD WILCOX CHAD.WILCOX@DISH.COM
RF ENGINEER:	SYED ZAIDI SYED.ZAIDI@DISH.COM

CONNECTICUT CODE COMPLIANCE

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES:

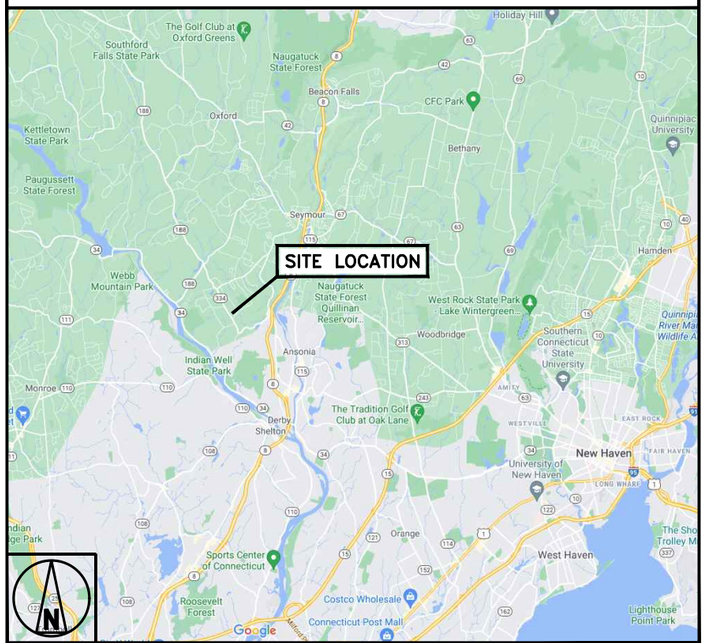
CODE TYPE	CODE
BUILDING	2018 CT STATE BUILDING CODE/2015 IBC W/ CT AMENDMENTS
MECHANICAL	2018 CT STATE BUILDING CODE/2015 IMC W/ CT AMENDMENTS
ELECTRICAL	2018 CT STATE BUILDING CODE/2017 NEC W/ CT AMENDMENTS

SITE PHOTO

DIRECTIONS

DIRECTIONS HEAD WEST ON FRANKLIN ST FOR 32 S (276 FT), DRIVE ALONG CT-8 S AND CT-334 W FOR 7MIN (4.6 MI), THEN DRIVE TO YOUR DESTINATION FOR 45 S (0.1 MI)

VICINITY MAP



NO SCALE

SHEET INDEX

SHEET NO.	SHEET TITLE
T-1	TITLE SHEET
A-0	SURVEY
A-1	OVERALL AND ENLARGED SITE PLAN
A-2	ELEVATION, ANTENNA LAYOUT AND SCHEDULE
A-3	EQUIPMENT PLATFORM AND H-FRAME DETAILS
A-4	EQUIPMENT DETAILS
A-5	EQUIPMENT DETAILS
A-6	EQUIPMENT DETAILS
E-1	ELECTRICAL/FIBER ROUTE PLAN AND NOTES
E-2	ELECTRICAL DETAILS
E-3	ELECTRICAL ONE-LINE, FAULT CALCS & PANEL SCHEDULE
G-1	GROUNDING PLANS AND NOTES
G-2	GROUNDING DETAILS
G-3	GROUNDING DETAILS
RF-1	RF CABLE COLOR CODE
GN-1	LEGEND AND ABBREVIATIONS
GN-2	RF SIGNAGE
GN-3	GENERAL NOTES
GN-4	GENERAL NOTES
GN-5	GENERAL NOTES

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

CALL 2 WORKING DAYS UTILITY NOTIFICATION PRIOR TO CONSTRUCTION

811

GENERAL NOTES

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

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.

dish wireless.

5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112

DRAWN BY:	CHECKED BY:	APPROVED BY:
CS	SRF	SRF

RFDS REV #: ----

CONSTRUCTION DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
0	02/02/2022	ISSUED FOR CONSTRUCTION
1	03/24/2022	POWER RUN

STATE OF CONNECTICUT
SCOTT A. WIRGAU
30575
LICENSED PROFESSIONAL ENGINEER

A&E PROJECT NUMBER

208205-13729958_D2

DISH Wireless L.L.C.
PROJECT INFORMATION

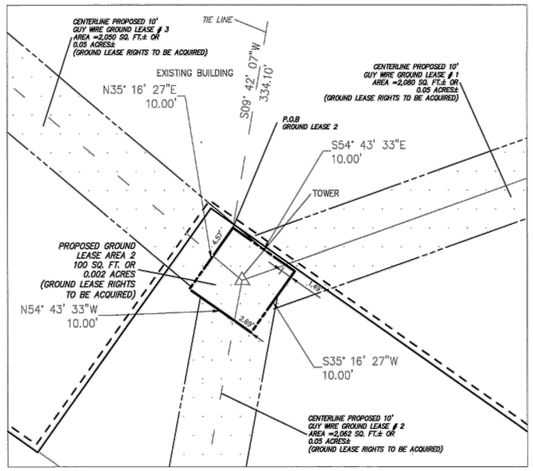
BOHVN00035A
80 GREAT HILL ROAD
SEYMOUR, CT 06483

SHEET TITLE

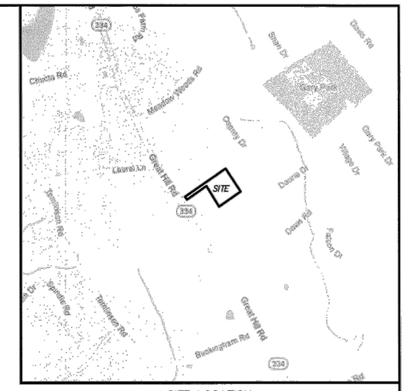
TITLE SHEET

SHEET NUMBER

T-1



GROUND LEASE 2 DETAIL
(SCALE: 1" = 10')



SITE LOCATION
(SCALE: NONE)

POINT OF COMMENCEMENT GROUND LEASE 2
IRON PIN
IRON PIPE

LANDS N/F OF
WILLIAM V. McDONNELL JR., PATRICK F. McDONNELL AND MATTHEW C. McDONNELL
PARCEL # 4-4.46H
LIBER 410 PAGE 0239

LANDS N/F OF
MICHAEL CHAVES AND MIRIAH A. CHAVES
PARCEL # 4-4.46D
LIBER 0463 PAGE 0922

APPROXIMATE BOUNDARY

IRON ROD

TIE LINE

LANDS N/F OF
CABLE HOLDCO EXCHANGE III LLC
PARCEL # 4-4.46A
LIBER 399 PAGE 0820

S09° 42' 07"W 334.17±

LANDS N/F OF
ALAN T. TUCKER AND DEBRA A. TUCKER
PARCEL # 4-4.46F
LIBER 222 PAGE 466

LANDS N/F OF
MATHEW TILTON AND LORI TILTON
PARCEL # 4-4.46B
LIBER 199 PAGE 368

POLE CL&P 439
POST
6' C.L.F.
GUY WIRE
ASPHALT PARKING LOT
N49° 47' 01"W 204.88'
N35° 16' 27"E 135.54'
CB
JX
LIGHT
EXISTING BUILDING
N70° 18' 43"E 206.44'
SEE DETAIL
TOWER
CARD READER
7' C.L.F.
POLE CL&P G438
N54° 57' 01"E 417.21'
ASPHALT PARKING LOT
MW
CONTROL BOX
GENERATOR
GRASS
WV
N54° 43' 33"E 242.97'
PUMP
N51° 39' 08"W 55.30'
S54° 43' 33"E 30.00'
N35° 16' 27"E 150.00'
S35° 16' 27"W 150.00'
2FT WIDE CONDUIT EASEMENT AREA=110± SQ FT OR 0.003 ACRES
PROPOSED GROUND LEASE AREA 1 4,500± SQ. FT. OR 0.10± ACRES (GROUND LEASE RIGHTS TO BE ACQUIRED)
S10° 28' 47"W 205.33'
APPROXIMATE BOUNDARY

LANDS N/F OF
JANE WAMPLER
PARCEL # 4-4.48F
LIBER 126 PAGE 0140

CENTERLINE PROPOSED 20' INGRESS-EGRESS & UTILITY GROUND LEASE AREA =15,002± SQ. FT. OR 0.34± ACRES (GROUND LEASE RIGHTS TO BE ACQUIRED)

POLE CL&P 0437
POLE CL&P 3381
GUY CATV
N34° 59' 14"W 20.39'
IRON PIPE
POINT OF BEGINNING INGRESS-EGRESS & UTILITY GROUND LEASE
POINT OF COMMENCEMENT INGRESS-EGRESS & UTILITY GROUND LEASE
GREAT HILL ROAD (GRAVEL)
POLE NO #'S

POINT OF BEGINNING GROUND LEASE 1
N54° 43' 33"W 30.00'
TIE LINE
N51° 16' 07"E 166.94'±
IRON ROD
POINT OF COMMENCEMENT GROUND LEASE 1

LANDS N/F OF
MICHAEL P. REID AND MAUREEN H. REID
PARCEL # 4-4.81
LIBER 208 PAGE 376

LANDS N/F OF
DMITRY BUZOLIN
PARCEL # 4-4.48E
LIBER 458 PAGE 0490

LANDS N/F OF
STANISLAW OGORZALEK, BERNADETA OGORZALEK AND WALDEMAR OGORZALEK
PARCEL # 4-4.80
LIBER 408 PAGE 0821

LANDS N/F OF
FRANK S. ZALENSKI, JR. AND MARGARET E. ZALENSKI
PARCEL # 4-4.48D
LIBER 146 PAGE 678

NOTES:

NOTES:

1. THIS SURVEY HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THROUGH 20-300b-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS INC. ON SEPTEMBER 26, 1996. THE BOUNDARY LINES SHOWN ON THIS PLAN WERE COMPILED FROM OTHER MAPS, RECORD RESEARCH OR OTHER SOURCES OF INFORMATION. IT IS NOT TO BE CONSTRUED AS HAVING BEEN OBTAINED AS THE RESULT OF A FIELD SURVEY, AND IS SUBJECT TO SUCH CHANGE AS AN ACCURATE FIELD SURVEY MAY DISCLOSE.

TYPE OF SURVEY: EASEMENT PLAN

BOUNDARY DETERMINATION CATEGORY: NONE

CLASS OF ACCURACY: HORIZONTAL CLASS A-2
VERTICAL CLASS V-2
TOPOGRAPHIC CLASS NONE

2. PROPERTY LINE SHOWN HEREON ARE FROM RECORD DEEDS PLOTS AND TAX MAPS AS OVERLAID ON ANY MONUMENTATION OR OTHER EVIDENCE THAT MAY HAVE BEEN LOCATED DURING THE TOPOGRAPHIC SURVEY. A PROPERTY SURVEY WAS NOT PERFORMED BY CLOUGH HARBOUR & ASSOCIATES LLP AND AS A RESULT THE PROPERTY LINES SHOWN ARE APPROXIMATE AND DO NOT PRESENT A PROPERTY/BOUNDARY OPINION.

3. BASE MAP PREPARED BY CHA FROM A MARCH 2012 FIELD SURVEY.

4. NORTH ORIENTATION IS TRUE NORTH BASED ON GPS OBSERVATION TAKEN AT THE TIME OF THE FIELD SURVEY. MAPPING PREPARED ON NAD83 CONNECTICUT STATE PLANE ZONE, US FOOT.

5.SUBJECT TO ANY STATEMENT OF FACT AN UP-TO-DATE ABSTRACT OF TITLE WOULD DISCLOSE.

6. SUBJECT TO ALL RIGHTS, EASEMENTS, COVENANTS OR RESTRICTIONS OF RECORD.

7. UNDERGROUND UTILITIES, STRUCTURES AND FACILITIES HAVE BEEN SHOWN FROM SURFACE LOCATIONS AND MEASUREMENTS OBTAINED FROM A FIELD SURVEY. THEREFORE THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE OTHER UTILITIES WHICH THE EXISTENCE OF ARE NOT KNOWN. SIZE, TYPE AND LOCATION OF ALL UTILITIES AND STRUCTURES MUST BE VERIFIED BY PROPER AUTHORITIES PRIOR TO ANY AND ALL CONSTRUCTION. CALL DIG SAFE PRIOR TO ANY EXCAVATION.

MAP REFERENCES:

1. MAP ENTITLED "TELE-MEDIA COMPANY OF WESTERN CT". PREPARED BY CLARKE AND PEARSON, ASSOCIATES, INC. REG. CIVIL ENGINEERS & SURVEYORS. DATED MAY 17, 1994. FILED IN THE SEYMOUR LAND RECORDS AS MAP No. 1821.

2. MAP ENTITLED "RECORD SUBDIVISION MAP COUNTRY HILL ESTATES". PREPARED BY MICHAEL H. HORBAL, REGISTERED LAND SURVEYOR. DATED JUNE 2, 1988. FILED IN THE SEYMORE TOWN CLERK'S OFFICE MAP No. 1703.

3. MAP ENTITLED "RECORD SUBDIVISION MAP, SECTION II, DAUBIA ACRES". PREPARED BY JOSEPH WYSOWSKI, REGISTERED LAND SURVEYOR. DATED DECEMBER 6, 1973. FILED IN THE SEYMOUR TOWN CLERK'S OFFICE AS MAP 1317.

4. MAP ENTITLED "FINAL PLAN ANDREWS SUBDIVISION". PREPARED BY JOSEPH WYSOWSKI, REGISTERED LAND SURVEYOR. DATED OCTOBER 18, 1982. FILED IN THE SEYMOUR LAND RECORDS AS MAP No. 1509.

5. MAP ENTITLED "TOWN OF SEYMOUR ASSESSOR MAP". PREPARED BY NEW ENGLAND GEOSYSTEMS. DATED DECEMBER 2011. MAP No. 04-04 SHEETS 1 OF 3, 2 OF 3, AND 3 OF 3.

6. MAP ENTITLED "EASEMENT SURVEY PREPARED FOR CTI TOWERS INC. -- SEYMOUR-- SITE NO. 10115" AS PREPARED BY CHA, DATED MARCH 26, 2012.

