

# 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](mailto:siting.council@ct.gov)

[www.ct.gov/csc](http://www.ct.gov/csc)

December 29, 2008

The Honorable Mark A. Lauretti  
Mayor  
City of Shelton  
54 Hill Street  
P. O. Box 364  
Shelton, CT 06484

*denied  
w/o prejudice  
4/8/09*

RE: **TS-T-MOBILE-126-081219** - Omnipoint Communications, Inc. a.k.a. T-Mobile request for an order to approve tower sharing at an existing telecommunications facility located at 70 Platt Road, Shelton, Connecticut.

Dear Mayor Lauretti:

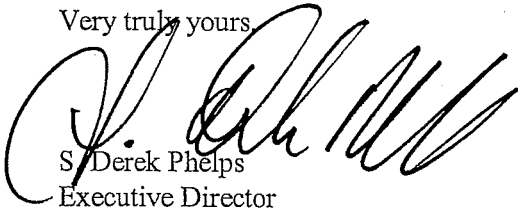
The Connecticut Siting Council (Council) received this request for tower sharing, pursuant to Connecticut General Statutes § 16-50aa.

The Council will consider this item at the next meeting scheduled for January 8, 2009, at 2:00 p.m. in Hearing Room One, Ten Franklin Square, New Britain, Connecticut.

If you have any questions or comments regarding this proposal, please call me or inform the council by January 7, 2009.

Thank you for your cooperation and consideration.

Very truly yours,



S/ Derek Phelps  
Executive Director

SDP/jb

Enclosure: Notice of Tower Sharing

c: Richard Schultz, Planning Administrator, City of Shelton

ORIGINAL

December 18, 2008

VIA OVERNIGHT DELIVERY

Mr. S. Derek Phelps  
Executive Director  
Connecticut Siting Council  
10 Franklin Square  
New Britain, CT 06051

RECEIVED  
DEC 19 2008  
CONNECTICUT  
SITING COUNCIL

Re: **Request of Omnipoint Communications, Inc. (T-Mobile) for an Order to Approve the Shared Use of a Tower Facility at 70 Platt Road, Shelton, Connecticut**

Dear Mr. Phelps:

Pursuant to Connecticut General Statutes §16-50aa, as amended, Omnipoint Communications, Inc. ("Omnipoint," also referred to herein as "T-Mobile") hereby requests an order from the Connecticut Siting Council ("Council") to approve the proposed shared use of a tower at 70 Platt Road in Shelton, Connecticut (N 41° 17' 39", W 73° 06' 25"). T-Mobile requests that the Council find that the proposed shared use of the tower satisfies the criteria stated in Connecticut General Statutes § 16-50aa and issue an order approving the proposed use.

**Background**

The tower at 70 Platt Road is owned and managed by AT&T and located on property at the corner of Platt Road and Oliver Terrace owned by Brennan Realty LLC. The Council approved an initial tower replacement by AT&T in Petition No. 608T; subsequently, in Petition No. 722, Cellco Partnership ("Verizon") received the Council's approval to extend the tower. The tower is now a 140' tower, with antennas of Verizon Wireless, AT&T Wireless and Sprint.

Omnipoint is licensed by the Federal Communications Commission (FCC) to provide wireless communications service in the State of Connecticut. Omnipoint and AT&T have agreed to the proposed shared use of this tower pursuant to mutually acceptable terms and conditions; Omnipoint and the underlying ground owner have also reached agreement for Omnipoint's use of ground space.

The proposed T-Mobile installation is depicted on the drawings included with this filing. As shown, T-Mobile proposes to install nine (9) panel-type antennas and six (6) TMAs on T-arms, with an antenna center line of approximately 120'. The related equipment cabinets would be located on a 10' x 15' concrete pad in an expanded fenced area adjacent to the existing equipment shelter.

### **Discussion**

C.G.S. § 16-50aa(c)(1) provides that, upon written request for approval of a proposed shared use, "if the council finds that the proposed shared use of the facility is technically, legally, environmentally and economically feasible and meets public safety concerns, the council shall issue an order approving such shared use." The shared use of the tower satisfies those criteria as follows:

**A. Technical Feasibility.** As shown on the attached structural analysis, the tower has sufficient capacity to accommodate the proposed T-Mobile installation. The proposed shared use of this tower therefore is technically feasible.

**B. Legal Feasibility.** Under C.G.S. § 16-50aa, the Council has been authorized to issue orders approving the proposed shared use of a tower facility such as the facility at 70 Platt Road in Shelton. In addition, § 16-50aa directs the Council to "give such consideration to other state laws and municipal regulations as it shall deem appropriate" in ruling on requests for the shared use of tower facilities.

