EM-METROPCS-059-090128

NOTICE OF INTENT TO MODIFY AN EXISTING TELECOMMUNICATIONS FACILITY AT 130 WELLES ROAD, GROTON, CONNECTICUT

ORIGINAL

Pursuant to the Public Utility Environmental Standards Act, Connecticut General Statutes § 16-50g et. seq. ("PUESA"), and Sections 16-50j-72(b) and 16-50j-73 of the Regulations of Connecticut State Agencies adopted pursuant to the PUESA, MetroPCS ("MetroPCS") hereby notifies the Connecticut Siting Council of its intent to modify an existing facility located at 130 Welles Road, Groton, Connecticut (the "Welles Road Facility"), owned by TowerCo, LLC (the "Tower Owner"). MetroPCS and the Tower Owner have agreed to share the use of the Welles Road Facility, as detailed below.

The Welles Road Facility

The Welles Road Facility is located on the north side of Welles Road just east of the intersection of Route 184 (Gold Start Highway) on land owned by the Town of Groton. The site coordinates are Latitude 41° 23' 33.64" and Longitude 71° 58' 11.32".

The Welles Road Facility obtained its initial approval from the Connecticut Siting Council in 2002 under Docket 230. The facility consists of an approximately one hundred eighteen (118) foot monopole (the "Tower") and associated equipment currently being used and/or approved for use for wireless communications by Sprint. A chain link fence surrounds the Tower compound.

MetroPCS' Wireless Facility

As shown on the enclosed plans prepared by Chappell Engineering Associates, LLC, including a site plan, compound plan, south tower elevation and antenna/equipment detail of the Welles Road Facility, MetroPCS proposes shared use of the Facility by placing antennas on the Tower and equipment cabinets within the existing fenced compound. MetroPCS will install up to six (6) Kathrein Model 800-10504 panel antennas, or their functional equivalents, at the approximately 108 foot level of the Tower, a GPS antenna and associated equipment including a battery cabinet, a ppc cabinet, a modcell cabinet and space for a future battery cabinet and future modcell cabinet on a 16' by 10' concrete pad within the existing fenced compound. As evidenced in the structural analysis report prepared by Semaan Engineering Solutions, LLC, annexed hereto, MetroPCS has confirmed that the monopole is structurally capable of supporting MetroPCS' proposed installation.

MetroPCS' Wireless Facility Constitutes An Exempt Modification

The proposed addition of MetroPCS' antennas and equipment to the Welles Road Facility constitutes an exempt "modification" of an existing facility as defined in Connecticut General Statutes Section 16-50i(d) and Council regulations promulgated pursuant thereto. The addition of MetroPCS' antennas and equipment to the Tower will not result in an increase of the Tower's height nor extend the site boundaries. Further, there will be no increase in noise levels by six (6) decibels or more at the Tower site's boundary. In addition, MetroPCS' facility will not increase

the cumulative radio frequency electromagnetic radiation power density at the Tower site's boundary to or above the standard adopted by the Connecticut Department of Environmental Protection as set forth in Section 22a-162 of the Connecticut General Statutes and MPE limits established by the Federal Communications Commission.

The power density for existing conditions is fully documented in the last filing with the Connecticut Siting Council for the Welles Road Facility as 7.24% of the MPE limits. Calculations for MetroPCS' proposed facility are as follows:

Carrier	Centerline Height	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density	Standard Limits	Percent of Limit
MetroPCS	108'	2140	3	727	0.0672	1.4267	4.71%

When combining the cumulative "worse case" power density levels for the existing facility with MetroPCS' proposed facility, it would result in a total power density of 11.95% which is well within applicable standards.

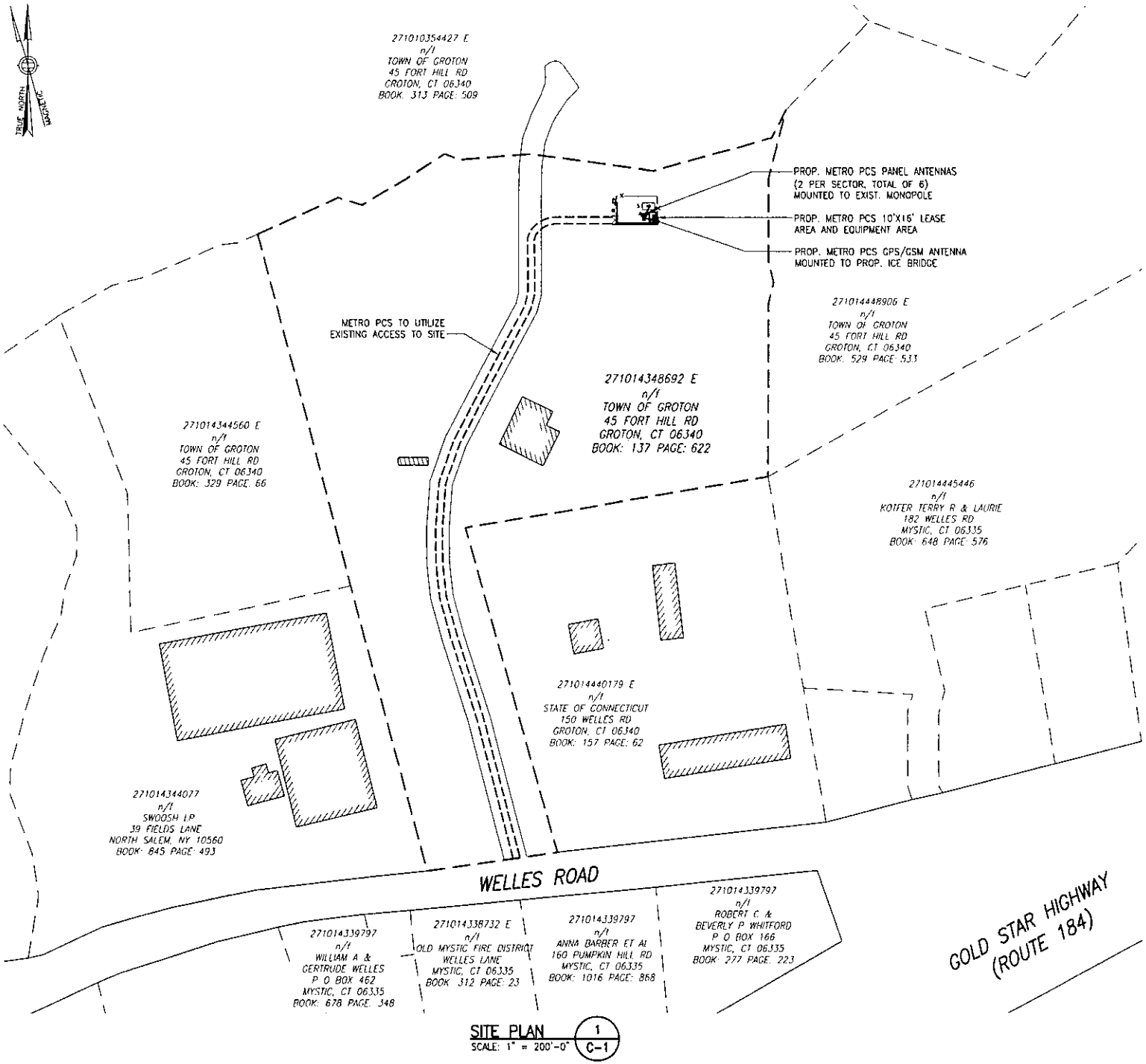
For all the foregoing reasons, the addition of MetroPCS' wireless facility to the Tower constitutes an exempt modification which will not have a substantially adverse environmental effect.

Conclusion

Accordingly, MetroPCS requests that the Connecticut Siting Council acknowledge that its proposed modification to the Welles Road Facility meets the Council's exemption criteria.

Christopher B. Fisher
Counsel for MetroPCS
Cuddy & Feder LLP
445 Hamilton Avenue, 14th Floor
White Plains, NY 10601
(914) 761-1300

cc: Mark R. Oefinger, Town Manager, Town of Groton
Kellie Dunn, MetroPCS



SITE PLAN (1 / C-1)
SCALE: 1" = 200'-0"

metroPCS
Unlimit Yourself.

285 BILLERICA ROAD
THIRD FLOOR
CHELMSFORD, MA 01824
TEL (978) 244-7200
FAX (978) 244-7240

CHAPPELL ENGINEERING ASSOCIATES, LLC
Civil · Structural · Land Surveying
201 BOSTON POST ROAD WEST
SUITE 301
MARLBOROUGH, MA 01752
TEL (508) 481-7400
www.chappellengineering.com

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	01/09/09	CSCP FINAL	CMC	JMT	JMT
0	11/21/08	CONN. SITING COUNCIL PLANS	RJK	JMT	JMT

NOT TO SCALE | DESIGNED BY: JMT | DRAWN BY: RJK

APPROVALS

SITE OWNER — DATE

CONSTRUCTION MANAGER — DATE

RF ENGINEER — DATE

SITE ACQUISITION — DATE

THE ABOVE PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS AND AUTHORIZE THE CONTRACTOR TO PROCEED WITH THE CONSTRUCTION DESCRIBED HEREIN. ALL CONSTRUCTION DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT AND ANY CHANGES OR MODIFICATIONS THEY MAY IMPOSE.

