

Centek Engineering, Inc. 3-2 North Branford Road Branford, Connecticut 06405 Phone: (203) 488-0580 Fax: (203) 488-8587

Steven L. Levine Real Estate Consultant

#### HAND DELIVERED

September 13, 2013

Attorney Melanie Bachman Acting Executive Director Connecticut Siting Council 10 Franklin Square New Britain, Connecticut 06051

Re: New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 40 Sherman Road, Woodstock (owner, Verizon)

Dear Ms. Bachman:

In order to accommodate technological changes, implement Uniform Mobile Telecommunications System ("UMTS") and/or Long Term Evolution ("LTE") capabilities, and enhance system performance in the State of Connecticut, New Cingular Wireless PCS, LLC ("AT&T") plans to modify the equipment configurations at many of its existing cell sites. Please accept this letter and attachments as notification, pursuant to R.C.S.A. Section 16-50j-73, of construction which 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 chief elected official of the municipality in which the affected cell site is located.

UMTS technology offers services to mobile computer and phone users anywhere in the world. Based on the Global System for Mobile ("GSM") communication standard, UMTS is the planned worldwide standard for mobile users. UMTS, fully implemented, gives computer and phone users high-speed access to the Internet as they travel. They have the same capabilities even when they roam, through both terrestrial wireless and satellite transmissions.

LTE is a high-performance air interface for cellular mobile communications. It is designed to increase the capacity and speed of mobile telephone networks.

Attached is a summary of the planned modifications, including power density calculations reflecting the change in AT&T's operations at the site. Also included is documentation of the structural sufficiency of the tower to accommodate the revised antenna configuration.

The changes to the facility do not constitute modifications 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 or altered. 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. The height of the overall structure will be unaffected.
- 2. The proposed changes will not extend the site boundaries. There will be no effect on the site compound other than some enlarged equipment pads as may be noted in the attachments.
- 3. The proposed changes will not increase the noise level at the existing facility by six decibels or more.
- 4. Radio frequency power density may increase due to use of one or more GSM channel for UMTS transmissions. Moreover, LTE will utilize additional radio frequencies newly-licensed by the FCC for cellular mobile communications. However, the changes 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.

For the foregoing reasons, AT&T respectfully submits that the proposed changes at the referenced site constitute exempt modifications under R.C.S.A. Section 16-50j-72(b)(2).

Please feel free to call me at (860) 830-0380 with questions concerning this matter. Thank you for your consideration.

Sincerely.

Steven L. Levine Real Estate Consultant

cc: Honorable Allan D. Walker, Jr., 1st Selectman, Town of Woodstock

Attachments

### NEW CINGULAR WIRELESS PCS, LLC Equipment Modification

40 Sherman Road, Woodstock, CT

Site Number 1043

Prior Decisions: Exempt Mods. 6/10 and 11/12

Tower Owner/Manager:

Verizon

**Equipment configuration:** 

Monopole

Current and/or approved:

Six Powerwave 7770 antennas @ 127 ft

Two KMW AM-X-CD-17-65-00T-RET antennas @ 127 ft c.l.

One Powerwave P65-17-XLH-RR antenna @ 127 ft c.l.

Six Powerwave TMA's @ 127 ft c.l.

Six Ericsson RRUS-11 remote radio heads @ 125 ft c.l. One Raycap DC6-48-60-18-8F surge arrestor @ 125 ft c.l.

Twelve runs 1-5/8 inch coax

One fiber cable and two DC control cables

Equipment shelter

Proposed modifications:

Install six Ericsson RRUS-11 remote radio heads @ 129 ft c.l.

Install one Raycap DC6-48-60-18-8F surge arrestor @ 129 ft

c.1.

Install one fiber cable and two DC control cables

#### **Power Density:**

Worst-case calculations for existing wireless operations at the site indicate a radio frequency electromagnetic radiation power density, measured at ground level beside the tower, of approximately 38.8 % of the standard adopted by the FCC. There will be no change in radiofrequency emissions due to the proposed equipment modification.

