



HPC Wireless Services
22 Shelter Rock Lane.
Building C
Danbury, CT, 06810
P.: 203.797.1112

June 12, 2014

VIA OVERNIGHT COURIER

Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051
Attn: Ms. Melanie Bachman, Acting Executive Director

RECEIVED
JUN 13 2014

CONNECTICUT
SITING COUNCIL

Re: Sprint Spectrum, L.P. – Exempt Modification
345 North Main Street, a/k/a 333 North Main Street, West Hartford, Connecticut

Dear Ms. Bachman:

This letter and attachments are submitted on behalf of Sprint Spectrum, L.P. (“Sprint”). Sprint is undertaking modifications to certain existing sites in its Connecticut system in order to implement updated technology. Please accept this letter and attachments as notification, pursuant to R.C.S.A. Section 16-50j-73, of construction that constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2). In compliance with R.C.S.A. Section 16-50j-73, a copy of this letter and attachments is being sent to the Mayor of the Town of West Hartford.

Sprint plans to modify the existing wireless communications facility owned and managed by Edens& Avant Investments LP, and located at 345 North Main Street, a/k/a/ 333 North Main Street, West Hartford, (coordinates 41°-47’-06.1” N, 72°-44’-54.55” W). Attached are plan and elevation drawings depicting the planned changes, and documentation of the structural sufficiency of the structure to accommodate the revised antenna configuration, subject to modifications detailed in the attached structural documentation. Also included is a power density report reflecting the modification to Sprint’s operations at the site.

The changes to the facility do not constitute a modification as defined in Connecticut General Statutes (“C.G.S.”) Section 16-50i(d) because the general physical characteristics of the facility will not be significantly changed. Rather, the planned changes to the facility fall squarely within those activities explicitly provided for in R.C.S.A. Section 16-50j-72(b)(2).

1. Sprint will add three (3) panel antennas for a total of six (6) antennas, and three (3) RRHs (remote radio heads) for a total of nine (9) RRHs, all on the existing mast and at a centerline height of approximately 100’, AGL, or approximately 50’ above the roof level. Sprint will also install one new (1) hybridflex cable for a total of four (4) hybridflex cables along the existing coaxial cable run. The proposed modifications will not extend

Ms. Melanie Bachman

June 12, 2014

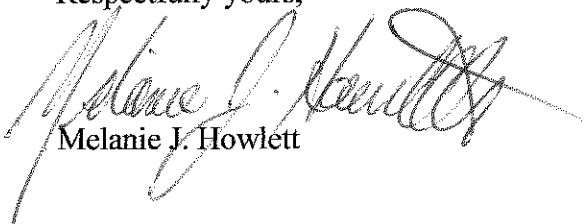
Page 2

the height of the approximately 100' AGL or approximately 50' rooftop tower.

2. Sprint will place associated equipment and new batteries in the three (3) cabinets on the 12' x 10' reinforced platform on a concrete pad. There will be no increase to the leased area. These changes will have no effect on the site boundaries.
3. The proposed changes will not increase the noise level at the existing facility by six decibels or more. The incremental effect of the proposed changes will be negligible.
4. The changes to the facility will not increase the calculated "worst case" power density for the combined operations at the site to a level at or above the applicable standard for uncontrolled environments as calculated for a mixed frequency site. As indicated on the attached report prepared by EBI Consulting, Sprint's operations at the site will result in a power density of approximately 3.19%; the combined site operations will result in a total power density of approximately 48.50%.

Please contact me by phone at (203) 610-1071 or by e-mail at mjhowlett@optonline.net with questions concerning this matter. Thank you for your consideration.

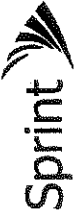


Respectfully yours,

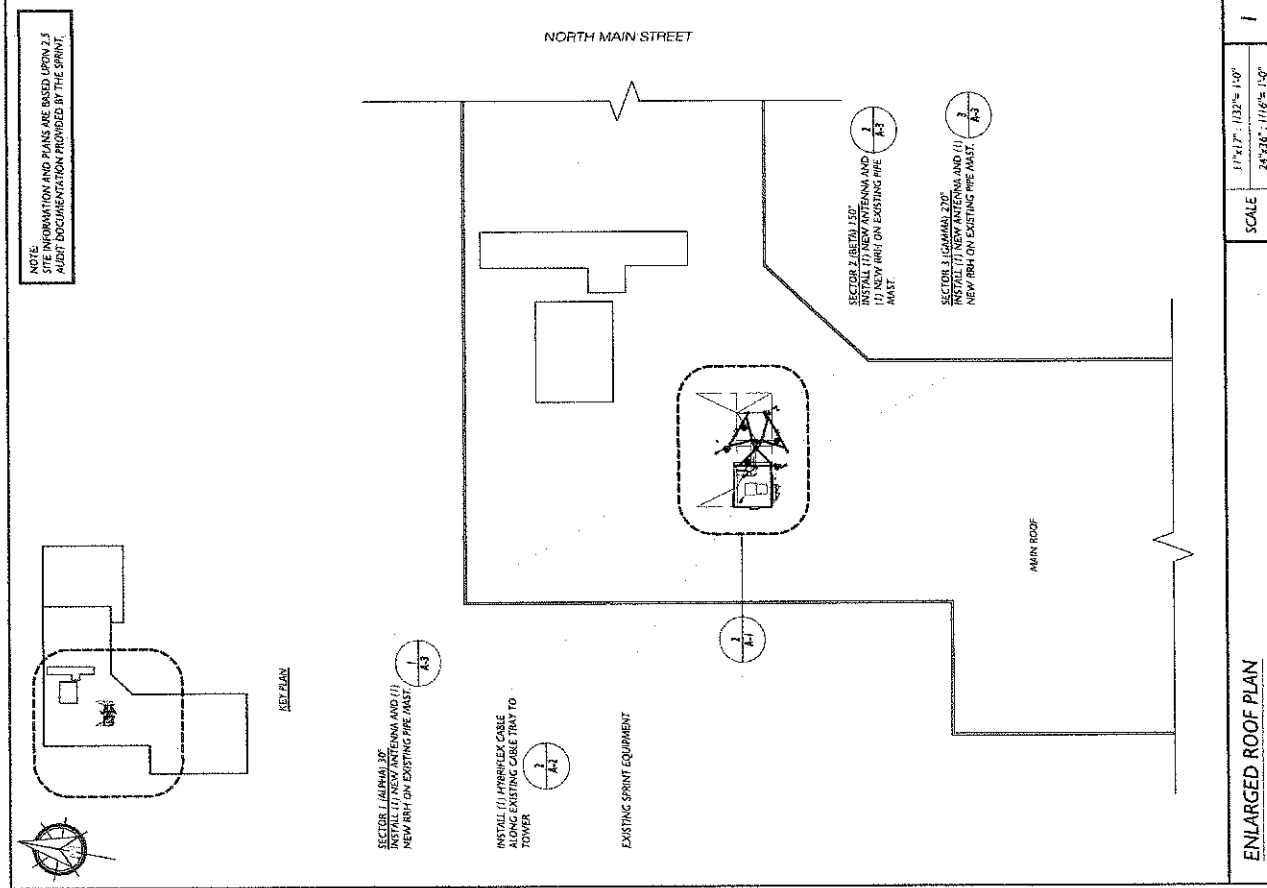
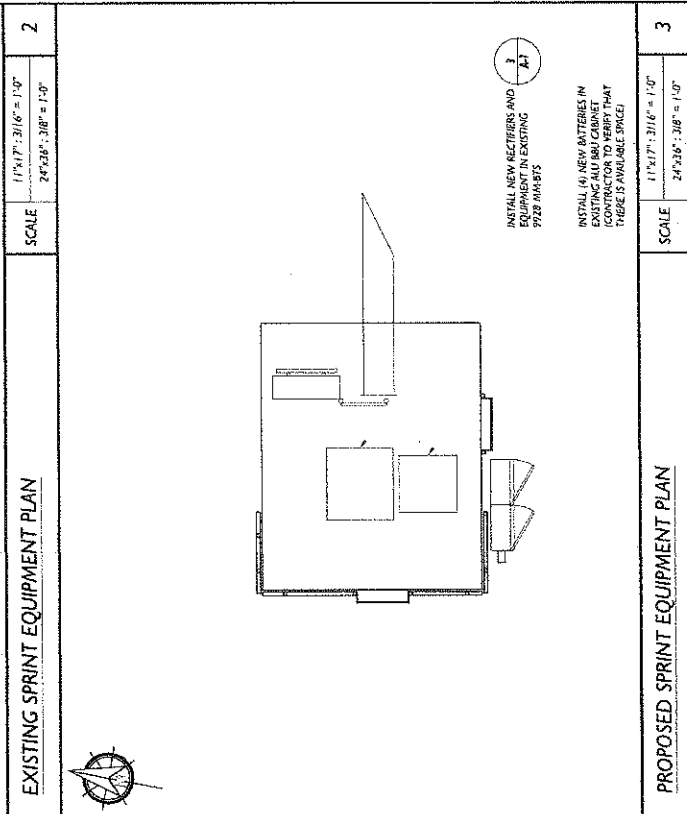
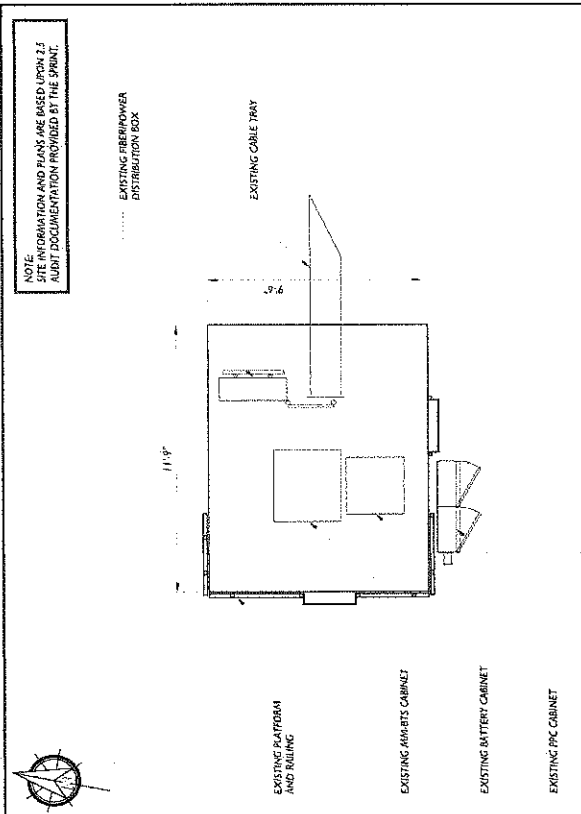