SITE ID
NLD0002B

SITE NAME
TOWER CO
WELLES ROAD GROTON

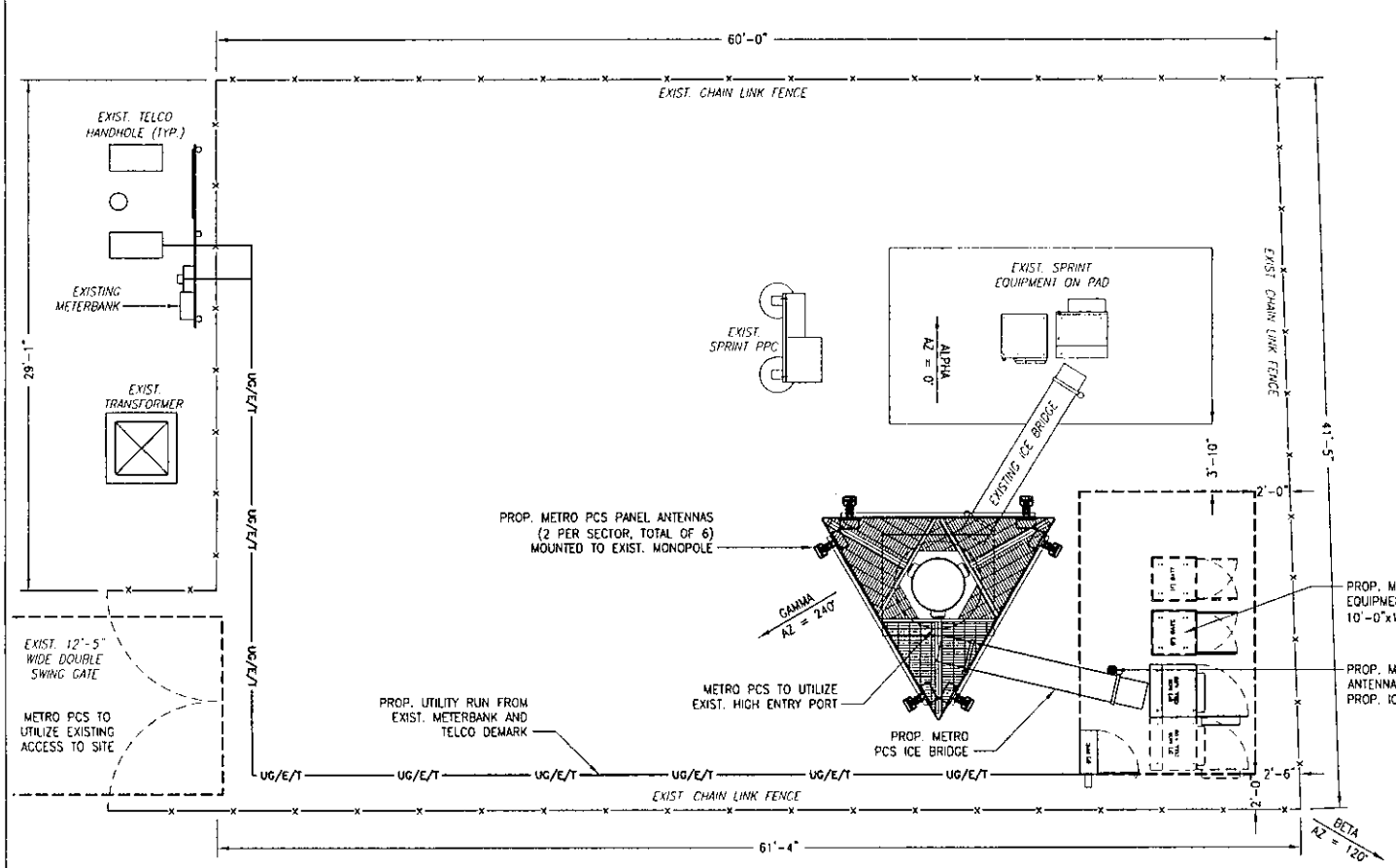
SITE ADDRESS
130 WELLES ROAD
GROTON, CT
06340

METRO PCS LEASE AREA

EQUIPMENT: 10'-0"x16'-0"=160.0 S.F.

TOTAL: = 160.0 S.F.

PROJECT NO.	DRAWING NAME	DATE	SHEET NO.	REV
736.183	C-1	01/09/09	1 OF 4	1



COMPOUND PLAN (1 / C-2)
SCALE: 1" = 10'-0"

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0	11/21/08	CONN. SITING COUNCIL PLANS	RJK	JMT	JMT

NOT TO SCALE | DESIGNED BY: JMT | DRAWN BY: RJK

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CONSTRUCTION MANAGER — DATE

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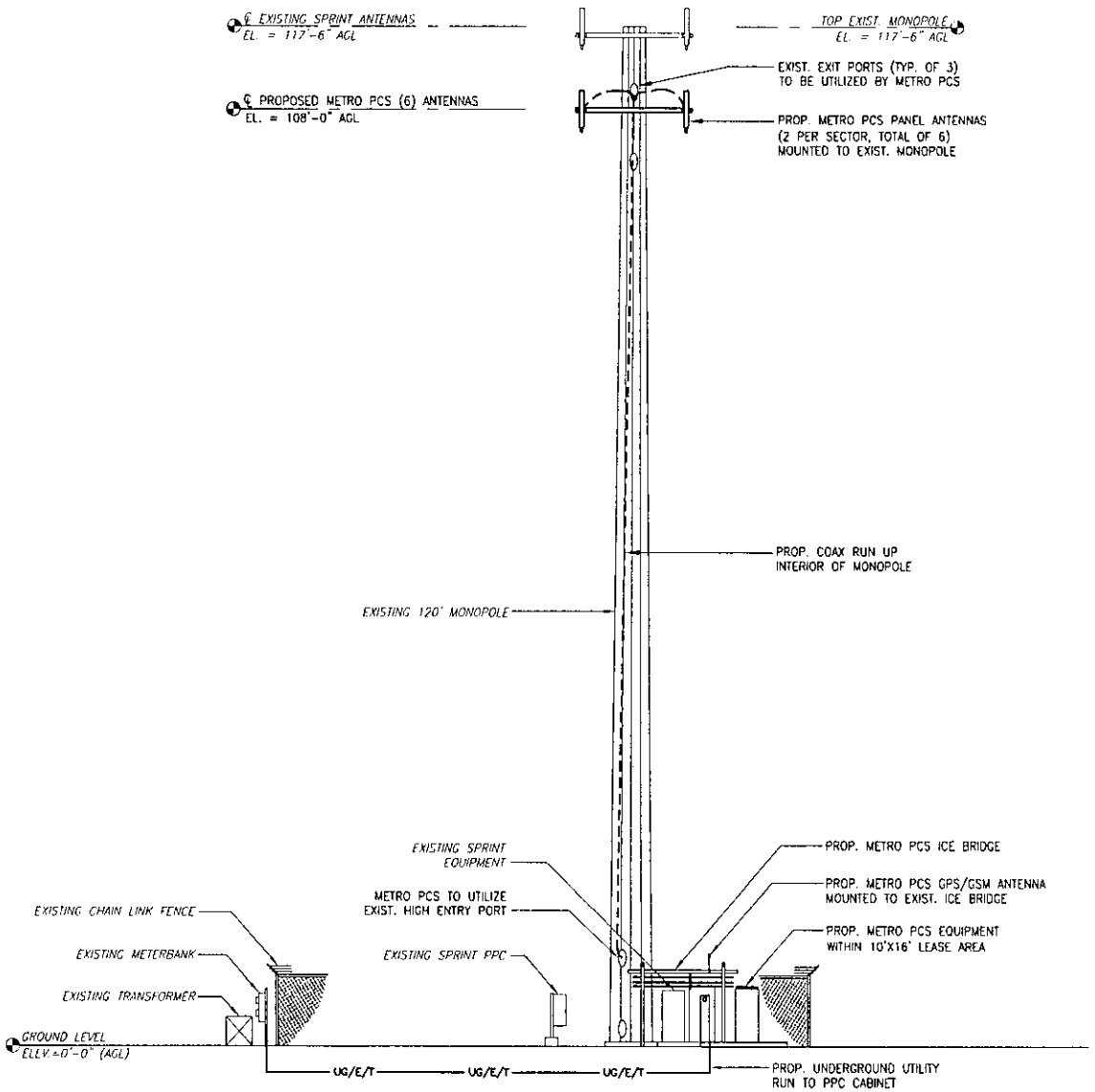
PROJECT NO.	DRAWING NAME	DATE	SHEET NO.	REV
736.183	C-2	01/09/09	2 OF 4	1

AZIMUTHS	
ALPHA	0°
BETA	120°
GAMMA	240°



SOUTH TOWER ELEVATION (1 / C-3)
SCALE: NTS

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0	11/21/08	CONN. SITING COUNCIL PLANS	RJK	JMT	JMT

