

2.00 CONDITIONS AND SOFTWARE

2.01 STANDARD ENGINEERING CONDITIONS

All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessarily limited to:

- Information supplied by the client regarding the structure itself, its foundations, the soil conditions, the antenna and feed line loading on the structure and its components, and other relevant information.
- Information from the field and/or drawings in the possession of Centek Engineering, Inc. or generated by field inspections or measurements of the structure.
- It is the responsibility of the client to ensure that the information provided to Centek Engineering, Inc. and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and are in an un-corroded condition and have not deteriorated. It is therefore assumed that its capacity has not significantly changed from the "as new" condition.
- All services will be performed to the codes specified by the client, and we do not imply to meet any other codes or requirements unless explicitly agreed in writing. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement. In the absence of information to the contrary, all work will be performed in accordance with the latest revision of ANSI/ASCE10 & ANSI/EIA-222
- All services performed, results obtained, and recommendations made are in accordance with generally accepted engineering principles and practices. Centek Engineering, Inc. is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.

2.02 GENERAL DESCRIPTION OF STRUCTURAL ANALYSIS PROGRAM

tnxTower, is an integrated structural analysis and design software package designed specifically for the telecommunications industry, tnxTower, formerly RISA Tower, automates much of the tower analysis and design required by the TIA/EIA 222 Standard.

tnxTower Features:

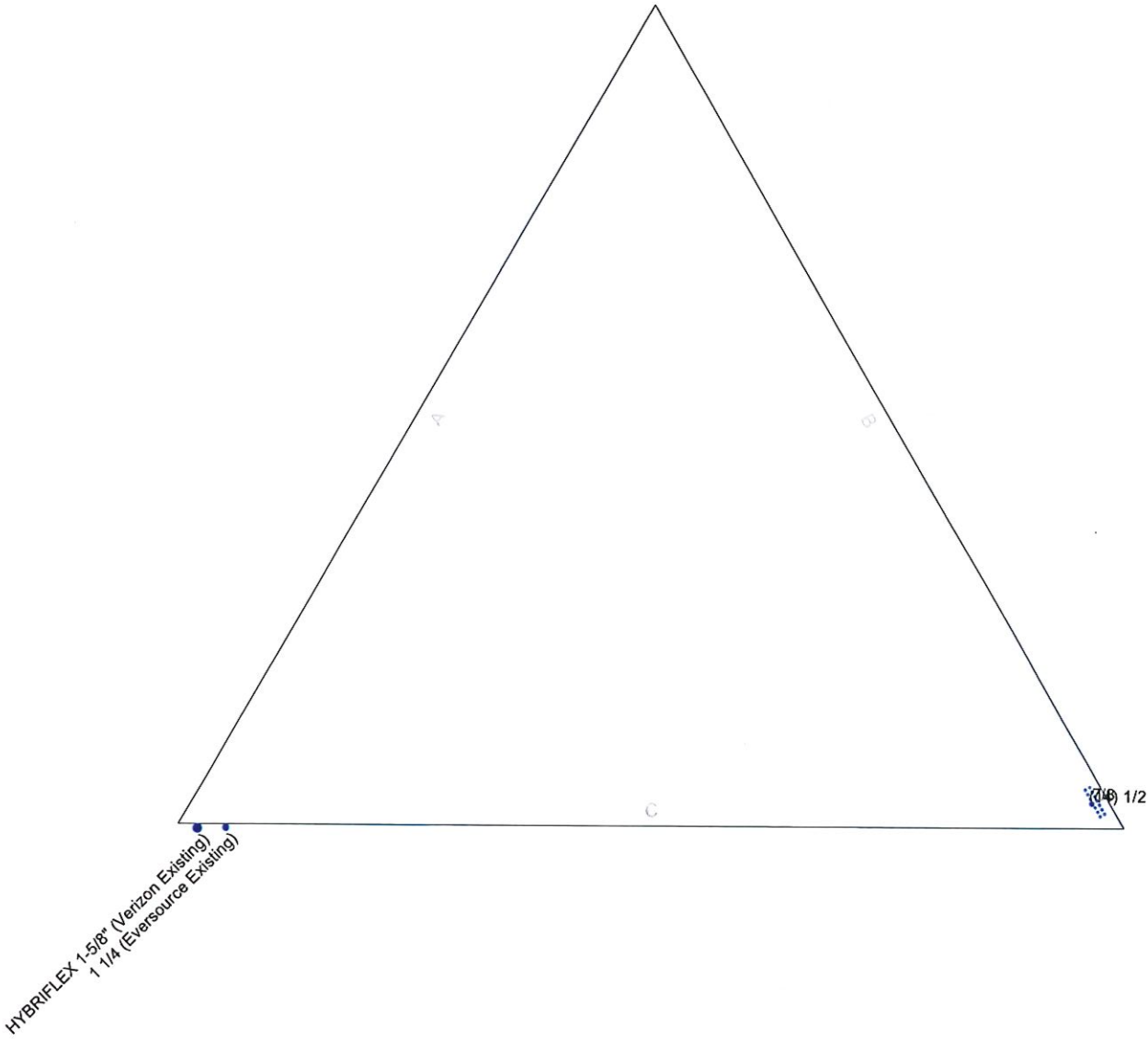
- tnxTower can analyze and design 3- and 4- sided guyed towers, 3- and 4- sided self-supporting towers, and either round or tapered ground mounted poles with or without guys.
- The program analyses towers using the TIA-222-H (2018) standard or any of the previous TIA/EIA standards back to RS-222 (1959). Steel Design is checked using the AISC ASD 9th Edition or the AISC LRFD specifications.
- Linear and non-linear (P-delta) analyses can be used in determining displacements and forces in the structure. Wind pressures and forces are automatically calculated.
- Extensive graphics plots include material take-off, shear-moment, leg compression, displacement, twist, feed line, guy anchor and stress plots.
- tnxTower contains unique features such as True Cable behavior, hog rod take-up, foundation stiffness and much more.

3.00 CALCULATIONS

Section	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13	T14	T15	T16	T17	T18	T19	T20	T21	T22	T23	T24	T25	T26	T27	T28	T29	T30	T31	T32	T33	T34	T35	T36	T37	T38	T39	T40	T41	T42	T43	T44	T45	T46	T47	T48	T49	T50	T51	T52	T53	T54	T55	T56	T57	T58	T59	T60	T61	T62	T63	T64	T65	T66	T67	T68	T69	T70	T71	T72	T73	T74	T75	T76	T77	T78	T79	T80	T81	T82	T83	T84	T85	T86	T87	T88	T89	T90	T91	T92	T93	T94	T95	T96	T97	T98	T99	T100	T101	T102	T103	T104	T105	T106	T107	T108	T109	T110	T111	T112	T113	T114	T115	T116	T117	T118	T119	T120	T121	T122	T123	T124	T125	T126	T127	T128	T129	T130	T131	T132	T133	T134	T135	T136	T137	T138	T139	T140	T141	T142	T143	T144	T145	T146	T147	T148	T149	T150	T151	T152	T153	T154	T155	T156	T157	T158	T159	T160	T161	T162	T163	T164	T165	T166	T167	T168	T169	T170	T171	T172	T173	T174	T175	T176	T177	T178	T179	T180	T181	T182	T183	T184	T185	T186	T187	T188	T189	T190	T191	T192	T193	T194	T195	T196	T197	T198	T199	T200	T201	T202	T203	T204	T205	T206	T207	T208	T209	T210	T211	T212	T213	T214	T215	T216	T217	T218	T219	T220	T221	T222	T223	T224	T225	T226	T227	T228	T229	T230	T231	T232	T233	T234	T235	T236	T237	T238	T239	T240	T241	T242	T243	T244	T245	T246	T247	T248	T249	T250	T251	T252	T253	T254	T255	T256	T257	T258	T259	T260	T261	T262	T263	T264	T265	T266	T267	T268	T269	T270	T271	T272	T273	T274	T275	T276	T277	T278	T279	T280	T281	T282	T283	T284	T285	T286	T287	T288	T289	T290	T291	T292	T293	T294	T295	T296	T297	T298	T299	T300	T301	T302	T303	T304	T305	T306	T307	T308	T309	T310	T311	T312	T313	T314	T315	T316	T317	T318	T319	T320	T321	T322	T323	T324	T325	T326	T327	T328	T329	T330	T331	T332	T333	T334	T335	T336	T337	T338	T339	T340	T341	T342	T343	T344	T345	T346	T347	T348	T349	T350	T351	T352	T353	T354	T355	T356	T357	T358	T359	T360	T361	T362	T363	T364	T365	T366	T367	T368	T369	T370	T371	T372	T373	T374	T375	T376	T377	T378	T379	T380	T381	T382	T383	T384	T385	T386	T387	T388	T389	T390	T391	T392	T393	T394	T395	T396	T397	T398	T399	T400	T401	T402	T403	T404	T405	T406	T407	T408	T409	T410	T411	T412	T413	T414	T415	T416	T417	T418	T419	T420	T421	T422	T423	T424	T425	T426	T427	T428	T429	T430	T431	T432	T433	T434	T435	T436	T437	T438	T439	T440	T441	T442	T443	T444	T445	T446	T447	T448	T449	T450	T451	T452	T453	T454	T455	T456	T457	T458	T459	T460	T461	T462	T463	T464	T465	T466	T467	T468	T469	T470	T471	T472	T473	T474	T475	T476	T477	T478	T479	T480	T481	T482	T483	T484	T485	T486	T487	T488	T489	T490	T491	T492	T493	T494	T495	T496	T497	T498	T499	T500	T501	T502	T503	T504	T505	T506	T507	T508	T509	T510	T511	T512	T513	T514	T515	T516	T517	T518	T519	T520	T521	T522	T523	T524	T525	T526	T527	T528	T529	T530	T531	T532	T533	T534	T535	T536	T537	T538	T539	T540	T541	T542	T543	T544	T545	T546	T547	T548	T549	T550	T551	T552	T553	T554	T555	T556	T557	T558	T559	T560	T561	T562	T563	T564	T565	T566	T567	T568	T569	T570	T571	T572	T573	T574	T575	T576	T577	T578	T579	T580	T581	T582	T583	T584	T585	T586	T587	T588	T589	T590	T591	T592	T593	T594	T595	T596	T597	T598	T599	T600	T601	T602	T603	T604	T605	T606	T607	T608	T609	T610	T611	T612	T613	T614	T615	T616	T617	T618	T619	T620	T621	T622	T623	T624	T625	T626	T627	T628	T629	T630	T631	T632	T633	T634	T635	T636	T637	T638	T639	T640	T641	T642	T643	T644	T645	T646	T647	T648	T649	T650	T651	T652	T653	T654	T655	T656	T657	T658	T659	T660	T661	T662	T663	T664	T665	T666	T667	T668	T669	T670	T671	T672	T673	T674	T675	T676	T677	T678	T679	T680	T681	T682	T683	T684	T685	T686	T687	T688	T689	T690	T691	T692	T693	T694	T695	T696	T697	T698	T699	T700	T701	T702	T703	T704	T705	T706	T707	T708	T709	T710	T711	T712	T713	T714	T715	T716	T717	T718	T719	T720	T721	T722	T723	T724	T725	T726	T727	T728	T729	T730	T731	T732	T733	T734	T735	T736	T737	T738	T739	T740	T741	T742	T743	T744	T745	T746	T747	T748	T749	T750	T751	T752	T753	T754	T755	T756	T757	T758	T759	T760	T761	T762	T763	T764	T765	T766	T767	T768	T769	T770	T771	T772	T773	T774	T775	T776	T777	T778	T779	T780	T781	T782	T783	T784	T785	T786	T787	T788	T789	T790	T791	T792	T793	T794	T795	T796	T797	T798	T799	T800	T801	T802	T803	T804	T805	T806	T807	T808	T809	T810	T811	T812	T813	T814	T815	T816	T817	T818	T819	T820	T821	T822	T823	T824	T825	T826	T827	T828	T829	T830	T831	T832	T833	T834	T835	T836	T837	T838	T839	T840	T841	T842	T843	T844	T845	T846	T847	T848	T849	T850	T851	T852	T853	T854	T855	T856	T857	T858	T859	T860	T861	T862	T863	T864	T865	T866	T867	T868	T869	T870	T871	T872	T873	T874	T875	T876	T877	T878	T879	T880	T881	T882	T883	T884	T885	T886	T887	T888	T889	T890	T891	T892	T893	T894	T895	T896	T897	T898	T899	T900	T901	T902	T903	T904	T905	T906	T907	T908	T909	T910	T911	T912	T913	T914	T915	T916	T917	T918	T919	T920	T921	T922	T923	T924	T925	T926	T927	T928	T929	T930	T931	T932	T933	T934	T935	T936	T937	T938	T939	T940	T941	T942	T943	T944	T945	T946	T947	T948	T949	T950	T951	T952	T953	T954	T955	T956	T957	T958	T959	T960	T961	T962	T963	T964	T965	T966	T967	T968	T969	T970	T971	T972	T973	T974	T975	T976	T977	T978	T979	T980	T981	T982	T983	T984	T985	T986	T987	T988	T989	T990	T991	T992	T993	T994	T995	T996	T997	T998	T999	T1000	T1001	T1002	T1003	T1004	T1005	T1006	T1007	T1008	T1009	T1010	T1011	T1012	T1013	T1014	T1015	T1016	T10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Feed Line Plan