**C. Environmental Feasibility.** The proposed shared use would have a minimal environmental effect, for the following reasons:

1. The proposed installation would have an insignificant incremental visual impact, and would not cause any significant change or alteration in the physical or environmental characteristics of the planned site. In particular, the proposed installation would not increase the height of the approved tower. The equipment area will be adjacent to the existing equipment area near the center of the underlying parcel.
2. The proposed installation would not increase the noise levels at the planned facility by six decibels or more.
3. Addition of T-Mobile's antennas at this site 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 power density calculation, T-Mobile's operations at the site will result in a power density of 3.5846%; the combined site operations will result in a total power

density of 72.138%. (That number is conservative in that it includes Nextel per the Council's power density records, but Nextel is not present on the tower and neither the Council data base nor AT&T's records include space for Nextel on the tower.)

4. The proposed installation would not require any water or sanitary facilities, or generate air emissions or discharges to water bodies. After construction is complete, the proposed installation would not generate any traffic other than for periodic maintenance visits.

The proposed use of this facility would therefore have a minimal environmental effect, and is environmentally feasible. The proposed tower sharing is therefore economically feasible.

**E. Economic Feasibility.** T-Mobile has entered into agreements to share the use of the existing tower and nearby ground space on terms mutually agreeable to the parties.

**F. Public Safety Concerns.** T-Mobile is not aware of any public safety concerns relative to the proposed sharing of the tower. As stated above, the tower is structurally capable of supporting the existing and proposed antennas. The proposed shared use will not interfere with municipal public safety activities. In fact, improved wireless communications service realized through shared use of the tower will enhance the safety and welfare of area residents.

### **Conclusion**

For the reasons set forth above, the proposed shared use of the tower at 70 Platt Road in Shelton, Connecticut satisfies the criteria stated in C.G.S. § 16-50aa and advances the General Assembly's and the Council's goal of preventing the proliferation of towers in Connecticut. T-Mobile therefore requests that the Council issue an order approving the proposed shared use.

Please contact the undersigned at (860) 798-7454 if there are any questions with respect to this matter. Thank you for your consideration.