Melanie J. Howlett

Attachments

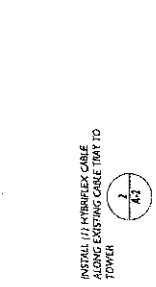
cc: Honorable Scott Slifka, Mayor, Town of West Hartford
Ron F. Van Winkle, Town Manager, Town of West Hartford
Ena Northeast LP, c/o Edens & Avant Investments LP (underlying property owner)

 <p>Sprint 6690 SPRINT PARKWAY OVERLAND PARK, KANSAS 66251 (617) 496-7460</p>		 <p>A SAXON DESIGN GROUP 100 PARK ST. SUITE 100 HARTFORD, CT 06117</p>		 <p>MICHAEL L. BOHLINGER ENGINEER'S LICENSE PROFESSIONAL ENGINEER CONNECTICUT LICENSE NO. 20405</p>		<p>CLIENT: ASDCSP20 DRAWING NO.: CT03XC074 PROJECT: 2.5 GHz DATE: WEST HARTFORD BISHOPS 345 NORTH MAIN STREET WEST HARTFORD, CT 06117</p>		<p>DATE: 3/14 SUBMIT: DISPOSE DRAWING: CD SCALE: A-1</p>	
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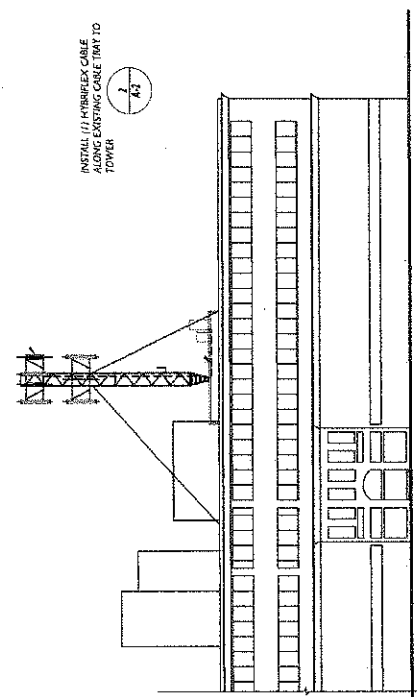


NOTE:
SITE INFORMATION AND PLANS ARE BASED UPON 2.5
AUDIT DOCUMENTATION PROVIDED BY THE SPRINT.

INSTALL (1) NEW ANTENNA
AND (1) NEW RIBH PER
SECTION (3 TOTAL OF EACH)
ON EXISTING PRE-CAST



INSTALL (1) HYBRID CABLE
ALONG EXISTING CABLE TRAY TO
POWER



ELEVATION
SCALE
1/4" = 1'-0"
3/8" = 1'-0"

HYBRID CABLE DC CONDUCTOR SIZE GUIDELINE

CABLE	LENGTH	DC CONDUCTOR	CABLE DIAMETER
FIBER ONLY	VARIES	USE NY HYBRIDEX	5/8"
HYBRIDEX	OVER 200'	8 AWG	1 1/4"
HYBRIDEX	225-300'	6 AWG	1 1/4"
HYBRIDEX	325-375'	4 AWG	1 1/4"

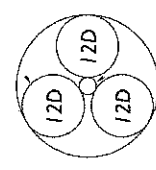
FRER BREAK OUT
(ITP)

BREAK OUTS TO RIBH

INSTALL CABLE TERMINATION ENCLOSURE
FURNISHED WITH CABLE INSTALL AND SUPPORT
PER MANUFACTURER'S SPECIFICATIONS

INSTALL (1) 5/8" NY HYBRIDEX CABLE

2170(5.530)
12 CHANNEL FIBER DIST.
(ITP OF 3)



(1) 12D(1)
INSULATED EPOXY GLASS ROD

HYBRID BREAK OUT DETAIL
SCALE
1" = 1'-0"
3/8" = 1'-0"

<p>6580 SPRINT PARKWAY OVERLAND PARK, KANSAS 66251 (817) 436-7468</p>		<p>A SAXON DESIGN GROUP DESIGN FIRM 1700 BRIDGE PLAZA EVANSTON, IL 60201</p>		<p>ENGINEER'S LICENSE MICHAEL L. BOHLINGER</p> <p>PROFESSIONAL ENGINEER CONNECTICUT LICENSE NO. 26405</p>		<p>PROJECT NO. ASDGSP20 CLIENT NO. CT03XC074 DESIGN TITLE 2.5 GHz SITE INFORMATION WEST HARTFORD BISHOPS 345 NORTH MAIN STREET WEST HARTFORD, CT 06117</p>		<p>DRAWING TITLE BUILDING ELEVATION AND CABLE PLAN</p>		<p>DATE: 11/11/11 DRAWN BY: JUS/SJF CHECKED BY: CO SCALE: A-2</p>	
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<p>Sprint 6590 SPRINT PARKWAY OVERLAND PARK, KANSAS 66261 (817) 436-7466</p>	<p>A SAXON DESIGN GROUP 1400 AVENUE M, SUITE 200 OVERLAND PARK, KS 66204</p>	<p>ENGINEER'S LICENSE MICHAEL L. BOHLINGER</p> <p>PROFESSIONAL ENGINEER CONNECTICUT LICENSE NO. 26405</p>	<p>PROJECT NO.: ASDGSP20</p> <p>DRAWING NO.: CT03XC074</p> <p>DATE: 2.5 GHz</p> <p>SITE INFORMATION: WEST HARTFORD BISHOPS 345 NORTH MAIN STREET WEST HARTFORD, CT 06117</p>	<p>DRAWING TITLE: RF DATA SHEET AND EQUIPMENT INFORMATION</p> <p>DATE: _____ SUBMITTED: _____ REVISED: _____ SCALE: _____</p>
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NOTE:
SITE INFORMATION AND PLANS ARE BASED UPON 2.5
AUBIT DOCUMENTATION PROVIDED BY THE CLIENT.

RFDS Sheet

GENERAL CONTRACTOR TO VERIFY CURRENT RFDS PRIOR TO CONSTRUCTION START.

General Site Information	
Site ID: CR03XC074	Equipment Vendor: ALU
Market: Western Connecticut	Lat/Long: 41.7519397
Region: EAST	Longitude: -72.7483197
MVA: N/A	LL SITE ID: N/A
Structure Type: BUILDING/QUIET TOWER	Shima SR Equipment Type: N/A
BTS Type: N/A	Equipment Vendor: ALU
Location ID: _____	Incremental Power Draw needed by added Equipment: D

Base Equipment	Top Hgt
BUU ID: ALU1BU1XR	Top Hgt: NONE
BUU Qty: 1	Top Hgt: N/A
Growth Cabinet:	Top Hgt: N/A
Growth Cabinet Qty: NONE	Top Hgt: N/A
Growth Cabinet Dimensions: N/A	Top Hgt: N/A
Growth Cabinet Weight: N/A	Top Hgt: N/A

RF Path Information

Path:	Top Hgt:
RRH Qty: 3	RRH Top Hgt: 28.1m x 1.8 x 3.6 x 7.1m
RRH Dimensions: 70	RRH Weight: TBD
RRH Mounting Height: 70	Power and Fiber Cable: ALU FIBER ONLY
RRH Mounting Weight: 1	Weight per foot: 0.12
Cable Qty: 0.7	Length: 1.3
Diameter: 1.3	Cable Number: 100
Length: 1.3	Cable Number: 27
Weight: 0.7	Cable Number: 8
Length: 1.3	Cable Number: TBD
Weight: 0.7	Cable Number: 0.5
Length: 1.3	Cable Number: 3
Weight: 0.7	Cable Number: 8
Length: 1.3	Cable Number: 1.3
Weight: 0.7	Cable Number: 1.3

(calculated as antenna height plus ZOH)

Antenna Sector Information	
Antenna make/model: RF5 AP070114L-C-20	Sector 1: RF5 AP070114L-C-20
Antenna Qty: 2	Sector 2: RF5 AP070114L-C-20
Antenna Dimensions: 56.3 x 12.6 x 6.3	Sector 3: RF5 AP070114L-C-20
Antenna Weight: 56	Sector 4: RF5 AP070114L-C-20
Antenna Mounting Ht Weight: 11 (estimate)	Sector 5: RF5 AP070114L-C-20
CL Height: 100	Sector 6: RF5 AP070114L-C-20
Antenna Arm: 30	Sector 7: RF5 AP070114L-C-20
Antenna Mounting Downlift: 0	Sector 8: RF5 AP070114L-C-20
Antenna Qty: 2	Sector 9: RF5 AP070114L-C-20

Sprint RFDS Sheet
7/28/2014
Confidential



Modification Package

Prepared for:

HPC Wireless
400 East 54th Street#4C
New York, NY 10022

ATTN: Ms. Debra Overbey

Structure : 50 ft Rohn Guyed Tower
(rooftop mounted 59 ft above grade)

Proposed Carrier : Sprint

Site ID : CT03XC074

Site Location : West Hartford, CT

County : Hartford

Date : May 7, 2014 (analysis revision)

Usage : 27.0% Legs, 55.0% Diagonals, 18.0%
Horizontals, 72.0% Guys (with mods)

May 7, 2014
Page 1

Introduction

The purpose of this report is to summarize results of the structural analysis performed on the 50 ft Rohn Guyed Tower located at West Hartford, CT, Hartford County (site #CT03XC074). The tower was originally designed and manufactured by Rohn (Drawing #0970975 dated July 28, 1997). This tower is mounted on top of a building with the base of the tower 54 ft above the grade line.

Analysis

The tower was analyzed using Semaan Engineering Solutions, Inc., Software. The analysis assumes that the tower is in good, undamaged, and non-corroded condition. The analysis was performed in conformance with TIA/EIA-222 Rev F and local building codes for a basic wind speed of 80 mph no ice and 69 mph with 1/2" radial ice (fastest mile). This is in conformance with the IBC 2006: Section 1609.1.1, Exception (4) and Section 3108.4.

Basic Wind Speed: 80.0 mph
Radial Ice: 69.0 mph w/ 0.50" ice
Code: TIA/EIA-222 Rev F

Antenna Loads

The following antenna loads were used in the tower analysis.

