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

July 24, 2009

Thomas J. Regan, Esq.
Brown Rudnick LLP
CityPlace I, 185 Asylum Street
Hartford, CT 06103

RE: **EM-T-MOBILE-164-090604** – T-Mobile USA, Inc. notice of intent to modify an existing telecommunications facility located at 419 Broad Street, Windsor, Connecticut.

Dear Attorney Regan:

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:

The proposed modifications are to be implemented as specified here and in your notice dated June 4, 2009, including the placement of all necessary equipment and shelters within the tower compound. 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, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

Thank you for your attention and cooperation.

Very truly yours,

S. Derek Phelps
Executive Director

SDP/MP/laf

c: The Honorable Donald Trinks, Mayor, Town of Windsor
Peter Souza, Town Manager, Town of Windsor
Eric Barz, Town Planner, Town of Windsor
Christopher B. Fisher, Esq., Cuddy & Feder LLP

THOMAS J. REGAN
Direct Dial: (860) 509-6522
tregan@brownrudnick.com

CityPlace I
185 Asylum
Street
Hartford
Connecticut
06103
tel 860.509.6500
fax 860.509.6501

Via Hand Delivery

June 4, 2009

ORIGINAL

Daniel F. Caruso, Chairman
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RE: T-Mobile USA, Inc - Exempt Modification

Dear Mr. Caruso:

On behalf of T-Mobile USA, Inc., enclosed for filing is an original and five (5) copies of a Notice to Make an Exempt Modification to an Existing Facility at 419 Broad Street in Windsor.

I have also enclosed a sixth copy of the Notice which I would like to have date-stamped and returned to the courier delivering this package.

Also enclosed is a check in the amount of $500.00 to cover the filing fee. If you have any questions, please feel free to contact me.

Very truly yours,

BROWN RUDNICK BERLACK ISRAELS LLP

By: _____
Thomas J. Regan

TJR/bh
Enclosures

40260670 v1 - REGANTJ - 025064/0016

BROWNRUDNICK

CityPlace I
185 Asylum
Street
Hartford
Connecticut
06103
tel 860.509.6500
fax 860.509.6501

cc/encls: via 1st Class Mail:

The Honorable Donald Trinks, Mayor
Town of Windsor
Town Hall
275 Broad Street
Windsor, CT 06095

CONNECTICUT

EM-T-MOBILE-164-090604

In re:

T-Mobile USA, Inc. Notice to Make an Exempt Modification to an Existing Facility, 419 Broad Street, Windsor, Connecticut.	:	**EXEMPT MODIFICATION NO. _____**
	:	
	:	June 4, 2009

ORIGINAL

NOTICE OF EXEMPT MODIFICATION

Pursuant to Conn. Agencies Regs. §§ 16-50j-73 and 16-50j-72(b), T-Mobile USA, Inc. ("T-Mobile") hereby gives notice to the Connecticut Siting Council ("Council") and the Town of Windsor of T-Mobile's intent to make an exempt modification to an existing monopole tower (the "Tower") located at 419 Broad Street in Windsor, Connecticut. Specifically, T-Mobile plans to upgrade its wireless system in Connecticut by implementing its Universal Mobile Telecommunications System ("UMTS"). UMTS is a third-generation ("3G") technology that utilizes a code division multiple access ("CDMA") base to allow for fast and large data transfers. To accomplish this upgrade, T-Mobile must modify its antenna and equipment configurations at many of its existing sites.

Once the UMTS upgrade is complete, T-Mobile will operate on a more unified communication system, allowing international wireless telephones to function world-wide. Furthermore, UMTS will enhance GPS navigation capabilities and provide emergency responders with more advanced tracking capabilities. The proposed UMTS technology is compatible with the existing second-generation ("2G") Global System for Mobile Communication ("GSM") currently on the Tower and the proposed upgrade is expected to enhance the existing 2G system. In order to accomplish the upgrade at this site, T-Mobile plans to add UMTS technology and install associated equipment at the base of the Tower.

Under the Council's regulations (Conn. Agencies Regs. § 16-50j-72(b)), T-Mobile's plans do not constitute a modification subject to the Council's review because T-Mobile will not

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HARTFORD, CT 06103
(860) 509-6500

change the height of the Tower, will not extend the boundaries of the compound, will not increase the noise levels at the site, and will not increase the total radio frequency electromagnetic radiation power density at the site to levels above applicable standards.