0 40 80
Scale in feet

Revisions:	Drawn By:	App'd. By:	Date:
MAP ISSUED	DJD	WTW	8/15/12
Dwg: REV1_239651005.dwg			

STATE OF CONNECTICUT
WILLIAM S. LUCARELLI
No. 16529
LICENSED LAND SURVEYOR

WILLIAM S. LUCARELLI, PLS 16529

CHA
III Winners Circle, PO Box 5269 • Albany, NY 12205-0269
Main: (518) 453-4500 • www.chacompanies.com

CHA Project Number: 23965-1005-34000

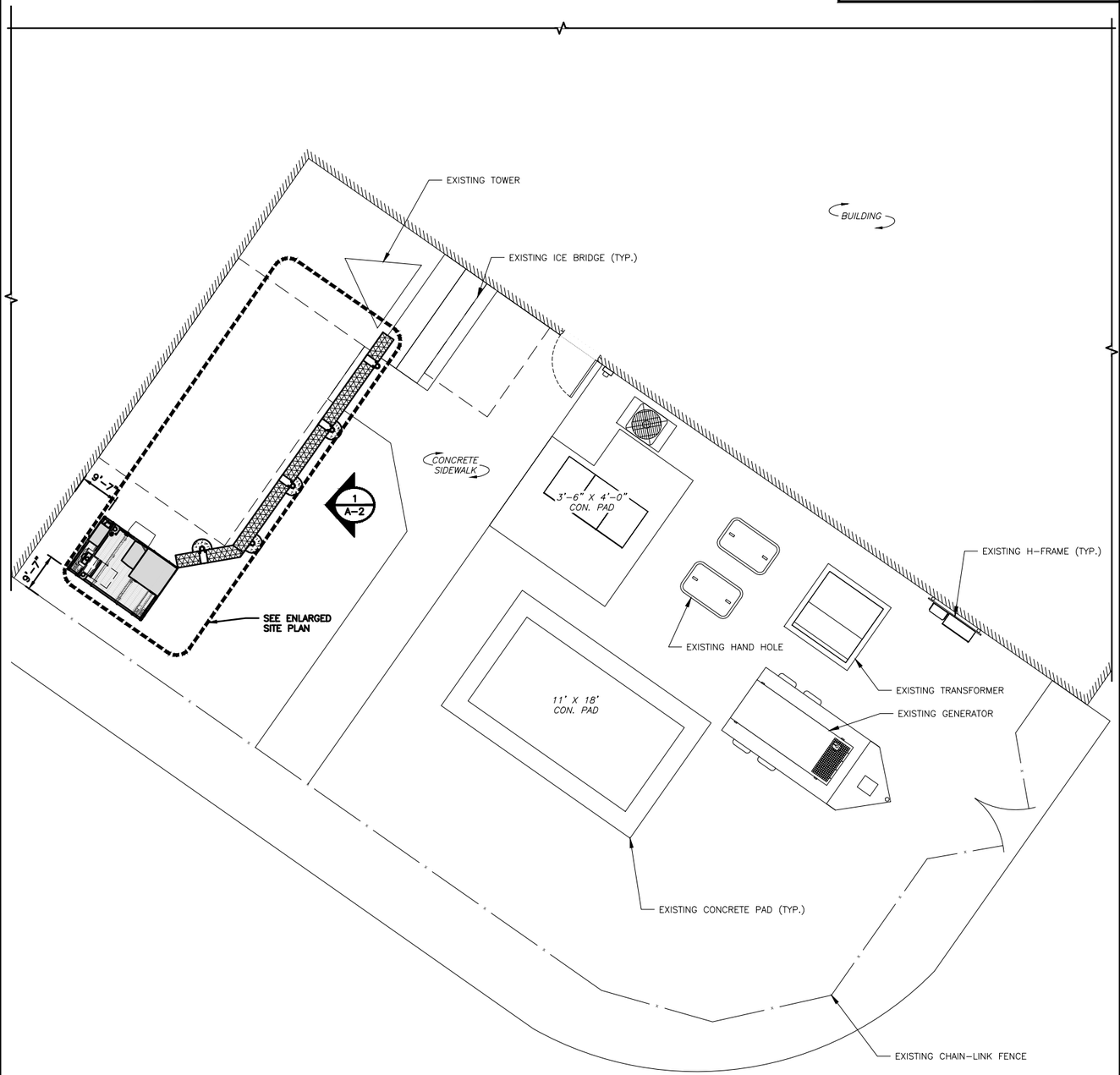
Survey Service Group

GROUND LEASE SURVEY PREPARED FOR
CTI TOWERS INC.
SEYMOUR
SITE NO. 10115
CITY OF SEYMOUR COUNTY OF NEW HAVEN
STATE OF CONNECTICUT

Scale: 1" = 40'	Date: AUGUST 15, 2012	Sheet 1 OF 1

NOTES

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



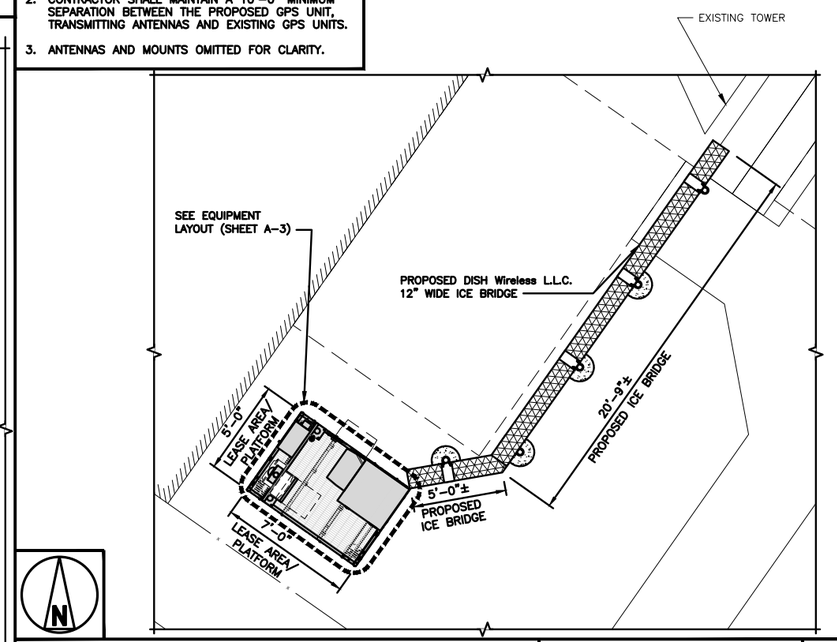
OVERALL SITE PLAN

5' 0 5' 10'
1"=5'

1

NOTES

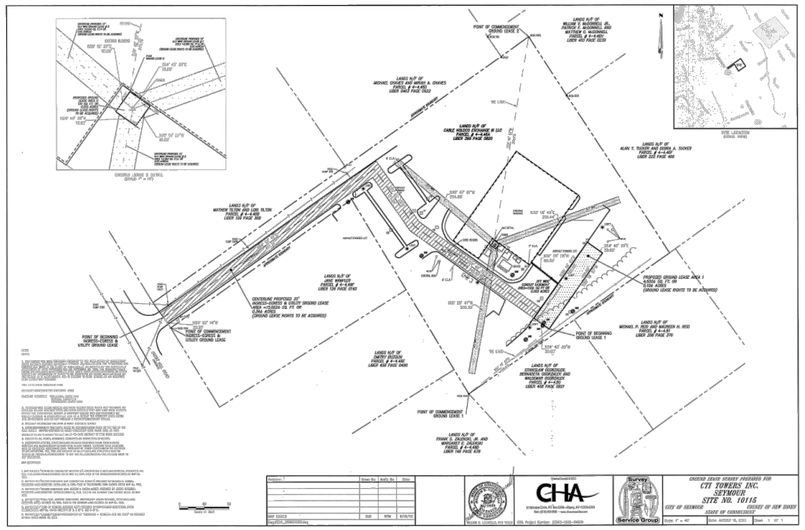
1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. CONTRACTOR SHALL MAINTAIN A 10'-0" MINIMUM SEPARATION BETWEEN THE PROPOSED GPS UNIT, TRANSMITTING ANTENNAS AND EXISTING GPS UNITS.
3. ANTENNAS AND MOUNTS OMITTED FOR CLARITY.



ENLARGED SITE PLAN

4' 2' 0 4' 8'
1/4"=1'-0"

2



NO SCALE

3

EXISTING SURVEY (BY OTHERS)

dish wireless.

5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112

DRAWN BY:	CHECKED BY:	APPROVED BY:
CS	SRF	SRF

RFDS REV #: ----

CONSTRUCTION DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
0	02/02/2022	ISSUED FOR CONSTRUCTION
1	03/24/2022	POWER RUN

STATE OF CONNECTICUT
SCOTT A. WIRGAU
30575
LICENSED PROFESSIONAL ENGINEER

A&E PROJECT NUMBER
208205-13729958_D2

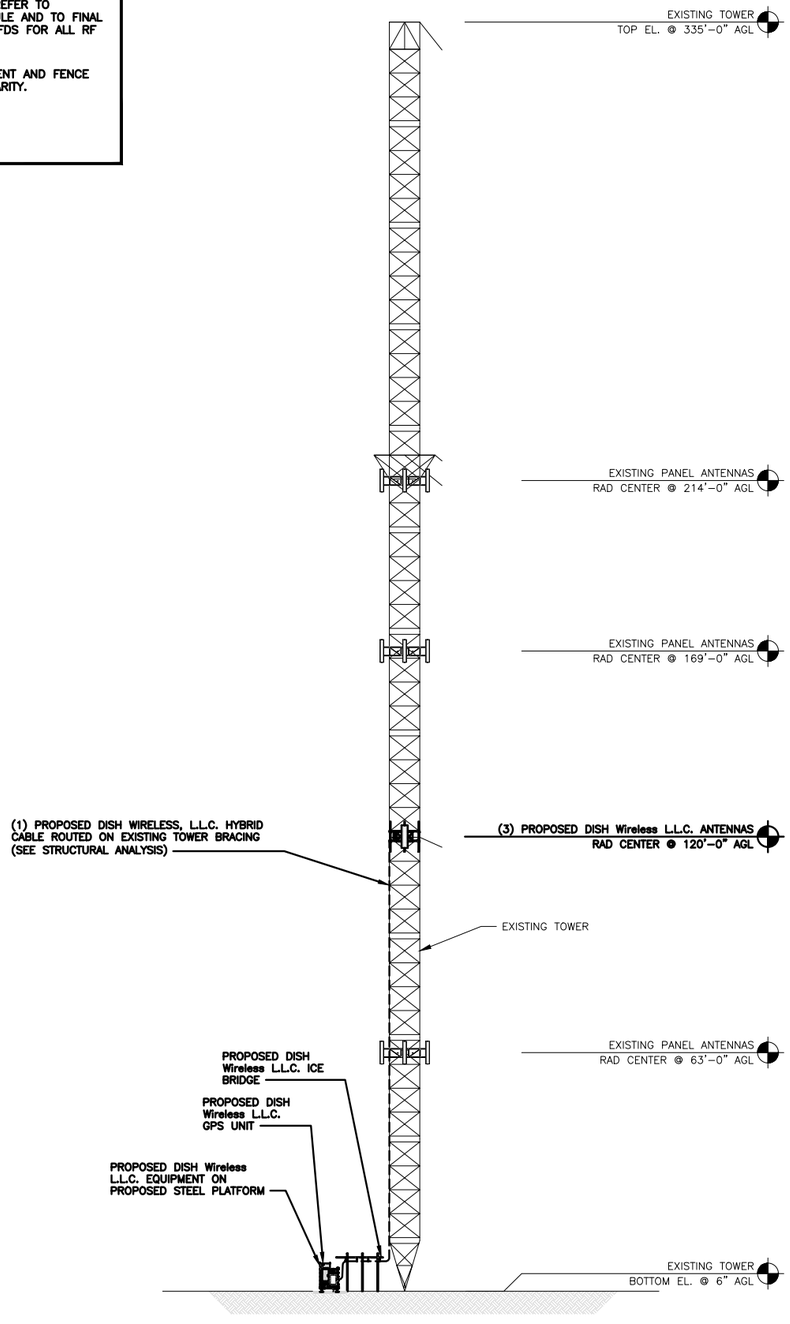
DISH Wireless L.L.C.
PROJECT INFORMATION
BOHVN00035A
80 GREAT HILL ROAD
SEYMOUR, CT 06483

SHEET TITLE
SITE PLAN
OVERALL AND ENLARGED

SHEET NUMBER
A-1

NOTES

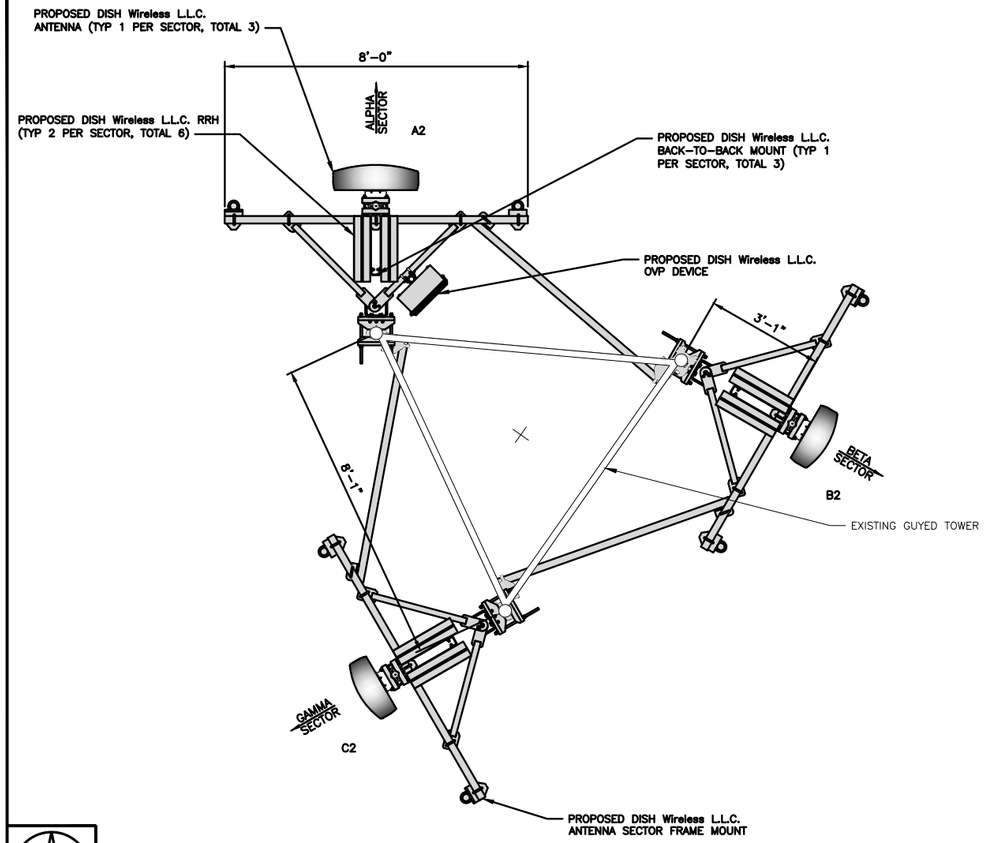
1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. ANTENNA AND MW DISH SPECIFICATIONS REFER TO ANTENNA SCHEDULE AND TO FINAL CONSTRUCTION RFDS FOR ALL RF DETAILS.
3. EXISTING EQUIPMENT AND FENCE OMITTED FOR CLARITY.



PROPOSED NORTH ELEVATION

20' 10' 0 20' 40'
1"=20'

1



N

ANTENNA LAYOUT

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

2

SECTOR POS.	ANTENNA					TRANSMISSION CABLE	RRH			OVP
	EXISTING OR PROPOSED	MANUFACTURER – MODEL NUMBER	TECH	AZIMUTH	RAD CENTER	FEED LINE TYPE AND LENGTH	MANUFACTURER – MODEL NUMBER	TECH	POS.	MANUFACTURER MODEL
A1	--	--	--	--	--	(1) HIGH-CAPACITY HYBRID CABLE (170' LONG)	TA08025-B604	5G	A2	(1) RAYCAP RDIDC-9181-PF-48
A2	PROPOSED	JMA – MX08FRO665-21	5G	0°	120'-0"		TA08025-B605	5G	A2	
A3	--	--	--	--	--		--	--	--	
B1	--	--	--	--	--	SHARED W/ALPHA	TA08025-B604	5G	B2	SHARED W/ALPHA
B2	PROPOSED	JMA – MX08FRO665-21	5G	120°	120'-0"		TA08025-B605	5G	B2	
B3	--	--	--	--	--		--	--	--	
C1	--	--	--	--	--	SHARED W/ALPHA	TA08025-B604	5G	C2	SHARED W/ALPHA
C2	PROPOSED	JMA – MX08FRO665-21	5G	240°	120'-0"		TA08025-B605	5G	C2	
C3	--	--	--	--	--		--	--	--	

NOTES

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

ANTENNA SCHEDULE

NO SCALE

3

dish wireless.

