COHEN and WOLF P.C.
ATTORNEYS AT LAW

JULIE D. KOHLER

PLEASE REPLY TO: Bridgeport
WRITER'S DIRECT DIAL: (203) 337-4157
E-Mail Address: jkohler@cohenandwolf.com

April 30, 2015

Attorney Melanie Bachman
Acting Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

Re: Notice of Exempt Modification
Cordless Data Transfer, Inc. /T-Mobile equipment upgrade
Site ID CT11527B
47 Turnpike Road, Willington Connecticut

Dear Attorney Bachman:

This office represents T-Mobile Northeast LLC ("T-Mobile") and has been retained to file exempt modification filings with the Connecticut Siting Council on its behalf.

In this case, Cordless Data Transfer Inc. owns the existing monopole tower and related facility located at 47 Turnpike Road Willington, Connecticut (Latitude: 41.92553767; Longitude: -72.252369). T-Mobile intends to add three (3) antennas and related equipment at this existing telecommunications facility in Willington ("Willington Facility"). Please accept this letter as notification, pursuant to R.C.S.A. § 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is also being sent to the First Selectman Christina B. Mailhos. Cordless Data Transfer, Inc. also owns the property.

The existing Willington Facility consists of a 170 foot tall monopole tower. [1] T-Mobile plans to add three (3) antennas and smart bias-T's to proposed antennas mounting pipe at a centerline of 159 feet. T-Mobile will mount three (3) RRU's (remote radio units) on a proposed unistrut under the existing ice bridge. It will also install a BBU cabinet on an existing concrete pad and install new coax cable routed within the monopole. (See the plans revised to March 4, 2015 attached hereto as Exhibit A). The existing Willington Facility is structurally capable of supporting T-Mobile's proposed modifications, as indicated in the structural analysis dated April 24, 2015 and attached hereto as Exhibit B.

The planned modifications to the Willington Facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1. The proposed modification will not increase the height of the tower. T-Mobile's

[1] The Willington Facility was approved in Docket No. 267. The Docket No. 267 Decision and Order does not contain any restrictions or limitations relevant to T-Mobile's proposed modifications.

proposed antennas will be installed at the same elevation as the existing antennas. The enclosed tower drawing confirms that the proposed modification will not increase the height of the tower.

2. The proposed modifications will not require an extension of the site boundaries. All of the modifications are proposed within the existing compound area.

3. The proposed modification to the Willington Facility 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 base of the tower, to a level at or above the applicable standard. According to a Radio Frequency Emissions Analysis Report prepared by EBI dated April 15, 2015, T-Mobile's operations would add 3.90% of the FCC Standard. Therefore, the calculated "worst case" power density for the planned combined operation at the site including all of the proposed antennas would be 15.79% of the FCC Standard as calculated for a mixed frequency site as evidenced by the engineering exhibit attached hereto as Exhibit C.

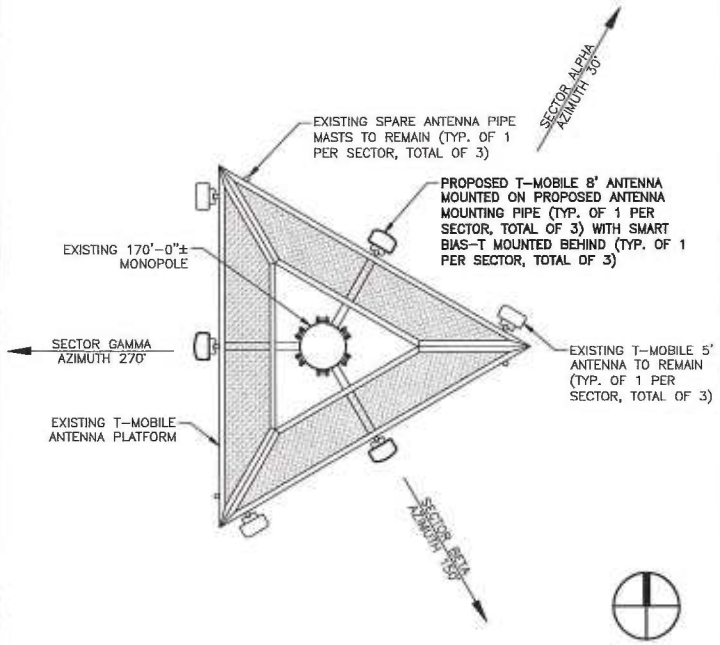
For the foregoing reasons, T-Mobile respectfully submits that the additional antennas and additional equipment at the Willington Facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2). Upon acknowledgement by the Council of this proposed exempt modification, T-Mobile shall commence construction approximately sixty days from the date of the Council's notice of acknowledgement.

Sincerely,

Julie D. Kohler, Esq.

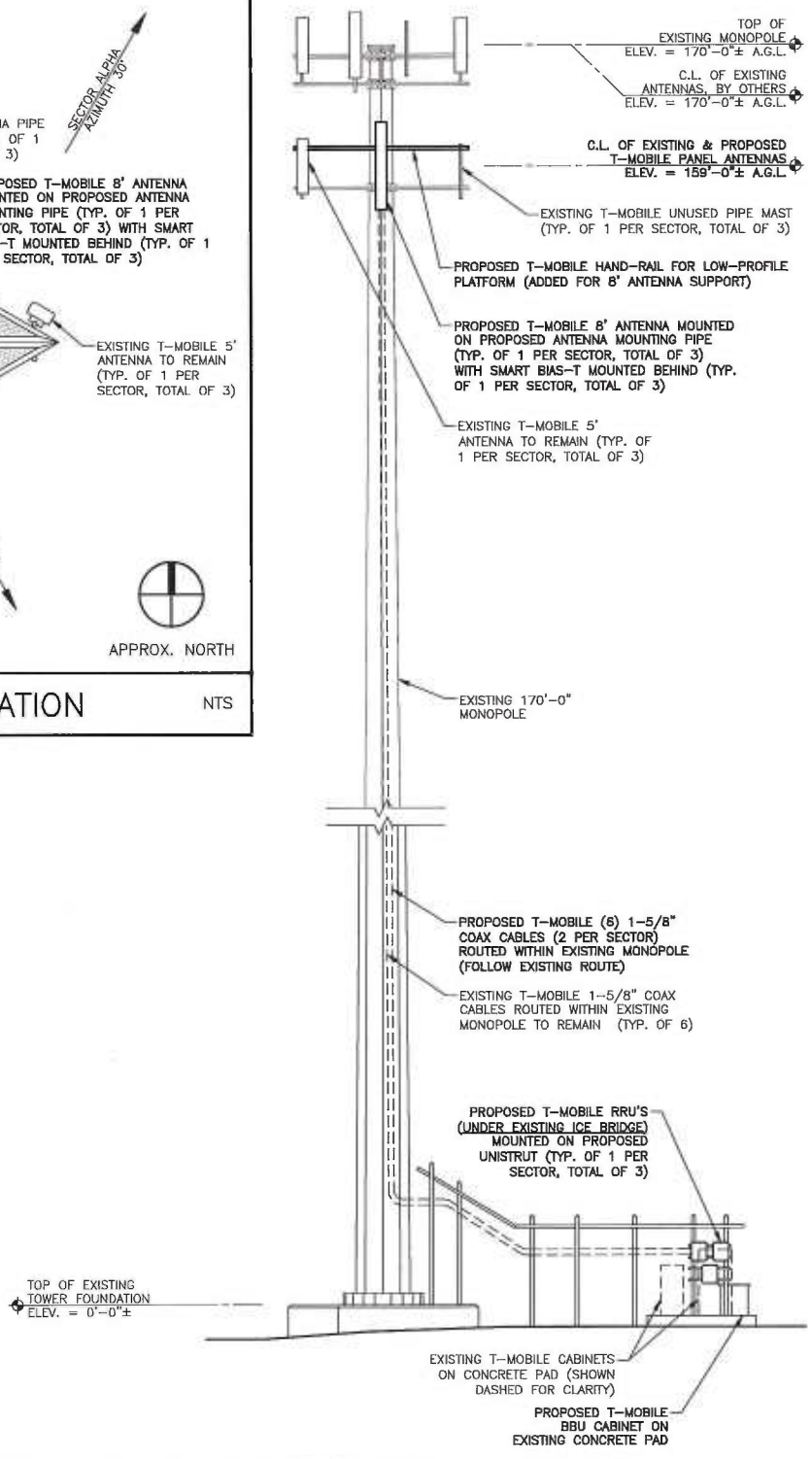
cc: Willington First Selectman, Christina B. Mailhos
Cordless Data Transfer
Jamie Ford, EBI Consulting