The Tower is a 101-foot monopole tower located at 419 Broad Street in Windsor, Connecticut (41° 50' 45.17", -72° 38' 46.10"). The Tower is owned by AT&T. There are multiple carriers located on the Tower. Currently, T-Mobile has 3 antennas and 6 Tower Mounted Amplifiers ("TMA") located on the Tower with a centerline of 94 feet. A site plan with Tower specifications is attached.

T-Mobile plans to add 3 UMTS antennas and 3 UMTS Twin TMA to the Tower.[1] The proposed antennas and TMA will have the same centerline as the existing antennas and TMA - 94 feet. To confirm the Tower can support these changes, T-Mobile commissioned GPD Associates to perform a structural analysis of the Tower (attached). According to the structural analysis, dated August 27, 2008, "...the tower and its foundation are sufficient for the proposed, existing, and reserved loadings ..." (Page 1, Structural Analysis Report, emphasis in original).

In addition, T-Mobile plans to locate 6, 7/8 inch coax cables to run under the existing ice bridge. T-Mobile proposes to install the UMTS equipment cabinet on its existing 10-foot by 20-foot (approximately) concrete pad. Hence, no increase in the size of the concrete pad is necessary.

Therefore, excluding brief, minor, construction-related noise during the addition of the antennas and the installation of the equipment cabinet, T-Mobile's changes to the Tower will not increase noise levels at the site.

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(860) 509-6500

[1] The structural analysis report incorrectly states that 9 antennas and 6 TMA are to be located on the Tower. T-Mobile proposes a final configuration of 6 antennas and 9 TMA to be located on the Tower.

The proposed antennas and TMA will not adversely impact the health and safety of the surrounding community or the people working on the Tower. The total radio frequency exposure measured around the Tower will be well below the National Council on Radiation Protection and Measurements' ("NCRP") standard adopted by the Federal Communications Commission ("FCC"). The worst-case power density analysis measured at the base of the Tower indicates that T-Mobile's antennas will emit 14.36% of the NCRP's standard for maximum permissible exposure. A cumulative power density analysis indicates that together, all of the antennas on the Tower will emit only 24.12% of the NCRP's standard for maximum permissible exposure. Therefore, the power density levels will be well below the FCC mandated radio frequency exposure limits in all locations around the Tower, even with extremely conservative assumptions. The power density analysis is attached.

In conclusion, T-Mobile's proposed plan to add antennas and TMA at this site does not constitute a modification subject to the Council's jurisdiction because T-Mobile will not increase the height of the Tower, will not extend the boundaries of the site, will not increase the noise levels at the site, and the total radio frequency electromagnetic radiation power density will stay within all applicable standards. *See* Conn. Agencies Regs. § 16-50j-72.

T-Mobile USA, Inc.

By: _____

Thomas J. Regan
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Hartford, CT 06103-3402
Email - tregan@brownrudnick.com
Phone - 860.509.6522
Fax - 860.509.6622