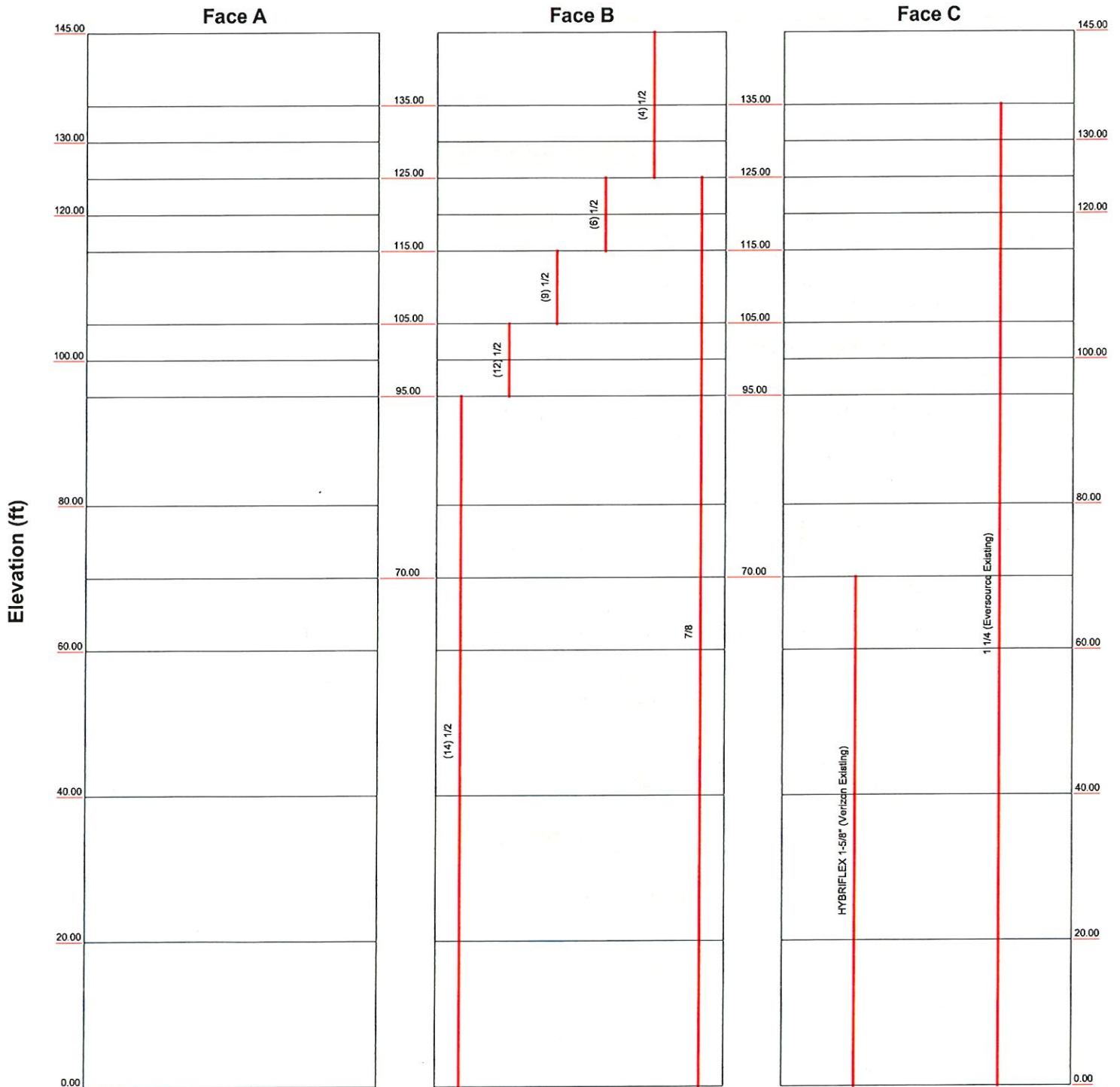
Round Flat App In Face App Out Face Truss-Leg



Centek Engineering		Job: 260393.00 - Uncasville 2 CT	
63-2 North Branford Road		Project: 145' Valmont Lattice Tower - 911 Route 32 Uncasville, CT	
Branford, CT 06405		Client: Verizon Wireless	App'd:
Phone: (203) 488-0580		Drawn by: CMT	Date: 07/28/26
FAX:		Code: TIA-222-H	Scale: NTS
		Path:	Dwg No. E-7

Feed Line Distribution Chart 0' - 145'

Round Flat App In Face App Out Face Truss Leg



Centek Engineering		Job: 260393.00 - Uncasville 2 CT	
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	Project 145' Valmont Lattice Tower - 911 Route 32 Uncasville, CT	Date 11:20:28 07/31/26
	Client Verizon Wireless	Designed by CMT

Tower Input Data

The main tower is a 3x free standing tower with an overall height of 145.00 ft above the ground line.

The base of the tower is set at an elevation of 0.00 ft above the ground line.

The face width of the tower is 5.00 ft at the top and 18.00 ft at the base.

This tower is designed using the TIA-222-H standard.

The following design criteria apply:

Tower base elevation above sea level: 0.00 ft.

Basic wind speed of 135 mph.

Risk Category III.

Exposure Category C.

Simplified Topographic Factor Procedure for wind speed-up calculations is used.

Topographic Category: 1.

Crest Height: 0.00 ft.

Nominal ice thickness of 1.0000 in.

Ice thickness is considered to increase with height.

Ice density of 56 pcf.

A wind speed of 50 mph is used in combination with ice.

Temperature drop of 50 °F.

Deflections calculated using a wind speed of 60 mph.

Weld together tower sections have flange connections..

Connections use galvanized A325 bolts, nuts and locking devices. Installation per TIA/EIA-222 and AISC Specifications..

Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards..

Welds are fabricated with ER-70S-6 electrodes..

Non-linear (P-delta) analysis was used.

Pressures are calculated at each section.

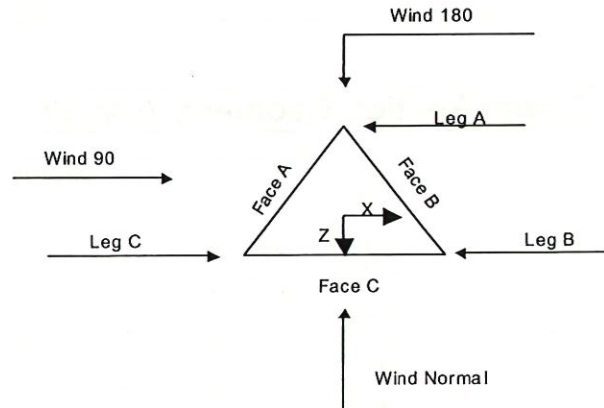
Stress ratio used in tower member design is 1.

Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

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

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Triangular Tower

Tower Section Geometry

Tower Section	Tower Elevation	Assembly Database	Description	Section Width	Number of Sections	Section Length
	ft			ft		ft
T1	145.00-130.00			5.00	1	15.00
T2	130.00-120.00			5.00	1	10.00
T3	120.00-100.00			6.00	1	20.00
T4	100.00-80.00			8.00	1	20.00
T5	80.00-60.00			10.00	1	20.00
T6	60.00-40.00			12.00	1	20.00
T7	40.00-20.00			14.00	1	20.00
T8	20.00-0.00			16.00	1	20.00

Tower Section Geometry (cont'd)

Tower Section	Tower Elevation	Diagonal Spacing	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset	Bottom Girt Offset
	ft	ft				in	in
T1	145.00-130.00	2.50	X Brace	No	No	0.0000	0.0000
T2	130.00-120.00	10.00	X Brace	No	No	0.0000	0.0000
T3	120.00-100.00	10.00	X Brace	No	No	0.0000	0.0000
T4	100.00-80.00	10.00	X Brace	No	No	0.0000	0.0000
T5	80.00-60.00	10.00	X Brace	No	No	0.0000	0.0000
T6	60.00-40.00	10.00	X Brace	No	No	0.0000	0.0000
T7	40.00-20.00	10.00	X Brace	No	No	0.0000	0.0000

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	Client	Verizon Wireless	Designed by	CMT

Tower Section	Tower Elevation ft	Diagonal Spacing ft	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset in	Bottom Girt Offset in
T8	20.00-0.00	10.00	X Brace	No	No	0.0000	0.0000

Tower Section Geometry (cont'd)