NOT TO SCALE | DESIGNED BY: JMT | DRAWN BY: RJK

APPROVALS

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CONSTRUCTION MANAGER — DATE

RF ENGINEER — DATE

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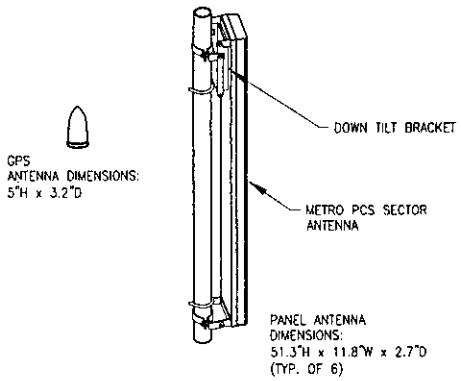
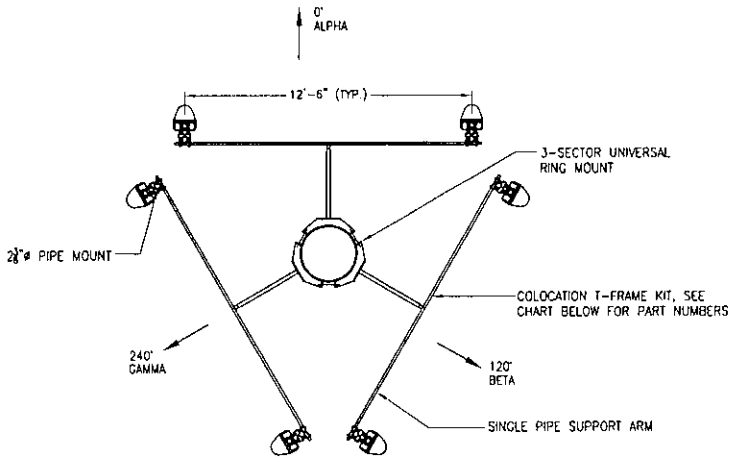
PROJECT NO.	DRAWING NAME	DATE	SHEET NO.	REV
736.183	C-3	01/09/09	3 OF 4	1



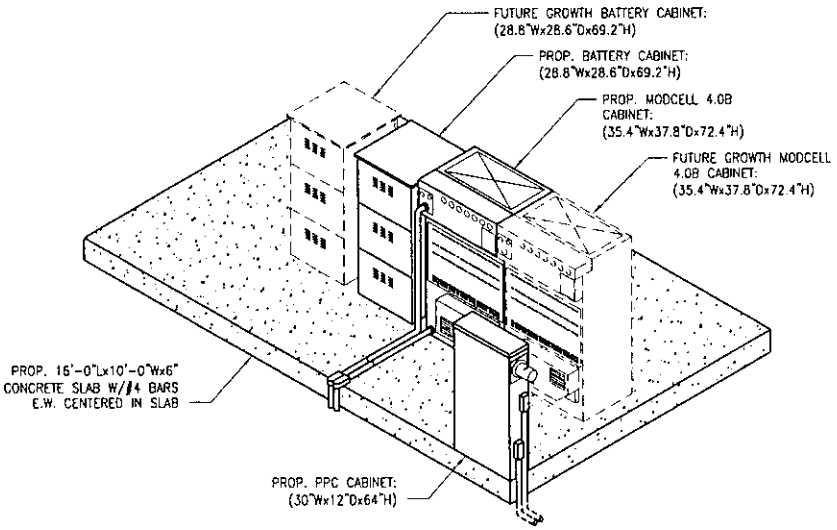
GPS & PANEL ANTENNA DETAIL 1/C-4
SCALE: NOT TO SCALE



COLOCATION T-FRAME KIT	MONOPOLE ø
~~MC-K12S-6-72~~	10"-30"
MC-K12L-6-72	30"-60"

ANTENNA DETAIL 2/C-4
SCALE: NOT TO SCALE

NORTH



EQUIPMENT DETAIL 3/C-4
SCALE: NOT TO SCALE

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TOTAL: = 160.0 S.F.

PROJECT NO.	DRAWING NAME	DATE	SHEET NO.	REV
736.183	C-4	01/09/09	4 OF 4	1

SEMAAN
ENGINEERING SOLUTIONS, LLC

Structural Analysis Report

Prepared for:

TowerCo LLC
5000 Valleystone Drive
Cary, NC 27519

ATTN: Mr. Stephen Rambeau

Structure	:	**118 ft PennSummit Monopole**
Proposed Carrier	:	**Metro PCS**
Site ID	:	**CT2019**
Site Name	:	**Groton, CT**
County	:	**New London**
Date	:	**January 7, 2009**
Usage	:	**58.6%**

Semaan Engineering Solutions, LLC
1079 N. 205th Street
Elkhorn, NE 68022
Phone: 402-289-1888

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1079 N. 205th Street
Elkhorn, NE 68022
Phone: 402-289-1888

Introduction

The purpose of this report is to summarize results of the structural analysis performed on the 118 ft PennSummit Monopole located at Groton, CT, New London County (site #CT2019). The tower was originally designed and manufactured by PennSummit (PJF Job No29203-0083 dated April 24, 2003).

Analysis

The tower was analyzed using Semaan Engineering Solutions, Inc., Software. The analysis assumes that the tower is in good, undamaged, and non-corroded condition. The analysis was performed in conformance with **TIA/EIA-222 Rev F and local building codes for a basic wind speed of 85 mph and 1/2" radial ice with reduced wind speed (fastest mile).** This is in conformance with the IBC 2006: Section 1609.1.1, Exception (4) and Section 3108.4.

Basic Wind Speed: 85.0 mph
Radial Ice: 74 mph w/ 0.50" ice
Code: TIA/EIA-222 Rev F

Antenna Loads

The following antenna loads were used in the tower analysis.

Existing Antennas

Elev. (ft)	Qty	Antennas	Mount	Coax (in)	Carrier
117.5	6	DB980F65E-M	Low Profile Platform	(6) 1 5/8"	Sprint

Proposed Antennas

Elev. (ft)	Qty	Antennas	Mount	Coax (in)	Carrier
108.0	6	742 351	Low Profile Platform	(12) 1 5/8"	Metro PCS

All transmission lines are assumed running inside of pole shaft.

Results

The existing monopole is structurally capable of supporting the existing and proposed antennas. The maximum structure usage is: 58.6%.

Pole Reactions	Original Design Reactions	Current Analysis Reactions	% Of Design
Moment (ft-kips)	1,461.00	913.90	62.6
Shear (kips)	17.00	11.26	66.3

The analysis reactions are less than the design reactions therefore no foundation modifications are required.

Conclusion

Based on the analysis results, the existing structure meets the requirements per the TIA/EIA-222 Rev F standards for a basic wind speed of 85 mph and 1/2" radial ice with reduced wind speed.

If you have any questions or require additional information, please call 402-289-1888.

Standard 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 necessary limited, to:

-- Information supplied by the client regarding the structure itself, the antenna and feed line loading on the structure and its components, or other relevant information.

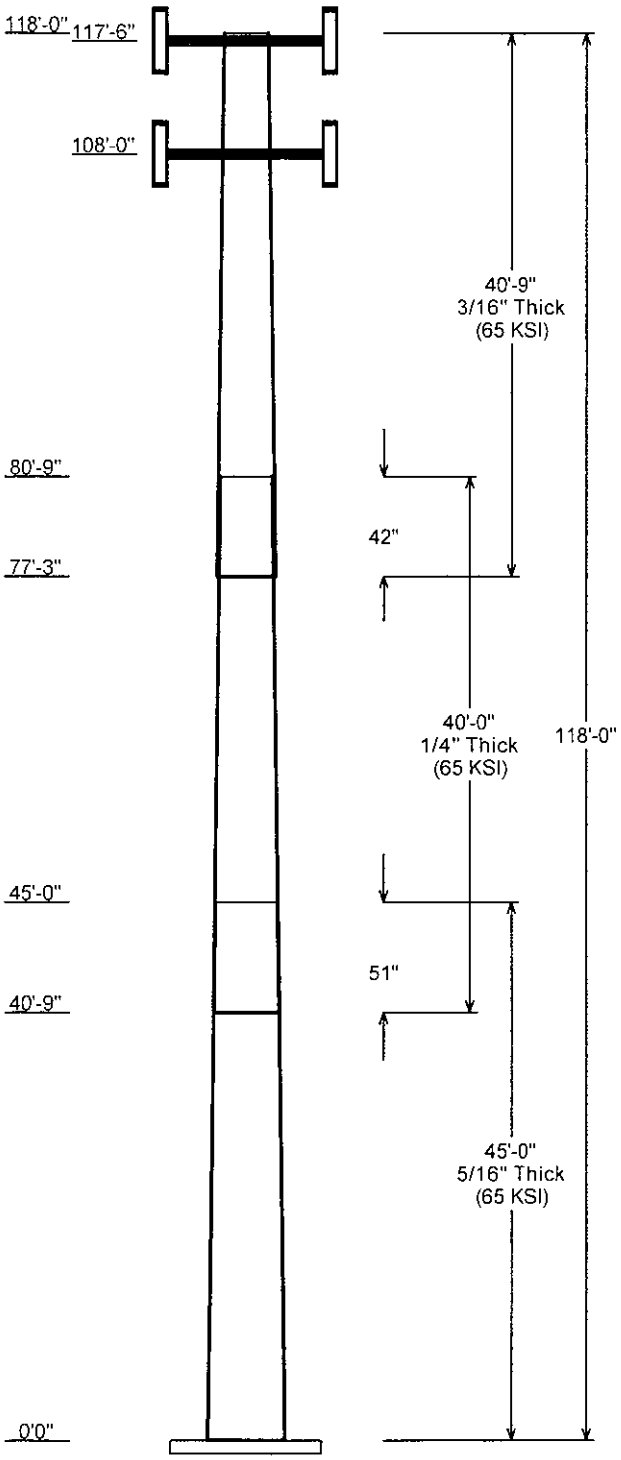
-- Information from drawings in the possession of Semaan Engineering Solutions, or generated by field inspections or measurements of the structure.