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Certificate of Service

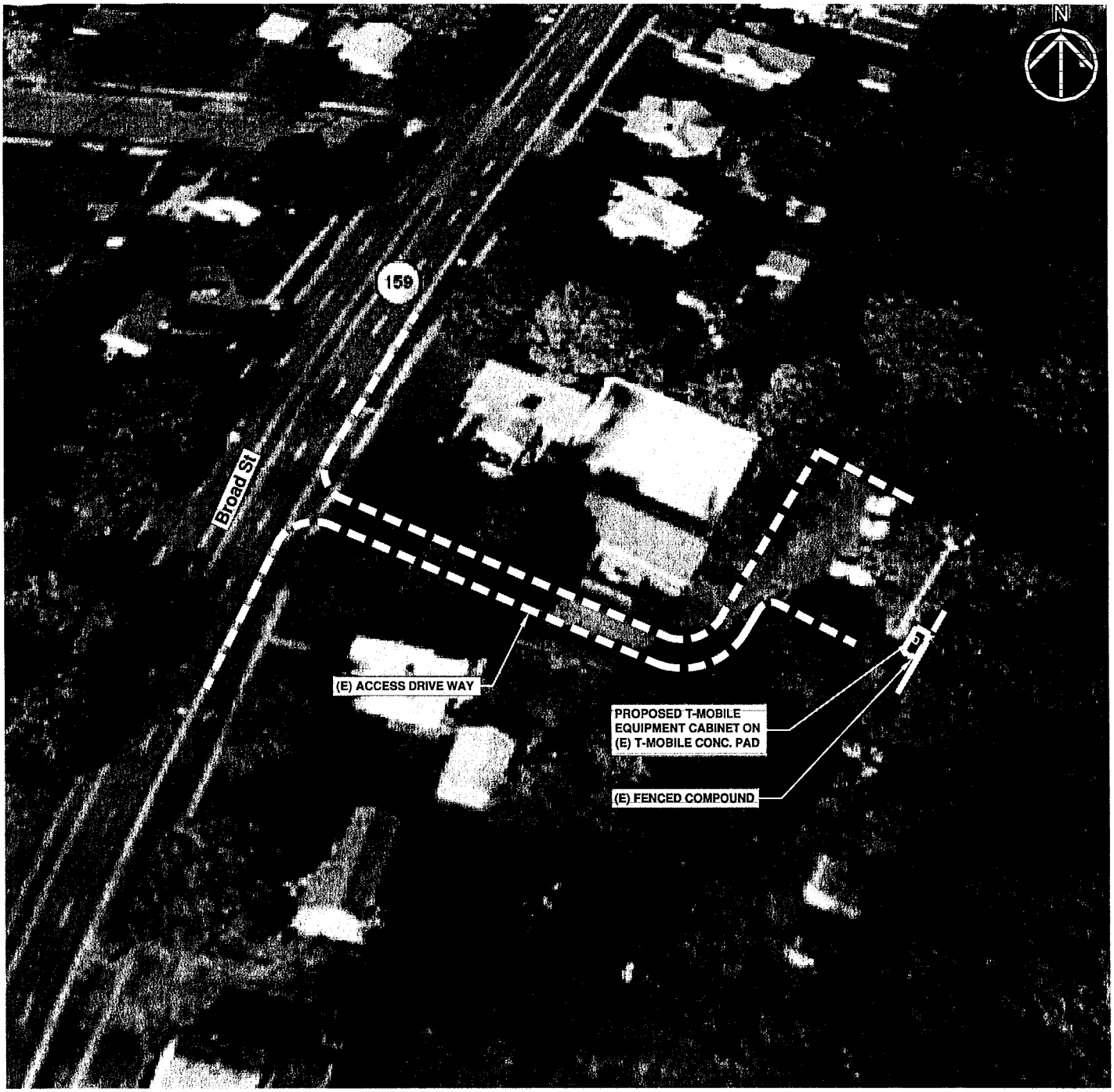
This is to certify that on this 4th day of June, 2009, the foregoing Notice of Exempt Modification was sent, via first class mail, to the following:

Town of Windsor
Mayor Donald Trinks
Town Hall
275 Broad Street
Windsor, CT 06095

By: _____
Thomas J. Regan

40260513 v1 - 025064/0016

BROWN RUDNICK LLP
CITYPLACE I
185 ASYLUM STREET
HARTFORD, CT 06103
(860) 509-6500



SITE PLAN

SCALE: 1"=100'-0"

50 0 50 100 150

ALL EQUIPMENT LOCATIONS ARE APPROXIMATE AND ARE SUBJECT TO APPROVAL BY LESSEE/LICENSEE'S STRUCTURAL & RF ENGINEERS. LOCATIONS OF POWER & TELEPHONE FACILITIES ARE SUBJECT TO APPROVAL BY UTILITY COMPANIES.