Respectfully yours,



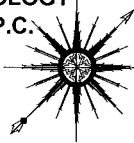
Jennifer Young Gaudet

### Attachments

cc: Honorable Mark A. Lauretti, Mayor  
David Brennan, Brennan Realty LLC

**ALL-POINTS TECHNOLOGY CORPORATION, P.C.**

3 SADDLEBROOK DRIVE  
KILLINGWORTH, CT. 06419  
PHONE: (860)-663-1697  
FAX: (860)-663-0935  
www.allpointstech.com



**APT FILING NUMBER: CT-255T-350**

LE-1

SCALE: AS NOTED

DRAWN BY: AAJ

DATE: 10/31/08

CHECKED BY: SMC

**T-Mobile**

35 GRIFFIN ROAD  
BLOOMFIELD, CT 06002  
OFFICE: (860)-692-7100

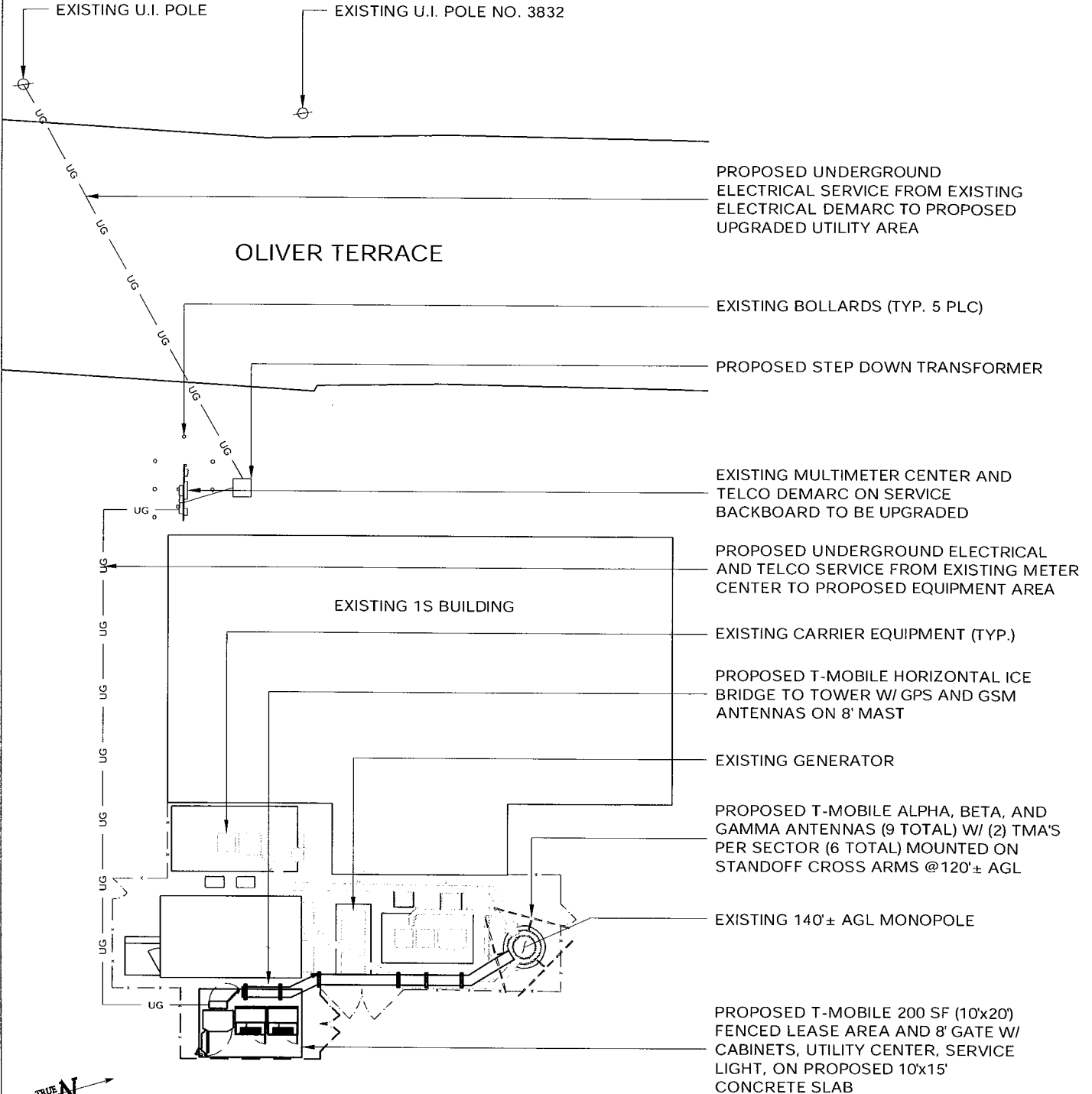
**T-MOBILE SITE NUMBER  
CTFF531**

AT&T SHELTON  
30 OLIVER TERRACE  
SHELTON, CT 06484-5336

**NOTE:**

PER FCC MANDATE, ENHANCED EMERGENCY (E911) SERVICE IS REQUIRED TO MEET NATIONWIDE STANDARDS FOR WIRELESS COMMUNICATIONS SYSTEMS. OMNIPPOINT COMMUNICATIONS INC. IMPLEMENTATION REQUIRES DEPLOYMENT OF EQUIPMENT AND ANTENNAS GENERALLY DEPICTED ON THIS PLAN, ATTACHED TO OR MOUNTED IN CLOSE PROXIMITY TO THE BTS RADIO CABINETS. OMNIPPOINT COMMUNICATIONS INC. RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO E911 EQUIPMENT AND LOCATION AS TECHNOLOGY EVOLVES TO MEET REQUIRED SPECIFICATIONS. ALL EQUIPMENT LOCATIONS ARE APPROXIMATE AND ARE SUBJECT TO APPROVAL BY OMNIPPOINT COMMUNICATIONS INC. STRUCTURAL & RF ENGINEERS. LOCATIONS OF POWER & TELEPHONE FACILITIES AND APPLICABLE EASEMENTS ARE SUBJECT TO APPROVAL AS PER UTILITY COMPANIES DIRECTION.

REV1: 12/17/08: CHANGE ANTENNA LOCATION: SMC  
REV2: 12/18/08: GENERAL COMMENTS: SMC

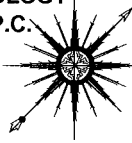


**COMPOUND PLAN**

SCALE: 1" = 20'-0"