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1 145.00-130.00	Solid Round	1 3/4	A572-50 (50 ksi)	Solid Round	7/8	A572-50 (50 ksi)
T2 130.00-120.00	Truss Leg	Pirol 207628	A572-50 (50 ksi)	Equal Angle	L2 1/2x2 1/2x3/16	A36 (36 ksi)
T3 120.00-100.00	Truss Leg	Pirol 207628	A572-50 (50 ksi)	Equal Angle	L2 1/2x2 1/2x3/16	A36 (36 ksi)
T4 100.00-80.00	Truss Leg	Pirol 207628	A572-50 (50 ksi)	Equal Angle	L2 1/2x2 1/2x3/16	A36 (36 ksi)
T5 80.00-60.00	Truss Leg	Pirol 207628	A572-50 (50 ksi)	Equal Angle	L2 1/2x2 1/2x3/16	A36 (36 ksi)
T6 60.00-40.00	Truss Leg	Pirol 207628	A572-50 (50 ksi)	Equal Angle	L2 1/2x2 1/2x3/16	A36 (36 ksi)
T7 40.00-20.00	Truss Leg	Pirol 207628	A572-50 (50 ksi)	Equal Angle	L3x3x3/16	A36 (36 ksi)
T8 20.00-0.00	Truss Leg	Pirol 207628	A572-50 (50 ksi)	Equal Angle	L3x3x3/16	A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 145.00-130.00	Solid Round	7/8	A572-50 (50 ksi)	Equal Angle		A36 (36 ksi)
T2 130.00-120.00	Equal Angle	L2 1/2x2 1/2x3/16	A36 (36 ksi)	Equal Angle		A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation ft	Gusset Area (per face) ft ²	Gusset Thickness in	Gusset Grade	Adjust. Factor A _f	Adjust. Factor A _r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
T1 145.00-130.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T2 130.00-120.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T3 120.00-100.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000

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	Client	Verizon Wireless	Designed by CMT

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals	Double Angle Stitch Bolt Spacing Horizontals	Double Angle Stitch Bolt Spacing Redundants
ft	ft ²	in					in	in	in
T4 100.00-80.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T5 80.00-60.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T6 60.00-40.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T7 40.00-20.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000
T8 20.00-0.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000	36.0000

Tower Section Geometry (cont'd)

Tower Elevation	Calc K Single Angles	Calc K Solid Rounds	Legs	K Factors ¹						
				X Brace Diags	K Brace Diags	Single Diags	Girts	Horiz.	Sec. Horiz.	Inner Brace
				X Y	X Y	X Y	X Y	X Y	X Y	X Y
T1 145.00-130.00	Yes	Yes	1	1	1	1	1	1	1	1
T2 130.00-120.00	Yes	Yes	1	1	1	1	1	1	1	1
T3 120.00-100.00	Yes	Yes	1	1	1	1	1	1	1	1
T4 100.00-80.00	Yes	Yes	1	1	1	1	1	1	1	1
T5 80.00-60.00	Yes	Yes	1	1	1	1	1	1	1	1
T6 60.00-40.00	Yes	Yes	1	1	1	1	1	1	1	1
T7 40.00-20.00	Yes	Yes	1	1	1	1	1	1	1	1
T8 20.00-0.00	Yes	Yes	1	1	1	1	1	1	1	1

¹Note: K factors are applied to member segment lengths. K-braces without inner supporting members will have the K factor in the out-of-plane direction applied to the overall length.

Tower Section Geometry (cont'd)

Tower Elevation ft	Truss-Leg K Factors					
	Truss-Legs Used As Leg Members			Truss-Legs Used As Inner Members		
	Leg Panels	X Brace Diagonals	Z Brace Diagonals	Leg Panels	X Brace Diagonals	Z Brace Diagonals
T2 130.00-120.00	1	0.5	0.85	1	0.5	0.85
T3 120.00-100.00	1	0.5	0.85	1	0.5	0.85
T4 100.00-80.00	1	0.5	0.85	1	0.5	0.85

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T5 80.00-60.00	1	0.5	0.85	1	0.5	0.85
T6 60.00-40.00	1	0.5	0.85	1	0.5	0.85
T7 40.00-20.00	1	0.5	0.85	1	0.5	0.85
T8 20.00-0.00	1	0.5	0.85	1	0.5	0.85

Tower Section Geometry (cont'd)

Tower Elevation ft	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T1 145.00-130.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1
T2 130.00-120.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1
T3 120.00-100.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1
T4 100.00-80.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1
T5 80.00-60.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1
T6 60.00-40.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1
T7 40.00-20.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1
T8 20.00-0.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1

Tower Elevation ft	Redundant Horizontal		Redundant Diagonal		Redundant Sub-Diagonal		Redundant Sub-Horizontal		Redundant Vertical		Redundant Hip		Redundant Hip Diagonal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T1 145.00-130.00	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T2 130.00-120.00	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T3 120.00-100.00	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)

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Tower Elevation ft	Redundant Horizontal		Redundant Diagonal		Redundant Sub-Diagonal		Redundant Sub-Horizontal		Redundant Vertical		Redundant Hip		Redundant Hip Diagonal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T4 100.00-80.00	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T5 80.00-60.00	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
T6 60.00-40.00	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
T7 40.00-20.00	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
	0.0000	0.75 (1)	0.0000	0.75 (1)	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75 (1)	0.0000	0.75 (1)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
T8 20.00-0.00	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)
	0.0000	0.75 (2)	0.0000	0.75 (2)							0.0000	0.75 (2)	0.0000	0.75 (2)
	0.0000	0.75 (3)	0.0000	0.75 (3)							0.0000	0.75 (3)	0.0000	0.75 (3)
	0.0000	0.75 (4)	0.0000	0.75 (4)							0.0000	0.75 (4)	0.0000	0.75 (4)

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Tower Section Geometry (cont'd)

Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.
T1 145.00-130.00	Flange	1.0000 A325N	6	1.0000 A325N	0	0.5000 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T2 130.00-120.00	Flange	1.0000 A325N	6	1.0000 A325N	1	1.0000 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T3 120.00-100.00	Flange	1.0000 A325N	6	1.0000 A325N	1	0.6250 A325N	0	0.0000 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T4 100.00-80.00	Flange	1.0000 A325N	6	1.0000 A325N	1	0.6250 A325N	0	0.0000 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T5 80.00-60.00	Flange	1.0000 A325N	6	1.0000 A325N	1	0.6250 A325N	0	0.0000 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T6 60.00-40.00	Flange	1.0000 A325N	6	1.0000 A325N	1	0.6250 A325N	0	0.0000 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T7 40.00-20.00	Flange	1.0000 A325N	6	1.0000 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	1
T8 20.00-0.00	Flange	1.0000 F1554-105	6	1.0000 A325N	1	0.6250 A325N	0	0.0000 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
1/2	B	No	No	Ar (CaAa)	95.00 - 0.00	-3.0000	0.46	14	7	0.5800	0.5800		0.25
1/2	B	No	No	Ar (CaAa)	105.00 - 95.00	-3.0000	0.46	12	6	0.5800	0.5800		0.25
1/2	B	No	No	Ar (CaAa)	115.00 - 105.00	-3.0000	0.46	9	5	0.5800	0.5800		0.25
1/2	B	No	No	Ar (CaAa)	125.00 - 115.00	-3.0000	0.46	6	3	0.5800	0.5800		0.25
1/2	B	No	No	Ar (CaAa)	145.00 - 125.00	-3.0000	0.46	4	2	0.5800	0.5800		0.25
7/8	B	No	No	Ar (CaAa)	125.00 - 0.00	-3.0000	0.46	1	1	1.1100	1.1100		0.54
HYBRIFLEX 1-5/8" (Verizon Existing)	C	No	No	Ar (CaAa)	70.00 - 0.00	0.0000	0.48	1	1	1.9800	1.9800		1.90
1 1/4 (Eversource Existing)	C	No	No	Ar (CaAa)	135.00 - 0.00	0.0000	0.45	1	1	1.5500	1.5500		0.66

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _{AA} In Face ft ²	C _{AA} Out Face ft ²	Weight K
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Tower Section	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight K
T1	145.00-130.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	3.480	0.000	0.01
		C	0.000	0.000	0.775	0.000	0.00
T2	130.00-120.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	3.455	0.000	0.02
		C	0.000	0.000	1.550	0.000	0.01
T3	120.00-100.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	12.660	0.000	0.06
		C	0.000	0.000	3.100	0.000	0.01
T4	100.00-80.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	17.880	0.000	0.08
		C	0.000	0.000	3.100	0.000	0.01
T5	80.00-60.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	18.460	0.000	0.08
		C	0.000	0.000	5.080	0.000	0.03
T6	60.00-40.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	18.460	0.000	0.08
		C	0.000	0.000	7.060	0.000	0.05
T7	40.00-20.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	18.460	0.000	0.08
		C	0.000	0.000	7.060	0.000	0.05
T8	20.00-0.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	18.460	0.000	0.08
		C	0.000	0.000	7.060	0.000	0.05

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight K
T1	145.00-130.00	A	1.326	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	11.648	0.000	0.11
		C		0.000	0.000	2.101	0.000	0.03
T2	130.00-120.00	A	1.314	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	10.132	0.000	0.10
		C		0.000	0.000	4.178	0.000	0.05
T3	120.00-100.00	A	1.297	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	29.181	0.000	0.34
		C		0.000	0.000	8.289	0.000	0.10
T4	100.00-80.00	A	1.271	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	34.031	0.000	0.43
		C		0.000	0.000	8.185	0.000	0.10
T5	80.00-60.00	A	1.240	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	34.359	0.000	0.44
		C		0.000	0.000	12.519	0.000	0.17
T6	60.00-40.00	A	1.199	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	33.926	0.000	0.42
		C		0.000	0.000	16.650	0.000	0.22
T7	40.00-20.00	A	1.139	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	33.298	0.000	0.41
		C		0.000	0.000	16.173	0.000	0.21
T8	20.00-0.00	A	1.021	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	32.053	0.000	0.38
		C		0.000	0.000	15.225	0.000	0.19

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Feed Line Center of Pressure

Section	Elevation	CP _x	CP _z	CP _x Ice	CP _z Ice
	ft	in	in	in	in
T1	145.00-130.00	2.3773	2.3990	3.0279	2.7866
T2	130.00-120.00	1.0749	1.8991	0.9470	1.4821
T3	120.00-100.00	3.2693	3.4444	2.9263	3.2790
T4	100.00-80.00	5.7587	5.0952	5.2207	5.1753
T5	80.00-60.00	5.8156	6.4446	5.1697	6.8260
T6	60.00-40.00	5.4915	7.6764	4.6561	8.2892
T7	40.00-20.00	5.6132	7.8477	5.0770	8.8770
T8	20.00-0.00	6.0383	8.4046	5.6828	9.6198

