



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@ct.gov

www.ct.gov/csc

September 27, 2018

Michael Pattison
Real Estate Manager
Smartlink, LLC
85 Rangeway Road, Building 3, Suite 102
Billerica MA 01862

RE: **EM-AT&T-104-170323** – AT&T notice of completion of construction for an existing telecommunications facility located at 300 Plain Hill Road, Norwich, Connecticut.

Dear Mr. Pattison:

The Connecticut Siting Council (Council) received a notice of completion of construction for the above-referenced facility on September 25, 2018.

The Council approved the above referenced request for exempt modification in a Decision Letter dated April 10, 2017 (enclosed) with the following conditions:

1. The tower shall be reinforced in accordance with the Tower Modification and Design Drawings prepared by Tower Engineering Solutions dated 09/13/16 and stamped by Hanming You; and
2. Within 45 days following completion of the equipment installation, AT&T shall provide documentation certified by a Professional Engineer that its installation complied with the recommendations presented in the Structural Analysis.

The completion notice does not contain documentation certified by a Professional Engineer that AT&T's installation is in compliance with the Structural Analysis that references the Tower Modification and Design Drawings mentioned above.

Therefore, the completion notice is not in compliance with the conditions of approval at this time.

The Council recommends that Smartlink provide the above referenced documentation on or before October 29, 2018. If additional time is needed to gather the requested information, please submit a written request for an extension of time prior to October 29, 2018.

Thank you for your attention to this matter. Should you have any questions, please feel free to contact me at 860-827-2951.

Sincerely,

Melanie Bachman
Executive Director

MAB/FOC/IN

Enclosures

c: The Honorable Peter A. Nystrom, Mayor, City of Norwich
John L. Salomone, City Manager, City of Norwich
Deanna Rhodes, City Planner, City of Norwich
SBA Communications, Tower Owner
Kelvin H. Stott, Property Owner

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CONNECTICUT SITING COUNCIL

Affirmative Action / Equal Opportunity Employer



April 10, 2017

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

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Romina Kirchmaier
Smartlink
85 Rangeway Road
Building 3, Suite 102
North Billerica, MA 01832

RE: **EM-AT&T-104-170323** – AT&T notice of intent to modify an existing telecommunications facility located at 292 Plain Hill Road, Norwich, Connecticut.

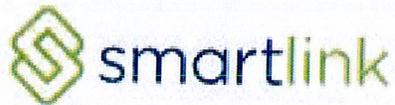
Dear Ms. Kirchmaier:

The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the following conditions:

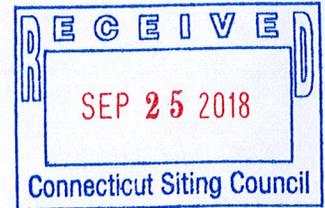
1. The tower shall be reinforced in accordance with the Tower Modification and Design Drawings prepared by Tower Engineering Solutions dated 09/13/16 and stamped by Hanming You;
2. Within 45 days following completion of the equipment installation, AT&T shall provide documentation certified by a Professional Engineer that its installation complied with the recommendations presented in the Structural Analysis;
3. Any deviation from the proposed modification as specified in this notice and supporting materials with the Council shall render this acknowledgement invalid;
4. Any material changes to this modification as proposed shall require the filing of a new notice with the Council;
5. Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
6. Any nonfunctioning antenna and associated antenna mounting equipment on this facility owned and operated by AT&T shall be removed within 60 days of the date the antenna ceased to function;
7. The validity of this action shall expire one year from the date of this letter; and
8. The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration.

The proposed modifications including the placement of all necessary equipment and shelters within the tower compound are to be implemented as specified here and in your notice dated March 8, 2017 and additional information received April 3, 2017. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site by any dimension, increase noise levels at the tower site boundary by six decibels or more, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standards adopted by the Federal Communications Commission pursuant to Section 704 of the Telecommunications Act of 1996 and by the state Department of Energy and Environmental Protection pursuant to Connecticut





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



September 20, 2018

RE: EM-AT&T-104-170323
Notice of Completion of Construction for Cingular Wireless/AT&T Facility at:
300 Plain Hill Road, Norwich, CT 06360
AT&T Site CTL02026

103 ✓
ORIGINAL

Dear Ms. Bachman,

The purpose of this letter is to notify you that the construction activity associated with the above referenced decision was completed on June 16, 2017.

