

EM-POCKET-066-081208

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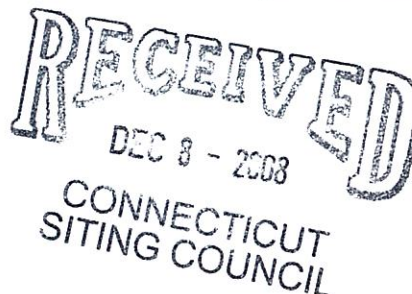
www.pullcom.com

ORIGINAL

December 5, 2008

Via Federal Express

S. Derek Phelps, Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051



Re: Notice of Exempt Modification
American Tower Corporation Telecommunications Facility
159 Weingart Road, Harwinton, Connecticut

Dear Mr. Phelps:

Youghiogheny Communications-Northeast, LLC, doing business as Pocket Communications ("Pocket"), intends to install antennas and appurtenant equipment at the existing 185-foot monopole facility owned by American Tower Corporation and located at 159 Weingart Road, Harwinton, Connecticut ("Facility"). Pocket Communications provides prepaid, flat rate wireless voice and data services to more than a quarter of a million subscribers. Pocket is licensed by the Federal Communications Commission (FCC) to provide PCS wireless telecommunications service in the State of Connecticut, which includes the area to be served by the proposed installation. This installation constitutes an exempt modification pursuant to the Public Utility Environmental Standards Act, Connecticut General Statutes Section 16-50g et. seq. (PUESA), and Section 16-50j-72(b)(2) of the Regulations of the Connecticut State Agencies adopted pursuant to PUESA. In accordance with R.C.S.A. Section 16-50j-73, a copy of this notice has been sent to Frank Chiaramonte, First Selectman, Town of Harwinton.

The existing Facility consists of a 185-foot self-supporting monopole tower capable of supporting multiple carriers within a fenced compound. The coordinates for the Facility are **Lat: 41°-47'-16" and Long: 73°-05'-33"**. The tower is located in the western portion of Harwinton, approximately 300 feet east of Weingart Road and roughly 4,200 feet west of Route 8 (see Site Map, attached as Exhibit A). The tower currently supports Verizon antennas at the one hundred seventy five foot (175') level centerline AGL (above ground level), and AT&T antennas at the one hundred eighty five foot level (185') AGL. Pocket proposes to install three RFS APXV18-206517S-C flush mount antennas on the tower at the one hundred sixty five foot centerline (165') AGL, and a Nortel CDMA Micro BTS 3231 cabinet, mounted on an "H-Frame," contained within a six foot by six foot (6'-0" x 6'-0") lease area. A small GPS antenna will be mounted to an ice bridge which will run from the lease area to the tower. Utilities will be run via

Page 2

a proposed underground conduit from an existing utility backboard, within the compound (See Design Drawings and Equipment Specifications, attached as Exhibits B and C respectively).

For the following reasons, the proposed modifications to the Weingart Road Facility meet the exempt modification criteria set forth in R.C.S.A. Section 16-50j-72(b)(2):

1. The proposed modification will not increase the height of the tower as Pocket's antennas will be installed at a center line height of approximately 165 feet.
2. The installation of Pocket's equipment and shelter will not require an extension of the site boundaries.
3. The proposed modifications will not increase the noise levels at the existing Facility by six decibels or more.
4. The operation of the additional antennas will not increase the total radio frequency (RF) power density, measured at the site boundary, to a level at 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 worst-case RF power density calculations for the proposed Pocket antennas would be 16.26% of the FCC standard (see general power density calculations table, attached as Exhibit D).

Also attached, Exhibit E, is a structural analysis confirming that the tower can support the existing and proposed antennas and associated equipment.

For the foregoing reasons, Pocket respectfully submits that the proposed antenna installation and equipment at the Harwinton Facility constitutes an exempt modification under R.C.S.A. Section 16-50j-72(b)(2).

Respectfully Submitted,



Carrie L. Larson

cc: Frank Chiaramonte, First Selectman
Jamie and Dorothy Clemente, underlying property owner

Exhibit A

Site Map

Pocket Site NHCT0203A

159 Weingart Road

Harwinton, Connecticut

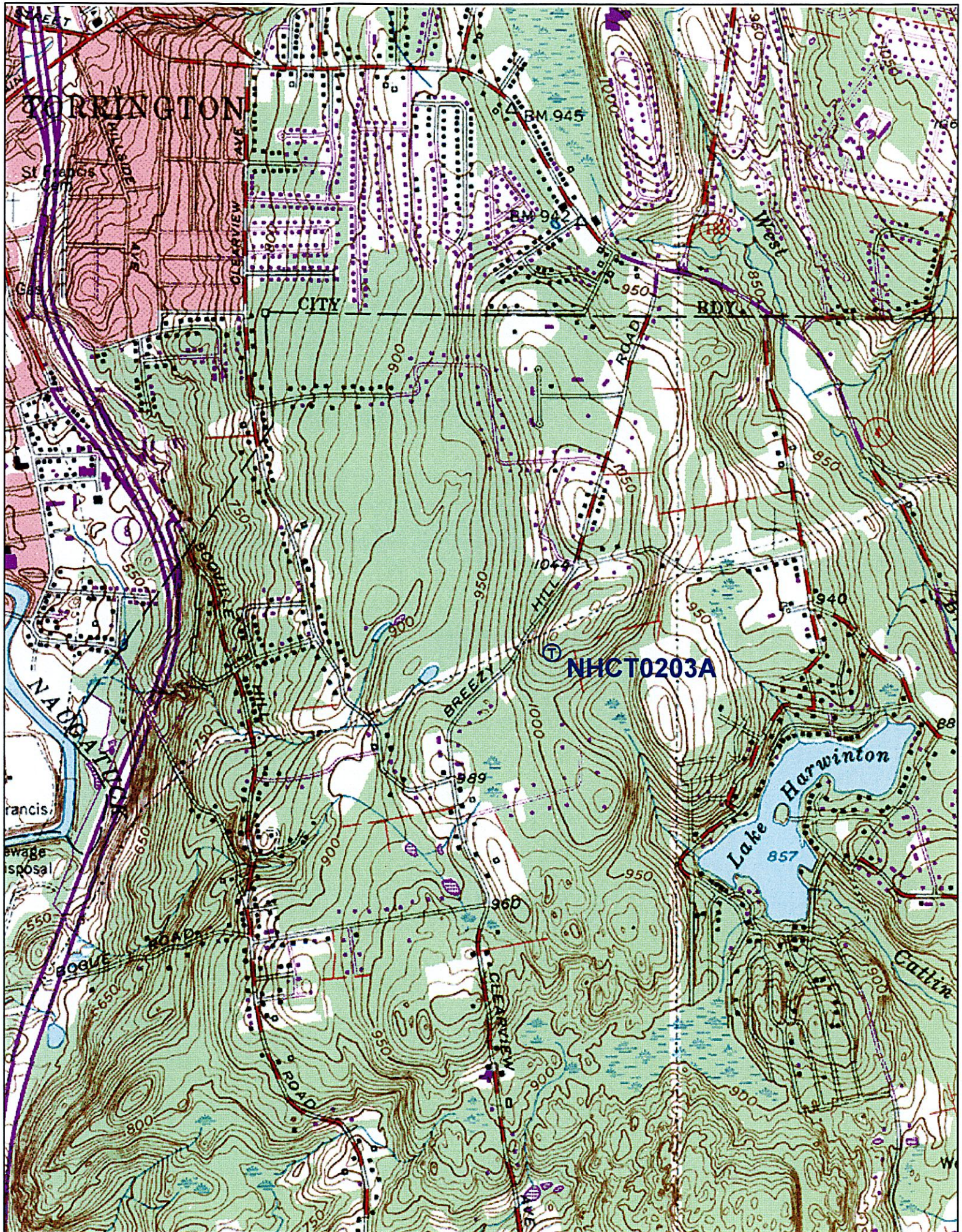


Exhibit B

Design Drawings

Pocket Site NHCT0203A

159 Weingart Road

Harwinton, Connecticut

A-1



THIS DOCUMENT IS THE CREATION, DESIGN,
PROPERTY AND COMPROMISED WORK OF
SOCIETY FOR HUMAN RIGHTS AND
SOCIETY FOR HUMAN RIGHTS AND

DISSEMINATION AND USE BY COMMERCE
AGENCIES FOR THE PURPOSES OF
CONDUCTING THEIR LAWFULLY AUTHORIZED

DATE	DESCRIPTION	AMOUNT
1/1/20	Initial deposit	100.00
1/15/20	Withdrawal	25.00
2/1/20	Deposit	50.00
2/15/20	Withdrawal	10.00
3/1/20	Deposit	75.00
3/15/20	Withdrawal	30.00
4/1/20	Deposit	100.00
4/15/20	Withdrawal	40.00
5/1/20	Deposit	125.00
5/15/20	Withdrawal	50.00
6/1/20	Deposit	150.00
6/15/20	Withdrawal	60.00
7/1/20	Deposit	175.00
7/15/20	Withdrawal	70.00
8/1/20	Deposit	200.00
8/15/20	Withdrawal	80.00
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9/15/20	Withdrawal	90.00
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10/15/20	Withdrawal	100.00
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9/15/21	Withdrawal	210.00
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2/15/24	Withdrawal	500.00
3/1/24	Deposit	1275.00
3/15/24	Withdrawal	510.00
4/1/24	Deposit	1300.00
4/1		

DRAWN BY: **OFR**

ASSIGNED BY:	FILE

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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B	10/15/06	ISSUED FOR REVIEW
A	10/07/06	ISSUED FOR REVIEW

ALL INFORMATION CONTAINED
HEREIN IS UNCLASSIFIED

MONOPOLE

14770-15, 2001 (10/2001)

TOWER ELEVATION
% OF SYSTEM

1000

A-2

ANTENNA PER SECTOR	ANTENNA NUMBER	COAX COLOR CODE	ANTENNA REF	MODEL NUMBER	AZIMUTH	HEIGHT	MECHANICAL DOWN-TILT	ELECTRICAL DOWN-TILT	COAX PER ANTENNA	COAX MODEL NUMBER	COAX LENGTH	
ALPHA	1	A-1	11-RED BAND	RFS	APX718-16-2068175-C	36°	165'±0"	0°	1½"	2	RFS	160'
BETA	1	B-1	11-BLUE BAND	RFS	APX716-16-2068175-C	150°	165'±0"	0°	1½"	2	RFS	160'
GAMMA	1	C-1	11-GREEN BAND	RFS	APX716-16-2068175-C	270°	165'±0"	0°	1½"	2	RFS	160'
GP-S	N/A	POCKET	N/A	PC TEL ANT	GPS-TIME-20NNIS	10'±0"	N/A	N/A	¾"	1	ANDREW	6ft

I. ALL COAX SHALL BE COLOR-CODED AT (3) PLACES EACH; AT ANTENNA, EXTERIOR OF SHELTER AND INTERIOR OF SHELTER.

2. (2) COLOR BANDS DENOTES TRANSMIT. TRANSMITTS TO BE CONNECTED TO THE +45 PORTS OF THE ANTENNAS.

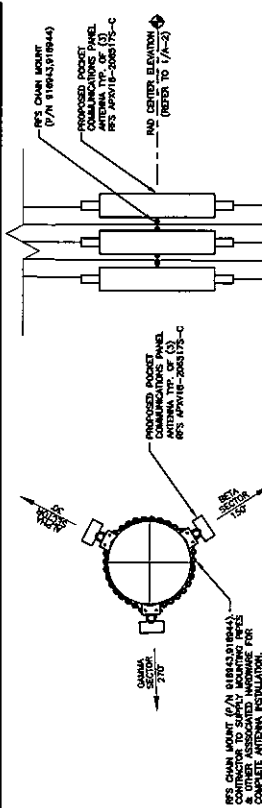
3. PRIOR TO ORDERING ANY ANTENNAS OR COAX, CONTRACTOR SHALL CONTACT POCKET COMMUNICATIONS'S CONSTRUCTION MANAGER AND OBTAIN APPROVAL FOR MATERIALS LISTED. CONTRACTOR IS SOLELY RESPONSIBLE FOR THIS COORDINATION.

 $\angle$

1. FOR DETAILED TOWER INFORMATION, REFER TO TOWER ERECTION DRAWINGS BY OTHERS. THE

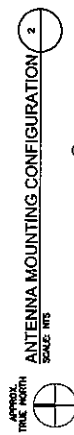
GENERAL CONFIGURATION PURPOSES ONLY.

CHANGE, VERIFY ANTENNA HEIGHT, DOWN-TILT, AND AZIMUTH WITH PROJECT MANAGER PRIOR TO CONSTRUCTION.



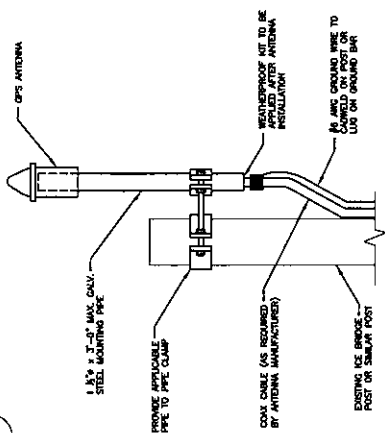
PLAN VIEW

TYPICAL SECTOR ELEVATION



TRUE NORTH

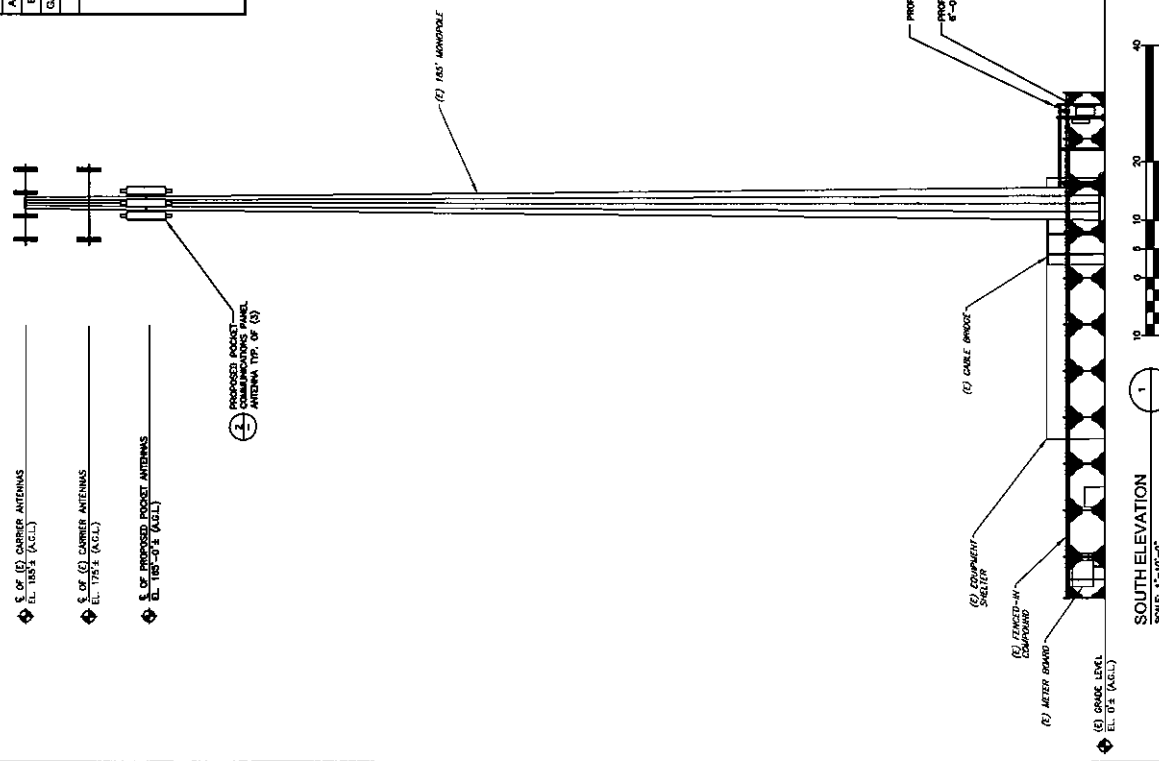
ANTENNA MOUNTING CONFIGURATION



STOP

1. LOCATION OF ANTENNA MUST HAVE A CLEAR VIEW OF SOUTHERN SKY AND CANNOT HAVE ANY BLOCKAGES EXCEEDING 25% OF THE SURFACE AREA OF A HOUSEHOLD AROUND THE GPS ANTENNA.
2. ALL GPS ANTENNA LOCATIONS MUST BE ABLE TO RECEIVE CLEAR SIGNALS FROM A MINIMUM OF FOUR (4) SATELLITES PERNY WITHIN 10 MINUTES OF THE DAY.

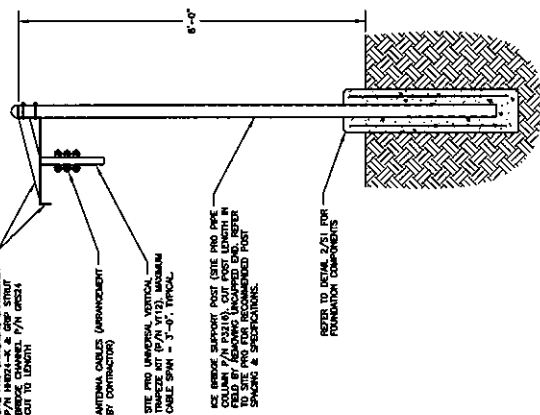
GPS ANTENNA PIPE MOUNT



SOUTH ELEVATION

SCHE 1°-10°-0°

- NOTES:**
1. WHEN USING COMPONENTS AS SHOWN IN STANDARD DETAILS, MAXIMUM ALLOWABLE SPAN BETWEEN SUPPORTS ON A SINGLE CHANNEL BRIDGE SHALL BE 10' FOR 10' BRIDGE CHANNEL.
 2. WHEN USING COMPONENTS FOR SPlicing BRIDGE CHANNEL, SECTIONS THE SPlice SHOULD BE PROVIDED AT THE SUPPORT, IF POSSIBLE OR AT A MAXIMUM OF 2' FROM THE SUPPORT.
 3. WHEN USING COMPONENTS, SUPPORT SHOULD BE PROVIDED AS SHOWN IN STANDARD DETAILS. A MAXIMUM CANTILEVER DISTANCE OF 2' FROM THE SUPPORT TO THE FREE END OF THE ICE BRIDGE.
 4. CUT BRIDGE CHANNEL SECTIONS SHALL HAVE END EDGES PROTECTED BY A 1/2" RADIUS. CHANNELS SHALL BE CUT TO THE ORIGINAL CHANNEL FINISH, OR TO A MINIMUM FINISH.
 5. ICE BRIDGES MAY BE CONSTRUCTED WITH COMPONENTS FROM OTHER MANUFACTURERS, PROVIDED THE MANUFACTURER'S INSTALLATION GUIDELINES ARE FOLLOWED.
 6. DEVIATIONS FROM STANDARDS FOR COMPONENT INSTALLATIONS ARE PERMITTED WITH THE RESPECTIVE MANUFACTURER'S APPROVAL.
 7. FOUNDATIONS FROM ICE BRIDGE FOUNDATIONS REQUIRE ENGINEERING APPROVAL.
 8. THE DESIGN IS BASED ON ASCE 7-02, 3 SECOND GUST WIND SPEED OF 110 MPH, EXPOSURE C, ELEVATION AT GROUND.
 9. THE DESIGN IS BASED ON 24" WIDE ICE BRIDGE AND (12) 1/2" DIA COAX CABLES AND MAX. JOIST SUPPORT SPACING OF 10'-0".



ICE BRIDGE DETAIL
SCALE: 1/8" = 1'-0"

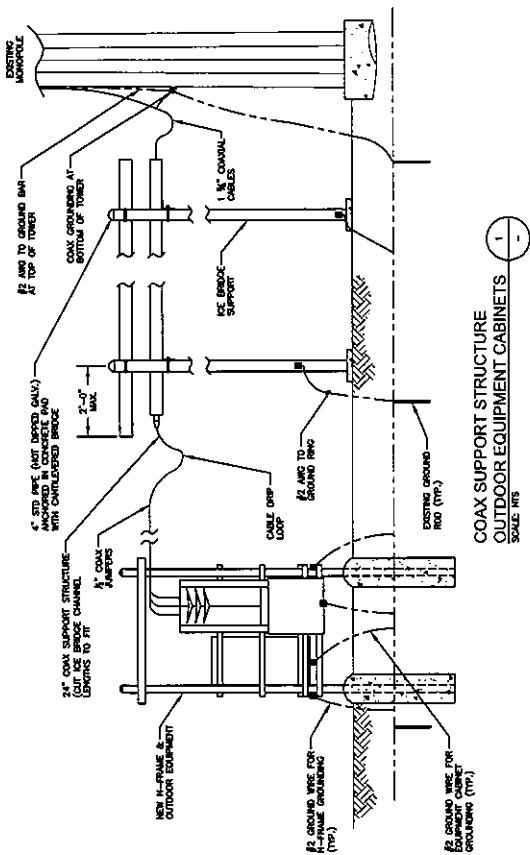
SUBMITTALS

REV	DATE	DESCRIPTION
D	10/20/09	ISSUED FOR REVIEW
C	11/20/09	ISSUED FOR REVIEW
B	10/10/09	ISSUED FOR REVIEW
A	10/07/09	ISSUED FOR REVIEW

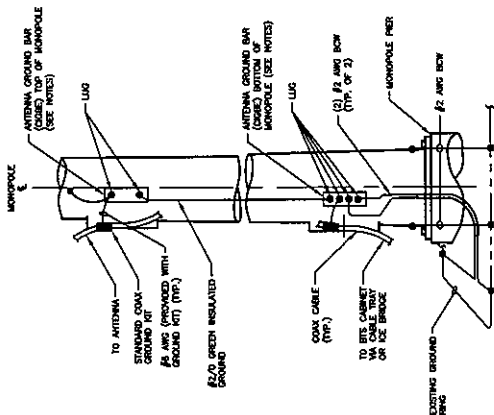
NHCT0203A
HARTWORTH
MONOPOLE
159 WEBGART ROAD
HARTWORTH, CT 06791

SHEET TITLE
COAX SUPPORT
STRUCTURE DETAIL &
GROUNDING DETAIL

SHEET NUMBER
S-2

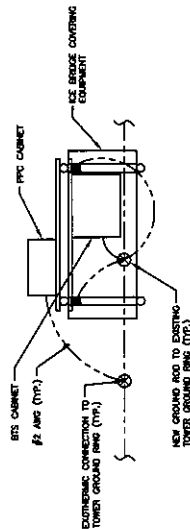


COAX SUPPORT STRUCTURE
OUTDOOR EQUIPMENT CABINETS
SCALE: 1/8" = 1'-0"



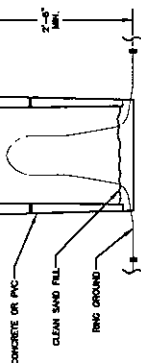
- NOTES:**
1. NUMBER OF ANTENNA BARS MAY VARY DEPENDS ON THE TYPE OF TOWER, LOCATION OF ANTENNAS AND CONNECTION ORIENTATION. PROVIDE AS REQUIRED.
 2. A SEPARATE GROUND BAR TO BE USED FOR GPS ANTENNA IF REQUIRED.

ANTENNA CABLE
GROUNDING DETAIL
SCALE: 1/8" = 1'-0"



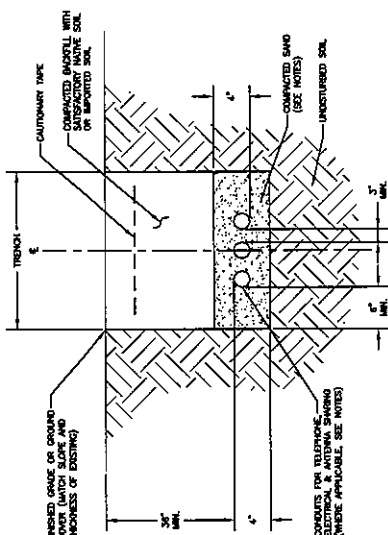
NOTE: CONTRACTOR SHALL PROVIDE 100% FULL-SCALE ELECTRICAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 8.0) FOR NEW GROUND ELECTRICAL SYSTEMS. THE CONTRACTOR SHALL TURN IN AND INSTALL SUPPLEMENTAL GROUND ELECTRICALS AS REQUIRED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.

TYPICAL CABINET AND
PLATFORM GROUNDING
SCALE: 1/8" = 1'-0"



NOTE:
INSPECTION HAND HOLE MAY BE
CONCRETE OR PVC AND SHALL BE A
MINIMUM OF 8" IN DIAMETER.

INSPECTION HAND HOLE
SCALE: NTS

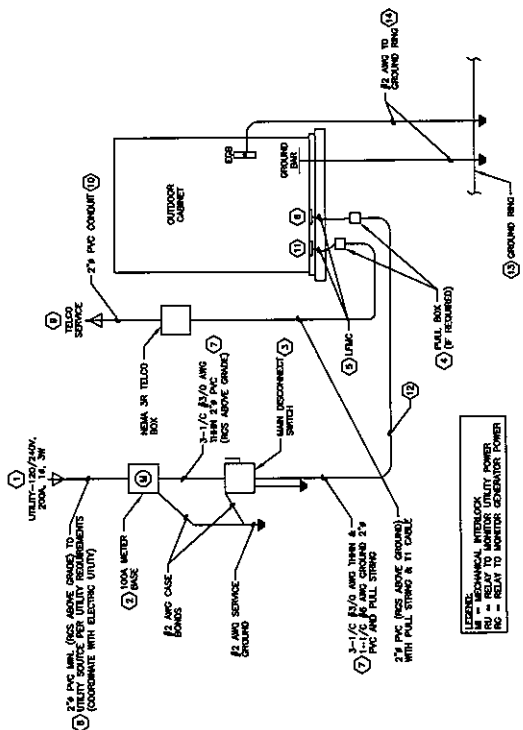


- NOTES:
1. LOW CONCRETE, RED-COLORED TOP MAY BE USED IN PLACE OF COMPACTED SAND.
 2. CONDUIT SIZE, TYPE, QUANTITY AND SEPARATION DIMENSION TO BE VERIFIED WITH LOCAL UTILITY COMPANY REQUIREMENTS.

DIRECT BURIED CONDUIT
SCALE: NTS

PANEL "SSC"									
LOAD DESCRIPTION (KVA)	SIZE	NO.	PHASE	CIRCUIT	BREAKER	LOAD NO.	LOAD (KVA)	DESCRIPTION	LOAD (KVA)
BT'S CABINET	2.5	1	2	202	2.2	1	2.2	TVSS	
LIGHTING	0.3	5	6	8	-	6	-	SPACE	
SPACE	-	7	8	10	-	10	-	SPACE	
SPACE	-	11	12	14	-	14	-	SPACE	
SPACE	-	15	16	18	-	18	-	SPACE	
SPACE	-	17	19	20	-	20	-	SPACE	
SPACE	-	21	22	24	-	24	-	SPACE	
SPACE	-	23	24	26	-	26	-	SPACE	
LOAD TOTAL	5.9					10.3 AVA			
SUB-TOTAL									4.4

100A MCB, 120/240V, 1Ø, 3W, 65,000 AIC	
TOTAL CONNECTED LOAD	10.3 KW
25% OF LARGEST CONT. LOAD	1250 W
TOTAL LOADS	11.5 KW 47.9 AMPS
NOTE: ALL NON-OPTIONAL	
BREAKERS PROVIDED BY SSC MFR	



POWER, TELCO & GROUND SINGLE
LINE DIAGRAM FOR OUTDOOR CABINET
SCALE: NTS

ELECTRICAL NOTES

1. ALL ELECTRICAL AND GROUNDING WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC), THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 70B, THE NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION (NECA) 1, AND THE NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION (NECA) 2.
2. CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL VERIFY ROUTING AND LENGTHS PRIOR TO CONSTRUCTION.
3. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCO.
4. THE CONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
5. THE CONTRACTOR SHALL PROVIDE NECESSARY TUGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.
6. CONTRACTOR SHALL PROVIDE 100A, 1Ø, 120/240V, 60HZ SERVICE FOR SITE.
7. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY FOR THE LOCATION OF THE CONDUIT AND THE LOCATION OF THE CONDUIT SHALL BE PROVIDED AND INSTALLED PER UTILITY REQUIREMENTS.
8. FOR COMPLETE INTERNAL WIRING AND ARRANGEMENT COMPLIANCE WITH THE NEC, UTILITY COMPANY AND LOCAL CODE REQUIREMENTS.
9. CONTRACTOR SHALL INSTALL SUFFICIENT LENGTHS OF LINC INCLUDING ALL CONDUIT FITTINGS (UNITS, REDUCING BUSHINGS, ELBOWS, COUPLERS, ETC.) NECESSARY FOR THE COMPLETE INTERNAL WIRING AND ARRANGEMENT OF THE CONDUIT.
10. CONTRACTOR SHALL PROVIDE ELECTRICAL SERVICE EQUIPMENT WITH FAULT CURRENT RATING GREATER THAN THE AVAILABLE FAULT CURRENT FROM THE POWER UTILITY.
11. CONTRACTOR SHALL VERIFY THAT THE MAIN BONDING JUMPER AND GROUNDING ELECTRODE CONDUCTOR IS INSTALLED PROPERLY IN MAIN DISCONNECT SWITCH.