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
T1	5	1/2	130.00 - 145.00	0.6000	0.6000
T1	8	1 1/4	130.00 - 135.00	0.6000	0.6000
T2	4	1/2	120.00 - 125.00	0.6000	0.3616
T2	5	1/2	125.00 - 130.00	0.6000	0.3616
T2	6	7/8	120.00 - 125.00	0.6000	0.3616
T2	8	1 1/4	120.00 - 130.00	0.6000	0.3616
T3	2	1/2	100.00 - 105.00	0.6000	0.4912
T3	3	1/2	105.00 - 115.00	0.6000	0.4912
T3	4	1/2	115.00 - 120.00	0.6000	0.4912
T3	6	7/8	100.00 - 120.00	0.6000	0.4912
T3	8	1 1/4	100.00 - 120.00	0.6000	0.4912
T4	1	1/2	80.00 - 95.00	0.6000	0.5852
T4	2	1/2	95.00 - 100.00	0.6000	0.5852
T4	6	7/8	80.00 - 100.00	0.6000	0.5852
T4	8	1 1/4	80.00 - 100.00	0.6000	0.5852
T5	1	1/2	60.00 - 80.00	0.6000	0.6000
T5	6	7/8	60.00 - 80.00	0.6000	0.6000
T5	7	HYBRIFLEX 1-5/8"	60.00 - 70.00	0.6000	0.6000
T5	8	1 1/4	60.00 - 80.00	0.6000	0.6000
T6	1	1/2	40.00 - 60.00	0.6000	0.6000
T6	6	7/8	40.00 - 60.00	0.6000	0.6000
T6	7	HYBRIFLEX 1-5/8"	40.00 - 60.00	0.6000	0.6000
T6	8	1 1/4	40.00 - 60.00	0.6000	0.6000
T7	1	1/2	20.00 - 40.00	0.6000	0.6000
T7	6	7/8	20.00 - 40.00	0.6000	0.6000
T7	7	HYBRIFLEX 1-5/8"	20.00 - 40.00	0.6000	0.6000
T7	8	1 1/4	20.00 - 40.00	0.6000	0.6000
T8	1	1/2	0.00 - 20.00	0.6000	0.6000

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Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
T8	6	7/8	0.00 - 20.00	0.6000	0.6000
T8	7	HYBRIFLEX 1-5/8"	0.00 - 20.00	0.6000	0.6000
T8	8	1 1/4	0.00 - 20.00	0.6000	0.6000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
10-ft Lightning Rod	A	From Leg	0.00 0.00 5.00	0.0000	145.00	No Ice 1/2" Ice 1" Ice	2.92 4.03 5.03	2.92 4.03 5.03	0.05 0.07 0.10
ANT150F2	A	From Leg	3.00 0.00 2.50	0.0000	145.00	No Ice 1/2" Ice 1" Ice	1.29 1.60 1.91	1.29 1.60 1.91	0.02 0.03 0.04
ANT150F2	B	From Leg	3.00 0.00 4.00	0.0000	145.00	No Ice 1/2" Ice 1" Ice	1.29 1.60 1.91	1.29 1.60 1.91	0.02 0.03 0.04
ANT450F2	B	From Leg	3.00 0.00 -4.00	0.0000	145.00	No Ice 1/2" Ice 1" Ice	0.79 1.01 1.23	0.79 1.01 1.23	0.01 0.02 0.03
CO-41A	C	From Leg	3.00 0.00 5.00	0.0000	145.00	No Ice 1/2" Ice 1" Ice	2.27 3.71 5.16	2.27 3.71 5.16	0.01 0.03 0.06
3' Side Mount Standoff	A	From Leg	1.00 0.00 0.00	0.0000	144.00	No Ice 1/2" Ice 1" Ice	2.64 3.69 4.74	2.64 3.69 4.74	0.04 0.05 0.06
3' Side Mount Standoff	B	From Leg	1.00 0.00 0.00	0.0000	144.00	No Ice 1/2" Ice 1" Ice	2.64 3.69 4.74	2.64 3.69 4.74	0.04 0.05 0.06
3' Side Mount Standoff	C	From Leg	1.00 0.00 0.00	0.0000	144.00	No Ice 1/2" Ice 1" Ice	2.64 3.69 4.74	2.64 3.69 4.74	0.04 0.05 0.06
DB589-Y (Eversource Existing)	C	From Leg	3.00 0.00 0.00	0.0000	138.00	No Ice 1/2" Ice 1" Ice	2.12 3.00 3.76	2.12 3.00 3.76	0.01 0.03 0.05
3' Side Mount Standoff (Eversource Existing)	C	From Leg	1.00 0.00 0.00	0.0000	133.00	No Ice 1/2" Ice 1" Ice	2.64 3.69 4.74	2.64 3.69 4.74	0.04 0.05 0.06
ANT150F2	A	From Leg	3.00 0.00 2.50	0.0000	125.00	No Ice 1/2" Ice 1" Ice	1.29 1.60 1.91	1.29 1.60 1.91	0.02 0.03 0.04
CO156AN	B	From Leg	3.00 0.00 5.00	0.0000	125.00	No Ice 1/2" Ice 1" Ice	2.27 3.71 5.16	2.27 3.71 5.16	0.01 0.03 0.06
ANT150F2	C	From Leg	3.00 0.00 2.50	0.0000	125.00	No Ice 1/2" Ice 1" Ice	1.29 1.60 1.91	1.29 1.60 1.91	0.02 0.03 0.04
3' Side Mount Standoff	A	From Leg	1.00 0.00 0.00	0.0000	125.00	No Ice 1/2" Ice 1" Ice	2.64 3.69 4.74	2.64 3.69 4.74	0.04 0.05 0.06

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Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C _{AA} Front ft ²	C _{AA} Side ft ²	Weight K
3' Side Mount Standoff	B	From Leg	1.00 0.00 0.00	0.0000	125.00	No Ice 1/2" Ice 1" Ice	2.64 3.69 4.74	2.64 3.69 4.74	0.04 0.05 0.06
3' Side Mount Standoff	C	From Leg	1.00 0.00 0.00	0.0000	125.00	No Ice 1/2" Ice 1" Ice	2.64 3.69 4.74	2.64 3.69 4.74	0.04 0.05 0.06
ANT150D	A	From Leg	3.00 0.00 2.50	0.0000	110.00	No Ice 1/2" Ice 1" Ice	0.80 1.44 2.08	0.80 1.44 2.08	0.01 0.01 0.01
ANT150D	B	From Leg	3.00 0.00 0.00	0.0000	115.00	No Ice 1/2" Ice 1" Ice	0.80 1.44 2.08	0.80 1.44 2.08	0.01 0.01 0.01
ANT150F2	C	From Leg	3.00 0.00 0.00	0.0000	115.00	No Ice 1/2" Ice 1" Ice	0.91 1.16 1.42	0.91 1.16 1.42	0.01 0.02 0.03
3' Side Mount Standoff	A	From Leg	1.00 0.00 0.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice	2.64 3.69 4.74	2.64 3.69 4.74	0.04 0.05 0.06
3' Pipe Mount Side Arm	B	From Leg	1.00 0.00 0.00	0.0000	115.00	No Ice 1/2" Ice 1" Ice	0.30 0.61 0.81	0.30 0.61 0.81	0.01 0.05 0.09
3' Pipe Mount Side Arm	C	From Leg	1.00 0.00 0.00	0.0000	115.00	No Ice 1/2" Ice 1" Ice	0.30 0.61 0.81	0.30 0.61 0.81	0.01 0.05 0.09
ANT150D	C	From Leg	3.00 0.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice	0.80 1.44 2.08	0.80 1.44 2.08	0.01 0.01 0.01
3' Pipe Mount Side Arm	C	From Leg	1.00 0.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice	0.30 0.61 0.81	0.30 0.61 0.81	0.01 0.05 0.09
10' x 3" Dia Omni	B	From Leg	3.00 0.00 5.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice	3.00 4.03 5.03	3.00 4.03 5.03	0.03 0.05 0.08
3' Side Mount Standoff	B	From Leg	1.00 0.00 0.00	0.0000	105.00	No Ice 1/2" Ice 1" Ice	2.64 3.69 4.74	2.64 3.69 4.74	0.04 0.05 0.06
ANT150D	A	From Leg	3.00 0.00 0.00	0.0000	102.00	No Ice 1/2" Ice 1" Ice	0.80 1.44 2.08	0.80 1.44 2.08	0.01 0.01 0.01
3' Pipe Mount Side Arm	A	From Leg	1.00 0.00 0.00	0.0000	102.00	No Ice 1/2" Ice 1" Ice	0.30 0.61 0.81	0.30 0.61 0.81	0.01 0.05 0.09
4'x4" Pipe Mount	B	From Leg	1.00 0.00 0.00	0.0000	95.00	No Ice 1/2" Ice 1" Ice	1.07 1.58 1.84	1.07 1.58 1.84	0.04 0.06 0.07
NNVS4-360S-BF2 (Verizon Proposed)	B	From Leg	1.00 0.00 0.00	0.0000	70.00	No Ice 1/2" Ice 1" Ice	1.22 1.90 2.10	1.22 1.90 2.10	0.03 0.06 0.09
RF4461d-13A (Verizon Proposed)	B	From Leg	1.00 0.00 0.00	0.0000	67.00	No Ice 1/2" Ice 1" Ice	1.87 2.03 2.21	1.28 1.42 1.57	0.08 0.10 0.12
RT8808-77A (Verizon Proposed)	B	From Leg	1.00 0.00 -1.00	0.0000	67.00	No Ice 1/2" Ice 1" Ice	1.87 2.03 2.21	0.85 0.97 1.10	0.06 0.07 0.09
Pipe Mount w/ TLSU	B	From Leg	0.00 0.00 0.00	0.0000	67.00	No Ice 1/2" Ice 1" Ice	3.02 3.18 3.34	2.00 2.10 2.20	0.06 0.13 0.19

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Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
RRFDC-1064-PF-48 (Verizon Existing)	B	From Leg	1.00	0.0000	67.00	No Ice	2.51	0.03
			0.00			1/2" Ice	2.71	0.05
			-1.00			1" Ice	2.92	0.08

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft	Aperture Area ft ²	Weight K
SPD2-4.7	B	Paraboloid w/o Radome	From Leg	2.00	0.0000		95.00	2.00	No Ice	3.14
				0.00					1/2" Ice	3.41
				0.00					1" Ice	3.68

Truss-Leg Properties

Section Designation	Area in ²	Area Ice in ²	Self Weight K	Ice Weight K	Equiv. Diameter in	Equiv. Diameter Ice in	Leg Area in ²
Pirol 207628	2072.5482	5843.8124	0.41	0.61	7.1963	20.2910	3.6816
Pirol 207628	2072.5482	5771.3422	0.41	0.60	7.1963	20.0394	3.6816
Pirol 207628	2072.5482	5647.9169	0.41	0.58	7.1963	19.6108	3.6816
Pirol 207628	2072.5482	5500.9257	0.41	0.56	7.1963	19.1004	3.6816
Pirol 207628	2072.5482	5316.4405	0.41	0.53	7.1963	18.4599	3.6816
Pirol 207628	2072.5482	5060.8358	0.41	0.49	7.1963	17.5723	3.6816
Pirol 207628	2072.5482	4595.7903	0.41	0.42	7.1963	15.9576	3.6816

Tower Pressures - No Ice

$$G_H = 0.850$$

Section Elevation ft	z ft	K _Z	q _z psf	A _G ft ²	F a c e	A _F ft ²	A _R ft ²	A _{ice} ft ²	Leg %	C _A A _A In Face ft ²	C _A A _A Out Face ft ²
T1 145.00-130.00	137.50	1.353	54	77.188	A	0.000	9.478	4.375	46.16	0.000	0.000
					B	0.000	9.478		46.16	3.480	0.000
					C	0.000	9.478		46.16	0.775	0.000
T2 130.00-120.00	125.00	1.326	53	66.055	A	4.726	12.014	12.014	71.77	0.000	0.000
					B	4.726	12.014		71.77	3.455	0.000
					C	4.726	12.014		71.77	1.550	0.000
T3	110.00	1.291	51	162.111	A	8.723	24.028	24.028	73.37	0.000	0.000