Existing Antennas

Tower El./AGL	Qty	Antennas	Mount	Coax (in)	Carrier
46.0 / 100.0	6	DB980H90	(3) PCS frames	(6) 1 5/8	Sprint
35.0 / 89.0	6	RRUS11	(3) PCS frames	(12) 1 5/8	AT&T
	1	AM-X-CD-16-65-00T-RET			
	2	P65-17-XLH-RR			
	1	DC6-48-60-18-8F			
	6	TT19-08BP111-001			
	6	Powerwave 7770.00			
13.0 / 67.0	1	GPS antenna	Leg Mount	(1) 1/2	Sprint

Proposed Antennas

Elev. (ft)	Qty	Antennas	Mount	Coax (in)	Carrier
46.0 / 100.0	3	APXVTM14-C-I20	Existing frames	(1) .70" Fiber	Sprint
	3	TD-RRH-8X20-25			

The proposed transmission lines may be placed anywhere on the tower. No line shielding was considered.

May 7, 2014

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Results

The existing Guyed Tower is not structurally capable of supporting the existing and proposed antennas. The guy cables at the 32 ft elevation are overstressed. New larger guy cables will be required. Refer to the attached drawings for additional information.

The maximum leg usage is: 25.0% (without mods) and 27.0% (with mods).

The maximum diagonal usage is: 56.0% (without mods) and 55.0% (with mods).

The maximum horizontal usage is: 18.0% (without mods) and 18.0% (with mods).

The maximum guy usage is: 121.0% (without mods) and 72.0% (with mods).

Anchor Radius (Ft)	Design Force (kip)	Analysis Force (kip)	% Of Design
29.0 ft	10.7 up	14.46 up	135.1
Mast Foundation	23.0 down	36.42 down	158.3

The analysis reactions exceed the original design reactions. The building support structure and connections must be checked by others for the additional loading.

Conclusion

Based on the analysis results, the existing structure (with the larger guy cables installed and approved per the attached drawings) meets the requirements per the TIA/EIA-222 Rev F standards for a basic wind speed of 80 mph no ice and 69 mph with 1/2" radial ice.

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

Attachments

1. Drawing S-01, Revision 1, dated 05/07/2014.
2. Drawing S-02, Revision 0, dated 05/02/2014.
3. Drawing S-03, Revision 1, dated 05/07/2014.

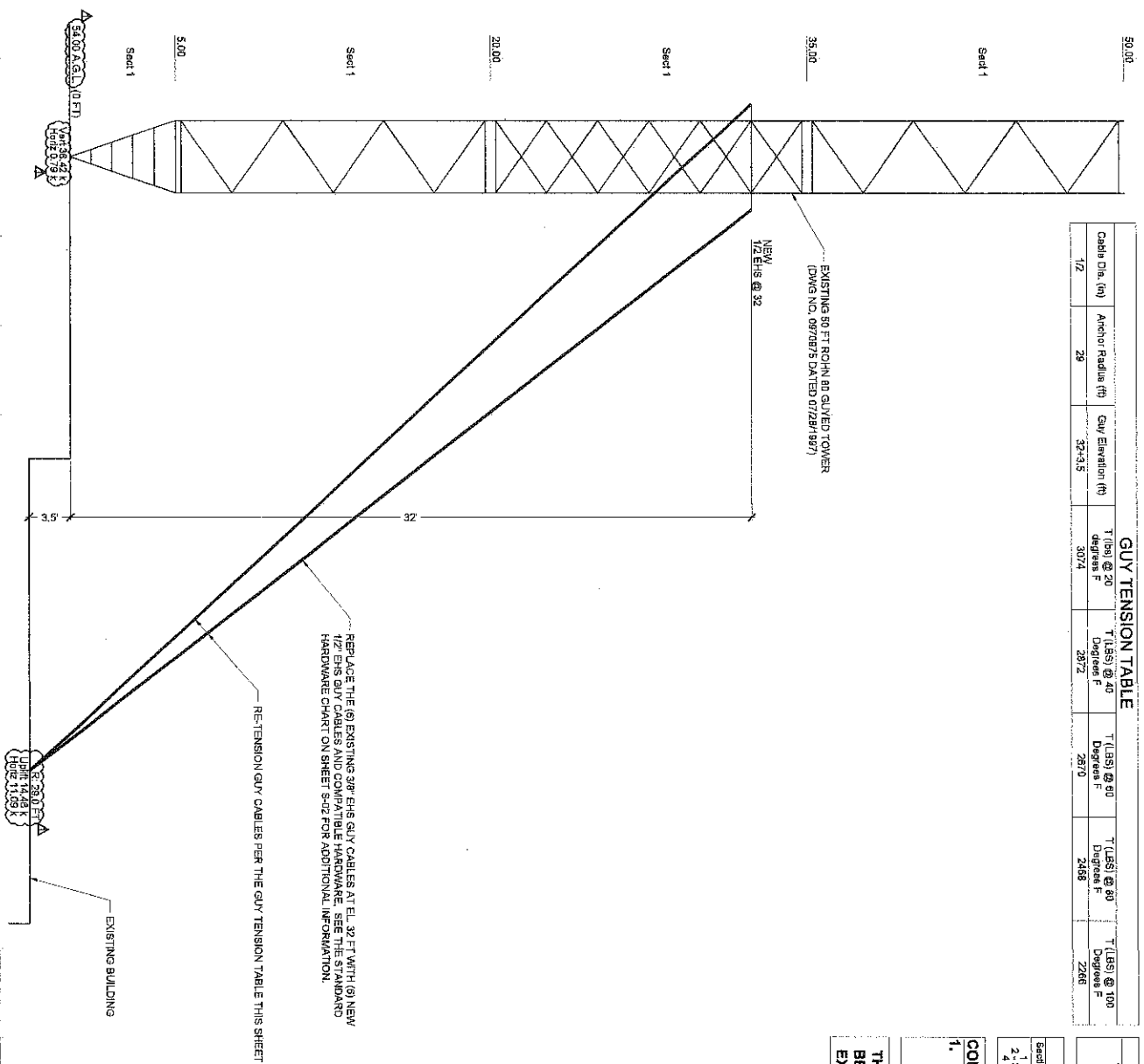
GUY TENSION TABLE							
Cable Dia. (in)	Anchor Radius (ft)	Guy Elevation (ft)	T (lbs) @ 20 degrees F	T (lbs) @ 40 Degrees F	T (lbs) @ 60 Degrees F	T (lbs) @ 80 Degrees F	T (lbs) @ 100 Degrees F
1/2	29	32-3.5	3074	2872	2579	2468	2265

Tower Information		Job Information	
Tower:	CT03XC074	Location:	West Hartford, CT
Code:	TRAEIA-222 Rev F	Shape:	Triang
Client:	HPC Wireless Services	Base Width:	3.42 ft

Leg Members		Diagonal Members		Horizontal Members	
Section	2-3	Section	2-4	Section	2-5
Qty	2	Qty	2	Qty	2
Material	304 SS	Material	304 SS	Material	304 SS
Size	2 1/2" DIA PIPE	Size	2 1/2" DIA PIPE	Size	2 1/2" DIA PIPE

CONTRACTOR NOTE:
 1. PROVIDE TEMPORARY GUY CABLES DIRECTLY ABOVE OR BELOW ANY CABLES THAT ARE BEING TEMPORARILY REMOVED. AT NO TIME SHOULD ANY OF THE GUY POINTS ON THE TOWER BE LEFT UNSUPPORTED.

THE CONNECTIONS TO THE BUILDING AND THE BUILDING STRUCTURE MUST BE CHECKED BY OTHERS. THIS MODIFICATION PACKAGE IS FOR THE EXISTING GUYED TOWER ONLY

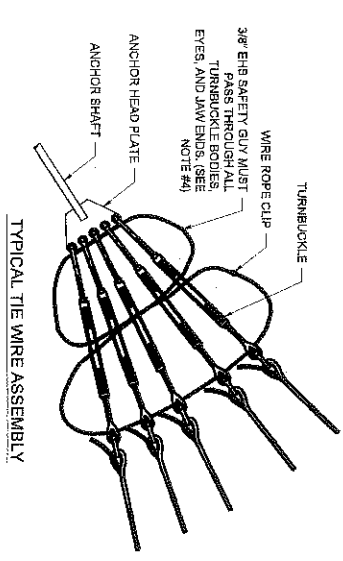
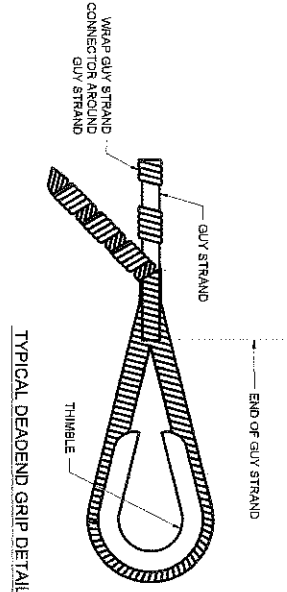
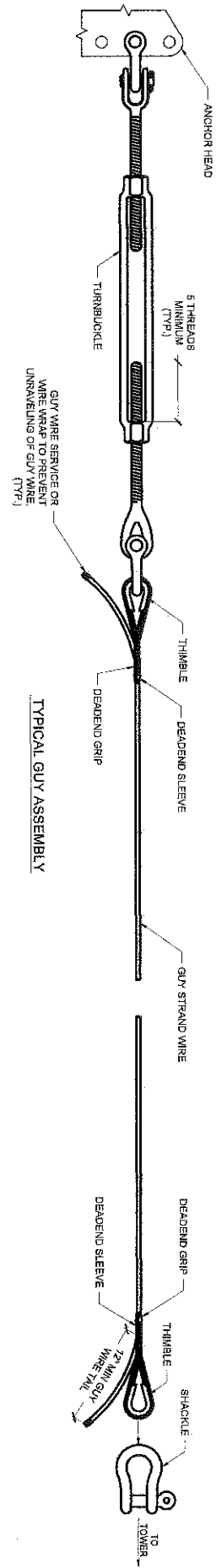


SEE SHEET S-03 FOR NOTES AND SPECIFICATIONS

CLIENT	HPC WIRELESS SERVICES
DRAWING DESCRIPTION	GUYED TOWER REINFORCEMENT DRAWINGS
DATE	05/07/2014
REVISION	01 ISSUE FOR CONSTRUCTION

REV #	DATE	REVISION DESCRIPTION	DRAWN	CHECKED
0	05/07/2014	ISSUE FOR CONSTRUCTION	KRC	TLT

SEMAN
 ENGINEERING SOLUTIONS, LLC
 Address: 1079 N. 205th Street, Omaha, Nebraska 68022
 Phone Number: (402)289-1868 Fax Number: (402)289-1863