**ALL-POINTS TECHNOLOGY CORPORATION, P.C.**

3 SADDLEBROOK DRIVE  
KILLINGWORTH, CT. 06419  
PHONE: (860)-663-1697  
FAX: (860)-663-0935  
www.allpointstech.com



**APT FILING NUMBER: CT-255T-350**

LE-2

SCALE: AS NOTED

DRAWN BY: AAJ

DATE: 10/31/08

CHECKED BY: SMC

**T-Mobile**

35 GRIFFIN ROAD  
BLOOMFIELD, CT 06002  
OFFICE: (860)-692-7100

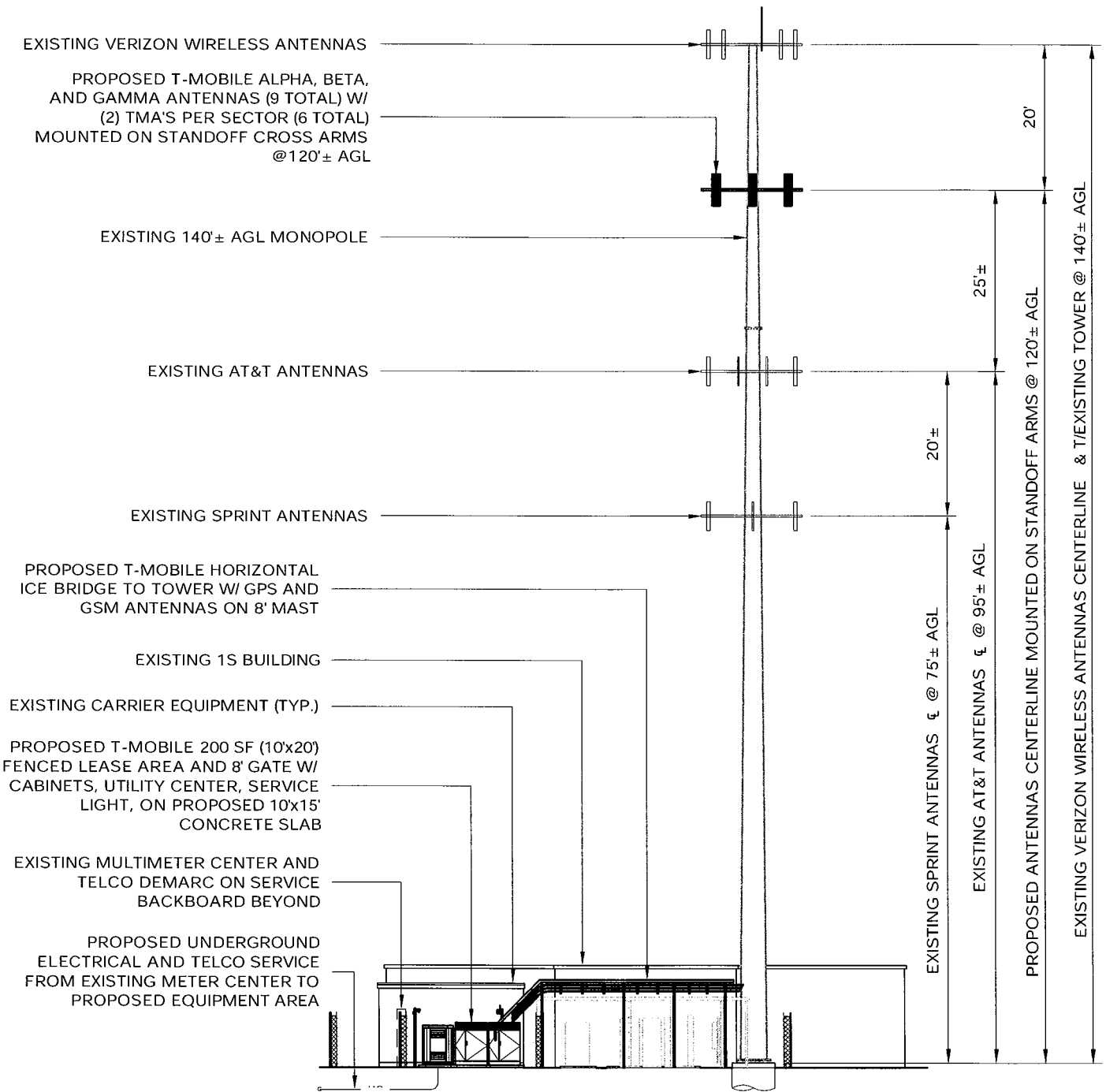
**T-MOBILE SITE NUMBER  
CTFF531**

AT&T SHELTON  
30 OLIVER TERRACE  
SHELTON, CT 06484-5336

**NOTE:**

PER FCC MANDATE, ENHANCED EMERGENCY (E911) SERVICE IS REQUIRED TO MEET NATIONWIDE STANDARDS FOR WIRELESS COMMUNICATIONS SYSTEMS. OMNIPPOINT COMMUNICATIONS INC. IMPLEMENTATION REQUIRES DEPLOYMENT OF EQUIPMENT AND ANTENNAS GENERALLY DEPICTED ON THIS PLAN, ATTACHED TO OR MOUNTED IN CLOSE PROXIMITY TO THE BTS RADIO CABINETS. OMNIPPOINT COMMUNICATIONS INC. RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO E911 EQUIPMENT AND LOCATION AS TECHNOLOGY EVOLVES TO MEET REQUIRED SPECIFICATIONS. ALL EQUIPMENT LOCATIONS ARE APPROXIMATE AND ARE SUBJECT TO APPROVAL BY OMNIPPOINT COMMUNICATIONS INC. STRUCTURAL & RF ENGINEERS. LOCATIONS OF POWER & TELEPHONE FACILITIES AND APPLICABLE EASEMENTS ARE SUBJECT TO APPROVAL AS PER UTILITY COMPANIES DIRECTION.

REV1: 12/17/08: CHANGE ANTENNA LOCATION: SMC  
REV2: 12/18/08: GENERAL COMMENTS: SMC



**EASTERN ELEVATION**

SCALE: 1" = 20'-0"



at&t

Glynn Walker  
AT&T Mobility  
5405 Windward Pkwy  
Alpharetta, GA 30004  
(770) 708-6122



GPD ASSOCIATES

Kevin Clements  
520 South Main St., Suite 2531  
Akron, Ohio 44311  
(330) 572-2195  
kclements@gpdgroup.com

GPD# 2008265.54  
December 11, 2008

### STRUCTURAL ANALYSIS REPORT

**AT&T DESIGNATION:** Site USID: 24519  
Site Name: SHELTON NE  
Site FA #: 10071231

**T-MOBILE DESIGNATION:** Site Name: Shelton Rt 8  
Site Number: CTF531

**ANALYSIS CRITERIA:** Codes: TIA/EIA-222-F & 2003 IBC  
85-mph with 0" ice  
74-mph with 1/2" ice

**SITE DATA:** Oliver Terrace, Shelton, CT 06484, Fairfield County  
Latitude 41° 17' 37.644"N, Longitude 73° 6' 26.28"W  