5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
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PHONE: (919) 468-0112

DRAWN BY:	CHECKED BY:	APPROVED BY:
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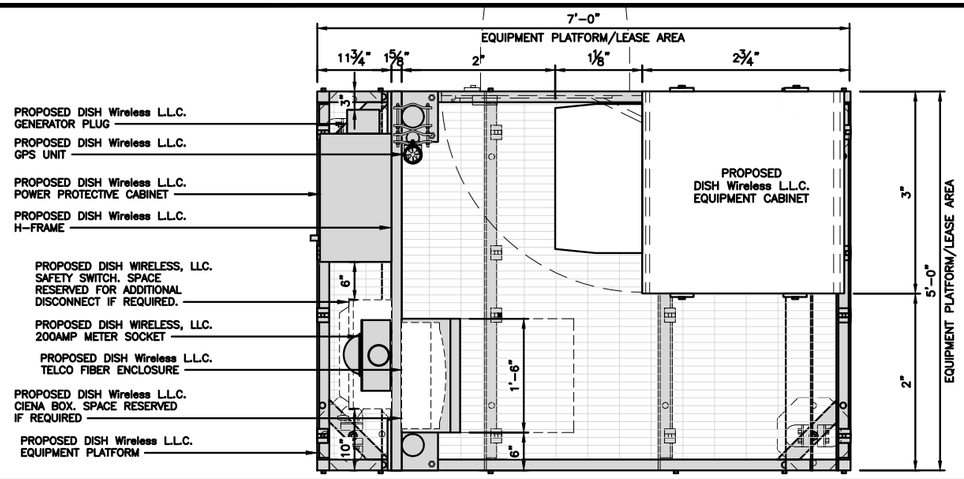
LICENSED
PROFESSIONAL ENGINEER

A&E PROJECT NUMBER
208205-13729958_D2

DISH Wireless L.L.C.
PROJECT INFORMATION
BOHVN00035A
80 GREAT HILL ROAD
SEYMOUR, CT 06483

SHEET TITLE
LAYOUT AND SCHEDULE ELEVATION, ANTENNA

SHEET NUMBER
A-2



PLATFORM EQUIPMENT PLAN

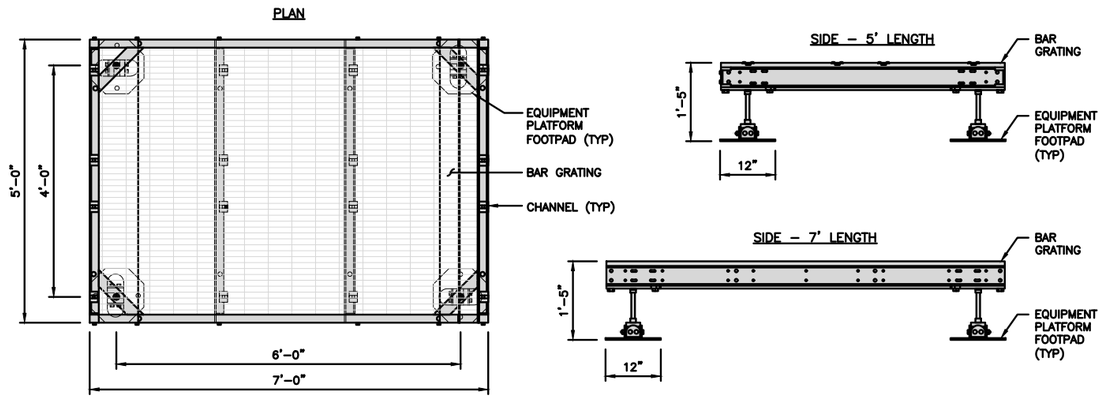
12" 9" 6" 3" 0 1' 2'
1"=1'-0"

1

COMMSCOPE MTC4045LP 5X7 PLATFORM	
DIMENSIONS (HxWxD)	16"x84"x60"
TOTAL WEIGHT	423 LBS

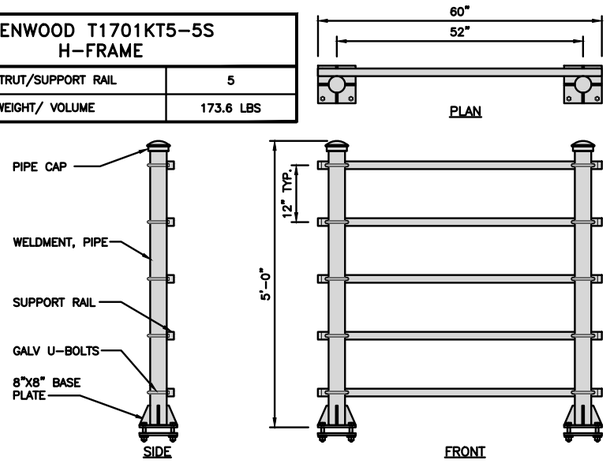
NOTE:
GC TO PROVIDE EXTENDED THREAD FOR PLATFORM IF REQUIRED HEIGHT EXCEEDS 17"

PLATFORM TO BE WITHIN 1" OF LEVEL



PLATFORM DETAIL | NO SCALE | 2

KENWOOD T1701KT5-5S H-FRAME	
UNISTRUT/SUPPORT RAIL	5
WEIGHT/ VOLUME	173.6 LBS

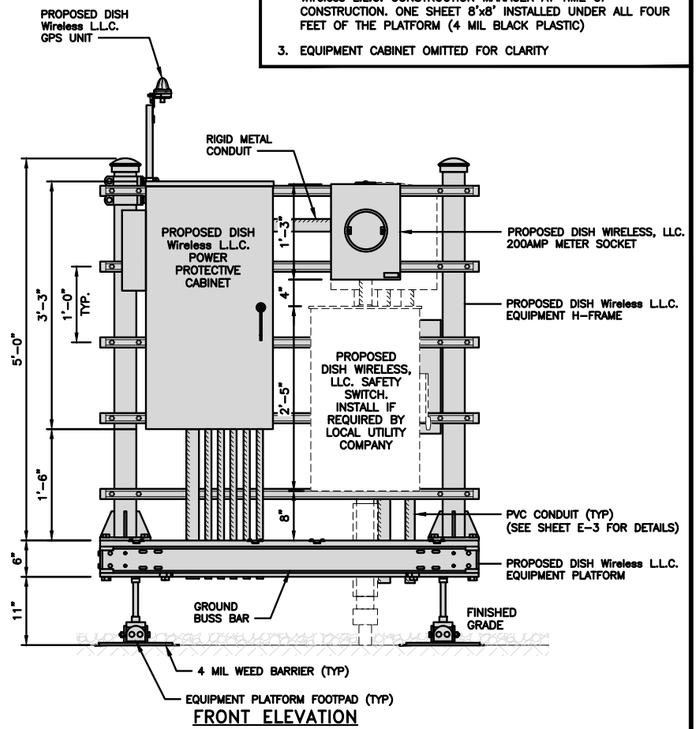


H-FRAME DETAIL | NO SCALE | 3

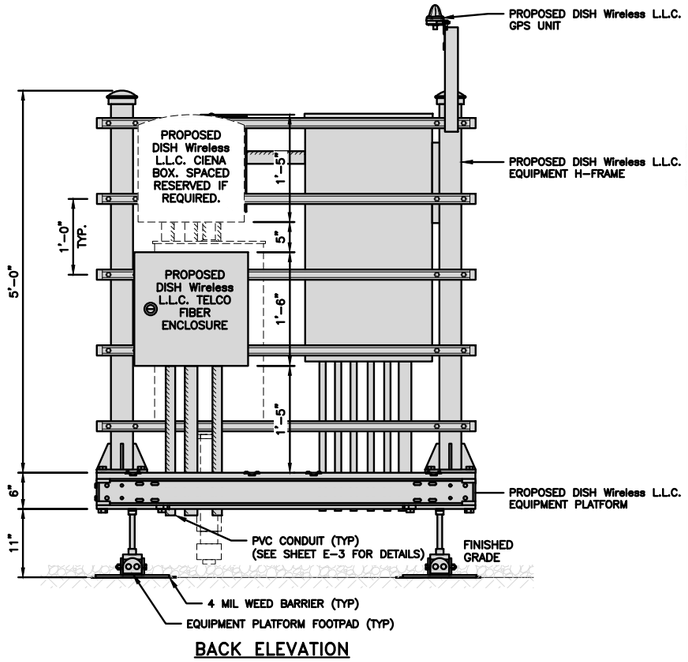
NOT USED | NO SCALE | 4

NOTES

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



FRONT ELEVATION



BACK ELEVATION

H-FRAME EQUIPMENT ELEVATION | 12" 9" 6" 3" 0 1' 2' 1"=1'-0" | 5

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

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A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112

DRAWN BY:	CHECKED BY:	APPROVED BY:
CS	SRF	SRF

RFDS REV #: ----

CONSTRUCTION DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
0	02/02/2022	ISSUED FOR CONSTRUCTION
1	03/24/2022	POWER RUN

STATE OF CONNECTICUT
SCOTT A. WIRGAU
30575
LICENSED PROFESSIONAL ENGINEER

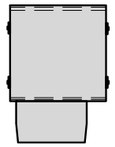
A&E PROJECT NUMBER
208205-13729958_D2

DISH Wireless L.L.C.
PROJECT INFORMATION
BOHVN00035A
80 GREAT HILL ROAD
SEYMOUR, CT 06483

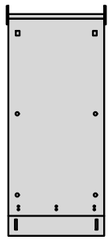
SHEET TITLE
H-FRAME DETAILS
EQUIPMENT PLATFORM AND

SHEET NUMBER
A-3

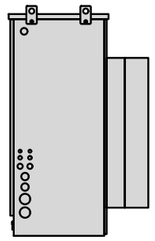
CHARLES INDUSTRY HEX CUBE–PM639155N4	
DIMENSIONS (HxWxD)	74"x32"x32"
POWER PLANT	–48VDC ABB/600W
TOTAL WEIGHT (EMPTY)	408 lbs



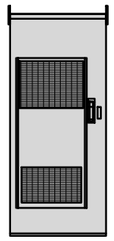
PLAN



BACK



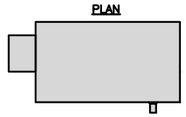
SIDE



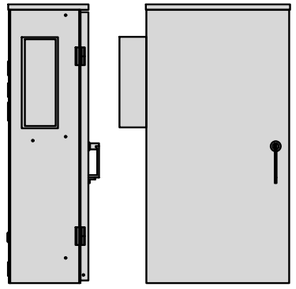
FRONT

CABINET DETAIL | NO SCALE | 1

RAYCAP RDIAC–6512–P–240–MTS POWER & TELCO PROTECTION CABINET	
DIMENSIONS (HxWxD)	40"x20"x10"
WEIGHT/ VOLUME	124 LBS
MANUAL TRANSFER SWITCH	200A
LOAD CENTER	30 POSITION
MAIN BREAKER	200A, 65kA AIC
GENERATOR RECEPTACLE	CAMLOCK
NEMA RATING	3R POWDER COATED ALUMINUM
SURGE PROTECTION DEVICE	UL 1449 4TH EDITION LISTED



PLAN

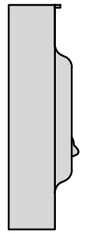


SIDE FRONT

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

SQUARE D SAFETY SWITCH D324NRB	
ENCLOSURE DIM (HxWxD)	29.25"x17.25"x8.25"
TOTAL WEIGHT (EMPTY)	45.33 LBS
MAX VOLTAGE/AMPS/WATT	240V/200A/48000W
ENCLOSURE RATING	OUTDOOR NEMA 3R

PLAN



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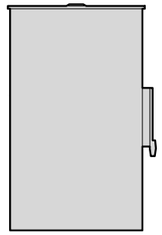

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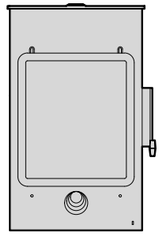
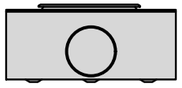


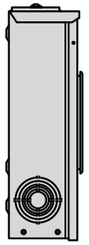
FRONT

SAFETY SWITCH | NO SCALE | 3

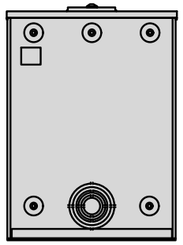
EATON METER SOCKET UNRRS213BEUSE	
METER SOCKET TYPE	RING
ENCLOSURE DIM (HxWxD)	16"x12"x6"
MAIN AMPERE RATING	200A
WEIGHT	18 LBS



PLAN



SIDE



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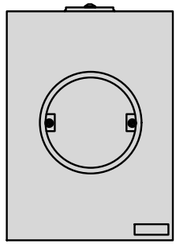
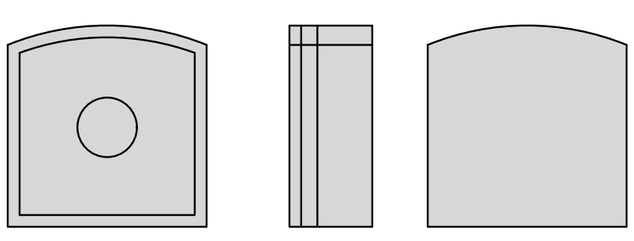


FRONT

METER SOCKET DETAIL | NO SCALE | 4

CIENA 3931 SERVICE DELIVERY SWITCH	
DIMENSIONS (HxWxD)	17.0"x16.8"x7.0" 431x427x178mm
WEIGHT	28.6 LBS/13.0 KG
POWER INPUT	60W MAX

PLAN

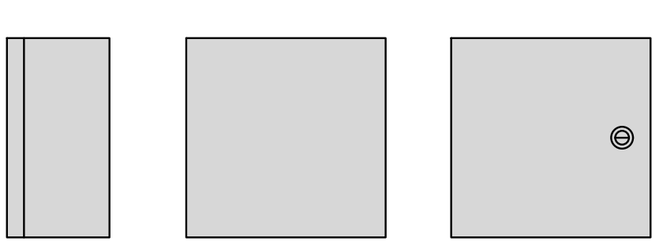


FRONT SIDE BACK

CIENA DETAIL | NO SCALE | 5

CHARLES FIBER TELCO ENCLOSURE CUBE–MP1818WB–A	
ENCLOSURE DIM (HxWxD)	18.0"x18.0"x9.25"
NEMA RATING	4X
THERMAL	SEALED
MOUNTING BACKBOARD	WOOD

PLAN

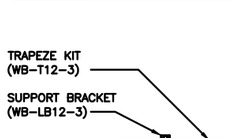


SIDE BACK FRONT

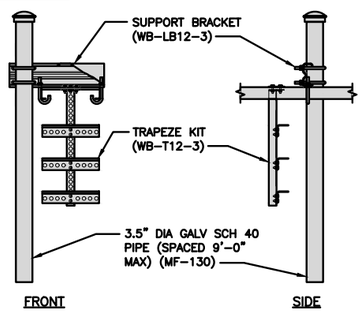
FIBER TELCO ENCLOSURE DETAIL | NO SCALE | 6