STANDARD GUY STRAND HARDWARE CHART

GUY STRAND	U.T.S.	W.L.	GROSBY TURNBUCKLE HG-221 (LAW 8 JAW) OR HG-227 (JAW & EYE)			DEADEND GRIP	DEADEND SLEEVE	GROSBY THIMBLE (G-414)		GROSBY SCREW PIN ANCHOR SHACKLE (G-209-A)			
			SIZE	U.T.S.	W.L.			PIN DIA.	SIZE	SIZE	U.T.S.	W.L.	PIN DIA.
5/16 EHS	11.2	5.6	5/8 x 12	17.5	8.8	1/2"	5/16"	5/16"	3/8 H.V.Y.	1/2"	33.3	16.6	5/8"
3/8 EHS	16.4	7.7	5/8 x 12	17.5	8.8	1/2"	3/8"	3/8"	1/2 H.V.Y.	1/2"	33.3	16.6	5/8"
7/16 EHS	20.8	10.4	3/4 x 12	28.0	13.0	5/8"	7/16"	7/16"	1/2 H.V.Y.	1/2"	33.3	16.6	5/8"
1/2 EHS	26.9	13.5	3/4 x 12	28.0	13.0	5/8"	1/2"	1/2"	3/4 H.V.Y.	1/2"	33.3	16.6	5/8"
9/16 EHS	35.0	17.5	7/8 x 12	36.0	18.0	3/4"	9/16"	9/16"	3/4 H.V.Y.	3/4"	50.0	25.0	3/4"
5/8 EHS	42.4	21.2	1 x 12	50.0	25.0	7/8"	5/8"	5/8"	3/4 H.V.Y.	3/4"	50.0	25.0	3/4"
11/16 EHS	50.0	25.0	1 x 12	50.0	25.0	7/8"	11/16"	11/16"	3/4 H.V.Y.	3/4"	50.0	25.0	3/4"
3/4 EHS	58.3	29.2	1 1/4 x 16	70.0	35.0	1 1/8"	3/4"	3/4"	1 H.V.Y.	7/8"	70.0	35.0	7/8"
7/8 EHS	76.7	38.9	1 1/2 x 16	107.0	53.5	1 3/8"	7/8"	7/8"	1 1/8 H.V.Y.	1"	125.0	62.5	1"
1 EHS	104.5	52.3	1 1/2 x 18	107.0	53.5	1 3/8"	1"	1"	1 1/8 H.V.Y.	1"	125.0	62.5	1"
5/8 BS	48.0	24.0	1 x 12	50.0	25.0	7/8"	5/8"	5/8"	3/4 H.V.Y.	3/4"	50.0	25.0	3/4"
11/16 BS	58.0	29.0	1 1/4 x 16	70.0	35.0	1 1/8"	3/4"	3/4"	1 H.V.Y.	7/8"	70.0	35.0	7/8"
3/4 BS	68.0	34.0	1 1/2 x 16	107.0	53.5	1 3/8"	7/8"	7/8"	1 1/8 H.V.Y.	1"	125.0	62.5	1"
7/8 BS	82.0	41.0	1 1/2 x 18	107.0	53.5	1 3/8"	7/8"	7/8"	1 1/8 H.V.Y.	1"	125.0	62.5	1"
15/16 BS	109.0	54.0	1 3/4 x 24	140.0	70.0	1 5/8"	1 5/16"	1 5/16"	1 1/8 H.V.Y.	1 1/4"	175.0	87.5	1 1/4"

NOTE:
 1. THE WORKING LOADS ARE BASED ON A SAFETY FACTOR OF 2.0 FOR TOWERS TALLER THAN 700'. A HIGHER SAFETY FACTOR IS REQUIRED BY EIA.
 2. ALL EHS AND BRIDGE STRAND HAS A LEFT HAND WIRE LAY.
 3. USE (1) 3/8 WIRE ROPE CLIP PER ANCHOR WITH 3/8 EHS GUY STRAND x 1/8" FOR TURNBUCKLE TIE.
 THE FOLLOWING CHART IS FOR OTHER TYPES OF SHACKLES AND IS FOR INFORMATION ONLY.

GUY STRAND	U.T.S.	W.L.	GROSBY FORGED SHACKLE (G-209)			GROSBY BOLT TYPE SHACKLE (G-213D)				
			SIZE	U.T.S.	W.L.	PIN DIA.	SIZE	U.T.S.	W.L.	PIN DIA.
5/16 EHS	11.2	5.6	1/2"	24	12.0	5/8"	1/2"	24	12.0	5/8"
3/8 EHS	16.4	7.7	1/2"	24	12.0	5/8"	1/2"	24	12.0	5/8"
7/16 EHS	20.8	10.4	1/2"	24	12.0	5/8"	1/2"	24	12.0	5/8"
1/2 EHS	26.9	13.5	5/8"	39	19.5	3/4"	5/8"	39	19.5	3/4"
9/16 EHS	35.0	17.5	5/8"	39	19.5	3/4"	5/8"	39	19.5	3/4"
5/8 EHS	42.4	21.2	3/4"	57	28.5	7/8"	3/4"	57	28.5	7/8"
3/4 EHS	58.3	29.2	7/8"	78	39.0	1"	7/8"	78	39.0	1"
7/8 EHS	76.7	38.9	1"	102	51.0	1 1/8"	1"	102	51.0	1 1/8"
1 EHS	104.5	52.3	1 1/8"	114	57.0	1 1/4"	1 1/8"	114	57.0	1 1/4"

- NOTES:
 1. THE GUY STRAND CONNECTOR MUST FOLLOW THE LAY OF THE GUY STRAND.
 2. THE STRAND AND THE CONNECTOR SHOWN HAVE A LEFT HAND LAY. STRAND WHICH HAS A RIGHT HAND LAY REQUIRES A CONNECTOR WITH A RIGHT HAND LAY.
 3. IF REMOVAL IF EXISTING PERFORMS IS REQUIRED - THEY CANNOT BE RE-USED.
 4. IF THE EXISTING SAFETY CABLES DO NOT HAVE THE LENGTH SUFFICIENT TO MAKE THE CONFIGURATION AS SHOWN, PLEASE REPLACE WITH NEW CABLES AND GUY CLIPS.

NOTES AND SPECIFICATIONS

GENERAL

1. THE MODIFICATIONS OUTLINED IN THESE DOCUMENTS WERE DESIGNED IN ACCORDANCE WITH THE TIA/EIA-222 REV. F STANDARD.
 2. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, DEVIATIONS, AND CONDITIONS PRIOR TO FABRICATION. THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR THE PROPER FIT AND CLEARANCE IN THE FIELD.
 3. CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, DEVIATIONS, AND CONDITIONS PRIOR TO FABRICATION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE PROPER FIT AND CLEARANCE IN THE FIELD.
 4. ANALYSIS ARE ADDED TO OR REMOVED FROM THE STRUCTURE UNLESS APPROVED IN WRITING BY SES, INC.
 5. THE PROPOSED LOADS SHALL NOT BE ADDED TO THE STRUCTURE UNTIL ALL MODIFICATIONS ARE MADE AND APPROVED BY THE WELDING INSPECTOR.
 6. THIS DRAWING DOES NOT INDICATE THE METHOD OF CONSTRUCTION THE CONTRACTOR SHALL SUPERVISE AND DETECT THE WORK AND HE SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, TECHNIQUES, SEQUENCES AND PROCEDURES.
 7. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE ON-SITE SAFETY ASSOCIATED WITH THE WORK TO BE PERFORMED. ALL SAFETY REQUIREMENTS AS DICTATED BY OSHA AND THE LOCAL JURISDICTIONS SHALL BE FOLLOWED.
 8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF ITS OWN PERSONNEL, AS WELL AS THE PUBLIC AFFECTED BY THE WORK IN THE VICINITY OF THE JOB SITE.
 9. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE PROTECTION OF THE PROPERTY IN THE VICINITY OF THE JOB SITE. THE CONTRACTOR SHALL USE THE PRECAUTIONARY MEANS NECESSARY FOR ADEQUATE PROTECTION.
 10. ALL WORK SHALL BE PERFORMED IN CALM WIND CONDITIONS, WHERE THE WIND SPEED DOES NOT EXCEED 10 MPH.
- STEEL CONSTRUCTION:**
1. STRUCTURAL STEEL SHALL CONFORM TO THE AISC MANUAL OF STEEL CONSTRUCTION, NINTH EDITION, FOR THE DESIGN AND FABRICATION OF STEEL COMPONENTS.
 2. ALL PLATE STEEL SHALL CONFORM TO A325B UNLESS NOTED OTHERWISE.
 3. ALL WELDS SHALL BE PERFORMED IN ACCORDANCE WITH THE AISC WELDED CONNECTIONS MANUAL.
 4. INCLUDE ALL FABRICATED STEEL ASSEMBLIES INCLUDING MONOPOLITOWER EXTENSIONS.
 5. ALL EXTERIOR STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123 AND AS FOLLOWS, UNLESS OTHERWISE NOTED.
 - A. GALVANIZING SHALL BE PERFORMED AFTER SHOP FABRICATION AND WELDING TO THE GREATEST EXTENT POSSIBLE
 - B. ALL DIRTS, SCRAPS, MARKS AND WELDS IN THE GALVANIZED AREA SHALL BE COATED WITH A ZINC-RICH PAINT.
 - C. IF THE STRUCTURE WAS ORIGINALLY PAINTED, AFTER ZINC-RICH PAINT IS DRY, OVERCOAT WITH AN APPROPRIATE PAINT WITH THE SAME COLOR AS THE EXISTING.
 6. DO NOT PLACE HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON DRAWINGS.
- BOLTING NOTES:**
1. ALL NON-STEEL BOLTS SHALL BE ASTM A325B (GALVANIZED), UNLESS NOTED OTHERWISE.
 2. ALL BOLTS SHALL BE TIGHTENED TO A SNUG TIGHT CONDITION AS DEFINED BY AISC, UNLESS NOTED OTHERWISE.
 3. FIELD JOINTS SHALL BE TESTED IN ACCORDANCE WITH THE AISC 308 SECTION 1704 AS REQUIRED BY PROJECT SPECIFICATIONS FOR THE FOLLOWING CONSTRUCTION WORK.
 - a. GUY WIRE RETENSIONING
 - b. HIGH STRENGTH BOLTS
 4. THE INSPECTION AGENCY SHALL SUBMIT INSPECTION AND TEST REPORTS TO THE BUILDING DEPARTMENT, THE ENGINEER OF RECORD, AND THE OWNER IN ACCORDANCE WITH IBC 2003, 1704, UNLESS THE FABRICATOR IS APPROVED BY THE BUILDING DEPARTMENT OFFICIAL TO PERFORM SUCH WORK WITHOUT THE SPECIAL INSPECTIONS.
- CONTRACTOR'S STRUCTURE INSPECTION AND MAINTENANCE:**
- CONTRACTOR SHALL INSPECT THE STRUCTURE AND THE ADDED REINFORCING CONSISTENT WITH THE CURRENT CODES AND STANDARDS. THE CONTRACTOR SHALL PROVIDE INSPECTION REPORTS TO THE ENGINEER OF RECORD OR OTHER REFERENCED AGENCIES. THE STRUCTURE OR ITS REINFORCING WILL REDUCE ITS CAPACITY TO WITHSTAND THE REQUIRED LOADS, ANY DEFECTS SHALL BE REPAIRED TO ENSURE THE STRUCTURAL INTEGRITY FOR THE LIFE OF THE STRUCTURE.