EXHIBIT A



ANTENNA CONFIGURATION

NTS



CONFIGURATION

704G

NOTE:
ALL EQUIPMENT LOCATIONS ARE APPROXIMATE AND ARE SUBJECT TO APPROVAL BY LESSEE/LICENSEE STRUCTURAL AND RF ENGINEERS.

TOWER ELEVATION

SCALE: 1/16" = 1'-0"

PREPARED BY:
EBI Consulting
environmental | engineering | due diligence
21 B Street | Burlington, MA 01803
Tel: (781) 273-2500 | Fax: (781) 273-3311
www.ebiconsulting.com
EBI JOB NO.: 8115000125

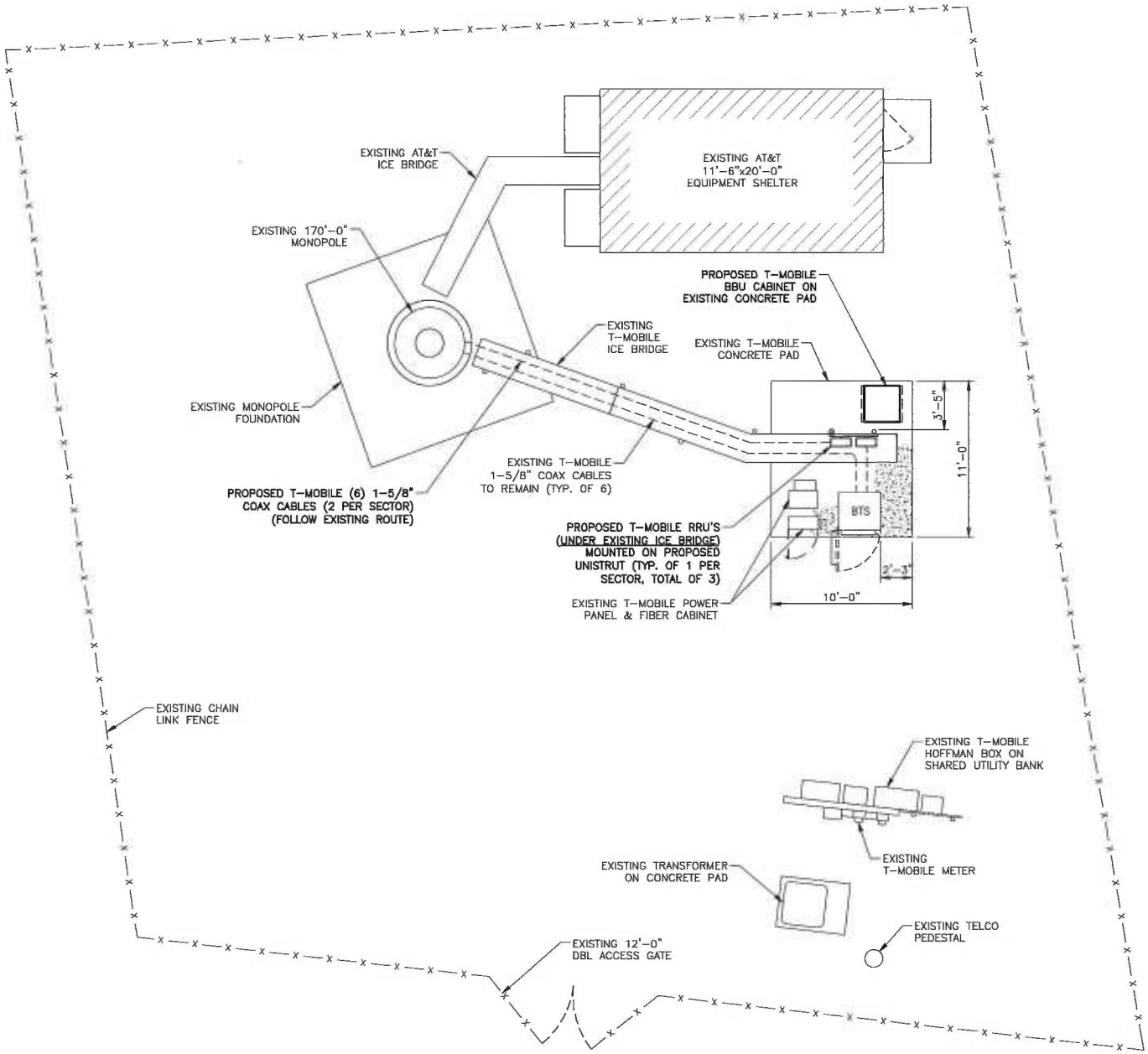
CLIENT:
T-Mobile Northeast, LLC
35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002
860.692.7100

SITE INFO:
CT11527B
CT527/CORDLESS
WILLINGTON
47 TURNPIKE ROAD
WILLINGTON, CT 06279

SUBMITTALS			
NO.	DATE	DESCRIPTION	BY
A	03/04/15	FOR REVIEW	AC

DRAWN BY: AC
CHECKED BY: BB
DATE: 03/03/15

SHEET NO: LE-2



CONFIGURATION

704G

APPROX. NORTH

NOTE:
ALL EQUIPMENT LOCATIONS ARE APPROXIMATE AND ARE SUBJECT TO APPROVAL BY LESSEE/LICENSEE STRUCTURAL AND RF ENGINEERS.