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

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

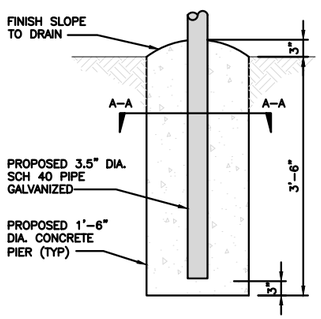


PLAN

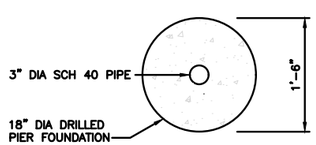


FRONT SIDE

ICE BRIDGE DETAIL | NO SCALE | 7

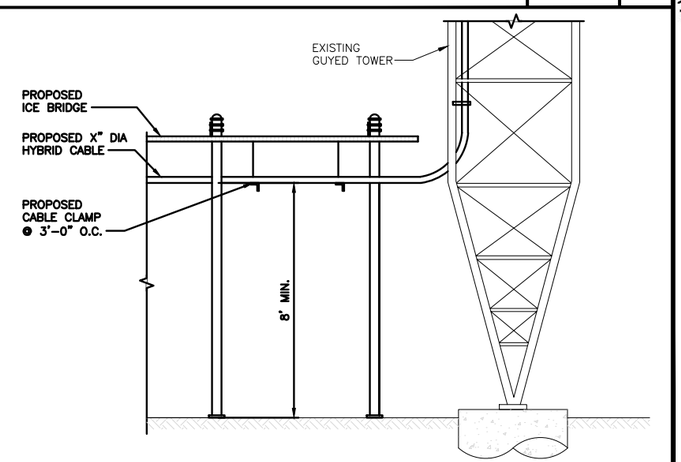


CONCRETE PIER



A–A SECTION

TYPICAL ICE BRIDGE CONCRETE PIER DETAIL | NO SCALE | 8



HYBRID CABLE RUN | NO SCALE | 9

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CARY, NC 27518
PHONE: (919) 468-0112

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RFDS REV #: ----

CONSTRUCTION DOCUMENTS

SUBMITTALS

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1	03/24/2022	POWER RUN

STATE OF CONNECTICUT
SCOTT A. WIRGAU
30575
LICENSED PROFESSIONAL ENGINEER

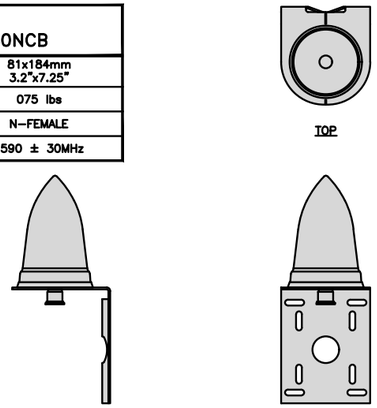
A&E PROJECT NUMBER
208205–13729958_D2

DISH Wireless L.L.C.
PROJECT INFORMATION
BOHVN00035A
80 GREAT HILL ROAD
SEYMOUR, CT 06483

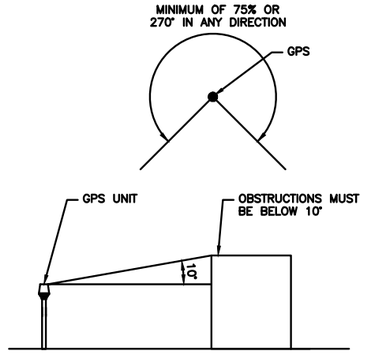
SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER
A-4

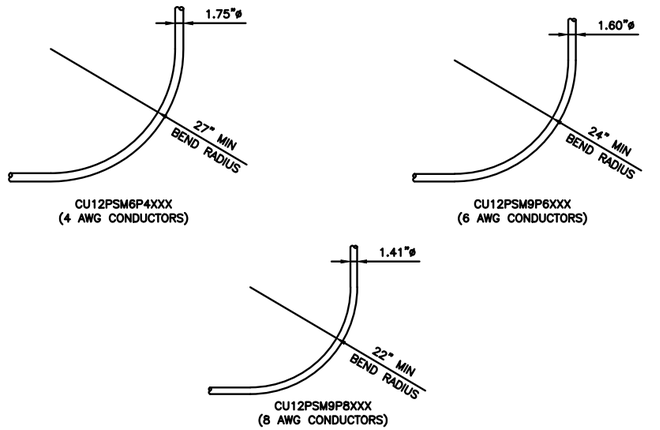
PCTEL GPSGL-TMG-SPI-40NCB	
DIMENSIONS (DIAxH) MM/INCH	81x184mm 3.2"x7.25"
WEIGHT W/ACCESSORIES	075 lbs
CONNECTOR	N-FEMALE
FREQUENCY RANGE	1590 ± 30MHz



GPS DETAIL | NO SCALE | 1

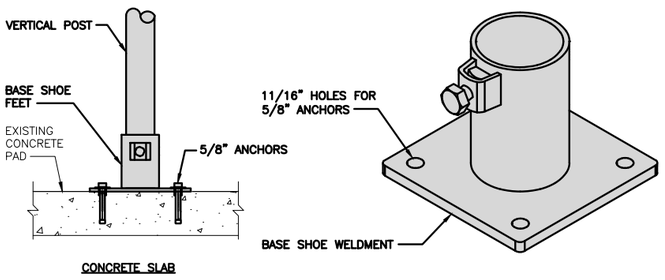


GPS MINIMUM SKY VIEW REQUIREMENTS | NO SCALE | 2



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

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



ICE BRIDGE PIPE MOUNT DETAIL | NO SCALE | 4

NOT USED | NO SCALE | 5

NOT USED | NO SCALE | 6

NOT USED | NO SCALE | 7

NOT USED | NO SCALE | 8

NOT USED | NO SCALE | 9

dish wireless.
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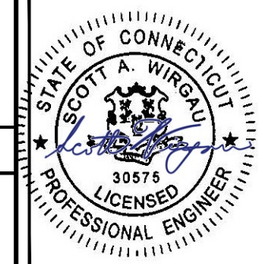


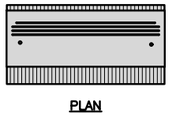
A&E PROJECT NUMBER
208205-13729958_D2

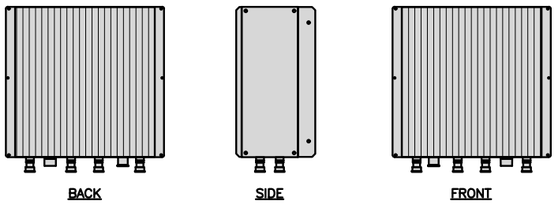
DISH Wireless L.L.C.
PROJECT INFORMATION
BOHVN00035A
80 GREAT HILL ROAD
SEYMOUR, CT 06483

SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER
A-5

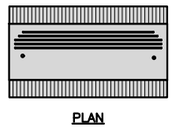
FUJITSU DUAL BAND TA08025-B604	
DIMENSIONS (HxWxD)	14.9"x15.7"x7.8"
WEIGHT	63.9 lbs
CONNECTOR TYPE	4.3-10 RF CONNECTOR
POWER SUPPLY	DC -58~-36V

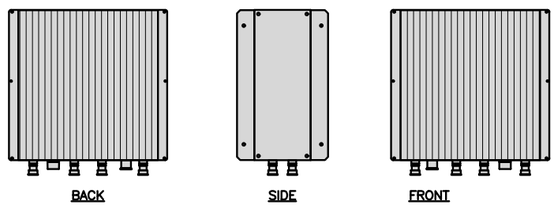

PLAN


BACK SIDE FRONT

RRH DETAIL | NO SCALE | 1

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

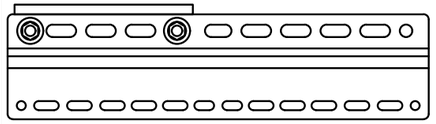

PLAN

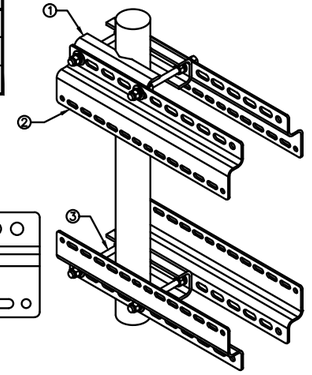

BACK SIDE FRONT

RRH DETAIL | NO SCALE | 2

SABRE DOUBLE Z-BRACKET G10123155	
DIMENSIONS (HxWxD) (1 BRACKET)	5"x20"x1-13/16"
WEIGHT (FULL ASSEMBLY)	35.79 lbs
PACKAGE QUANTITY	4

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



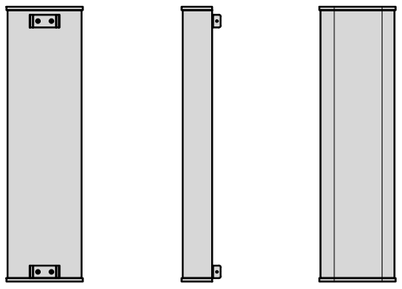


NOTE:
OR DISH Wireless L.L.C.
APPROVED EQUIVALENT

RRH MOUNT DETAIL | NO SCALE | 3

JMA WIRELESS MX08FRO665-21 ANTENNA	
DIMENSIONS (HxWxD)	72.0"x20.0"x8.0"
TOTAL WEIGHT	64.5 LB
RF PORTS, CONNECTOR TYPE	8 x 4.3-10 FEMALE


PLAN


BACK SIDE FRONT

ANTENNA DETAIL | NO SCALE | 4

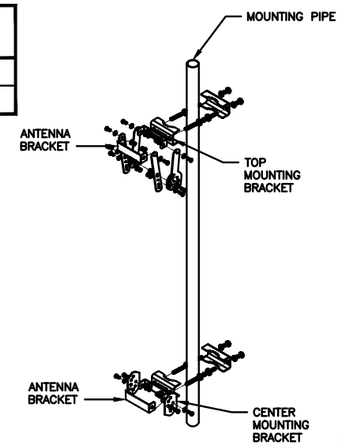
NOT USED | NO SCALE | 5

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

NOTE:
KIT #91900318: TOP AND BOTTOM BRACKETS FOR 4-,6-, AND 8-FOOT ANTENNAS

ANTENNA BRACKET NOT PART OF KIT

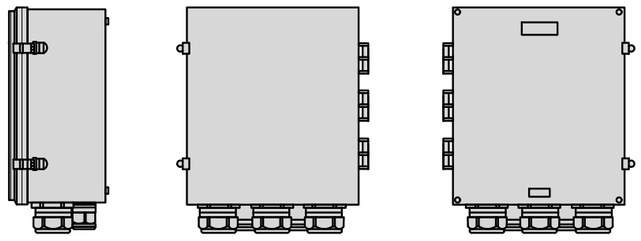
NOTE:
OR DISH Wireless L.L.C.
APPROVED EQUIVALENT



ANTENNA BRACKET DETAIL | NO SCALE | 6

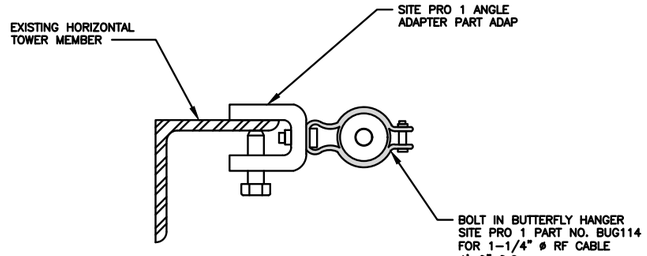
RAYCAP RDIDC-9181-PF-48 DC SURGE PROTECTION (OVP)	
DIMENSIONS (HxWxD)	18.98"x14.39"x8.15"
WEIGHT	21.82 LBS


PLAN


SIDE BACK FRONT

SURGE SUPPRESSION DETAIL (OVP) | NO SCALE | 7

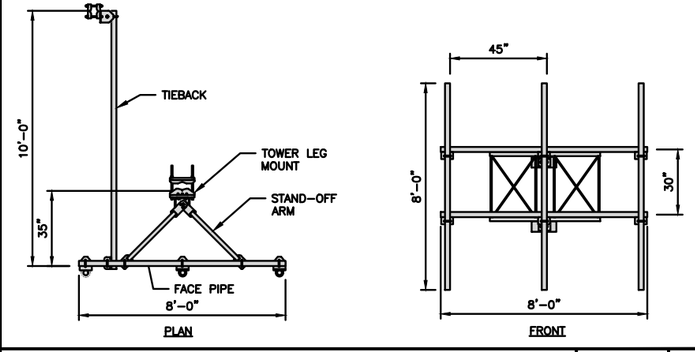
NOTE:
PROVIDED & INSTALLED BY CONTRACTOR



HYBRID CABLE TOWER BRACE RUN | NO SCALE | 8

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

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



ANTENNA FRAME DETAIL | NO SCALE | 9

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LITTLETON, CO 80120

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112

DRAWN BY:	CHECKED BY:	APPROVED BY:
CS	SRF	SRF

RFDS REV #: ----

CONSTRUCTION DOCUMENTS

SUBMITTALS		
REV	DATE	DESCRIPTION
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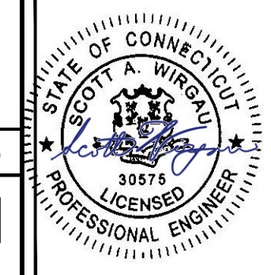
1	03/24/2022	POWER RUN