<p>CLIENT HPC WIRELESS SERVICES</p>		<p>DRAWING DESCRIPTION GUYED TOWER REINFORCEMENT DRAWINGS</p>		<p>DATE 05/07/2014</p>		<p>REVISION DESCRIPTION REVISED ANALYSIS</p>		<p>REV # 0</p>		<p>DATE 05/02/2014</p>		<p>REVISION DESCRIPTION ISSUE FOR CONSTRUCTION</p>		<p>DRAWN KRC</p>		<p>CHECKED TLT</p>	
--	--	--	--	----------------------------	--	--	--	--------------------	--	----------------------------	--	--	--	----------------------	--	------------------------	--



Address: 1079 N. 205th Street, Omaha, Nebraska 68022
Phone Number: (402)289-1888 Fax Number: (402)289-1886

DATE PLOTTED: 05/07/2014
DRAWING NUMBER: CT03X0074
PROJECT NUMBER: WEST HARTFORD, CT
SCALE: AS SHOWN

2.5 - CT03X0074

Standard Conditions

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

- Information supplied by the client regarding the structure itself, the antenna and feed line loading on the structure and its components, or other relevant information.
- Information from drawings in the possession of Semaan Engineering Solutions, or generated by field inspections or measurements of the structure.

It is the responsibility of the client to ensure that the information provided to Semaan Engineering Solutions and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and are in an un-corroded condition and have not deteriorated; and we, therefore, assume that their capacity has not significantly changed from the "as new" condition.

All services will be performed to the codes specified by the client, and we do not imply to meet any other codes or requirements unless explicitly agreed in writing. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement. In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/EIA-222.

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

SEMAAN ENGINEERING SOLUTIONS, LLC
 1079 N 205th Street
 Ekholm, NE 68022

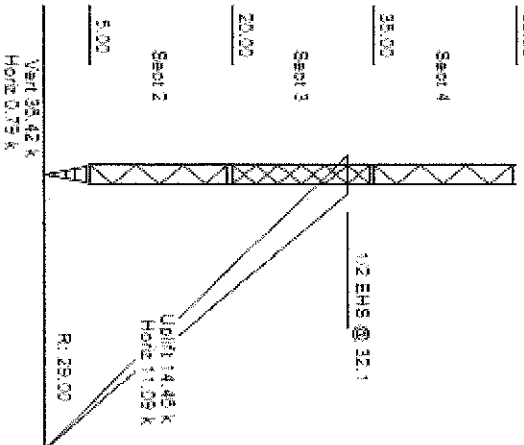
@ 2007 - 2014 by ATC/IP LLC. All rights reserved.
 Loads: 80 mph no ice
 69 mph w/ 1/2" radial ice
 50 mph no ice

Job Information			
Tower :	CT03XC074_FIX	Location :	West Hartford, CT
Code :	TIA/EIA-222 Rev F	Shape :	Triangle
Client :	WWW.WWWW	Base Width :	3.42 ft

Sections Properties			
Section	Leg Members	Diagonal Members	Horizontal Members
1	PXX 50 ksi 2-1/2" DIA PIPE	PSP 42 ksi ROHN 1 1/2X16GA	SAE 36 ksi 4X4X0.25
2-3	PX 50 ksi 2-1/2" DIA PIPE	PSP 42 ksi ROHN 1 1/2X16GA	PSP 42 ksi ROHN 1 1/2X16GA
4	PX 50 ksi 2-1/2" DIA PIPE	PSP 42 ksi ROHN 1 1/2X16GA	PSP 42 ksi ROHN 1 1/2X16GA

Discrete Appurtenance			
Elev (ft)	Type	Qty	Description
46.00	Panel	6	DB980H90
46.00	Mounting Frame	3	PCS Frames
46.00	Panel	3	APXV/TM14-C-120
46.00	Panel	3	TD-RRH-8X20-25
35.50	Panel	6	TT19-088P1114001
35.00	Panel	6	Powerwave 7770.00
35.00	Mounting Frame	3	PCS Frames
35.00	Panel	1	DC6-48-80-18-8F
35.00	Panel	2	P65-17-XLH-RR
35.00	Panel	1	AMX-CD-16-65-00T-RET
35.00	Panel	6	RRUS11
32.00	Other	1	Torque Arm
13.00	Panel	1	GPS antenna

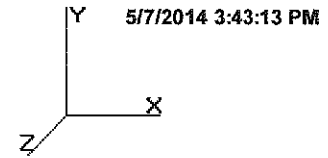
Linear Appurtenance			
Elev (ft)	From	To	Qty Description
0.000		46.000	6 1.5/8" Coax
0.000		46.000	1 70" Fiber
0.000		35.000	1 RET cable
0.000		35.000	1 Fiber Optic Cable
0.000		35.000	2 DC Cables
0.000		35.000	1 3" conduit
0.000		35.000	12 1.5/8" Coax
0.000		13.000	1 1/2" Coax



SEMAAN ENGINEERING SOLUTIONS, LLC
 1079 N 205th Street
 Elkhorn, NE 68022
 Phone: 402-289-1888
 Fax: 402-289-1861

Site Number: CT03XC074_FIX
 Location: West Hartford, CT
 Code: TIA/EIA-222 Rev F

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Gh : 1.22

Section Forces

LoadCase Normal No Ice

80.00 mph Wind Normal To Face with No Ice

Allow Stress Inc: 1.333
 Dead LF: 1.000
 Wind LF: 1.000

Sect Seq	Height (ft)	Wind qz (psf)	Total Area			Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Ice Area			Total Weight (lb)	Ice Weight (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face
			Flat (sqft)	Round (sqft)	Ice Round (sqft)							Linear (sqft)	Linear (sqft)							
4	42.50	22.26	0.00	11.19	0.00	0.22	2.54	1.00	1.00	0.59	6.65	11.53	0.00	585.0	0.0	456.29	374.43	830.72	1	
3	27.50	21.21	0.00	14.33	0.00	0.28	2.35	1.00	1.00	0.61	8.74	49.72	0.00	844.7	0.0	530.01	1,538.4	2,068.47	1	
2	12.50	20.02	0.00	11.19	0.00	0.22	2.54	1.00	1.00	0.59	6.65	50.16	0.00	770.9	0.0	410.24	1,464.2	1,874.49	1	
1	2.50	19.10	2.61	2.58	0.00	0.61	1.80	1.00	1.00	0.76	4.56	16.85	0.00	486.5	0.0	190.78	469.40	397.07	1 **	
														2,687.1	0.0			5,170.75		

** = 2QzGhAg Controls

LoadCase 60 deg No Ice

80.00 mph Wind at 60 deg From Face with No Ice

Allow Stress Inc: 1.333
 Dead LF: 1.000
 Wind LF: 1.000

Sect Seq	Height (ft)	Wind qz (psf)	Total Area			Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Ice Area			Total Weight (lb)	Ice Weight (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face
			Flat (sqft)	Round (sqft)	Ice Round (sqft)							Linear (sqft)	Linear (sqft)							
4	42.50	22.26	0.00	11.19	0.00	0.22	2.54	0.80	1.00	0.59	6.65	11.53	0.00	585.0	0.0	456.29	374.43	830.72	1	
3	27.50	21.21	0.00	14.33	0.00	0.28	2.35	0.80	1.00	0.61	8.74	49.72	0.00	844.7	0.0	530.01	1,538.4	2,068.47	1	
2	12.50	20.02	0.00	11.19	0.00	0.22	2.54	0.80	1.00	0.59	6.65	50.16	0.00	770.9	0.0	410.24	1,464.2	1,874.49	1	
1	2.50	19.10	2.61	2.58	0.00	0.61	1.80	0.80	1.00	0.76	4.04	16.85	0.00	486.5	0.0	168.94	469.40	397.07	1 **	
														2,687.1	0.0			5,170.75		

** = 2QzGhAg Controls

LoadCase 90 deg No Ice

80.00 mph Wind at 90 deg From Face with No Ice

Allow Stress Inc: 1.333
 Dead LF: 1.000
 Wind LF: 1.000

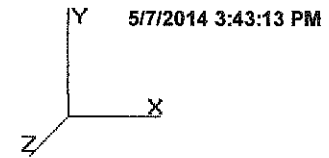
Sect Seq	Height (ft)	Wind qz (psf)	Total Area			Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Ice Area			Total Weight (lb)	Ice Weight (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face
			Flat (sqft)	Round (sqft)	Ice Round (sqft)							Linear (sqft)	Linear (sqft)							
4	42.50	22.26	0.00	11.19	0.00	0.22	2.54	0.85	1.00	0.59	6.65	11.53	0.00	585.0	0.0	456.29	374.43	830.72	1	
3	27.50	21.21	0.00	14.33	0.00	0.28	2.35	0.85	1.00	0.61	8.74	49.72	0.00	844.7	0.0	530.01	1,538.4	2,068.47	1	
2	12.50	20.02	0.00	11.19	0.00	0.22	2.54	0.85	1.00	0.59	6.65	50.16	0.00	770.9	0.0	410.24	1,464.2	1,874.49	1	
1	2.50	19.10	2.61	2.58	0.00	0.61	1.80	0.85	1.00	0.76	4.17	16.85	0.00	486.5	0.0	174.40	469.40	397.07	1 **	
														2,687.1	0.0			5,170.75		

** = 2QzGhAg Controls

SEMAAN ENGINEERING SOLUTIONS, LLC
 1079 N 205th Street
 Elkhorn, NE 68022
 Phone: 402-289-1888
 Fax: 402-289-1861