140' FWT Monopole

Mr. Walker,

GPD is pleased to submit this Structural Analysis Report to determine the structural integrity of the aforementioned tower. The purpose of this analysis is to determine the suitability of the tower with the addition of the following proposed loading configuration:

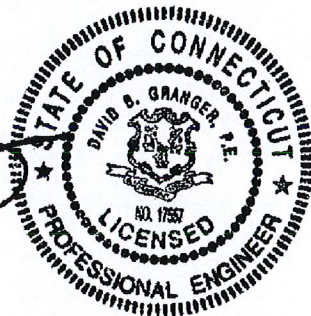
Elev. 120' (9) RFS APX16PV-16PVL-E Antennas on (3) 12' T-Arms, w/ (18) 1-5/8" internal coax  
(6) Comm. Comp. DTMA-1819-DD-12 Tower Mounted Amplifiers mounted behind the antennas

Based on our analysis we have determined the tower and its foundation are sufficient for the proposed, existing, and reserved loadings as referenced in Appendix A.

We at GPD appreciate the opportunity of providing our continuing professional services to you and AT&T. If you have any questions please do not hesitate to call.

Respectfully submitted,

David B. Granger, P.E.  
Connecticut #: 17557



## SUMMARY & RESULTS

The purpose of this analysis was to verify whether the existing structure is capable of carrying the proposed loading configuration as specified by T-Mobile to AT&T. This report was commissioned by Mr. Glynn Walker of AT&T.

### TOWER SUMMARY AND RESULTS

| Member       | Capacity | Results |
|--------------|----------|---------|
| Monopole     | 80.0%    | Pass    |
| Flange Plate | 62.6%    | Pass    |
| Flange Bolts | 53.2%    | Pass    |
| Base Plate   | 54.3%    | Pass    |
| Anchor Rods  | 96.4%    | Pass    |
| Foundation   | 53.9%    | Pass    |

## ANALYSIS METHOD

RISA Tower (Version 5.3.0.1), a commercially available software program, was used to create a three-dimensional model of the tower and calculate primary member stresses for various dead, live, wind, and ice load cases. Selected output from the analysis is included in Appendix B. The following table details the information provided to complete this structural analysis. This analysis is solely based on this information and is being provided without the benefit of a site visit.