#### **Existing & Proposed**

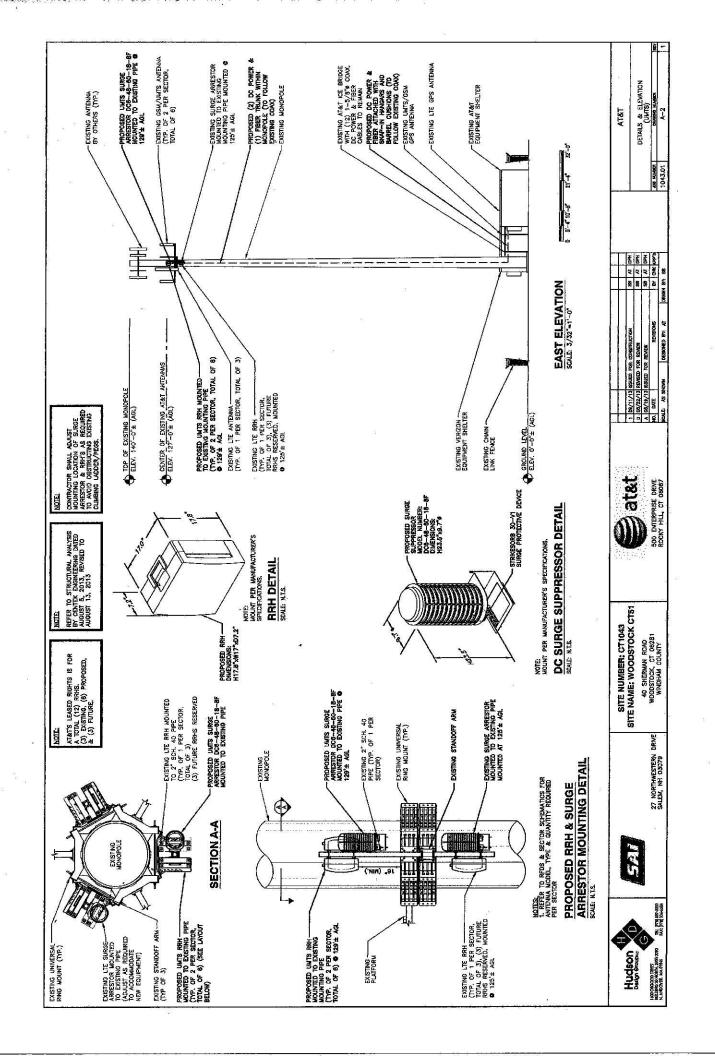
| Company       | Centerline Ht<br>(feet) | Frequency<br>(MHz) | Number of<br>Channels | Power Per<br>Channel<br>(Watts) | Power Density<br>(mW/cm²) | Standard<br>Limits<br>(mW/cm²) | Percent of<br>Limit |
|---------------|-------------------------|--------------------|-----------------------|---------------------------------|---------------------------|--------------------------------|---------------------|
| Other Users * |                         |                    |                       | ALEXAN TRACTOR                  |                           |                                | 16.80               |
| AT&T LTE *    | 127                     | 734                | 1                     | 1771                            | 0.0395                    | 0.4893                         | 8.07                |
| AT&T GSM*     | 127                     | 880 - 894          | 1                     | 283                             | 0.0063                    | 0.5867                         | 1.08                |
| AT&T GSM *    | 127                     | 1900 Band          | 4                     | 525                             | 0.0468                    | 1.0000                         | 4.68                |
| AT&T UMTS *   | 127                     | 880 - 894          | 2                     | 565                             | 0.0252                    | 0.5867                         | 4.29                |
| AT&T UMTS *   | 127                     | 1900 Band          | 2                     | 875                             | 0.0390                    | 1.0000                         | 3.90                |
| . Total *     |                         |                    |                       |                                 |                           | 1 8                            | 208.89%             |