ELECTRICAL DETAILS

SHEET NUMBER
E-1

Exhibit C

Equipment Specifications

Pocket Site NHCT0203A

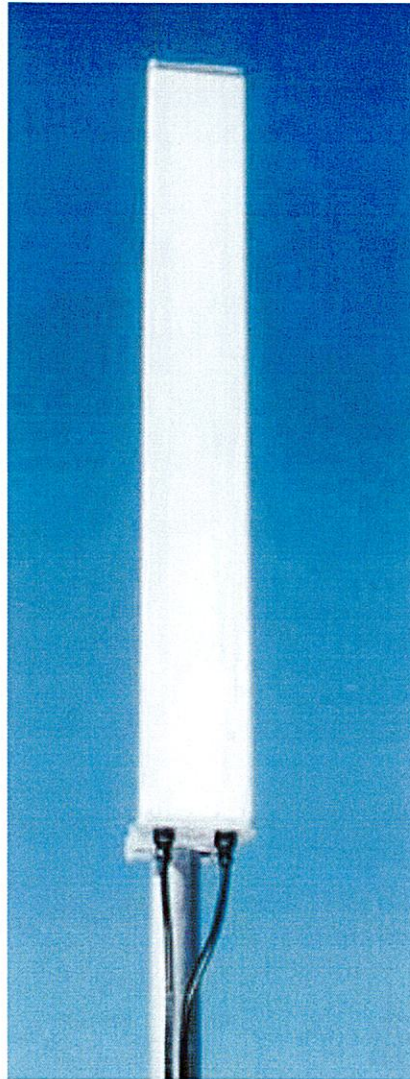
159 Weingart Road

Harwinton, Connecticut



Product Description

This variable tilt antenna provides exceptional suppression of all upper sidelobes at all downtilt angles. It also features null fill and a wide downtilt range with optional remote tilt.



Features/Benefits

- Variable electrical downtilt - provides enhanced precision in controlling intercell interference. The tilt is infield adjustable 0-10 deg.
- High Suppression of all Upper Sidelobes (Typically <-20dB).
- Optional remote tilt - can be retrofitted.
- Broadband design.
- Dual polarization.
- Low profile for low visual impact.

Technical Features

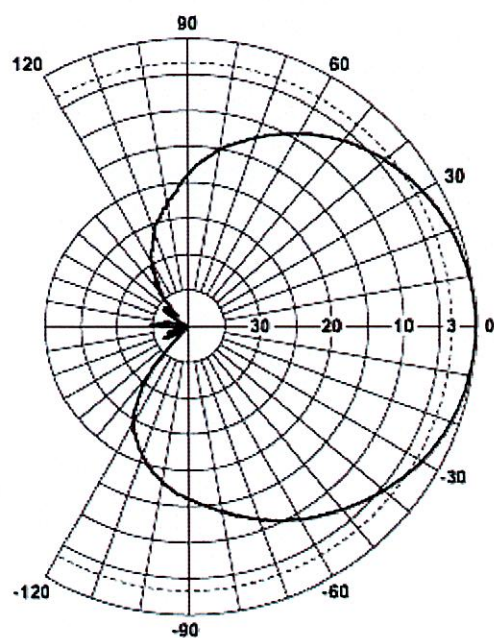
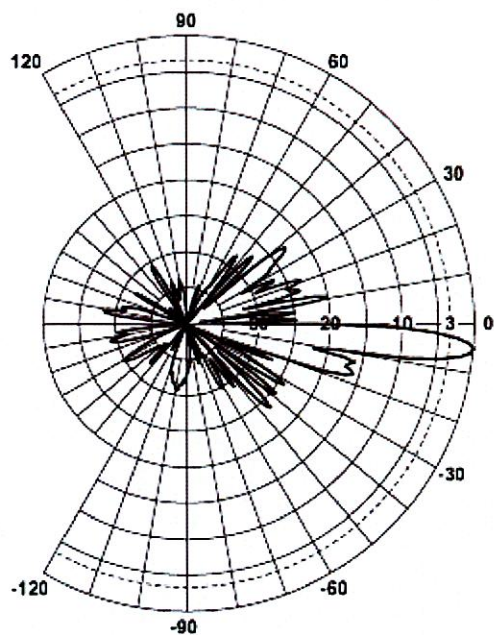
Frequency Band	3G/UMTS (Single, Broad, Dual and Triple-Band)
Horizontal Pattern	Directional
Antenna Type	Panel Dual Polarized
Electrical Down Tilt Option	Variable

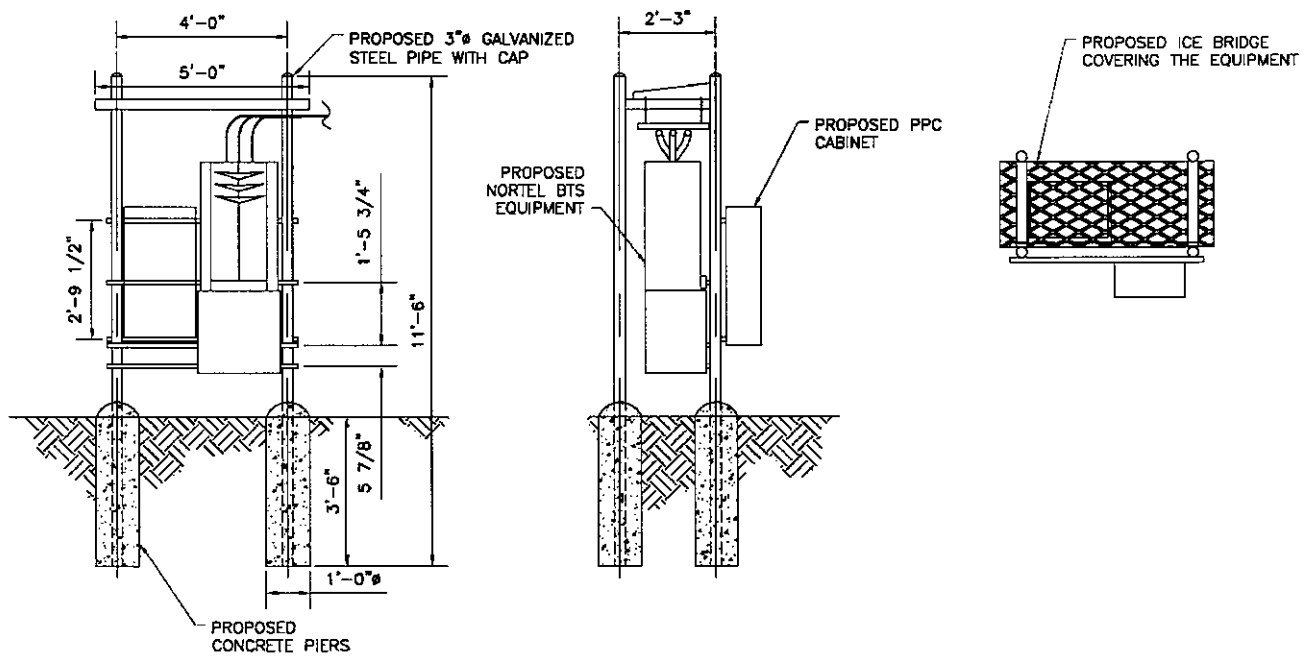


Gain, dBi (dBd)	18.8 (16.7) , 19.0 (16.9)
Frequency Range, MHz	1710-1900, 1900-2170
Connector Type	(2) 7-16 DIN Female
Connector Location	Bottom
Mount Type	Downtilt
Electrical Downtilt, deg	0-10
Horizontal Beamwidth, deg	67 , 63
Mounting Hardware	APM40-2
Rated Wind Speed, km/h (mph)	160 (100)
VSWR	< 1.5:1
Vertical Beamwidth, deg	5.0 , 4.6
Upper Sidelobe Suppression, dB	>17 , >18 all (Typically >20)
Polarization	Dual pol +/-45°
Front-To-Back Ratio, dB	>30
Maximum Power Input, W	300
Isolation between Ports, dB	>30
Lightning Protection	Direct Ground
3rd Order IMP @ 2 x 43 dBm, dBc	>150
7th Order IMP @ 2x46 dBm, dBc	>170
Impedance, Ohms	50
Overall Length, m (ft)	1.85 (6.06)
Mounting Hardware Weight, kg (lb)	3.4 (7.5)
Dimensions - HxWxD, mm (in)	1850 x 175 x 80 (72.0 x 6.8 x 3.15)
Weight w/o Mtg Hardware, kg (lb)	12 (26.4)
Weight w/ Mtg Hardware, kg (lb)	14.8 (32.5)
Radiating Element Material	Brass
Radome Color	Light Grey RAL7035
Radome Material	Fiberglass
Mounting Hardware Material	Diecasted Aluminum
Reflector Material	Aluminum
Max Wind Loading Area, m ² (ft ²)	0.31 (3.3)
Survival Wind Speed, km/h (mph)	200 (125)
Maximum Thrust @ Rated Wind, N (lbf)	558 (125)
Front Thrust @ Rated Wind, N (lbf)	558 (125)
Shipping Weight, kg (lb)	18.3 (39.8)
Packing Dimensions, HxWxD, mm (in)	2021 x 260 x 200 (79.5 x 10.2 x 7.8)
Packing Dimensions - HxWxD, m (ft)	2.0 x 0.26 x 0.2 (6.6 x 0.85 x 0.65)

Notes

For additional mounting information please click "External Document Link" below.





Pocket/Youghiogheny Communications – Northeast, LLC
Rack Detail



CDMA BTS 3231 AWS 1.7/2.1 GHz (Outdoor/Indoor)

CDMA BTS 3231

Industry's Highest Capacity AWS Micro BTS

The CDMA BTS 3231 is the latest extension to Nortel Networks BTS (Base Transceiver Station) portfolio providing the ideal solution for urban, sub-urban and rural deployments. The CDMA BTS 3231 is a 3-carrier, 3-sector outdoor/indoor BTS operating at the AWS band of 1.7/2.1 GHz supporting IS-95, 1XRTT and 1xEV-DO simultaneously. BTS 3231 provides flexible deployments solutions including floor, rack, and wall mount options. The power consumption of BTS3231 is industry leading consuming only 630W for 3C3S. The BTS 3231 is also very light at 240lbs making it easy

to transport to hard to reach locations such as the top of a high rise building.

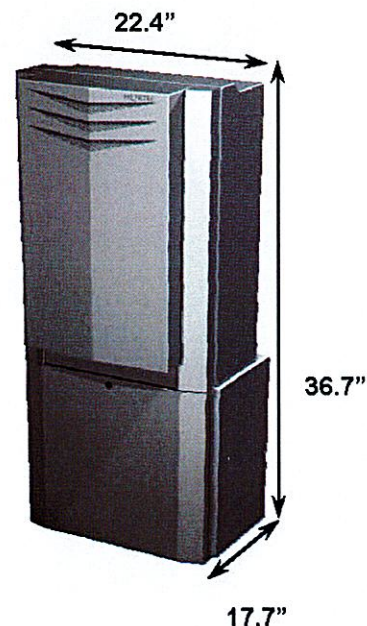


Exhibit D

Power Density Calculations

Pocket Site NHCT0203A

159 Weingart Road

Harwinton, Connecticut



C Squared Systems, LLC
920 Candia Road
Manchester, NH 03109
Phone: (603) 657 9702
E-mail:

support@csquaredsystems.com

Calculated Radio Frequency Emissions



NHCT0203

159 Weingart Road, Harwinton, CT

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2. FCC Guidelines for Evaluating RF Radiation Exposure Limits	2
3. RF Exposure Prediction Methods	2
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---	---

1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed Pocket antennas to be installed on the existing tower at 159 Weingart Road, Harwinton, CT.

These calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. As a result, the predicted signal levels are much more conservative (higher) than the actual signal levels will be from the finished installation.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter (mW/cm^2). The number of mW/cm^2 emitted is called the power density. The general population exposure limit for the cellular band is $0.567\text{--}0.593 \text{ mW}/\text{cm}^2$, and the general population exposure limit for the PCS/AWS band is $1.0 \text{ mW}/\text{cm}^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

The FCC general population / uncontrolled limits set the maximum exposure to which most people may be subjected. General population / uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Higher exposure limits are permitted under the occupational / controlled exposure category, but only for persons who are exposed as a consequence of their employment and who have been made fully aware of the potential for exposure (through training), and they must be able to exercise control over their exposure. General population / uncontrolled limits are five times more stringent than the levels that are acceptable for occupational, or radio frequency trained individuals.”

The FCC describes exposure to radio frequency (RF) energy in terms of percentage of maximum permissible exposure (MPE) with 100% being the maximum allowed. Rather than the FCC presenting the user specification in terms of complex power density figures over a specified surface area, this MPE measure is particularly useful, and even more so when considering that power density limits actually vary by frequency because of the different absorptive properties of the human body at different frequencies.

MPE limits are specified as time-averaged exposure limits. This means that exposure can be averaged over 30 minutes for general population / uncontrolled exposure (or 6 minutes for occupational / controlled exposure). However, for the case of exposure of the general public, time averaging is usually not applied because of uncertainties over exact exposure conditions and difficulty in controlling time of exposure. Therefore, the typical conservative approach is to assume that any RF exposure to the general public will be continuous.

Finally, it should be noted that the MPE limits adopted by the FCC for both general population / uncontrolled exposure and for occupational / controlled exposure incorporate a substantial margin of safety and have been established to be well below levels generally accepted as having the potential to cause adverse health effects.

2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by OET Bulletin 65 Edition 97-01. These new rules include limits for Maximum Permissible Exposure (MPE) for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP), the exposure limits developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

Attachment B contains excerpts from OET Bulletin 65 and defines the Maximum Exposure Limit. As shown in these excerpts, each frequency band has different exposure limits, requiring power density to be reported as a percent of Maximum Permissible Exposure (MPE) when dealing with carriers transmitting in different frequency bands.

3. RF Exposure Prediction Methods

The emission field calculation results displayed in the following figures were generated using the following formula as outlined in FCC bulletin OET 65:

$$\text{Power Density} = \left(\frac{\text{EIRP}}{\pi \times R^2} \right) \times \text{Off Beam Loss}$$

Where:

EIRP = Effective Isotropic Radiated Power

R = Radial Distance = $\sqrt{H^2 + V^2}$

H = Horizontal Distance from antenna

V = Vertical Distance from bottom of antenna

Off Beam Loss is determined by the selected antenna patterns

4. Calculation Results

Table 1 below outlines the power density information for the site. All information for carriers other than Pocket was obtained from current CSC database.

Carrier	Number of Trans.	Effective Radiated Power (ERP) Per Transmitter (Watts)	Antenna Height (Feet)	Operating Frequency (MHz)	Total ERP (Watts)	Power Density (mw/cm ²)	Limit	%MPE
AT&T/TDMA	16	100	185	880	1600	0.0168	0.5867	2.87%
AT&T/GSM	2	296	185	880	880	0.0062	0.5867	1.06%
AT&T/GSM	2	427	185	1930	1930	0.0090	1.0000	0.90%
Verizon	9	485	175	1970	1970	0.0512	1.0000	5.12%
Verizon	9	200	175	875	875	0.0211	0.5833	3.62%
Pocket	3	631	165	2130-2133.75	1893	0.0269	1.0000	2.69%
							Total	16.26%

Table 1: Proposed Carrier Information

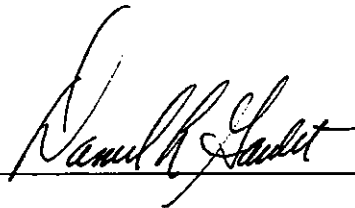
5. Conclusion

The above analysis verifies that emissions from the proposed site will be well below the maximum power density levels as outlined by the FCC in the OET Bulletin 65 Ed. 97-01. Even when using conservative methods, the cumulative power density from the proposed transmit antennas at the existing facility is well below the limits for the general public. The highest expected percent of Maximum Permissible Exposure at the base of the tower is 16.26% of the FCC limit.

As noted in the introduction, obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. As a result, the predicted signal levels are more conservative (higher) than the actual signal levels will be from the finished installation.

6. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The calculations follow guidelines set forth in ANSI/IEEE Std. C95.3, ANSI/IEEE Std. C95.1 and FCC OET Bulletin 65 Edition 97-01.



Daniel L. Goulet
C Squared Systems, LLC

October 28, 2008
Date

Attachment A: References

OET Bulletin 65 - Edition 97-01 - August 1997 Federal Communications Commission Office of Engineering & Technology

ANSI C95.1-1982, American National Standard Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300 kHz to 100 GHz. IEEE-SA Standards Board

IEEE Std C95.3-1991 (Reaff 1997), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave. IEEE-SA Standards Board

Attachment B: FCC Limits For Maximum Permissible Exposure (MPE)

(A) Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f ²)*	6
30-300	61.4	0.163	1.0	6
300-1500	-	-	f/300	6
1500-100,000	-	-	5	6

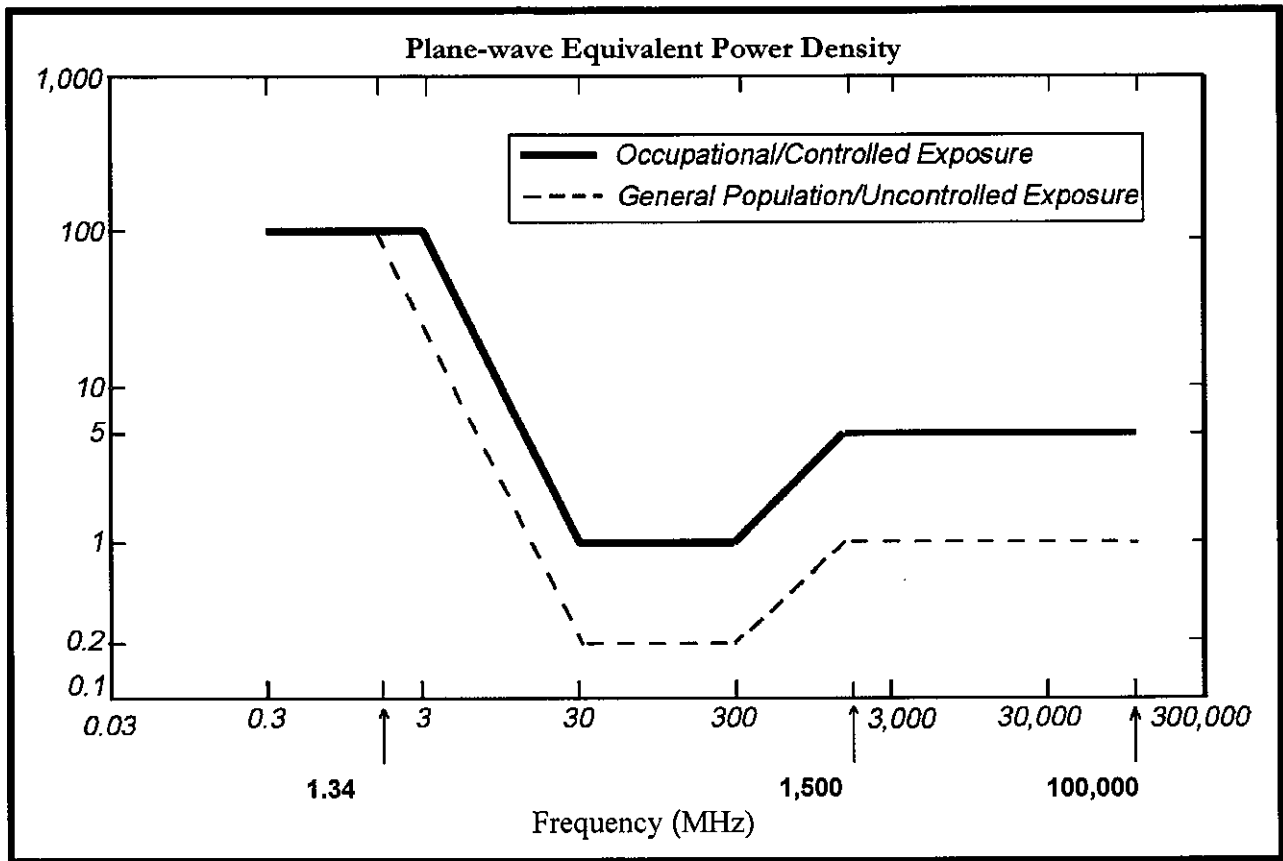
(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	f/1500	30
1500-100,000	-	-	1.0	30

f = frequency in MHz * Plane-wave equivalent power density

NOTE 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.



• FCC Limits for Maximum Permissible Exposure (MPE)

Exhibit E

Structural Analysis

Pocket Site NHCT0203A

159 Weingart Road

Harwinton, Connecticut

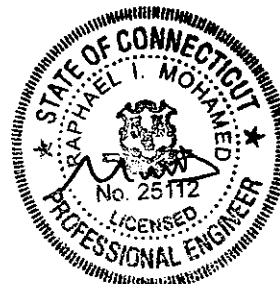


Structural Analysis Report

Structure : 180 ft Monopole
ATC Site Name : Harwinton, CT
ATC Site Number : 302502
Proposed Carrier : Youghiogheny
Carrier Site Name : Harwinton
Carrier Site Number : NHCT0203A
County : Litchfield
Engineering Number : 42504221
Date : October 6, 2008
Usage : 108%
Portholes Required : Yes

Submitted by:
Christopher L. Jolly, E.I.
Design Engineer

American Tower Engineering Services
400 Regency Forest Drive
Cary, NC 27518
Phone: 919-468-0112



10-8-08

Introduction

The purpose of this report is to summarize results of the structural analysis performed on the 180 ft Monopole located at 159 Weingart Road, Harwinton, CT 06791, Litchfield County (ATC Site # 302502). The tower dimensions and geometry were obtained from a mapping completed by Smith Cullum Inc. (Steel Data Report Number CT-0038, dated February 13, 2002). Tower modifications per design by Hutter Trankina Engineering Co. (HTE Job No. 03320B, dated August 9, 2003) have been completed and were considered in this analysis.

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.

Basic Wind Speed: 95.0 mph (3-Second Gust)
 Radial Ice: 40.0 mph (3-Second Gust) w/ 1 1/4" ice
 Code: ANSI/TIA-22-G / 2003 International Building Code
 with 2005 and 2008 Connecticut Supplements

Antenna Loads

The following antenna loads were used in the tower analysis.

Existing Antennas

Elev. (ft)	Qty	Antennas	Mount	Coax	Carrier
185.0	6	TTA	Round Platform with Handrails	(2) 1 1/4" (9) 7/8"	AT&T Mobility
	3	CDA Diplexer			
	11	CSS DUO4-8670			
175.0	6	Antel LPA-80063/6CF	Flat Low Profile Platform	(6) 1 5/8"	Verizon
	6	Decibel DB950G85E-KL		(6) 1 5/8"	

Proposed Antennas

Elev. (ft)	Qty	Antennas	Mount	Coax	Carrier
165.0	3	RFS APXV18-206517-C	Flush	(6) 1 5/8"	Youghiogheny

Install proposed coax inside monopole.

Results

The maximum structure usage is: 108%

Additional exit and/or entry ports may be required to accommodate the running of the proposed lines to the proposed antennas. These additional ports **may not** be installed without installation drawings providing the location, size and welding requirements of each port.

To ensure compliance with all conditions of this structural analysis, port installation drawings shall be provided by American Tower's Engineering Department under a subsequent project.

Pole Reactions	Original Design Reactions	Current Analysis Reactions	% Of Design
Moment (ft-kips)	N/A	3,296.7	N/A
Shear (kips)	N/A	28.5	N/A

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

Conclusion

Based on the analysis results, the structure does not meet the requirements per ANSI/TIA-222-G and 2003 IBC standards with 2005 and 2008 CT Supplements. The tower and foundation can support the existing and proposed equipment after the modifications listed below are completed.

- Reinforce anchor bolts

If you have any questions or require additional information, please call 919-465-6545.

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 American Tower Corporation, or generated by field inspections or measurements of the structure.

It is the responsibility of the client to ensure that the information provided to ATC Engineering Services 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. ATC Engineering Services is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.

Job Information			
Pole :	302502	Code :	ANSI/TIA-222 Rev G
Description :	180 ft Monopole	Struct Class :	II
Client :	Youghiogheny	Exposure :	B
Location :	Harwinton, CT	Topo :	1
Shape :	12 Sides	Base Elev (ft):	0.00
Height :	180.00 (ft)	Taper:	0.158333(in/ft)

Sections Properties								
Shaft Section	Length (ft)	Diameter (in)		Thick Joint (in)	Type	Overlap Length (in)	Taper (in/ft)	Steel Grade (ksi)
		Across Top	Flats Bottom					
1	44.100	36.01	43.00	0.375		0.000	0.158333	65
2	42.470	29.29	36.01	0.313	Butt Joint	0.000	0.158333	65
3	38.700	23.16	29.29	0.250	Butt Joint	0.000	0.158333	65
4	54.730	14.50	23.16	0.188	Butt Joint	0.000	0.158333	65

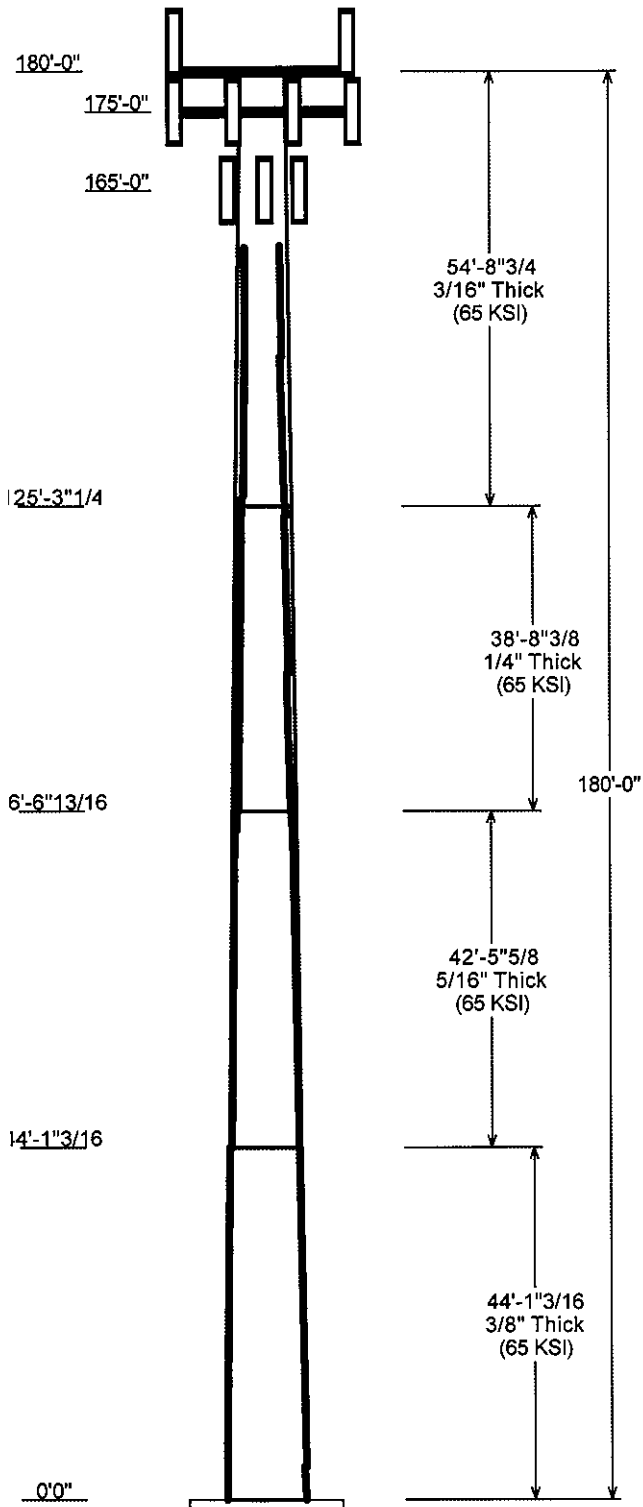
Discrete Appurtenance				
Attach Elev (ft)	Force Elev (ft)	Qty	Description	
180.000	185.000	6	TTA	
180.000	185.000	1	Round Platform with Handrails	
180.000	185.000	3	CDA Diplexer	
180.000	185.000	11	CSS DUO4-8670	
175.000	175.000	1	Flat Low Profile Platform	
175.000	175.000	6	Antel LPA-80063/6CF	
175.000	175.000	6	Decibel DB950G85E-KL	
165.000	165.000	3	RFS APXV18-206517-C	