It is the responsibility of the client to ensure that the information provided to Semaan Engineering Solutions 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; and we, therefore, assume that their 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 relevant revision of ANSI/EIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. Semaan Engineering Solutions is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.

SEMAAN ENGINEERING SOLUTIONS
1079 N.204th Avenue
Elkhorn, NE 68022
Phone: 402-289-1888
Fax: 402-289-1861



Job Information

Pole :	CT2019	Code: TIA/EIA-222 Rev F	
Description :			
Client :	TowerCo LLC		
Location :	Groton, CT		
Shape :	18 Sides	Base Elev (ft):	0.00
Height :	118.00 (ft)	Taper:	0.140000(in/ft)

Sections Properties

Shaft Section	Length (ft)	Diameter (in) Accross Flats Top	Bottom	Thick (in)	Joint Type	Overlap Length (in)	Taper (in/ft)	Steel Grade (ksi)
1	45.000	32.64	38.94	0.313		0.000	0.140000	65
2	40.000	28.13	33.73	0.250	Slip Joint	51.000	0.140000	65
3	40.750	23.29	29.00	0.188	Slip Joint	42.000	0.140000	65

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
117.500	117.500	1	Low Profile Platform
117.500	117.500	6	DB980F65E-M
108.000	108.000	1	Low Profile Platform
108.000	108.000	6	742 351

Linear Appurtenance

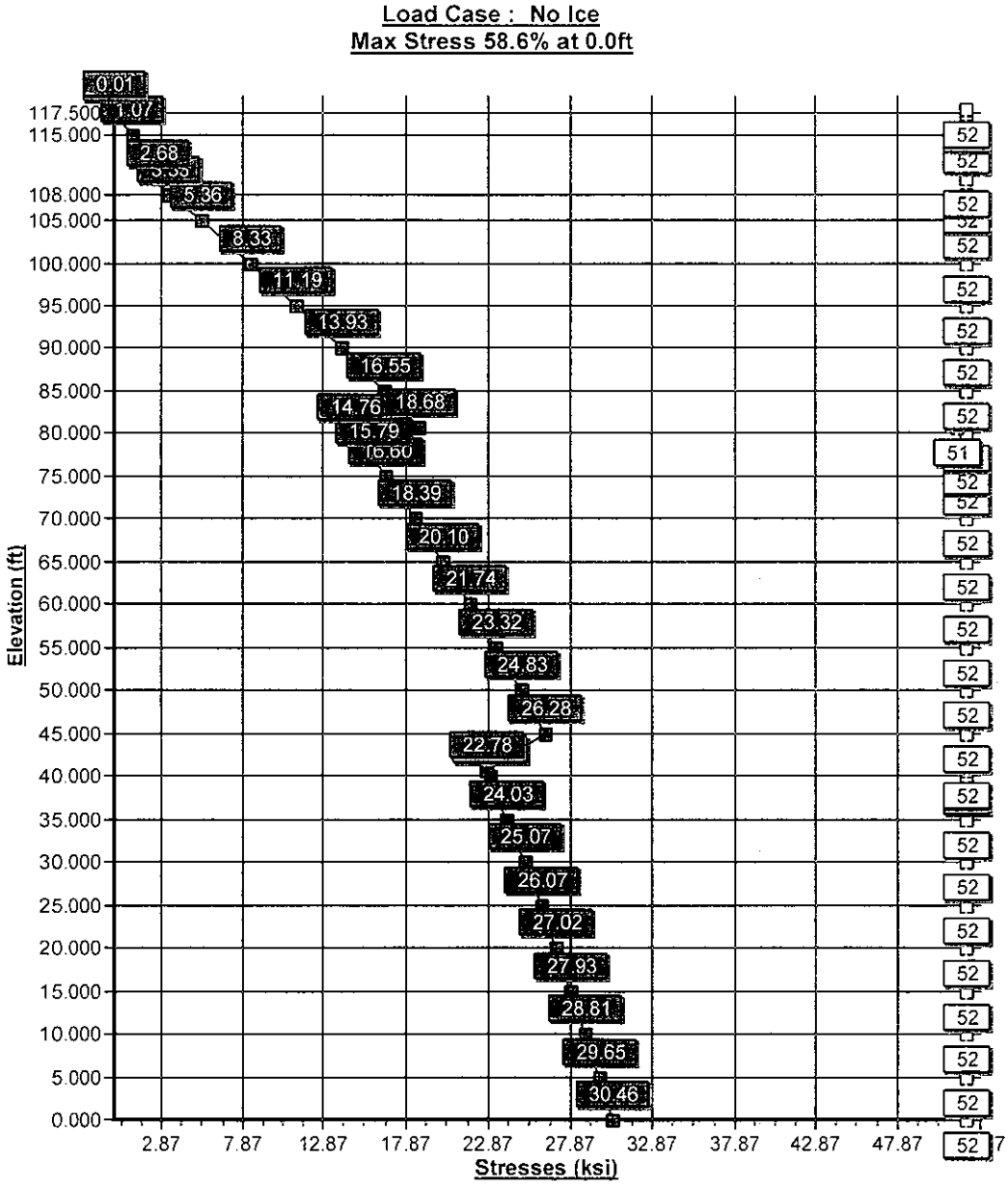
Elev (ft) From	To	Description	Exposed To Wind
0.000	108.0	1 5/8" Coax	No
0.000	117.5	1 5/8" Coax	No

Load Cases

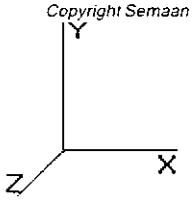
No Ice	85.00 mph Wind with No Ice
Ice	73.61 mph Wind with Ice

Reactions

Load Case	Moment (Kip-ft)	Shear (Kips)	Axial (Kips)
No Ice	913.90	11.26	16.26
Ice	736.13	8.91	19.84


Load Case : No Ice
Max Stress 58.6% at 0.0ft
Elevation (ft)
117.500
115.000
108.000
105.000
100.000
95.000
90.000
85.000
80.000
75.000
70.000
65.000
60.000
55.000
50.000
45.000
40.000
35.000
30.000
25.000
20.000
15.000
10.000
5.000
0.000
0.01
1.07
2.68
5.36
8.33
11.19
13.93
16.55
18.68
14.76
15.79
18.39
20.10
21.74
23.32
24.83
26.28
22.78
24.03
25.07
26.07
27.02
27.93
28.81
29.65
30.46
52
51
2.87
7.87
12.87
17.87
22.87
27.87
32.87
37.87
42.87
47.87
Stresses (ksi)

Pole :	CT2019	Code: TIA/EIA-222 Rev F	
Location :	Groton, CT		
Height :	118.0 (ft)		
Shape :	18 Sides		
Base Dia :	38.94 (in)		
Top Dia :	23.29 (in)		
Taper :	0.140000 (in/ft)	Base Elev : 0.000 (ft)	



Shaft Section Properties

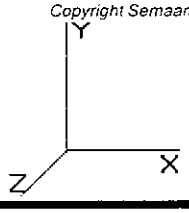
Sect Num	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint Len (in)	Weight (lb)	Bottom Dia (in)	Bottom Elev (ft)	Bottom Area (sqin)	Bottom Ix (in^4)	Bottom W/t Ratio	Bottom D/t Ratio	Top Dia (in)	Top Elev (ft)	Top Area (sqin)	Top Ix (in^4)	Top W/t Ratio	Top D/t Ratio	Taper (in/ft)
1	45.000	0.3125	65		0.00	5,389	38.94	0.000	38.32	7224.1	20.56	124.6	32.64	45.00	32.07	4234.7	17.01	104.46	0.14000
2	40.000	0.2500	65	Slip Joint	51.00	3,314	33.73	40.75	26.57	3764.9	22.38	134.9	28.13	80.75	22.13	2174.4	18.44	112.55	0.14000
3	40.750	0.1875	65	Slip Joint	42.00	2,142	29.00	77.25	17.15	1799.0	25.86	154.6	23.29	118.0	13.75	928.0	20.50	124.26	0.14000
				Shaft Weight		10,845													