Site Number: CT03XC074_FIX
 Location: West Hartford, CT
 Code: TIA/EIA-222 Rev F

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Gh : 1.22

Section Forces

LoadCase Normal Ice 69.28 mph Wind Normal To Face with Ice

Allow Stress Inc: 1.333
 Dead LF: 1.000
 Wind LF: 1.000

Sect Seq	Height (ft)	Wind qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Rr	Ice			Total Weight (lb)	Ice Weight (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face	
											Eff Area (sqft)	Linear Area (sqft)	Linear Area (sqft)							
4	42.50	16.70	0.00	16.35	5.17	0.32	2.25	1.00	1.00	0.62	10.17	11.53	6.42	903.1	318.1	463.70	437.05	900.75	1	
3	27.50	15.91	0.00	21.59	7.26	0.42	2.02	1.00	1.00	0.66	14.26	49.72	30.00	1,621.4	776.7	558.05	1,849.8	1,983.87	1	**
2	12.50	15.01	0.00	16.35	5.17	0.32	2.25	1.00	1.00	0.62	10.17	50.16	30.67	1,461.0	690.1	416.90	1,769.5	1,871.87	1	**
1	2.50	14.33	2.61	4.13	1.55	0.79	1.81	1.00	1.00	0.89	6.27	16.85	10.42	759.2	272.6	197.38	569.71	297.78	1	**
														4,744.6	2,057.5			5,054.28		

** = 2QzGhAg Controls

LoadCase 60 deg Ice 69.28 mph Wind at 60 deg From Face with Ice

Allow Stress Inc: 1.333
 Dead LF: 1.000
 Wind LF: 1.000

Sect Seq	Height (ft)	Wind qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Rr	Ice			Total Weight (lb)	Ice Weight (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face	
											Eff Area (sqft)	Linear Area (sqft)	Linear Area (sqft)							
4	42.50	16.70	0.00	16.35	5.17	0.32	2.25	0.80	1.00	0.62	10.17	11.53	6.42	903.1	318.1	463.70	437.05	900.75	1	
3	27.50	15.91	0.00	21.59	7.26	0.42	2.02	0.80	1.00	0.66	14.26	49.72	30.00	1,621.4	776.7	558.05	1,849.8	1,983.87	1	**
2	12.50	15.01	0.00	16.35	5.17	0.32	2.25	0.80	1.00	0.62	10.17	50.16	30.67	1,461.0	690.1	416.90	1,769.5	1,871.87	1	**
1	2.50	14.33	2.61	4.13	1.55	0.79	1.81	0.80	1.00	0.89	5.75	16.85	10.42	759.2	272.6	180.93	569.71	297.78	1	**
														4,744.6	2,057.5			5,054.28		

** = 2QzGhAg Controls

LoadCase 90 deg Ice 69.28 mph Wind at 90 deg From Face with Ice

Allow Stress Inc: 1.333
 Dead LF: 1.000
 Wind LF: 1.000

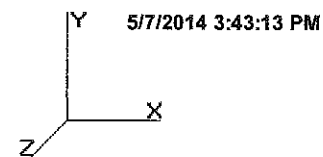
Sect Seq	Height (ft)	Wind qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Rr	Ice			Total Weight (lb)	Ice Weight (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face	
											Eff Area (sqft)	Linear Area (sqft)	Linear Area (sqft)							
4	42.50	16.70	0.00	16.35	5.17	0.32	2.25	0.85	1.00	0.62	10.17	11.53	6.42	903.1	318.1	463.70	437.05	900.75	1	
3	27.50	15.91	0.00	21.59	7.26	0.42	2.02	0.85	1.00	0.66	14.26	49.72	30.00	1,621.4	776.7	558.05	1,849.8	1,983.87	1	**
2	12.50	15.01	0.00	16.35	5.17	0.32	2.25	0.85	1.00	0.62	10.17	50.16	30.67	1,461.0	690.1	416.90	1,769.5	1,871.87	1	**
1	2.50	14.33	2.61	4.13	1.55	0.79	1.81	0.85	1.00	0.89	5.88	16.85	10.42	759.2	272.6	185.05	569.71	297.78	1	**
														4,744.6	2,057.5			5,054.28		

** = 2QzGhAg Controls

SEMAAN ENGINEERING SOLUTIONS, LLC
 1079 N 205th Street
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 Phone: 402-289-1888
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Site Number: CT03XC074_FIX
 Location: West Hartford, CT
 Code: TIA/EIA-222 Rev F

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Gh : 1.22

Section Forces

LoadCase Normal

50.00 mph Wind Normal To Face with No Ice

Allow Stress Inc: 1.333
 Dead LF: 1.000
 Wind LF: 1.000

Sect Seq	Wind Height (ft)	Wind qz (psf)	Total Flat	Total Round	Total Ice Round	Sol Ratio	Cf	Df	Dr	Rr	Eff Area	Linear Area	Ice Linear Area	Total Weight	Ice Weight (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face
			Area (sqft)	Area (sqft)	Area (sqft)						(sqft)	(sqft)	(sqft)	(lb)					
4	42.50	8.70	0.00	11.19	0.00	0.22	2.54	1.00	1.00	0.59	6.65	11.53	0.00	585.0	0.0	178.24	146.26	324.50	1
3	27.50	8.29	0.00	14.33	0.00	0.28	2.35	1.00	1.00	0.61	8.74	49.72	0.00	844.7	0.0	207.04	600.96	808.00	1
2	12.50	7.82	0.00	11.19	0.00	0.22	2.54	1.00	1.00	0.59	6.65	50.16	0.00	770.9	0.0	160.25	571.97	732.22	1
1	2.50	7.46	2.61	2.58	0.00	0.61	1.80	1.00	1.00	0.76	4.56	16.85	0.00	486.5	0.0	74.52	183.36	155.11	1 **
														2,687.1	0.0			2,019.82	

** = 2QzGhAg Controls

LoadCase 60 deg

50.00 mph Wind at 60 deg From Face with No Ice

Allow Stress Inc: 1.333
 Dead LF: 1.000
 Wind LF: 1.000

Sect Seq	Wind Height (ft)	Wind qz (psf)	Total Flat	Total Round	Total Ice Round	Sol Ratio	Cf	Df	Dr	Rr	Eff Area	Linear Area	Ice Linear Area	Total Weight	Ice Weight (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face
			Area (sqft)	Area (sqft)	Area (sqft)						(sqft)	(sqft)	(sqft)	(lb)					
4	42.50	8.70	0.00	11.19	0.00	0.22	2.54	0.80	1.00	0.59	6.65	11.53	0.00	585.0	0.0	178.24	146.26	324.50	1
3	27.50	8.29	0.00	14.33	0.00	0.28	2.35	0.80	1.00	0.61	8.74	49.72	0.00	844.7	0.0	207.04	600.96	808.00	1
2	12.50	7.82	0.00	11.19	0.00	0.22	2.54	0.80	1.00	0.59	6.65	50.16	0.00	770.9	0.0	160.25	571.97	732.22	1
1	2.50	7.46	2.61	2.58	0.00	0.61	1.80	0.80	1.00	0.76	4.04	16.85	0.00	486.5	0.0	65.99	183.36	155.11	1 **
														2,687.1	0.0			2,019.82	

** = 2QzGhAg Controls

LoadCase 90 deg

50.00 mph Wind at 90 deg From Face with No Ice

Allow Stress Inc: 1.333
 Dead LF: 1.000
 Wind LF: 1.000

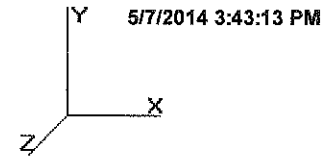
Sect Seq	Wind Height (ft)	Wind qz (psf)	Total Flat	Total Round	Total Ice Round	Sol Ratio	Cf	Df	Dr	Rr	Eff Area	Linear Area	Ice Linear Area	Total Weight	Ice Weight (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face
			Area (sqft)	Area (sqft)	Area (sqft)						(sqft)	(sqft)	(sqft)	(lb)					
4	42.50	8.70	0.00	11.19	0.00	0.22	2.54	0.85	1.00	0.59	6.65	11.53	0.00	585.0	0.0	178.24	146.26	324.50	1
3	27.50	8.29	0.00	14.33	0.00	0.28	2.35	0.85	1.00	0.61	8.74	49.72	0.00	844.7	0.0	207.04	600.96	808.00	1
2	12.50	7.82	0.00	11.19	0.00	0.22	2.54	0.85	1.00	0.59	6.65	50.16	0.00	770.9	0.0	160.25	571.97	732.22	1
1	2.50	7.46	2.61	2.58	0.00	0.61	1.80	0.85	1.00	0.76	4.17	16.85	0.00	486.5	0.0	68.13	183.36	155.11	1 **
														2,687.1	0.0			2,019.82	

** = 2QzGhAg Controls

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 Location: West Hartford, CT
 Code: TIA/EIA-222 Rev F

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Tower Loading

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)	X Angle (deg)	Vert Ecc (ft)
46.00	DB980H90	6	9.00	3.280	0.73	28.00	3.850	0.73	0.000	0.00	0.000
46.00	PCS frames	3	500.00	15.000	0.67	650.00	20.600	0.67	0.000	0.00	0.000
46.00	APXVTM14-C-I20	3	54.90	6.430	0.76	92.44	7.090	0.76	0.000	0.00	0.000
46.00	TD-RRH-8X20-25	3	70.00	4.800	0.68	70.00	5.250	0.68	0.000	0.00	0.000
35.50	TT19-08BP111-001	6	16.00	0.635	0.90	21.74	0.805	0.90	0.000	0.00	0.000
35.00	Powerwave 7770.00	6	35.00	5.882	0.73	67.63	6.533	0.73	0.000	0.00	0.000
35.00	PCS frames	3	500.00	15.000	0.67	650.00	20.600	0.67	0.000	0.00	0.000
35.00	DC6-48-60-18-8F	1	32.80	1.467	1.00	50.52	1.667	1.00	0.000	0.00	0.000
35.00	P65-17-XLH-RR	2	59.00	11.470	0.88	121.06	12.394	0.88	0.000	0.00	0.000
35.00	AM-X-CD-16-65-00T-RET	1	48.50	8.260	0.75	95.00	9.080	0.75	0.000	0.00	0.000
35.00	RRUS11	6	51.00	3.256	0.73	72.85	3.623	0.73	0.000	0.00	0.000
32.00	Torque Arm	1	500.00	15.000	1.00	1000.00	20.000	1.00	0.000	0.00	0.000
13.00	GPS antenna	1	35.00	2.120	1.00	48.31	2.430	1.00	0.000	0.00	0.000
Totals		42	4775.00			6964.59			Number of Appurtenances : 13		