### DOCUMENTS PROVIDED

| Document                     | Remarks  | Source    |
|------------------------------|--|-----------|
| Preliminary Tower Summary    | T-Mobile Co-location document                            | G. Walker |
| Site Lease Application       | T-Mobile Application, dated 9/5/08                       | G. Walker |
| Original Tower Drawing       | Paul J. Ford & Company Job #: 34803-0047, dated 10/25/04 | G. Walker |
| Foundation Drawing           | Paul J. Ford & Company Job #: 34803-0047, dated 10/25/04 | G. Walker |
| Previous Structural Analysis | GPD Associates Job #: 2008261.65, dated 4/10/08          | Siterra   |



## ASSUMPTIONS

This structural analysis is based on the theoretical capacity of the members and is not a condition assessment of the monopole. This analysis is from information supplied, and therefore, its results are based on and are as accurate as that supplied data. GPD has made no independent determination, nor is it required to, of its accuracy. The following assumptions were made for this structural analysis.

1. The monopole shaft sizes and shape are considered accurate as supplied. The material grade is as per data supplied and/or as assumed and as stated in the materials section.
2. The antenna configuration is as supplied and/or as modeled in the analysis. It is assumed to be complete and accurate. All antennas, mounts, coax and waveguides are assumed to be properly installed and supported as per manufacturer requirements.
3. Some assumptions are made regarding antennas and mount sizes and their projected areas based on best interpretation of data supplied and of best knowledge of antenna type and industry practice.
4. All mounts, if applicable, are considered adequate to support the loading. No actual analysis of the mount(s) is performed. This analysis is limited to analyzing the tower only.
5. The soil parameters are as per data supplied or as assumed and stated in the calculations. If no data is available, the foundation system is not verified. In the case of absent foundation data, it is the tower owner's responsibility to insure that the foundation system is adequate to support the structure with its new reactions.
6. The tower and structures have been properly maintained in accordance with TIA Standards and/or with manufacturer's specifications.
7. All welds and connections are assumed to develop at least the member capacity, unless determined otherwise and explicitly stated in this report.
8. All prior structural modifications, if any, are assumed to be as per data supplied / available, to have been properly installed and to be fully effective.
9. All proposed coax is assumed to be internal to the monopole.
10. Tower Mounted Amplifiers are assumed to be installed behind antennas.
11. All existing loading was obtained from the most recent structural analysis by GPD Associates Job # 2008261.65, dated 4/10/08, tower photos and the submitted PTS and is assumed to be accurate.

If any of these assumptions are not valid or have been made in error, this analysis may be affected, and GPD Associates should be allowed to review any new information to determine its effect on the structural integrity of the tower.

## DISCLAIMER OF WARRANTIES

GPD ASSOCIATES has not performed a site visit to the tower to verify the member sizes or antenna/coax loading. If the existing conditions are not as represented on the tower elevation contained in this report, we should be contacted immediately to evaluate the significance of the discrepancy. This is not a condition assessment of the tower or foundation. This report does not replace a full tower inspection. The tower and foundations are assumed to have been properly fabricated, erected, maintained, in good condition, twist free, and plumb.

The engineering services rendered by GPD ASSOCIATES in connection with this Structural Analysis are limited to a computer analysis of the tower structure and theoretical capacity of its main structural members. All tower components have been assumed to only resist dead loads when no other loads are applied. No allowance was made for any damaged, bent, missing, loose, or rusted members (above and below ground). No allowance was made for loose bolts or cracked welds.

GPD ASSOCIATES does not analyze the fabrication of the structure (including welding). It is not possible to have all the very detailed information needed to perform a thorough analysis of every structural sub-component and connection of an existing tower. GPD ASSOCIATES provides a limited scope of service in that we cannot verify the adequacy of every weld, plate connection detail, etc. The purpose of this report is to assess the feasibility of adding appurtenances usually accompanied by transmission lines to the structure.

It is the owner's responsibility to determine the amount of ice accumulation, if any, that should be considered in the structural analysis.

The attached sketches are a schematic representation of the analyzed tower. If any material is fabricated from these sketches, the contractor shall be responsible for field verifying the existing conditions, proper fit, and clearance in the field. Any mentions of structural modifications are reasonable estimates and should not be used as a precise construction document. Precise modification drawings are obtainable from GPD ASSOCIATES, but are beyond the scope of this report.

Miscellaneous items such as antenna mounts, etc., have not been designed or detailed as a part of our work. We recommend that material of adequate size and strength be purchased from a reputable tower manufacturer.

GPD ASSOCIATES makes no warranties, expressed and/or implied, in connection with this report and disclaims any liability arising from material, fabrication, and erection of this tower. GPD ASSOCIATES will not be responsible whatsoever for, or on account of, consequential or incidental damages sustained by any person, firm, or organization as a result of any data or conclusions contained in this report. The maximum liability of GPD ASSOCIATES pursuant to this report will be limited to the total fee received for preparation of this report.