SITE PLAN

SCALE: 3/32" = 1'-0"

PREPARED BY:
EBI Consulting
environmental | engineering | due diligence
21 B Street | Burlington, MA 01803
Tel: (781) 273-2500 | Fax: (781) 273-3311
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CLIENT:
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860.692.7100

SITE INFO:
CT11527B
CT527/CORDLESS WILLINGTON
47 TURNPIKE ROAD
WILLINGTON, CT 06279

SUBMITTALS			
NO.	DATE	DESCRIPTION	BY
A	03/04/15	FOR REVIEW	AC

DRAWN BY: AC
CHECKED BY: BB
DATE: 03/03/15

SHEET NO: LE-1

EXHIBIT B

FRED A. NUDD CORPORATION

1743 ROUTE 104, BOX 577
ONTARIO, NY 14519
(315) 524-2531 FAX (315) 524-4249

www.nuddtowers.com

Mark LeGault
Cordless Data Transfer, Inc.
600 Old Hartford Road
Colchester, CT 06415
April 5, 2015

Nudd Job Number: 115-35034

Site Location: Willington, CT (47 Turnpike Road, Willington, CT 06279, Tolland County)

Subject: Structural Analysis of an existing 170 ft Monopole Tower

Fred A. Nudd Corporation has completed a structural analysis of an existing 170 ft monopole tower. The tower was originally designed by Fred A. Nudd Corporation. The tower analysis was completed considering TIA-222-F design standards, which is the enforced design standard of the 2003 International Building Code, including 2005 Connecticut Building Code Amendments and the 2008 Connecticut Supplement. Additional standards used in this analysis include AISC Manual for Steel Construction, Allowable Stress Design, 9th Edition, and ACI318-05, Building Code Requirements for Structural Concrete and Commentary. Tower and foundation dimensions have been taken from drawings by Fred A. Nudd, project number 9859, dated February 24, 2004 & March 1, 2004, respectively. Geotechnical information was taken from a subsurface exploration report by Coneco, project number C537, dated February 25, 2004. Design criteria per each analysis are noted on the following page. The tower is assumed to be in good, undamaged and equivalent to as new condition and has been maintained / inspected per criteria by TIA-222.

The purpose of this analysis is to determine the structure's ability to support new T-Mobile. The new equipment to be installed, which included antennas, coax, mounts and associated hardware are listed on the following page, along with already installed cellular equipment, in the appurtenance loading table.

Results of the analysis indicate the tower will be able to the support the design loads noted in the appurtenance loading table on the following page. Specific section design loads, capacities and stress ratios are provided on the following pages. Maximum member usage was found to be 68%. Detailed calculation of the applied forces and member capacities are provided in the following pages.

The tower base foundation was analyzed using soil properties from the aforementioned geotechnical report. Based on this analysis, the foundation is capable of supporting the existing and proposed equipment. Factor of safety in excess of two was calculated regarding foundation resistance to applied axial and lateral loads. Detailed calculation of the applied forces and member capacities are provided in the following pages.

In conclusion, the tower superstructure and substructure can support the proposed T-Mobile equipment in addition to the existing equipment and meet the aforementioned design standards for strength and serviceability.

We trust this report satisfies your needs. Please contact us with any questions or concerns regarding this report.

Best Regards,
Fred. A. Nudd Corporation

David Tan, P.E. (CT PE # 22092)

Code Design Criteria

TIA-222-F
Windspeed = 85 mph, fastest mile
Exposure = C
Structure Class II
Radial Ice = 0.5 inch
Ice Windspeed = 74 mph, fastest mile
Topographic Category = II
Seismic = Site Class D, S_s & S_1 = 0.23 & 0.064, respectively

Appurtenance Loading – Existing and To Remain on Tower

Elevation (ft)[1]	Antenna	Mount	Coax (in)[2]
170	(6) Powerwave 7750 (2) KMV AM-X-CD-16-65-00T (1) Powerwave P65-17-XLH-RR (6) Powerwave 100860 (6) Ericsson RRUs11	(3) 12 ft Boom / Frame	(12) 1-5/8 (1) 3 in Conduit (2) 19.7 mm (1) 10 mm Fiber
159	(3) EMS RR90-17-02DP (3) Ericsson KRY 112 71	Low Profile Platform	(6) 1-5/8

[1]Note elevation is measured from grade to center of antenna
[2]All existing coax is installed inside the monopole shaft

Proposed Appurtenance Loading – T-Mobile

Elevation (ft)[1]	Antenna	Mount	Coax[2]
159	(3) Commscope LNX-6515DS-VTM (3) Andrew Smart Bias Tee	(3) 12 ft Boom / Frame	(6) 1-5/8

[1]Note elevation is measured from grade to center of antenna
[2]Additional coax is to be installed inside the monopole shaft

Maximum Member Usage Results

Member	Usage (%)[1]
Pole Shaft	65
Base Plate	58
Anchor Bolts	47

[1]Usage above 100% indicates the applied design load exceeds the member strength capacity and requires strengthening

Foundation Usage Results

Base Reaction	Capacity (kip-ft)	Analysis (kip-ft)	Factor of Safety[1]
Overturning	14595.1	2594.0	5.35

[1]Factor of safety lower than 2.0 indicates the applied design load exceeds the member strength capacity and requires strengthening

Job Number:	115-35034
Site Name:	Wilmington CT
Engineer:	FAN
Client:	CDT
Date:	04/01/15

Design Criteria

Code Input:	TIA-222-F						
Design Windspeed:	85	mph	K_D:	1.00	Steel Elastic Modulus:	29000	ksi
G_H:	1.69		Topo Category:	1	Weight of Steel:	490	pcf
Height of Crest:	0	ft	Structure Class:	II	Wind Importance:	1.00	
Ice Windspeed:	74		Exposure (B/C):	C	Wind with Ice Importance:	1.00	
Radial Ice:	0.50	in	D Load Factor 1:	1.0	Ice Thickness Importance:	1.00	
W Load Factor:	1.0		D Load Factor 2:	1.0	Earthquake Importance:	1.00	
W_i Load Factor:	1.0		E Load Factor 1:	1.0	S_s:	0.230	
Weight of Ice:	56	pcf	D_i Load Factor:	1.0	S_1:	0.064	
Site Class:	D		Stress Increase:	1.33			

Tower Geometry Input:		Base Section - Section 1		Middle Section - Section 2			
Top of Splice 1 Height:	46.5 ft	ϕ - Bottom Sec. 1:	58.00 in	ϕ - Bottom Sec. 2:	50.38 in	Steel F_Y - Sec. 1:	65 ksi
Top of Splice 2 Height:	90 ft	ϕ - Top Sec. 1:	48.19 in	ϕ - Top Sec. 2:	39.81 in	Steel F_Y - Sec. 2:	65 ksi
Top of Splice 3 Height:	134.5 ft	T - Bottom Sec. 1:	0.3750 in	T - Bottom Sec. 2:	0.3750 in	Steel F_Y - Sec. 3:	65 ksi
Top of Splice 4 Height:	160 ft					Steel F_Y - Sec. 4:	65 ksi
Top of Splice 5 Height:	170 ft	Middle Section - Section 3		Middle Section - Section 4		Steel F_Y - Sec. 5:	65 ksi
Top of Tower:	170 ft	ϕ - Bottom Sec. 3:	41.63 in	ϕ - Bottom Sec. 3:	32.56 in	Steel F_Y - Sec. 6:	ksi
		ϕ - Top Sec. 3:	31.06 in	ϕ - Top Sec. 3:	26.25 in	# of Sides - Sec. 1:	18
		T - Bottom Sec. 3:	0.3125 in	T - Bottom Sec. 3:	0.2500 in	# of Sides - Sec. 2:	18
						# of Sides - Sec. 3:	18
		Middle Section - Section 5		Top Section - Section 6		# of Sides - Sec. 4:	18
		ϕ - Bottom Sec. 3:	26.25 in	ϕ - Bottom Sec. 3:	in	# of Sides - Sec. 5:	18
		ϕ - Top Sec. 3:	22.00 in	ϕ - Top Sec. 3:	in	# of Sides - Sec. 6:	
		T - Bottom Sec. 3:	0.2500 in	T - Bottom Sec. 3:	in		

Note: Diameters are across flats.