Linear Appurtenance				
Elev (ft)		Description	Exposed To Wind	
From	To			
140.0	160.0	3.0" Solid Rod	Yes	
120.0	140.0	3.5" Solid Rod	Yes	
80.000	120.0	4.0" Solid Rod	Yes	
5.000	175.0	1 5/8" Coax	No	
5.000	175.0	1 5/8" Coax	No	
5.000	180.0	1 1/4" Coax	No	
5.000	180.0	7/8" Coax	No	
0.000	80.000	4.25" Solid Rod	Yes	
0.000	165.0	1 5/8" Coax	No	

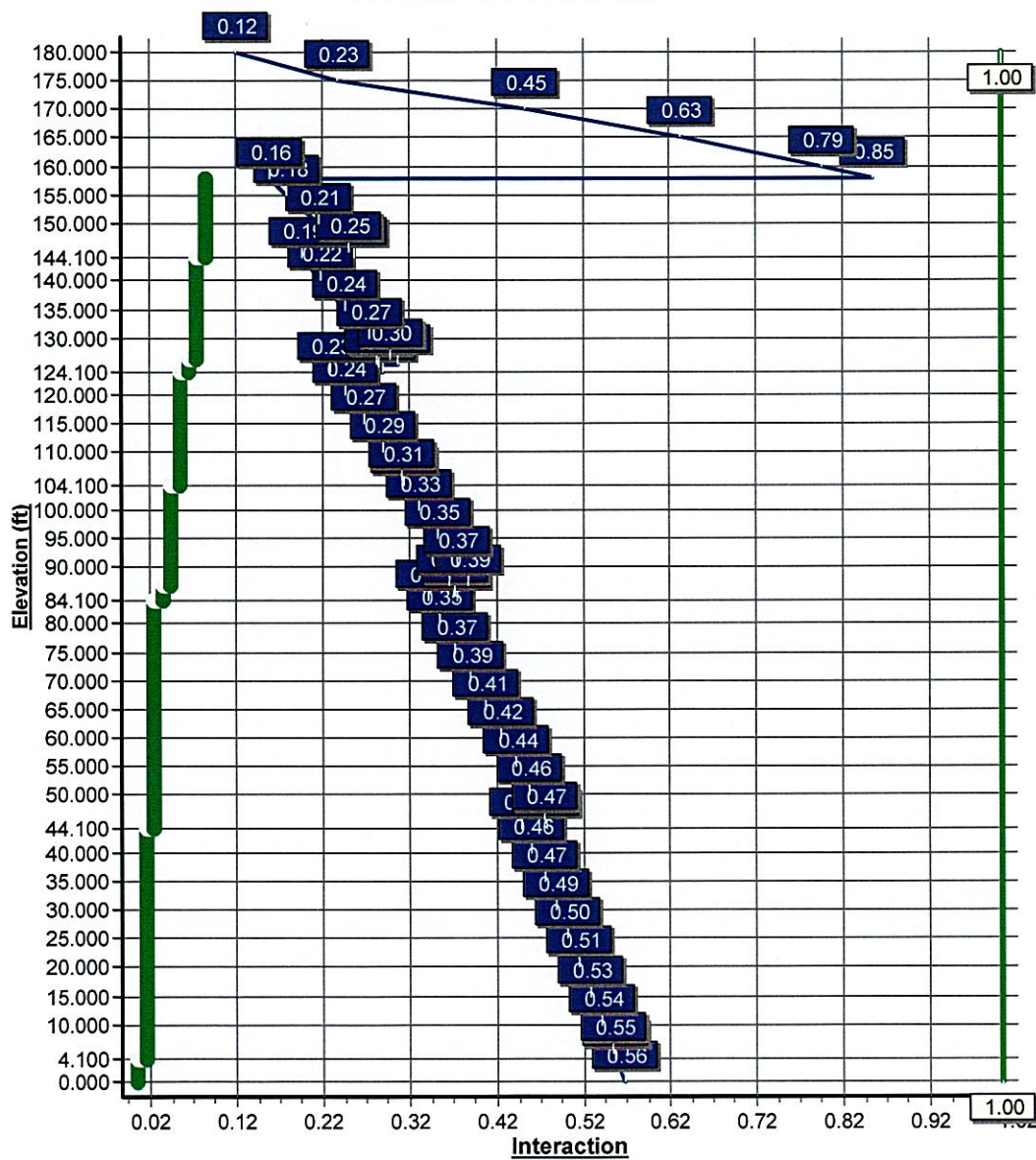
Load Cases	
1.2D + 1.6W	95.00 mph with No Ice
0.9D + 1.6W	95.00 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	40.00 mph with 1.25 in Radial Ice
1.0D + 1.0W	60.00 mph Serviceability

Reactions			
Load Case	Moment (Kip-ft)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W	3296.69	28.54	52.68
0.9D + 1.6W	3268.70	28.25	44.57
1.2D + 1.0Di + 1.0Wi	598.18	4.65	89.80
1.0D + 1.0W	848.23	7.37	47.31

Dish Deflections			
Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
1.0D + 1.0W	0.00	0.000	0.000



Load Case : 1.2D + 1.6W
Max Ratio 85.21% at 158.0ft



Pole : 302502
 Location : Harwinton, CT
 Height : 180.0 (ft)
 Shape : 12 Sides
 Base Dia : 43.00 (in)
 Top Dia : 14.50 (in)
 Taper : 0.158333 (in/ft)

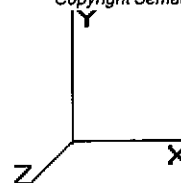
Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : B
 Topographic Category : 1

Base Elev : 0.000 (ft)

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Shaft Section Properties

Shaft Section Properties					Slip Joint Len (in)	Weight (lb)	Bottom						Top						Taper (in/ft)	
Sect Num	Length (ft)	Thick (in)	Fv (ksi)	Joint Type			Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio		
1	44.100	0.3750	65		0.00	7,091	43.00	0.000	51.47	11936.2	28.58	114.6	36.01	44.10	43.04	6978.8	23.59	96.05	0.15833	
2	42.470	0.3130	65	Butt Joint	0.00	4,711	36.01	44.10	35.99	5855.4	28.69	115.0	29.29	86.57	29.21	3131.0	22.93	93.59	0.15833	
3	38.700	0.2500	65	Butt Joint	0.00	2,754	29.29	86.57	23.38	2517.2	29.25	117.1	23.16	125.2	18.45	1236.4	22.69	92.66	0.15833	
4	54.730	0.1880	65	Butt Joint	0.00	2,102	23.16	125.2	13.91	937.4	30.87	123.2	14.50	180.0	8.66	226.5	18.52	77.13	0.15833	
Shaft Weight						16,658														

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	Weight (lb)	No Ice CaAa (sf)	CaAa Factor	Weight (lb)	Ice CaAa (sf)	CaAa Factor	Distance From Face (ft)	Vert Ecc (ft)
180.0	TTA	6	10.00	1.400	0.50	71.25	2.840	0.50	0.000	5.000
180.0	Round Platform with Handrails	1	2000.00	27.200	1.00	4203.88	68.775	1.00	0.000	5.000
180.0	CDA Diplexer	3	5.00	0.700	0.50	59.82	1.289	0.50	0.000	5.000
180.0	CSS DUO4-8670	11	38.50	6.590	0.82	364.15	7.669	0.82	0.000	5.000
175.0	Flat Low Profile Platform	1	1500.00	26.100	1.00	2598.84	58.480	1.00	0.000	0.000
175.0	Antel LPA-80063/6CF	6	27.00	10.340	0.94	562.07	11.920	0.94	0.000	0.000
175.0	Decibel DB950G85E-KL	6	11.50	4.240	0.77	216.25	6.105	0.77	0.000	0.000
165.0	RFS APXV18-206517-C	3	26.40	5.170	0.79	265.81	7.328	0.79	0.000	0.000
Totals		37	4308.70			5995.43			Number of Loadings : 8	

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Exposed Width (in)	Exposed To Wind
5.00	180.00	(2) 1 1/4" Coax	0.00	N
5.00	180.00	(9) 7/8" Coax	0.00	N
5.00	175.00	(6) 1 5/8" Coax	0.00	N
5.00	175.00	(6) 1 5/8" Coax	0.00	N
0.00	165.00	(6) 1 5/8" Coax	0.00	N
140.00	160.00	(3) 3.0" Solid Rod	6.00	Y
120.00	140.00	(3) 3.5" Solid Rod	7.00	Y
80.00	120.00	(3) 4.0" Solid Rod	8.00	Y
0.00	80.00	(3) 4.25" Solid Rod	8.50	Y

Additional Steel

Elev From (ft)	Elev To (ft)	Qty	Description	Fv (ksi)	Offset (in)	Hole Dia (in)	Linear Weight (lb/ft)	Thick (in)	Weight (lb)	Len (ft)
0.00	4.10	3	SOL 4 1/4" SOLID	50	3.13	0.00	48.27	4.25	593.7	12.30
4.10	44.10	3	SOL 4 1/4" SOLID	50	3.13	0.00	48.27	4.25	5,792.4	120.00
44.10	84.10	3	SOL 4 1/4" SOLID	50	3.13	0.00	48.27	4.25	5,792.4	120.00
84.10	86.60	3	SOL 4" SOLID	50	3.13	0.00	42.76	4.00	320.7	7.50
86.60	104.1	3	SOL 4" SOLID	50	3.13	0.00	42.76	4.00	2,244.9	52.50
104.1	124.1	3	SOL 4" SOLID	50	3.13	0.00	42.76	4.00	2,565.6	60.00
124.1	126.3	3	SOL 3 1/2" SOLID	50	3.13	0.00	32.74	3.50	216.1	6.60
126.3	144.1	3	SOL 3 1/2" SOLID	50	3.13	0.00	32.74	3.50	1,748.3	53.40
144.1	158.0	3	SOL 3" SOLID	65	3.13	1.50	24.05	3.00	1,002.9	41.70

Pole : 302502
Location : Harwinton, CT
Height : 180.0 (ft)
Shape : 12 Sides
Base Dia : 43.00 (in)
Top Dia : 14.50 (in)
Taper : 0.158333 (in/ft)

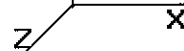
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure Category : B
Topographic Category : 1

Base Elev : 0.000 (ft)

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Pole : 302502
 Location : Harwinton, CT
 Height : 180.0 (ft)
 Shape : 12 Sides
 Base Dia : 43.00 (in)
 Top Dia : 14.50 (in)
 Taper : 0.158333 (in/ft)

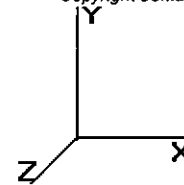
Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : B
 Topographic Category : 1

Base Elev : 0.000 (ft)

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Segment Properties (Max Len : 5 ft)

Seq	Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in3)	Weight (lb)	Additional Reinforcing		
												Area (in^2)	Ix (in^4)	Weight (lb)
0.00			0.3750	43.000	51.470	11,936.2	28.58	114.67	65.0	536.3	0.0	42.55	15.27	0.0
4.10		Reinf. Top Reinf	0.3750	42.351	50.686	11,399.1	28.12	112.94	65.0	520.0	712.6	42.55	14.90	593.7
5.00			0.3750	42.208	50.514	11,283.4	28.02	112.56	65.0	516.4	155.0	42.55	14.82	130.3
10.00			0.3750	41.417	49.558	10,654.9	27.45	110.44	65.0	497.0	851.3	42.55	14.38	724.0
15.00			0.3750	40.625	48.602	10,050.1	26.88	108.33	65.0	477.9	835.0	42.55	13.95	724.0
20.00			0.3750	39.833	47.646	9,468.7	26.32	106.22	65.0	459.2	818.8	42.55	13.52	724.0
25.00			0.3750	39.042	46.690	8,910.1	25.75	104.11	65.0	440.9	802.5	42.55	13.10	724.0
30.00			0.3750	38.250	45.734	8,374.0	25.19	102.00	65.0	422.9	786.2	42.55	12.69	724.0
35.00			0.3750	37.458	44.778	7,859.8	24.62	99.89	65.0	405.4	770.0	42.55	12.28	724.0
40.00			0.3750	36.667	43.822	7,367.1	24.06	97.78	65.0	388.1	753.7	42.55	11.88	724.0
44.10		Top - Section 1	0.3750	36.018	43.038	6,978.8	23.59	96.05	65.0	374.3	605.9	42.55	11.55	593.7
44.10		Bot - Section 2	0.3130	36.018	35.985	5,855.4	28.69	115.07	65.0	314.1		42.55	11.55	
45.00			0.3130	35.875	35.842	5,785.6	28.57	114.62	65.0	311.5	110.0	42.55	11.48	130.3
50.00			0.3130	35.083	35.044	5,407.7	27.89	112.09	65.0	297.8	603.0	42.55	11.10	724.0
55.00			0.3130	34.292	34.246	5,046.7	27.21	109.56	65.0	284.3	589.4	42.55	10.72	724.0
60.00			0.3130	33.500	33.448	4,702.1	26.53	107.03	65.0	271.2	575.9	42.55	10.34	724.0
65.00			0.3130	32.708	32.650	4,373.5	25.86	104.50	65.0	258.3	562.3	42.55	9.979	724.0
70.00			0.3130	31.917	31.852	4,060.7	25.18	101.97	65.0	245.8	548.7	42.55	9.619	724.0
75.00			0.3130	31.125	31.054	3,763.1	24.50	99.44	65.0	233.6	535.1	42.55	9.265	724.0
80.00			0.3130	30.333	30.256	3,480.4	23.82	96.91	65.0	221.7	521.6	42.55	8.918	724.0
84.10		Reinf. Top Reinf	0.3130	29.684	29.602	3,259.5	23.27	94.84	65.0	212.1	417.5	42.55	8.638	593.7
85.00			0.3130	29.542	29.458	3,212.3	23.15	94.38	65.0	210.1	90.4	37.69	7.499	115.5
86.57		Top - Section 2	0.3130	29.293	29.208	3,131.0	22.93	93.59	65.0	206.5	156.7	37.69	7.406	201.4
86.57		Bot - Section 3	0.2500	29.293	23.380	2,517.2	29.25	117.17	65.0	166.0		37.69	7.406	
86.60		Reinf. Top Reinf	0.2500	29.288	23.376	2,515.9	29.25	117.15	65.0	165.9	2.4	37.69	7.404	3.8
90.00			0.2500	28.750	22.943	2,378.6	28.67	115.00	65.0	159.8	267.9	37.69	7.205	436.2
95.00			0.2500	27.958	22.305	2,185.8	27.82	111.83	65.0	151.0	384.9	37.69	6.917	641.4
100.0			0.2500	27.167	21.668	2,003.8	26.97	108.67	65.0	142.5	374.1	37.69	6.634	641.4
104.1		Reinf. Top Reinf	0.2500	26.518	21.145	1,862.3	26.28	106.07	65.0	135.7	298.6	37.69	6.408	525.9
105.0			0.2500	26.375	21.031	1,832.1	26.13	105.50	65.0	134.2	64.6	37.69	6.358	115.5
110.0			0.2500	25.583	20.393	1,670.5	25.28	102.33	65.0	126.1	352.4	37.69	6.088	641.4
115.0			0.2500	24.792	19.756	1,518.8	24.43	99.17	65.0	118.3	341.5	37.69	5.824	641.4
120.0			0.2500	24.000	19.119	1,376.5	23.58	96.00	65.0	110.8	330.7	37.69	5.565	641.4
124.1		Reinf. Top Reinf	0.2500	23.351	18.596	1,266.7	22.88	93.40	65.0	104.8	263.1	37.69	5.357	525.9
125.0			0.2500	23.208	18.481	1,243.4	22.73	92.83	65.0	103.5	56.8	28.86	3.941	88.4
125.2		Top - Section 3	0.2500	23.166	18.447	1,236.4	22.69	92.66	65.0	103.1	17.0	28.86	3.931	26.5
125.2		Bot - Section 4	0.1880	23.166	13.910	937.4	30.87	123.22	63.9	78.2		28.86	3.931	
126.3		Reinf. Top Reinf	0.1880	23.003	13.811	917.6	30.64	122.35	64.2	77.1	48.6	28.86	3.892	101.2
130.0			0.1880	22.417	13.456	848.7	29.81	119.24	65.0	73.1	171.7	28.86	3.755	363.4
135.0			0.1880	21.625	12.977	761.2	28.68	115.03	65.0	68.0	224.9	28.86	3.573	491.1
140.0			0.1880	20.833	12.498	679.9	27.55	110.82	65.0	63.0	216.7	28.86	3.396	491.1
144.1		Reinf. Top Reinf	0.1880	20.184	12.105	617.8	26.62	107.36	65.0	59.1	171.6	28.86	3.255	402.7
145.0			0.1880	20.042	12.019	604.7	26.42	106.60	65.0	58.3	36.9	21.20	2.286	64.9
150.0			0.1880	19.250	11.539	535.2	25.29	102.39	65.0	53.7	200.4	21.20	2.165	360.8
155.0			0.1880	18.458	11.060	471.2	24.16	98.18	65.0	49.3	192.3	21.20	2.047	360.8
158.0		Reinf. Top	0.1880	17.983	10.773	435.4	23.49	95.66	65.0	46.8	111.4	21.20	1.978	216.4
160.0			0.1880	17.667	10.581	412.6	23.04	93.97	65.0	45.1	72.7			
165.0			0.1880	16.875	10.102	359.0	21.91	89.76	65.0	41.1	175.9			
170.0			0.1880	16.083	9.622	310.3	20.78	85.55	65.0	37.3	167.8			
175.0			0.1880	15.292	9.143	266.2	19.65	81.34	65.0	33.6	159.6			
180.0			0.1880	14.500	8.664	226.5	18.52	77.13	65.0	30.2	151.5			
											16,657.8			
												20,277.		

Pole : 302502
 Location : Harwinton, CT
 Height : 180.0 (ft)
 Shape : 12 Sides
 Base Dia : 43.00 (in)
 Top Dia : 14.50 (in)
 Taper : 0.158333 (in/ft)

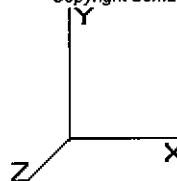
Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : B
 Topographic Category : 1

Base Elev : 0.000 (ft)

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Load Case: 1.2D + 1.6W

95.00 mph with No Ice

26 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 1.20

Wind Load Factor : 1.60

Shaft Segment Forces (Factored)

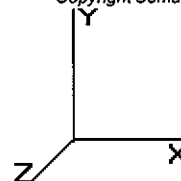
Seg Top Elev (ft)	Description	Kzt	Kz	az (psf)	azGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	15.364	16.90	294.86	1.000	0.00	0.00	0.000	0.00	0.0	0.0	0.0
4.10	Reinf. Top Reinf Bottom	1.00	0.70	15.364	16.90	290.40	1.277 *	0.00	4.10	15.095	19.28	521.3	0.0	1,448.8
5.00		1.00	0.70	15.364	16.90	289.43	1.283 *	0.00	0.90	3.283	4.21	113.9	0.0	316.3
10.00		1.00	0.70	15.364	16.90	284.00	1.289 *	0.00	5.00	18.036	23.25	628.7	0.0	1,745.6
15.00		1.00	0.70	15.364	16.90	278.57	1.200 *	0.00	5.00	17.695	21.23	574.2	0.0	1,726.1
20.00		1.00	0.70	15.364	16.90	273.14	1.200 *	0.00	5.00	17.353	20.82	563.1	0.0	1,706.6
25.00		1.00	0.70	15.364	16.90	267.71	1.200 *	0.00	5.00	17.012	20.41	552.0	0.0	1,687.1
30.00		1.00	0.70	15.377	16.91	262.39	1.200 *	0.00	5.00	16.670	20.00	541.4	0.0	1,667.5
35.00		1.00	0.73	16.070	17.67	262.69	1.200 *	0.00	5.00	16.329	19.59	554.2	0.0	1,648.0
40.00		1.00	0.76	16.694	18.36	262.09	1.200 *	0.00	5.00	15.987	19.18	563.7	0.0	1,628.5
44.10	Top - Section 1 Reinf.	1.00	0.78	17.166	18.88	261.06	1.200 *	0.00	4.10	12.855	15.43	466.1	0.0	1,320.8
45.00		1.00	0.78	17.266	18.99	260.78	1.200 *	0.00	0.90	2.791	3.35	101.8	0.0	262.3
50.00		1.00	0.81	17.793	19.57	258.89	1.200 *	0.00	5.00	15.304	18.37	575.1	0.0	1,447.7
55.00		1.00	0.83	18.285	20.11	256.52	1.200 *	0.00	5.00	14.963	17.96	577.8	0.0	1,431.4
60.00		1.00	0.85	18.745	20.61	253.73	1.200 *	0.00	5.00	14.621	17.55	578.9	0.0	1,415.1
65.00		1.00	0.87	19.179	21.09	250.58	1.200 *	0.00	5.00	14.280	17.14	578.4	0.0	1,398.8
70.00		1.00	0.89	19.589	21.54	247.12	1.200 *	0.00	5.00	13.938	16.73	576.7	0.0	1,382.5
75.00		1.00	0.91	19.979	21.97	243.38	1.200 *	0.00	5.00	13.597	16.32	573.7	0.0	1,366.2
80.00		1.00	0.92	20.351	22.38	239.38	1.200 *	0.00	5.00	13.255	15.91	569.7	0.0	1,349.9
84.10	Reinf. Top Reinf Bottom	1.00	0.94	20.643	22.70	235.94	1.200 *	0.00	4.10	10.614	12.74	462.8	0.0	1,094.8
85.00		1.00	0.94	20.706	22.77	235.16	1.200 *	0.00	0.90	2.300	2.76	100.6	0.0	224.0
86.57	Top - Section 2	1.00	0.94	20.815	22.89	233.80	1.200 *	0.00	1.57	3.984	4.78	175.2	0.0	389.4
86.60	Reinf. Top Reinf Bottom	1.00	0.94	20.817	22.89	233.77	1.200 *	0.00	0.03	0.076	0.09	3.3	0.0	6.7
90.00		1.00	0.95	21.047	23.15	230.74	1.200 *	0.00	3.40	8.512	10.21	378.4	0.0	757.7
95.00		1.00	0.97	21.375	23.51	226.12	1.200 *	0.00	5.00	12.231	14.68	552.2	0.0	1,103.3
100.0		1.00	0.98	21.690	23.86	221.34	1.200 *	0.00	5.00	11.890	14.27	544.7	0.0	1,090.3
104.1	Reinf. Top Reinf Bottom	1.00	1.00	21.941	24.13	217.29	1.200 *	0.00	4.10	9.494	11.39	440.0	0.0	884.3
105.0		1.00	1.00	21.995	24.19	216.39	1.200 *	0.00	0.90	2.054	2.46	95.4	0.0	193.0
110.0		1.00	1.01	22.289	24.51	211.29	1.200 *	0.00	5.00	11.207	13.45	527.5	0.0	1,064.3
115.0		1.00	1.02	22.574	24.83	206.06	1.200 *	0.00	5.00	10.865	13.04	518.0	0.0	1,051.3
120.0		1.00	1.04	22.850	25.13	200.70	1.200 *	0.00	5.00	10.524	12.63	507.9	0.0	1,038.2
124.1	Reinf. Top Reinf Bottom	1.00	1.05	23.071	25.37	196.21	1.200 *	0.00	4.10	8.374	10.05	408.0	0.0	841.6
125.0		1.00	1.05	23.118	25.43	195.21	1.200 *	0.00	0.90	1.808	2.17	88.3	0.0	156.5
125.2	Top - Section 3	1.00	1.05	23.133	25.44	194.91	1.200 *	0.00	0.27	0.540	0.65	26.4	0.0	46.9
126.3	Reinf. Top Reinf Bottom	1.00	1.05	23.187	25.50	193.77	1.200 *	0.00	1.03	2.051	2.46	100.5	0.0	159.5
130.0		1.00	1.06	23.379	25.71	189.61	1.200 *	0.00	3.70	7.249	8.70	357.9	0.0	569.4
135.0		1.00	1.07	23.632	25.99	183.90	1.200 *	0.00	5.00	9.499	11.40	474.1	0.0	760.9
140.0		1.00	1.08	23.879	26.26	178.09	1.200 *	0.00	5.00	9.158	10.99	461.8	0.0	751.2
144.1	Reinf. Top Reinf Bottom	1.00	1.09	24.077	26.48	173.26	1.200 *	0.00	4.10	7.254	8.71	368.9	0.0	608.6
145.0		1.00	1.09	24.120	26.53	172.19	1.200 *	0.00	0.90	1.562	1.87	79.6	0.0	109.3
150.0		1.00	1.11	24.355	26.79	166.19	1.200 *	0.00	5.00	8.475	10.17	435.9	0.0	601.2
155.0		1.00	1.12	24.584	27.04	160.10	1.200 *	0.00	5.00	8.133	9.76	422.3	0.0	591.5
158.0	Reinf. Top	1.00	1.12	24.719	27.19	156.41	1.200 *	0.00	3.00	4.716	5.66	246.2	0.0	350.2
160.0		1.00	1.13	24.808	27.28	153.93	1.200 *	0.00	2.00	3.076	3.69	161.1	0.0	87.2
165.0	Appertunance(s)	1.00	1.14	25.027	27.53	147.68	1.000	0.00	5.00	7.450	7.45	328.2	0.0	211.1
170.0		1.00	1.15	25.241	27.76	141.36	1.000	0.00	5.00	7.109	7.11	315.8	0.0	201.3
175.0	Appertunance(s)	1.00	1.16	25.451	27.99	134.95	1.000	0.00	5.00	6.767	6.77	303.1	0.0	191.6
180.0	Appertunance(s)	1.00	1.16	25.657	28.22	128.48	1.000	0.00	5.00	6.426	6.43	290.2	0.0	181.8
* = Cf Adjusted By Linear Load Ra Effect								Totals:		180.00		18,384.7	0.0	40,266.3

Pole : 302502
 Location : Harwinton, CT
 Height : 180.0 (ft)
 Shape : 12 Sides
 Base Dia : 43.00 (in)
 Top Dia : 14.50 (in)
 Taper : 0.158333 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : B
 Topographic Category : 1

Base Elev : 0.000 (ft)

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Load Case: 1.2D + 1.6W

95.00 mph with No Ice

26 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 1.20

Wind Load Factor : 1.60

Discrete Appurtenance Segment Forces (Factored)

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Ka	Total CaAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
165.0	RFS APXV18-206517-C	3	25.027	27.530	0.63	0.80	9.80	0.000	0.000	431.77	0.00	0.00	95.04
175.0	Flat Low Profile Pla	1	25.451	27.996	1.00	1.00	26.10	0.000	0.000	1,169.13	0.00	0.00	1,800.00
175.0	Antel LPA-80063/6CF	6	25.451	27.996	0.75	0.80	46.65	0.000	0.000	2,089.83	0.00	0.00	194.40
175.0	Decibel DB950G85E-	6	25.451	27.996	0.62	0.80	15.67	0.000	0.000	701.97	0.00	0.00	82.80
180.0	TTA	6	25.859	28.444	0.38	0.75	3.15	0.000	5.000	143.36	0.00	716.80	72.00
180.0	Round Platform with	1	25.859	28.444	1.00	1.00	27.20	0.000	5.000	1,237.90	0.00	6,189.48	2,400.00
180.0	CDA Diplexer	3	25.859	28.444	0.38	0.75	0.79	0.000	5.000	35.84	0.00	179.20	18.00
180.0	CSS DUO4-8670	11	25.859	28.444	0.62	0.75	44.58	0.000	5.000	2,028.94	0.00	10,144.7	508.20
										7,838.74			5,170.44

Pole : 302502
 Location : Harwinton, CT
 Height : 180.0 (ft)
 Shape : 12 Sides
 Base Dia : 43.00 (in)
 Top Dia : 14.50 (in)
 Taper : 0.158333 (in/ft)

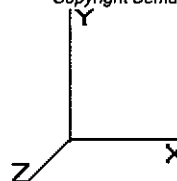
Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : B
 Topographic Category : 1

Base Elev : 0.000 (ft)

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Page: 6



Load Case: 1.2D + 1.6W

95.00 mph with No Ice

26 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 1.20

Wind Load Factor : 1.60

Linear Appurtenance Segment Forces (Factored)