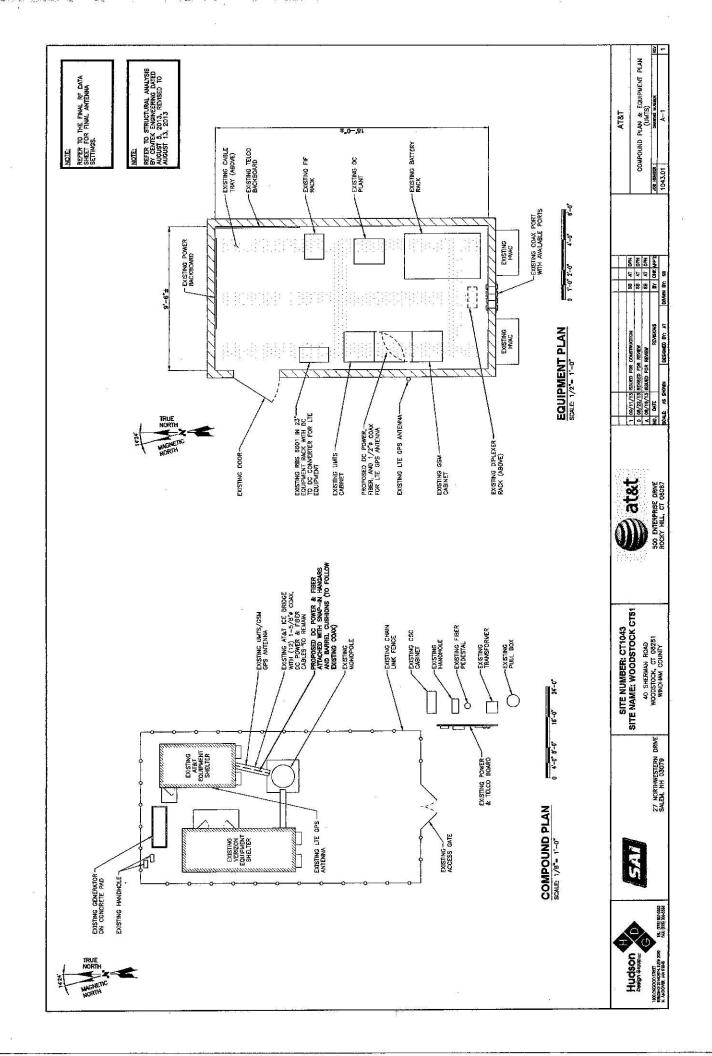
<sup>\*</sup> Per CSC records.

# **Structural information:**

The attached structural analysis (Centek Engineering Inc., 8/13/13) demonstrates that the tower and foundation are adequate to accommodate the proposed equipment modifications.

THE DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND CONFRIGHTED WORK OF ATEAT, ANY DIPLICATION OR USE WITHOUT EXPRESS WHITHEN CONSENT IS STREAD OF DIPLICATION AND USE ITS CONFRINGING AGRICULTING THEIR LUMPLLY AUTHORIZED REQUIREDRY AND ADMINISTRATIVE FUNDIDENS IS SPECIFICALLY ALLOYED. THE FACILIY IS AN UNANANED PRIVATE AND SECURED EQUIPAENT INSTALLATON, IT IS ONLY ACCESSED BY TRANED TECHNICANS FOR PERIODIC ROLLINE MAYITEWANG AND THEREFORE DOES NOT REQUIRE AND THEREFORE COCKENIES. THE FACILITY IS NOT COMERNED BY REQUIATIONS REQUIRING PUBLIC, ACCESS PER ADA REQUIRAMENTA. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE US STEEL AND SHALL IMMEDIATELY NOTIFY THE REFER REPRESENTATIVE IN WRITING OF DESCREAMAINES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME. CALL TOLL FREE 1-800-922-4455 OR DIAL 811 TITLE SHEET (UMTS) UNDERGROUND SERVICE ALERT BEFORE YOU DIG GENERAL NOTES SITE NAME: WOODSTOCK CT51 CALL SITE NUMBER: CT1043 SB AT DPH SB AT DPH SB AT DPH BY CHK APP'D atet ń START OUT GOING NORTHEAST ON ENTERPRISE DR TOWARD CAPITOL BLVD. TURN LEFT ONTO COPTIOL BLVD. TURN LEFT ONTO BEST STREET, MEEDE ONTO CIT-15 N VNA. EXIT 29 TOWARD I-84 / EAST WARDHEAD AND CIT-15 N VNA. EXIT 29 TOWARD I-84 / EAST WARDHEAD AND CIT-15 N VNA. EXIT 29 TOWARD I-84 / EAST TOWARD WARDHEAD AND STONE, LAST TOWARD WARDHEAD AND STONE, LAST TOWARD WARDHEAD AND STONE THE TOWARD BLOCKEY HAW / MEED TOWARD EAST TOWARD WARDHEAD AND STONE TOWARD WARDHEAD AND COMPOLLING TOWARD WARDHEAD AND COMPOLLING TOWARD WARDHEAD AND COMPOLLING TOWARD WARDHEAD AND COMPOLLING TOWARD WARDHEAD WARDHEAD AND COMPOLLING TOWARD WARDHEAD WARDH **Watst** VICINITY MAP 500 ENTERPRISE DRIVE ROCKY HILL, CT 08057 DIRECTIONS TO SITE SITE NUMBER: CT1043 SITE NAME: WOODSTOCK CT51 40 SHERMAN ROAD WOODSTOCK, CT 06281 WINDHAM COUNTY REV 27 NORTHWESTERN DRIVE SALEM, NH 03079 UNMANNED TELECOMMUNICATIONS FACILITY UPGRADE (UMTS); PROJECT INFORMATION GROUNDING ONE LINE DIAGRAM & DETAILS 41° 58' 43.1" N 72' 05' 39.9" W DRAWING INDEX COMPOUND PLAN & EQUIPMENT PLAN TELECOMMUNICATIONS FACILITY TELECOMMUNICATIONS FACILITY 888-915-5600 O SHERMAN ROAD MODDSTOCK, CT 08281 41.97865 N 72.09442 W DETAILS & ELEVATION GN-1 GENERAL NOTES TITLE SHEET SCOPE OF WORK: SITE ADDRESS: CURRENT USE: PROPOSED USE: NOC# Hudson Design Stoupes LATITUDE: LONGITUDE: A-2 <u>-</u> 5 ĭ