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Section Elevation	z	K _Z	q _z	A _G	F a c e	A _F	A _R	A _{leg}	Leg %	C _A A _A In Face ft ²	C _A A _A Out Face ft ²
ft	ft		psf	ft ²		ft ²	ft ²	ft ²			ft ²
120.00-100.00					B	8.723	24.028		73.37	12.660	0.000
					C	8.723	24.028		73.37	3.100	0.000
T4	90.00	1.238	49	202.111	A	9.970	24.028	24.028	70.67	0.000	0.000
100.00-80.00					B	9.970	24.028		70.67	17.880	0.000
					C	9.970	24.028		70.67	3.100	0.000
T5 80.00-60.00	70.00	1.174	47	242.111	A	11.267	24.028	24.028	68.08	0.000	0.000
					B	11.267	24.028		68.08	18.460	0.000
					C	11.267	24.028		68.08	5.080	0.000
T6 60.00-40.00	50.00	1.094	43	282.111	A	12.620	24.028	24.028	65.56	0.000	0.000
					B	12.620	24.028		65.56	18.460	0.000
					C	12.620	24.028		65.56	7.060	0.000
T7 40.00-20.00	30.00	0.982	39	322.111	A	16.830	24.028	24.028	58.81	0.000	0.000
					B	16.830	24.028		58.81	18.460	0.000
					C	16.830	24.028		58.81	7.060	0.000
T8 20.00-0.00	10.00	0.850	34	362.111	A	18.566	24.028	24.028	56.41	0.000	0.000
					B	18.566	24.028		56.41	18.460	0.000
					C	18.566	24.028		56.41	7.060	0.000

Tower Pressure - With Ice

$$G_H = 0.850$$

Section Elevation	z	K _Z	q _z	t _z	A _G	F a c e	A _F	A _R	A _{leg}	Leg %	C _A A _A In Face ft ²	C _A A _A Out Face ft ²
ft	ft		psf	in	ft ²		ft ²	ft ²	ft ²		ft ²	ft ²
T1	137.50	1.353	7	1.3264	80.504	A	0.000	31.580	11.007	34.85	0.000	0.000
145.00-130.00						B	0.000	31.580		34.85	11.648	0.000
						C	0.000	31.580		34.85	2.101	0.000
T2	125.00	1.326	7	1.3138	68.248	A	4.726	38.842	33.875	77.75	0.000	0.000
130.00-120.00						B	4.726	38.842		77.75	10.132	0.000
						C	4.726	38.842		77.75	4.178	0.000
T3	110.00	1.291	7	1.2971	166.440	A	8.723	75.961	66.909	79.01	0.000	0.000
120.00-100.00						B	8.723	75.961		79.01	29.181	0.000
						C	8.723	75.961		79.01	8.289	0.000
T4 100.00-80.00	90.00	1.238	7	1.2714	206.354	A	9.970	75.619	65.478	76.50	0.000	0.000
						B	9.970	75.619		76.50	34.031	0.000
						C	9.970	75.619		76.50	8.185	0.000
T5 80.00-60.00	70.00	1.174	6	1.2398	246.249	A	11.267	74.949	63.774	73.97	0.000	0.000
						B	11.267	74.949		73.97	34.359	0.000
						C	11.267	74.949		73.97	12.519	0.000
T6 60.00-40.00	50.00	1.094	6	1.1988	286.112	A	12.620	73.738	61.635	71.37	0.000	0.000
						B	12.620	73.738		71.37	33.926	0.000
						C	12.620	73.738		71.37	16.650	0.000
T7 40.00-20.00	30.00	0.982	5	1.1391	325.913	A	16.830	71.453	58.672	66.46	0.000	0.000
						B	16.830	71.453		66.46	33.298	0.000
						C	16.830	71.453		66.46	16.173	0.000
T8 20.00-0.00	10.00	0.850	5	1.0206	365.517	A	18.566	65.913	53.281	63.07	0.000	0.000
						B	18.566	65.913		63.07	32.053	0.000
						C	18.566	65.913		63.07	15.225	0.000

Tower Pressure - Service

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$$G_H = 0.850$$

Section Elevation	z	K _Z	q _z	A _G	F a c e	A _F	A _R	A _{leg}	Leg %	C _A A _A In Face ft ²	C _A A _A Out Face ft ²
ft	ft		psf	ft ²		ft ²	ft ²	ft ²			
T1 145.00-130.00	137.50	1.353	11	77.188	A	0.000	9.478	4.375	46.16	0.000	0.000
					B	0.000	9.478		46.16	3.480	0.000
					C	0.000	9.478		46.16	0.775	0.000
T2 130.00-120.00	125.00	1.326	10	66.055	A	4.726	12.014	12.014	71.77	0.000	0.000
					B	4.726	12.014		71.77	3.455	0.000
					C	4.726	12.014		71.77	1.550	0.000
T3 120.00-100.00	110.00	1.291	10	162.111	A	8.723	24.028	24.028	73.37	0.000	0.000
					B	8.723	24.028		73.37	12.660	0.000
					C	8.723	24.028		73.37	3.100	0.000
T4 100.00-80.00	90.00	1.238	10	202.111	A	9.970	24.028	24.028	70.67	0.000	0.000
					B	9.970	24.028		70.67	17.880	0.000
					C	9.970	24.028		70.67	3.100	0.000
T5 80.00-60.00	70.00	1.174	9	242.111	A	11.267	24.028	24.028	68.08	0.000	0.000
					B	11.267	24.028		68.08	18.460	0.000
					C	11.267	24.028		68.08	5.080	0.000
T6 60.00-40.00	50.00	1.094	9	282.111	A	12.620	24.028	24.028	65.56	0.000	0.000
					B	12.620	24.028		65.56	18.460	0.000
					C	12.620	24.028		65.56	7.060	0.000
T7 40.00-20.00	30.00	0.982	8	322.111	A	16.830	24.028	24.028	58.81	0.000	0.000
					B	16.830	24.028		58.81	18.460	0.000
					C	16.830	24.028		58.81	7.060	0.000
T8 20.00-0.00	10.00	0.850	7	362.111	A	18.566	24.028	24.028	56.41	0.000	0.000
					B	18.566	24.028		56.41	18.460	0.000
					C	18.566	24.028		56.41	7.060	0.000

Tower Forces - No Ice - Wind Normal To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z	D _F	D _R	A _E	F	w	Ctrl. Face
ft	K	K				psf			ft ²	K	plf	
T1 145.00-130.00	0.02	0.81	A	0.123	2.874	54	1	1	5.358	0.82	54.60	C
			B	0.123	2.874		1	1	5.358			
			C	0.123	2.874		1	1	5.358			
T2 130.00-120.00	0.02	0.87	A	0.253	2.427	53	1	1	11.765	1.41	141.12	C
			B	0.253	2.427		1	1	11.765			
			C	0.253	2.427		1	1	11.765			
T3 120.00-100.00	0.07	1.68	A	0.202	2.589	51	1	1	22.535	2.95	147.57	C
			B	0.202	2.589		1	1	22.535			
			C	0.202	2.589		1	1	22.535			
T4 100.00-80.00	0.09	1.73	A	0.168	2.706	49	1	1	23.657	3.20	159.80	C
			B	0.168	2.706		1	1	23.657			
			C	0.168	2.706		1	1	23.657			
T5 80.00-60.00	0.11	1.78	A	0.146	2.787	47	1	1	24.893	3.30	165.24	C
			B	0.146	2.787		1	1	24.893			
			C	0.146	2.787		1	1	24.893			
T6 60.00-40.00	0.13	1.84	A	0.13	2.847	43	1	1	26.215	3.32	165.81	C
			B	0.13	2.847		1	1	26.215			
			C	0.13	2.847		1	1	26.215			
T7 40.00-20.00	0.13	2.04	A	0.127	2.859	39	1	1	30.420	3.39	169.31	C
			B	0.127	2.859		1	1	30.420			
			C	0.127	2.859		1	1	30.420			
T8 20.00-0.00	0.13	2.11	A	0.118	2.894	34	1	1	32.143	3.10	155.21	C

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Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z	D _F	D _R	A _E	F	w	Ctrl. Face
ft	K	K				psf			ft ²	K	plf	
Sum Weight:	0.71	12.86	B C	0.118 0.118	2.894 2.894		1 1	1 1 OTM	32.143 32.143 1431.07 kip-ft	21.49		

Tower Forces - No Ice - Wind 45 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z	D _F	D _R	A _E	F	w	Ctrl. Face
ft	K	K				psf			ft ²	K	plf	
T1 145.00-130.00	0.02	0.81	A B C	0.123 0.123 0.123	2.874 2.874 2.874	54	0.825 0.825 0.825	1 1 1	5.358 5.358 5.358	0.82	54.60	C
T2 130.00-120.00	0.02	0.87	A B C	0.253 0.253 0.253	2.427 2.427 2.427	53	0.825 0.825 0.825	1 1 1	10.938 10.938 10.938	1.32	132.14	C
T3 120.00-100.00	0.07	1.68	A B C	0.202 0.202 0.202	2.589 2.589 2.589	51	0.825 0.825 0.825	1 1 1	21.008 21.008 21.008	2.78	138.96	C
T4 100.00-80.00	0.09	1.73	A B C	0.168 0.168 0.168	2.706 2.706 2.706	49	0.825 0.825 0.825	1 1 1	21.913 21.913 21.913	3.00	149.96	C
T5 80.00-60.00	0.11	1.78	A B C	0.146 0.146 0.146	2.787 2.787 2.787	47	0.825 0.825 0.825	1 1 1	22.922 22.922 22.922	3.09	154.37	C
T6 60.00-40.00	0.13	1.84	A B C	0.13 0.13 0.13	2.847 2.847 2.847	43	0.825 0.825 0.825	1 1 1	24.007 24.007 24.007	3.08	154.22	C
T7 40.00-20.00	0.13	2.04	A B C	0.127 0.127 0.127	2.859 2.859 2.859	39	0.825 0.825 0.825	1 1 1	27.474 27.474 27.474	3.11	155.37	C
T8 20.00-0.00	0.13	2.11	A B C	0.118 0.118 0.118	2.894 2.894 2.894	34	0.825 0.825 0.825	1 1 1 OTM	28.894 28.894 28.894 1345.33 kip-ft	2.83	141.74	C
Sum Weight:	0.71	12.86								20.03		

Tower Forces - No Ice - Wind 60 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z	D _F	D _R	A _E	F	w	Ctrl. Face
ft	K	K				psf			ft ²	K	plf	
T1 145.00-130.00	0.02	0.81	A B C	0.123 0.123 0.123	2.874 2.874 2.874	54	0.8 0.8 0.8	1 1 1	5.358 5.358 5.358	0.82	54.60	C
T2 130.00-120.00	0.02	0.87	A B	0.253 0.253	2.427 2.427	53	0.8 0.8	1 1	10.819 10.819	1.31	130.86	C