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice CaAa (sf)	No Ice CaAa Factor	Ice Weight (lb)	Ice CaAa (sf)	Ice CaAa Factor	Distance From Face (ft)	Vert Ecc (ft)
117.5	Low Profile Platform	1	1600.00	25.550	1.00	2100.00	27.320	1.00	0.000	0.000
117.5	DB980F65E-M	6	9.50	3.750	0.75	29.85	4.320	0.75	0.000	0.000
108.0	Low Profile Platform	1	1600.00	25.550	1.00	2100.00	27.320	1.00	0.000	0.000
108.0	742 351	6	29.80	5.885	0.61	57.10	6.508	0.61	0.000	0.000
	Totals	14	3435.80			4721.70			Number of Loadings :	4

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	No Ice Weight (lb/ft)	No Ice CaAa (sf/ft)	Ice Weight (lb/ft)	Ice CaAa (sf/ft)	Exposed To Wind
0.00	117.50	(6) 1 5/8" Coax	6.00	0.00	6.00	0.00	N
0.00	108.00	(12) 1 5/8" Coax	12.00	0.00	12.00	0.00	N
		Total Weight	2,001.00 (lb)		2,001.00 (lb)		



Segment Properties

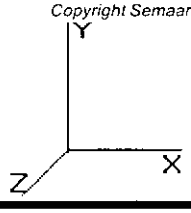
(Max Len : 5 ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fy (ksi)	Fb (ksi)	Weight (lb)
0.00		0.3125	38.943	38.315	7,224.1	20.56	124.62	65	52	0.0
5.00		0.3125	38.243	37.621	6,838.4	20.17	122.38	65	52	646.0
10.00		0.3125	37.543	36.927	6,466.8	19.77	120.14	65	52	634.2
15.00		0.3125	36.843	36.232	6,108.8	19.38	117.90	65	52	622.4
20.00		0.3125	36.143	35.538	5,764.3	18.98	115.66	65	52	610.5
25.00		0.3125	35.443	34.844	5,433.1	18.59	113.42	65	52	598.7
30.00		0.3125	34.743	34.149	5,114.7	18.19	111.18	65	52	586.9
35.00		0.3125	34.043	33.455	4,809.0	17.80	108.94	65	52	575.1
40.00		0.3125	33.343	32.761	4,515.8	17.40	106.70	65	52	563.3
40.75	Bot - Section 2	0.3125	33.238	32.657	4,472.9	17.34	106.36	65	52	83.5
45.00	Top - Section 1	0.2500	33.143	26.100	3,567.7	21.97	132.57	65	52	848.9
50.00		0.2500	32.443	25.544	3,344.8	21.47	129.77	65	52	439.3
55.00		0.2500	31.743	24.989	3,131.3	20.98	126.97	65	52	429.9
60.00		0.2500	31.043	24.433	2,927.1	20.48	124.17	65	52	420.4
65.00		0.2500	30.343	23.878	2,732.0	19.99	121.37	65	52	411.0
70.00		0.2500	29.643	23.322	2,545.7	19.50	118.57	65	52	401.5
75.00		0.2500	28.943	22.767	2,368.1	19.00	115.77	65	52	392.1
77.25	Bot - Section 3	0.2500	28.628	22.517	2,291.0	18.78	114.51	65	52	173.4
80.00		0.2500	28.243	22.212	2,199.0	18.51	112.97	65	52	368.7
80.75	Top - Section 2	0.1875	28.513	16.857	1,708.7	25.40	152.07	65	51	99.7
85.00		0.1875	27.918	16.502	1,603.3	24.84	148.90	65	52	241.2
90.00		0.1875	27.218	16.086	1,484.9	24.19	145.16	65	52	277.2
95.00		0.1875	26.518	15.669	1,372.5	23.53	141.43	65	52	270.1
100.0		0.1875	25.818	15.253	1,265.9	22.87	137.70	65	52	263.1
105.0		0.1875	25.118	14.836	1,165.0	22.21	133.96	65	52	256.0
108.0		0.1875	24.698	14.586	1,107.1	21.82	131.72	65	52	150.2
110.0		0.1875	24.418	14.420	1,069.6	21.55	130.23	65	52	98.7
115.0		0.1875	23.718	14.003	979.6	20.89	126.50	65	52	241.8
117.5		0.1875	23.368	13.795	936.5	20.56	124.63	65	52	118.2
118.0		0.1875	23.298	13.753	928.0	20.50	124.26	65	52	23.4
										10,845.3

Pole : CT2019
Location : Groton, CT
Height : 118.0 (ft)
Shape : 18 Sides
Base Dia : 38.94 (in)
Top Dia : 23.29 (in)
Taper : 0.140000 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



Load Case: No Ice — 85.00 mph Wind with No Ice — 24 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

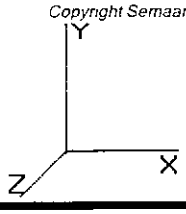
Shaft Segment Forces

Seg Top Elev (ft)	Description		Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		0.00	1.00	18.496	31.25	275.84	0.650	0.00	0.00	0.000	0.00	0.0	0.0	0.0
5.00		0.00	1.00	18.496	31.25	270.88	0.650	0.00	5.00	16.080	10.45	326.7	0.0	646.0
10.00		0.00	1.00	18.496	31.25	265.92	0.650	0.00	5.00	15.789	10.26	320.8	0.0	634.2
15.00		0.00	1.00	18.496	31.25	260.97	0.650	0.00	5.00	15.497	10.07	314.9	0.0	622.4
20.00		0.00	1.00	18.496	31.25	256.01	0.650	0.00	5.00	15.205	9.88	308.9	0.0	610.5
25.00		0.00	1.00	18.496	31.25	251.05	0.650	0.00	5.00	14.914	9.69	303.0	0.0	598.7
30.00		0.00	1.00	18.496	31.25	246.09	0.650	0.00	5.00	14.622	9.50	297.1	0.0	586.9
35.00		0.00	1.01	18.810	31.78	243.17	0.650	0.00	5.00	14.330	9.31	296.1	0.0	575.1
40.00		0.00	1.05	19.541	33.02	242.76	0.650	0.00	5.00	14.039	9.13	301.4	0.0	563.3
40.75	Bot - Section 2	0.00	1.06	19.645	33.20	242.63	0.650	0.00	0.75	2.081	1.35	44.9	0.0	83.5
45.00	Top - Section 1	0.00	1.09	20.210	34.15	241.69	0.650	0.00	4.25	11.843	7.70	262.9	0.0	848.9
50.00		0.00	1.12	20.827	35.19	243.85	0.650	0.00	5.00	13.664	8.88	312.6	0.0	439.3
55.00		0.00	1.15	21.402	36.17	241.86	0.650	0.00	5.00	13.372	8.69	314.4	0.0	429.9
60.00		0.00	1.18	21.941	37.08	239.49	0.650	0.00	5.00	13.080	8.50	315.3	0.0	420.4
65.00		0.00	1.21	22.449	37.93	236.78	0.650	0.00	5.00	12.789	8.31	315.4	0.0	411.0
70.00		0.00	1.24	22.929	38.75	233.78	0.650	0.00	5.00	12.497	8.12	314.8	0.0	401.5
75.00		0.00	1.26	23.386	39.52	230.52	0.650	0.00	5.00	12.205	7.93	313.5	0.0	392.1
77.25	Bot - Section 3	0.00	1.27	23.584	39.85	228.97	0.650	0.00	2.25	5.397	3.51	139.8	0.0	173.4
80.00		0.00	1.28	23.821	40.25	227.03	0.650	0.00	2.75	6.602	4.29	172.8	0.0	368.7
80.75	Top - Section 2	0.00	1.29	23.884	40.36	226.48	0.650	0.00	0.75	1.785	1.16	46.8	0.0	99.7
85.00		0.00	1.31	24.237	40.96	226.37	0.650	0.00	4.25	9.993	6.50	266.1	0.0	241.2
90.00		0.00	1.33	24.636	41.63	222.50	0.650	0.00	5.00	11.487	7.47	310.9	0.0	277.2
95.00		0.00	1.35	25.020	42.28	218.46	0.650	0.00	5.00	11.195	7.28	307.7	0.0	270.1
100.0		0.00	1.37	25.389	42.90	214.26	0.650	0.00	5.00	10.903	7.09	304.1	0.0	263.1
105.0		0.00	1.39	25.745	43.51	209.90	0.650	0.00	5.00	10.612	6.90	300.1	0.0	256.0
108.0	Appertunance(s)	0.00	1.40	25.953	43.86	207.23	0.650	0.00	3.00	6.227	4.05	177.5	0.0	150.2
110.0		0.00	1.41	26.090	44.09	205.42	0.650	0.00	2.00	4.093	2.66	117.3	0.0	98.7
115.0		0.00	1.42	26.423	44.65	200.80	0.650	0.00	5.00	10.028	6.52	291.1	0.0	241.8
117.5	Appertunance(s)	0.00	1.43	26.586	44.93	198.44	0.650	0.00	2.50	4.905	3.19	143.2	0.0	118.2
118.0		0.00	1.43	26.618	44.98	197.97	0.650	0.00	0.50	0.972	0.63	28.4	0.0	23.4
							Totals:		118.00			7,268.5	0.0	10,845.3