A&E PROJECT NUMBER
208205-13729958_D2

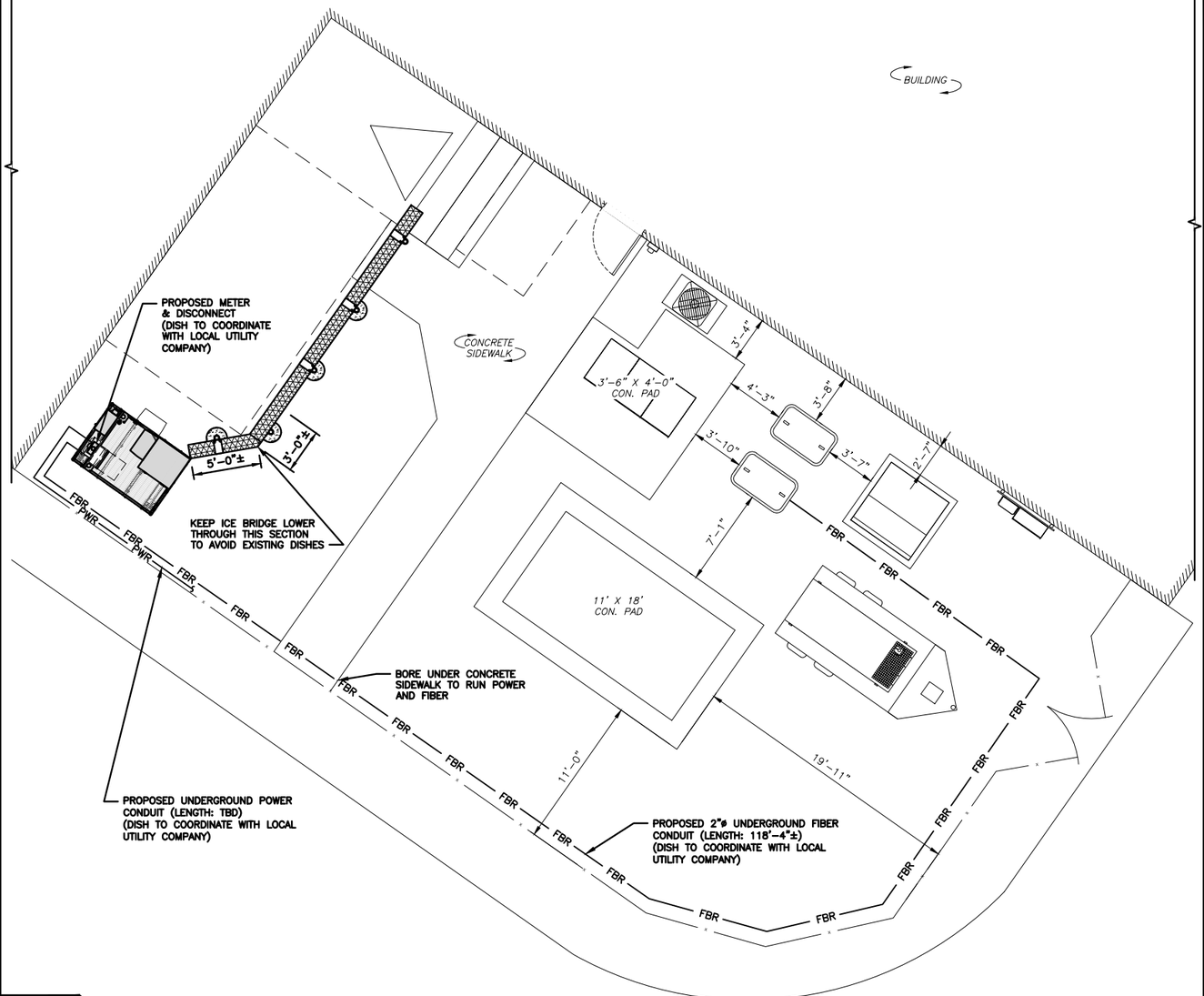
DISH Wireless L.L.C.
PROJECT INFORMATION
BOHVN00035A
80 GREAT HILL ROAD
SEYMOUR, CT 06483

SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER
A-6

NOTES

1. A BOUNDARY SURVEY OF THE EXISTING EASEMENT WAS NOT AVAILABLE AT CONSTRUCTION DRAWING CREATION. CONSTRUCTION CONTRACTOR MUST FIELD VERIFY THAT THE PROPOSED UTILITY ROUTES ARE WITHIN AMERICAN TOWER'S EASEMENT.
2. ANTENNAS AND MOUNTS OMITTED FOR CLARITY.
3. GC TO REFER TO FINAL UTILITY COORDINATION DOCUMENT FOR ALL MEET ME POINTS AND ROUTING DETAILS.



N

UTILITY ROUTE PLAN

5' 0 5' 10'
1"=5'

1

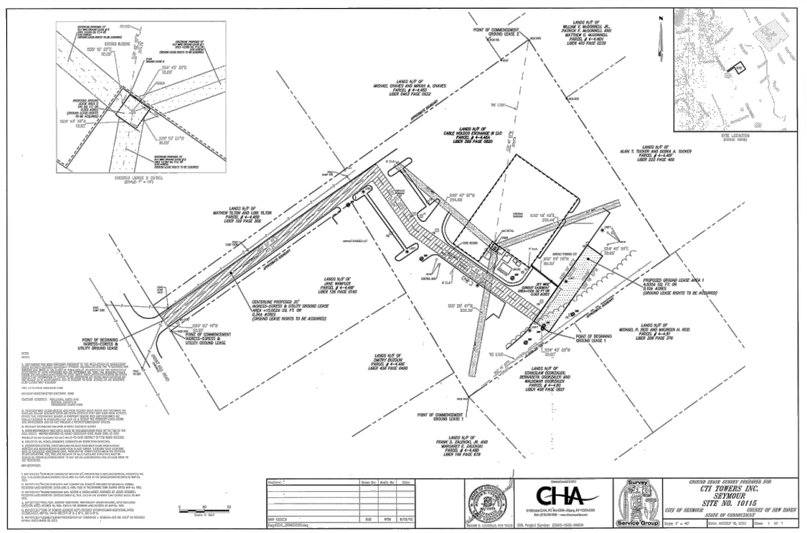
DC POWER WIRING SHALL BE COLOR CODED AT EACH END FOR IDENTIFYING +24V AND −48V CONDUCTORS. RED MARKINGS SHALL IDENTIFY +24V AND BLUE MARKINGS SHALL IDENTIFY −48V.

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

ELECTRICAL NOTES

NO SCALE

2



EXISTING SURVEY (BY OTHERS)

NO SCALE

3

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PHONE: (919) 468-0112

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CONSTRUCTION DOCUMENTS

SUBMITTALS

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STATE OF CONNECTICUT
SCOTT A. WIRGAU
30575
LICENSED PROFESSIONAL ENGINEER

A&E PROJECT NUMBER
208205-13729958_D2

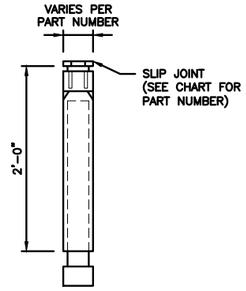
DISH Wireless L.L.C.
PROJECT INFORMATION
BOHVN00035A
80 GREAT HILL ROAD
SEYMOUR, CT 06483

SHEET TITLE
PLAN AND NOTES
ELECTRICAL/FIBER ROUTE

SHEET NUMBER
E-1

CARLON EXPANSION FITTINGS

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

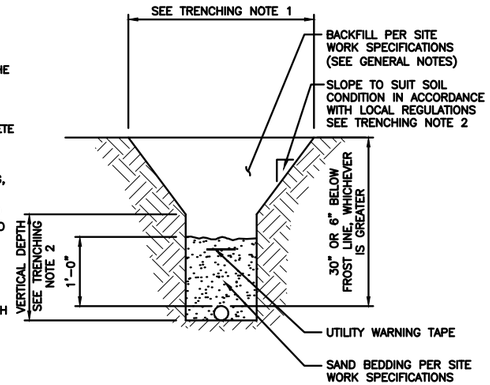


NOTE:
CONTRACTOR TO INSTALL EXPANSION FITTING SLIP JOINT AT METER CENTER CONDUIT TERMINATION, AS PER LOCAL UTILITY POLICY, ORDINANCE AND/OR SPECIFIED REQUIREMENT.

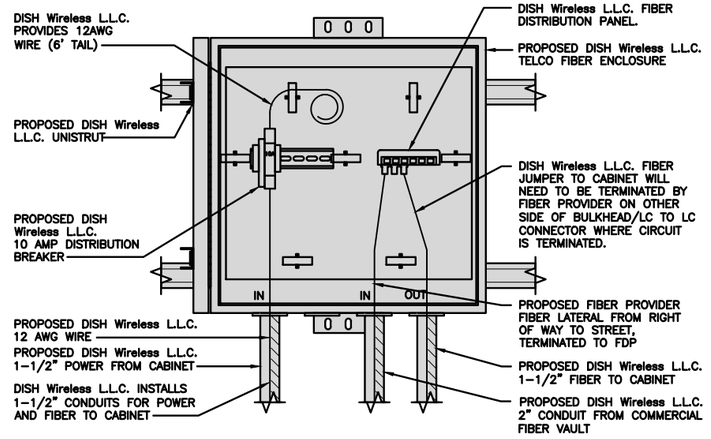
EXPANSION JOINT DETAIL | NO SCALE | 1

TRENCHING NOTES

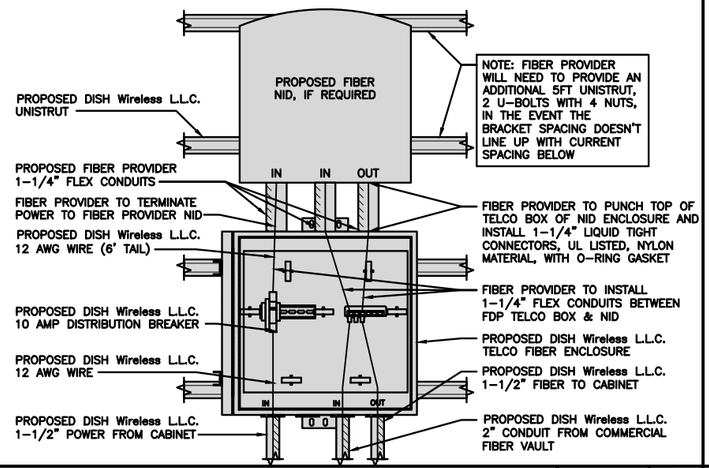
1. CONTRACTOR SHALL RESTORE THE TRENCH TO ITS ORIGINAL CONDITIONS BY EITHER SEEDING OR SODDING GRASS AREAS, OR REPLACING ASPHALT OR CONCRETE AREAS TO ITS ORIGINAL CROSS SECTION.
2. TRENCHING SAFETY; INCLUDING, BUT NOT LIMITED TO SOIL CLASSIFICATION, SLOPING, AND SHORING, SHALL BE GOVERNED BY THE CURRENT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



TYPICAL UNDERGROUND TRENCH DETAIL | NO SCALE | 2



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



LIT TELCO BOX – INTERIOR WIRING LAYOUT (OPTIONAL) | NO SCALE | 4

NOT USED | NO SCALE | 5

NOT USED | NO SCALE | 6

NOT USED | NO SCALE | 7

NOT USED | NO SCALE | 8

NOT USED | NO SCALE | 9

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CS	SRF	SRF

RFDS REV #: ----

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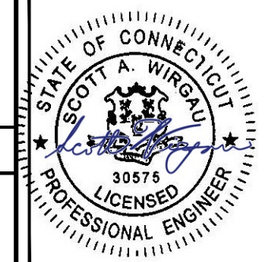
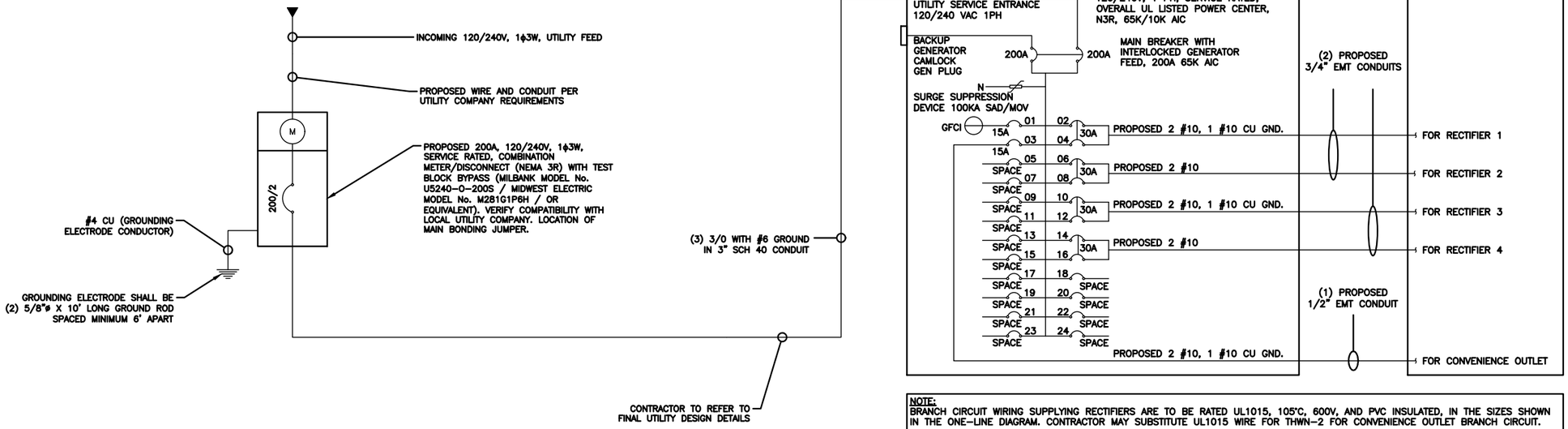


A&E PROJECT NUMBER
208205-13729958_D2

DISH Wireless L.L.C.
PROJECT INFORMATION
BOHVN00035A
80 GREAT HILL ROAD
SEYMOUR, CT 06483

SHEET TITLE
DETAILS
ELECTRICAL

SHEET NUMBER
E-2



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

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

PPC ONE-LINE DIAGRAM

NO SCALE | 1

PROPOSED CHARLES PANEL SCHEDULE

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

PANEL SCHEDULE

NO SCALE | 2

NOT USED

NO SCALE | 3

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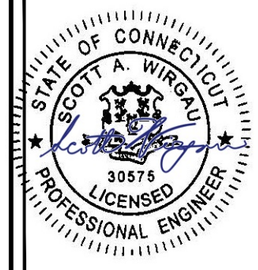
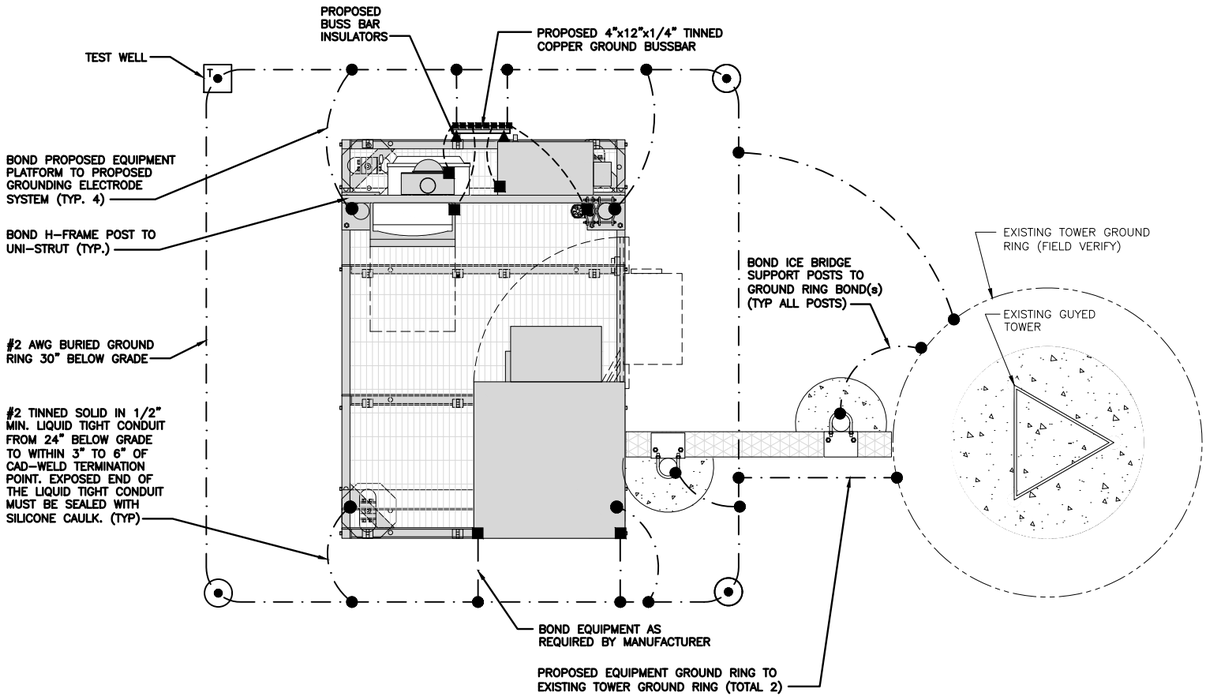