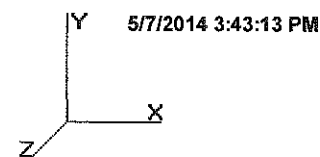
Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Wind	Spread On Faces	Bundling Arrangement
0.00	46.00	.70" Fiber	1	0.70	0.16	100.00	Lin App	Separate
0.00	46.00	1 5/8" Coax	6	1.98	1.04	100.00	Lin App	Separate
0.00	35.00	1 5/8" Coax	12	1.98	1.04	100.00	Lin App	Separate
0.00	35.00	3" conduit	1	3.00	1.00	100.00	Lin App	Separate
0.00	35.00	DC Cables	2	0.00	0.52	100.00	Lin App	Separate
0.00	35.00	Fiber Optic Cable	1	0.00	0.95	100.00	Lin App	Separate
0.00	35.00	RET cable	1	0.44	0.08	100.00	Lin App	Separate
0.00	13.00	1/2" Coax	1	0.65	0.16	100.00	Lin App	Separate

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 Location: West Hartford, CT

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Force/Stress Summary

Section: 1 G80TB - BASE Bot Elev (ft): 0.00 Height (ft): 5.000

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing %				Fa (ksi)	Member			Shear Bear		Use %	Controls
				X	Y	Z	KL/R		Cap (kip)	Num Bolts	Num Holes	Cap (kip)	Cap (kip)		
LEG PXX - 2-1/2" DIA PIP	-12.30	Normal No Ice	1.23	100	100	100	17.5	38.1	153.43	0	0	0.00	0.00	8	Member X
HORIZ SAE - 4X4X0.25	-0.05	Normal No Ice	0.784	100	100	100	11.8	27.8	54.02	0	0	0.00	0.00	0	Member Z
DIAG	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00		

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG	0.00		0	0.00	0	0	0.00	0.00	0	
HORIZ SAE - 4X4X0.25	1.74	Normal Ice	36	55.87	0	0	0.00	0.00	3	Member
DIAG	0.00		0	0.00	0	0	0.00	0.00	0	

Section: 2 G84HCS-15 FT Bot Elev (ft): 5.00 Height (ft): 15.000

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing %				Fa (ksi)	Member			Shear Bear		Use %	Controls
				X	Y	Z	KL/R		Cap (kip)	Num Bolts	Num Holes	Cap (kip)	Cap (kip)		
LEG PX - 2-1/2" DIA PIPE	-12.62	Normal Ice	2.42	200	200	200	63.0	29.6	66.61	0	0	0.00	0.00	18	Member X
HORIZ PSP - ROHN 1 1/2X16G	-0.28	Normal No Ice	3.420	100	100	100	80.5	22.7	6.64	0	0	0.00	0.00	4	Member X
DIAG PSP - ROHN 1 1/2X16G	-0.81	Normal No Ice	4.192	100	100	100	0.0	0.0	4.84	0	0	0.00	0.00	16	User Input

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG	0.00		0	0.00	0	0	0.00	0.00	0	
HORIZ PSP - ROHN 1 1/2X16G	1.44	Normal Ice	42	9.84	0	0	0.00	0.00	14	Member
DIAG PSP - ROHN 1 1/2X16G	0.81	90 deg No Ice	42	4.84	0	0	0.00	0.00	16	User Input

Section: 3 G84HCS-15 FT Bot Elev (ft): 20.00 Height (ft): 15.000

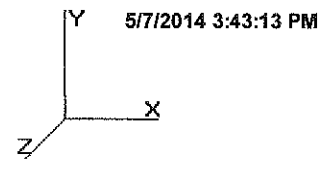
Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing %				Fa (ksi)	Member			Shear Bear		Use %	Controls
				X	Y	Z	KL/R		Cap (kip)	Num Bolts	Num Holes	Cap (kip)	Cap (kip)		
LEG PX - 2-1/2" DIA PIPE	-18.00	Normal Ice	2.42	200	200	200	63.0	29.6	66.61	0	0	0.00	0.00	27	Member X
HORIZ PSP - ROHN 1 1/2X16G	-0.05	Normal No Ice	3.420	100	100	100	80.5	22.7	6.64	0	0	0.00	0.00	0	Member X
DIAG PSP - ROHN 1 1/2X16G	-2.67	Normal No Ice	4.192	100	100	100	0.0	0.0	4.84	0	0	0.00	0.00	55	User Input

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PX - 2-1/2" DIA PIPE	10.90	60 deg No Ice	50	90.00	0	0	0.00	0.00	12	Member
HORIZ PSP - ROHN 1 1/2X16G	1.82	Normal No Ice	42	9.84	0	0	0.00	0.00	18	Member
DIAG PSP - ROHN 1 1/2X16G	2.52	90 deg No Ice	42	4.84	0	0	0.00	0.00	52	User Input

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Force/Stress Summary

Section: 4 G84HCS-15 FT Bot Elev (ft): 35.00 Height (ft): 15.000

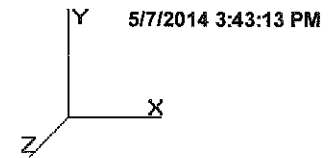
Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing %			Fa (ksi)	Member			Shear Bear		Use %	Controls	
				X	Y	Z		KL/R	Cap Num (kip)	Num Bolts	Num Holes	Cap (kip)			Cap (kip)
LEG PX - 2-1/2" DIA PIPE	-10.39	Normal No Ice	2.42	200	200	200	63.0	29.6	66.61	0	0	0.00	0.00	15	Member X
HORIZ PSP - ROHN 1 1/2X11G	-1.73	Normal No Ice	3.420	100	100	100	83.9	22.0	11.43	0	0	0.00	0.00	15	Member X
DIAG PSP - ROHN 1 1/2X11G	-2.49	Normal No Ice	4.192	100	100	100	102.9	17.9	9.32	0	0	0.00	0.00	26	Member X

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap Num (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
HORIZ PSP - ROHN 1 1/2X11G	0.58	60 deg No Ice	42	17.47	0	0	0.00	0.00	3	Member
DIAG PSP - ROHN 1 1/2X11G	2.62	90 deg No Ice	42	17.47	0	0	0.00	0.00	14	Member

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Support Forces Summary

Load Case	Node	FX (kip)	FY (kip)	FZ (kip)	(-) = Uplift (+) = Down
90 deg	A1b	-3.79	-5.70	-2.14	
	A1a	0.08	-0.12	-0.06	
	A1	-0.06	-2.91	2.22	
	1	-0.27	16.29	-0.03	
60 deg	A1b	-3.78	-5.70	-2.18	
	A1a	0.58	-0.90	-0.39	
	A1	-0.05	-0.90	0.69	
	1	-0.24	15.07	-0.14	
Normal	A1b	-3.19	-4.87	-1.91	
	A1a	3.19	-4.86	-1.91	
	A1	0.00	-0.03	0.02	
	1	0.00	17.33	-0.24	
90 deg Ice	A1b	-9.48	-14.06	-5.26	
	A1a	0.12	-0.26	-0.12	
	A1	-0.23	-7.21	5.52	
	1	-0.46	33.49	-0.15	
60 deg Ice	A1b	-8.53	-12.77	-4.92	
	A1a	0.53	-0.90	-0.42	
	A1	-0.10	-0.90	0.67	
	1	-0.60	26.50	-0.35	
Normal Ice	A1b	-7.97	-12.14	-4.89	
	A1a	7.97	-12.14	-4.90	
	A1	0.00	-0.16	0.08	
	1	0.00	36.42	-0.34	
90 deg No Ice	A1b	-9.69	-14.46	-5.39	
	A1a	0.05	-0.11	-0.05	
	A1	-0.18	-7.33	5.59	
	1	-0.53	29.46	-0.15	
60 deg No Ice	A1b	-8.47	-12.77	-4.89	
	A1a	0.24	-0.41	-0.19	
	A1	-0.05	-0.41	0.30	
	1	-0.68	21.14	-0.40	
Normal No Ice	A1b	-8.20	-12.53	-4.99	
	A1a	8.20	-12.52	-4.99	
	A1	0.00	-0.07	0.03	
	1	0.00	32.69	-0.40	

Max Reactions

	<u>Base</u>	<u>Anch1</u>
Vertical (kip)	36.42	-14.46
Horizontal (kip)	0.79	11.09

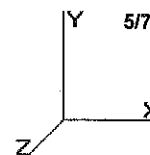
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Cable Forces Summary

Load Case	Elevation (ft)	Cable	Node 1	Node 2	Allow Tension (kip)	Applied Tension (kip)	Use %
Normal No Ice	32.12	1/2 EHS	A1	T1	13.35	0.05	0
		1/2 EHS	A1b	T1b	13.35	8.46	63
		1/2 EHS	A1a	T1a	13.35	7.36	55
		1/2 EHS	A1a	T1	13.35	8.50	63
		1/2 EHS	A1b	T1a	13.35	7.40	55
		1/2 EHS	A1	T1b	13.35	0.05	0
60 deg No Ice		1/2 EHS	A1	T1	13.35	0.33	2
		1/2 EHS	A1b	T1b	13.35	8.09	60
		1/2 EHS	A1a	T1a	13.35	0.22	1
		1/2 EHS	A1a	T1	13.35	0.33	2
		1/2 EHS	A1b	T1a	13.35	8.08	60
		1/2 EHS	A1	T1b	13.35	0.22	1
90 deg No Ice		1/2 EHS	A1	T1	13.35	5.15	38
		1/2 EHS	A1b	T1b	13.35	8.70	65
		1/2 EHS	A1a	T1a	13.35	0.07	0
		1/2 EHS	A1a	T1	13.35	0.10	0
		1/2 EHS	A1b	T1a	13.35	9.62	72
		1/2 EHS	A1	T1b	13.35	4.13	30
Normal Ice		1/2 EHS	A1	T1	13.35	0.13	0
		1/2 EHS	A1b	T1b	13.35	8.25	61
		1/2 EHS	A1a	T1a	13.35	7.17	53
		1/2 EHS	A1a	T1	13.35	8.28	61
		1/2 EHS	A1b	T1a	13.35	7.20	53
		1/2 EHS	A1	T1b	13.35	0.13	0
60 deg Ice		1/2 EHS	A1	T1	13.35	0.72	5
		1/2 EHS	A1b	T1b	13.35	8.13	60
		1/2 EHS	A1a	T1a	13.35	0.49	3
		1/2 EHS	A1a	T1	13.35	0.72	5
		1/2 EHS	A1b	T1a	13.35	8.13	60
		1/2 EHS	A1	T1b	13.35	0.49	3
90 deg Ice		1/2 EHS	A1	T1	13.35	5.10	38
		1/2 EHS	A1b	T1b	13.35	8.50	63
		1/2 EHS	A1a	T1a	13.35	0.17	1
		1/2 EHS	A1a	T1	13.35	0.23	1
		1/2 EHS	A1b	T1a	13.35	9.38	70
		1/2 EHS	A1	T1b	13.35	4.09	30
Normal		1/2 EHS	A1	T1	13.35	0.04	0
		1/2 EHS	A1b	T1b	13.35	3.33	24
		1/2 EHS	A1a	T1a	13.35	2.84	21
		1/2 EHS	A1a	T1	13.35	3.34	25
		1/2 EHS	A1b	T1a	13.35	2.85	21
		1/2 EHS	A1	T1b	13.35	0.04	0
60 deg		1/2 EHS	A1	T1	13.35	0.80	5
		1/2 EHS	A1b	T1b	13.35	3.62	27
		1/2 EHS	A1a	T1a	13.35	0.38	2