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Centered on Solutions™

# Structural Analysis Report

140-ft Existing Valmont Monopole

Proposed AT&T Mobility
Antenna Upgrade

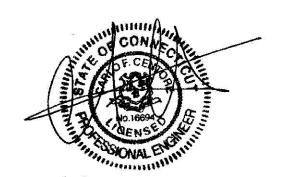
AT&T Site Ref: CT1043

Verizon Site Ref: Woodstock NW

40 Sherman Road Woodstock, CT

CENTEK Project No. 13212

Date: August 5, 2013
Rev 1: August 13, 2013



Prepared for:

AT&T Mobility 500 Enterprise Drive, Suite 3A Rocky Hill, CT 06067

#### <u>Introduction</u>

The purpose of this report is to summarize the results of the non-linear,  $P-\Delta$  structural analysis of the antenna upgrade proposed by AT&T Mobility on the existing monopole (tower) located in Woodstock, CT.

The host tower is a 140-ft tall extendable to 157-ft, three-section, eighteen sided, tapered monopole, originally designed and manufactured by Valmont; project no. 12650-69 dated June 26, 2009. The tower geometry, structure member sizes and foundation system information were obtained from the original manufacturers design documents.

Antenna and appurtenance information were obtained from a previous structural analysis report prepared by Centek job no. 12044.CO12 dated October 8, 2012.

The tower is made up of three (3) tapered vertical sections consisting of A572-65 pole sections. The vertical tower sections are slip joint connected. The diameter of the pole (flat-flat) is 28.58-in at the top and 65.00-in at the base.

AT&T Mobility proposes the installation of six (6) Remote Radio Units (RRU's) and one (1) surge arrestor mounted on a proposed universal ring mount. Refer to the Antenna and Appurtenance Summary below for a detailed description of the proposed antenna and appurtenance configuration.