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	Client	Verizon Wireless	Designed by CMT

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z	D _F	D _R	A _E	F	w	Ctrl. Face
ft	K	K				psf			ft ²	K	plf	
T3 120.00-100.00	0.07	1.68	C	0.253	2.427		0.8	1	10.819			
			A	0.202	2.589	51	0.8	1	20.790	2.75	137.74	C
			B	0.202	2.589		0.8	1	20.790			
			C	0.202	2.589		0.8	1	20.790			
T4 100.00-80.00	0.09	1.73	A	0.168	2.706	49	0.8	1	21.663	2.97	148.55	C
			B	0.168	2.706		0.8	1	21.663			
			C	0.168	2.706		0.8	1	21.663			
T5 80.00-60.00	0.11	1.78	A	0.146	2.787	47	0.8	1	22.640	3.06	152.81	C
			B	0.146	2.787		0.8	1	22.640			
			C	0.146	2.787		0.8	1	22.640			
T6 60.00-40.00	0.13	1.84	A	0.13	2.847	43	0.8	1	23.691	3.05	152.56	C
			B	0.13	2.847		0.8	1	23.691			
			C	0.13	2.847		0.8	1	23.691			
T7 40.00-20.00	0.13	2.04	A	0.127	2.859	39	0.8	1	27.054	3.07	153.38	C
			B	0.127	2.859		0.8	1	27.054			
			C	0.127	2.859		0.8	1	27.054			
T8 20.00-0.00	0.13	2.11	A	0.118	2.894	34	0.8	1	28.430	2.80	139.82	C
			B	0.118	2.894		0.8	1	28.430			
			C	0.118	2.894		0.8	1	28.430			
Sum Weight:	0.71	12.86						OTM	1333.08 kip-ft	19.82		

Tower Forces - No Ice - Wind 90 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z	D _F	D _R	A _E	F	w	Ctrl. Face
ft	K	K				psf			ft ²	K	plf	
T1 145.00-130.00	0.02	0.81	A	0.123	2.874	54	0.85	1	5.358	0.82	54.60	C
			B	0.123	2.874		0.85	1	5.358			
			C	0.123	2.874		0.85	1	5.358			
T2 130.00-120.00	0.02	0.87	A	0.253	2.427	53	0.85	1	11.056	1.33	133.42	C
			B	0.253	2.427		0.85	1	11.056			
			C	0.253	2.427		0.85	1	11.056			
T3 120.00-100.00	0.07	1.68	A	0.202	2.589	51	0.85	1	21.226	2.80	140.19	C
			B	0.202	2.589		0.85	1	21.226			
			C	0.202	2.589		0.85	1	21.226			
T4 100.00-80.00	0.09	1.73	A	0.168	2.706	49	0.85	1	22.162	3.03	151.36	C
			B	0.168	2.706		0.85	1	22.162			
			C	0.168	2.706		0.85	1	22.162			
T5 80.00-60.00	0.11	1.78	A	0.146	2.787	47	0.85	1	23.203	3.12	155.92	C
			B	0.146	2.787		0.85	1	23.203			
			C	0.146	2.787		0.85	1	23.203			
T6 60.00-40.00	0.13	1.84	A	0.13	2.847	43	0.85	1	24.322	3.12	155.87	C
			B	0.13	2.847		0.85	1	24.322			
			C	0.13	2.847		0.85	1	24.322			
T7 40.00-20.00	0.13	2.04	A	0.127	2.859	39	0.85	1	27.895	3.15	157.36	C
			B	0.127	2.859		0.85	1	27.895			
			C	0.127	2.859		0.85	1	27.895			
T8 20.00-0.00	0.13	2.11	A	0.118	2.894	34	0.85	1	29.358	2.87	143.66	C
			B	0.118	2.894		0.85	1	29.358			
			C	0.118	2.894		0.85	1	29.358			
Sum Weight:	0.71	12.86						OTM	1357.58 kip-ft	20.24		

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Tower Forces - With Ice - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
T1 145.00-130.00	0.13	1.81	A	0.392	2.079	7	1	1	19.988	0.31	20.78	C
			B	0.392	2.079		1	1	19.988			
			C	0.392	2.079		1	1	19.988			
T2 130.00-120.00	0.16	2.44	A	0.638	1.785	7	1	1	34.584	0.41	41.04	C
			B	0.638	1.785		1	1	34.584			
			C	0.638	1.785		1	1	34.584			
T3 120.00-100.00	0.45	4.60	A	0.509	1.889	7	1	1	61.119	0.80	39.96	C
			B	0.509	1.889		1	1	61.119			
			C	0.509	1.889		1	1	61.119			
T4 100.00-80.00	0.54	4.68	A	0.415	2.035	7	1	1	58.575	0.82	41.19	C
			B	0.415	2.035		1	1	58.575			
			C	0.415	2.035		1	1	58.575			
T5 80.00-60.00	0.60	4.75	A	0.35	2.171	6	1	1	57.443	0.83	41.49	C
			B	0.35	2.171		1	1	57.443			
			C	0.35	2.171		1	1	57.443			
T6 60.00-40.00	0.65	4.80	A	0.302	2.291	6	1	1	56.826	0.81	40.60	C
			B	0.302	2.291		1	1	56.826			
			C	0.302	2.291		1	1	56.826			
T7 40.00-20.00	0.62	5.13	A	0.271	2.376	5	1	1	59.016	0.77	38.59	C
			B	0.271	2.376		1	1	59.016			
			C	0.271	2.376		1	1	59.016			
T8 20.00-0.00	0.57	4.92	A	0.231	2.495	5	1	1	56.837	0.67	33.45	C
			B	0.231	2.495		1	1	56.837			
			C	0.231	2.495		1	1	56.837			
Sum Weight:	3.71	33.12						OTM	384.75 kip-ft	5.43		

Tower Forces - With Ice - Wind 45 To Face

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
T1 145.00-130.00	0.13	1.81	A	0.392	2.079	7	0.825	1	19.988	0.31	20.78	C
			B	0.392	2.079		0.825	1	19.988			
			C	0.392	2.079		0.825	1	19.988			
T2 130.00-120.00	0.16	2.44	A	0.638	1.785	7	0.825	1	33.756	0.40	40.14	C
			B	0.638	1.785		0.825	1	33.756			
			C	0.638	1.785		0.825	1	33.756			
T3 120.00-100.00	0.45	4.60	A	0.509	1.889	7	0.825	1	59.593	0.78	39.10	C
			B	0.509	1.889		0.825	1	59.593			
			C	0.509	1.889		0.825	1	59.593			
T4 100.00-80.00	0.54	4.68	A	0.415	2.035	7	0.825	1	56.830	0.80	40.18	C
			B	0.415	2.035		0.825	1	56.830			
			C	0.415	2.035		0.825	1	56.830			
T5	0.60	4.75	A	0.35	2.171	6	0.825	1	55.471	0.81	40.33	C

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Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
80.00-60.00			B	0.35	2.171		0.825	1	55.471			
			C	0.35	2.171		0.825	1	55.471			
T6	0.65	4.80	A	0.302	2.291	6	0.825	1	54.617	0.79	39.32	C
60.00-40.00			B	0.302	2.291		0.825	1	54.617			
			C	0.302	2.291		0.825	1	54.617			
T7	0.62	5.13	A	0.271	2.376	5	0.825	1	56.071	0.74	37.00	C
40.00-20.00			B	0.271	2.376		0.825	1	56.071			
			C	0.271	2.376		0.825	1	56.071			
T8 20.00-0.00	0.57	4.92	A	0.231	2.495	5	0.825	1	53.587	0.64	31.85	C
			B	0.231	2.495		0.825	1	53.587			
			C	0.231	2.495		0.825	1	53.587			
Sum Weight:	3.71	33.12						OTM	375.72 kip-ft	5.27		

Tower Forces - With Ice - Wind 60 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
T1	0.13	1.81	A	0.392	2.079	7	0.8	1	19.988	0.31	20.78	C
145.00-130.00			B	0.392	2.079		0.8	1	19.988			
			C	0.392	2.079		0.8	1	19.988			
T2	0.16	2.44	A	0.638	1.785	7	0.8	1	33.638	0.40	40.01	C
130.00-120.00			B	0.638	1.785		0.8	1	33.638			
			C	0.638	1.785		0.8	1	33.638			
T3	0.45	4.60	A	0.509	1.889	7	0.8	1	59.375	0.78	38.98	C
120.00-100.00			B	0.509	1.889		0.8	1	59.375			
			C	0.509	1.889		0.8	1	59.375			
T4	0.54	4.68	A	0.415	2.035	7	0.8	1	56.581	0.80	40.03	C
100.00-80.00			B	0.415	2.035		0.8	1	56.581			
			C	0.415	2.035		0.8	1	56.581			
T5	0.60	4.75	A	0.35	2.171	6	0.8	1	55.189	0.80	40.16	C
80.00-60.00			B	0.35	2.171		0.8	1	55.189			
			C	0.35	2.171		0.8	1	55.189			
T6	0.65	4.80	A	0.302	2.291	6	0.8	1	54.302	0.78	39.14	C
60.00-40.00			B	0.302	2.291		0.8	1	54.302			
			C	0.302	2.291		0.8	1	54.302			
T7	0.62	5.13	A	0.271	2.376	5	0.8	1	55.650	0.74	36.77	C
40.00-20.00			B	0.271	2.376		0.8	1	55.650			
			C	0.271	2.376		0.8	1	55.650			
T8 20.00-0.00	0.57	4.92	A	0.231	2.495	5	0.8	1	53.123	0.63	31.63	C
			B	0.231	2.495		0.8	1	53.123			
			C	0.231	2.495		0.8	1	53.123			
Sum Weight:	3.71	33.12						OTM	374.43 kip-ft	5.25		

Tower Forces - With Ice - Wind 90 To Face

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Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
T1 145.00-130.00	0.13	1.81	A	0.392	2.079	7	0.85	1	19.988	0.31	20.78	C
			B	0.392	2.079		0.85	1	19.988			
			C	0.392	2.079		0.85	1	19.988			
T2 130.00-120.00	0.16	2.44	A	0.638	1.785	7	0.85	1	33.875	0.40	40.27	C
			B	0.638	1.785		0.85	1	33.875			
			C	0.638	1.785		0.85	1	33.875			
T3 120.00-100.00	0.45	4.60	A	0.509	1.889	7	0.85	1	59.811	0.78	39.22	C
			B	0.509	1.889		0.85	1	59.811			
			C	0.509	1.889		0.85	1	59.811			
T4 100.00-80.00	0.54	4.68	A	0.415	2.035	7	0.85	1	57.079	0.81	40.32	C
			B	0.415	2.035		0.85	1	57.079			
			C	0.415	2.035		0.85	1	57.079			
T5 80.00-60.00	0.60	4.75	A	0.35	2.171	6	0.85	1	55.753	0.81	40.49	C
			B	0.35	2.171		0.85	1	55.753			
			C	0.35	2.171		0.85	1	55.753			
T6 60.00-40.00	0.65	4.80	A	0.302	2.291	6	0.85	1	54.933	0.79	39.50	C
			B	0.302	2.291		0.85	1	54.933			
			C	0.302	2.291		0.85	1	54.933			
T7 40.00-20.00	0.62	5.13	A	0.271	2.376	5	0.85	1	56.492	0.74	37.23	C
			B	0.271	2.376		0.85	1	56.492			
			C	0.271	2.376		0.85	1	56.492			
T8 20.00-0.00	0.57	4.92	A	0.231	2.495	5	0.85	1	54.052	0.64	32.08	C
			B	0.231	2.495		0.85	1	54.052			
			C	0.231	2.495		0.85	1	54.052			
Sum Weight:	3.71	33.12						OTM	377.01 kip-ft	5.29		