The tower reinforcement was completed in accordance with the tower modification and design drawings prepared by Tower Engineering Solutions. Below is the Post Modification Structural Analysis that was completed Tower Engineering Solutions dated September 27, 2016.

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

Michael Pattison | Real Estate Manager
Smartlink
(m) 781-290-9276
michael.pattison@Smartlinkllc.com

Cc: Daniel M. Laub – Cuddy Feder (via email)
CT Siting Council (paper copy)



Tower Engineering Solutions

Phone (972) 483-0607, Fax (972) 975-9615
8445 Freeport Parkway, Suite 375, Irving, Texas 75063

Post-Mod Structural Analysis Report

Existing 180 ft Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT01365-S

Customer Site Name: Norwich 2 CT

Carrier Name: AT&T

Carrier Site ID / Name: CTL02026

Site Location: 292 Plain Hill Road

Norwich, Connecticut

New London County

Latitude: 41.578199

Longitude: -72.103675

Analysis Result:

Max Structural Usage: 85.2% [Pass]

Max Foundation Usage: 89.0% [Pass]

Report Prepared By : Haoxuan Lei





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Introduction

The purpose of this report is to summarize the analysis results on the 180 ft Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any existing modification listed under Sources of Information was assumed completed and was included in this analysis.

The proposed modification by **TES** listed under Sources of Information was considered completed and was included in this analysis.

Sources of Information

Tower Drawings	Tower Design prepared by Valmont, job # 18407-99, dated 06/03/1999
Foundation Drawing	Foundation Design prepared by Valmont, job # 18407-99, dated 06/03/1999
Geotechnical Report	Geotechnical Report prepared by FDH, job # 1207121EG1, dated 08/13/2012
Existing Modification	Modification Design prepared by FDH, job # 1316541400, dated 03/14/13
Proposed Modification	TES Job # 23727

Analysis Criteria

The rigorous analysis was performed in accordance with the requirements and stipulations of the ANSI/TIA/EIA 222-G. In accordance with this standard, the structure was analyzed using **TESPoles**, a proprietary analysis software. The program considers the structure as an elastic 3-D model with second-order effects and temperature effects incorporated in the analysis. The analysis was performed using multiple wind directions.

Wind Speed Used in the Analysis:	Ultimate Design Wind Speed $V_{ult} = 136.0$ mph (3-Sec. Gust)/ Nominal Design Wind Speed $V_{asd} = 105.0$ mph (3-Sec. Gust)
Basic Wind Speed with Ice:	50 mph (3-Sec. Gust) with 3/4" radial ice concurrent
Operational Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	ANSI/TIA/EIA 222-G / 2016 Connecticut State Building Code
Exposure Category:	C
Structure Class:	II
Topographic Category:	1
Crest Height:	0 ft
Seismic Parameters:	SS = 0.17, S1 = 0.061

Existing Antennas, Mounts and Transmission Lines

The table below summarizes the antennas, mounts and transmission lines that were considered in the analysis as existing on the tower.

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	177.0	3	RFS - APXVSPP18-C-A20 - Panel	Platform w/ Hand Rails	(4) 1 1/4"	Sprint
2		3	RFS - APXVTM14C-I20 - Panel			
3		3	ALU - TD-RRH8x20-25			
4		3	ALU - 1900MHz - RRUs			
5		3	ALU - 800 MHz - RRUs			
6		3	ALU - 800MHz Filters			
7		4	RFS - ACU-A20-N			
8	159.0	3	Antel - BXA-80080/4CF - Panel	Low Profile Platform	(11) 1 5/8" (2) 1 5/8" Fiber	Verizon
9		3	Antel - BXA-171085-8BF-EDIN-2 - Panel			
10		2	RFS - DB-T1-6Z-8AB-0Z - ODU			
11		6	Commscope - SBNHH-1D65B - Panel			
12		3	Alcatel Lucent - B25 RRH4X30 - RRH			
13		3	Alcatel Lucent - B25 RRH4X30 - RRH			
14		3	Alcatel Lucent - RRH 4X45-PCS - RRH			
-	147.0	6	Powerwave Technologies - 7770 - Panel	Low Profile Platform	(1) 0.5" Fiber (12) 1 5/8" (2) 3/4" DC	AT&T
-		1	Andrew - SBNH-1D6565C - Panel			
-		1	KMW - AM-X-CD-16-65-00T-RET - Panel			
-		1	Powerwave - P65-17-XLH-RR - Panel			
-		6	Powerwave Technologies - LGP21401 - TMA			
-		6	Ericsson - RRUS 11 - RRU			
-		6	Powerwave - LGP21903 Diplexer - Diplexer			
-		1	Raycap - DC6-48-60-18-8F ("Squid") - DC Surge Suppression System			
25	52.0	1	GPS	-	(1) 1/2"	Sprint