Pole : CT2019
Location : Groton, CT
Height : 118.0 (ft)
Shape : 18 Sides
Base Dia : 38.94 (in)
Top Dia : 23.29 (in)
Taper : 0.140000 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)

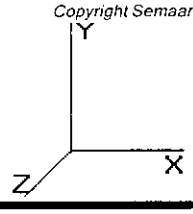


Load Case: No Ice — 85.00 mph Wind with No Ice — 24 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Discrete Appurtenance Segment Forces

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Total CaAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
108.0	Low Profile Platform	1	25.953	43.861	1.00	25.55	0.000	0.000	1,120.66	0.00	0.00	1,600.00
108.0	742 351	6	25.953	43.861	0.61	21.54	0.000	0.000	944.73	0.00	0.00	178.80
117.5	Low Profile Platform	1	26.586	44.931	1.00	25.55	0.000	0.000	1,147.98	0.00	0.00	1,600.00
117.5	DB980F65E-M	6	26.586	44.931	0.75	16.88	0.000	0.000	758.20	0.00	0.00	57.00
									3,971.57			3,435.80



Load Case: No Ice — 85.00 mph Wind with No Ice — 24 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

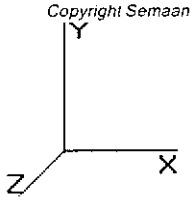
Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	326.72	735.98	0.00	0.00
10.00	320.79	724.17	0.00	0.00
15.00	314.87	712.36	0.00	0.00
20.00	308.94	700.55	0.00	0.00
25.00	303.01	688.73	0.00	0.00
30.00	297.09	676.92	0.00	0.00
35.00	296.10	665.11	0.00	0.00
40.00	301.35	653.30	0.00	0.00
40.75	44.90	96.98	0.00	0.00
45.00	262.93	925.37	0.00	0.00
50.00	312.61	529.33	0.00	0.00
55.00	314.38	519.88	0.00	0.00
60.00	315.27	510.43	0.00	0.00
65.00	315.37	500.98	0.00	0.00
70.00	314.77	491.53	0.00	0.00
75.00	313.54	482.08	0.00	0.00
77.25	139.83	213.85	0.00	0.00
80.00	172.77	418.17	0.00	0.00
80.75	46.84	113.18	0.00	0.00
85.00	266.06	317.72	0.00	0.00
90.00	310.86	367.23	0.00	0.00
95.00	307.68	360.14	0.00	0.00
100.0	304.09	353.05	0.00	0.00
105.0	300.11	345.96	0.00	0.00
108.0	2,242.92	1,982.98	0.00	0.00
110.0	117.30	110.70	0.00	0.00
115.0	291.08	271.79	0.00	0.00
117.5	2,049.43	1,790.24	0.00	0.00
118.0	28.43	23.43	0.00	0.00
Totals:	11,240.05	16,282.13	0.00	0.00

Pole : CT2019
Location : Groton, CT
Height : 118.0 (ft)
Shape : 18 Sides
Base Dia : 38.94 (in)
Top Dia : 23.29 (in)
Taper : 0.140000 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)

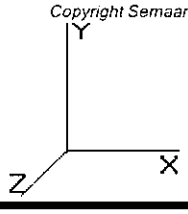


Load Case: No Ice — 85.00 mph Wind with No Ice — 24 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Calculated Shaft Forces and Deflections

Seg Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	X Deflect (in)	Z Deflect (in)	Total Deflect (in)	Rotation (deg)
0.00	-11.265	-16.265	0.000	0.000	0.000	-913.900	0.000	0.000	0.000	0.000
5.00	-10.984	-15.496	0.000	0.000	0.000	-857.577	-0.094	0.000	0.094	-0.174
10.00	-10.704	-14.741	0.000	0.000	0.000	-802.657	-0.369	0.000	0.369	-0.347
15.00	-10.425	-14.000	0.000	0.000	0.000	-749.137	-0.824	0.000	0.824	-0.518
20.00	-10.148	-13.274	0.000	0.000	0.000	-697.011	-1.456	0.000	1.456	-0.686
25.00	-9.872	-12.561	0.000	0.000	0.000	-646.273	-2.264	0.000	2.264	-0.852
30.00	-9.597	-11.862	0.000	0.000	0.000	-596.915	-3.244	0.000	3.244	-1.015
35.00	-9.319	-11.177	0.000	0.000	0.000	-548.931	-4.392	0.000	4.392	-1.174
40.00	-9.020	-10.517	0.000	0.000	0.000	-502.338	-5.705	0.000	5.705	-1.329
40.75	-8.986	-10.409	0.000	0.000	0.000	-495.573	-5.916	0.000	5.916	-1.353
45.00	-8.723	-9.469	0.000	0.000	0.000	-457.381	-7.179	0.000	7.179	-1.482
50.00	-8.421	-8.925	0.000	0.000	0.000	-413.765	-8.809	0.000	8.809	-1.628
55.00	-8.115	-8.392	0.000	0.000	0.000	-371.660	-10.605	0.000	10.605	-1.795
60.00	-7.805	-7.871	0.000	0.000	0.000	-331.084	-12.571	0.000	12.571	-1.955
65.00	-7.491	-7.362	0.000	0.000	0.000	-292.060	-14.700	0.000	14.700	-2.106
70.00	-7.174	-6.866	0.000	0.000	0.000	-254.607	-16.982	0.000	16.982	-2.249
75.00	-6.852	-6.386	0.000	0.000	0.000	-218.737	-19.408	0.000	19.408	-2.381
77.25	-6.710	-6.171	0.000	0.000	0.000	-203.320	-20.544	0.000	20.544	-2.438
80.00	-6.523	-5.756	0.000	0.000	0.000	-184.869	-21.968	0.000	21.968	-2.504
80.75	-6.477	-5.638	0.000	0.000	0.000	-179.977	-22.363	0.000	22.363	-2.522
85.00	-6.207	-5.321	0.000	0.000	0.000	-152.450	-24.650	0.000	24.650	-2.614
90.00	-5.889	-4.957	0.000	0.000	0.000	-121.415	-27.454	0.000	27.454	-2.736
95.00	-5.572	-4.604	0.000	0.000	0.000	-91.969	-30.375	0.000	30.375	-2.838
100.0	-5.255	-4.260	0.000	0.000	0.000	-64.111	-33.392	0.000	33.392	-2.919
105.0	-4.940	-3.927	0.000	0.000	0.000	-37.835	-36.481	0.000	36.481	-2.976
108.0	-2.598	-2.063	0.000	0.000	0.000	-23.014	-38.359	0.000	38.359	-2.998
110.0	-2.475	-1.958	0.000	0.000	0.000	-17.818	-39.617	0.000	39.617	-3.009
115.0	-2.171	-1.701	0.000	0.000	0.000	-5.441	-42.776	0.000	42.776	-3.024
117.5	-0.030	-0.022	0.000	0.000	0.000	-0.015	-44.360	0.000	44.360	-3.026
118.0	-0.028	0.000	0.000	0.000	0.000	0.000	-44.677	0.000	44.677	-3.026



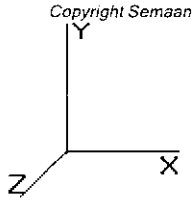
Load Case: No Ice — 85.00 mph Wind with No Ice — 24 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Calculated Stresses

Seg Elev (ft)	Applied Stresses: Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)	Allowable Stress (Fb) (ksi)		Stress Ratio
0.00	0.42	0.59	0.00	0.00	0.00	30.02	30.46	52.0	0.0	0.586
5.00	0.41	0.59	0.00	0.00	0.00	29.22	29.65	52.0	0.0	0.570
10.00	0.40	0.58	0.00	0.00	0.00	28.39	28.81	52.0	0.0	0.554
15.00	0.39	0.58	0.00	0.00	0.00	27.53	27.93	52.0	0.0	0.537
20.00	0.37	0.58	0.00	0.00	0.00	26.63	27.02	52.0	0.0	0.520
25.00	0.36	0.57	0.00	0.00	0.00	25.69	26.07	52.0	0.0	0.501
30.00	0.35	0.57	0.00	0.00	0.00	24.70	25.07	52.0	0.0	0.482
35.00	0.33	0.56	0.00	0.00	0.00	23.67	24.03	52.0	0.0	0.462
40.00	0.32	0.55	0.00	0.00	0.00	22.60	22.94	52.0	0.0	0.441
40.75	0.32	0.55	0.00	0.00	0.00	22.44	22.78	52.0	0.0	0.438
45.00	0.36	0.67	0.00	0.00	0.00	25.89	26.28	52.0	0.0	0.506
50.00	0.35	0.66	0.00	0.00	0.00	24.45	24.83	52.0	0.0	0.478
55.00	0.34	0.65	0.00	0.00	0.00	22.95	23.32	52.0	0.0	0.449
60.00	0.32	0.64	0.00	0.00	0.00	21.39	21.74	52.0	0.0	0.418
65.00	0.31	0.63	0.00	0.00	0.00	19.76	20.10	52.0	0.0	0.387
70.00	0.29	0.62	0.00	0.00	0.00	18.06	18.39	52.0	0.0	0.354
75.00	0.28	0.61	0.00	0.00	0.00	16.29	16.60	52.0	0.0	0.319
77.25	0.27	0.60	0.00	0.00	0.00	15.48	15.79	52.0	0.0	0.304
80.00	0.26	0.59	0.00	0.00	0.00	14.47	14.76	52.0	0.0	0.284
80.75	0.33	0.77	0.00	0.00	0.00	18.30	18.68	51.5	0.0	0.363
85.00	0.32	0.76	0.00	0.00	0.00	16.17	16.55	51.9	0.0	0.319
90.00	0.31	0.74	0.00	0.00	0.00	13.56	13.93	52.0	0.0	0.268
95.00	0.29	0.72	0.00	0.00	0.00	10.83	11.19	52.0	0.0	0.215
100.00	0.28	0.69	0.00	0.00	0.00	7.97	8.33	52.0	0.0	0.160
105.00	0.26	0.67	0.00	0.00	0.00	4.97	5.36	52.0	0.0	0.103
108.00	0.14	0.36	0.00	0.00	0.00	3.13	3.33	52.0	0.0	0.064
110.00	0.14	0.35	0.00	0.00	0.00	2.48	2.68	52.0	0.0	0.052
115.00	0.12	0.31	0.00	0.00	0.00	0.80	1.07	52.0	0.0	0.021
117.50	0.00	0.00	0.00	0.00	0.00	0.00	0.01	52.0	0.0	0.000
118.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	52.0	0.0	0.000