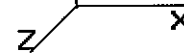
Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	qz (psf)	Ra	Cf Adjust Factor	F X (lb)	Dead Load (lb)
4.10	(3) 4.25" Solid Rod	Yes	4.10	0.000	8.50	2.90	0.00	15.364	0.192	1.277	0.00	145.09
5.00	(3) 4.25" Solid Rod	Yes	0.90	0.000	8.50	0.64	0.00	15.364	0.194	1.283	0.00	31.85
10.00	(3) 4.25" Solid Rod	Yes	5.00	0.000	8.50	3.54	0.00	15.364	0.196	1.289	0.00	176.94
15.00	(3) 4.25" Solid Rod	Yes	5.00	0.682	8.50	3.54	2.42	15.364	0.200	0.000	65.32	176.94
20.00	(3) 4.25" Solid Rod	Yes	5.00	0.682	8.50	3.54	2.42	15.364	0.204	0.000	65.32	176.94
25.00	(3) 4.25" Solid Rod	Yes	5.00	0.682	8.50	3.54	2.42	15.364	0.208	0.000	65.32	176.94
30.00	(3) 4.25" Solid Rod	Yes	5.00	0.682	8.50	3.54	2.41	15.377	0.212	0.000	65.35	176.94
35.00	(3) 4.25" Solid Rod	Yes	5.00	0.667	8.50	3.54	2.36	16.070	0.217	0.000	66.80	176.94
40.00	(3) 4.25" Solid Rod	Yes	5.00	0.654	8.50	3.54	2.32	16.694	0.222	0.000	68.09	176.94
44.10	(3) 4.25" Solid Rod	Yes	4.10	0.645	8.50	2.90	1.87	17.166	0.226	0.000	56.62	145.09
45.00	(3) 4.25" Solid Rod	Yes	0.90	0.643	8.50	0.64	0.41	17.266	0.228	0.000	12.46	31.85
50.00	(3) 4.25" Solid Rod	Yes	5.00	0.634	8.50	3.54	2.24	17.793	0.231	0.000	70.30	176.94
55.00	(3) 4.25" Solid Rod	Yes	5.00	0.625	8.50	3.54	2.21	18.285	0.237	0.000	71.26	176.94
60.00	(3) 4.25" Solid Rod	Yes	5.00	0.617	8.50	3.54	2.19	18.745	0.242	0.000	72.15	176.94
65.00	(3) 4.25" Solid Rod	Yes	5.00	0.610	8.50	3.54	2.16	19.179	0.248	0.000	72.98	176.94
70.00	(3) 4.25" Solid Rod	Yes	5.00	0.604	8.50	3.54	2.14	19.589	0.254	0.000	73.76	176.94
75.00	(3) 4.25" Solid Rod	Yes	5.00	0.600	8.50	3.54	2.13	19.979	0.260	0.000	74.72	176.94
80.00	(3) 4.25" Solid Rod	Yes	5.00	0.600	8.50	3.54	2.13	20.351	0.267	0.000	76.11	176.94
84.10	(3) 4.0" Solid Rod	Yes	4.10	0.625	8.00	2.73	1.71	20.643	0.258	0.000	62.09	36.90
85.00	(3) 4.0" Solid Rod	Yes	0.90	0.624	8.00	0.60	0.37	20.706	0.261	0.000	13.65	8.10
86.57	(3) 4.0" Solid Rod	Yes	1.57	0.623	8.00	1.05	0.65	20.815	0.263	0.000	23.87	14.13
86.60	(3) 4.0" Solid Rod	Yes	0.03	0.623	8.00	0.02	0.01	20.817	0.264	0.000	0.46	0.27
90.00	(3) 4.0" Solid Rod	Yes	3.40	0.619	8.00	2.27	1.40	21.047	0.266	0.000	51.99	30.60
95.00	(3) 4.0" Solid Rod	Yes	5.00	0.614	8.00	3.33	2.05	21.375	0.273	0.000	77.05	45.00
100.0	(3) 4.0" Solid Rod	Yes	5.00	0.610	8.00	3.33	2.03	21.690	0.280	0.000	77.61	45.00
104.1	(3) 4.0" Solid Rod	Yes	4.10	0.606	8.00	2.73	1.66	21.941	0.288	0.000	64.01	36.90
105.0	(3) 4.0" Solid Rod	Yes	0.90	0.606	8.00	0.60	0.36	21.995	0.292	0.000	14.07	8.10
110.0	(3) 4.0" Solid Rod	Yes	5.00	0.602	8.00	3.33	2.01	22.289	0.297	0.000	78.68	45.00
115.0	(3) 4.0" Solid Rod	Yes	5.00	0.600	8.00	3.33	2.00	22.574	0.307	0.000	79.46	45.00
120.0	(3) 4.0" Solid Rod	Yes	5.00	0.600	8.00	3.33	2.00	22.850	0.317	0.000	80.43	45.00
124.1	(3) 3.5" Solid Rod	Yes	4.10	0.676	7.00	2.39	1.62	23.071	0.286	0.000	65.63	19.19
125.0	(3) 3.5" Solid Rod	Yes	0.90	0.675	7.00	0.53	0.35	23.118	0.290	0.000	14.42	4.21
125.2	(3) 3.5" Solid Rod	Yes	0.27	0.675	7.00	0.16	0.11	23.133	0.292	0.000	4.33	1.26
126.3	(3) 3.5" Solid Rod	Yes	1.03	0.674	7.00	0.60	0.41	23.187	0.293	0.000	16.53	4.82
130.0	(3) 3.5" Solid Rod	Yes	3.70	0.671	7.00	2.16	1.45	23.379	0.298	0.000	59.63	17.32
135.0	(3) 3.5" Solid Rod	Yes	5.00	0.668	7.00	2.92	1.95	23.632	0.307	0.000	81.01	23.40
140.0	(3) 3.5" Solid Rod	Yes	5.00	0.664	7.00	2.92	1.94	23.879	0.318	0.000	81.43	23.40
144.1	(3) 3.0" Solid Rod	Yes	4.10	0.772	6.00	2.05	1.58	24.077	0.283	0.000	67.05	26.27
145.0	(3) 3.0" Solid Rod	Yes	0.90	0.771	6.00	0.45	0.35	24.120	0.288	0.000	14.73	5.77
150.0	(3) 3.0" Solid Rod	Yes	5.00	0.767	6.00	2.50	1.92	24.355	0.295	0.000	82.24	32.04
155.0	(3) 3.0" Solid Rod	Yes	5.00	0.764	6.00	2.50	1.91	24.584	0.307	0.000	82.63	32.04
158.0	(3) 3.0" Solid Rod	Yes	3.00	0.762	6.00	1.50	1.14	24.719	0.318	0.000	49.71	19.22
160.0	(3) 3.0" Solid Rod	Yes	2.00	0.760	6.00	1.00	0.76	24.808	0.325	0.000	33.20	12.82
Totals:											2,252.47	3,412.76

Pole : 302502
 Location : Harwinton, CT
 Height : 180.0 (ft)
 Shape : 12 Sides
 Base Dia : 43.00 (in)
 Top Dia : 14.50 (in)
 Taper : 0.158333 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : B
 Topographic Category : 1

Base Elev : 0.000 (ft)

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Load Case: 1.2D + 1.6W

95.00 mph with No Ice

26 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 1.20

Wind Load Factor : 1.60

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
4.10	521.32	1,618.14	0.00	0.00
5.00	113.86	353.45	0.00	0.00
10.00	628.72	2,036.48	0.00	0.00
15.00	639.51	2,016.96	0.00	0.00
20.00	628.42	1,997.45	0.00	0.00
25.00	617.34	1,977.93	0.00	0.00
30.00	606.75	1,958.41	0.00	0.00
35.00	620.99	1,938.89	0.00	0.00
40.00	631.79	1,919.38	0.00	0.00
44.10	522.68	1,559.33	0.00	0.00
45.00	114.24	314.67	0.00	0.00
50.00	645.43	1,738.54	0.00	0.00
55.00	649.09	1,722.25	0.00	0.00
60.00	651.00	1,705.95	0.00	0.00
65.00	651.39	1,689.66	0.00	0.00
70.00	650.42	1,673.37	0.00	0.00
75.00	648.45	1,657.08	0.00	0.00
80.00	645.84	1,640.79	0.00	0.00
84.10	524.86	1,225.08	0.00	0.00
85.00	114.22	252.61	0.00	0.00
86.57	199.03	439.33	0.00	0.00
86.60	3.79	7.67	0.00	0.00
90.00	430.38	865.78	0.00	0.00
95.00	629.20	1,262.23	0.00	0.00
100.0	622.27	1,249.22	0.00	0.00
104.1	503.97	1,014.63	0.00	0.00
105.0	109.47	221.58	0.00	0.00
110.0	606.22	1,223.20	0.00	0.00
115.0	597.47	1,210.19	0.00	0.00
120.0	588.30	1,197.17	0.00	0.00
124.1	473.67	954.24	0.00	0.00
125.0	102.69	181.27	0.00	0.00
125.2	30.70	54.27	0.00	0.00
126.3	116.99	187.77	0.00	0.00
130.0	417.56	671.02	0.00	0.00
135.0	555.12	898.27	0.00	0.00
140.0	543.27	888.49	0.00	0.00
144.1	435.93	728.32	0.00	0.00
145.0	94.30	135.55	0.00	0.00
150.0	518.14	747.20	0.00	0.00
155.0	504.90	737.42	0.00	0.00
158.0	295.91	437.76	0.00	0.00
160.0	194.35	145.58	0.00	0.00
165.0	759.92	420.10	0.00	0.00
170.0	315.79	285.76	0.00	0.00
175.0	4,264.05	2,353.18	0.00	0.00
180.0	3,736.19	3,205.36	0.00	17,230.20
Totals:	28,475.93	52,718.96	0.00	17,230.20

Pole : 302502
 Location : Harwinton, CT
 Height : 180.0 (ft)
 Shape : 12 Sides
 Base Dia : 43.00 (in)
 Top Dia : 14.50 (in)
 Taper : 0.158333 (in/ft)

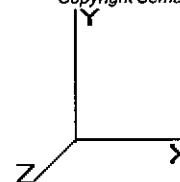
Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : B
 Topographic Category : 1

Base Elev : 0.000 (ft)

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Load Case: 1.2D + 1.6W

95.00 mph with No Ice

26 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 1.20

Wind Load Factor : 1.60

Calculated Forces

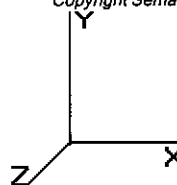
Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-52.68	-28.54	0.00	-3,296.69	0.00	3,296.69	3,010.98	1,505.49	5,293.47	2,614.24	0.00	0.00	0.563
4.10	-51.02	-28.09	0.00	-3,179.68	0.00	3,179.68	3,010.98	1,505.49	5,293.47	2,614.24	0.06	-0.14	0.553
4.10	-51.02	-28.09	0.00	-3,179.68	0.00	3,179.68	3,010.98	1,505.49	5,293.47	2,614.24	0.06	-0.14	0.553
5.00	-50.62	-28.07	0.00	-3,154.39	0.00	3,154.39	2,955.05	1,477.53	5,097.82	2,517.62	0.09	-0.17	0.551
10.00	-48.51	-27.57	0.00	-3,014.06	0.00	3,014.06	2,899.13	1,449.57	4,905.86	2,422.82	0.36	-0.34	0.539
15.00	-46.42	-27.05	0.00	-2,876.21	0.00	2,876.21	2,843.21	1,421.60	4,717.59	2,329.84	0.80	-0.50	0.526
20.00	-44.35	-26.53	0.00	-2,740.95	0.00	2,740.95	2,787.29	1,393.64	4,532.99	2,238.67	1.42	-0.67	0.513
25.00	-42.31	-26.01	0.00	-2,608.30	0.00	2,608.30	2,731.36	1,365.68	4,352.08	2,149.33	2.22	-0.84	0.500
30.00	-40.28	-25.49	0.00	-2,478.25	0.00	2,478.25	2,675.44	1,337.72	4,174.86	2,061.81	3.18	-1.00	0.486
35.00	-38.29	-24.94	0.00	-2,350.81	0.00	2,350.81	2,619.52	1,309.76	4,001.32	1,976.10	4.32	-1.16	0.472
40.00	-36.32	-24.36	0.00	-2,226.13	0.00	2,226.13	2,563.60	1,281.80	3,831.46	1,892.22	5.62	-1.33	0.458
44.10	-34.74	-23.85	0.00	-2,126.26	0.00	2,126.26	2,563.60	1,281.80	3,831.46	1,892.22	6.82	-1.46	0.446
44.10	-34.74	-23.85	0.00	-2,126.26	0.00	2,126.26	2,563.60	1,281.80	3,831.46	1,892.22	6.82	-1.46	0.000
45.00	-34.39	-23.78	0.00	-2,104.80	0.00	2,104.80	2,096.73	1,048.36	3,075.36	1,518.80	7.10	-1.49	0.472
50.00	-32.60	-23.19	0.00	-1,985.89	0.00	1,985.89	2,050.05	1,025.03	2,939.37	1,451.64	8.75	-1.66	0.456
55.00	-30.83	-22.57	0.00	-1,869.96	0.00	1,869.96	2,003.38	1,001.69	2,806.46	1,386.01	10.57	-1.82	0.439
60.00	-29.09	-21.95	0.00	-1,757.09	0.00	1,757.09	1,956.70	978.35	2,676.63	1,321.89	12.57	-1.99	0.422
65.00	-27.36	-21.31	0.00	-1,647.35	0.00	1,647.35	1,910.02	955.01	2,549.87	1,259.28	14.74	-2.15	0.405
70.00	-25.66	-20.67	0.00	-1,540.79	0.00	1,540.79	1,863.35	931.67	2,426.18	1,198.20	17.07	-2.30	0.388
75.00	-23.98	-20.02	0.00	-1,437.45	0.00	1,437.45	1,816.67	908.33	2,305.57	1,138.64	19.56	-2.46	0.371
80.00	-22.32	-19.35	0.00	-1,337.38	0.00	1,337.38	1,769.99	885.00	2,188.04	1,080.59	22.22	-2.61	0.353
84.10	-21.10	-18.80	0.00	-1,258.04	0.00	1,258.04	1,769.99	885.00	2,188.04	1,080.59	24.52	-2.73	0.339
84.10	-21.10	-18.80	0.00	-1,258.04	0.00	1,258.04	1,769.99	885.00	2,188.04	1,080.59	24.52	-2.73	0.373
85.00	-20.84	-18.68	0.00	-1,241.12	0.00	1,241.12	1,723.32	861.66	2,073.58	1,024.06	25.04	-2.76	0.369
86.57	-20.40	-18.47	0.00	-1,211.79	0.00	1,211.79	1,708.66	854.33	2,038.28	1,006.63	25.95	-2.81	0.363
86.57	-20.40	-18.47	0.00	-1,211.79	0.00	1,211.79	1,708.66	854.33	2,038.28	1,006.63	25.95	-2.81	0.386
86.60	-20.37	-18.49	0.00	-1,211.24	0.00	1,211.24	1,708.66	854.33	2,038.28	1,006.63	25.97	-2.81	0.386
86.60	-20.37	-18.49	0.00	-1,211.24	0.00	1,211.24	1,708.66	854.33	2,038.28	1,006.63	25.97	-2.81	0.386
90.00	-19.49	-18.06	0.00	-1,148.37	0.00	1,148.37	1,342.14	671.07	1,577.69	779.16	28.01	-2.93	0.372
95.00	-18.21	-17.42	0.00	-1,058.05	0.00	1,058.05	1,304.85	652.43	1,490.89	736.29	31.17	-3.09	0.351
100.00	-16.96	-16.77	0.00	-970.94	0.00	970.94	1,267.57	633.79	1,406.54	694.64	34.49	-3.25	0.330
104.10	-15.95	-16.23	0.00	-902.17	0.00	902.17	1,267.57	633.79	1,406.54	694.64	37.33	-3.38	0.312
104.10	-15.95	-16.23	0.00	-902.17	0.00	902.17	1,267.57	633.79	1,406.54	694.64	37.33	-3.38	0.312
105.00	-15.71	-16.13	0.00	-887.56	0.00	887.56	1,230.29	615.15	1,324.65	654.19	37.97	-3.40	0.309
110.00	-14.49	-15.49	0.00	-806.89	0.00	806.89	1,193.01	596.51	1,245.21	614.96	41.62	-3.55	0.287
115.00	-13.28	-14.85	0.00	-729.43	0.00	729.43	1,155.73	577.86	1,168.24	576.95	45.41	-3.69	0.266
120.00	-12.10	-14.21	0.00	-655.18	0.00	655.18	1,118.45	559.22	1,093.71	540.14	49.35	-3.83	0.245
124.10	-11.16	-13.69	0.00	-596.92	0.00	596.92	1,118.45	559.22	1,093.71	540.14	52.68	-3.93	0.227
124.10	-11.16	-13.69	0.00	-596.92	0.00	596.92	1,118.45	559.22	1,093.71	540.14	52.68	-3.93	0.287
125.00	-10.98	-13.57	0.00	-584.60	0.00	584.60	1,081.17	540.58	1,021.65	504.55	53.42	-3.95	0.282
125.27	-10.93	-13.54	0.00	-580.94	0.00	580.94	1,079.15	539.58	1,017.83	502.67	53.64	-3.96	0.281
125.27	-10.93	-13.54	0.00	-580.94	0.00	580.94	1,079.15	539.58	1,017.83	502.67	53.64	-3.96	0.304
126.30	-10.73	-13.43	0.00	-566.98	0.00	566.98	1,079.15	539.58	1,017.83	502.67	54.50	-3.99	0.297
126.30	-10.73	-13.43	0.00	-566.98	0.00	566.98	1,079.15	539.58	1,017.83	502.67	54.50	-3.99	0.297
130.00	-10.06	-12.99	0.00	-517.30	0.00	517.30	787.08	393.54	721.85	356.50	57.64	-4.11	0.273
135.00	-9.17	-12.39	0.00	-452.36	0.00	452.36	759.16	379.58	671.24	331.50	62.03	-4.26	0.244
140.00	-8.30	-11.80	0.00	-390.41	0.00	390.41	731.12	365.56	622.37	307.37	66.57	-4.40	0.216
144.10	-7.60	-11.32	0.00	-342.03	0.00	342.03	731.12	365.56	622.37	307.37	70.39	-4.51	0.193
144.10	-7.60	-11.32	0.00	-342.03	0.00	342.03	731.12	365.56	622.37	307.37	70.39	-4.51	0.255
145.00	-7.45	-11.22	0.00	-331.84	0.00	331.84	703.09	351.54	575.35	284.14	71.24	-4.53	0.249
150.00	-6.73	-10.66	0.00	-275.72	0.00	275.72	675.05	337.53	530.17	261.83	76.07	-4.68	0.213

Pole : 302502
 Location : Harwinton, CT
 Height : 180.0 (ft)
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 Page: 9



Load Case: 1.2D + 1.6W

95.00 mph with No Ice

26 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

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Wind Load Factor : 1.60

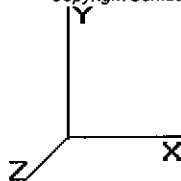
155.00	-6.01	-10.11	0.00	-222.40	0.00	222.40	647.02	323.51	486.84	240.43	81.03	-4.81	0.177
158.00	-5.59	-9.78	0.00	-192.07	0.00	192.07	647.02	323.51	486.84	240.43	84.08	-4.88	0.156
158.00	-5.59	-9.78	0.00	-192.07	0.00	192.07	647.02	323.51	486.84	240.43	84.08	-4.88	0.852
160.00	-5.42	-9.61	0.00	-172.50	0.00	172.50	618.98	309.49	445.36	219.95	86.13	-4.92	0.794
165.00	-5.00	-8.85	0.00	-124.47	0.00	124.47	590.95	295.47	405.73	200.37	91.56	-5.43	0.631
170.00	-4.69	-8.54	0.00	-80.21	0.00	80.21	562.91	281.46	367.94	181.71	97.47	-5.84	0.451
175.00	-2.78	-4.06	0.00	-37.53	0.00	37.53	534.87	267.44	332.00	163.96	103.74	-6.11	0.234
180.00	0.00	-3.74	0.00	-17.23	0.00	17.23	506.84	253.42	297.90	147.12	110.21	-6.26	0.117

Pole : 302502
 Location : Harwinton, CT
 Height : 180.0 (ft)
 Shape : 12 Sides
 Base Dia : 43.00 (in)
 Top Dia : 14.50 (in)
 Taper : 0.158333 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : B
 Topographic Category : 1

Base Elev : 0.000 (ft)

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Load Case: 0.9D + 1.6W

95.00 mph with No Ice (Reduced DL)

26 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 0.90

Wind Load Factor : 1.60

Shaft Segment Forces (Factored)

Seg Top Elev (ft)	Description	Kzt	Kz	qz (psf)	qxGh (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		1.00	0.70	15.364	16.90	294.86	1.000	0.00	0.00	0.000	0.00	0.0	0.0	0.0
4.10	Reinf. Top Reinf Bottom	1.00	0.70	15.364	16.90	290.40	1.000 *	0.00	4.10	15.095	15.10	408.2	0.0	1,235.1
5.00		1.00	0.70	15.364	16.90	289.43	1.000 *	0.00	0.90	3.283	3.28	88.8	0.0	269.8
10.00		1.00	0.70	15.364	16.90	284.00	1.000 *	0.00	5.00	18.036	18.04	487.7	0.0	1,490.2
15.00		1.00	0.70	15.364	16.90	278.57	1.200 *	0.00	5.00	17.695	21.23	574.2	0.0	1,475.6
20.00		1.00	0.70	15.364	16.90	273.14	1.200 *	0.00	5.00	17.353	20.82	563.1	0.0	1,460.9
25.00		1.00	0.70	15.364	16.90	267.71	1.200 *	0.00	5.00	17.012	20.41	552.0	0.0	1,446.3
30.00		1.00	0.70	15.377	16.91	262.39	1.200 *	0.00	5.00	16.670	20.00	541.4	0.0	1,431.7
35.00		1.00	0.73	16.070	17.67	262.69	1.200 *	0.00	5.00	16.329	19.59	554.2	0.0	1,417.0
40.00		1.00	0.76	16.694	18.36	262.09	1.200 *	0.00	5.00	15.987	19.18	563.7	0.0	1,402.4
44.10	Top - Section 1 Reinf.	1.00	0.78	17.166	18.88	261.06	1.200 *	0.00	4.10	12.855	15.43	466.1	0.0	1,139.0
45.00		1.00	0.78	17.266	18.99	260.78	1.200 *	0.00	0.90	2.791	3.35	101.8	0.0	229.3
50.00		1.00	0.81	17.793	19.57	258.89	1.200 *	0.00	5.00	15.304	18.37	575.1	0.0	1,266.8
55.00		1.00	0.83	18.285	20.11	256.52	1.200 *	0.00	5.00	14.963	17.96	577.8	0.0	1,254.5
60.00		1.00	0.85	18.745	20.61	253.73	1.200 *	0.00	5.00	14.621	17.55	578.9	0.0	1,242.3
65.00		1.00	0.87	19.179	21.09	250.58	1.200 *	0.00	5.00	14.280	17.14	578.4	0.0	1,230.1
70.00		1.00	0.89	19.589	21.54	247.12	1.200 *	0.00	5.00	13.938	16.73	576.7	0.0	1,217.9
75.00		1.00	0.91	19.979	21.97	243.38	1.200 *	0.00	5.00	13.597	16.32	573.7	0.0	1,205.7
80.00		1.00	0.92	20.351	22.38	239.38	1.200 *	0.00	5.00	13.255	15.91	569.7	0.0	1,193.5
84.10	Reinf. Top Reinf Bottom	1.00	0.94	20.643	22.70	235.94	1.200 *	0.00	4.10	10.614	12.74	462.8	0.0	969.5
85.00		1.00	0.94	20.706	22.77	235.16	1.200 *	0.00	0.90	2.300	2.76	100.6	0.0	196.9
86.57	Top - Section 2	1.00	0.94	20.815	22.89	233.80	1.200 *	0.00	1.57	3.984	4.78	175.2	0.0	342.4
86.60	Reinf. Top Reinf Bottom	1.00	0.94	20.817	22.89	233.77	1.200 *	0.00	0.03	0.076	0.09	3.3	0.0	6.0
90.00		1.00	0.95	21.047	23.15	230.74	1.200 *	0.00	3.40	8.512	10.21	378.4	0.0	677.3
95.00		1.00	0.97	21.375	23.51	226.12	1.200 *	0.00	5.00	12.231	14.68	552.2	0.0	987.8
100.0		1.00	0.98	21.690	23.86	221.34	1.200 *	0.00	5.00	11.890	14.27	544.7	0.0	978.1
104.1	Reinf. Top Reinf Bottom	1.00	1.00	21.941	24.13	217.29	1.200 *	0.00	4.10	9.494	11.39	440.0	0.0	794.7
105.0		1.00	1.00	21.995	24.19	216.39	1.200 *	0.00	0.90	2.054	2.46	95.4	0.0	173.6
110.0		1.00	1.01	22.289	24.51	211.29	1.200 *	0.00	5.00	11.207	13.45	527.5	0.0	958.6
115.0		1.00	1.02	22.574	24.83	206.06	1.200 *	0.00	5.00	10.865	13.04	518.0	0.0	948.8
120.0		1.00	1.04	22.850	25.13	200.70	1.200 *	0.00	5.00	10.524	12.63	507.9	0.0	939.0
124.1	Reinf. Top Reinf Bottom	1.00	1.05	23.071	25.37	196.21	1.200 *	0.00	4.10	8.374	10.05	408.0	0.0	762.7
125.0		1.00	1.05	23.118	25.43	195.21	1.200 *	0.00	0.90	1.808	2.17	88.3	0.0	139.5
125.2	Top - Section 3	1.00	1.05	23.133	25.44	194.91	1.200 *	0.00	0.27	0.540	0.65	26.4	0.0	41.8
126.3	Reinf. Top Reinf Bottom	1.00	1.05	23.187	25.50	193.77	1.200 *	0.00	1.03	2.051	2.46	100.5	0.0	144.9
130.0		1.00	1.06	23.379	25.71	189.61	1.200 *	0.00	3.70	7.249	8.70	357.9	0.0	517.9
135.0		1.00	1.07	23.632	25.99	183.90	1.200 *	0.00	5.00	9.499	11.40	474.1	0.0	693.5
140.0		1.00	1.08	23.879	26.26	178.09	1.200 *	0.00	5.00	9.158	10.99	461.8	0.0	686.1
144.1	Reinf. Top Reinf Bottom	1.00	1.09	24.077	26.48	173.26	1.200 *	0.00	4.10	7.254	8.71	368.9	0.0	557.1
145.0		1.00	1.09	24.120	26.53	172.19	1.200 *	0.00	0.90	1.562	1.87	79.6	0.0	98.2
150.0		1.00	1.11	24.355	26.79	166.19	1.200 *	0.00	5.00	8.475	10.17	435.9	0.0	541.1
155.0		1.00	1.12	24.584	27.04	160.10	1.200 *	0.00	5.00	8.133	9.76	422.3	0.0	533.8
158.0	Reinf. Top	1.00	1.12	24.719	27.19	156.41	1.200 *	0.00	3.00	4.716	5.66	246.2	0.0	316.7
160.0		1.00	1.13	24.808	27.28	153.93	1.200 *	0.00	2.00	3.076	3.69	161.1	0.0	65.4
165.0	Appertunance(s)	1.00	1.14	25.027	27.53	147.68	1.000	0.00	5.00	7.450	7.45	328.2	0.0	158.4
170.0		1.00	1.15	25.241	27.76	141.36	1.000	0.00	5.00	7.109	7.11	315.8	0.0	151.0
175.0	Appertunance(s)	1.00	1.16	25.451	27.99	134.95	1.000	0.00	5.00	6.767	6.77	303.1	0.0	143.7
180.0	Appertunance(s)	1.00	1.16	25.657	28.22	128.48	1.000	0.00	5.00	6.426	6.43	290.2	0.0	136.3

* = Cf Adjusted By Linear Load Ra Effect

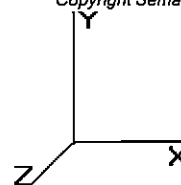
Totals: 180.00 18,105.5 0.0 35,269.0

Pole : 302502
 Location : Harwinton, CT
 Height : 180.0 (ft)
 Shape : 12 Sides
 Base Dia : 43.00 (in)
 Top Dia : 14.50 (in)
 Taper : 0.158333 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : B
 Topographic Category : 1

Base Elev : 0.000 (ft)

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Load Case: 0.9D + 1.6W

95.00 mph with No Ice (Reduced DL)

26 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 0.90

Wind Load Factor : 1.60

Discrete Appurtenance Segment Forces (Factored)

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Ka	Total CaAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
165.0	RFS APXV18-206517-C	3	25.027	27.530	0.63	0.80	9.80	0.000	0.000	431.77	0.00	0.00	71.28
175.0	Flat Low Profile Pla	1	25.451	27.996	1.00	1.00	26.10	0.000	0.000	1,169.13	0.00	0.00	1,350.00
175.0	Antel LPA-80063/6CF	6	25.451	27.996	0.75	0.80	46.65	0.000	0.000	2,089.83	0.00	0.00	145.80
175.0	Decibel DB950G85E-	6	25.451	27.996	0.62	0.80	15.67	0.000	0.000	701.97	0.00	0.00	62.10
180.0	TTA	6	25.859	28.444	0.38	0.75	3.15	0.000	5.000	143.36	0.00	716.80	54.00
180.0	Round Platform with	1	25.859	28.444	1.00	1.00	27.20	0.000	5.000	1,237.90	0.00	6,189.48	1,800.00
180.0	CDA Diplexer	3	25.859	28.444	0.38	0.75	0.79	0.000	5.000	35.84	0.00	179.20	13.50
180.0	CSS DUO4-8670	11	25.859	28.444	0.62	0.75	44.58	0.000	5.000	2,028.94	0.00	10,144.7	381.15
										7,838.74			3,877.83