Proposed Carrier's Final Configuration of Antennas, Mounts and Transmission Lines

Information pertaining to the proposed carrier's final configuration of antennas and transmission lines was provided by SBA Communications Corp. The proposed antennas and lines are listed below.

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
15	147.0	1	CCI Antennas - HPA-65R-BUU-H6 - Panel	Low Profile Platform	(1) 1/2" Fiber (12) 1 5/8" (2) 3/4" DC	AT&T
16		2	Cci Antennas - HPA-65R-BUU-H8 - Panel			
17		3	Ericsson - RRUS 12 - RRU			
18		3	Ericsson - RRUS A2 - RRU			
19		6	Powerwave Technologies - 7770 - Panel			
20		6	Powerwave Technologies - LGP21401 - TMA			
21		12	Kathrein - 860 10025 RET - RET			
22		6	Ericsson - RRUS 11 - RRU			
23		6	Powerwave - LGP21901 Diplexer - Diplexer			
24		1	Raycap - DC6-48-60-18-8F ("Squid") - DC Surge Suppression System			

See the attached coax layout for the line placement considered in the analysis.

Analysis Results

The results of the structural analysis, performed for the wind and ice loading and antenna equipment as defined above, are summarized as the following:

	Pole shafts	Anchor Bolts	Base Plate
Max. Usage:	85.2%	72.9%	54.4%
Pass/Fail	Pass	Pass	Pass

Foundations

	Moment (Kip-Ft)	Shear (Kips)
Original Design Reactions	4948.0	38.8
Analysis Reactions	5345.8	44.1
Factored Reactions*	6679.8	52.4
% of Design Reactions	80.0%	84.2%

* Per section 15.5.1 of the TIA-222-G standard, factored reactions were obtained by multiplying a 1.35 factor to the original design reactions.

The foundation has been investigated using the supplied documents and soils report and was found adequate. Therefore, no modification to the foundation will be required.

Operational Condition (Rigidity):

Operational characteristics of the tower are found to be within the limits prescribed by ANSI/TIA/EIA 222-G for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 1.3536 degrees under the operational wind speed as specified in the Analysis Criteria.

Conclusions

Based on the analysis results, the structure and its foundation will be adequate to safely support the existing and proposed equipment and meet the minimum requirements per the design ANSI/TIA/EIA 222-G standards under a basic wind speed of 105 mph no ice and 50 mph with 3/4" radial ice after the following proposed modification is successfully completed.

- Proposed modification design drawing by TES Job # 23727

Pre-Mod Installation Determination

We have also checked this tower to determine if the proposed AT&T equipment loading can be installed prior to the completion of the required modifications. We ran a reduced wind loading case as required by TIA-1019 considering a construction period of no more than 6 months.

The tower and foundations passed, so the Carrier can proceed and install their proposed loading prior to the mods completion. Please be aware that this approval is being provided and is based on the method outlined in TIA-1019. This approval is not a blanket approval and there is still a risk that the tower will experience a wind event that cannot be predicted by TIA-1019 or our Engineers. In the event of an unforeseen wind event, Tower Engineering Solutions will not be liable nor responsible for damage to the tower or the Carriers equipment. Additionally, the tower cannot go beyond the 6 month construction period without the modifications being completed. If the modifications cannot be completed within 6 months from the completed installation of the Carrier's proposed equipment, TES must be notified immediately for further review.