## APPENDIX A

### Tower Analysis Summary Form

# Tower Analysis Summary Form

The information contained in this summary report is not to be used independently from the PE stamped tower analysis.

|                             |            |
|-----------------------------|------------|
| <b>General Info</b>         |            |
| Site Name                   | SHELTON NE |
| Site USD                    | 24519      |
| Site FA                     | 10071231   |
| Date of Analysis            | 12/11/2008 |
| Company Performing Analysis | GPD        |

|                                 |                                 |             |
|---------------------------------|---------------------------------|-------------|
| <b>Tower Info</b>               |                                 | <b>Date</b> |
| Tower Type (G, SST, MP)         | MP                              |             |
| Tower Height (top of steel AGL) | 140                             |             |
| Tower Manufacturer              | FWT                             |             |
| Tower Model                     | n/a                             |             |
| Manufacturer Drawings           | Paul J. Ford Job #: 34803-0047  | 10/25/2004  |
| Tower/Foundation Design         | Paul J. Ford Job #: 34803-0047  | 10/25/2004  |
| Geotech Report                  | Dr. Clarence Welti              | 7/11/2003   |
| Tower Mapping                   | n/a                             |             |
| Previous Analysis               | GPD Associates Job #: 200826165 | 4/10/2008   |

|                                   |    |
|-----------------------------------|----|
| <b>Steel Yield Strength (ksi)</b> |    |
| Pole                              | 65 |
| Base Plate                        | 60 |
| Anchor Rods                       | 75 |

|                                       |                        |
|---------------------------------------|------------------------|
| <b>Design Parameters</b>              |                        |
| Design Code Used                      | TIA/EIA-222-F          |
| Location of Tower (County, State)     | Fairfield, Connecticut |
| Basic Wind Speed (mph)                | 85 - fastest           |
| Ice Thickness (in)                    | 0.5                    |
| Structure Classification (I, II, III) |                        |
| Exposure Category (B, C, D)           |                        |
| Topographic Category (1 to 5)         |                        |

|   |       |
|---|-------|
| <b>Analysis Results (% Maximum Usage)</b> |       |
| <b>Existing Condition</b>                 |       |
| Tower                                     | 76.4% |
| Foundation                                | 42.8% |
| Guy Wire                                  | n/a   |

|                           |       |
|---------------------------|-------|
| <b>Proposed Condition</b> |       |
| Tower                     | 96.4% |
| Foundation                | 53.9% |
| Guy Wire                  | n/a   |

## Existing/Reserved

| Antenna       |                        | Mount    |       | Transmission Line |                 |          |                       |                     |
|---------------|------------------------|----------|-------|-------------------|-----------------|----------|-----------------------|---------------------|
| Antenna Owner | Attachment Height (ft) | Quantity | Type  | Model             | EPA (ft²) total | Quantity | Size                  | Attachment Leg/Face |
| Verizon       | 140                    | 12       | Panel | DB844H85          | 3.06            | 1        | 13" Platform          | 24.90               |
| Unknown       | 140                    | 1        | Omni  | 9' Omni           | 2.25            | 1        | on same mount         | 12                  |
| AT&T Mobility | 95                     | 3        | Panel | AWS90162          | 2.67            | 1        | 13" Platform w/ rails | 35.90               |
| Sprint        | 75                     | 6        | Panel | RR65-18-04DPL2    | 4.36            | 1        | 13" LP Platform       | 24.80               |

## Proposed

| Antenna       |                        | Mount    |       | Transmission Line |                 |          |                |                     |
|---------------|------------------------|----------|-------|-------------------|-----------------|----------|----------------|---------------------|
| Antenna Owner | Attachment Height (ft) | Quantity | Type  | Model             | EPA (ft²) total | Quantity | Size           | Attachment Leg/Face |
| T-Mobile      | 120                    | 9        | Panel | APX16PV-16PVL-E   | 6.70            | 3        | 12" T-Arms     | 14.10               |
| T-Mobile      | 120                    | 6        | TMA   | DTMA-1819-DD-12   | Shielded        | 18       | on same mounts | 18                  |

## Future

| Antenna       |                        | Mount    |      | Transmission Line |                 |          |      |                     |
|---------------|------------------------|----------|------|-------------------|-----------------|----------|------|---------------------|
| Antenna Owner | Attachment Height (ft) | Quantity | Type | Model             | EPA (ft²) total | Quantity | Size | Attachment Leg/Face |
|               |                        |          |      |                   |                 |          |      |                     |

Revision: 1.2  
Date: 12/15/06

## Technical Memo

To: Jennifer Gaudet  
From: Scott Heffernan - Radio Frequency Engineer  
cc: Jason Overbey  
Subject: Power Density Report for CTFF531A  
Date: December 1, 2008

### 1. Introduction:

This report is the result of an Electromagnetic Field Intensities (EMF - Power Densities) study for the T-Mobile PCS antenna installation on a Monopole at 30 Oliver Terrace, Shelton, CT. This study incorporates the most conservative consideration for determining the practical combined worst case power density levels that would be theoretically encountered from locations surrounding the transmitting location.