Pole : 302502
 Location : Harwinton, CT
 Height : 180.0 (ft)
 Shape : 12 Sides
 Base Dia : 43.00 (in)
 Top Dia : 14.50 (in)
 Taper : 0.158333 (in/ft)

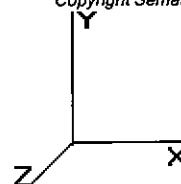
Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : B
 Topographic Category : 1

Base Elev : 0.000 (ft)

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Load Case: 0.9D + 1.6W

95.00 mph with No Ice (Reduced DL)

26 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 0.90

Wind Load Factor : 1.60

Linear Appurtenance Segment Forces (Factored)

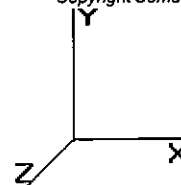
Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	qz (psf)	Ra	Cf Adjust Factor	F X (lb)	Dead Load (lb)
4.10	(3) 4.25" Solid Rod	Yes	4.10	0.000	8.50	2.90	0.00	15.364	0.192	1.277	0.00	108.82
5.00	(3) 4.25" Solid Rod	Yes	0.90	0.000	8.50	0.64	0.00	15.364	0.194	1.283	0.00	23.89
10.00	(3) 4.25" Solid Rod	Yes	5.00	0.000	8.50	3.54	0.00	15.364	0.196	1.289	0.00	132.70
15.00	(3) 4.25" Solid Rod	Yes	5.00	0.682	8.50	3.54	2.42	15.364	0.200	0.000	65.32	132.70
20.00	(3) 4.25" Solid Rod	Yes	5.00	0.682	8.50	3.54	2.42	15.364	0.204	0.000	65.32	132.70
25.00	(3) 4.25" Solid Rod	Yes	5.00	0.682	8.50	3.54	2.42	15.364	0.208	0.000	65.32	132.70
30.00	(3) 4.25" Solid Rod	Yes	5.00	0.682	8.50	3.54	2.41	15.377	0.212	0.000	65.35	132.70
35.00	(3) 4.25" Solid Rod	Yes	5.00	0.667	8.50	3.54	2.36	16.070	0.217	0.000	66.80	132.70
40.00	(3) 4.25" Solid Rod	Yes	5.00	0.654	8.50	3.54	2.32	16.694	0.222	0.000	68.09	132.70
44.10	(3) 4.25" Solid Rod	Yes	4.10	0.645	8.50	2.90	1.87	17.166	0.226	0.000	56.62	108.82
45.00	(3) 4.25" Solid Rod	Yes	0.90	0.643	8.50	0.64	0.41	17.266	0.228	0.000	12.46	23.89
50.00	(3) 4.25" Solid Rod	Yes	5.00	0.634	8.50	3.54	2.24	17.793	0.231	0.000	70.30	132.70
55.00	(3) 4.25" Solid Rod	Yes	5.00	0.625	8.50	3.54	2.21	18.285	0.237	0.000	71.26	132.70
60.00	(3) 4.25" Solid Rod	Yes	5.00	0.617	8.50	3.54	2.19	18.745	0.242	0.000	72.15	132.70
65.00	(3) 4.25" Solid Rod	Yes	5.00	0.610	8.50	3.54	2.16	19.179	0.248	0.000	72.98	132.70
70.00	(3) 4.25" Solid Rod	Yes	5.00	0.604	8.50	3.54	2.14	19.589	0.254	0.000	73.76	132.70
75.00	(3) 4.25" Solid Rod	Yes	5.00	0.600	8.50	3.54	2.13	19.979	0.260	0.000	74.72	132.70
80.00	(3) 4.25" Solid Rod	Yes	5.00	0.600	8.50	3.54	2.13	20.351	0.267	0.000	76.11	132.70
84.10	(3) 4.0" Solid Rod	Yes	4.10	0.625	8.00	2.73	1.71	20.643	0.258	0.000	62.09	27.67
85.00	(3) 4.0" Solid Rod	Yes	0.90	0.624	8.00	0.60	0.37	20.706	0.261	0.000	13.65	6.08
86.57	(3) 4.0" Solid Rod	Yes	1.57	0.623	8.00	1.05	0.65	20.815	0.263	0.000	23.87	10.60
86.60	(3) 4.0" Solid Rod	Yes	0.03	0.623	8.00	0.02	0.01	20.817	0.264	0.000	0.46	0.20
90.00	(3) 4.0" Solid Rod	Yes	3.40	0.619	8.00	2.27	1.40	21.047	0.266	0.000	51.99	22.95
95.00	(3) 4.0" Solid Rod	Yes	5.00	0.614	8.00	3.33	2.05	21.375	0.273	0.000	77.05	33.75
100.0	(3) 4.0" Solid Rod	Yes	5.00	0.610	8.00	3.33	2.03	21.690	0.280	0.000	77.61	33.75
104.1	(3) 4.0" Solid Rod	Yes	4.10	0.606	8.00	2.73	1.66	21.941	0.288	0.000	64.01	27.67
105.0	(3) 4.0" Solid Rod	Yes	0.90	0.606	8.00	0.60	0.36	21.995	0.292	0.000	14.07	6.08
110.0	(3) 4.0" Solid Rod	Yes	5.00	0.602	8.00	3.33	2.01	22.289	0.297	0.000	78.68	33.75
115.0	(3) 4.0" Solid Rod	Yes	5.00	0.600	8.00	3.33	2.00	22.574	0.307	0.000	79.46	33.75
120.0	(3) 4.0" Solid Rod	Yes	5.00	0.600	8.00	3.33	2.00	22.850	0.317	0.000	80.43	33.75
124.1	(3) 3.5" Solid Rod	Yes	4.10	0.676	7.00	2.39	1.62	23.071	0.286	0.000	65.63	14.39
125.0	(3) 3.5" Solid Rod	Yes	0.90	0.675	7.00	0.53	0.35	23.118	0.290	0.000	14.42	3.16
125.2	(3) 3.5" Solid Rod	Yes	0.27	0.675	7.00	0.16	0.11	23.133	0.292	0.000	4.33	0.95
126.3	(3) 3.5" Solid Rod	Yes	1.03	0.674	7.00	0.60	0.41	23.187	0.293	0.000	16.53	3.62
130.0	(3) 3.5" Solid Rod	Yes	3.70	0.671	7.00	2.16	1.45	23.379	0.298	0.000	59.63	12.99
135.0	(3) 3.5" Solid Rod	Yes	5.00	0.668	7.00	2.92	1.95	23.632	0.307	0.000	81.01	17.55
140.0	(3) 3.5" Solid Rod	Yes	5.00	0.664	7.00	2.92	1.94	23.879	0.318	0.000	81.43	17.55
144.1	(3) 3.0" Solid Rod	Yes	4.10	0.772	6.00	2.05	1.58	24.077	0.283	0.000	67.05	19.70
145.0	(3) 3.0" Solid Rod	Yes	0.90	0.771	6.00	0.45	0.35	24.120	0.288	0.000	14.73	4.33
150.0	(3) 3.0" Solid Rod	Yes	5.00	0.767	6.00	2.50	1.92	24.355	0.295	0.000	82.24	24.03
155.0	(3) 3.0" Solid Rod	Yes	5.00	0.764	6.00	2.50	1.91	24.584	0.307	0.000	82.63	24.03
158.0	(3) 3.0" Solid Rod	Yes	3.00	0.762	6.00	1.50	1.14	24.719	0.318	0.000	49.71	14.42
160.0	(3) 3.0" Solid Rod	Yes	2.00	0.760	6.00	1.00	0.76	24.808	0.325	0.000	33.20	9.61
Totals:											2,252.47	2,559.57

Pole : 302502
 Location : Harwinton, CT
 Height : 180.0 (ft)
 Shape : 12 Sides
 Base Dia : 43.00 (in)
 Top Dia : 14.50 (in)
 Taper : 0.158333 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
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 Topographic Category : 1

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Load Case: 0.9D + 1.6W

95.00 mph with No Ice (Reduced DL)

26 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 0.90

Wind Load Factor : 1.60

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
4.10	408.19	1,362.04	0.00	0.00
5.00	88.77	297.67	0.00	0.00
10.00	487.72	1,708.37	0.00	0.00
15.00	639.51	1,693.73	0.00	0.00
20.00	628.42	1,679.10	0.00	0.00
25.00	617.34	1,664.46	0.00	0.00
30.00	606.75	1,649.82	0.00	0.00
35.00	620.99	1,635.18	0.00	0.00
40.00	631.79	1,620.55	0.00	0.00
44.10	522.68	1,317.92	0.00	0.00
45.00	114.24	268.58	0.00	0.00
50.00	645.43	1,484.91	0.00	0.00
55.00	649.09	1,472.70	0.00	0.00
60.00	651.00	1,460.48	0.00	0.00
65.00	651.39	1,448.26	0.00	0.00
70.00	650.42	1,436.04	0.00	0.00
75.00	648.45	1,423.83	0.00	0.00
80.00	645.84	1,411.61	0.00	0.00
84.10	524.86	1,067.23	0.00	0.00
85.00	114.22	218.32	0.00	0.00
86.57	199.03	379.84	0.00	0.00
86.60	3.79	6.71	0.00	0.00
90.00	430.38	758.37	0.00	0.00
95.00	629.20	1,107.02	0.00	0.00
100.0	622.27	1,097.27	0.00	0.00
104.1	503.97	892.45	0.00	0.00
105.0	109.47	195.05	0.00	0.00
110.0	606.22	1,077.75	0.00	0.00
115.0	597.47	1,067.99	0.00	0.00
120.0	588.30	1,058.23	0.00	0.00
124.1	473.67	847.16	0.00	0.00
125.0	102.69	158.05	0.00	0.00
125.2	30.70	47.33	0.00	0.00
126.3	116.99	166.12	0.00	0.00
130.0	417.56	594.12	0.00	0.00
135.0	555.12	796.48	0.00	0.00
140.0	543.27	789.14	0.00	0.00
144.1	435.93	646.91	0.00	0.00
145.0	94.30	117.90	0.00	0.00
150.0	518.14	650.59	0.00	0.00
155.0	504.90	643.25	0.00	0.00
158.0	295.91	382.43	0.00	0.00
160.0	194.35	109.18	0.00	0.00
165.0	759.92	315.08	0.00	0.00
170.0	315.79	214.32	0.00	0.00
175.0	4,264.05	1,764.88	0.00	0.00
180.0	3,736.19	2,404.02	0.00	17,230.20
Totals:	28,196.72	44,608.47	0.00	17,230.20

Pole : 302502
 Location : Harwinton, CT
 Height : 180.0 (ft)
 Shape : 12 Sides
 Base Dia : 43.00 (in)
 Top Dia : 14.50 (in)
 Taper : 0.158333 (in/ft)

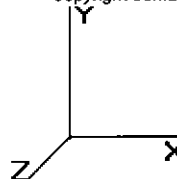
Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : B
 Topographic Category : 1

Base Elev : 0.000 (ft)

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Load Case: 0.9D + 1.6W

95.00 mph with No Ice (Reduced DL)

26 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 0.90

Wind Load Factor : 1.60

Calculated Forces

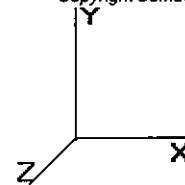
Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-44.57	-28.25	0.00	-3,268.70	0.00	3,268.70	3,010.98	1,505.49	5,293.47	2,614.24	0.00	0.00	0.557
4.10	-43.17	-27.90	0.00	-3,152.88	0.00	3,152.88	3,010.98	1,505.49	5,293.47	2,614.24	0.06	-0.14	0.547
4.10	-43.17	-27.90	0.00	-3,152.88	0.00	3,152.88	3,010.98	1,505.49	5,293.47	2,614.24	0.06	-0.14	0.547
5.00	-42.83	-27.89	0.00	-3,127.76	0.00	3,127.76	2,955.05	1,477.53	5,097.82	2,517.62	0.09	-0.17	0.545
10.00	-41.04	-27.51	0.00	-2,988.32	0.00	2,988.32	2,899.13	1,449.57	4,905.86	2,422.82	0.36	-0.33	0.533
15.00	-39.27	-26.97	0.00	-2,850.75	0.00	2,850.75	2,843.21	1,421.60	4,717.59	2,329.84	0.80	-0.50	0.520
20.00	-37.52	-26.44	0.00	-2,715.88	0.00	2,715.88	2,787.29	1,393.64	4,532.99	2,238.67	1.41	-0.67	0.507
25.00	-35.79	-25.90	0.00	-2,583.70	0.00	2,583.70	2,731.36	1,365.68	4,352.08	2,149.33	2.20	-0.83	0.494
30.00	-34.08	-25.36	0.00	-2,454.20	0.00	2,454.20	2,675.44	1,337.72	4,174.86	2,061.81	3.15	-0.99	0.480
35.00	-32.39	-24.80	0.00	-2,327.38	0.00	2,327.38	2,619.52	1,309.76	4,001.32	1,976.10	4.28	-1.15	0.466
40.00	-30.72	-24.21	0.00	-2,203.37	0.00	2,203.37	2,563.60	1,281.80	3,831.46	1,892.22	5.58	-1.31	0.452
44.10	-29.38	-23.70	0.00	-2,104.09	0.00	2,104.09	2,563.60	1,281.80	3,831.46	1,892.22	6.76	-1.44	0.440
44.10	-29.38	-23.70	0.00	-2,104.09	0.00	2,104.09	2,563.60	1,281.80	3,831.46	1,892.22	6.76	-1.44	0.000
45.00	-29.08	-23.63	0.00	-2,082.76	0.00	2,082.76	2,096.73	1,048.36	3,075.36	1,518.80	7.04	-1.47	0.466
50.00	-27.55	-23.02	0.00	-1,964.61	0.00	1,964.61	2,050.05	1,025.03	2,939.37	1,451.64	8.67	-1.64	0.450
55.00	-26.03	-22.40	0.00	-1,849.49	0.00	1,849.49	2,003.38	1,001.69	2,806.46	1,386.01	10.48	-1.80	0.433
60.00	-24.53	-21.77	0.00	-1,737.47	0.00	1,737.47	1,956.70	978.35	2,676.63	1,321.89	12.45	-1.97	0.417
65.00	-23.05	-21.14	0.00	-1,628.60	0.00	1,628.60	1,910.02	955.01	2,549.87	1,259.28	14.60	-2.13	0.400
70.00	-21.58	-20.49	0.00	-1,522.92	0.00	1,522.92	1,863.35	931.67	2,426.18	1,198.20	16.91	-2.28	0.383
75.00	-20.13	-19.84	0.00	-1,420.48	0.00	1,420.48	1,816.67	908.33	2,305.57	1,138.64	19.38	-2.43	0.365
80.00	-18.71	-19.17	0.00	-1,321.30	0.00	1,321.30	1,769.99	885.00	2,188.04	1,080.59	22.01	-2.58	0.348
84.10	-17.64	-18.62	0.00	-1,242.69	0.00	1,242.69	1,769.99	885.00	2,188.04	1,080.59	24.28	-2.70	0.334
84.10	-17.64	-18.62	0.00	-1,242.69	0.00	1,242.69	1,769.99	885.00	2,188.04	1,080.59	24.28	-2.70	0.367
85.00	-17.42	-18.51	0.00	-1,225.93	0.00	1,225.93	1,723.32	861.66	2,073.58	1,024.06	24.80	-2.73	0.364
86.57	-17.04	-18.30	0.00	-1,196.88	0.00	1,196.88	1,708.66	854.33	2,038.28	1,006.63	25.70	-2.78	0.358
86.57	-17.04	-18.30	0.00	-1,196.88	0.00	1,196.88	1,708.66	854.33	2,038.28	1,006.63	25.70	-2.78	0.381
86.60	-17.01	-18.31	0.00	-1,196.33	0.00	1,196.33	1,708.66	854.33	2,038.28	1,006.63	25.72	-2.78	0.381
86.60	-17.01	-18.31	0.00	-1,196.33	0.00	1,196.33	1,708.66	854.33	2,038.28	1,006.63	25.72	-2.78	0.381
90.00	-16.23	-17.88	0.00	-1,134.06	0.00	1,134.06	1,342.14	671.07	1,577.69	779.16	27.74	-2.90	0.367
95.00	-15.11	-17.24	0.00	-1,044.64	0.00	1,044.64	1,304.85	652.43	1,490.89	736.29	30.86	-3.06	0.346
100.00	-14.01	-16.59	0.00	-958.44	0.00	958.44	1,267.57	633.79	1,406.54	694.64	34.15	-3.21	0.325
104.10	-13.13	-16.06	0.00	-890.41	0.00	890.41	1,267.57	633.79	1,406.54	694.64	36.97	-3.34	0.308
104.10	-13.13	-16.06	0.00	-890.41	0.00	890.41	1,267.57	633.79	1,406.54	694.64	36.97	-3.34	0.308
105.00	-12.92	-15.96	0.00	-875.96	0.00	875.96	1,230.29	615.15	1,324.65	654.19	37.60	-3.37	0.304
110.00	-11.84	-15.32	0.00	-796.18	0.00	796.18	1,193.01	596.51	1,245.21	614.96	41.20	-3.51	0.283
115.00	-10.78	-14.68	0.00	-719.61	0.00	719.61	1,155.73	577.86	1,168.24	576.95	44.95	-3.65	0.262
120.00	-9.73	-14.04	0.00	-646.22	0.00	646.22	1,118.45	559.22	1,093.71	540.14	48.85	-3.78	0.241
124.10	-8.90	-13.52	0.00	-588.65	0.00	588.65	1,118.45	559.22	1,093.71	540.14	52.14	-3.89	0.224
124.10	-8.90	-13.52	0.00	-588.65	0.00	588.65	1,118.45	559.22	1,093.71	540.14	52.14	-3.89	0.282
125.00	-8.75	-13.41	0.00	-576.48	0.00	576.48	1,081.17	540.58	1,021.65	504.55	52.88	-3.91	0.278
125.27	-8.70	-13.38	0.00	-572.86	0.00	572.86	1,079.15	539.58	1,017.83	502.67	53.10	-3.92	0.276
125.27	-8.70	-13.38	0.00	-572.86	0.00	572.86	1,079.15	539.58	1,017.83	502.67	53.10	-3.92	0.299
126.30	-8.52	-13.26	0.00	-559.08	0.00	559.08	1,079.15	539.58	1,017.83	502.67	53.95	-3.95	0.292
126.30	-8.52	-13.26	0.00	-559.08	0.00	559.08	1,079.15	539.58	1,017.83	502.67	53.95	-3.95	0.292
130.00	-7.93	-12.82	0.00	-510.00	0.00	510.00	787.08	393.54	721.85	356.50	57.05	-4.07	0.268
135.00	-7.14	-12.23	0.00	-445.88	0.00	445.88	759.16	379.58	671.24	331.50	61.39	-4.21	0.240
140.00	-6.37	-11.64	0.00	-384.73	0.00	384.73	731.12	365.56	622.37	307.37	65.88	-4.35	0.212
144.10	-5.75	-11.17	0.00	-336.99	0.00	336.99	731.12	365.56	622.37	307.37	69.66	-4.45	0.190
144.10	-5.75	-11.17	0.00	-336.99	0.00	336.99	731.12	365.56	622.37	307.37	69.66	-4.45	0.251
145.00	-5.62	-11.07	0.00	-326.94	0.00	326.94	703.09	351.54	575.35	284.14	70.50	-4.48	0.245
150.00	-4.99	-10.51	0.00	-271.59	0.00	271.59	675.05	337.53	530.17	261.83	75.27	-4.62	0.209

Pole : 302502
 Location : Harwinton, CT
 Height : 180.0 (ft)
 Shape : 12 Sides
 Base Dia : 43.00 (in)
 Top Dia : 14.50 (in)
 Taper : 0.158333 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : B
 Topographic Category : 1

Base Elev : 0.000 (ft)

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Load Case: 0.9D + 1.6W

95.00 mph with No Ice (Reduced DL)

26 Iterations

Gust Response Factor : 1.10
 Dead Load Factor : 0.90
 Wind Load Factor : 1.60

Wind Importance Factor : 1.00

155.00	-4.37	-9.97	0.00	-219.02	0.00	219.02	647.02	323.51	486.84	240.43	80.18	-4.75	0.174
158.00	-4.01	-9.64	0.00	-189.12	0.00	189.12	647.02	323.51	486.84	240.43	83.18	-4.82	0.153
158.00	-4.01	-9.64	0.00	-189.12	0.00	189.12	647.02	323.51	486.84	240.43	83.18	-4.82	0.837
160.00	-3.87	-9.46	0.00	-169.83	0.00	169.83	618.98	309.49	445.36	219.95	85.21	-4.86	0.779
165.00	-3.55	-8.70	0.00	-122.54	0.00	122.54	590.95	295.47	405.73	200.37	90.58	-5.37	0.618
170.00	-3.32	-8.39	0.00	-79.02	0.00	79.02	562.91	281.46	367.94	181.71	96.42	-5.77	0.442
175.00	-1.99	-3.97	0.00	-37.09	0.00	37.09	534.87	267.44	332.00	163.96	102.61	-6.03	0.230
180.00	0.00	-3.74	0.00	-17.23	0.00	17.23	506.84	253.42	297.90	147.12	109.00	-6.18	0.117

Pole : 302502
 Location : Harwinton, CT
 Height : 180.0 (ft)
 Shape : 12 Sides
 Base Dia : 43.00 (in)
 Top Dia : 14.50 (in)
 Taper : 0.158333 (in/ft)

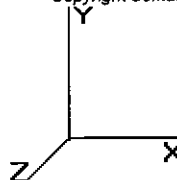
Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : B
 Topographic Category : 1

Base Elev : 0.000 (ft)

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Load Case: 1.2D + 1.0Di + 1.0Wi	40.00 mph with 1.25 in Radial Ice	25 Iterations
Gust Response Factor : 1.10	Ice Dead Load Factor : 1.00	Wind Importance Factor : 1.00
Dead Load Factor : 1.20		Ice Importance Factor : 1.00
Wind Load Factor : 1.00		

Shaft Segment Forces (Factored)

Seg Top Elev (ft)	Description	Kzt	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		1.00	0.70	2.724	2.996	0.000	1.200	0.00	0.00	0.000	0.00	0.0	0.0	0.0
4.10	Reinf. Top Reinf Bottom	1.00	0.70	2.724	2.996	0.000	1.200 *	2.02	4.10	16.482	19.78	59.3	478.0	1,926.8
5.00		1.00	0.70	2.724	2.996	0.000	1.200 *	2.07	0.90	3.593	4.31	12.9	106.8	423.1
10.00		1.00	0.70	2.724	2.996	0.000	1.200 *	2.21	5.00	19.885	23.86	71.5	626.4	2,372.1
15.00		1.00	0.70	2.724	2.996	0.000	1.200 *	2.31	5.00	19.620	23.54	70.5	641.8	2,367.9
20.00		1.00	0.70	2.724	2.996	0.000	1.200 *	2.37	5.00	19.335	23.20	69.5	649.4	2,356.0
25.00		1.00	0.70	2.724	2.996	0.000	1.200 *	2.43	5.00	19.038	22.85	68.5	652.4	2,339.4
30.00		1.00	0.70	2.726	2.999	0.000	1.200 *	2.47	5.00	18.734	22.48	67.4	652.4	2,319.9
35.00		1.00	0.73	2.849	3.134	0.000	1.200 *	2.51	5.00	18.425	22.11	69.3	650.2	2,298.2
40.00		1.00	0.76	2.960	3.256	0.000	1.200 *	2.54	5.00	18.111	21.73	70.8	646.4	2,274.9
44.10	Top - Section 1 Reinf.	1.00	0.78	3.043	3.348	0.000	1.200 *	2.57	4.10	14.613	17.54	58.7	526.7	1,847.5
45.00		1.00	0.78	3.061	3.367	0.000	1.200 *	2.57	0.90	3.178	3.81	12.8	115.4	377.7
50.00		1.00	0.81	3.155	3.470	0.000	1.200 *	2.60	5.00	17.476	20.97	72.8	635.2	2,082.8
55.00		1.00	0.83	3.242	3.566	0.000	1.200 *	2.63	5.00	17.155	20.59	73.4	628.2	2,059.5
60.00		1.00	0.85	3.323	3.656	0.000	1.200 *	2.65	5.00	16.833	20.20	73.8	620.4	2,035.5
65.00		1.00	0.87	3.400	3.740	0.000	1.200 *	2.67	5.00	16.509	19.81	74.1	612.0	2,010.8
70.00		1.00	0.89	3.473	3.820	0.000	1.200 *	2.69	5.00	16.185	19.42	74.2	603.1	1,985.6
75.00		1.00	0.91	3.542	3.896	0.000	1.200 *	2.71	5.00	15.859	19.03	74.1	593.6	1,959.9
80.00		1.00	0.92	3.608	3.969	0.000	1.200 *	2.73	5.00	15.532	18.64	74.0	583.8	1,933.7
84.10	Reinf. Top Reinf Bottom	1.00	0.94	3.660	4.026	0.000	1.200 *	2.74	4.10	12.490	14.99	60.3	471.8	1,566.6
85.00		1.00	0.94	3.671	4.038	0.000	1.200 *	2.74	0.90	2.712	3.25	13.1	103.2	327.2
86.57	Top - Section 2	1.00	0.94	3.690	4.059	0.000	1.200 *	2.75	1.57	4.705	5.65	22.9	179.0	568.5
86.60	Reinf. Top Reinf Bottom	1.00	0.94	3.691	4.060	0.000	1.200 *	2.75	0.03	0.090	0.11	0.4	3.4	10.1
90.00		1.00	0.95	3.731	4.105	0.000	1.200 *	2.76	3.40	10.079	12.09	49.6	382.8	1,140.5
95.00		1.00	0.97	3.789	4.168	0.000	1.200 *	2.77	5.00	14.547	17.46	72.8	551.9	1,655.2
100.0		1.00	0.98	3.845	4.230	0.000	1.200 *	2.79	5.00	14.217	17.06	72.2	540.7	1,631.0
104.1	Reinf. Top Reinf Bottom	1.00	1.00	3.890	4.279	0.000	1.200 *	2.80	4.10	11.411	13.69	58.6	435.6	1,319.9
105.0		1.00	1.00	3.899	4.289	0.000	1.200 *	2.80	0.90	2.475	2.97	12.7	95.3	288.2
110.0		1.00	1.01	3.952	4.347	0.000	1.200 *	2.82	5.00	13.556	16.27	70.7	517.4	1,581.7
115.0		1.00	1.02	4.002	4.402	0.000	1.200 *	2.83	5.00	13.225	15.87	69.9	505.4	1,556.7
120.0		1.00	1.04	4.051	4.456	0.000	1.200 *	2.84	5.00	12.894	15.47	68.9	493.2	1,531.4
124.1	Reinf. Top Reinf Bottom	1.00	1.05	4.090	4.499	0.000	1.200 *	2.85	4.10	10.324	12.39	55.7	396.0	1,237.7
125.0		1.00	1.05	4.099	4.508	0.000	1.200 *	2.85	0.90	2.236	2.68	12.1	86.5	243.1
125.2	Top - Section 3	1.00	1.05	4.101	4.511	0.000	1.200 *	2.85	0.27	0.668	0.80	3.6	25.9	72.8
126.3	Reinf. Top Reinf Bottom	1.00	1.05	4.111	4.522	0.000	1.200 *	2.85	1.03	2.542	3.05	13.8	98.4	257.8
130.0		1.00	1.06	4.145	4.559	0.000	1.200 *	2.86	3.70	9.017	10.82	49.3	346.4	915.8
135.0		1.00	1.07	4.190	4.609	0.000	1.200 *	2.87	5.00	11.898	14.28	65.8	455.3	1,216.3
140.0		1.00	1.08	4.233	4.657	0.000	1.200 *	2.88	5.00	11.565	13.88	64.6	442.3	1,193.5
144.1	Reinf. Top Reinf Bottom	1.00	1.09	4.268	4.695	0.000	1.200 *	2.89	4.10	9.234	11.08	52.0	353.9	962.5
145.0		1.00	1.09	4.276	4.704	0.000	1.200 *	2.89	0.90	1.997	2.40	11.3	77.3	186.5
150.0		1.00	1.11	4.318	4.749	0.000	1.200 *	2.90	5.00	10.898	13.08	62.1	415.9	1,017.2
155.0		1.00	1.12	4.358	4.794	0.000	1.200 *	2.91	5.00	10.565	12.68	60.8	402.5	993.9
158.0	Reinf. Top	1.00	1.12	4.382	4.821	0.000	1.200 *	2.92	3.00	6.178	7.41	35.7	236.6	586.8
160.0		1.00	1.13	4.398	4.838	0.000	1.200 *	2.92	2.00	4.051	4.86	23.5	155.6	242.8
165.0	Appertunance(s)	1.00	1.14	4.437	4.881	0.000	1.200	2.93	5.00	9.897	11.88	58.0	375.2	586.3
170.0		1.00	1.15	4.475	4.922	0.000	1.200	2.94	5.00	9.563	11.48	56.5	361.4	562.7
175.0	Appertunance(s)	1.00	1.16	4.512	4.963	0.000	1.200	2.95	5.00	9.229	11.07	55.0	347.4	539.0
180.0	Appertunance(s)	1.00	1.16	4.549	5.003	0.000	1.200	2.96	5.00	8.894	10.67	53.4	333.4	515.1