Tower Forces - Service - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
T1 145.00-130.00	0.02	0.81	A	0.123	2.874	11	1	1	5.358	0.16	10.79	C
			B	0.123	2.874		1	1	5.358			
			C	0.123	2.874		1	1	5.358			
T2 130.00-120.00	0.02	0.87	A	0.253	2.427	10	1	1	11.765	0.28	27.87	C
			B	0.253	2.427		1	1	11.765			
			C	0.253	2.427		1	1	11.765			
T3 120.00-100.00	0.07	1.68	A	0.202	2.589	10	1	1	22.535	0.58	29.15	C
			B	0.202	2.589		1	1	22.535			
			C	0.202	2.589		1	1	22.535			
T4 100.00-80.00	0.09	1.73	A	0.168	2.706	10	1	1	23.657	0.63	31.57	C
			B	0.168	2.706		1	1	23.657			
			C	0.168	2.706		1	1	23.657			
T5 80.00-60.00	0.11	1.78	A	0.146	2.787	9	1	1	24.893	0.65	32.64	C
			B	0.146	2.787		1	1	24.893			
			C	0.146	2.787		1	1	24.893			
T6 60.00-40.00	0.13	1.84	A	0.13	2.847	9	1	1	26.215	0.66	32.75	C
			B	0.13	2.847		1	1	26.215			
			C	0.13	2.847		1	1	26.215			
T7 40.00-20.00	0.13	2.04	A	0.127	2.859	8	1	1	30.420	0.67	33.44	C
			B	0.127	2.859		1	1	30.420			
			C	0.127	2.859		1	1	30.420			

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	Client	Verizon Wireless	Designed by CMT

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
ft	K	K										
T8 20.00-0.00	0.13	2.11	A	0.118	2.894	7	1	1	32.143	0.61	30.66	C
			B	0.118	2.894		1	1	32.143			
			C	0.118	2.894		1	1	32.143			
Sum Weight:	0.71	12.86						OTM	282.68 kip-ft	4.24		

Tower Forces - Service - Wind 45 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
ft	K	K										
T1 145.00-130.00	0.02	0.81	A	0.123	2.874	11	0.825	1	5.358	0.16	10.79	C
			B	0.123	2.874		0.825	1	5.358			
			C	0.123	2.874		0.825	1	5.358			
T2 130.00-120.00	0.02	0.87	A	0.253	2.427	10	0.825	1	10.938	0.26	26.10	C
			B	0.253	2.427		0.825	1	10.938			
			C	0.253	2.427		0.825	1	10.938			
T3 120.00-100.00	0.07	1.68	A	0.202	2.589	10	0.825	1	21.008	0.55	27.45	C
			B	0.202	2.589		0.825	1	21.008			
			C	0.202	2.589		0.825	1	21.008			
T4 100.00-80.00	0.09	1.73	A	0.168	2.706	10	0.825	1	21.913	0.59	29.62	C
			B	0.168	2.706		0.825	1	21.913			
			C	0.168	2.706		0.825	1	21.913			
T5 80.00-60.00	0.11	1.78	A	0.146	2.787	9	0.825	1	22.922	0.61	30.49	C
			B	0.146	2.787		0.825	1	22.922			
			C	0.146	2.787		0.825	1	22.922			
T6 60.00-40.00	0.13	1.84	A	0.13	2.847	9	0.825	1	24.007	0.61	30.46	C
			B	0.13	2.847		0.825	1	24.007			
			C	0.13	2.847		0.825	1	24.007			
T7 40.00-20.00	0.13	2.04	A	0.127	2.859	8	0.825	1	27.474	0.61	30.69	C
			B	0.127	2.859		0.825	1	27.474			
			C	0.127	2.859		0.825	1	27.474			
T8 20.00-0.00	0.13	2.11	A	0.118	2.894	7	0.825	1	28.894	0.56	28.00	C
			B	0.118	2.894		0.825	1	28.894			
			C	0.118	2.894		0.825	1	28.894			
Sum Weight:	0.71	12.86						OTM	265.74 kip-ft	3.96		

Tower Forces - Service - Wind 60 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
ft	K	K										
T1 145.00-130.00	0.02	0.81	A	0.123	2.874	11	0.8	1	5.358	0.16	10.79	C
			B	0.123	2.874		0.8	1	5.358			
			C	0.123	2.874		0.8	1	5.358			
T2	0.02	0.87	A	0.253	2.427	10	0.8	1	10.819	0.26	25.85	C

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Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
130.00-120.00			B	0.253	2.427		0.8	1	10.819			
			C	0.253	2.427		0.8	1	10.819			
T3	0.07	1.68	A	0.202	2.589	10	0.8	1	20.790	0.54	27.21	C
120.00-100.00			B	0.202	2.589		0.8	1	20.790			
			C	0.202	2.589		0.8	1	20.790			
T4	0.09	1.73	A	0.168	2.706	10	0.8	1	21.663	0.59	29.34	C
100.00-80.00			B	0.168	2.706		0.8	1	21.663			
			C	0.168	2.706		0.8	1	21.663			
T5	0.11	1.78	A	0.146	2.787	9	0.8	1	22.640	0.60	30.19	C
80.00-60.00			B	0.146	2.787		0.8	1	22.640			
			C	0.146	2.787		0.8	1	22.640			
T6	0.13	1.84	A	0.13	2.847	9	0.8	1	23.691	0.60	30.14	C
60.00-40.00			B	0.13	2.847		0.8	1	23.691			
			C	0.13	2.847		0.8	1	23.691			
T7	0.13	2.04	A	0.127	2.859	8	0.8	1	27.054	0.61	30.30	C
40.00-20.00			B	0.127	2.859		0.8	1	27.054			
			C	0.127	2.859		0.8	1	27.054			
T8 20.00-0.00	0.13	2.11	A	0.118	2.894	7	0.8	1	28.430	0.55	27.62	C
			B	0.118	2.894		0.8	1	28.430			
			C	0.118	2.894		0.8	1	28.430			
Sum Weight:	0.71	12.86						OTM	263.32 kip-ft	3.92		

Tower Forces - Service - Wind 90 To Face

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
T1	0.02	0.81	A	0.123	2.874	11	0.85	1	5.358	0.16	10.79	C
145.00-130.00			B	0.123	2.874		0.85	1	5.358			
			C	0.123	2.874		0.85	1	5.358			
T2	0.02	0.87	A	0.253	2.427	10	0.85	1	11.056	0.26	26.35	C
130.00-120.00			B	0.253	2.427		0.85	1	11.056			
			C	0.253	2.427		0.85	1	11.056			
T3	0.07	1.68	A	0.202	2.589	10	0.85	1	21.226	0.55	27.69	C
120.00-100.00			B	0.202	2.589		0.85	1	21.226			
			C	0.202	2.589		0.85	1	21.226			
T4	0.09	1.73	A	0.168	2.706	10	0.85	1	22.162	0.60	29.90	C
100.00-80.00			B	0.168	2.706		0.85	1	22.162			
			C	0.168	2.706		0.85	1	22.162			
T5	0.11	1.78	A	0.146	2.787	9	0.85	1	23.203	0.62	30.80	C
80.00-60.00			B	0.146	2.787		0.85	1	23.203			
			C	0.146	2.787		0.85	1	23.203			
T6	0.13	1.84	A	0.13	2.847	9	0.85	1	24.322	0.62	30.79	C
60.00-40.00			B	0.13	2.847		0.85	1	24.322			
			C	0.13	2.847		0.85	1	24.322			
T7	0.13	2.04	A	0.127	2.859	8	0.85	1	27.895	0.62	31.08	C
40.00-20.00			B	0.127	2.859		0.85	1	27.895			
			C	0.127	2.859		0.85	1	27.895			
T8 20.00-0.00	0.13	2.11	A	0.118	2.894	7	0.85	1	29.358	0.57	28.38	C
			B	0.118	2.894		0.85	1	29.358			
			C	0.118	2.894		0.85	1	29.358			
Sum Weight:	0.71	12.86						OTM	268.16	4.00		

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Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
ft	K	K							kip-ft			

Force Totals

Load Case	Vertical Forces K	Sum of Forces X K	Sum of Forces Z K	Sum of Overturning Moments, M _x kip-ft	Sum of Overturning Moments, M _z kip-ft	Sum of Torques kip-ft
Leg Weight	8.38					
Bracing Weight	4.48					
Total Member Self-Weight	12.86			3.53	-3.48	
Total Weight	14.53			3.53	-3.48	
Wind 0 deg - No Ice		-0.17	-24.12	-1743.02	12.97	11.58
Wind 30 deg - No Ice		11.37	-19.70	-1435.81	-834.65	15.99
Wind 45 deg - No Ice		15.99	-15.93	-1162.08	-1174.67	16.80
Wind 60 deg - No Ice		19.41	-11.18	-816.35	-1427.76	16.59
Wind 90 deg - No Ice		22.92	0.01	4.14	-1678.97	12.69
Wind 120 deg - No Ice		20.98	12.11	880.35	-1522.18	4.75
Wind 135 deg - No Ice		16.67	16.67	1215.83	-1216.19	0.08
Wind 150 deg - No Ice		11.46	19.84	1454.24	-841.75	-4.47
Wind 180 deg - No Ice		0.02	22.40	1646.93	-5.58	-11.84
Wind 210 deg - No Ice		-11.37	19.70	1443.01	827.44	-15.99
Wind 225 deg - No Ice		-16.06	15.89	1165.37	1174.74	-16.80
Wind 240 deg - No Ice		-20.98	11.91	862.56	1517.31	-16.33
Wind 270 deg - No Ice		-22.98	-0.11	-6.60	1677.87	-12.27
Wind 300 deg - No Ice		-19.60	-11.31	-827.42	1435.77	-4.75
Wind 315 deg - No Ice		-16.18	-16.09	-1175.22	1183.22	-0.35
Wind 330 deg - No Ice		-11.58	-19.85	-1447.50	845.97	4.04
Member Ice	20.26					
Total Weight Ice	39.51			15.50	-12.41	
Wind 0 deg - Ice		-0.03	-6.14	-456.37	-9.73	2.49
Wind 30 deg - Ice		2.99	-5.18	-384.91	-243.61	3.74
Wind 45 deg - Ice		4.22	-4.21	-310.36	-339.18	4.03
Wind 60 deg - Ice		5.15	-2.97	-214.56	-411.57	4.06
Wind 90 deg - Ice		6.01	0.00	15.60	-476.89	3.29
Wind 120 deg - Ice		5.33	3.08	251.98	-422.01	1.53
Wind 135 deg - Ice		4.30	4.30	346.91	-343.90	0.46
Wind 150 deg - Ice		3.01	5.20	417.70	-244.74	-0.63
Wind 180 deg - Ice		0.00	5.95	476.20	-12.76	-2.53
Wind 210 deg - Ice		-2.99	5.18	415.92	218.75	-3.74
Wind 225 deg - Ice		-4.23	4.21	340.74	315.50	-4.02
Wind 240 deg - Ice		-5.33	3.04	249.11	397.58	-4.02
Wind 270 deg - Ice		-6.02	-0.02	13.84	453.02	-3.22
Wind 300 deg - Ice		-5.18	-2.99	-216.33	389.12	-1.53
Wind 315 deg - Ice		-4.25	-4.24	-312.45	316.83	-0.50
Wind 330 deg - Ice		-3.02	-5.20	-386.75	221.74	0.56
Total Weight	14.53			3.53	-3.48	
Wind 0 deg - Service		-0.03	-4.77	-344.06	1.07	2.30
Wind 30 deg - Service		2.25	-3.89	-283.35	-166.46	3.17
Wind 45 deg - Service		3.16	-3.15	-229.25	-233.66	3.33
Wind 60 deg - Service		3.84	-2.21	-160.91	-283.69	3.29
Wind 90 deg - Service		4.53	0.00	1.26	-333.33	2.51
Wind 120 deg - Service		4.15	2.39	174.44	-302.34	0.94
Wind 135 deg - Service		3.29	3.29	240.75	-241.86	0.01