Job Number:	115-35034
Site Name:	Wilmington CT
Engineer:	FAN
Date:	4/1/2015
Code Input:	TIA-222-F

Antenna/Mount Input & Corresponding Loads

Antenna (Name & Man.)	Height (in)	Width (in)	Depth (in)	Round /Flat (R/F)	Weight (lb)	Total	Orient. Factor	Elev. (ft)	K_A (Ant.)	Ice Thickness (in)	K_{zt}	EPA Bare (ft^2)	EPA Ice (ft^2)	Σ Wt. Bare (lb)	Σ Wt. Ice (lb)
Powerwave 7750	55.0	11.0	5.0	F	35.0	6.0	0.76	170.0	1.00	0.50	1.00	25.7	30.9	210	407
EMS RR90-17-02DP	56.0	8.0	2.8	F	13.5	3.0	0.63	159.0	1.00	0.50	1.00	8.6	10.6	41	114
Commscope LNX-6515DS	96.0	11.9	7.1	F	43.7	3.0	0.68	159.0	1.00	0.50	1.00	23.2	27.0	131	315
KMV AM-X-CD-16-65-00T	72.0	11.8	5.9	F	48.5	2.0	0.66	170.0	1.00	0.50	1.00	10.9	12.8	97	188
Powerwave 100860	13.9	14.4	3.8	F	40.0	6.0	0.64	170.0	1.00	0.50	1.00	6.4	8.3	240	308
Ericsson RRUs11	17.8	17.3	2.0	F	50.0	6.0	0.57	170.0	1.00	0.50	1.00	8.8	10.9	300	402
Powerwave P65-17-XLH	96.0	12.0	6.0	F	62.0	1.0	0.80	170.0	1.00	0.50	1.00	9.1	10.6	62	124
										0.50	1.00	0.0	0.0	0	0

Mount (Type)	C_AA_C Bare (ft^2)	C_AA_C Ice (ft^2)	Weight Bare (lb)	Weight Ice (lb)	K_A (Mnt.)	Σ EPA Bare (ft^2)	Σ EPA Ice (ft^2)	K_Z	Q_Z Bare (psf)	Q_Z Ice (psf)	F_A Bare (k)	F_A Ice (k)	Σ Wt. Bare (lb)	Σ Wt. Ice (lb)
Sector Frame	40.3	50.0	1200.0	1518.0	1.00	66.0	80.8	1.597	29.55	22.16	3.29	3.03	1410	1925
Low Profile Platform	26.1	31.6	1500.0	1700.0	1.00	34.7	42.2	1.567	28.99	21.74	1.70	1.55	1541	1814
Ericsson KRY 112 71						23.2	27.0	1.567	28.99	21.74	1.14	0.99	131	315
						10.9	12.8	1.597	29.55	22.16	0.55	0.48	97	188
						6.4	8.3	1.597	29.55	22.16	0.32	0.31	240	308
						8.8	10.9	1.597	29.55	22.16	0.44	0.41	300	402
						9.1	10.6	1.597	29.55	22.16	0.46	0.40	62	124
						0.0	0.0	1.000	18.50	13.87	0.00	0.00	0	0

Site Number:	115-35034
Site Name:	Wilmington CT
Engineer:	FAN
Date:	04/01/15
Code Input:	TIA-222-F

Tower Input & Section Properties

Note: Diameters below are across flats

Elevation (Top of Section) (ft)	ϕ_{Bottom} (in)	ϕ_{Top} (in)	P.W. (in)	P.W. F / R	W_{Coax} (lb/ft)	Thk (in)	R_a	Inertia (in^4)	Area (in^2)	S (in^3)	Z (in^3)	D/t	w/t	F'_y (ksi)	W.F. (in)
5.67	58.00	56.80	0.00	R	19.7	0.3750	0.000	28765	68.6	976.8	NA	154.7	27.3	62.4	10.2
11.33	56.80	55.61	0.00	R	19.7	0.3750	0.000	27011	67.2	936.6	NA	151.5	26.7	63.0	10.0
17.00	55.61	54.41	0.00	R	19.7	0.3750	0.000	25330	65.7	897.2	NA	148.3	26.1	63.6	9.8
22.67	54.41	53.22	0.00	R	19.7	0.3750	0.000	23720	64.3	858.6	NA	145.1	25.6	64.2	9.6
28.33	53.22	52.02	0.00	R	19.7	0.3750	0.000	22180	62.9	820.9	NA	141.9	25.0	64.8	9.4
34.00	52.02	50.83	0.00	R	19.7	0.3750	0.000	20708	61.5	784.1	NA	138.7	24.5	65.0	9.2
39.67	50.83	49.63	0.00	R	19.7	0.3750	0.000	19303	60.0	748.0	NA	135.5	23.9	65.0	9.0
45.33	49.63	48.43	0.00	R	19.7	0.3750	0.000	17963	58.6	712.9	NA	132.3	23.3	65.0	8.8
51.00	48.43	49.28	0.00	R	19.7	0.3750	0.000	16686	57.2	678.6	NA	129.2	22.8	65.0	8.5
56.67	49.28	47.91	0.00	R	19.7	0.3750	0.000	17586	58.2	702.8	NA	131.4	23.2	65.0	8.7
62.33	47.91	46.53	0.00	R	19.7	0.3750	0.000	16143	56.6	663.7	NA	127.8	22.5	65.0	8.4
68.00	46.53	45.15	0.00	R	19.7	0.3750	0.000	14781	54.9	625.7	NA	124.1	21.9	65.0	8.2
73.67	45.15	43.78	0.00	R	19.7	0.3750	0.000	13498	53.3	588.8	NA	120.4	21.2	65.0	8.0
79.33	43.78	42.40	0.00	R	19.7	0.3750	0.000	12292	51.7	553.0	NA	116.7	20.6	65.0	7.7
85.00	42.40	41.03	0.00	R	19.7	0.3750	0.000	11160	50.0	518.4	NA	113.1	19.9	65.0	7.5
90.67	41.03	41.47	0.00	R	19.7	0.3750	0.000	10099	48.4	484.8	NA	109.4	19.3	65.0	7.2
96.33	41.47	40.12	0.00	R	19.7	0.3125	0.000	8732	40.8	414.7	NA	132.7	23.4	65.0	7.3
102.00	40.12	38.78	0.00	R	19.7	0.3125	0.000	7903	39.5	388.0	NA	128.4	22.6	65.0	7.1
107.67	38.78	37.43	0.00	R	19.7	0.3125	0.000	7129	38.2	362.1	NA	124.1	21.9	65.0	6.8
113.33	37.43	36.09	0.00	R	19.7	0.3125	0.000	6407	36.8	337.1	NA	119.8	21.1	65.0	6.6
119.00	36.09	34.74	0.00	R	19.7	0.3125	0.000	5735	35.5	313.0	NA	115.5	20.4	65.0	6.4
124.67	34.74	33.40	0.00	R	19.7	0.3125	0.000	5113	34.1	289.8	NA	111.2	19.6	65.0	6.1
130.33	33.40	32.05	0.00	R	19.7	0.3125	0.000	4537	32.8	267.5	NA	106.9	18.8	65.0	5.9
136.00	32.05	32.19	0.00	R	19.7	0.3125	0.000	4005	31.5	246.1	NA	102.6	18.1	65.0	5.7
141.67	32.19	30.79	0.00	R	19.7	0.2500	0.000	3266	25.3	199.8	NA	128.8	22.7	65.0	5.7
147.33	30.79	29.39	0.00	R	19.7	0.2500	0.000	2854	24.2	182.6	NA	123.2	21.7	65.0	5.4
153.00	29.39	27.98	0.00	R	19.7	0.2500	0.000	2479	23.1	166.1	NA	117.5	20.7	65.0	5.2
158.67	27.98	26.58	0.00	R	19.7	0.2500	0.000	2138	22.0	150.5	NA	111.9	19.7	65.0	4.9
164.33	26.58	24.41	0.00	R	9.8	0.2500	0.000	1829	20.9	135.6	NA	106.3	18.7	65.0	4.7
170.00	24.41	22.00	0.00	R	9.8	0.2500	0.000	1413	19.2	114.0	NA	97.6	17.2	65.0	4.3