A&E PROJECT NUMBER
208205-13729958_D2

DISH Wireless L.L.C.
PROJECT INFORMATION
BOHVN00035A
80 GREAT HILL ROAD
SEYMOUR, CT 06483

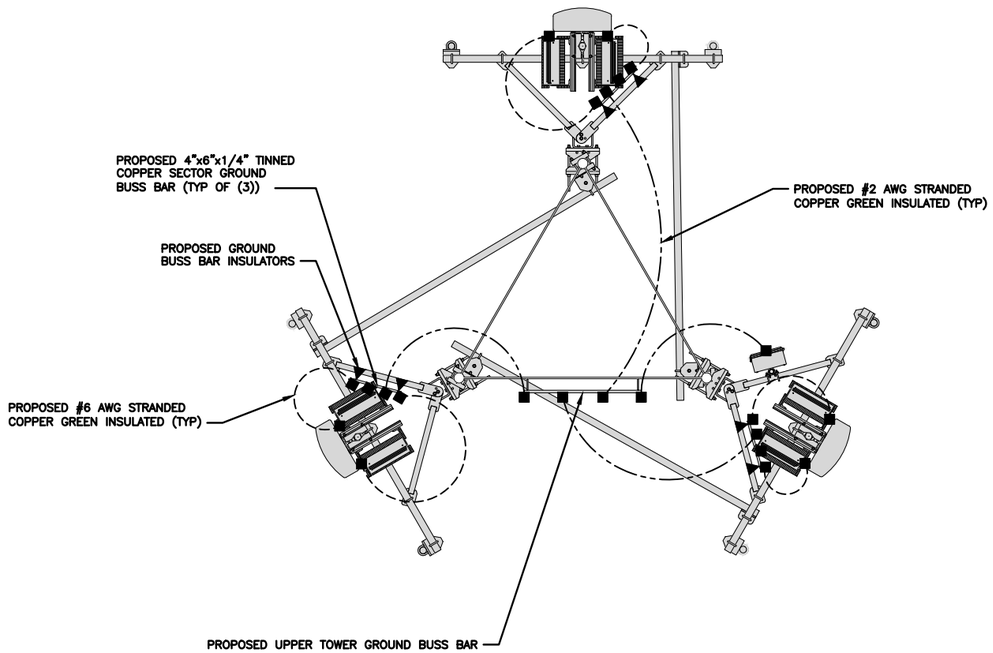
SHEET TITLE
CALCS & PANEL SCHEDULE
ELECTRICAL ONE-LINE, FAULT

SHEET NUMBER
E-3



TYPICAL EQUIPMENT GROUNDING PLAN

NO SCALE | 1



TYPICAL ANTENNA GROUNDING PLAN

NO SCALE | 2

NOTES

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

- 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.

(B) **TOWER GROUND RING:** THE GROUND RING SYSTEM SHALL BE INSTALLED AROUND AN ANTENNA TOWER'S LEGS, AND/OR GUY ANCHORS. WHERE SEPARATE SYSTEMS HAVE BEEN PROVIDED FOR THE TOWER AND THE BUILDING, AT LEAST TWO BONDS SHALL BE MADE BETWEEN THE TOWER RING GROUND SYSTEM AND THE BUILDING RING GROUND SYSTEM USING MINIMUM #2 AWG SOLID COPPER CONDUCTORS.

(C) **INTERIOR GROUND RING:** #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTOR EXTENDED AROUND THE PERIMETER OF THE EQUIPMENT AREA. ALL NON-TELECOMMUNICATIONS RELATED METALLIC OBJECTS FOUND WITHIN A SITE SHALL BE GROUNDED TO THE INTERIOR GROUND RING WITH #6 AWG STRANDED GREEN INSULATED CONDUCTOR.

(D) **BOND TO INTERIOR GROUND RING:** #2 AWG SOLID TINNED COPPER WIRE PRIMARY BONDS SHALL BE PROVIDED AT LEAST AT FOUR POINTS ON THE INTERIOR GROUND RING, LOCATED AT THE CORNERS OF THE BUILDING.

(E) **GROUND ROD:** UL LISTED COPPER CLAD STEEL. MINIMUM 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.

(F) **CELL REFERENCE GROUND BAR:** POINT OF GROUND REFERENCE FOR ALL COMMUNICATIONS EQUIPMENT FRAMES. ALL BONDS ARE MADE WITH #2 AWG UNLESS NOTED OTHERWISE STRANDED GREEN INSULATED COPPER CONDUCTORS. BOND TO GROUND RING WITH (2) #2 SOLID TINNED COPPER CONDUCTORS.

(G) **HATCH PLATE GROUND BAR:** BOND TO THE INTERIOR GROUND RING WITH TWO #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTORS. WHEN A HATCH-PLATE AND A CELL REFERENCE GROUND BAR ARE BOTH PRESENT, THE CRGB MUST BE CONNECTED TO THE HATCH-PLATE AND TO THE INTERIOR GROUND RING USING (2) TWO #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTORS EACH.

(H) **EXTERIOR CABLE ENTRY PORT GROUND BARS:** LOCATED AT THE ENTRANCE TO THE CELL SITE BUILDING. BOND TO GROUND RING WITH A #2 AWG SOLID TINNED COPPER CONDUCTORS WITH AN EXOTHERMIC WELD AND INSPECTION SLEEVE.

(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) **INTERIOR UNIT BONDS:** METAL FRAMES, CABINETS AND INDIVIDUAL METALLIC UNITS LOCATED WITH THE AREA OF THE INTERIOR GROUND RING REQUIRE A #6 AWG STRANDED GREEN INSULATED COPPER BOND TO THE INTERIOR GROUND RING.

(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 GROUND RING.

(Q) 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.

GROUNDING KEY NOTES

NO SCALE | 3

dish wireless.
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LITTLETON, CO 80120

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STATE OF CONNECTICUT
SCOTT A. WIRGAU
30575
LICENSED PROFESSIONAL ENGINEER

A&E PROJECT NUMBER
208205-13729958_D2

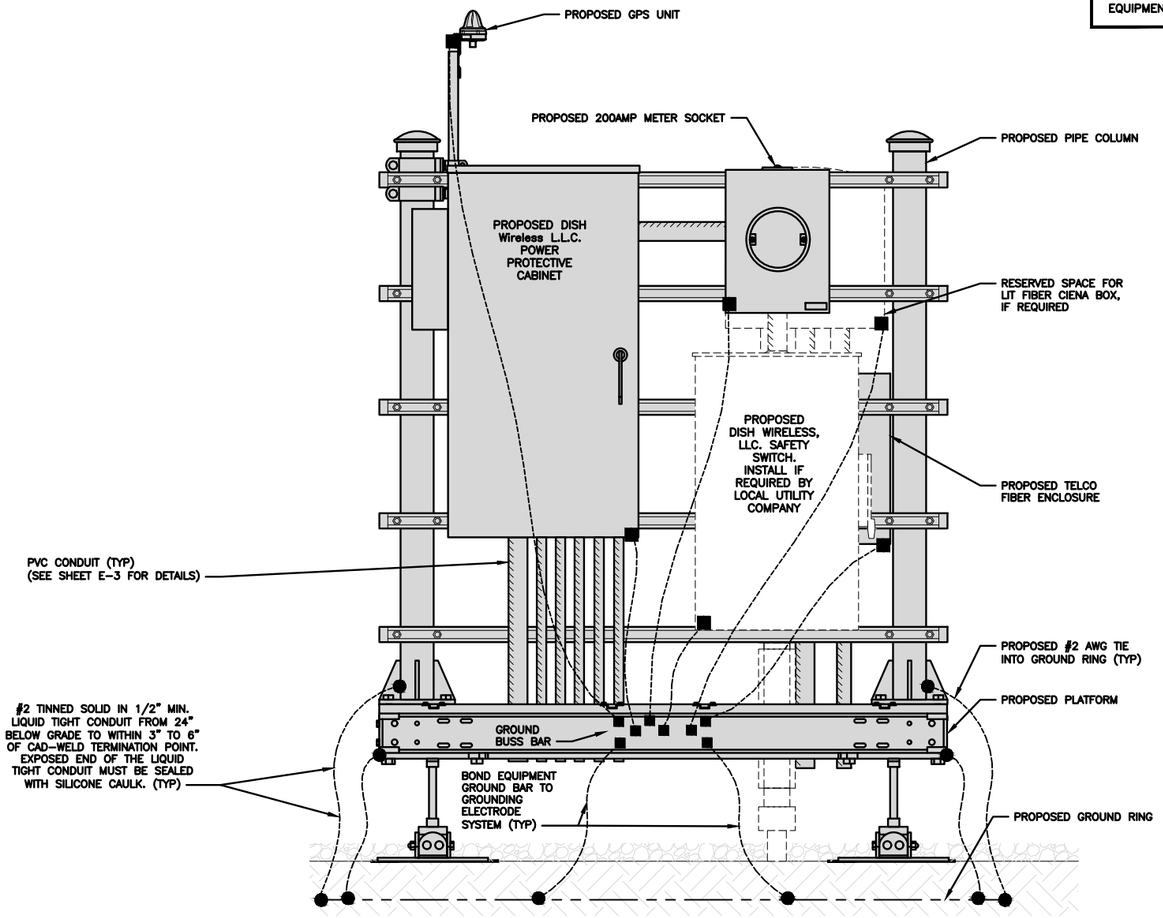
DISH Wireless L.L.C.
PROJECT INFORMATION
BOHVN00035A
80 GREAT HILL ROAD
SEYMOUR, CT 06483

SHEET TITLE
AND NOTES
GROUNDING PLANS

SHEET NUMBER
G-1

NOTES

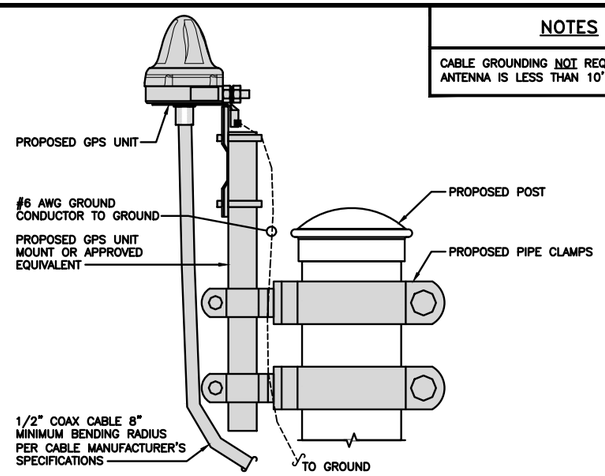
EQUIPMENT CABINET OMITTED FOR CLARITY



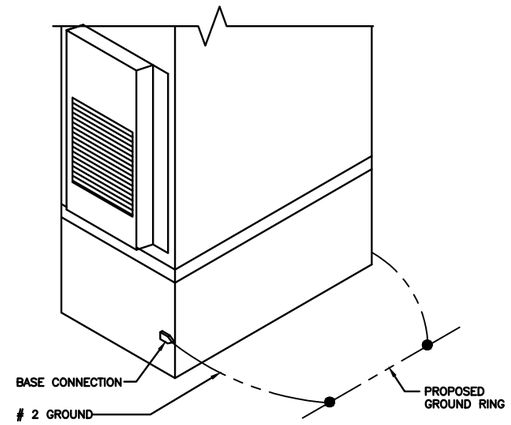
H-FRAME GROUNDING DETAIL | NO SCALE | 1

NOTES

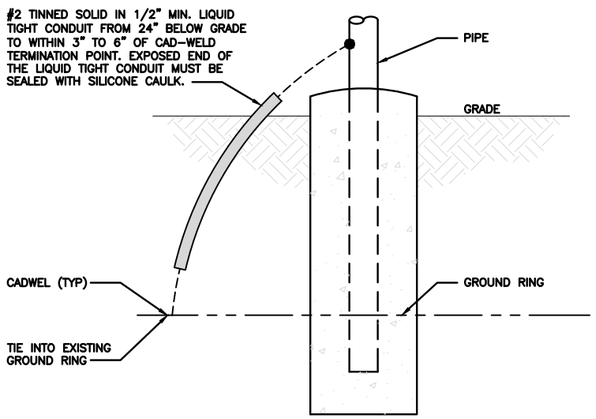
CABLE GROUNDING NOT REQUIRED WHEN ANTENNA IS LESS THAN 10' FROM CABINET



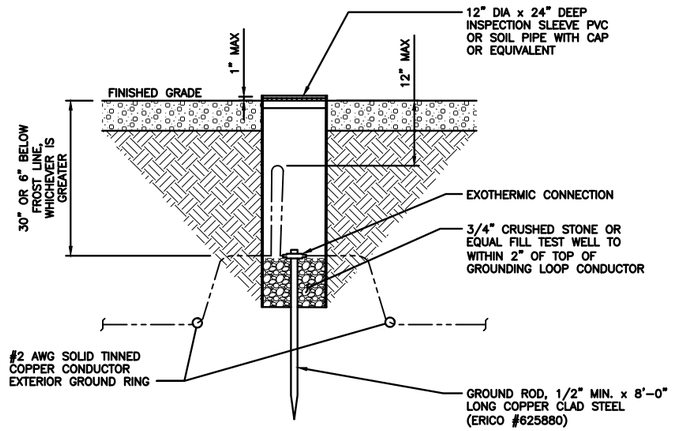
TYPICAL GPS UNIT GROUNDING | NO SCALE | 2



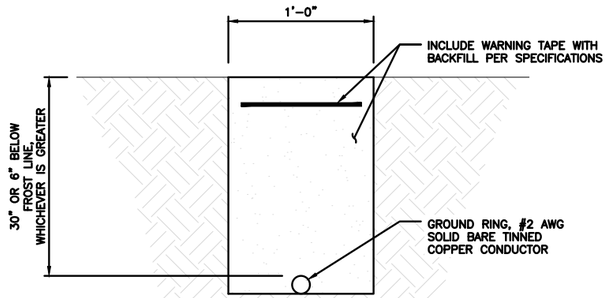
OUTDOOR CABINET GROUNDING | NO SCALE | 3



TRANSITIONING GROUND DETAIL | NO SCALE | 4



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



TYPICAL GROUND RING TRENCH | NO SCALE | 6

dish wireless.