Pole :	CT2019	Code: TIA/EIA-222 Rev F	
Location :	Groton, CT		1/7/2009 3:03:38 PM
Height :	118.0 (ft)		
Shape :	18 Sides		
Base Dia :	38.94 (in)		
Top Dia :	23.29 (in)		
Taper :	0.140000 (in/ft)	Base Elev : 0.000 (ft)	



Load Case: Ice — 73.61 mph Wind with Ice — 24 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

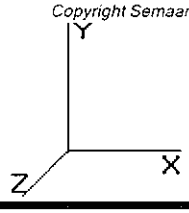
Shaft Segment Forces

Seg Top Elev (ft)	Description		Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		0.00	1.00	13.871	23.44	238.88	0.650	0.50	0.00	0.000	0.00	0.0	0.0	0.0
5.00		0.00	1.00	13.871	23.44	234.58	0.650	0.50	5.00	16.497	10.72	251.4	119.5	765.5
10.00		0.00	1.00	13.871	23.44	230.29	0.650	0.50	5.00	16.205	10.53	246.9	117.4	751.6
15.00		0.00	1.00	13.871	23.44	226.00	0.650	0.50	5.00	15.914	10.34	242.5	115.2	737.6
20.00		0.00	1.00	13.871	23.44	221.70	0.650	0.50	5.00	15.622	10.15	238.0	113.1	723.6
25.00		0.00	1.00	13.871	23.44	217.41	0.650	0.50	5.00	15.330	9.96	233.6	110.9	709.6
30.00		0.00	1.00	13.871	23.44	213.11	0.650	0.50	5.00	15.039	9.78	229.2	108.7	695.7
35.00		0.00	1.01	14.106	23.84	210.58	0.650	0.50	5.00	14.747	9.59	228.5	106.6	681.7
40.00		0.00	1.05	14.655	24.76	210.22	0.650	0.50	5.00	14.455	9.40	232.7	104.4	667.7
40.75	Bot - Section 2	0.00	1.06	14.733	24.89	210.12	0.650	0.50	0.75	2.143	1.39	34.7	15.6	99.1
45.00	Top - Section 1	0.00	1.09	15.156	25.61	209.30	0.650	0.50	4.25	12.198	7.93	203.1	88.2	937.1
50.00		0.00	1.12	15.620	26.39	211.18	0.650	0.50	5.00	14.080	9.15	241.6	101.7	541.0
55.00		0.00	1.15	16.051	27.12	209.45	0.650	0.50	5.00	13.789	8.96	243.1	99.5	529.4
60.00		0.00	1.18	16.455	27.80	207.40	0.650	0.50	5.00	13.497	8.77	244.0	97.3	517.8
65.00		0.00	1.21	16.836	28.45	205.05	0.650	0.50	5.00	13.205	8.58	244.2	95.2	506.2
70.00		0.00	1.24	17.196	29.06	202.45	0.650	0.50	5.00	12.914	8.39	243.9	93.0	494.5
75.00		0.00	1.26	17.538	29.63	199.63	0.650	0.50	5.00	12.622	8.20	243.2	90.9	482.9
77.25	Bot - Section 3	0.00	1.27	17.687	29.89	198.29	0.650	0.50	2.25	5.585	3.63	108.5	40.4	213.8
80.00		0.00	1.28	17.865	30.19	196.60	0.650	0.50	2.75	6.832	4.44	134.1	49.4	418.1
80.75	Top - Section 2	0.00	1.29	17.912	30.27	196.14	0.650	0.50	0.75	1.848	1.20	36.4	13.4	113.1
85.00		0.00	1.31	18.177	30.71	196.03	0.650	0.50	4.25	10.347	6.73	206.6	74.5	315.8
90.00		0.00	1.33	18.476	31.22	192.68	0.650	0.50	5.00	11.903	7.74	241.6	85.5	362.8
95.00		0.00	1.35	18.764	31.71	189.18	0.650	0.50	5.00	11.612	7.55	239.3	83.4	353.5
100.0		0.00	1.37	19.041	32.17	185.54	0.650	0.50	5.00	11.320	7.36	236.8	81.2	344.3
105.0		0.00	1.39	19.308	32.63	181.78	0.650	0.50	5.00	11.028	7.17	233.9	79.0	335.0
108.0	Appertunance(s)	0.00	1.40	19.464	32.89	179.46	0.650	0.50	3.00	6.477	4.21	138.5	46.7	196.8
110.0		0.00	1.41	19.566	33.06	177.89	0.650	0.50	2.00	4.260	2.77	91.6	30.8	129.5
115.0		0.00	1.42	19.816	33.49	173.89	0.650	0.50	5.00	10.445	6.79	227.4	74.7	316.5
117.5	Appertunance(s)	0.00	1.43	19.938	33.69	171.85	0.650	0.50	2.50	5.113	3.32	112.0	36.8	155.1
118.0		0.00	1.43	19.963	33.73	171.44	0.650	0.50	0.50	1.014	0.66	22.2	7.3	30.8
							Totals:		118.00			5,629.3	2,280.6	13,125.9

Pole : CT2019
Location : Groton, CT
Height : 118.0 (ft)
Shape : 18 Sides
Base Dia : 38.94 (in)
Top Dia : 23.29 (in)
Taper : 0.140000 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



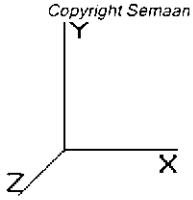
Load Case: Ice — 73.61 mph Wind with Ice — 24 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Discrete Appurtenance Segment Forces

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Total CaAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
108.0	Low Profile Platform	1	19.464	32.894	1.00	27.32	0.000	0.000	898.66	0.00	0.00	2,100.00
108.0	742 351	6	19.464	32.894	0.61	23.82	0.000	0.000	783.51	0.00	0.00	342.60
117.5	Low Profile Platform	1	19.938	33.696	1.00	27.32	0.000	0.000	920.57	0.00	0.00	2,100.00
117.5	DB980F65E-M	6	19.938	33.696	0.75	19.44	0.000	0.000	655.05	0.00	0.00	179.10
									3,257.80			4,721.70

Pole :	CT2019	Code: TIA/EIA-222 Rev F	
Location :	Groton, CT		
Height :	118.0 (ft)		
Shape :	18 Sides		
Base Dia :	38.94 (in)		
Top Dia :	23.29 (in)		
Taper :	0.140000 (in/ft)	Base Elev : 0.000 (ft)	



Load Case: Ice — 73.61 mph Wind with Ice — 24 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

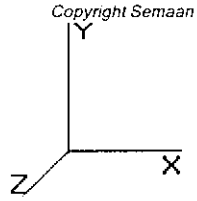
Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	251.37	855.53	0.00	0.00
10.00	246.93	841.56	0.00	0.00
15.00	242.48	827.59	0.00	0.00
20.00	238.04	813.62	0.00	0.00
25.00	233.60	799.64	0.00	0.00
30.00	229.15	785.67	0.00	0.00
35.00	228.52	771.70	0.00	0.00
40.00	232.71	757.73	0.00	0.00
40.75	34.68	112.59	0.00	0.00
45.00	203.08	1,013.61	0.00	0.00
50.00	241.59	630.98	0.00	0.00
55.00	243.12	619.37	0.00	0.00
60.00	243.97	607.76	0.00	0.00
65.00	244.22	596.15	0.00	0.00
70.00	243.93	584.54	0.00	0.00
75.00	243.17	572.93	0.00	0.00
77.25	108.51	254.30	0.00	0.00
80.00	134.06	467.59	0.00	0.00
80.75	36.36	126.61	0.00	0.00
85.00	206.60	392.25	0.00	0.00
90.00	241.59	452.76	0.00	0.00
95.00	239.34	443.51	0.00	0.00
100.0	236.77	434.26	0.00	0.00
105.0	233.91	425.01	0.00	0.00
108.0	1,820.66	2,693.43	0.00	0.00
110.0	91.55	141.46	0.00	0.00
115.0	227.37	346.52	0.00	0.00
117.5	1,687.61	2,449.16	0.00	0.00
118.0	22.23	30.78	0.00	0.00
Totals:	8,887.13	19,848.62	0.00	0.00

