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March 29, 2018

Melanie A. Bachman, Esq.
Executive Director/Staff Attorney
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **EM-VER-069-171227 – 812 Providence Pike, Killingly, Connecticut**

Dear Ms. Bachman:

In preparation for installation of the cell site modifications approved in EM-VER-069-171227, the Cellco Partnership d/b/a Verizon Wireless' ("Cellco") construction team discovered that the T-Arm mounting system at this facility needed to be replaced.

Attached is a Structural Certification Letter confirming that the tower can support the approved modifications with the new T-Arm mounting system.

If you have any questions or need any additional information regarding this facility please do not hesitate to contact me.

Sincerely,

Kenneth C. Baldwin

Copy to:
Tim Parks

17833808-v1

ALL-POINTS
TECHNOLOGY CORPORATION

March 19, 2018

Verizon Wireless
20 Alexander Drive
Wallingford, CT 06492

Attn: Mr. Daniel Burnett-Pollock

Re: Antenna Platform Structural Certification Letter
Verizon Site Ref: Danielson 2 CT
812 Providence Pike
Danielson, CT 06239

Project/Location Code: 20171719579/468921
APT Filing No. CT141EB10310

Dear Mr. Burnett-Pollock,

All-Points Technology Corporation, P.C. (APT), a professional engineering corporation licensed in the State of Connecticut, has been retained by Verizon (VZW) to assess the structural adequacy of the proposed VZW antenna mount assembly to support the proposed antenna and appurtenance modification on the above noted tower structure. This review was limited to a structural evaluation of the proposed antenna mounting assembly and its connection to the host tower structure.

The proposed VZW antenna and appurtenance modification consists of the replacement of six (6) existing panel antennas with six (6) proposed panel antennas and the replacement of three (3) existing Remote Radios Heads (RRHs) with nine (9) proposed RRHs. Three (3) existing panel antennas, two (2) existing Main Distribution Boxes (MDB) and two (2) hybrid cables are to remain. Further, the modification includes the replacement of three (3) lightweight T-Frames with three (3) Proposed SitePRO1 VFA12-HD 12' Heavy Duty V-Frames and two (2) Stiff Arms and antenna mounting pipes. Reference is made to the Construction Drawings prepared by this office, marked Rev 1, dated 03/19/18.

The structural review has been prepared in accordance with the following design standards:

ANSI/TIA-222-G-2009 - Structural Standards for Steel Antenna Towers and Antenna Supporting Structures

ASCE/SEI 7-10 – Minimum Design Loads for Buildings and Other Structures

AISC - American Institute of Steel Construction Manual of Steel Construction, 14th Ed.

IBC 2012 - as amended by the 2016 Connecticut State Building Code.

Verizon Network Standard NSTD-445 dated 06/25/17.

Antenna, appurtenance and mount assembly loads were evaluated utilizing the ANSI TIA-222-G standard.

- Load Case 1: 106 mph (3-second gust,), 0in ice (Nominal Survival Wind)
- Load Case 2: 50 mph (3-second gust) with 1.0in ice thickness
- Load Case 3: 60 mph (3-second gust) (Service Load)
- Structure Class II
- Exposure Category B

- Topographic Category 1.

Note:
1. Based upon IBC 2012/2016 Connecticut State Building Code maximum ultimate wind speed for site location of 130 mph (3-sec gust), equivalent to a nominal design speed of 106 mph (3-sec gust) per exception #5, Section 1609.1.1.

The existing and proposed Verizon antenna/appurtenance and mount assembly loading consists of the following equipment (proposed equipment shown in **bold** text):

Antenna and Appurtenance Make/Model	Quantity	Status	Mount Type	Elevation
Antel BXA-70063-6CF panel antennas	3	ETR	Three (3) Proposed SitePRO1 VFA12-HD 12' Heavy Duty V-Frames with Two (2) Stiff Arms and Antenna Mounting Pipes To Replace three (3) Existing Lightweight T-Arm Mounts	187 ft± AGL
Commscope JAHH-65B-R3B panel antennas	6	P		
Nokia B13 RRH4x30W 700 LTE-C Remote Radio Heads (RRHs)	3	P		
Nokia B66a RRH4x45W AWS Remote Radio Heads (RRHs)	3	P		
Nokia B5 RRH4x40 850 LTE-C Remote Radio Heads (RRHs)	3	P		
Raycap RxxDC-3315-PF-48 Main Distribution Boxes (MDBs)	2	ETR[3]		
RFS HB158-1-13U6-S6F18 Hybrid Fiber Cables (Exterior)	2	ETR	n/a	n/a
1-5/8" dia. Hybrid Fiber Lines	2	ETR	n/a	n/a

Notes:
1. ETR = Existing to Remain/to be Relocated; P = Proposed.
2. Antennas and appurtenances shall be centered on mount assembly at the above specified elevation with no vertical eccentricity.
3. Existing MDBs mounted to existing tower legs.

The findings of this review are based upon a comparative review of the proposed equipment loading and a mount classification letter for the SitePRO1 VFA12-HD 12' Heavy Duty V Frame and two (2) Stiff Arms.as prepared by the SSOE Group, dated January 20, 2017. The minimum Verizon classification rating for SitePRO1 VFA12-HD 12' Heavy Duty V Frame with two (2) stiff arms is M1400R(i)(2800)-4[6]/M1600A(2800)-4[6].

In conclusion, we find that the proposed replacement Verizon antenna mount assembly is structurally adequate to support the proposed antenna/appurtenance modification.

Sincerely,
All-Points Technology Corp., P.C.

Scott M. Chasse, P.E.
Principal

Prepared By:
All-Points Technology Corp., P.C.

Michael S. Trodden, P.E.
Sr. Structural Engineer