#### Antenna and Appurtenance Summary

The existing, proposed and future loads considered in this analysis consist of the following:

- VERIZON (RESERVED): <u>Antennas</u>: Six (6) Antel LPA-80063-6CF panel antennas, six (6) Antel BXA-70063-6CF panel antennas, six (6) LPA-171063-12CF panel antennas, six (6) RRH's and one (1) main distribution box mounted to a 13-ft low profile platform with a RAD center elevation of 137-ft above grade. <u>Coax Cables</u>: Twelve (12) 1-5/8" Ø coax cables running on the inside of the existing tower. Six (6) 1-5/8" Ø coax cables and two (2) 1-5/8" Ø fiber cable banded to the exterior of the existing tower.
- AT&T (EXISTING): <u>Antennas</u>: Six (6) Powerwave 7770.00 panel antennas, two (2) KMW AM-X-CD-17-65-00T-RET panel antennas, one (1) Powerwave P65-17-XLH-RR panel antenna, six (6) Powerwave TT08-19DB111-001 TMA's and six (6) RET's mounted on a 13-ft low profile platform with a RAD center elevation of 127-ft above grade level. <u>Coax Cables</u>: Twelve (12) 1-5/8" Ø coax cables running on the inside of the existing tower.
- AT&T (RESERVED):
   Antennas: Three (3) Powerwave 7770.00 panel antennas, three (3) Powerwave TT08-19DB111-001 TMA's and three (3) RET's mounted on a 13-ft low profile platform with a RAD center elevation of 127-ft above grade level.

   Coax Cables: Six (6) 1-5/8" Ø coax cables banded to the exterior of the existing tower.

REPORT SECTION 1-1

AT&T (EXISTING):

Antennas: Six (6) Ericsson RRUS-11 and one (1) Raycap DC6-48-60-18-8F surge arrestor mounted to one (1) universal ring mount with a RAD center elevation of 125-ft above grade level.

Coax Cables: One (1) fiber cable and two (2) dc control cables running inside of the existing tower.

AT&T (PROPOSED):

<u>Antennas</u>: Six (6) Éricsson RRUS-11 and one (1) Raycap DC6-48-60-18-8F surge arrestor mounted to one (1) universal ring mount with a RAD center elevation of 129-ft above grade level.

<u>Coax Cables:</u> One (1) fiber cable and two (2) dc control cables running inside of the existing tower.

# Primary Assumptions Used in the Analysis

- The tower structure's theoretical capacity not including any assessment of the condition of the tower.
- The tower carries the horizontal and vertical loads due to the weight of antennas, ice load and wind.
- Tower is properly installed and maintained.
- Tower is in plumb condition.
- Tower loading for antennas and mounts as listed in this report.
- All bolts are appropriately tightened providing the necessary connection continuity.
- All welds are fabricated with ER-70S-6 electrodes.
- All members are assumed to be as specified in the original tower design documents or reinforcement drawings.
- All members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
- All member protective coatings are in good condition.
- All tower members were properly designed, detailed, fabricated, installed and have been properly maintained since erection.
- Any deviation from the analyzed antenna loading will require a new analysis for verification of structural adequacy.
- All existing coax cables to be installed as indicated in this report.

REPORT SECTION 1-2

## Analysis

The existing tower was analyzed using a comprehensive computer program entitled RISATower. The program analyzes the tower, considering the worst case loading condition. The tower is considered as loaded by concentric forces along the tower shaft, and the model assumes that the shaft members are subjected to bending, axial, and shear forces.

The existing tower was analyzed for the controlling basic wind speed (fastest mile) with no ice and a 75% reduction of wind force with ½ inch accumulative ice to determine stresses in members as per guidelines of TIA/EIA-222-F-96 entitled "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures", the American Institute of Steel Construction (AISC) and the Manual of Steel Construction; Allowable Stress Design (ASD).

The controlling wind speed is determined by evaluating the local available wind speed data as provided in Appendix K of the CSBC1 and the wind speed data available in the TIA/EIA-222-F-96 Standard. The higher of the two wind speeds is utilized in preparation on the tower analysis.

#### Tower Loading

Tower loading was determined by the basic wind speed as applied to projected surface areas with modification factors per TIA/EIA-222-F, gravity loads of the tower structure and its components, and the application of 1/2" radial ice on the tower structure and its components.

| Basic | Wind |
|-------|------|
| Cass  | 4.   |

Windham: v = 85 mph (fastest mile)

[Section 16 of TIA/EIA-222-F-96]

Speed:

Woodstock; v = 100 mph (3 second gust) equivalent to v =80 mph

[Appendix K of the 2005 CT Building Code Supplement]

(fastest mile)

TIA/EIA-222-F wind speed controls.