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Load Case	Vertical Forces K	Sum of Forces X K	Sum of Forces Z K	Sum of Overturning Moments, M_x kip-ft	Sum of Overturning Moments, M_z kip-ft	Sum of Torques kip-ft
Wind 150 deg - Service		2.27	3.92	287.87	-167.86	-0.89
Wind 180 deg - Service		0.00	4.43	325.96	-2.59	-2.35
Wind 210 deg - Service		-2.25	3.89	285.65	162.06	-3.17
Wind 225 deg - Service		-3.17	3.14	230.78	230.70	-3.33
Wind 240 deg - Service		-4.15	2.35	170.92	298.40	-3.24
Wind 270 deg - Service		-4.54	-0.02	-0.86	330.14	-2.43
Wind 300 deg - Service		-3.87	-2.24	-163.10	282.29	-0.94
Wind 315 deg - Service		-3.20	-3.18	-231.84	232.37	-0.07
Wind 330 deg - Service		-2.29	-3.92	-285.66	165.72	0.80

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 45 deg - No Ice
7	0.9 Dead+1.0 Wind 45 deg - No Ice
8	1.2 Dead+1.0 Wind 60 deg - No Ice
9	0.9 Dead+1.0 Wind 60 deg - No Ice
10	1.2 Dead+1.0 Wind 90 deg - No Ice
11	0.9 Dead+1.0 Wind 90 deg - No Ice
12	1.2 Dead+1.0 Wind 120 deg - No Ice
13	0.9 Dead+1.0 Wind 120 deg - No Ice
14	1.2 Dead+1.0 Wind 135 deg - No Ice
15	0.9 Dead+1.0 Wind 135 deg - No Ice
16	1.2 Dead+1.0 Wind 150 deg - No Ice
17	0.9 Dead+1.0 Wind 150 deg - No Ice
18	1.2 Dead+1.0 Wind 180 deg - No Ice
19	0.9 Dead+1.0 Wind 180 deg - No Ice
20	1.2 Dead+1.0 Wind 210 deg - No Ice
21	0.9 Dead+1.0 Wind 210 deg - No Ice
22	1.2 Dead+1.0 Wind 225 deg - No Ice
23	0.9 Dead+1.0 Wind 225 deg - No Ice
24	1.2 Dead+1.0 Wind 240 deg - No Ice
25	0.9 Dead+1.0 Wind 240 deg - No Ice
26	1.2 Dead+1.0 Wind 270 deg - No Ice
27	0.9 Dead+1.0 Wind 270 deg - No Ice
28	1.2 Dead+1.0 Wind 300 deg - No Ice
29	0.9 Dead+1.0 Wind 300 deg - No Ice
30	1.2 Dead+1.0 Wind 315 deg - No Ice
31	0.9 Dead+1.0 Wind 315 deg - No Ice
32	1.2 Dead+1.0 Wind 330 deg - No Ice
33	0.9 Dead+1.0 Wind 330 deg - No Ice
34	1.2 Dead+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 45 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
39	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
40	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
41	1.2 Dead+1.0 Wind 135 deg+1.0 Ice+1.0 Temp
42	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp

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Comb. No.	Description
43	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
44	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
45	1.2 Dead+1.0 Wind 225 deg+1.0 Ice+1.0 Temp
46	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
47	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
48	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
49	1.2 Dead+1.0 Wind 315 deg+1.0 Ice+1.0 Temp
50	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
51	Dead+Wind 0 deg - Service
52	Dead+Wind 30 deg - Service
53	Dead+Wind 45 deg - Service
54	Dead+Wind 60 deg - Service
55	Dead+Wind 90 deg - Service
56	Dead+Wind 120 deg - Service
57	Dead+Wind 135 deg - Service
58	Dead+Wind 150 deg - Service
59	Dead+Wind 180 deg - Service
60	Dead+Wind 210 deg - Service
61	Dead+Wind 225 deg - Service
62	Dead+Wind 240 deg - Service
63	Dead+Wind 270 deg - Service
64	Dead+Wind 300 deg - Service
65	Dead+Wind 315 deg - Service
66	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T1	145 - 130	Leg	Max Tension	29	3.77	0.01	-0.00
			Max. Compression	24	-4.49	0.02	-0.00
			Max. Mx	26	-0.52	-0.07	-0.00
			Max. My	18	-0.39	0.00	0.07
			Max. Vy	26	0.22	0.00	0.00
			Max. Vx	18	-0.21	0.00	0.00
		Diagonal	Max Tension	26	0.72	0.00	0.00
			Max. Compression	10	-0.72	0.00	0.00
			Max. Mx	46	0.18	-0.01	0.00
			Max. My	14	-0.25	-0.00	0.00
			Max. Vy	46	0.01	-0.01	0.00
			Max. Vx	14	0.00	0.00	0.00
		Top Girt	Max Tension	25	0.06	0.00	0.00
			Max. Compression	18	-0.08	0.00	0.00
			Max. Mx	34	-0.02	0.02	0.00
			Max. My	6	0.01	0.00	-0.00
			Max. Vy	34	-0.02	0.00	0.00
			Max. Vx	6	0.00	0.00	0.00
T2	130 - 120	Leg	Max Tension	29	5.94	-0.02	-0.00
			Max. Compression	24	-7.25	0.79	0.02
			Max. Mx	28	5.73	-0.85	0.02
			Max. My	20	-0.73	-0.04	0.80
			Max. Vy	8	0.32	-0.85	-0.02
			Max. Vx	20	-0.34	-0.04	0.80
		Diagonal	Max Tension	29	1.54	0.00	0.00
			Max. Compression	12	-1.66	0.00	0.00
			Max. Mx	43	0.30	0.03	-0.01
			Max. My	41	-0.15	0.03	-0.01
			Max. Vy	43	0.02	0.03	-0.01

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft			
T3	120 - 100	Top Girt	Max. Vx	41	0.00	0.00	0.00			
			Max Tension	28	0.03	0.00	0.00			
			Max. Compression	23	-0.02	0.00	0.00			
		Leg	Max. Mx	34	0.01	-0.04	0.00			
			Max. My	45	0.01	0.00	0.00			
			Max. Vy	34	0.03	0.00	0.00			
			Max. Vx	45	-0.00	0.00	0.00			
			Max Tension	19	17.22	-0.79	0.04			
			Max. Compression	12	-20.36	1.11	-0.01			
			Max. Mx	28	16.68	-1.13	0.01			
			Max. My	4	-1.63	-0.02	-1.14			
			Max. Vy	28	0.25	-1.13	0.01			
			Diagonal	Max. Vx	4	0.30	-0.02	-1.14		
				Max Tension	26	2.72	0.00	0.00		
				Max. Compression	26	-2.76	0.00	0.00		
				Max. Mx	43	0.61	0.04	0.01		
T4	100 - 80	Leg	Max. My	46	-0.03	0.04	0.01			
			Max. Vy	43	0.03	0.04	0.01			
			Max. Vx	46	-0.00	0.00	0.00			
		Diagonal	Max Tension	19	31.90	-1.15	0.05			
			Max. Compression	12	-37.18	1.28	-0.01			
			Max. Mx	3	-36.32	1.28	-0.03			
			Max. My	20	-2.50	-0.01	1.31			
			Max. Vy	28	0.20	-1.19	0.01			
			Max. Vx	20	-0.22	-0.01	1.21			
			Max Tension	26	3.49	0.00	0.00			
			Max. Compression	10	-3.54	0.00	0.00			
			Max. Mx	43	0.68	0.05	0.01			
			Max. My	45	-0.25	0.04	0.01			
			Max. Vy	43	0.04	0.05	0.01			
			Max. Vx	45	-0.00	0.00	0.00			
			T5	80 - 60	Leg	Max Tension	29	47.74	-1.47	0.01
Max. Compression	12	-55.53				1.60	-0.01			
Max. Mx	13	-54.57				1.60	-0.01			
Diagonal	Max. My	20			-3.61	-0.01	1.60			
	Max. Vy	28			-0.26	-1.48	0.01			
	Max. Vx	4			-0.31	-0.02	-1.44			
	Max Tension	26			4.17	0.00	0.00			
	Max. Compression	26			-4.24	0.00	0.00			
	Max. Mx	43			0.75	0.07	0.01			
	Max. My	45			-0.28	0.05	0.01			
	Max. Vy	43			0.04	0.07	0.01			
	Max. Vx	45			0.00	0.00	0.00			
	T6	60 - 40			Leg	Max Tension	29	64.32	-1.51	0.01
						Max. Compression	12	-74.74	1.96	-0.02
						Max. Mx	12	-74.74	1.96	-0.02
					Diagonal	Max. My	20	-4.37	0.03	1.80
Max. Vy			3	-0.18		1.94	-0.06			
Max. Vx			20	-0.19		0.03	1.80			
Max Tension			26	4.66		0.00	0.00			
Max. Compression			26	-4.76		0.00	0.00			
Max. Mx			43	1.05		0.08	-0.01			
Max. My			45	-0.35		0.08	0.01			
Max. Vy			43	0.05		0.08	-0.01			
Max. Vx			45	0.00		0.00	0.00			
Leg			Max Tension	29		81.14	-1.62	0.01		
			Max. Compression	12		-94.18	2.16	-0.01		
			Max. Mx	43		12.72	-2.40	0.01		
			Max. My	16		-4.21	-0.08	-1.96		
	Max. Vy	48	0.34	-2.36	0.01					
	Max. Vx	20	0.25	-0.07	1.95					