* = Cf Adjusted By Linear Load Ra Effect

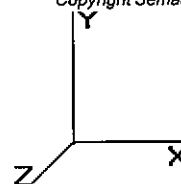
Totals: 180.00 2,453.1 19,211.9 59,478.2

Pole : 302502
 Location : Harwinton, CT
 Height : 180.0 (ft)
 Shape : 12 Sides
 Base Dia : 43.00 (in)
 Top Dia : 14.50 (in)
 Taper : 0.158333 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : B
 Topographic Category : 1

Base Elev : 0.000 (ft)

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Load Case: 1.2D + 1.0Di + 1.0Wi	40.00 mph with 1.25 in Radial Ice	25 Iterations
Gust Response Factor : 1.10	Ice Dead Load Factor : 1.00	Wind Importance Factor : 1.00
Dead Load Factor : 1.20		Ice Importance Factor : 1.00
Wind Load Factor : 1.00		

Discrete Appurtenance Segment Forces (Factored)

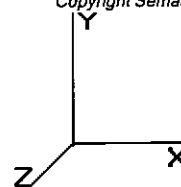
Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Ka	Total CaAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
165.0	RFS APXV18-206517-C	3	4.437	4.881	0.63	0.80	13.89	0.000	0.000	67.81	0.00	0.00	813.26
175.0	Flat Low Profile Pla	1	4.512	4.963	1.00	1.00	58.48	0.000	0.000	290.26	0.00	0.00	2,698.84
175.0	Antel LPA-80063/6CF	6	4.512	4.963	0.75	0.80	53.78	0.000	0.000	266.95	0.00	0.00	3,404.81
175.0	Decibel DB950G85E-	6	4.512	4.963	0.62	0.80	22.56	0.000	0.000	111.99	0.00	0.00	1,311.30
180.0	TTA	6	4.584	5.043	0.38	0.75	6.39	0.000	5.000	32.22	0.00	161.11	377.44
180.0	Round Platform with	1	4.584	5.043	1.00	1.00	68.77	0.000	5.000	346.82	0.00	1,734.08	4,203.88
180.0	CDA Diplexer	3	4.584	5.043	0.38	0.75	1.45	0.000	5.000	7.31	0.00	36.56	182.45
180.0	CSS DUO4-8670	11	4.584	5.043	0.62	0.75	51.88	0.000	5.000	261.64	0.00	1,308.20	4,090.37
										1,384.99			17,082.36

Pole : 302502
 Location : Harwinton, CT
 Height : 180.0 (ft)
 Shape : 12 Sides
 Base Dia : 43.00 (in)
 Top Dia : 14.50 (in)
 Taper : 0.158333 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : B
 Topographic Category : 1

Base Elev : 0.000 (ft)

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Load Case: 1.2D + 1.0Di + 1.0Wi		40.00 mph with 1.25 in Radial Ice	25 Iterations
Gust Response Factor : 1.10	Ice Dead Load Factor : 1.00	Wind Importance Factor : 1.00	
Dead Load Factor : 1.20		Ice Importance Factor : 1.00	
Wind Load Factor : 1.00			

Linear Appurtenance Segment Forces (Factored)

Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	qz (psf)	Ra	Cf Adjust Factor	F X (lb)	Dead Load (lb)
4.10	(3) 4.25" Solid Rod	Yes	4.10	0.000	8.50	4.29	0.00	2.724	0.192	1.277	0.00	266.77
5.00	(3) 4.25" Solid Rod	Yes	0.90	0.000	8.50	0.95	0.00	2.724	0.194	1.283	0.00	59.11
10.00	(3) 4.25" Solid Rod	Yes	5.00	0.000	8.50	5.39	0.00	2.724	0.196	1.289	0.00	339.63
15.00	(3) 4.25" Solid Rod	Yes	5.00	1.200	8.50	5.47	6.56	2.724	0.200	0.000	19.66	346.72
20.00	(3) 4.25" Solid Rod	Yes	5.00	1.200	8.50	5.52	6.63	2.724	0.204	0.000	19.86	351.99
25.00	(3) 4.25" Solid Rod	Yes	5.00	1.200	8.50	5.57	6.68	2.724	0.208	0.000	20.02	356.23
30.00	(3) 4.25" Solid Rod	Yes	5.00	1.200	8.50	5.61	6.73	2.726	0.212	0.000	20.17	359.79
35.00	(3) 4.25" Solid Rod	Yes	5.00	1.200	8.50	5.64	6.76	2.849	0.217	0.000	21.20	362.87
40.00	(3) 4.25" Solid Rod	Yes	5.00	1.200	8.50	5.67	6.80	2.960	0.222	0.000	22.13	365.59
44.10	(3) 4.25" Solid Rod	Yes	4.10	1.200	8.50	4.66	5.60	3.043	0.226	0.000	18.73	301.44
45.00	(3) 4.25" Solid Rod	Yes	0.90	1.200	8.50	1.02	1.23	3.061	0.228	0.000	4.14	66.25
50.00	(3) 4.25" Solid Rod	Yes	5.00	1.200	8.50	5.71	6.86	3.155	0.231	0.000	23.79	370.25
55.00	(3) 4.25" Solid Rod	Yes	5.00	1.200	8.50	5.73	6.88	3.242	0.237	0.000	24.54	372.29
60.00	(3) 4.25" Solid Rod	Yes	5.00	1.200	8.50	5.75	6.90	3.323	0.242	0.000	25.24	374.17
65.00	(3) 4.25" Solid Rod	Yes	5.00	1.200	8.50	5.77	6.93	3.400	0.248	0.000	25.90	375.92
70.00	(3) 4.25" Solid Rod	Yes	5.00	1.200	8.50	5.79	6.95	3.473	0.254	0.000	26.53	377.56
75.00	(3) 4.25" Solid Rod	Yes	5.00	1.200	8.50	5.80	6.96	3.542	0.260	0.000	27.13	379.11
80.00	(3) 4.25" Solid Rod	Yes	5.00	1.200	8.50	5.82	6.98	3.608	0.267	0.000	27.71	380.56
84.10	(3) 4.0" Solid Rod	Yes	4.10	1.200	8.00	4.61	5.53	3.660	0.258	0.000	22.27	196.12
85.00	(3) 4.0" Solid Rod	Yes	0.90	1.200	8.00	1.01	1.21	3.671	0.261	0.000	4.91	43.10
86.57	(3) 4.0" Solid Rod	Yes	1.57	1.200	8.00	1.77	2.12	3.690	0.263	0.000	8.61	75.30
86.60	(3) 4.0" Solid Rod	Yes	0.03	1.200	8.00	0.03	0.04	3.691	0.264	0.000	0.16	1.44
90.00	(3) 4.0" Solid Rod	Yes	3.40	1.200	8.00	3.83	4.60	3.731	0.266	0.000	18.88	163.66
95.00	(3) 4.0" Solid Rod	Yes	5.00	1.200	8.00	5.65	6.78	3.789	0.273	0.000	28.26	241.88
100.0	(3) 4.0" Solid Rod	Yes	5.00	1.200	8.00	5.66	6.79	3.845	0.280	0.000	28.73	243.03
104.1	(3) 4.0" Solid Rod	Yes	4.10	1.200	8.00	4.65	5.58	3.890	0.288	0.000	23.87	200.03
105.0	(3) 4.0" Solid Rod	Yes	0.90	1.200	8.00	1.02	1.23	3.899	0.292	0.000	5.26	43.95
110.0	(3) 4.0" Solid Rod	Yes	5.00	1.200	8.00	5.68	6.82	3.952	0.297	0.000	29.64	245.20
115.0	(3) 4.0" Solid Rod	Yes	5.00	1.200	8.00	5.69	6.83	4.002	0.307	0.000	30.08	246.22
120.0	(3) 4.0" Solid Rod	Yes	5.00	1.200	8.00	5.70	6.84	4.051	0.317	0.000	30.50	247.20
124.1	(3) 3.5" Solid Rod	Yes	4.10	1.200	7.00	4.34	5.21	4.090	0.286	0.000	23.44	168.13
125.0	(3) 3.5" Solid Rod	Yes	0.90	1.200	7.00	0.95	1.14	4.099	0.290	0.000	5.16	36.94
125.2	(3) 3.5" Solid Rod	Yes	0.27	1.200	7.00	0.29	0.34	4.101	0.292	0.000	1.55	11.08
126.3	(3) 3.5" Solid Rod	Yes	1.03	1.200	7.00	1.09	1.31	4.111	0.293	0.000	5.92	42.32
130.0	(3) 3.5" Solid Rod	Yes	3.70	1.200	7.00	3.93	4.71	4.145	0.298	0.000	21.48	152.47
135.0	(3) 3.5" Solid Rod	Yes	5.00	1.200	7.00	5.32	6.38	4.190	0.307	0.000	29.39	206.87
140.0	(3) 3.5" Solid Rod	Yes	5.00	1.200	7.00	5.32	6.39	4.233	0.318	0.000	29.75	207.66
144.1	(3) 3.0" Solid Rod	Yes	4.10	1.200	6.00	4.03	4.84	4.268	0.283	0.000	22.70	160.69
145.0	(3) 3.0" Solid Rod	Yes	0.90	1.200	6.00	0.88	1.06	4.276	0.288	0.000	4.99	35.30
150.0	(3) 3.0" Solid Rod	Yes	5.00	1.200	6.00	4.92	5.91	4.318	0.295	0.000	28.06	196.79
155.0	(3) 3.0" Solid Rod	Yes	5.00	1.200	6.00	4.93	5.92	4.358	0.307	0.000	28.37	197.47
158.0	(3) 3.0" Solid Rod	Yes	3.00	1.200	6.00	2.96	3.55	4.382	0.318	0.000	17.13	118.72
160.0	(3) 3.0" Solid Rod	Yes	2.00	1.200	6.00	1.98	2.37	4.398	0.325	0.000	11.47	79.25
Totals:											787.35	9,367.06

Pole : 302502
 Location : Harwinton, CT
 Height : 180.0 (ft)
 Shape : 12 Sides
 Base Dia : 43.00 (in)
 Top Dia : 14.50 (in)
 Taper : 0.158333 (in/ft)

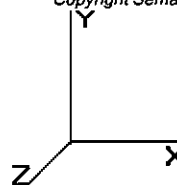
Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : B
 Topographic Category : 1

Base Elev : 0.000 (ft)

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Load Case: 1.2D + 1.0Di + 1.0Wi 40.00 mph with 1.25 in Radial Ice

25 Iterations

Gust Response Factor : 1.10

Ice Dead Load Factor : 1.00

Wind Importance Factor : 1.00

Dead Load Factor : 1.20

Ice Importance Factor : 1.00

Wind Load Factor : 1.00

Applied Segment Forces Summary

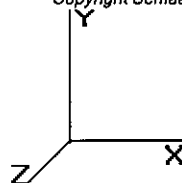
Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
4.10	59.26	2,217.79	0.00	0.00
5.00	12.92	487.48	0.00	0.00
10.00	71.50	2,825.61	0.00	0.00
15.00	90.20	2,828.58	0.00	0.00
20.00	89.38	2,821.87	0.00	0.00
25.00	88.47	2,809.58	0.00	0.00
30.00	87.58	2,793.62	0.00	0.00
35.00	90.49	2,775.01	0.00	0.00
40.00	92.89	2,754.42	0.00	0.00
44.10	77.44	2,242.37	0.00	0.00
45.00	16.98	464.50	0.00	0.00
50.00	96.56	2,567.02	0.00	0.00
55.00	97.94	2,545.76	0.00	0.00
60.00	99.08	2,523.60	0.00	0.00
65.00	100.00	2,500.68	0.00	0.00
70.00	100.72	2,477.08	0.00	0.00
75.00	101.28	2,452.90	0.00	0.00
80.00	101.68	2,428.19	0.00	0.00
84.10	82.61	1,856.10	0.00	0.00
85.00	18.05	390.85	0.00	0.00
86.57	31.52	679.53	0.00	0.00
86.60	0.60	12.26	0.00	0.00
90.00	68.52	1,381.61	0.00	0.00
95.00	101.02	2,011.05	0.00	0.00
100.0	100.90	1,987.95	0.00	0.00
104.1	82.46	1,613.39	0.00	0.00
105.0	17.99	352.69	0.00	0.00
110.0	100.35	1,940.80	0.00	0.00
115.0	99.94	1,916.80	0.00	0.00
120.0	99.45	1,892.55	0.00	0.00
124.1	79.18	1,499.22	0.00	0.00
125.0	17.26	300.54	0.00	0.00
125.2	5.17	90.00	0.00	0.00
126.3	19.72	323.64	0.00	0.00
130.0	70.82	1,152.58	0.00	0.00
135.0	95.19	1,537.05	0.00	0.00
140.0	94.38	1,515.09	0.00	0.00
144.1	74.73	1,216.63	0.00	0.00
145.0	16.27	242.35	0.00	0.00
150.0	90.18	1,327.87	0.00	0.00
155.0	89.15	1,305.33	0.00	0.00
158.0	52.87	773.86	0.00	0.00
160.0	34.99	367.58	0.00	0.00
165.0	125.77	1,513.53	0.00	0.00
170.0	56.49	647.13	0.00	0.00
175.0	724.16	8,038.35	0.00	0.00
180.0	701.39	9,394.65	0.00	3,239.95
Totals:	4,625.49	89,797.03	0.00	3,239.95

Pole : 302502
 Location : Harwinton, CT
 Height : 180.0 (ft)
 Shape : 12 Sides
 Base Dia : 43.00 (in)
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Code: ANSI/TIA-222 Rev G
 Struct Class : II
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 Topographic Category : 1

Base Elev : 0.000 (ft)

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Load Case: 1.2D + 1.0Di + 1.0Wi	40.00 mph with 1.25 in Radial Ice	25 Iterations
Gust Response Factor : 1.10	Ice Dead Load Factor : 1.00	Wind Importance Factor : 1.00
Dead Load Factor : 1.20		Ice Importance Factor : 1.00
Wind Load Factor : 1.00		

Calculated Forces

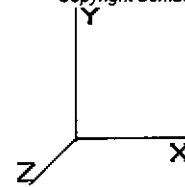
Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-89.80	-4.65	0.00	-598.18	0.00	598.18	3,010.98	1,505.49	5,293.47	2,614.24	0.00	0.00	0.117
4.10	-87.58	-4.61	0.00	-579.13	0.00	579.13	3,010.98	1,505.49	5,293.47	2,614.24	0.01	-0.03	0.115
4.10	-87.58	-4.61	0.00	-579.13	0.00	579.13	3,010.98	1,505.49	5,293.47	2,614.24	0.01	-0.03	0.115
5.00	-87.09	-4.62	0.00	-574.99	0.00	574.99	2,955.05	1,477.53	5,097.82	2,517.62	0.02	-0.03	0.115
10.00	-84.26	-4.59	0.00	-551.87	0.00	551.87	2,899.13	1,449.57	4,905.86	2,422.82	0.07	-0.06	0.113
15.00	-81.43	-4.54	0.00	-528.90	0.00	528.90	2,843.21	1,421.60	4,717.59	2,329.84	0.15	-0.09	0.110
20.00	-78.61	-4.49	0.00	-506.17	0.00	506.17	2,787.29	1,393.64	4,532.99	2,238.67	0.26	-0.12	0.108
25.00	-75.79	-4.44	0.00	-483.72	0.00	483.72	2,731.36	1,365.68	4,352.08	2,149.33	0.40	-0.15	0.106
30.00	-73.00	-4.38	0.00	-461.53	0.00	461.53	2,675.44	1,337.72	4,174.86	2,061.81	0.58	-0.18	0.103
35.00	-70.22	-4.32	0.00	-439.63	0.00	439.63	2,619.52	1,309.76	4,001.32	1,976.10	0.79	-0.21	0.101
40.00	-67.46	-4.25	0.00	-418.05	0.00	418.05	2,563.60	1,281.80	3,831.46	1,892.22	1.03	-0.24	0.098
44.10	-65.22	-4.18	0.00	-400.64	0.00	400.64	2,563.60	1,281.80	3,831.46	1,892.22	1.25	-0.27	0.096
44.10	-65.22	-4.18	0.00	-400.64	0.00	400.64	2,563.60	1,281.80	3,831.46	1,892.22	1.25	-0.27	0.000
45.00	-64.76	-4.18	0.00	-396.88	0.00	396.88	2,096.73	1,048.36	3,075.36	1,518.80	1.31	-0.28	0.102
50.00	-62.19	-4.10	0.00	-376.00	0.00	376.00	2,050.05	1,025.03	2,939.37	1,451.64	1.61	-0.31	0.099
55.00	-59.64	-4.02	0.00	-355.49	0.00	355.49	2,003.38	1,001.69	2,806.46	1,386.01	1.95	-0.34	0.095
60.00	-57.11	-3.94	0.00	-335.38	0.00	335.38	1,956.70	978.35	2,676.63	1,321.89	2.32	-0.37	0.092
65.00	-54.61	-3.85	0.00	-315.68	0.00	315.68	1,910.02	955.01	2,549.87	1,259.28	2.72	-0.40	0.089
70.00	-52.13	-3.76	0.00	-296.43	0.00	296.43	1,863.35	931.67	2,426.18	1,198.20	3.16	-0.43	0.085
75.00	-49.68	-3.66	0.00	-277.63	0.00	277.63	1,816.67	908.33	2,305.57	1,138.64	3.63	-0.46	0.082
80.00	-47.25	-3.56	0.00	-259.31	0.00	259.31	1,769.99	885.00	2,188.04	1,080.59	4.13	-0.49	0.078
84.10	-45.40	-3.48	0.00	-244.69	0.00	244.69	1,769.99	885.00	2,188.04	1,080.59	4.56	-0.51	0.076
84.10	-45.40	-3.48	0.00	-244.69	0.00	244.69	1,769.99	885.00	2,188.04	1,080.59	4.56	-0.51	0.083
85.00	-45.00	-3.46	0.00	-241.56	0.00	241.56	1,723.32	861.66	2,073.58	1,024.06	4.65	-0.52	0.082
86.57	-44.32	-3.43	0.00	-236.13	0.00	236.13	1,708.66	854.33	2,038.28	1,006.63	4.83	-0.53	0.081
86.57	-44.32	-3.43	0.00	-236.13	0.00	236.13	1,708.66	854.33	2,038.28	1,006.63	4.83	-0.53	0.086
86.60	-44.31	-3.44	0.00	-236.03	0.00	236.03	1,708.66	854.33	2,038.28	1,006.63	4.83	-0.53	0.086
86.60	-44.31	-3.44	0.00	-236.03	0.00	236.03	1,708.66	854.33	2,038.28	1,006.63	4.83	-0.53	0.086
90.00	-42.93	-3.38	0.00	-224.34	0.00	224.34	1,342.14	671.07	1,577.69	779.16	5.21	-0.55	0.084
95.00	-40.92	-3.28	0.00	-207.47	0.00	207.47	1,304.85	652.43	1,490.89	736.29	5.81	-0.58	0.079
100.00	-38.93	-3.17	0.00	-191.09	0.00	191.09	1,267.57	633.79	1,406.54	694.64	6.44	-0.61	0.075
104.10	-37.32	-3.08	0.00	-178.07	0.00	178.07	1,267.57	633.79	1,406.54	694.64	6.98	-0.64	0.071
104.10	-37.32	-3.08	0.00	-178.07	0.00	178.07	1,267.57	633.79	1,406.54	694.64	6.98	-0.64	0.071
105.00	-36.96	-3.07	0.00	-175.30	0.00	175.30	1,230.29	615.15	1,324.65	654.19	7.10	-0.64	0.071
110.00	-35.02	-2.97	0.00	-159.93	0.00	159.93	1,193.01	596.51	1,245.21	614.96	7.79	-0.67	0.066
115.00	-33.10	-2.86	0.00	-145.09	0.00	145.09	1,155.73	577.86	1,168.24	576.95	8.51	-0.70	0.062
120.00	-31.21	-2.75	0.00	-130.79	0.00	130.79	1,118.45	559.22	1,093.71	540.14	9.26	-0.73	0.057
124.10	-29.71	-2.66	0.00	-119.51	0.00	119.51	1,118.45	559.22	1,093.71	540.14	9.90	-0.75	0.054
124.10	-29.71	-2.66	0.00	-119.51	0.00	119.51	1,118.45	559.22	1,093.71	540.14	9.90	-0.75	0.067
125.00	-29.41	-2.64	0.00	-117.12	0.00	117.12	1,081.17	540.58	1,021.65	504.55	10.04	-0.75	0.066
125.27	-29.32	-2.63	0.00	-116.41	0.00	116.41	1,079.15	539.58	1,017.83	502.67	10.08	-0.76	0.066
125.27	-29.32	-2.63	0.00	-116.41	0.00	116.41	1,079.15	539.58	1,017.83	502.67	10.08	-0.76	0.072
126.30	-29.00	-2.62	0.00	-113.69	0.00	113.69	1,079.15	539.58	1,017.83	502.67	10.25	-0.76	0.070
126.30	-29.00	-2.62	0.00	-113.69	0.00	113.69	1,079.15	539.58	1,017.83	502.67	10.25	-0.76	0.070
130.00	-27.85	-2.55	0.00	-104.01	0.00	104.01	787.08	393.54	721.85	356.50	10.85	-0.79	0.065
135.00	-26.31	-2.44	0.00	-91.28	0.00	91.28	759.16	379.58	671.24	331.50	11.69	-0.82	0.059
140.00	-24.80	-2.34	0.00	-79.07	0.00	79.07	731.12	365.56	622.37	307.37	12.56	-0.84	0.053
144.10	-23.58	-2.25	0.00	-69.49	0.00	69.49	731.12	365.56	622.37	307.37	13.29	-0.87	0.048
144.10	-23.58	-2.25	0.00	-69.49	0.00	69.49	731.12	365.56	622.37	307.37	13.29	-0.87	0.063
145.00	-23.34	-2.24	0.00	-67.46	0.00	67.46	703.09	351.54	575.35	284.14	13.46	-0.87	0.062
150.00	-22.01	-2.14	0.00	-56.28	0.00	56.28	675.05	337.53	530.17	261.83	14.38	-0.90	0.054

Pole : 302502
 Location : Harwinton, CT
 Height : 180.0 (ft)
 Shape : 12 Sides
 Base Dia : 43.00 (in)
 Top Dia : 14.50 (in)
 Taper : 0.158333 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : B
 Topographic Category : 1

Base Elev : 0.000 (ft)

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Load Case: 1.2D + 1.0Di + 1.0Wi	40.00 mph with 1.25 in Radial Ice	25 Iterations
Gust Response Factor : 1.10	Ice Dead Load Factor : 1.00	Wind Importance Factor : 1.00
Dead Load Factor : 1.20		Ice Importance Factor : 1.00
Wind Load Factor : 1.00		

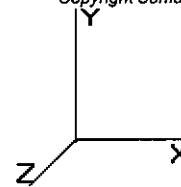
155.00	-20.70	-2.03	0.00	-45.60	0.00	45.60	647.02	323.51	486.84	240.43	15.34	-0.93	0.046
158.00	-19.93	-1.97	0.00	-39.50	0.00	39.50	647.02	323.51	486.84	240.43	15.93	-0.94	0.042
158.00	-19.93	-1.97	0.00	-39.50	0.00	39.50	647.02	323.51	486.84	240.43	15.93	-0.94	0.205
160.00	-19.56	-1.95	0.00	-35.56	0.00	35.56	618.98	309.49	445.36	219.95	16.33	-0.95	0.193
165.00	-18.05	-1.83	0.00	-25.80	0.00	25.80	590.95	295.47	405.73	200.37	17.38	-1.06	0.159
170.00	-17.40	-1.78	0.00	-16.65	0.00	16.65	562.91	281.46	367.94	181.71	18.54	-1.14	0.123
175.00	-9.38	-0.90	0.00	-7.74	0.00	7.74	534.87	267.44	332.00	163.96	19.77	-1.20	0.065
180.00	0.00	-0.70	0.00	-3.24	0.00	3.24	506.84	253.42	297.90	147.12	21.04	-1.23	0.022

Pole : 302502
 Location : Harwinton, CT
 Height : 180.0 (ft)
 Shape : 12 Sides
 Base Dia : 43.00 (in)
 Top Dia : 14.50 (in)
 Taper : 0.158333 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : B
 Topographic Category : 1

Base Elev : 0.000 (ft)

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Load Case: 1.2D + 1.0E

Dead Load with Seismic

0 Iterations

Gust Response Factor : 1.10
 Dead Load Factor : 1.20
 Wind Load Factor : 0.00

Seismic Load Factor : 1.00
 Structure Frequency : 0.2442

Sds : 0.34
 Sd1 : 0.06
 SA : 0.02

Ss : 0.33
 S1 : 0.04
 Seismic Importance Factor : 1.00

Total Segment Forces (Factored)

R : 1.50

Seg Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)
0.00		0.00	0.00	0.00	0.00	0.00
4.10	Reinf. Top Reinf Bottom	712.61	0.00	0.02	0.01	31.20
5.00		154.96	0.00	0.03	0.02	7.43
10.00		851.30	0.01	0.05	0.03	53.41
15.00		835.04	0.01	0.06	0.03	59.51
20.00		818.77	0.02	0.07	0.04	64.24
25.00		802.51	0.04	0.08	0.04	69.96
30.00		786.25	0.05	0.10	0.05	78.31
35.00		769.98	0.07	0.12	0.05	90.33
40.00		753.72	0.09	0.14	0.05	106.49
44.10	Top - Section 1 Reinf.	605.91	0.11	0.17	0.05	100.41
45.00		109.98	0.12	0.18	0.05	18.88
50.00		603.02	0.15	0.22	0.05	125.17
55.00		589.44	0.18	0.27	0.06	145.92
60.00		575.87	0.21	0.33	0.06	166.75
65.00		562.29	0.25	0.40	0.07	186.38
70.00		548.72	0.29	0.47	0.08	203.78
75.00		535.14	0.33	0.55	0.09	218.19
80.00		521.56	0.37	0.62	0.10	229.12
84.10	Reinf. Top Reinf Bottom	417.54	0.41	0.68	0.11	192.46
85.00		90.45	0.42	0.70	0.11	42.07
86.57	Top - Section 2	156.70	0.44	0.72	0.12	73.95
86.60	Reinf. Top Reinf Bottom	2.39	0.44	0.72	0.12	1.13
90.00		267.95	0.47	0.77	0.13	129.79
95.00		384.92	0.53	0.82	0.14	191.08
100.0		374.08	0.58	0.87	0.15	187.28
104.1	Reinf. Top Reinf Bottom	298.64	0.63	0.90	0.16	148.70
105.0		64.59	0.64	0.90	0.17	32.07
110.0		352.39	0.71	0.92	0.18	170.47
115.0		341.55	0.77	0.91	0.19	157.84
120.0		330.71	0.84	0.88	0.21	142.84
124.1	Reinf. Top Reinf Bottom	263.08	0.90	0.84	0.22	105.56
125.0		56.78	0.91	0.83	0.23	22.36
125.2	Top - Section 3	16.96	0.92	0.83	0.23	6.64
126.3	Reinf. Top Reinf Bottom	48.58	0.93	0.82	0.23	18.60
130.0		171.65	0.99	0.77	0.24	59.99
135.0		224.87	1.06	0.69	0.27	67.77
140.0		216.71	1.14	0.61	0.29	54.84
144.1	Reinf. Top Reinf Bottom	171.62	1.21	0.54	0.32	37.16
145.0		36.94	1.23	0.53	0.33	7.73
150.0		200.41	1.31	0.47	0.37	35.10
155.0		192.25	1.40	0.45	0.43	30.04
158.0	Reinf. Top	111.44	1.46	0.47	0.48	17.19
160.0		72.66	1.49	0.50	0.51	11.44
165.0	Appertunance(s)	235.95	1.59	0.63	0.61	43.05
170.0		167.79	1.69	0.89	0.75	39.20
175.0	Appertunance(s)	2234.64	1.79	1.33	0.92	697.53
180.0	Appertunance(s)	2649.98	1.89	1.98	1.14	1108.29