Load Cases:

Load Case 1; 85 mph wind speed w/ no ice plus gravity load - used in calculation of tower stresses and

96]

rotation.

Load Case 2; 74 mph wind speed w/ ½" radial ice plus gravity load - used in calculation of tower stresses. The

74 mph wind speed velocity

represents 75% of the wind pressure generated by the 85 mph wind

speed..

[Section 2.3.16 of TIA/EIA-222-F-

[Section 2.3.16 of TIA/EIA-222-F-

Load Case 3; Seismic – not checked

[Section 1614.5 of State Bldg. Code 20051 does not control in the design of this structure type

SECTION 1-3

<sup>&</sup>lt;sup>1</sup> The 2005 Connecticut State Building Code as amended by the 2009 CT State Supplement. (CSBC)

## Tower Capacity

Tower stresses were calculated utilizing the structural analysis software RISATower. Allowable stresses were determined based on Table 5 of the TIA/EIA code with a 1/3 increase per Section 3.1.1.1 of the same code.

 Calculated stresses were found to be within allowable limits. In Load Case 1, per RISATower "Section Capacity Table", this tower was found to be at 49.5% of its total capacity.

| Tower Section   | Elevation    | Stress Ratio<br>(percentage of<br>capacity) | Result |
|-----------------|--------------|---|--------|
| Pole Shaft (L3) | 0.00'-46.08' | 49.5%                                       | PASS   |

# Foundation and Anchors

The existing foundation consists of a 8.5-ft  $\emptyset$  x 4.5-ft long reinforced concrete pier on a 26.0-ft square x 3.0-ft thick reinforce concrete pad. The sub-grade conditions used in the analysis of the existing foundation were obtained from the aforementioned original design report prepared by Valmont job no. 12650-69 dated June 26, 2009. The base of the tower is connected to the foundation by means of (20) 2.25 $^{\circ}$  $\emptyset$ , ASTM A615-75 anchor bolts embedded approximately 6-ft into the concrete foundation structure.

Review of the foundation and anchor design consisted of verification of applied loads obtained from the tower design calculations and code checks of allowable stresses:

The tower base reactions developed from the governing Load Case 1 were used in the verification of the foundation and its anchors:

| Location | Vector      | Proposed Reactions |
|----------|-------------|--------------------|
|          | Shear       | 31 kips            |
| Base     | Compression | 40 kips            |
|          | Moment      | 3015 kip-ft        |

The foundation was found to be within allowable limits.

| Foundation                             | Design<br>Limit    | IBC 2003/2005<br>CT State Building<br>Code Section<br>3108.4.2 (FS) <sup>(1)</sup> | Proposed<br>Loading<br>(FS) <sup>(1)</sup> | Result |
|--|--------------------|--|--|--------|
| Reinforced<br>Concrete Pad<br>and Pier | OTM <sup>(2)</sup> | 2.0  | 2.76                                       | PASS   |

Note 1: FS denotes Factor of Safety.

Note 2: OTM denotes Overturning Moment

The anchor bolts and base plate were found to be within allowable limits.

| Tower.<br>Component | Design Limit | Sigoss Ratio<br>(percentage of<br>capacity) | Result |
|---------------------|--------------|---|--------|
| Anchor Bolts        | Compression  | 52.0%                                       | PASS   |
| Base Plate          | Bending      | 23.5%                                       | PASS   |

### Conclusion

This analysis shows that the subject tower <u>is adequate</u> to support the proposed modified antenna configuration.

The analysis is based, in part, on the information provided to this office by AT&T Mobility. If the existing conditions are different than the information in this report, Centek Engineering, Inc. must be contacted for resolution of any potential issues.

Please feel free to call with any questions or comments.