Site Number:	115-35034
Site Name:	Wilmington CT
Engineer:	FAN
Date:	04/01/15
Code Input:	TIA-222-F

Shaft Wind, Ice and Dead Design Loads

Note: Diameters below are across points

Elevation (Top of Section) (ft)	$\phi_{Average}$ (in)	C	C_f Bare	C_f Ice	K_z	K_{zt}	Ice Thickness (in)	Shaft EPA (ft^2)	Q_z Bare (psf)	Q_z Ice (psf)	F_{ST} Bare (k)	F_{ST} Ice (k)	Wt. Bare (lb)	Wt. Ice (lb)
5.67	58.29	413	0.65	0.65	1.00	1.00	0.50	27.52	18.50	13.87	0.559	0.427	1434	1638
11.33	57.07	404	0.65	0.65	1.00	1.00	0.50	26.95	18.50	13.87	0.548	0.418	1407	1606
17.00	55.86	396	0.65	0.65	1.00	1.00	0.50	26.38	18.50	13.87	0.536	0.409	1379	1574
22.67	54.64	387	0.65	0.65	1.00	1.00	0.50	25.80	18.50	13.87	0.524	0.400	1352	1543
28.33	53.43	378	0.65	0.65	1.00	1.00	0.50	25.23	18.50	13.87	0.513	0.392	1324	1511
34.00	52.22	370	0.65	0.65	1.00	1.00	0.50	24.66	18.50	13.87	0.501	0.383	1297	1479
39.67	51.00	367	0.65	0.65	1.03	1.00	0.50	24.08	19.09	14.31	0.505	0.386	1269	1448
45.33	49.79	366	0.65	0.65	1.07	1.00	0.50	23.51	19.88	14.91	0.514	0.393	1242	1416
51.00	49.61	371	0.65	0.65	1.11	1.00	0.50	23.43	20.61	15.45	0.530	0.406	1214	1388
56.67	49.34	375	0.65	0.65	1.15	1.00	0.50	23.30	21.27	15.95	0.544	0.417	1234	1406
62.33	47.95	369	0.65	0.65	1.18	1.00	0.50	22.64	21.89	16.42	0.544	0.417	1202	1370
68.00	46.55	363	0.65	0.65	1.21	1.00	0.50	21.98	22.47	16.85	0.542	0.416	1171	1334
73.67	45.15	357	0.65	0.65	1.24	1.00	0.50	21.32	23.01	17.26	0.539	0.413	1139	1297
79.33	43.76	349	0.65	0.65	1.27	1.00	0.50	20.66	23.52	17.64	0.534	0.410	1108	1261
85.00	42.36	342	0.65	0.65	1.30	1.00	0.50	20.00	24.00	18.00	0.527	0.405	1076	1224
90.67	41.88	341	0.65	0.65	1.32	1.00	0.50	19.78	24.47	18.35	0.532	0.408	1044	1191
96.33	41.42	340	0.65	0.65	1.35	1.00	0.50	19.56	24.91	18.68	0.535	0.411	899	1044
102.00	40.06	332	0.65	0.65	1.37	1.00	0.50	18.92	25.33	19.00	0.526	0.405	873	1013
107.67	38.69	323	0.65	0.65	1.39	1.00	0.50	18.27	25.73	19.30	0.516	0.397	847	983
113.33	37.33	314	0.65	0.65	1.41	1.00	0.50	17.63	26.12	19.59	0.506	0.390	821	952
119.00	35.96	305	0.65	0.65	1.43	1.00	0.50	16.98	26.50	19.87	0.494	0.381	796	922
124.67	34.59	295	0.65	0.65	1.45	1.00	0.50	16.34	26.86	20.15	0.482	0.372	770	891
130.33	33.23	286	0.65	0.65	1.47	1.00	0.50	15.69	27.21	20.41	0.469	0.362	744	861
136.00	32.62	282	0.65	0.65	1.49	1.00	0.50	15.40	27.55	20.67	0.466	0.360	719	833
141.67	31.98	278	0.65	0.65	1.51	1.00	0.50	15.10	27.88	20.91	0.463	0.358	600	713
147.33	30.55	267	0.65	0.65	1.52	1.00	0.50	14.43	28.20	21.15	0.447	0.346	579	686
153.00	29.13	256	0.65	0.65	1.54	1.00	0.50	13.75	28.52	21.39	0.431	0.334	557	660
158.67	27.70	245	0.65	0.65	1.56	1.00	0.50	13.08	28.82	21.61	0.414	0.322	536	633
164.33	25.89	230	0.65	0.65	1.57	1.00	0.50	12.22	29.12	21.84	0.391	0.305	459	550
170.00	23.56	210	0.65	0.65	1.59	1.00	0.50	11.13	29.40	22.05	0.359	0.281	425	509

Site Number:	115-35034	F_a:	1.60	Total W:	33.30 k
Site Name:	Wilmington CT	F_v:	2.40	R:	1.5
Engineer:	FAN	S_{DS}:	0.25	V_S:	0.85 k
Date:	04/01/15	S_{D1}:	0.10	f_1:	0.38 Htz
Code Input:	TIA-222-F				