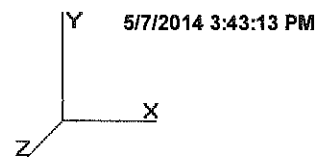
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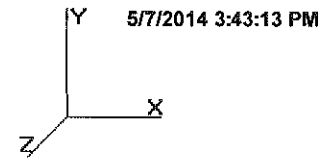


	1/2 EHS	A1a	T1	13.35	0.80	5
	1/2 EHS	A1b	T1a	13.35	3.62	27
	1/2 EHS	A1	T1b	13.35	0.38	2
90 deg	1/2 EHS	A1	T1	13.35	2.09	15
	1/2 EHS	A1b	T1b	13.35	3.42	25
	1/2 EHS	A1a	T1a	13.35	0.07	0
	1/2 EHS	A1a	T1	13.35	0.12	0
	1/2 EHS	A1b	T1a	13.35	3.81	28
	1/2 EHS	A1	T1b	13.35	1.62	12

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Deflections and Rotations

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)
50.00 mph Wind at 60 deg From Face with No Ice	12.27	0.0167	-0.0044	0.0762
	32.12	0.0414	0.0005	0.1586
	35.00	0.0467	0.0003	0.1503
	47.12	0.0699	0.0004	0.1060
50.00 mph Wind at 90 deg From Face with No Ice	12.27	0.0230	-0.0314	0.1032
	32.12	0.0573	-0.0245	0.2272
	35.00	0.0641	-0.0244	0.1838
	47.12	0.0929	-0.0239	0.1346
50.00 mph Wind Normal To Face with No Ice	12.27	0.0282	-0.0089	0.1287
	32.12	0.0715	-0.0020	0.2743
	35.00	0.0797	-0.0022	0.2092
	47.12	0.1146	-0.0022	0.1610
69.28 mph Wind at 60 deg From Face with Ice	12.27	0.0568	-0.0082	0.2597
	32.12	0.1420	0.0008	0.3578
	35.00	0.1583	0.0005	0.4272
	47.12	0.2284	0.0006	0.3250
69.28 mph Wind at 90 deg From Face with Ice	12.27	0.1033	-0.0825	0.4674
	32.12	0.2616	-0.0649	0.7761
	35.00	0.2888	-0.0675	0.6564
	47.12	0.4044	-0.0670	0.5404
69.28 mph Wind Normal To Face with Ice	12.27	0.1194	-0.0183	0.5482
	32.12	0.3058	-0.0009	0.9074
	35.00	0.3374	-0.0041	0.7429
	47.12	0.4719	-0.0037	0.6264
80.00 mph Wind at 60 deg From Face with No Ice	12.27	0.0582	-0.0040	0.2646
	32.12	0.1451	0.0009	0.3397
	35.00	0.1618	0.0005	0.4389
	47.12	0.2345	0.0006	0.3338
80.00 mph Wind at 90 deg From Face with No Ice	12.27	0.1106	-0.0871	0.5008
	32.12	0.2810	-0.0721	0.8136
	35.00	0.3102	-0.0749	0.6989
	47.12	0.4339	-0.0744	0.5783
80.00 mph Wind Normal To Face with No Ice	12.27	0.1281	-0.0163	0.5885
	32.12	0.3288	-0.0017	0.9563
	35.00	0.3628	-0.0052	0.7937
	47.12	0.5070	-0.0049	0.6718
		0.0000	0.0000	0.0000

**RADIO FREQUENCY FCC REGULATORY COMPLIANCE
MAXIMUM PERMISSIBLE EXPOSURE (MPE) ASSESSMENT**

Sprint Existing Facility

Site ID: CT03XC074

West Hartford Bishops

345 North main Street
West Hartford, CT 06117

May 29, 2014

EBI Project Number: 62143107

May 29, 2014

Sprint
Attn: RF Engineering Manager
1 International Boulevard, Suite 800
Mahwah, NJ 07495

Re: Radio Frequency Maximum Permissible Exposure (MPE) Assessment for Site:
CT03XC074 - West Hartford Bishops

Site Total: 48.50% - MPE% in full compliance

EBI Consulting was directed to analyze the proposed upgrades to the existing Sprint facility located at 345 North main Street, West Hartford, CT, for the purpose of determining whether the radio frequency (RF) exposure levels from the proposed Sprint equipment upgrades on this property are within specified federal limits.

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

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

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

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The general population exposure limit for the cellular band (850 MHz Band) is approximately $567 \mu\text{W}/\text{cm}^2$, and the general population exposure limit for the 1900 MHz and 2500 MHz bands is $1000 \mu\text{W}/\text{cm}^2$. 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.

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

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed upgrades to the existing Sprint Wireless antenna facility located at 345 North main Street, West Hartford, CT, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. All calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was focused at the base of the tower. For this report the sample point is the top of a 6 foot person standing at the base of the tower.

For all calculations, all emissions were calculated using the following assumptions:

- 1) 3 channels in the 1900 MHz Band were considered for each sector of the proposed installation.
- 2) 1 channel in the 800 MHz Band was considered for each sector of the proposed installation
- 3) 2 channels in the 2500 MHz Band were considered for each sector of the proposed installation.
- 4) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 5) For the following calculations the sample point was the top of a six foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufactures supplied specifications minus 10 dB was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

- 6) The antennas used in this modeling are the RFS APXVSP18-C-A20 and the RFS APXVTM14-C-I20. This is based on feedback from the carrier with regards to anticipated antenna selection. The RFS APXVSP18-C-A20 has a 15.9 dBd gain value at its main lobe at 1900 MHz and 13.4 dBd at its main lobe for 850 MHz. The RFS APXVTM14-C-I20 has a 15.9 dBd gain value at its main lobe at 2500 MHz. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 7) The antenna mounting height centerline for the proposed antennas is **100 feet** above ground level (AGL).
- 8) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

All calculation were done with respect to uncontrolled / general public threshold limits

Site ID	CT03XC074 - West Hartford Bishops
Site Address	345 North main Street, West Hartford, CT, 06117
Site Type	Guysed Tower

Sector 1

Antenna Number	Antenna Make	Antenna Model	Radio Type	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain (10 db reduction)	Antenna Height (ft)	Antenna analysis height	Cable Size	Cable Loss (dB)	Additional Loss (dB)	ERP	Power Density Percentage
1a	RFS	APXVSP18-C-A20	RRH	1900 MHz	CDMA / LTE	20	3	60	5.9	100	94	1/2"	0.5	3	104.27	0.42%
1a	RFS	APXVSP18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	3.4	100	94	1/2"	0.5	3	19.54	0.14%
1B	RFS	APXVTM14-C-120	RRH	2500 MHz	CDMA / LTE	20	2	40	5.9	100	94	1/2"	0.5	3	69.51	0.50%
Sector total Power Density Value: 1.06%																

Sector 2

Antenna Number	Antenna Make	Antenna Model	Radio Type	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain (10 db reduction)	Antenna Height (ft)	Antenna analysis height	Cable Size	Cable Loss (dB)	Additional Loss (dB)	ERP	Power Density Percentage
2a	RFS	APXVSP18-C-A20	RRH	1900 MHz	CDMA / LTE	20	3	60	5.9	100	94	1/2"	0.5	3	104.27	0.42%
2a	RFS	APXVSP18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	3.4	100	94	1/2"	0.5	3	19.54	0.14%
2B	RFS	APXVTM14-C-120	RRH	2500 MHz	CDMA / LTE	20	2	40	5.9	100	94	1/2"	0.5	3	69.51	0.50%
Sector total Power Density Value: 1.06%																

Sector 3

Antenna Number	Antenna Make	Antenna Model	Radio Type	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain (10 db reduction)	Antenna Height (ft)	Antenna analysis height	Cable Size	Cable Loss (dB)	Additional Loss (dB)	ERP	Power Density Percentage
3a	RFS	APXVSP18-C-A20	RRH	1900 MHz	CDMA / LTE	20	3	60	5.9	100	94	1/2"	0.5	3	104.27	0.42%
3a	RFS	APXVSP18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	3.4	100	94	1/2"	0.5	3	19.54	0.14%
3B	RFS	APXVTM14-C-120	RRH	2500 MHz	CDMA / LTE	20	2	40	5.9	100	94	1/2"	0.5	3	69.51	0.50%
Sector total Power Density Value: 1.06%																

Site Composite MPE %	
Carrier	MPE %
Sprint	3.19%
Clearwire	1.92%
AT&T	43.39%
Total Site MPE %	48.50%

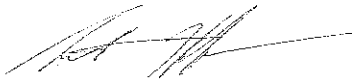
Summary

All calculations performed for this analysis yielded results that were well within the allowable limits for general public Maximum Permissible Exposure (MPE) to radio frequency energy.

The anticipated Maximum Composite contributions from the Sprint facility are **3.19% (1.06% from sector 1, 1.06% from sector 2 and 1.06% from sector 3)** of the allowable FCC established general public limit considering all three sectors simultaneously sampled at the ground level.

The anticipated composite MPE value for this site assuming all carriers present is **48.50%** of the allowable FCC established general public limit sampled at 6 feet above ground level. This total composite site value is based upon MPE values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.



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