Pole : 302502
Location : Harwinton, CT
Height : 180.0 (ft)
Shape : 12 Sides
Base Dia : 43.00 (in)
Top Dia : 14.50 (in)
Taper : 0.158333 (in/ft)

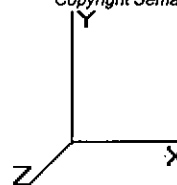
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure Category : B
Topographic Category : 1

Base Elev : 0.000 (ft)

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Load Case: 1.2D + 1.0E

Dead Load with Seismic

0 Iterations

Gust Response Factor : 1.10

Sds : 0.34

Ss : 0.33

Dead Load Factor : 1.20

Seismic Load Factor : 1.00

Sd1 : 0.06

S1 : 0.04

Wind Load Factor : 0.00

Structure Frequency : 0.2442

SA : 0.02

Seismic Importance Factor : 1.00

Totals: 21,291.28

5,787.67

Total Wind : 28,475.9

Seismic Base Shear Is Less Than 50% Of Wind Force - Analysis Not Required

Pole : 302502
 Location : Harwinton, CT
 Height : 180.0 (ft)
 Shape : 12 Sides
 Base Dia : 43.00 (in)
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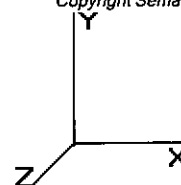
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 Struct Class : II
 Exposure Category : B
 Topographic Category : 1

Base Elev : 0.000 (ft)

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Load Case: 0.9D + 1.0E

Dead Load with Seismic (Reduced DL)

0 Iterations

Gust Response Factor : 1.10

Sds : 0.34

Ss : 0.33

Dead Load Factor : 0.90

Seismic Load Factor : 1.00

Sd1 : 0.06

S1 : 0.04

Wind Load Factor : 0.00

Structure Frequency : 0.2442

SA : 0.02

Seismic Importance Factor : 1.00

Total Segment Forces (Factored)

R : 1.50

Seg Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)
0.00		0.00	0.00	0.00	0.00	0.00
4.10	Reinf. Top Reinf Bottom	712.61	0.00	0.02	0.01	31.20
5.00		154.96	0.00	0.03	0.02	7.43
10.00		851.30	0.01	0.05	0.03	53.41
15.00		835.04	0.01	0.06	0.03	59.51
20.00		818.77	0.02	0.07	0.04	64.24
25.00		802.51	0.04	0.08	0.04	69.96
30.00		786.25	0.05	0.10	0.05	78.31
35.00		769.98	0.07	0.12	0.05	90.33
40.00		753.72	0.09	0.14	0.05	106.49
44.10	Top - Section 1 Reinf.	605.91	0.11	0.17	0.05	100.41
45.00		109.98	0.12	0.18	0.05	18.88
50.00		603.02	0.15	0.22	0.05	125.17
55.00		589.44	0.18	0.27	0.06	145.92
60.00		575.87	0.21	0.33	0.06	166.75
65.00		562.29	0.25	0.40	0.07	186.38
70.00		548.72	0.29	0.47	0.08	203.78
75.00		535.14	0.33	0.55	0.09	218.19
80.00		521.56	0.37	0.62	0.10	229.12
84.10	Reinf. Top Reinf Bottom	417.54	0.41	0.68	0.11	192.46
85.00		90.45	0.42	0.70	0.11	42.07
86.57	Top - Section 2	156.70	0.44	0.72	0.12	73.95
86.60	Reinf. Top Reinf Bottom	2.39	0.44	0.72	0.12	1.13
90.00		267.95	0.47	0.77	0.13	129.79
95.00		384.92	0.53	0.82	0.14	191.08
100.0		374.08	0.58	0.87	0.15	187.28
104.1	Reinf. Top Reinf Bottom	298.64	0.63	0.90	0.16	148.70
105.0		64.59	0.64	0.90	0.17	32.07
110.0		352.39	0.71	0.92	0.18	170.47
115.0		341.55	0.77	0.91	0.19	157.84
120.0		330.71	0.84	0.88	0.21	142.84
124.1	Reinf. Top Reinf Bottom	263.08	0.90	0.84	0.22	105.56
125.0		56.78	0.91	0.83	0.23	22.36
125.2	Top - Section 3	16.96	0.92	0.83	0.23	6.64
126.3	Reinf. Top Reinf Bottom	48.58	0.93	0.82	0.23	18.60
130.0		171.65	0.99	0.77	0.24	59.99
135.0		224.87	1.06	0.69	0.27	67.77
140.0		216.71	1.14	0.61	0.29	54.84
144.1	Reinf. Top Reinf Bottom	171.62	1.21	0.54	0.32	37.16
145.0		36.94	1.23	0.53	0.33	7.73
150.0		200.41	1.31	0.47	0.37	35.10
155.0		192.25	1.40	0.45	0.43	30.04
158.0	Reinf. Top	111.44	1.46	0.47	0.48	17.19
160.0		72.66	1.49	0.50	0.51	11.44
165.0	Appertunance(s)	235.95	1.59	0.63	0.61	43.05
170.0		167.79	1.69	0.89	0.75	39.20
175.0	Appertunance(s)	2234.64	1.79	1.33	0.92	697.53
180.0	Appertunance(s)	2649.98	1.89	1.98	1.14	1108.29

Pole : 302502
Location : Harwinton, CT
Height : 180.0 (ft)
Shape : 12 Sides
Base Dia : 43.00 (in)
Top Dia : 14.50 (in)
Taper : 0.158333 (in/ft)

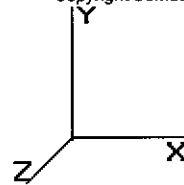
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Struct Class : II
Exposure Category : B
Topographic Category : 1

Base Elev : 0.000 (ft)

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Load Case: 0.9D + 1.0E

Dead Load with Seismic (Reduced DL)

0 Iterations

Gust Response Factor : 1.10

Sds : 0.34

Ss : 0.33

Dead Load Factor : 0.90

Seismic Load Factor : 1.00

Sd1 : 0.06

S1 : 0.04

Wind Load Factor : 0.00

Structure Frequency : 0.2442

SA : 0.02

Seismic Importance Factor : 1.00

Totals: 21,291.28

5,787.67

Total Wind : 28,475.9

Seismic Base Shear Is Less Than 50% Of Wind Force - Analysis Not Required

Pole : 302502
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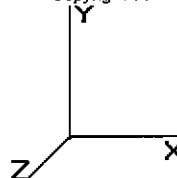
Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : B
 Topographic Category : 1

Base Elev : 0.000 (ft)

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Load Case: 1.0D + 1.0W

60.00 mph Serviceability

25 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 1.00

Wind Load Factor : 1.00

Shaft Segment Forces (Factored)

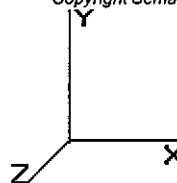
Seg Top Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	6.129	6.742	186.22	1.000	0.00	0.00	0.000	0.00	0.0	0.0	0.0
4.10	Reinf. Top Reinf Bottom	1.00	0.70	6.129	6.742	183.41	1.000 *	0.00	4.10	15.095	15.10	101.8	0.0	1,306.3
5.00		1.00	0.70	6.129	6.742	182.79	1.000 *	0.00	0.90	3.283	3.28	22.1	0.0	285.3
10.00		1.00	0.70	6.129	6.742	179.37	1.000 *	0.00	5.00	18.036	18.04	121.6	0.0	1,575.4
15.00		1.00	0.70	6.129	6.742	175.94	1.200 *	0.00	5.00	17.695	21.23	143.1	0.0	1,559.1
20.00		1.00	0.70	6.129	6.742	172.51	1.200 *	0.00	5.00	17.353	20.82	140.4	0.0	1,542.8
25.00		1.00	0.70	6.129	6.742	169.08	1.200 *	0.00	5.00	17.012	20.41	137.6	0.0	1,526.6
30.00		1.00	0.70	6.134	6.747	165.72	1.200 *	0.00	5.00	16.670	20.00	135.0	0.0	1,510.3
35.00		1.00	0.73	6.410	7.051	165.90	1.200 *	0.00	5.00	16.329	19.59	138.2	0.0	1,494.0
40.00		1.00	0.76	6.659	7.325	165.53	1.200 *	0.00	5.00	15.987	19.18	140.5	0.0	1,477.8
44.10	Top - Section 1 Reinf.	1.00	0.78	6.848	7.532	164.88	1.200 *	0.00	4.10	12.855	15.43	116.2	0.0	1,199.6
45.00		1.00	0.78	6.887	7.576	164.70	1.200 *	0.00	0.90	2.791	3.35	25.4	0.0	240.3
50.00		1.00	0.81	7.098	7.807	163.51	1.200 *	0.00	5.00	15.304	18.37	143.4	0.0	1,327.1
55.00		1.00	0.83	7.294	8.023	162.01	1.200 *	0.00	5.00	14.963	17.96	144.1	0.0	1,313.5
60.00		1.00	0.85	7.477	8.225	160.25	1.200 *	0.00	5.00	14.621	17.55	144.3	0.0	1,299.9
65.00		1.00	0.87	7.650	8.415	158.26	1.200 *	0.00	5.00	14.280	17.14	144.2	0.0	1,286.3
70.00		1.00	0.89	7.814	8.595	156.07	1.200 *	0.00	5.00	13.938	16.73	143.8	0.0	1,272.8
75.00		1.00	0.91	7.969	8.766	153.71	1.200 *	0.00	5.00	13.597	16.32	143.0	0.0	1,259.2
80.00		1.00	0.92	8.118	8.930	151.19	1.200 *	0.00	5.00	13.255	15.91	142.0	0.0	1,245.6
84.10	Reinf. Top Reinf Bottom	1.00	0.94	8.235	9.058	149.01	1.200 *	0.00	4.10	10.614	12.74	115.4	0.0	1,011.2
85.00		1.00	0.94	8.260	9.086	148.52	1.200 *	0.00	0.90	2.300	2.76	25.1	0.0	205.9
86.57	Top - Section 2	1.00	0.94	8.303	9.133	147.66	1.200 *	0.00	1.57	3.984	4.78	43.7	0.0	358.1
86.60	Reinf. Top Reinf Bottom	1.00	0.94	8.304	9.134	147.64	1.200 *	0.00	0.03	0.076	0.09	0.8	0.0	6.2
90.00		1.00	0.95	8.396	9.235	145.73	1.200 *	0.00	3.40	8.512	10.21	94.3	0.0	704.1
95.00		1.00	0.97	8.526	9.379	142.81	1.200 *	0.00	5.00	12.231	14.68	137.7	0.0	1,026.3
100.0		1.00	0.98	8.652	9.517	139.79	1.200 *	0.00	5.00	11.890	14.27	135.8	0.0	1,015.5
104.1	Reinf. Top Reinf Bottom	1.00	1.00	8.752	9.627	137.24	1.200 *	0.00	4.10	9.494	11.39	109.7	0.0	824.6
105.0		1.00	1.00	8.774	9.651	136.67	1.200 *	0.00	0.90	2.054	2.46	23.8	0.0	180.1
110.0		1.00	1.01	8.891	9.780	133.45	1.200 *	0.00	5.00	11.207	13.45	131.5	0.0	993.8
115.0		1.00	1.02	9.005	9.905	130.14	1.200 *	0.00	5.00	10.865	13.04	129.1	0.0	982.9
120.0		1.00	1.04	9.115	10.02	126.75	1.200 *	0.00	5.00	10.524	12.63	126.6	0.0	972.1
124.1	Reinf. Top Reinf Bottom	1.00	1.05	9.203	10.12	123.92	1.200 *	0.00	4.10	8.374	10.05	101.7	0.0	789.0
125.0		1.00	1.05	9.222	10.14	123.29	1.200 *	0.00	0.90	1.808	2.17	22.0	0.0	145.2
125.2	Top - Section 3	1.00	1.05	9.227	10.15	123.10	1.200 *	0.00	0.27	0.540	0.65	6.6	0.0	43.5
126.3	Reinf. Top Reinf Bottom	1.00	1.05	9.249	10.17	122.38	1.200 *	0.00	1.03	2.051	2.46	25.0	0.0	149.8
130.0		1.00	1.06	9.326	10.25	119.75	1.200 *	0.00	3.70	7.249	8.70	89.2	0.0	535.1
135.0		1.00	1.07	9.427	10.36	116.15	1.200 *	0.00	5.00	9.499	11.40	118.2	0.0	716.0
140.0		1.00	1.08	9.525	10.47	112.48	1.200 *	0.00	5.00	9.158	10.99	115.1	0.0	707.8
144.1	Reinf. Top Reinf Bottom	1.00	1.09	9.604	10.56	109.42	1.200 *	0.00	4.10	7.254	8.71	92.0	0.0	574.3
145.0		1.00	1.09	9.621	10.58	108.75	1.200 *	0.00	0.90	1.562	1.87	19.8	0.0	101.9
150.0		1.00	1.11	9.715	10.68	104.96	1.200 *	0.00	5.00	8.475	10.17	108.7	0.0	561.2
155.0		1.00	1.12	9.806	10.78	101.12	1.200 *	0.00	5.00	8.133	9.76	105.3	0.0	553.0
158.0	Reinf. Top	1.00	1.12	9.860	10.84	98.788	1.200 *	0.00	3.00	4.716	5.66	61.4	0.0	327.9
160.0		1.00	1.13	9.896	10.88	97.223	1.200 *	0.00	2.00	3.076	3.69	40.2	0.0	72.7
165.0	Appertunance(s)	1.00	1.14	9.983	10.98	93.276	1.000	0.00	5.00	7.450	7.45	81.8	0.0	175.9
170.0		1.00	1.15	10.069	11.07	89.280	1.000	0.00	5.00	7.109	7.11	78.7	0.0	167.8
175.0	Appertunance(s)	1.00	1.16	10.152	11.16	85.237	1.000	0.00	5.00	6.767	6.77	75.6	0.0	159.6
180.0	Appertunance(s)	1.00	1.16	10.234	11.25	81.150	1.000	0.00	5.00	6.426	6.43	72.3	0.0	151.5
* = Cf Adjusted By Linear Load Ra Effect								Totals:		540.00		61,465.7		0.0 112,470.1

Pole : 302502
 Location : Harwinton, CT
 Height : 180.0 (ft)
 Shape : 12 Sides
 Base Dia : 43.00 (in)
 Top Dia : 14.50 (in)
 Taper : 0.158333 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : B
 Topographic Category : 1

Base Elev : 0.000 (ft)

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Load Case: 1.0D + 1.0W

60.00 mph Serviceability

25 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 1.00

Wind Load Factor : 1.00

Discrete Appurtenance Segment Forces (Factored)

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Ka	Total CaAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
165.0	RFS APXV18-206517-C	3	9.983	10.981	0.63	0.80	9.80	0.000	0.000	107.64	0.00	0.00	79.20
175.0	Flat Low Profile Pla	1	10.152	11.168	1.00	1.00	26.10	0.000	0.000	291.47	0.00	0.00	1,500.00
175.0	Antel LPA-80063/6CF	6	10.152	11.168	0.75	0.80	46.65	0.000	0.000	521.01	0.00	0.00	162.00
175.0	Decibel DB950G85E-	6	10.152	11.168	0.62	0.80	15.67	0.000	0.000	175.01	0.00	0.00	69.00
180.0	TTA	6	10.315	11.346	0.38	0.75	3.15	0.000	5.000	35.74	0.00	178.70	60.00
180.0	Round Platform with	1	10.315	11.346	1.00	1.00	27.20	0.000	5.000	308.62	0.00	1,543.08	2,000.00
180.0	CDA Diplexer	3	10.315	11.346	0.38	0.75	0.79	0.000	5.000	8.94	0.00	44.68	15.00
180.0	CSS DUO4-8670	11	10.315	11.346	0.62	0.75	44.58	0.000	5.000	505.83	0.00	2,529.15	423.50
										1,954.26			4,308.70

Pole : 302502
 Location : Harwinton, CT
 Height : 180.0 (ft)
 Shape : 12 Sides
 Base Dia : 43.00 (in)
 Top Dia : 14.50 (in)
 Taper : 0.158333 (in/ft)

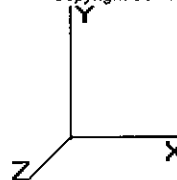
Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : B
 Topographic Category : 1

Base Elev : 0.000 (ft)

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Load Case: 1.0D + 1.0W

60.00 mph Serviceability

25 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 1.00

Wind Load Factor : 1.00

Linear Appurtenance Segment Forces (Factored)

Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	qz (psf)	Ra	Cf Adjust Factor	F X (lb)	Dead Load (lb)
4.10	(3) 4.25" Solid Rod	Yes	4.10	0.000	8.50	2.90	0.00	6.129	0.192	1.277	0.00	120.91
5.00	(3) 4.25" Solid Rod	Yes	0.90	0.000	8.50	0.64	0.00	6.129	0.194	1.283	0.00	26.54
10.00	(3) 4.25" Solid Rod	Yes	5.00	0.000	8.50	3.54	0.00	6.129	0.196	1.289	0.00	147.45
15.00	(3) 4.25" Solid Rod	Yes	5.00	1.080	8.50	3.54	3.82	6.129	0.200	0.000	25.78	147.45
20.00	(3) 4.25" Solid Rod	Yes	5.00	1.080	8.50	3.54	3.82	6.129	0.204	0.000	25.78	147.45
25.00	(3) 4.25" Solid Rod	Yes	5.00	1.080	8.50	3.54	3.82	6.129	0.208	0.000	25.78	147.45
30.00	(3) 4.25" Solid Rod	Yes	5.00	1.079	8.50	3.54	3.82	6.134	0.212	0.000	25.80	147.45
35.00	(3) 4.25" Solid Rod	Yes	5.00	1.056	8.50	3.54	3.74	6.410	0.217	0.000	26.37	147.45
40.00	(3) 4.25" Solid Rod	Yes	5.00	1.036	8.50	3.54	3.67	6.659	0.222	0.000	26.88	147.45
44.10	(3) 4.25" Solid Rod	Yes	4.10	1.022	8.50	2.90	2.97	6.848	0.226	0.000	22.35	120.91
45.00	(3) 4.25" Solid Rod	Yes	0.90	1.019	8.50	0.64	0.65	6.887	0.228	0.000	4.92	26.54
50.00	(3) 4.25" Solid Rod	Yes	5.00	1.003	8.50	3.54	3.55	7.098	0.231	0.000	27.75	147.45
55.00	(3) 4.25" Solid Rod	Yes	5.00	0.990	8.50	3.54	3.51	7.294	0.237	0.000	28.13	147.45
60.00	(3) 4.25" Solid Rod	Yes	5.00	0.978	8.50	3.54	3.46	7.477	0.242	0.000	28.48	147.45
65.00	(3) 4.25" Solid Rod	Yes	5.00	0.967	8.50	3.54	3.42	7.650	0.248	0.000	28.81	147.45
70.00	(3) 4.25" Solid Rod	Yes	5.00	0.956	8.50	3.54	3.39	7.814	0.254	0.000	29.11	147.45
75.00	(3) 4.25" Solid Rod	Yes	5.00	0.947	8.50	3.54	3.35	7.969	0.260	0.000	29.40	147.45
80.00	(3) 4.25" Solid Rod	Yes	5.00	0.938	8.50	3.54	3.32	8.118	0.267	0.000	29.68	147.45
84.10	(3) 4.0" Solid Rod	Yes	4.10	0.990	8.00	2.73	2.71	8.235	0.258	0.000	24.51	30.75
85.00	(3) 4.0" Solid Rod	Yes	0.90	0.988	8.00	0.60	0.59	8.260	0.261	0.000	5.39	6.75
86.57	(3) 4.0" Solid Rod	Yes	1.57	0.986	8.00	1.05	1.03	8.303	0.263	0.000	9.42	11.77
86.60	(3) 4.0" Solid Rod	Yes	0.03	0.986	8.00	0.02	0.02	8.304	0.264	0.000	0.18	0.22
90.00	(3) 4.0" Solid Rod	Yes	3.40	0.980	8.00	2.27	2.22	8.396	0.266	0.000	20.52	25.50
95.00	(3) 4.0" Solid Rod	Yes	5.00	0.973	8.00	3.33	3.24	8.526	0.273	0.000	30.41	37.50
100.0	(3) 4.0" Solid Rod	Yes	5.00	0.966	8.00	3.33	3.22	8.652	0.280	0.000	30.64	37.50
104.1	(3) 4.0" Solid Rod	Yes	4.10	0.960	8.00	2.73	2.62	8.752	0.288	0.000	25.27	30.75
105.0	(3) 4.0" Solid Rod	Yes	0.90	0.959	8.00	0.60	0.58	8.774	0.292	0.000	5.55	6.75
110.0	(3) 4.0" Solid Rod	Yes	5.00	0.953	8.00	3.33	3.18	8.891	0.297	0.000	31.06	37.50
115.0	(3) 4.0" Solid Rod	Yes	5.00	0.947	8.00	3.33	3.16	9.005	0.307	0.000	31.25	37.50
120.0	(3) 4.0" Solid Rod	Yes	5.00	0.941	8.00	3.33	3.14	9.115	0.317	0.000	31.44	37.50
124.1	(3) 3.5" Solid Rod	Yes	4.10	1.070	7.00	2.39	2.56	9.203	0.286	0.000	25.91	15.99
125.0	(3) 3.5" Solid Rod	Yes	0.90	1.069	7.00	0.53	0.56	9.222	0.290	0.000	5.69	3.51
125.2	(3) 3.5" Solid Rod	Yes	0.27	1.069	7.00	0.16	0.17	9.227	0.292	0.000	1.71	1.05
126.3	(3) 3.5" Solid Rod	Yes	1.03	1.067	7.00	0.60	0.64	9.249	0.293	0.000	6.53	4.02
130.0	(3) 3.5" Solid Rod	Yes	3.70	1.063	7.00	2.16	2.29	9.326	0.298	0.000	23.54	14.43
135.0	(3) 3.5" Solid Rod	Yes	5.00	1.057	7.00	2.92	3.08	9.427	0.307	0.000	31.98	19.50
140.0	(3) 3.5" Solid Rod	Yes	5.00	1.052	7.00	2.92	3.07	9.525	0.318	0.000	32.15	19.50
144.1	(3) 3.0" Solid Rod	Yes	4.10	1.200	6.00	2.05	2.46	9.604	0.283	0.000	25.99	21.89
145.0	(3) 3.0" Solid Rod	Yes	0.90	1.200	6.00	0.45	0.54	9.621	0.288	0.000	5.72	4.81
150.0	(3) 3.0" Solid Rod	Yes	5.00	1.200	6.00	2.50	3.00	9.715	0.295	0.000	32.06	26.70
155.0	(3) 3.0" Solid Rod	Yes	5.00	1.200	6.00	2.50	3.00	9.806	0.307	0.000	32.36	26.70
158.0	(3) 3.0" Solid Rod	Yes	3.00	1.200	6.00	1.50	1.80	9.860	0.318	0.000	19.52	16.02
160.0	(3) 3.0" Solid Rod	Yes	2.00	1.200	6.00	1.00	1.20	9.896	0.325	0.000	13.06	10.68
Totals:											886.87	2,843.97

Pole : 302502
 Location : Harwinton, CT
 Height : 180.0 (ft)
 Shape : 12 Sides
 Base Dia : 43.00 (in)
 Top Dia : 14.50 (in)
 Taper : 0.158333 (in/ft)

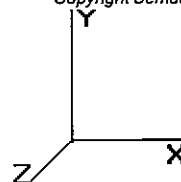
Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : B
 Topographic Category : 1

Base Elev : 0.000 (ft)

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Load Case: 1.0D + 1.0W

60.00 mph Serviceability

25 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

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
4.10	101.76	1,447.40	0.00	0.00
5.00	22.13	316.26	0.00	0.00
10.00	121.59	1,817.74	0.00	0.00
15.00	168.93	1,801.48	0.00	0.00
20.00	166.17	1,785.21	0.00	0.00
25.00	163.41	1,768.95	0.00	0.00
30.00	160.77	1,752.68	0.00	0.00
35.00	164.53	1,736.42	0.00	0.00
40.00	167.41	1,720.16	0.00	0.00
44.10	138.54	1,398.39	0.00	0.00
45.00	30.29	283.94	0.00	0.00
50.00	171.13	1,569.45	0.00	0.00
55.00	172.19	1,555.88	0.00	0.00
60.00	172.79	1,542.30	0.00	0.00
65.00	173.01	1,528.73	0.00	0.00
70.00	172.88	1,515.15	0.00	0.00
75.00	172.44	1,501.58	0.00	0.00
80.00	171.71	1,488.00	0.00	0.00
84.10	139.88	1,119.85	0.00	0.00
85.00	30.46	229.75	0.00	0.00
86.57	53.09	399.67	0.00	0.00
86.60	1.01	7.03	0.00	0.00
90.00	114.86	794.17	0.00	0.00
95.00	168.07	1,158.76	0.00	0.00
100.0	166.42	1,147.92	0.00	0.00
104.1	134.95	933.18	0.00	0.00
105.0	29.34	203.90	0.00	0.00
110.0	162.58	1,126.23	0.00	0.00
115.0	160.40	1,115.39	0.00	0.00
120.0	158.06	1,104.55	0.00	0.00
124.1	127.64	882.86	0.00	0.00
125.0	27.70	165.79	0.00	0.00
125.2	8.28	49.64	0.00	0.00
126.3	31.57	173.34	0.00	0.00
130.0	112.77	619.75	0.00	0.00
135.0	150.18	830.41	0.00	0.00
140.0	147.29	822.25	0.00	0.00
144.1	117.95	674.05	0.00	0.00
145.0	25.55	123.78	0.00	0.00
150.0	140.73	682.79	0.00	0.00
155.0	137.64	674.64	0.00	0.00
158.0	80.90	400.87	0.00	0.00
160.0	53.24	121.32	0.00	0.00
165.0	189.45	350.08	0.00	0.00
170.0	78.73	238.13	0.00	0.00
175.0	1,063.06	1,960.98	0.00	0.00
180.0	931.46	2,671.13	0.00	4,295.62
Totals:	7,354.97	47,311.96	0.00	4,295.62

Pole : 302502
 Location : Harwinton, CT
 Height : 180.0 (ft)
 Shape : 12 Sides
 Base Dia : 43.00 (in)
 Top Dia : 14.50 (in)
 Taper : 0.158333 (in/ft)

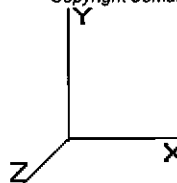
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 Struct Class : II
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Load Case: 1.0D + 1.0W