TRANSCEND WIRELESS, LLC
10 INDUSTRIAL AVE.
MAHWAH, NJ 07430
OFFICE: (201) 684-0055
FAX:(201) 684-0066

FOR

OMNIPOINT COMMUNICATIONS, INC. DBA T-MOBILE USA, INC
35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002
OFFICE: (860) 692-7100
FAX:(860) 692-7159

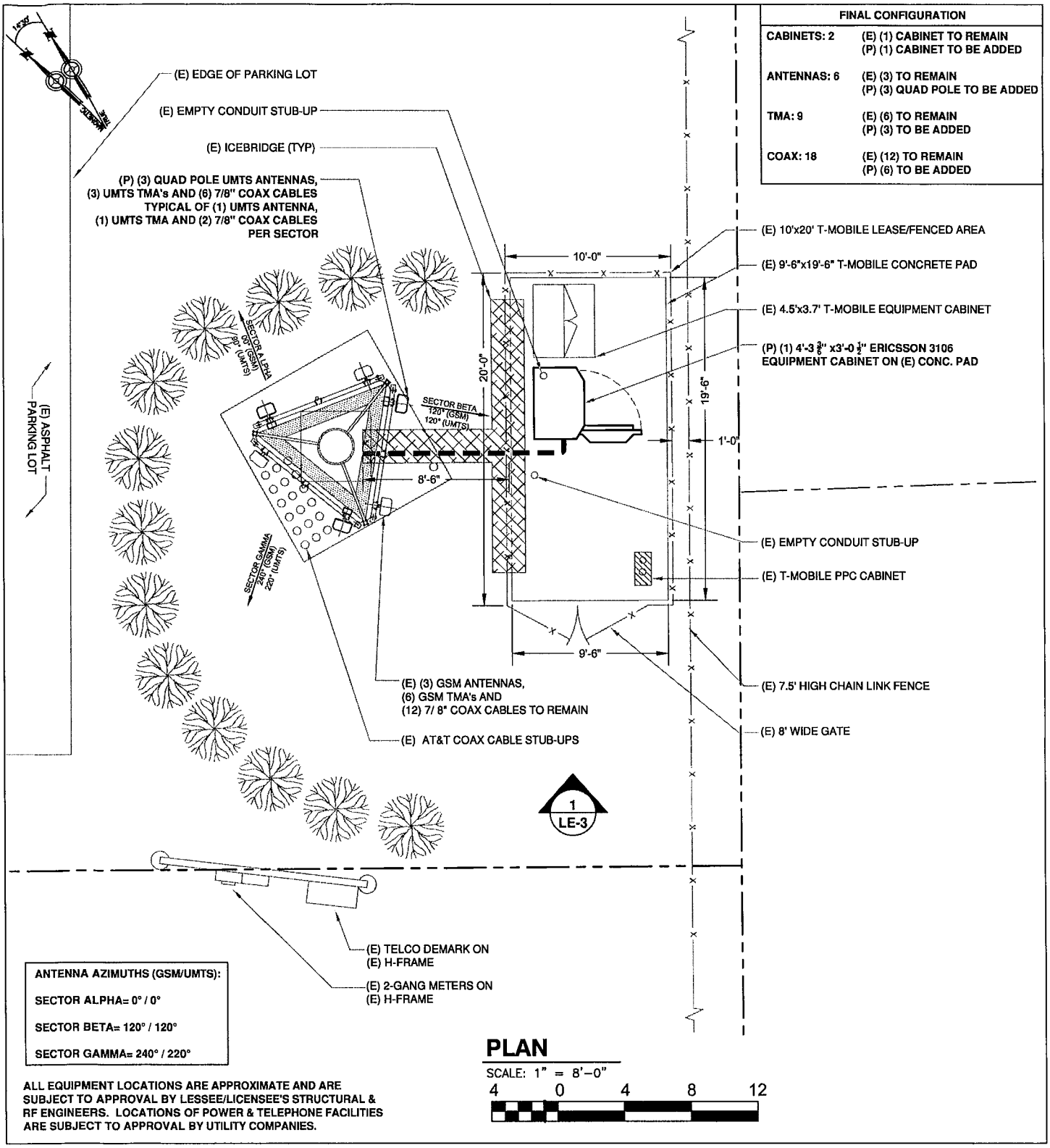
ATLANTIS GROUP
15 Cypress St., Suite 300
Newton Centre, MA 02459
Office: 617-965-0789
Fax: 617-663-6032

SITE NUMBER:	
CTHA130A	
SITE NAME:	
SNET TOWER MP	
ADDRESS:	
419 BROAD STREET WINDSOR, CT 06095	
DRAWN BY	
G.C.	
1: REVISED	05-28-09
0: FINAL LE	04-15-09
A: REVIEW	02-04-09
REVISION	DATE

APPROVALS

Site Owner	Date
Construction Manager	Date
RF Engineer	Date
Site Acquisition	Date

The above parties hereby approve and accept these documents and authorize the contractor to proceed with the construction described herein, all construction documents are subject to review by the local building department and any changes or modifications they may impose.