Respectfully Submitted by:

Carlo F. Centore, PE

Principal ~ Structural Engineer

Prepared by:

Timothy J. Lynn, EIT Structural Engineer

|                    | 82     |         |                |          |
|--------------------|--------|---------|----------------|----------|
| Section            | , e    | 2       |                |          |
| Length (ft)        | 63.250 | 48.587  | 51.247         | 47       |
| Number of Sides    | 82     | -18     | 18             |          |
| Thickness (in)     | 0.438  | 0.375   | 0.281          | E        |
| Socket Length (ft) |        | 791.7   | 5.917          |          |
| Top Dia (in)       | 50.649 | 40,236  | 28,583         | 83       |
| Bot Dia (in)       | 65.000 | 53.330  | 42,393         | 93       |
| Grade              |        | A572-65 |                |          |
| Weight (K) 29.1    | 14.4   | 6.1     | 5.5            |          |
| <u>0.0 R</u>       |        | 46.1 ft | <u>88.8 ft</u> | 140.0 ft |
|                    |        |         |                |          |
|                    |        |         |                |          |

#### **DESIGNED APPURTENANCE LOADING**

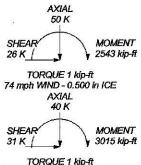
| TYPE   | ELEVATION                             | TYPE   | ELEVATION  |
|--|---------------------------------------|--|--|
| LPA-80063/6CF (Verizon - Reserved)                               | 137                                   | (2) TT08-19DB111-001 TMA (ATE -                      | 127  |
| LPA-171063-12CF (Verizon -                                       | 137                                   | Existing)  |  |
| Reserved)  | (642)(C)                              | (2) RET (ATI - Existing)                             | 127  |
| BXA-70063/6CF (Verizon - Reserved)                               | 137                                   | (2) RET (ATT - Existing)                             | 127  |
| BXA-70063/6CF (Verizon - Reserved)                               | 137                                   | (2) RET (ATI - Existing)                             | 127  |
| LPA-171063-12CF (Vertzon -                                       | 137                                   | 7770.00 (ATI - Reserved)                             | 127  |
| Reserved)  | - F                                   | 7770.00 (ATI - Reserved)                             | 127  |
| LPA-80063/6CF (Verizon - Reserved)                               | 137                                   | 7770,00 (ATI - Reserved)                             | 127  |
| LPA-80063/8CF (Verizon - Reserved)                               | 137                                   | TT08-19DB111-001 TMA (ATI -                          | 127  |
| LPA-171063-12CF (Verizon -<br>Reserved)                          | 137                                   | Reserved)<br>TT08-19DB111-001 TMA (ATE -             | 127  |
| BXA-70063/6CF (Verizon - Reserved)                               | 137                                   | Reserved)  | Name and Address of the Address of t |
| BXA-70063/6CF (Vertzon - Reserved)<br>LPA-171063-12CF (Vertzon - | 137<br>137                            | TT08-19DB111-001 TMA (ATI - Reserved)                | 127  |
| Reserved)  | 137                                   | RET (ATI - Reserved)                                 | 127  |
| LPA-80063/6CF (Verizon - Reserved)                               | 137                                   | RET (ATI - Reserved)                                 | 127  |
| LPA-80063/6CF (Verizon - Reserved)                               | 137                                   | RET (ATI - Reserved)                                 | 127  |
| LPA-171063-12CF (Verizon<br>Reserved)                            | 137                                   | Valmont 13' Low Profile Platform (ATI -<br>Existing) | 127  |
| BXA-70063/6CF (Verizon - Reserved)                               | 137                                   | P65-17-XLH-RR (ATI - Existing)                       | 127  |
| BXA-70063/6CF (Verizon - Reserved)                               | 137                                   | AM-X-CD-17-65-00T-RET (ATI-                          | 127  |
| LPA-171063-12CF (Verizon -<br>Reserved)                          | 137                                   | Existing)  AM-X-CD-17-65-00T-RET (ATI -              | 127  |
| LPA-80063/6CF (Verizon - Reserved)                               | 137                                   | Existing)  |  |
| (2) RRH (Verizon - Reserved)                                     | 137                                   | (2) 7770.00 (ATL - Existing)                         | 127  |
| (2) RRH (Verizon - Reserved)                                     | 137                                   | (2) 7770.00 (ATI - Existing)                         | 127  |
| (2) RRH (Vertzon - Reserved)                                     | 137                                   | (2) 7770.00 (ATI - Existing)                         | 127  |
| DB-T1-6Z-8AB-0Z (Verizon - Reserved)                             | · · · · · · · · · · · · · · · · · · · | (2) TT08-190B111-001 TMA (ATI -                      | 127  |
| Valmont 13' Low Profile Platform<br>(Verizon - Existing)         | 137                                   | Existing)<br>(2) TT08-19DB111-001 TMA (ATI-          | 127  |
| (2) RRUS-11 (ATI - Proposed)                                     | 129                                   | Existing)  |  |
| (2) RRUS-11 (ATI - Proposed)                                     | 129                                   | (2) RRUS-11 (ATI - Existing)                         | 125  |
| (2) RRUS-11 (ATI - Proposed)                                     | 129                                   | (2) RRUS-11 (ATI - Existing)                         | 125  |
| DC6-48-60-18-8F Surge Arrestor (ATI -                            | 129                                   | (2) RRUS-11 (ATI - Existing)                         | 125  |
| Proposed)  | 400                                   | DC6-48-60-18-8F Surge Arrestor (ATI -<br>Existing)   | 125  |
| Valmont Uni-Tri Bracket (ATI -<br>Proposed)                      | 129                                   | Valmont Uni-Tri Bracket (ATI - Existing)             | 125  |