Pole : CT2019
Location : Groton, CT
Height : 118.0 (ft)
Shape : 18 Sides
Base Dia : 38.94 (in)
Top Dia : 23.29 (in)
Taper : 0.140000 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)

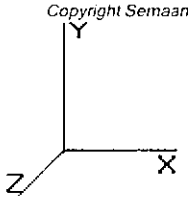


Load Case: Ice — 73.61 mph Wind with Ice — 24 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Calculated Shaft Forces and Deflections

Seg Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	X Deflect (in)	Z Deflect (in)	Total Deflect (in)	Rotation (deg)
0.00	-8.912	-19.837	0.000	0.000	0.000	-736.128	0.000	0.000	0.000	0.000
5.00	-8.706	-18.961	0.000	0.000	0.000	-691.571	-0.075	0.000	0.075	-0.141
10.00	-8.499	-18.100	0.000	0.000	0.000	-648.044	-0.297	0.000	0.297	-0.280
15.00	-8.293	-17.254	0.000	0.000	0.000	-605.549	-0.664	0.000	0.664	-0.418
20.00	-8.087	-16.423	0.000	0.000	0.000	-564.084	-1.175	0.000	1.175	-0.554
25.00	-7.881	-15.608	0.000	0.000	0.000	-523.650	-1.827	0.000	1.827	-0.688
30.00	-7.675	-14.808	0.000	0.000	0.000	-484.247	-2.619	0.000	2.619	-0.820
35.00	-7.466	-14.023	0.000	0.000	0.000	-445.871	-3.547	0.000	3.547	-0.949
40.00	-7.237	-13.261	0.000	0.000	0.000	-408.541	-4.609	0.000	4.609	-1.076
40.75	-7.214	-13.141	0.000	0.000	0.000	-403.114	-4.780	0.000	4.780	-1.095
45.00	-7.015	-12.118	0.000	0.000	0.000	-372.454	-5.802	0.000	5.802	-1.200
50.00	-6.785	-11.477	0.000	0.000	0.000	-337.382	-7.123	0.000	7.123	-1.319
55.00	-6.552	-10.849	0.000	0.000	0.000	-303.458	-8.578	0.000	8.578	-1.455
60.00	-6.315	-10.234	0.000	0.000	0.000	-270.698	-10.173	0.000	10.173	-1.586
65.00	-6.074	-9.632	0.000	0.000	0.000	-239.124	-11.900	0.000	11.900	-1.710
70.00	-5.830	-9.044	0.000	0.000	0.000	-208.756	-13.754	0.000	13.754	-1.826
75.00	-5.579	-8.472	0.000	0.000	0.000	-179.608	-15.725	0.000	15.725	-1.935
77.25	-5.469	-8.217	0.000	0.000	0.000	-167.055	-16.648	0.000	16.648	-1.982
80.00	-5.324	-7.751	0.000	0.000	0.000	-152.015	-17.806	0.000	17.806	-2.036
80.75	-5.289	-7.621	0.000	0.000	0.000	-148.022	-18.127	0.000	18.127	-2.051
85.00	-5.079	-7.229	0.000	0.000	0.000	-125.545	-19.987	0.000	19.987	-2.127
90.00	-4.832	-6.778	0.000	0.000	0.000	-100.148	-22.269	0.000	22.269	-2.227
95.00	-4.583	-6.338	0.000	0.000	0.000	-75.990	-24.648	0.000	24.648	-2.311
100.0	-4.335	-5.910	0.000	0.000	0.000	-53.073	-27.106	0.000	27.106	-2.378
105.0	-4.086	-5.493	0.000	0.000	0.000	-31.399	-29.624	0.000	29.624	-2.426
108.0	-2.154	-2.879	0.000	0.000	0.000	-19.140	-31.154	0.000	31.154	-2.444
110.0	-2.057	-2.741	0.000	0.000	0.000	-14.832	-32.180	0.000	32.180	-2.453
115.0	-1.815	-2.404	0.000	0.000	0.000	-4.549	-34.756	0.000	34.756	-2.466
117.5	-0.023	-0.030	0.000	0.000	0.000	-0.012	-36.047	0.000	36.047	-2.467
118.0	-0.022	0.000	0.000	0.000	0.000	0.000	-36.306	0.000	36.306	-2.467



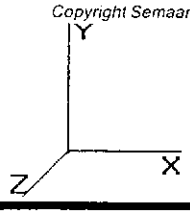
Load Case: Ice — 73.61 mph Wind with Ice — 24 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Calculated Stresses

Seg Elev (ft)	Applied Stresses Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)	Allowable Stress (Fb) (ksi)		Stress Ratio
0.00	0.52	0.47	0.00	0.00	0.00	24.18	24.71	52.0	0.0	0.475
5.00	0.50	0.47	0.00	0.00	0.00	23.56	24.08	52.0	0.0	0.463
10.00	0.49	0.46	0.00	0.00	0.00	22.92	23.43	52.0	0.0	0.451
15.00	0.48	0.46	0.00	0.00	0.00	22.25	22.74	52.0	0.0	0.438
20.00	0.46	0.46	0.00	0.00	0.00	21.55	22.02	52.0	0.0	0.424
25.00	0.45	0.46	0.00	0.00	0.00	20.81	21.28	52.0	0.0	0.409
30.00	0.43	0.45	0.00	0.00	0.00	20.04	20.49	52.0	0.0	0.394
35.00	0.42	0.45	0.00	0.00	0.00	19.23	19.66	52.0	0.0	0.378
40.00	0.40	0.45	0.00	0.00	0.00	18.38	18.80	52.0	0.0	0.362
40.75	0.40	0.45	0.00	0.00	0.00	18.25	18.67	52.0	0.0	0.359
45.00	0.46	0.54	0.00	0.00	0.00	21.08	21.56	52.0	0.0	0.415
50.00	0.45	0.54	0.00	0.00	0.00	19.94	20.41	52.0	0.0	0.393
55.00	0.43	0.53	0.00	0.00	0.00	18.74	19.20	52.0	0.0	0.369
60.00	0.42	0.52	0.00	0.00	0.00	17.49	17.93	52.0	0.0	0.345
65.00	0.40	0.51	0.00	0.00	0.00	16.18	16.61	52.0	0.0	0.320
70.00	0.39	0.50	0.00	0.00	0.00	14.81	15.22	52.0	0.0	0.293
75.00	0.37	0.49	0.00	0.00	0.00	13.37	13.77	52.0	0.0	0.265
77.25	0.36	0.49	0.00	0.00	0.00	12.72	13.11	52.0	0.0	0.252
80.00	0.35	0.48	0.00	0.00	0.00	11.90	12.27	52.0	0.0	0.236
80.75	0.45	0.63	0.00	0.00	0.00	15.05	15.54	51.5	0.0	0.302
85.00	0.44	0.62	0.00	0.00	0.00	13.32	13.80	51.9	0.0	0.266
90.00	0.42	0.61	0.00	0.00	0.00	11.18	11.65	52.0	0.0	0.224
95.00	0.40	0.59	0.00	0.00	0.00	8.94	9.40	52.0	0.0	0.181
100.00	0.39	0.57	0.00	0.00	0.00	6.59	7.05	52.0	0.0	0.136
105.00	0.37	0.56	0.00	0.00	0.00	4.12	4.60	52.0	0.0	0.088
108.00	0.20	0.30	0.00	0.00	0.00	2.60	2.85	52.0	0.0	0.055
110.00	0.19	0.29	0.00	0.00	0.00	2.06	2.31	52.0	0.0	0.044
115.00	0.17	0.26	0.00	0.00	0.00	0.67	0.96	52.0	0.0	0.018
117.50	0.00	0.00	0.00	0.00	0.00	0.00	0.01	52.0	0.0	0.000
118.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	52.0	0.0	0.000

Pole :	CT2019	Code: TIA/EIA-222 Rev F	
Location :	Groton, CT		
Height :	118.0 (ft)		
Shape :	18 Sides		
Base Dia :	38.94 (in)		
Top Dia :	23.29 (in)		
Taper :	0.140000 (in/ft)	Base Elev : 0.000 (ft)	



Analysis Summary

	Reactions						Max Stresses			
Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Combined Stress (ksi)	Allowable Stress (ksi)	Elev (ft)	Stress Ratio
No Ice	11.3	0.00	16.26	0.00	0.00	913.90	30.46	52.0	0.00	0.586
Ice	8.9	0.00	19.84	0.00	0.00	736.13	24.71	52.0	0.00	0.475