FINAL CONFIGURATION	
CABINETS: 2	(E) (1) CABINET TO REMAIN (P) (1) CABINET TO BE ADDED
ANTENNAS: 6	(E) (3) TO REMAIN (P) (3) QUAD POLE TO BE ADDED
TMA: 9	(E) (6) TO REMAIN (P) (3) TO BE ADDED
COAX: 18	(E) (12) TO REMAIN (P) (6) TO BE ADDED

ANTENNA AZIMUTHS (GSM/UMTS):

SECTOR ALPHA= 0° / 0°

SECTOR BETA= 120° / 120°

SECTOR GAMMA= 240° / 220°

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PLAN

SCALE: 1" = 8'–0"

4 0 4 8 12

TRANSCEND WIRELESS, LLC
10 INDUSTRIAL AVE.
MAHWAH, NJ 07430
OFFICE: (201) 684-0055
FAX:(201) 684-0066

FOR

OMNIPOINT COMMUNICATIONS, INC. DBA T-MOBILE USA, INC
35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002
OFFICE: (860) 692-7100
FAX:(860) 692-7159

ATLANTIS GROUP
15 Cypress St., Suite 300
Newton Centre, MA 02459
Office: 617-965-0789
Fax: 617-663-6032

SITE NUMBER: CTHA130A
SITE NAME: SNET TOWER MP
ADDRESS: 419 BROAD STREET, WINDSOR, CT 06095
DRAWN BY: G.C.

REVISION	DATE
1: REVISED	05-28-09
0: FINAL LE	04-15-09
A: REVIEW	02-04-09

APPROVALS

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Construction Manager	Date
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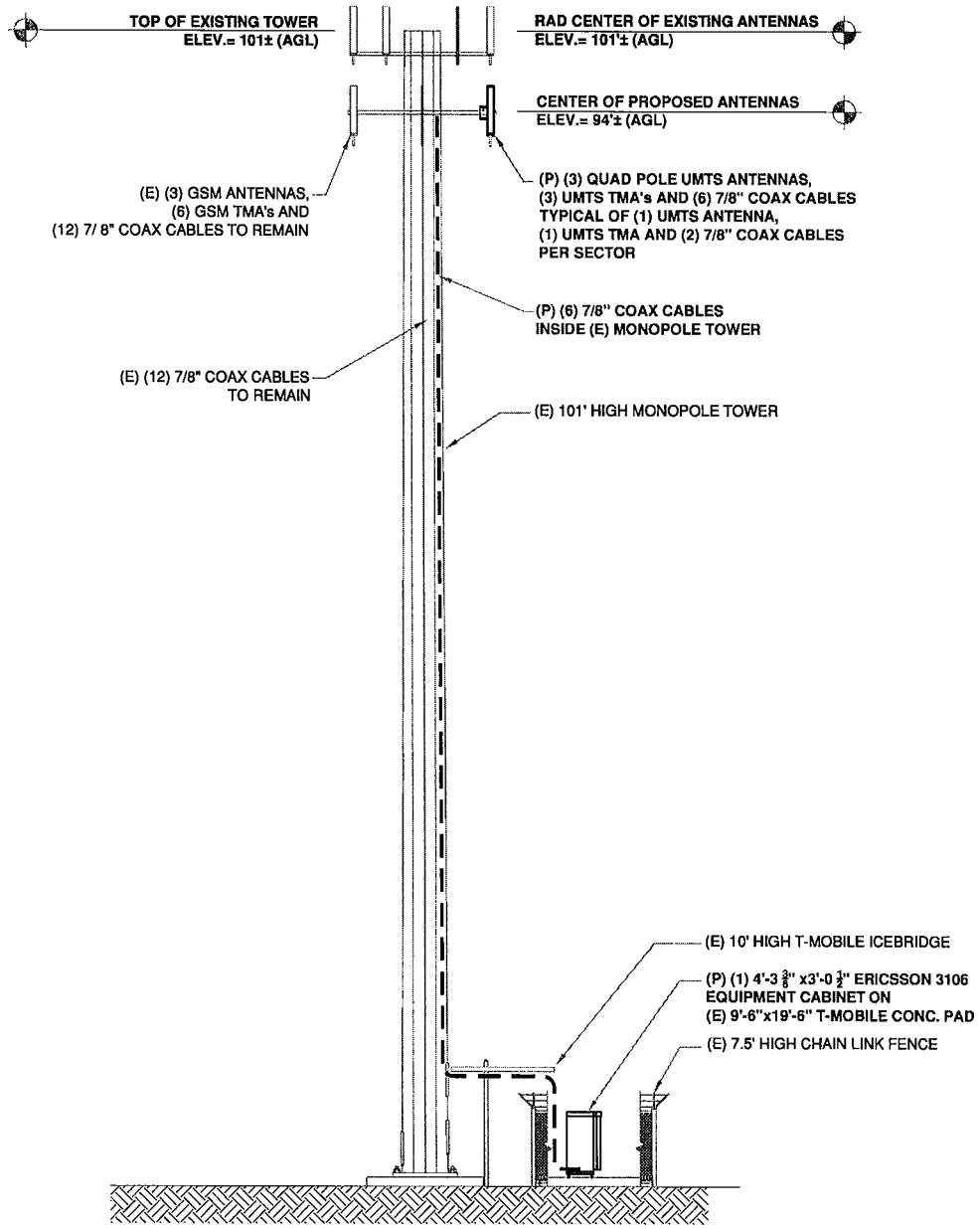