5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112

DRAWN BY:	CHECKED BY:	APPROVED BY:
CS	SRF	SRF

RFDS REV #: ----

CONSTRUCTION DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
0	02/02/2022	ISSUED FOR CONSTRUCTION
1	03/24/2022	POWER RUN

STATE OF CONNECTICUT
SCOTT A. WIRGAU
30575
LICENSED PROFESSIONAL ENGINEER

A&E PROJECT NUMBER
208205-13729958_D2

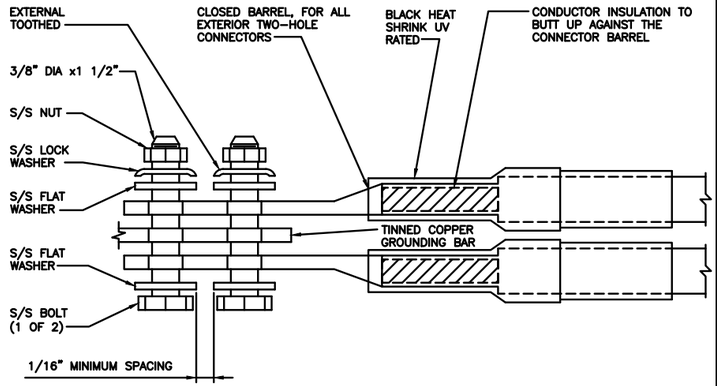
DISH Wireless L.L.C.
PROJECT INFORMATION
BOHVN00035A
80 GREAT HILL ROAD
SEYMOUR, CT 06483

SHEET TITLE
GROUNDING DETAILS

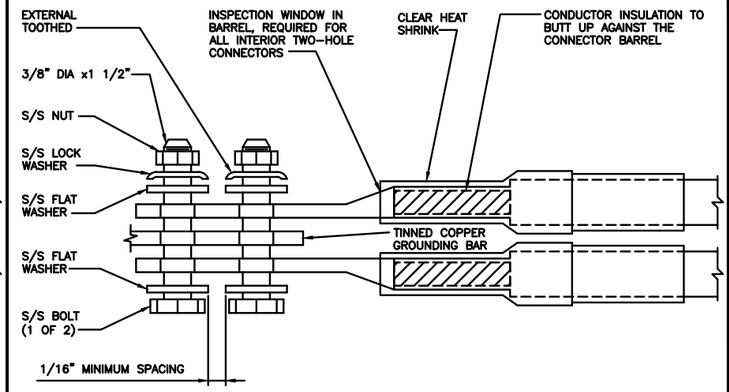
SHEET NUMBER
G-2

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

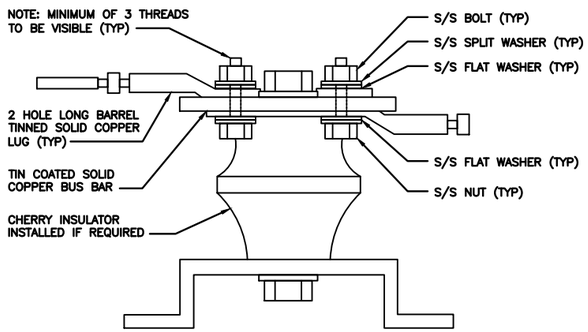
TYPICAL GROUNDING NOTES | NO SCALE | 1



TYPICAL EXTERIOR TWO HOLE LUG | NO SCALE | 2



TYPICAL INTERIOR TWO HOLE LUG | NO SCALE | 3



LUG DETAIL | NO SCALE | 4

NOT USED | NO SCALE | 5

NOT USED | NO SCALE | 6

NOT USED | NO SCALE | 7

NOT USED | NO SCALE | 8

NOT USED | NO SCALE | 9

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80 GREAT HILL ROAD
SEYMOUR, CT 06483

SHEET TITLE
GROUNDING DETAILS

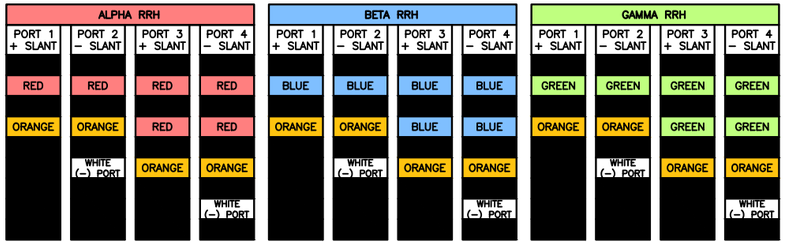
SHEET NUMBER
G-3

RF JUMPER COLOR CODING

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

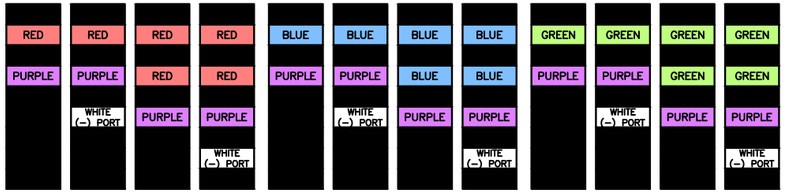
LOW-BAND RRH –
(600MHz N71 BASEBAND) +
(850MHz N26 BAND) +
(700MHz N29 BAND) – OPTIONAL PER MARKET

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



MID-BAND RRH –
(AWS BANDS N66+N70)

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

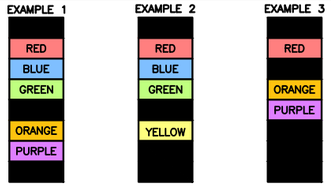


HYBRID/DISCREET CABLES

INCLUDE SECTOR BANDS BEING SUPPORTED
ALONG WITH FREQUENCY BANDS

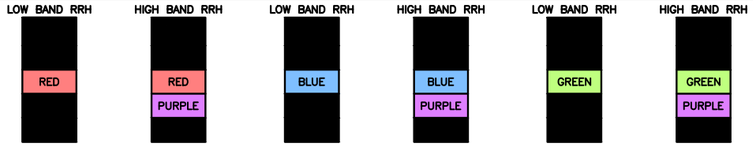
EXAMPLE 1 – HYBRID, OR DISCREET, SUPPORTS
ALL SECTORS, BOTH LOW-BANDS AND MID-BANDS

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



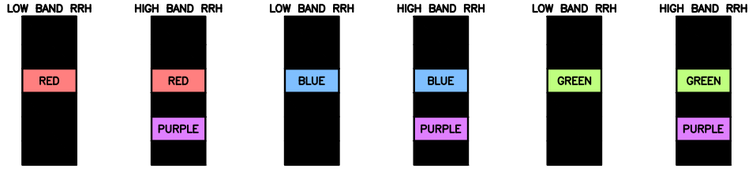
FIBER JUMPERS TO RRHs

LOW-BAND RRH FIBER CABLES HAVE SECTOR
STRIPE ONLY

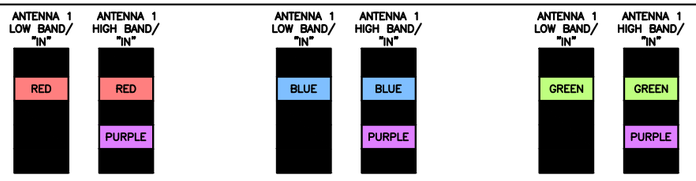


POWER CABLES TO RRHs

LOW-BAND RRH POWER CABLES HAVE SECTOR
STRIPE ONLY



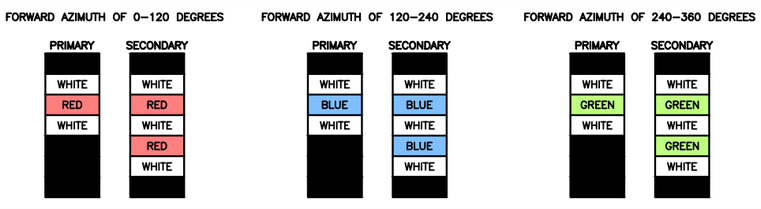
RET MOTORS AT ANTENNAS



MICROWAVE RADIO LINKS

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

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



RF CABLE COLOR CODES | NO SCALE | 1

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

AWS
(N66+N70+H-BLOCK)
PURPLE

CBRS TECH
(3 GHz)
YELLOW

NEGATIVE SLANT PORT
ON ANT/RRH
WHITE

ALPHA SECTOR
RED

BETA SECTOR
BLUE

GAMMA SECTOR
GREEN

COLOR IDENTIFIER | NO SCALE | 2

NOT USED | NO SCALE | 3

NOT USED | NO SCALE | 4

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30575
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A&E PROJECT NUMBER
208205-13729958_D2

DISH Wireless L.L.C.
PROJECT INFORMATION
BOHVN00035A
80 GREAT HILL ROAD
SEYMOUR, CT 06483

SHEET TITLE
CABLE COLOR CODES
RF

SHEET NUMBER
RF-1

LEGEND

EXOTHERMIC CONNECTION

MECHANICAL CONNECTION

BUSS BAR INSULATOR

CHEMICAL ELECTROLYTIC GROUNDING SYSTEM

TEST CHEMICAL ELECTROLYTIC GROUNDING SYSTEM — T

EXOTHERMIC WITH INSPECTION SLEEVE

GROUNDING BAR

GROUND ROD

TEST GROUND ROD WITH INSPECTION SLEEVE — T

SINGLE POLE SWITCH — $

DUPLEX RECEPTACLE

DUPLEX GFCI RECEPTACLE — GFCI

FLUORESCENT LIGHTING FIXTURE (2) TWO LAMPS 48–T8 — F

SMOKE DETECTION (DC) — SD

EMERGENCY LIGHTING (DC)

SECURITY LIGHT W/PHOTOCELL LITHONIA ALXW LED–1–25A400/51K–SR4–120–PE–DDBTXD

CHAIN LINK FENCE — x — x — x — x

WOOD/WROUGHT IRON FENCE

WALL STRUCTURE

LEASE AREA

PROPERTY LINE (PL)

SETBACKS

ICE BRIDGE

CABLE TRAY

WATER LINE — W — W — W — W — W

UNDERGROUND POWER — UGP — UGP — UGP — UGP — UGP

UNDERGROUND TELCO — UGT — UGT — UGT — UGT — UGT

OVERHEAD POWER — OHP — OHP — OHP — OHP

OVERHEAD TELCO — OHT — OHT — OHT — OHT

UNDERGROUND TELCO/POWER — UGT/P — UGT/P — UGT/P — UGT/P

ABOVE GROUND POWER — AGP — AGP — AGP — AGP — AGP

ABOVE GROUND TELCO — AGT — AGT — AGT — AGT — AGT

ABOVE GROUND TELCO/POWER — AGT/P — AGT/P — AGT/P — AGT/P

WORKPOINT — W.P.

SECTION REFERENCE — XX / X–X

DETAIL REFERENCE — XX / X–X

ABBREVIATIONS

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

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A&E PROJECT NUMBER
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DISH Wireless L.L.C.
PROJECT INFORMATION
BOHVN00035A
80 GREAT HILL ROAD
SEYMOUR, CT 06483

SHEET TITLE
ABBREVIATIONS
LEGEND AND

SHEET NUMBER
GN-1

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

SIGN PLACEMENT:

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

NOTES:

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

INFORMATION

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

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

Site ID: _____

THIS SIGN IS FOR REFERENCE PURPOSES ONLY

NOTICE

Transmitting Antenna(s)

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

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

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

Site ID: _____

dish

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Site ID: _____

dish

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RF SIGNAGE

dish wireless.
5701 SOUTH SANTA FE DRIVE
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SEYMOUR, CT 06483

SHEET TITLE
TITLE SHEET
TITLE SHEET

SHEET NUMBER
GN-2

SITE ACTIVITY REQUIREMENTS:

1. NOTICE TO PROCEED – NO WORK SHALL COMMENCE PRIOR TO CONTRACTOR RECEIVING A WRITTEN NOTICE TO PROCEED (NTP) AND THE ISSUANCE OF A PURCHASE ORDER. PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE DISH Wireless L.L.C. AND TOWER OWNER NOC & THE DISH Wireless L.L.C. AND TOWER OWNER CONSTRUCTION MANAGER.

2. "LOOK UP" – DISH Wireless L.L.C. AND TOWER OWNER SAFETY CLIMB REQUIREMENT:

THE INTEGRITY OF THE SAFETY CLIMB AND ALL COMPONENTS OF THE CLIMBING FACILITY SHALL BE CONSIDERED DURING ALL STAGES OF DESIGN, INSTALLATION, AND INSPECTION. TOWER MODIFICATION, MOUNT REINFORCEMENTS, AND/OR EQUIPMENT INSTALLATIONS SHALL NOT COMPROMISE THE INTEGRITY OR FUNCTIONAL USE OF THE SAFETY CLIMB OR ANY COMPONENTS OF THE CLIMBING FACILITY ON THE STRUCTURE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: PINCHING OF THE WIRE ROPE, BENDING OF THE WIRE ROPE FROM ITS SUPPORTS, DIRECT CONTACT OR CLOSE PROXIMITY TO THE WIRE ROPE WHICH MAY CAUSE FRICTIONAL WEAR, IMPACT TO THE ANCHORAGE POINTS IN ANY WAY, OR TO IMPEDE/BLOCK ITS INTENDED USE. ANY COMPROMISED SAFETY CLIMB, INCLUDING EXISTING CONDITIONS MUST BE TAGGED OUT AND REPORTED TO YOUR DISH Wireless L.L.C. AND DISH Wireless L.L.C. AND TOWER OWNER POC OR CALL THE NOC TO GENERATE A SAFETY CLIMB MAINTENANCE AND CONTRACTOR NOTICE TICKET.

3. PRIOR TO THE START OF CONSTRUCTION, ALL REQUIRED JURISDICTIONAL PERMITS SHALL BE OBTAINED. THIS INCLUDES, BUT IS NOT LIMITED TO, BUILDING, ELECTRICAL, MECHANICAL, FIRE, FLOOD ZONE, ENVIRONMENTAL, AND ZONING. AFTER ONSITE ACTIVITIES AND CONSTRUCTION ARE COMPLETED, ALL REQUIRED PERMITS SHALL BE SATISFIED AND CLOSED OUT ACCORDING TO LOCAL JURISDICTIONAL REQUIREMENTS.

4. ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN, AND SHALL MEET ANSI/ASSE A10.48 (LATEST EDITION); FEDERAL, STATE, AND LOCAL REGULATIONS; AND ANY APPLICABLE INDUSTRY CONSENSUS STANDARDS RELATED TO THE CONSTRUCTION ACTIVITIES BEING PERFORMED. ALL RIGGING PLANS SHALL ADHERE TO ANSI/ASSE A10.48 (LATEST EDITION) AND DISH Wireless L.L.C. AND TOWER OWNER STANDARDS, INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION, TO CERTIFY THE SUPPORTING STRUCTURE(S) IN ACCORDANCE WITH ANSI/TIA–322 (LATEST EDITION).

5. ALL SITE WORK TO COMPLY WITH DISH Wireless L.L.C. AND TOWER OWNER INSTALLATION STANDARDS FOR CONSTRUCTION ACTIVITIES ON DISH Wireless L.L.C. AND TOWER OWNER TOWER SITE AND LATEST VERSION OF ANSI/TIA–1019–A–2012 "STANDARD FOR INSTALLATION, ALTERATION, AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS."

6. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY DISH Wireless L.L.C. AND TOWER OWNER PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.

7. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.

8. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.

9. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES INCLUDING PRIVATE LOCATES SERVICES PRIOR TO THE START OF CONSTRUCTION.

10. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION E) CONSTRUCTION SAFETY PROCEDURES.

11. ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND DISH PROJECT SPECIFICATIONS, LATEST APPROVED REVISION.

12. CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH AT THE COMPLETION OF THE WORK. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.

13. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF DISH Wireless L.L.C. AND TOWER OWNER, AND/OR LOCAL UTILITIES.

14. THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE REQUIRED BY LOCAL JURISDICTION AND SIGNAGE REQUIRED ON INDIVIDUAL PIECES OF EQUIPMENT, ROOMS, AND SHELTERS.

15. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE CARRIER'S EQUIPMENT AND TOWER AREAS.

16. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.

17. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION AS SPECIFIED ON THE CONSTRUCTION DRAWINGS AND/OR PROJECT SPECIFICATIONS.

18. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.

19. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.

20. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS AND RADIOS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.

21. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.

22. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

GENERAL NOTES:

1.FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:

CONTRACTOR:GENERAL CONTRACTOR RESPONSIBLE FOR CONSTRUCTION

CARRIER:DISH Wireless L.L.C.

TOWER OWNER:TOWER OWNER

2. THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE ENGINEERS IN THIS OR SIMILAR LOCALITIES. IT IS ASSUMED THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND/OR WORKPEOPLE WHO HAVE A WORKING KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR MISCELLANEOUS WORK NOT EXPLICITLY SHOWN.

3. THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE MEANS OR METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY FOR PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, FORMWORK, SHORING, ETC. SITE VISITS BY THE ENGINEER OR HIS REPRESENTATIVE WILL NOT INCLUDE INSPECTION OF THESE ITEMS AND IS FOR STRUCTURAL OBSERVATION OF THE FINISHED STRUCTURE ONLY.

4. NOTES AND DETAILS IN THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT, AND/OR AS PROVIDED FOR IN THE CONTRACT DOCUMENTS. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL NOTES, AND SPECIFICATIONS, THE GREATER, MORE STRICT REQUIREMENTS, SHALL GOVERN. IF FURTHER CLARIFICATION IS REQUIRED CONTACT THE ENGINEER OF RECORD.

5. SUBSTANTIAL EFFORT HAS BEEN MADE TO PROVIDE ACCURATE DIMENSIONS AND MEASUREMENTS ON THE DRAWINGS TO ASSIST IN THE FABRICATION AND/OR PLACEMENT OF CONSTRUCTION ELEMENTS BUT IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE DIMENSIONS, MEASUREMENTS, AND/OR CLEARANCES SHOWN IN THE CONSTRUCTION DRAWINGS PRIOR TO FABRICATION OR CUTTING OF ANY NEW OR EXISTING CONSTRUCTION ELEMENTS. IF IT IS DETERMINED THAT THERE ARE DISCREPANCIES AND/OR CONFLICTS WITH THE CONSTRUCTION DRAWINGS THE ENGINEER OF RECORD IS TO BE NOTIFIED AS SOON AS POSSIBLE.

6. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CARRIER POC AND TOWER OWNER.

7. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.

8. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.

9. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.

10. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CARRIER AND TOWER OWNER PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.

11. CONTRACTOR IS TO PERFORM A SITE INVESTIGATION, BEFORE SUBMITTING BIDS, TO DETERMINE THE BEST ROUTING OF ALL CONDUITS FOR POWER, AND TELCO AND FOR GROUNDING CABLES AS SHOWN IN THE POWER, TELCO, AND GROUNDING PLAN DRAWINGS.

12. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF DISH Wireless L.L.C. AND TOWER OWNER

13. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.

14. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.

dish wireless.

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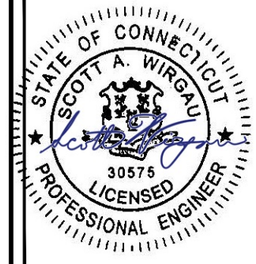
DRAWN BY:	CHECKED BY:	APPROVED BY:
CS	SRF	SRF

RFDS REV #: ----

CONSTRUCTION DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
0	02/02/2022	ISSUED FOR CONSTRUCTION
1	03/24/2022	POWER RUN



A&E PROJECT NUMBER

208205–13729958_D2

DISH Wireless L.L.C.
PROJECT INFORMATION

BOHVN00035A
80 GREAT HILL ROAD
SEYMOUR, CT 06483

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN-3

CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

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

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

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

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

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

#4 BARS AND SMALLER 40 ksi

#5 BARS AND LARGER 60 ksi

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

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

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

ELECTRICAL INSTALLATION NOTES:

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

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

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

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

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

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

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

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

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

8. TIE WRAPS ARE NOT ALLOWED.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

dish wireless.

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DRAWN BY:	CHECKED BY:	APPROVED BY:
CS	SRF	SRF

RFDS REV #: ----

CONSTRUCTION DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
0	02/02/2022	ISSUED FOR CONSTRUCTION
1	03/24/2022	POWER RUN

STATE OF CONNECTICUT
SCOTT A. WIRGAU
30575
LICENSED
PROFESSIONAL ENGINEER

A&E PROJECT NUMBER
208205-13729958_D2

DISH Wireless L.L.C.
PROJECT INFORMATION
BOHVN00035A
80 GREAT HILL ROAD
SEYMOUR, CT 06483

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-4

GROUNDING NOTES:

1. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION AND AC POWER GES'S) SHALL BE BONDED TOGETHER AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.

2. THE CONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS, THE CONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.

3. THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT AND PROVIDE TESTING RESULTS.

4. METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.

5. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.

6. EACH CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, #6 STRANDED COPPER OR LARGER FOR INDOOR BTS; #2 BARE SOLID TINNED COPPER FOR OUTDOOR BTS.

7. CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED BACK TO BACK CONNECTIONS ON OPPOSITE SIDE OF THE GROUND BUS ARE PERMITTED.

8. ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING SHALL BE #2 SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.

9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.

10. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.

11. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.

12. ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR AND EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.

13. COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.

14. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.

15. APPROVED ANTIOXIDANT COATINGS (i.e. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.

16. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.

17. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.

18. BOND ALL METALLIC OBJECTS WITHIN 6 ft OF MAIN GROUND RING WITH (1) #2 BARE SOLID TINNED COPPER GROUND CONDUCTOR.

19. GROUND CONDUCTORS USED FOR THE FACILITY GROUNDING AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON-METALLIC MATERIAL SUCH AS PVC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (i.e., NONMETALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.

20. ALL GROUNDS THAT TRANSITION FROM BELOW GRADE TO ABOVE GRADE MUST BE #2 BARE SOLID TINNED COPPER IN 3/4" NON-METALLIC, FLEXIBLE CONDUIT FROM 24" BELOW GRADE TO WITHIN 3" TO 6" OF CAD-WELD TERMINATION POINT. THE EXPOSED END OF THE CONDUIT MUST BE SEALED WITH SILICONE CAULK. (ADD TRANSITIONING GROUND STANDARD DETAIL AS WELL).

21. BUILDINGS WHERE THE MAIN GROUNDING CONDUCTORS ARE REQUIRED TO BE ROUTED TO GRADE, THE CONTRACTOR SHALL ROUTE TWO GROUNDING CONDUCTORS FROM THE ROOFTOP, TOWERS, AND WATER TOWERS GROUNDING RING, TO THE EXISTING GROUNDING SYSTEM, THE GROUNDING CONDUCTORS SHALL NOT BE SMALLER THAN 2/0 COPPER. ROOFTOP GROUNDING RING SHALL BE BONDED TO THE EXISTING GROUNDING SYSTEM, THE BUILDING STEEL COLUMNS, LIGHTNING PROTECTION SYSTEM, AND BUILDING MAIN WATER LINE (FERROUS OR NONFERROUS METAL PIPING ONLY). DO NOT ATTACH GROUNDING TO FIRE SPRINKLER SYSTEM PIPES.

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.

6. 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.

H. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE REQUIRED DURING CONSTRUCTION UNTIL ALL CONNECTIONS 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

dish wireless.

5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112

DRAWN BY:	CHECKED BY:	APPROVED BY:
CS	SRF	SRF

RFDS REV #: ----

CONSTRUCTION DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
0	02/02/2022	ISSUED FOR CONSTRUCTION
1	03/24/2022	POWER RUN

STATE OF CONNECTICUT
SCOTT A. WIRGAU
30575
LICENSED
PROFESSIONAL ENGINEER

A&E PROJECT NUMBER
208205-13729958_D2

DISH Wireless L.L.C.
PROJECT INFORMATION
BOHVN00035A
80 GREAT HILL ROAD
SEYMOUR, CT 06483

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-5

April 21, 2022

Mike Marganski, Zoning Enforcement Officer
Seymour Town Hall
1 First Street
Seymour, CT 06483

Re: Tower Share Application – Dish Site 13729958
Dish Wireless Telecommunications Facility @ 80 Great Hill Road, Seymour, CT 06483

Dear Mr. Marganski:

Dish Wireless ("Dish") is proposing a wireless telecommunications facility on an existing three hundred thirty five (335) foot tall guyed tower at 80 Great Hill Road, Seymour, CT 06483 (Latitude: 41.361967 Longitude: -73.113125) and within the existing fenced compound. The tower is owned and operated by American Tower Corporation. The subject property is owned by CABLE HOLDCO EXCHANGE III LLC.

Dish proposes to install a five (5) foot by seven (7) foot metal platform within the existing fenced compound and install three (3) antennas, three (3) antenna mounts, eight (8) RRUs, and cables on the existing tower at a one hundred twenty (120) feet as more particularly detailed and described on the enclosed Construction Drawings. The overall height of the existing tower will remain at 335 feet and no changes will be made to the compound dimensions.

The tower was approved in Docket Number 31 on November 5, 1982; a copy of the approval is enclosed.

This letter is intended to serve as the required notice to the municipal planning agency. As required by Regulations of Connecticut State Agencies ("RCSA") 16-50j-73 the Connecticut Siting Council ("CSC") has been notified of this proposal and will review this application. Please accept this letter as notification pursuant to RSCA 16-50j-73.

The enclosed letter and attachments to the CSC fully describe Dish's proposal for the site. However, if you have any questions or require any additional information concerning our plans or the CSC procedures, please contact me at 443-677-0144 or contact Melanie Bachmann, Acting Executive Director of the CSC at 860-972-2935.

Respectfully Submitted,

Jack Andrews
Zoning Manager, Centerline Communications
10130 Donleigh Drive
Columbia, MD 21046

April 21, 2022

The Honorable AnnMarie Drugonis
Seymour Town Hall
1 First Street
Seymour, CT 06483

Re: Tower Share Application – Dish Site 13729958
Dish Wireless Telecommunications Facility @ 80 Great Hill Road, Seymour, CT 06483

Dear First Selectwoman Drugonis:

Dish Wireless ("Dish") is proposing a wireless telecommunications facility on an existing three hundred thirty five (335) foot tall guyed tower at 80 Great Hill Road, Seymour, CT 06483 (Latitude: 41.361967 Longitude: -73.113125) and within the existing fenced compound. The tower is owned and operated by American Tower Corporation. The subject property is owned by CABLE HOLDCO EXCHANGE III LLC.

Dish proposes to install a five (5) foot by seven (7) foot metal platform within the existing fenced compound and install three (3) antennas, three (3) antenna mounts, eight (8) RRUs, and cables on the existing tower at a one hundred twenty (120) feet as more particularly detailed and described on the enclosed Construction Drawings. The overall height of the existing tower will remain at 335 feet and no changes will be made to the compound dimensions.

The tower was approved in Docket Number 31 on November 5, 1982; a copy of the approval is enclosed.

This letter is intended to serve as the required notice to the municipality's chief elected official. As required by Regulations of Connecticut State Agencies ("RCSA") 16-50j-73 the Connecticut Siting Council ("CSC") has been notified of this proposal and will review this application. Please accept this letter as notification pursuant to RSCA 16-50j-73.

The enclosed letter and attachments to the CSC fully describe Dish's proposal for the site. However, if you have any questions or require any additional information concerning our plans or the CSC procedures, please contact me at 443-677-0144 or contact Melanie Bachmann, Acting Executive Director of the CSC at 860-972-2935.

Respectfully Submitted,

Jack Andrews
Zoning Manager, Centerline Communications
10130 Donleigh Drive
Columbia, MD 21046

April 21, 2022

Blake Paynter
Project Manager, Site Development
American Tower Corporation
10 Presidential Way
Woburn, MA 01801

Re: Tower Share Application – Dish Site 13729958
Dish Wireless Telecommunications Facility @ 80 Great Hill Road, Seymour, CT 06483

Dear Mr. Paynter:

Dish Wireless ("Dish") is proposing a wireless telecommunications facility on an existing three hundred thirty five (335) foot tall guyed tower at 80 Great Hill Road, Seymour, CT 06483 (Latitude: 41.361967 Longitude: -73.113125) and within the existing fenced compound. The tower is owned and operated by American Tower Corporation. The subject property is owned by CABLE HOLDCO EXCHANGE III LLC.

Dish proposes to install a five (5) foot by seven (7) foot metal platform within the existing fenced compound and install three (3) antennas, three (3) antenna mounts, eight (8) RRUs, and cables on the existing tower at a one hundred twenty (120) feet as more particularly detailed and described on the enclosed Construction Drawings. The overall height of the existing tower will remain at 335 feet and no changes will be made to the compound dimensions.

The tower was approved in Docket Number 31 on November 5, 1982; a copy of the approval is enclosed.

This letter is intended to serve as the required notice to the tower owner. As required by Regulations of Connecticut State Agencies ("RCSA") 16-50j-73 the Connecticut Siting Council ("CSC") has been notified of this proposal and will review this application. Please accept this letter as notification pursuant to RSCA 16-50j-73.

The enclosed letter and attachments to the CSC fully describe Dish's proposal for the site. However, if you have any questions or require any additional information concerning our plans or the CSC procedures, please contact me at 443-677-0144 or contact Melanie Bachmann, Acting Executive Director of the CSC at 860-972-2935.

Respectfully Submitted,

Jack Andrews
Zoning Manager, Centerline Communications
10130 Donleigh Drive
Columbia, MD 21046

April 21, 2022

Cable Holdco Exchange III LLC
One Comcast Center
Philadelphia, PA 19103
ATTN: TAX DEPARTMENT

Re: Tower Share Application – Dish Site 13729958
Dish Wireless Telecommunications Facility @ 80 Great Hill Road, Seymour, CT 06483

Dear Property Owner:

Dish Wireless ("Dish") is proposing a wireless telecommunications facility on an existing three hundred thirty five (335) foot tall guyed tower at 80 Great Hill Road, Seymour, CT 06483 (Latitude: 41.361967 Longitude: -73.113125) and within the existing fenced compound. The tower is owned and operated by American Tower Corporation. The subject property is owned by CABLE HOLDCO EXCHANGE III LLC.

Dish proposes to install a five (5) foot by seven (7) foot metal platform within the existing fenced compound and install three (3) antennas, three (3) antenna mounts, eight (8) RRUs, and cables on the existing tower at a one hundred twenty (120) feet as more particularly detailed and described on the enclosed Construction Drawings. The overall height of the existing tower will remain at 335 feet and no changes will be made to the compound dimensions.

The tower was approved in Docket Number 31 on November 5, 1982; a copy of the approval is enclosed.

This letter is intended to serve as the required notice to the property owner. As required by Regulations of Connecticut State Agencies ("RCSA") 16-50j-73 the Connecticut Siting Council ("CSC") has been notified of this proposal and will review this application. Please accept this letter as notification pursuant to RSCA 16-50j-73.

The enclosed letter and attachments to the CSC fully describe Dish's proposal for the site. However, if you have any questions or require any additional information concerning our plans or the CSC procedures, please contact me at 443-677-0144 or contact Melanie Bachmann, Acting Executive Director of the CSC at 860-972-2935.

Respectfully Submitted,

Jack Andrews
Zoning Manager, Centerline Communications
10130 Donleigh Drive
Columbia, MD 21046
443-677-0144

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