Shaft Earthquake Design Loads

Elevation (Top of Section) (ft)	Σ Weight Bare (k)	Weight Bare (k)	Vertical Dist. Ratio	F_{sz} (k)
5.67	33.30	1.43	0.0%	0.000
11.33	31.86	1.41	0.1%	0.000
17.00	30.46	1.38	0.1%	0.001
22.67	29.08	1.35	0.2%	0.002
28.33	27.73	1.32	0.3%	0.003
34.00	26.40	1.30	0.5%	0.004
39.67	25.11	1.27	0.6%	0.005
45.33	23.84	1.24	0.8%	0.007
51.00	22.59	1.21	1.0%	0.008
56.67	21.38	1.23	1.2%	0.010
62.33	20.15	1.20	1.4%	0.012
68.00	18.94	1.17	1.7%	0.014
73.67	17.77	1.14	1.9%	0.016
79.33	16.63	1.11	2.2%	0.018
85.00	15.53	1.08	2.4%	0.020
90.67	14.45	1.04	2.6%	0.023
96.33	13.41	0.90	2.6%	0.022
102.00	12.51	0.87	2.8%	0.024
107.67	11.63	0.85	3.0%	0.026
113.33	10.79	0.82	3.3%	0.028
119.00	9.97	0.80	3.5%	0.030
124.67	9.17	0.77	3.7%	0.031
130.33	8.40	0.74	3.9%	0.033
136.00	7.66	0.72	4.1%	0.035
141.67	6.94	0.60	3.7%	0.032
147.33	6.34	0.58	3.9%	0.033
153.00	5.76	0.56	4.0%	0.034
158.67	5.20	0.54	4.2%	0.035
164.33	4.66	2.13	17.8%	0.151
170.00	4.21	2.53	22.6%	0.193

Unfactored Tower Loads & Deflections

Job Number:	115-35034
Site Name:	Wilmington CT
Engineer:	FAN
Date:	04/01/15
Code Input:	TIA-222-F

Elevation	Weight	Shear	$M_{Lateral}$	M_{PD}	M_{Total}	Δ	Weight	Shear	$M_{Lateral}$	M_{PD}	M_{Total}	Δ	Shear	$M_{Lateral}$	M_{PD}	M_{Total}	Δ
	Bare						Iced						Earthquake				
(ft)	(k)	(k)	(k-ft)	(k-ft)	(k-ft)	(in)	(k)	(k)	(k-ft)	(k-ft)	(k-ft)	(in)	(k)	(k-ft)	(k-ft)	(k-ft)	(in)
0	33.30	22.43	2526.8	67.2	2594.0	0.0	39.01	18.29	2128.5	69.0	2197.5	0.0	0.85	112.5	3.0	115.5	0.0
5.67	31.86	21.87	2398.7	66.9	2465.7	0.1	37.37	17.87	2023.8	68.8	2092.6	0.1	0.85	107.7	3.0	110.7	0.0
11.33	30.46	21.32	2273.8	66.3	2340.1	0.3	35.77	17.45	1921.5	68.2	1989.7	0.3	0.85	102.8	3.0	105.8	0.0
17.00	29.08	20.79	2151.9	65.3	2217.2	0.8	34.19	17.04	1821.6	67.1	1888.7	0.6	0.85	98.0	2.9	100.9	0.0
22.67	27.73	20.26	2033.0	63.9	2096.9	1.4	32.65	16.64	1723.9	65.8	1789.7	1.2	0.85	93.2	2.9	96.1	0.1
28.33	26.40	19.75	1917.1	62.2	1979.2	2.1	31.14	16.25	1628.5	64.1	1692.5	1.8	0.85	88.4	2.8	91.2	0.1
34.00	25.11	19.25	1804.0	60.2	1864.2	3.1	29.66	15.86	1535.2	62.1	1597.3	2.6	0.84	83.6	2.7	86.3	0.1
39.67	23.84	18.74	1693.8	57.9	1751.7	4.2	28.21	15.48	1444.2	59.8	1504.0	3.6	0.84	78.8	2.6	81.4	0.2
45.33	22.59	18.23	1586.4	55.5	1641.9	5.5	26.80	15.08	1355.4	57.3	1412.7	4.7	0.83	74.1	2.5	76.6	0.3
51.00	21.38	17.70	1482.1	52.8	1534.9	7.0	25.41	14.68	1268.8	54.7	1323.4	5.9	0.82	69.4	2.4	71.8	0.3
56.67	20.15	17.15	1380.7	50.0	1430.8	8.7	24.00	14.26	1184.5	51.8	1236.4	7.4	0.81	64.8	2.2	67.0	0.4
62.33	18.94	16.61	1282.5	47.2	1329.7	10.5	22.63	13.85	1102.7	48.9	1151.6	8.9	0.80	60.2	2.1	62.3	0.5
68.00	17.77	16.07	1187.3	44.2	1231.5	12.5	21.30	13.43	1023.1	45.9	1069.1	10.6	0.79	55.7	2.0	57.7	0.6
73.67	16.63	15.53	1095.2	41.2	1136.5	14.6	20.00	13.02	945.9	42.9	988.8	12.4	0.77	51.3	1.8	53.2	0.7
79.33	15.53	14.99	1006.2	38.2	1044.4	17.0	18.74	12.61	871.1	39.8	910.9	14.4	0.75	47.0	1.7	48.7	0.8
85.00	14.45	14.47	920.1	35.2	955.3	19.5	17.52	12.20	798.6	36.7	835.2	16.5	0.73	42.8	2.6	45.5	0.9
90.67	13.41	13.94	837.0	32.2	869.3	22.1	16.33	11.79	728.3	33.6	761.9	18.8	0.71	38.8	1.4	40.2	1.0
96.33	12.51	13.40	757.0	29.3	786.3	25.0	15.28	11.38	660.4	30.5	690.9	21.3	0.69	34.8	1.3	36.1	1.1
102.00	11.63	12.87	680.0	26.3	706.3	28.0	14.27	10.98	594.8	27.4	622.2	23.9	0.66	31.0	1.1	32.1	1.3
107.67	10.79	12.36	605.9	23.4	629.3	31.2	13.29	10.58	531.5	24.3	555.8	26.6	0.64	27.3	1.0	28.3	1.4
113.33	9.97	11.85	534.7	20.6	555.3	34.6	12.33	10.19	470.4	21.3	491.7	29.5	0.61	23.8	0.9	24.7	1.6
119.00	9.17	11.36	466.4	17.9	484.3	38.2	11.41	9.81	411.4	18.4	429.8	32.6	0.58	20.4	0.8	21.2	1.8
124.67	8.40	10.88	400.8	15.3	416.1	42.0	10.52	9.44	354.7	15.6	370.2	35.8	0.55	17.2	0.6	17.9	1.9
130.33	7.66	10.41	337.9	12.8	350.7	45.9	9.66	9.08	300.0	12.8	312.8	39.2	0.51	14.2	0.5	14.8	2.1
136.00	6.94	9.94	277.7	10.4	288.1	50.0	8.83	8.72	247.3	10.2	257.5	42.7	0.48	11.4	0.4	11.8	2.3
141.67	6.34	9.48	220.1	8.2	228.2	54.2	8.11	8.36	196.7	7.8	204.4	46.4	0.45	8.8	0.3	9.1	2.5
147.33	5.76	9.03	165.1	6.0	171.1	58.6	7.43	8.01	148.0	5.4	153.5	50.2	0.41	6.4	0.2	6.6	2.7
153.00	5.20	8.60	112.5	4.1	116.6	63.1	6.77	7.68	101.3	3.2	104.6	54.1	0.38	4.1	0.1	4.2	2.9
158.67	4.66	8.19	62.4	2.3	64.7	67.7	6.13	7.36	56.5	1.2	57.7	58.1	0.34	2.1	0.0	2.1	3.1
164.33	4.21	4.96	29.7	0.7	30.3	72.4	3.46	4.51	27.0	0.0	27.0	62.2	0.19	0.5	0.0	0.5	3.3
170.00	1.67	0.00	0.0	0.0	0.0	77.1	0.00	0.00	0.0	0.0	0.0	66.2	0.19	0.0	0.0	0.0	3.5