### 2. Discussion:

The following assumptions were used in the calculations:

- 1) The emissions from T-Mobile transmitters are in the 1940-1950 MHz frequency band.
- 2) The antenna array consists of three sectors, with 3 antennas per sector.
- 3) The model number for each antenna is APX16DWV-16DWV-S-E-ACU.
- 4) The antenna center line height is 120 ft.
- 5) The maximum transmit power from any sector is 2123.39 Watts Effective Radiated Power (EiRP) assuming 8 channels per sector.
- 6) All the antennas are simultaneously transmitting and receiving, 24 hours a day.
- 7) Power levels emitting from the antennas 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.
- 8) The average ground level of the studied area does not change significantly with respect to the transmitting location

Equations given in "FCC OET Bulletin 65, Edition 97-01" were then used with the above information to perform the calculations.

### 3. Conclusion:

Based on the above worst case assumptions, the power density calculation from the T-Mobile PCS antenna installation on a Monopole at 30 Oliver Terrace, Shelton, CT, is 0.03585 mW/cm<sup>2</sup>. This value represents 3.585% of the Maximum Permissible Exposure (MPE) standard of 1 milliwatt per square centimeter (mW/cm<sup>2</sup>) set forth in the FCC/ANSI/IEEE C95.1-1991. Furthermore, the proposed antenna location for T-Mobile will not interfere with existing public safety communications, AM or FM radio broadcasts, TV, Police Communications, HAM Radio communications or any other signals in the area.

|                   |         |
|-------------------|---------|
| Total Site MPE %: | 72.138% |
|-------------------|---------|

## New England Market



### Worst Case Power Density

|   |   |
|---|---|
| <b>Site:</b>  | <b>CTFF531A</b>   |
| <b>Site Address:</b>  | <b>30 Oliver Terrace</b>                                      |
| <b>Town:</b>  | <b>Shelton</b>  |
| <b>Tower Height:</b>  | <b>140 ft.</b>  |
| <b>Tower Style:</b>   | <b>Monopole</b>   |
| <b>Base Station TX output</b>   | 25 W  |
| <b>Number of channels</b>   | 8   |
| <b>Antenna Model</b>  | APX16DWV-16DWV-S-E-ACU  |
| <b>Cable Size</b>   | 1 5/8   |
| <b>Cable Length</b>   | 150 ft.   |
| <b>Antenna Height</b>   | 120.0 ft.   |
| <b>Ground Reflection</b>  | 1.6   |
| <b>Frequency</b>  | 1945.0 MHz  |
| <b>Jumper &amp; Connector loss</b>  | 4.50 dB   |
| <b>Antenna Gain</b>   | 16.5 dBi  |
| <b>Cable Loss per foot</b>  | 0.0116 dB   |
| <b>Total Cable Loss</b>   | 1.7400 dB   |
| <b>Total Attenuation</b>  | 6.2400 dB   |
| <b>Total EIRP per Channel<br/>(In Watts)</b>  | 54.24 dBm<br>265.42 W   |
| <b>Total EIRP per Sector<br/>(In Watts)</b>   | 63.27 dBm<br>2123.39 W  |
| <b>nsg</b>  | 10.2600   |
| <b>Power Density (S) =</b>  | <b>0.035846 mW/cm<sup>2</sup></b>                             |
| <b>T-Mobile Worst Case % MPE =</b>  | <b>3.5846%</b>  |
| <i>Equation Used :</i>  | $S = \frac{(1000)(grf)^2 (Power) * 10^{(nsg/10)}}{4\pi(R)^2}$ |
| <i>Office of Engineering and Technology (OET) Bulletin 65, Edition 97-01, August 1997</i> |   |

| <b>Additional Carrier Information (% MPE)</b> |                |
|---|----------------|
| Cingular GSM                                  | 7.35%          |
| Cingular UMTS                                 | 3.40%          |
| J. Brennan Construction                       | 19.31%         |
| Nextel  | 7.99%          |
| Sprint  | 23.79%         |
| Verizon (cellular)                            | 5.63%          |
| Verizon (pcs)                                 | 1.10%          |
| <b>Total % MPE for Site</b>                   | <b>72.138%</b> |