60.00 mph Serviceability

25 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 1.00

Wind Load Factor : 1.00

Calculated Forces

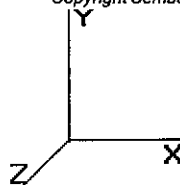
Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-47.31	-7.37	0.00	-848.23	0.00	848.23	3,010.98	1,505.49	5,293.47	2,614.24	0.00	0.00	0.151
4.10	-45.86	-7.28	0.00	-818.01	0.00	818.01	3,010.98	1,505.49	5,293.47	2,614.24	0.02	-0.04	0.148
4.10	-45.86	-7.28	0.00	-818.01	0.00	818.01	3,010.98	1,505.49	5,293.47	2,614.24	0.02	-0.04	0.148
5.00	-45.54	-7.28	0.00	-811.46	0.00	811.46	2,955.05	1,477.53	5,097.82	2,517.62	0.02	-0.04	0.148
10.00	-43.72	-7.19	0.00	-775.04	0.00	775.04	2,899.13	1,449.57	4,905.86	2,422.82	0.09	-0.09	0.144
15.00	-41.91	-7.05	0.00	-739.08	0.00	739.08	2,843.21	1,421.60	4,717.59	2,329.84	0.21	-0.13	0.141
20.00	-40.12	-6.91	0.00	-703.83	0.00	703.83	2,787.29	1,393.64	4,532.99	2,238.67	0.37	-0.17	0.137
25.00	-38.35	-6.77	0.00	-669.28	0.00	669.28	2,731.36	1,365.68	4,352.08	2,149.33	0.57	-0.22	0.133
30.00	-36.59	-6.63	0.00	-635.43	0.00	635.43	2,675.44	1,337.72	4,174.86	2,061.81	0.82	-0.26	0.130
35.00	-34.85	-6.48	0.00	-602.30	0.00	602.30	2,619.52	1,309.76	4,001.32	1,976.10	1.11	-0.30	0.126
40.00	-33.13	-6.32	0.00	-569.90	0.00	569.90	2,563.60	1,281.80	3,831.46	1,892.22	1.45	-0.34	0.122
44.10	-31.73	-6.19	0.00	-543.96	0.00	543.96	2,563.60	1,281.80	3,831.46	1,892.22	1.75	-0.37	0.119
44.10	-31.73	-6.19	0.00	-543.96	0.00	543.96	2,563.60	1,281.80	3,831.46	1,892.22	1.75	-0.37	0.000
45.00	-31.44	-6.17	0.00	-538.39	0.00	538.39	2,096.73	1,048.36	3,075.36	1,518.80	1.82	-0.38	0.126
50.00	-29.87	-6.01	0.00	-507.54	0.00	507.54	2,050.05	1,025.03	2,939.37	1,451.64	2.25	-0.42	0.121
55.00	-28.31	-5.85	0.00	-477.49	0.00	477.49	2,003.38	1,001.69	2,806.46	1,386.01	2.72	-0.47	0.117
60.00	-26.76	-5.68	0.00	-448.25	0.00	448.25	1,956.70	978.35	2,676.63	1,321.89	3.23	-0.51	0.112
65.00	-25.23	-5.51	0.00	-419.85	0.00	419.85	1,910.02	955.01	2,549.87	1,259.28	3.78	-0.55	0.107
70.00	-23.72	-5.34	0.00	-392.29	0.00	392.29	1,863.35	931.67	2,426.18	1,198.20	4.38	-0.59	0.103
75.00	-22.21	-5.17	0.00	-365.59	0.00	365.59	1,816.67	908.33	2,305.57	1,138.64	5.02	-0.63	0.098
80.00	-20.72	-4.99	0.00	-339.76	0.00	339.76	1,769.99	885.00	2,188.04	1,080.59	5.70	-0.67	0.093
84.10	-19.60	-4.84	0.00	-319.30	0.00	319.30	1,769.99	885.00	2,188.04	1,080.59	6.29	-0.70	0.089
84.10	-19.60	-4.84	0.00	-319.30	0.00	319.30	1,769.99	885.00	2,188.04	1,080.59	6.29	-0.70	0.098
85.00	-19.37	-4.81	0.00	-314.94	0.00	314.94	1,723.32	861.66	2,073.58	1,024.06	6.42	-0.71	0.097
86.57	-18.97	-4.76	0.00	-307.38	0.00	307.38	1,708.66	854.33	2,038.28	1,006.63	6.66	-0.72	0.096
86.57	-18.97	-4.76	0.00	-307.38	0.00	307.38	1,708.66	854.33	2,038.28	1,006.63	6.66	-0.72	0.102
86.60	-18.97	-4.76	0.00	-307.24	0.00	307.24	1,708.66	854.33	2,038.28	1,006.63	6.66	-0.72	0.102
86.60	-18.97	-4.76	0.00	-307.24	0.00	307.24	1,708.66	854.33	2,038.28	1,006.63	6.66	-0.72	0.102
90.00	-18.17	-4.65	0.00	-291.05	0.00	291.05	1,342.14	671.07	1,577.69	779.16	7.18	-0.75	0.098
95.00	-17.01	-4.48	0.00	-267.81	0.00	267.81	1,304.85	652.43	1,490.89	736.29	7.99	-0.79	0.092
100.00	-15.86	-4.30	0.00	-245.43	0.00	245.43	1,267.57	633.79	1,406.54	694.64	8.84	-0.83	0.087
104.10	-14.93	-4.16	0.00	-227.78	0.00	227.78	1,267.57	633.79	1,406.54	694.64	9.57	-0.86	0.082
104.10	-14.93	-4.16	0.00	-227.78	0.00	227.78	1,267.57	633.79	1,406.54	694.64	9.57	-0.86	0.082
105.00	-14.73	-4.13	0.00	-224.04	0.00	224.04	1,230.29	615.15	1,324.65	654.19	9.73	-0.87	0.081
110.00	-13.60	-3.96	0.00	-203.37	0.00	203.37	1,193.01	596.51	1,245.21	614.96	10.66	-0.91	0.075
115.00	-12.48	-3.79	0.00	-183.56	0.00	183.56	1,155.73	577.86	1,168.24	576.95	11.63	-0.94	0.070
120.00	-11.38	-3.62	0.00	-164.60	0.00	164.60	1,118.45	559.22	1,093.71	540.14	12.63	-0.98	0.064
124.10	-10.50	-3.48	0.00	-149.76	0.00	149.76	1,118.45	559.22	1,093.71	540.14	13.48	-1.00	0.059
124.10	-10.50	-3.48	0.00	-149.76	0.00	149.76	1,118.45	559.22	1,093.71	540.14	13.48	-1.00	0.075
125.00	-10.33	-3.45	0.00	-146.62	0.00	146.62	1,081.17	540.58	1,021.65	504.55	13.67	-1.01	0.073
125.27	-10.28	-3.44	0.00	-145.69	0.00	145.69	1,079.15	539.58	1,017.83	502.67	13.73	-1.01	0.073
125.27	-10.28	-3.44	0.00	-145.69	0.00	145.69	1,079.15	539.58	1,017.83	502.67	13.73	-1.01	0.079
126.30	-10.11	-3.41	0.00	-142.15	0.00	142.15	1,079.15	539.58	1,017.83	502.67	13.95	-1.02	0.077
126.30	-10.11	-3.41	0.00	-142.15	0.00	142.15	1,079.15	539.58	1,017.83	502.67	13.95	-1.02	0.077
130.00	-9.49	-3.29	0.00	-129.52	0.00	129.52	787.08	393.54	721.85	356.50	14.75	-1.05	0.071
135.00	-8.66	-3.13	0.00	-113.06	0.00	113.06	759.16	379.58	671.24	331.50	15.87	-1.08	0.063
140.00	-7.84	-2.97	0.00	-97.39	0.00	97.39	731.12	365.56	622.37	307.37	17.02	-1.12	0.056
144.10	-7.17	-2.84	0.00	-85.20	0.00	85.20	731.12	365.56	622.37	307.37	17.99	-1.15	0.050
144.10	-7.17	-2.84	0.00	-85.20	0.00	85.20	731.12	365.56	622.37	307.37	17.99	-1.15	0.066
145.00	-7.04	-2.82	0.00	-82.64	0.00	82.64	703.09	351.54	575.35	284.14	18.21	-1.15	0.065
150.00	-6.36	-2.67	0.00	-68.54	0.00	68.54	675.05	337.53	530.17	261.83	19.44	-1.19	0.055

Pole : 302502
 Location : Harwinton, CT
 Height : 180.0 (ft)
 Shape : 12 Sides
 Base Dia : 43.00 (in)
 Top Dia : 14.50 (in)
 Taper : 0.158333 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : B
 Topographic Category : 1

Base Elev : 0.000 (ft)

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Load Case: 1.0D + 1.0W

60.00 mph Serviceability

25 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 1.00

Wind Load Factor : 1.00

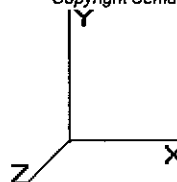
155.00	-5.69	-2.52	0.00	-55.20	0.00	55.20	647.02	323.51	486.84	240.43	20.70	-1.22	0.046
158.00	-5.29	-2.43	0.00	-47.64	0.00	47.64	647.02	323.51	486.84	240.43	21.47	-1.24	0.041
158.00	-5.29	-2.43	0.00	-47.64	0.00	47.64	647.02	323.51	486.84	240.43	21.47	-1.24	0.217
160.00	-5.17	-2.38	0.00	-42.78	0.00	42.78	618.98	309.49	445.36	219.95	21.99	-1.25	0.203
165.00	-4.82	-2.19	0.00	-30.87	0.00	30.87	590.95	295.47	405.73	200.37	23.37	-1.38	0.162
170.00	-4.58	-2.12	0.00	-19.90	0.00	19.90	562.91	281.46	367.94	181.71	24.87	-1.48	0.118
175.00	-2.64	-1.00	0.00	-9.32	0.00	9.32	534.87	267.44	332.00	163.96	26.46	-1.54	0.062
180.00	0.00	-0.93	0.00	-4.30	0.00	4.30	506.84	253.42	297.90	147.12	28.10	-1.58	0.029

Pole : 302502
 Location : Harwinton, CT
 Height : 180.0 (ft)
 Shape : 12 Sides
 Base Dia : 43.00 (in)
 Top Dia : 14.50 (in)
 Taper : 0.158333 (in/ft)

Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : B
 Topographic Category : 1

Base Elev : 0.000 (ft)

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Analysis Summary

Load Case	Reactions						Max Usage	
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.6W	28.54	0.00	52.68	0.00	0.00	3296.69	160.00	0.79
0.9D + 1.6W	28.25	0.00	44.57	0.00	0.00	3268.70	160.00	0.78
1.2D + 1.0Di + 1.0Wi	4.65	0.00	89.80	0.00	0.00	598.18	160.00	0.19
1.0D + 1.0W	7.37	0.00	47.31	0.00	0.00	848.23	160.00	0.20

Additional Steel Summary

Elev From (ft)	Elev To (ft)	Member	Stitch Weld				Upper Terminal Weld				Lower Terminal Weld				Max Member		
			Len (in)	Spacing (in)	Size (in)	Fu (ksi)	Moment (ft-kips)	Q (in^3)	Tot I (in^4)	Len (in)	Moment (ft-kips)	Q (in^3)	Tot I (in^4)	Len (in)	Pu (kip)	phi Pn (kip)	Ratio
0.00	4.10	(3) SOL-4 1/4" SOLID	4.00	33.00	0.250	70	3,179.7	374.9	26,306	48.8	3,296.7	379.5	27,211	49.5	559.6	629.7	0.89
4.10	44.1	(3) SOL-4 1/4" SOLID	4.00	33.00	0.250	70	2,126.3	329.9	18,538	40.7	3,179.7	374.9	26,306	48.8	551.5	629.7	0.88
44.1	84.1	(3) SOL-4 1/4" SOLID	4.00	33.00	0.250	70	1,258.0	285.0	11,898	32.4	2,126.3	329.9	17,415	43.4	487.2	629.7	0.77
84.1	86.6	(3) SOL-4" SOLID	4.00	60.00	0.250	70	1,211.2	248.4	9,920	32.6	1,258.0	250.9	10,812	31.4	368.2	534.0	0.69
86.6	104.	(3) SOL-4" SOLID	4.00	60.00	0.250	70	902.2	231.0	8,270	27.1	1,211.2	248.4	9,920	32.6	368.2	534.0	0.69
104.	124.	(3) SOL-4" SOLID	4.00	60.00	0.250	70	596.9	211.1	6,625	20.5	902.2	231.0	8,270	27.1	305.8	534.0	0.57
124.	126.	(3) SOL-3 1/2" SOLID	4.00	60.00	0.188	70	567.0	157.6	4,810	26.6	596.9	159.2	5,242	26.0	225.3	401.7	0.56
126.	144.	(3) SOL-3 1/2" SOLID	4.00	60.00	0.188	70	342.0	144.0	3,873	18.2	567.0	157.6	4,810	26.6	225.3	401.7	0.56
144.	158.	(3) SOL-3" SOLID	4.00	60.00	0.188	70	192.1	96.3	2,413	11.0	342.0	104.0	2,926	17.4	147.5	362.2	0.41

Pole : 302502
 Location : Harwinton, CT
 Height : 180.0 (ft)
 Shape : 12 Sides
 Base Dia : 43.00 (in)
 Top Dia : 14.50 (in)
 Taper : 0.158333 (in/ft)

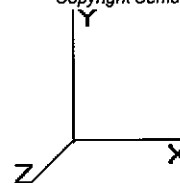
Code: ANSI/TIA-222 Rev G
 Struct Class : II
 Exposure Category : B
 Topographic Category : 1

Base Elev : 0.000 (ft)

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Base Summary

Reactions

Original Design			Analysis			Moment Design %
Moment (kip-ft)	Axial (kip)	Shear (kip)	Moment (kip-ft)	Axial (kip)	Shear (kip)	
			3,296.69	89.80	28.54	

Base Plate

Yield (ksi)	Thick (in)	Width (in)	Style	Poly Sides	Clip Len (in)	Effective Len (in)	Mu (kip-in)	Phi Mn (kip-in)	Ratio
50.0	2.500	55.000	Polygon	12	0.00	11.522	464.46	810.13	0.57

Anchor Bolts

Bolt Circle	Num Bolts	Bolt Type	Bolt Dia (in)	Yield (ksi)	Ultimate (ksi)	Arrange	Cluster Dist (in)	Start Angle (deg)	Compression			Tension		
									Force (kip)	Allow (kip)	Ratio	Force (kip)	Allow (kip)	Ratio
49.25	12	2.25" 18J	2.25	75.00	100.00	Radial	0.00	0.0	275.23	260.00	1.08	260.27	260.00	1.02

Base/Flange Plate	Plate Type	Flange @ 125.3 ft
	Pole Diameter	22.86 in
	Pole Thickness	0.188 in
	Plate Diameter	30 in
	Plate Thickness	1.25 in
	Plate Fy	60 ksi
	Weld Length	0.25 in
	ϕ_s Resistance	94.68 k-in
	Applied	15.35 k-in
	#	0
Stiffeners		

Code Rev. **G**

Date **10/6/2008**
 Engineer **CLJ**
 Site # **302502**
 Carrier **Youghiogheny**

Moment **580.9 k-ft**
 Axial **10.9 k**

Required Flange Thickness:

0.50 in OK

Bolts	#	16
	Bolt Circle (R)adial / (S)quare	26.43 in R
	Diameter	1 in
	Hole Diameter	1.125 in
	Type	A325
	Fy	92 ksi
	Fu	120 ksi
	ϕ_s Resistance	54.52 k
	Applied	15.78 k
	#	3
Reinforcement	DYW. Circle	26.43 in
	Offset Angle	33°
	Type	Other
	Diameter	3.5 in
	Fu	65 ksi
Extra Bolts O	#	0

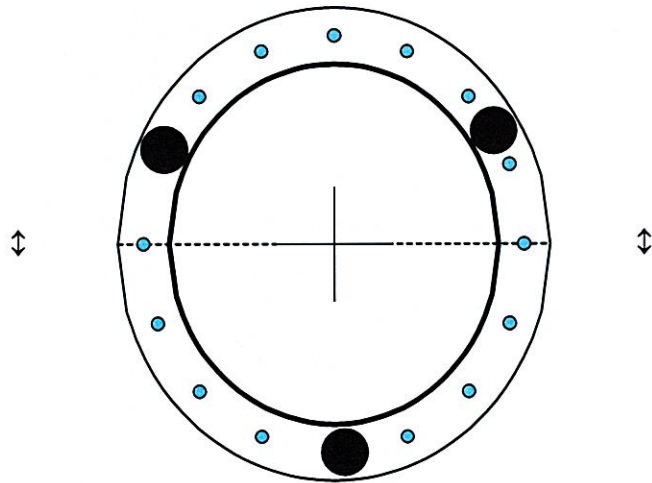


Plate Stress Ratio:

0.16 (Pass)

Bolt Stress Ratio:

0.29 (Pass)

FOUNDATION TYPE: PAD & PIER

Site Name: Harwinton, CT
Site Number: 302502
Engineer: CLJ
Date: 10/6/2008

Design Loads (Factored)

O.T. Moment: 3296.69 k-ft
Compression: 89.80 k
Shear: 28.54 k

Tower Type:
Code Revision:
Allowable Capacity Increase (Transient Loads):
Pedestal Shape - (R)ound / (S)quare
Width of Prismatic Portion of Pedestal (d):
Length of Pedestal (l):
Height of Pedestal above Ground (h):
Length of Pad (L):
Width of Pad (W):
Thickness of Pad (t):
Depth Below Ground Surface to Water Table (w):
Unit Weight of Soil Above Water Table:
Friction Angle of Uplift (A):
Ultimate Coefficient of Shear Friction:
Ultimate Cohesion of Soil:
Allowable Concrete Compressive Strength:
Unit Weight of Water:
Unit Weight of Concrete:
Ultimate Compressive Bearing Pressure:

MP
G
1.00
S
6 ft
5.5 ft
0.5 ft
20 ft
20 ft
3 ft
20 ft
110 pcf
30°
0 psf
3000 psi
62.4 pcf
150 pcf
12000 psf

Volume of Concrete: 1398.0 ft³
Volume of Soil: 2441.0 ft³
Weight of Concrete (Buoyancy Effect Considered): 209.7 k
Weight of Soil (Buoyancy Effect Considered): 268.5 k
Weight of Soil (Buoyancy Effect, w/o Friction Angle Cone): 200.2 k

Q_{ult} : 5709.83 psf
 Q_{net} : 4829.83 psf
Eccentricity: 7.08 ft > 3.33 ft (L/6)
Resultant is Outside Middle Third of Pad
L-Prime: 8.75 ft

One-Way Shear Check

Top of Concrete to Middle of Bottom Rebar Mat: 33.00 in
Factored Shear at Face of Pier: 485.34 k
 ΦV_n , Concrete 1-way Shear Resistance: 780.83 k

Mat Thickness is Acceptable**Overturning Check**

Overturning Moment at Foundation Base: 3539.28 k-ft
Increment: 330.00 psf/ft
Lateral Bearing Resistance: 126.72 k
Overturning Moment Capacity: 5986.63 k-ft
Total Vertical Load: 499.70 k

Bearing Design Load / Bearing Capacity:	0.54	Acceptable
O.T. Design / O.T. Capacity:	0.79	Acceptable

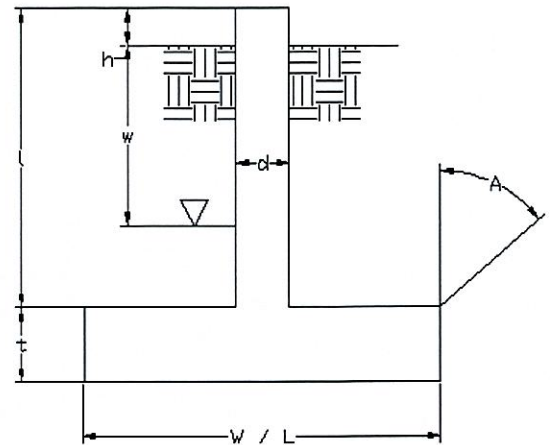


Exhibit F

Structural Modification

Drawings

Pocket Site NHCT0203A

159 Weingart Road

Harwinton, Connecticut

AMERICAN TOWER CORPORATION

400 REGENCY FOREST DRIVE
CARY, NORTH CAROLINA 27518
PHONE: (919) 468-0112 / FAX: (919) 466-5040

302502 - HARWINTON, CT 180 FT. MONOPOLE BASE PLATE MODIFICATIONS

PROJECT DESCRIPTION:

THE MODIFICATIONS PRESENTED ON THESE DRAWINGS ARE BASED ON THE RECOMMENDATIONS OUTLINED IN THE STRUCTURAL ANALYSIS COMPLETED UNDER ENGINEERING PROJECT NUMBER 42504231 DATED 10/08/08. SATISFACTORY COMPLETION OF THE WORK INDICATED ON THESE DRAWINGS WILL RESULT IN THE STRUCTURE MEETING THE REQUIREMENTS OF THE SPECIFICATIONS UNDER WHICH THE STRUCTURAL WAS COMPLETED.

AS-BUILT SIGN-OFF		
DESCRIPTION	SIGNATURE	DATE
CONTRACTOR NAME		
CONTRACTOR REPRESENTATIVE (PRINT NAME)		
CONTRACTOR REPRESENTATIVE SIGNATURE		
REDEVELOPMENT P.M. (PRINT NAME)		
REDEVELOPMENT P.M. SIGNATURE		

PROJECT SUMMARY

ATC PROJECT NUMBER: 42504233

CUSTOMER: YOUGHIOGHENY

CUSTOMER SITE NUMBER: NHCT0203A

CUSTOMER SITE NAME: HARWINTON

SITE ADDRESS: 159 WEINGART ROAD
HARWINTON, CT 06791

DATE: 10/23/08

REVISION: 0



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Connecticut.

DRAWING INDEX		
DRAWING NUMBER	DRAWING TITLE	REVISION
B001	BILL OF MATERIALS (1 PAGE)	0
CT001	CT GENERAL NOTES	0
A-1	MODIFICATION PROFILE	0
A-2	ANCHOR BOLT INSTALLATION DETAILS	0



THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATIONS SHALL BE USED ONLY FOR THE EXCLUSIVE PROPERTY OF AMERICAN TOWER CORPORATION AND THEIR USE AND REPRODUCTION FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN PERMISSION OF AMERICAN TOWER CORPORATION IS PROHIBITED. ANY REPRODUCTION OR TRANSMISSION OF THESE DRAWINGS OR SPECIFICATIONS WITHOUT THE WRITTEN PERMISSION OF AMERICAN TOWER CORPORATION SHALL BE A VIOLATION OF THE COPYRIGHT AND TRADE SECRET ACTS AND MAY BE SUBJECT TO PROSECUTION AND CIVIL AND CRIMINAL PENALTIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND FOR THE ACCEPTANCE OF THESE REVISIONS.

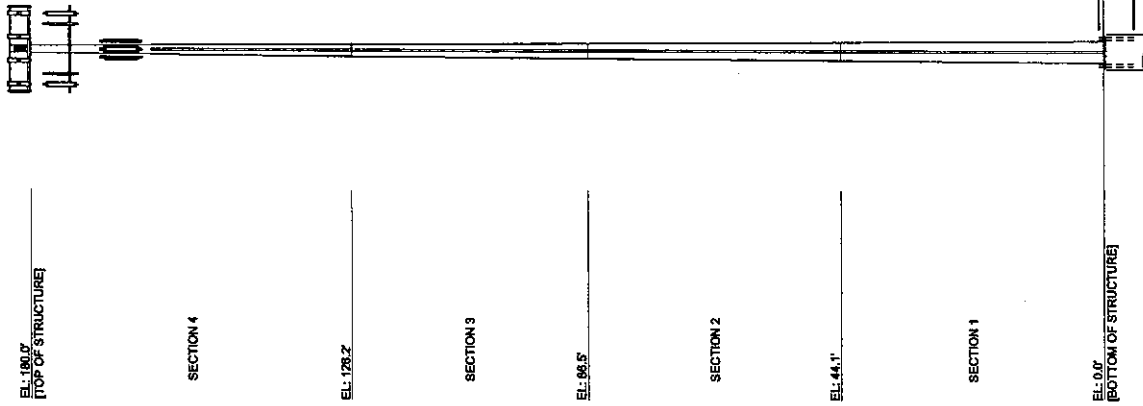
REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	AMB	10/22/08
2			
3			

SITE NUMBER:
302502
SITE NAME:
HARWINTON
CONNECTICUT
SITE ADDRESS:
150 WEINGART ROAD
HARWINTON, CT 06781

DRAWN BY:	JMB
CHECKED BY:	BKL
DATE DRAWN:	10/22/08
A/TC JOB NO.:	4504233
SHEET TITLE:	

MODIFICATION PROFILE

SHEET NUMBER:	A-1	REV. #	0
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TOWER ELEVATION VIEW

NOTE:
PROPOSED YOUGHIOGENY COAX TO BE
INSTALLED INSIDE MONOPOLE.



THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATION AS INSTRUMENTS OF SERVICE, ARE THE EXCLUSIVE PROPERTY OF ALMENDRA TOWER CORPORATION AND THEIR USE AND PUBLICATION SHALL BE RESTRICTED TO THE OBJECT SET FORTH HEREIN. ANY REPRODUCTION OF THESE DRAWINGS OR PUBLICATION BY ANY PERSON OR ENTITY IN WHOLE OR IN PART IS PROHIBITED EXCEPT BY WRITTEN PERMISSION FROM ALMENDRA TOWER CORPORATION. TITLE TO THESE PLANS AND/OR SPECIFICATIONS SHALL REMAIN WITH ALMENDRA TOWER CORPORATION WITHOUT PREJUDICE AND VISUAL CONTACT WITH THEM SHALL CONSTITUTE PRIMA FACIE EVIDENCE OF ACCEPTANCE OF THESE RESTRICTIONS.

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	JMB	10/23/08

SITE NUMBER:
302502

SITE NAME:
HARWINTON
CONNECTICUT

SITE ADDRESS:
158 WEINGART ROAD
HARTWINTON, CT 08791

DRAWN BY:	JMB
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748

1072401

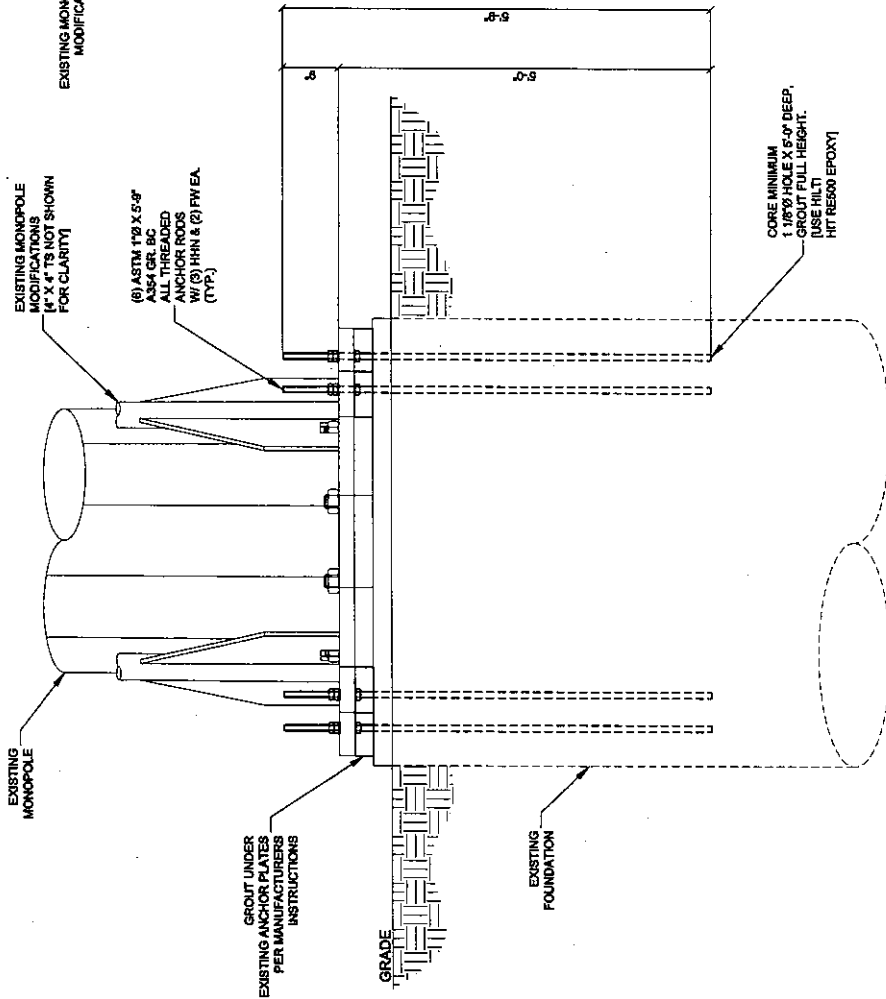
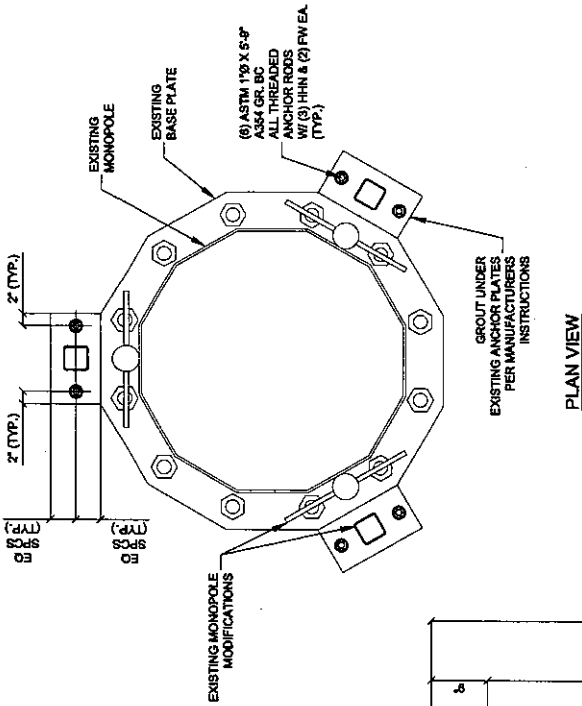
125M2

210026

ANCHOR BOLT INSTALLATION DETAILS

SHEET NUMBER: _____ REV. 1

A-2	0
-----	---



SECTION "A-A"
ELEVATION VIEW

Larson, Carrie L.

From: Bob Locke [blocker@aerialspectrum.com]
Sent: Monday, November 24, 2008 3:36 PM
To: Larson, Carrie L.
Cc: 'Robert Mitchell'
Subject: Pocket CSC Packages
Attachments: NHCT0153A CSC Package.zip; NHCT0203A CSC Package.zip

Carrie,

Attached are (2) additional CSC packages for the sites listed below.

NHCT0153A – SBA owned tower but unable to confirm ground ownership

NHCT0203A – John J. and Clara D. Basile

Sincerely,

Robert Locke Jr.

Project Manager

Aerial Spectrum Inc.

599 North Avenue, Suite 8

Wakefield, MA 01880

www.aerialspectrum.com

Office - (781) 295-0818 x209

Fax - (781) 295-0825

Mobile - (978) 771-8654

11/24/2008

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11/24/2008