Combined Strength Ratios

		LC = Design Load Combinations
Job Number:	115-35034	LC1: 1.0D + 1.0 W
Site Name:	Wilmington CT	LC2: 1.0D + 0.75W + 1.0I
Engineer:	FAN	LC3: 1.0D + 1.0E
Date:	42095	
Code Input:	TIA-222-F	

Elevation	f_a	f_v Bare	f_b	f_a	f_v Ice	f_b	f_v Earthquake	f_b	F_v	F_b	Int. Eq.	Int. Eq.	Int. Eq.
LF / ϕ (ft)	1.0 (ksi)	1.0 (ksi)	1 / 1 (ksi)	1.0 (ksi)	1.0 (ksi)	1 / 1 (ksi)	1.0 (ksi)	1 / 1 (ksi)	1.0 (ksi)	1.0 (ksi)	LC1	LC2	LC3
0.0	0.5	0.5	31.9	0.6	0.4	26.3	0.0	1.4	33.3	49.9	0.65	0.54	0.04
5.7	0.5	0.5	31.6	0.6	0.4	26.1	0.0	1.4	33.6	50.4	0.64	0.53	0.04
11.3	0.5	0.5	31.3	0.5	0.4	25.8	0.0	1.4	33.9	50.9	0.62	0.52	0.04
17.0	0.5	0.5	31.0	0.5	0.4	25.6	0.0	1.4	34.2	51.3	0.61	0.51	0.04
22.7	0.4	0.5	30.7	0.5	0.4	25.4	0.0	1.4	34.5	51.8	0.60	0.50	0.04
28.3	0.4	0.5	30.3	0.5	0.4	25.1	0.0	1.4	34.7	52.0	0.59	0.49	0.04
34.0	0.4	0.5	29.9	0.5	0.4	24.8	0.0	1.4	34.7	52.0	0.58	0.49	0.03
39.7	0.4	0.5	29.5	0.5	0.4	24.5	0.0	1.4	34.7	52.0	0.58	0.48	0.03
45.3	0.4	0.5	29.0	0.5	0.4	24.1	0.0	1.4	34.7	52.0	0.57	0.47	0.03
51.0	0.4	0.5	26.2	0.4	0.4	21.8	0.0	1.2	34.7	52.0	0.51	0.43	0.03
56.7	0.4	0.5	25.9	0.4	0.4	21.6	0.0	1.2	34.7	52.0	0.50	0.42	0.03
62.3	0.3	0.5	25.5	0.4	0.4	21.3	0.0	1.2	34.7	52.0	0.50	0.42	0.03
68.0	0.3	0.5	25.1	0.4	0.4	21.0	0.0	1.2	34.7	52.0	0.49	0.41	0.03
73.7	0.3	0.5	24.7	0.4	0.4	20.7	0.0	1.2	34.7	52.0	0.48	0.41	0.03
79.3	0.3	0.4	24.2	0.4	0.4	20.3	0.0	1.1	34.7	52.0	0.47	0.40	0.03
85.0	0.3	0.4	23.6	0.4	0.4	19.9	0.0	1.1	34.7	52.0	0.46	0.39	0.03
90.7	0.3	0.5	25.2	0.4	0.4	21.3	0.0	1.2	34.7	52.0	0.49	0.42	0.03
96.3	0.3	0.5	24.3	0.4	0.4	20.6	0.0	1.1	34.7	52.0	0.47	0.40	0.03
102.0	0.3	0.5	23.4	0.4	0.4	19.9	0.0	1.1	34.7	52.0	0.46	0.39	0.03
107.7	0.3	0.5	22.4	0.4	0.4	19.1	0.0	1.0	34.7	52.0	0.44	0.37	0.03
113.3	0.3	0.5	21.3	0.3	0.4	18.2	0.0	0.9	34.7	52.0	0.42	0.36	0.02
119.0	0.3	0.5	20.0	0.3	0.4	17.2	0.0	0.9	34.7	52.0	0.39	0.34	0.02
124.7	0.3	0.5	18.7	0.3	0.4	16.1	0.0	0.8	34.7	52.0	0.36	0.32	0.02
130.3	0.2	0.5	17.1	0.3	0.4	14.8	0.0	0.7	34.7	52.0	0.33	0.29	0.02
136.0	0.3	0.6	17.3	0.3	0.5	15.0	0.0	0.7	34.7	52.0	0.34	0.30	0.02
141.7	0.3	0.6	15.0	0.3	0.5	13.1	0.0	0.6	34.7	52.0	0.29	0.26	0.02
147.3	0.2	0.6	12.4	0.3	0.5	10.8	0.0	0.5	34.7	52.0	0.24	0.22	0.01
153.0	0.2	0.6	9.3	0.3	0.5	8.2	0.0	0.3	34.7	52.0	0.18	0.16	0.01
158.7	0.2	0.6	5.7	0.3	0.5	5.1	0.0	0.2	34.7	52.0	0.12	0.11	0.01
164.3	0.2	0.4	3.2	0.2	0.4	2.9	0.0	0.1	34.7	52.0	0.07	0.06	0.01
170.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.7	52.0	0.00	0.00	0.00

Anchor Bolt and Baseplate Capacities

Job Number:	**115-35034**
Site Name:	**Wilmington CT**
Engineer:	**FAN**
Date:	**4/1/2015**
Code Input:	**TIA-222-F**

Base Plate and Bolt Analysis

Moment:	2594.0	k-ft
Shear/Leg:	22.4	k
Compression/Leg:	33.3	k

Assumptions

Weld Strength is 70 ksi
Maximum Bolt / Stiffener Ratio is 2/1

TIA-222 Code Revision (F/G):	F		Stiffener Height along Pole:		in
Lower Monopole Shaft Diameter:	58.0	in	Stiffener Length along Plate:		in
Lower Monopole Thickness:	0.375	in	Stiffener Thickness:		in
Base Plate Thickness:	2.25	in	# of Stiffeners:		
Base Plate Yield Strength:	50	ksi	Stiffener Yield Strength:		ksi
Fillet Weld Size:	0.375	in	Chamfer:		in
Weld Type (PP/F or F/F):	PP/F				
Anchor Bolt Yield Strength:	105	ksi			
Anchor Bolt Ultimate Strength:	125	ksi			
Anchor Bolt Diameter:	2.25	in	Angle:	0.0	Degrees
Anchor Bolt Circle:	65.00	in	Effective Stiffener Area:	0.00	in^2
# of Anchor Bolts:	18		Stiffener Strength Capacity:	0.0	k
Stress Increase:	1.33		Stiffener Moment Capacity:	0.0	k-in
Concrete Strength:	3000	psi			
Foundation Diameter:	6.00	ft			

Start Angle:	180.0	Degrees
Area:	69.7	in^2
Centriod from Center of Pole:	0.00	in
Inertia:	37797.6	in^4
Section Modulus, Tension:	1163.0	in^3
Section Modulus, Compression:	1163.0	in^3
Area of Bolt:	3.98	in^2
Inertia of Bolt:	1.26	in^4
Bolt Tension:	104.6	k
Bolt Shear:	0.2	k
Tensile Bolt Capacity:	220.9	k
Shear Bolt Capacity:	112.7	k
Interaction Equation:	0.47	Result: OK