#### **MATERIAL STRENGTH**

| GRADE   | Fy     | Fu     | GRADE | Fy | Fu |
|---------|--------|--------|-------|----|----|
| A572-65 | 65 ksi | 80 ksi |       |    |    |

#### **TOWER DESIGN NOTES**

- 1. Tower is located in Windham County, Connecticut.
  2. Tower designed for a 85 mph basic wind in accordance with the TIA/EIA-222-F Standard.
  3. Tower is also designed for a 74 mph basic wind with 0.50 in ice.
  4. Deflections are based upon a 60 mph wind.
  5. Weld together tower sections have flange connections.
  6. Connections use galvanized A325 bolts, nuts and locking devices. Installation per TIA/EIA-222 and AISC Specifications.
  7. Tower members are "hot dipped" galvanized in accordance with ASTMA123 and ASTMA153 Standards.
- Standards.
- 8. Welds are fabricated with ER-70S-6 electrodes.
  9. TOWER RATING: 49.5%



TORQUE 1 kip-ft REACTIONS - 85 mph WIND

| Centek Engineering Inc. | lob: 13212 - CT1043  |                            |             |  |  |
|-------------------------|--|----------------------------|-------------|--|--|
| 63-2 North Branford Rd. | Project: 140' Valmont Monopole - 40 Sherman Rd., Woodstock, Cl |                            |             |  |  |
| Branford, CT 06405      | Client AT&T Mobility   | Drawn by: TJL              | App'd:      |  |  |
|                         | Code: TIA/EIA-222-F  | Date: 08/13/13             | Scale: NTS  |  |  |
| FAX: (203) 488-8587     | Path: J:\Jobs\1321200,W\Rev (1)                                | ACalcs&ERM140' Monopole.er | Dwg No. E-1 |  |  |



Centek Engineering, Inc. 3-2 North Branford Road Branford, Connecticut 06405 Phone: (203) 488-0580 Fax: (203) 488-8587

Steven L. Levine Real Estate Consultant

September 13, 2013

Honorable Allan D. Walker, Jr.

1st Selectman, Town of Woodstock
Town Office Building 415 Rte. 169
Woodstock, Connecticut 06281-3039

Re: Telecommunications Facility - 40 Sherman Road, Woodstock

Dear Mr. Walker:

In order to accommodate technological changes, implement Uniform Mobile Telecommunications System ("UMTS") and Long Term Evolution ("LTE") capabilities, and enhance system performance in the State of Connecticut, New Cingular Wireless PCS, LLC ("AT&T") will be changing its equipment configuration at certain cell sites.

As required by Regulations of Connecticut State Agencies ("R.C.S.A.") Section 16-50j-73, the Connecticut Siting Council has been notified of the changes and will review AT&T's proposal. Please accept this letter as notification under Section 16-50j-73 of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2).

The enclosed Notice fully sets forth the AT&T proposal. However, if you have any questions or require any further information on the plans for the site or the Siting Council's procedures, please contact the undersigned at 860-830-0380 or Ms. Melanie Bachman, Acting Executive Director, Connecticut Siting Council at (860) 827-2935.

Sincerely,

Steven L. Levine

Real Estate Consultant

Enclosure