Moment Arm:	2.375	in
Moment in Plate:	248.4	k-in
Baseplate Effective Width:	10.12	in
Section / Plastic Modulus:	8.54	in^3
Plate Moment Capacity:	427.1	k-in
Interaction Equation:	0.58	Result: OK

Foundation Capacity

Job Number:	**115-35034**
Site Name:	**Wilmington CT**
Engineer:	**FAN**
Date:	**4/1/2015**
Code Input:	**TIA-222-F**

Rock Anchor Design

Unfactored Moment:	2594.0	k-ft		
Unfactored Shear:	22.4	k		
Unfactored Compression:	33.3	k		
Tower Anchor Bolt Circle:	65.0	in	Concrete Breaking Strength:	3000 psi
Caisson Square Length:	14.0	ft	Clear Cover:	3.0 in
Caisson Height Above Grade:	0.5	ft	Horizontal Bar #:	8
Caisson Depth Below Grade:	5.5	ft	# of Horizontal Bars, One Way:	14
Williams Rod Minimum Yield Strength:	120	ksi	Rebar Yield Strength:	60 ksi
Williams Rod Ultimate Strength:	150	ksi	ϕ_v:	0.75
Williams Rod Diameter:	1.75	in	ϕ_v:	0.90
Williams Rod Net Area:	2.60	in^2	β:	0.85
Rock Anchor Circle:	120.00	in	Rebar Tension Area:	11.1 in^2
# of Rock Anchors:	8			
Rock Anchor Embedment (Including Free Stress Length):	33.0	ft		
Free Stress Length:	11.0	ft		
Concrete Unit Weight:	150	pcf		
Soil Unit Weight:	135	pcf		
Ultimate Bond Strength:	150	psi		
Cored Hole Diameter:	4.00	in		
Pullout Angle:	40	Degrees		
Proof Load:	320	k		
Limit Capacity to Proof Load:	Yes			
Rock Anchor Yield / Plastic Design:	Yield			

Rock Anchor Material and Soil Strength

Williams Rod Ultimate Tensile Strength:	390.0	k
Breakout Weight of Single Anchor:	5680.3	k
Bond Strength of a Single Anchor:	497.6	k
Ultimate Tension Resistance of a Single Anchor:	320.0	k
Ultimate Moment Resistance from Rock Anchors:	13120.0	k-ft
Caisson Weight:	176.4	k
Ultimate Moment Resistance from Concrete and Tower Weight:	1467.8852	k-ft
Design Moment:	2728.6	k-ft
Σ Ultimate Moment Resistance:	14587.9	k-ft
Factor of Safety, Overturning:	5.35	OK

Reinforced Concrete Design

Load Factor:	1.3	
Design One Way Shear (V_u):	428.9	k
One Way Shear Capacity (ϕV_c):	952.4	k
Usage:	0.45	OK
Design Flexural Load (M_u):	582.7	k-ft
Neutral Axis Depth:	1.55	in
Lower Steel Pad Moment Capacity (ϕM_n):	3376.5	k-ft
Usage:	0.17	OK

EXHIBIT C

EBI Consulting
environmental | engineering | due diligence

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

T-Mobile Existing Facility

Site ID: CT11527B

Cordless Willington
47 Turnpike Road
Willington, CT 06279

April 15, 2015

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general public allowable limit:	15.79 %

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April 15, 2015

T-Mobile USA
Attn: Jason Overbey, RF Manager
35 Griffin Road South
Bloomfield, CT 06002

Emissions Analysis for Site: **CT11527B – Cordless Willington**

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **47 Turnpike Road, Willington, CT**, for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (μW/cm2). The number of $\mu W/cm^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

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

General population/uncontrolled exposure limits apply to situations in which the general 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 ($\mu W/cm^2$). The general population exposure limit for the 700 MHz Band is 467 $\mu W/cm^2$, and the general population exposure limit for the PCS band is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

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

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed T-Mobile Wireless antenna facility located at **47 Turnpike Road, Willington, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna 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 equipment was calculated using the following assumptions:

1) 2 GSM channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel

2) 2 UMTS channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

3) 2 LTE channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.

4) 1 LTE channel (700 MHz Band) was considered for each sector of the proposed installation. This channel has a transmit power of 30 Watts.

5) 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.

6) 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.

7) The antennas used in this modeling are the **EMS RR90_17_02DP** for 1900 MHz (PCS) channels and the **Commscope LNX-6515DS-VTM** for 700 MHz channels. This is based on feedback from the carrier with regards to anticipated antenna selection. The **EMS RR90_17_02DP** has a maximum gain of **14.4 dBd** at its main lobe. The **Commscope LNX-6515DS-VTM** has a maximum gain of **14.6 dBd** at its main lobe. 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.

8) The antenna mounting height centerline of the proposed antennas is **159 feet** above ground level (AGL).

9) 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 calculations were done with respect to uncontrolled / general public threshold limits.

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T-Mobile Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	EMS RR90_17_02DP	Make / Model:	EMS RR90_17_02DP	Make / Model:	EMS RR90_17_02DP
Gain:	14.4 dBd	Gain:	14.4 dBd	Gain:	14.4 dBd
Height (AGL):	159	Height (AGL):	159	Height (AGL):	159
Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)
Channel Count	6	Channel Count	6	# PCS Channels:	6
Total TX Power:	240	Total TX Power:	240	# AWS Channels:	240
ERP (W):	6,610.15	ERP (W):	6,610.15	ERP (W):	6,610.15
Antenna A1 MPE%	1.02	Antenna B1 MPE%	1.02	Antenna C1 MPE%	1.02
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	Commscope LNX-6515DS-VTM	Make / Model:	Commscope LNX-6515DS-VTM	Make / Model:	Commscope LNX-6515DS-VTM
Gain:	14.6 dBd	Gain:	14.6 dBd	Gain:	14.6 dBd
Height (AGL):	159	Height (AGL):	159	Height (AGL):	159
Frequency Bands	700 MHz	Frequency Bands	700 MHz	Frequency Bands	700 MHz
Channel Count	1	Channel Count	1	Channel Count	1
Total TX Power:	30	Total TX Power:	30	Total TX Power:	30
ERP (W):	865.21	ERP (W):	865.21	ERP (W):	865.21
Antenna A2MPE%	0.28	Antenna B2 MPE%	0.28	Antenna C2 MPE%	0.28

Site Composite MPE%	
Carrier	**MPE%**
T-Mobile	**3.90**
AT&T	11.89 %
Site Total MPE %:	**15.79 %**

T-Mobile Sector 1 Total:	1.30 %
T-Mobile Sector 2 Total:	1.30 %
T-Mobile Sector 3 Total:	1.30 %
Site Total:	15.79 %

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Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general public exposure to RF Emissions.

The anticipated maximum composite contributions from the T-Mobile facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general public exposure to RF Emissions are shown here:

T-Mobile Sector	Power Density Value (%)
Sector 1:	1.30 %
Sector 2:	1.30 %
Sector 3 :	1.30 %
T-Mobile Total:	3.90 %
Site Total:	15.79 %
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **15.79%** of the allowable FCC established general public limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

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

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