ALL EQUIPMENT LOCATIONS ARE APPROXIMATE AND ARE SUBJECT TO APPROVAL BY LESSEE/LICENSEE'S STRUCTURAL & RF ENGINEERS. LOCATIONS OF POWER & TELEPHONE FACILITIES ARE SUBJECT TO APPROVAL BY UTILITY COMPANIES.

ELEVATION

SCALE: 1" = 16'–0"

8 0 8 16 24

TRANSCEND WIRELESS, LLC
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FOR

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OFFICE: (860) 692-7100
FAX:(860) 692-7159

ATLANTIS GROUP
15 Cypress St., Suite 300
Newton Centre, MA 02459
Office: 617-965-0789
Fax: 617-663-6032

SITE NUMBER:	CTHA130A
SITE NAME:	SNET TOWER MP
ADDRESS:	419 BROAD STREET WINDSOR, CT 06095
DRAWN BY	G.C.

REVISION	DATE
1: REVISED	05-28-09
0: FINAL LE	04-15-09
A: REVIEW	02-04-09

APPROVALS

Site Owner	Date
Construction Manager	Date
RF Engineer	Date
Site Acquisition	Date

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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# 2008264.13
August 27, 2008

Approved
9/25/08

STRUCTURAL ANALYSIS REPORT

AT&T DESIGNATION:	**Site USID:**	**59344**
	Site FA:	**10035043**
	Site Name:	**Windsor**
T-MOBILE DESIGNATION:	**Site Name:**	**CTHA130/SNET Tower MP**
	Site Number:	**CTHA130A**
ANALYSIS CRITERIA:	**Codes:**	**TIA/EIA-222-F & 2003 IBC** **80-mph with 0" ice** **69-mph with 1/2" ice**
SITE DATA:		**419 Broad Street, Windsor, CT 06095, Hartford County** **Latitude 41° 50' 45.167"N, Longitude 72° 38' 46.103"W** **100' EEI Monopole**

Mr. Walker,

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

OK Elev. 94' (9) APX16DWV-16DWV-S-E-ACU Antennas on a PiROD 13' LP Platform w/ (18) 1-5/8" internal coax
(6) DTMA-1819-DD-12 Tower Mounted Amplifiers mounted behind the antennas

Based on our analysis we have determined the design of the <u>tower and its foundation are sufficient</u> 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,

STATE OF CONNECTICUT ★ DAVID B. GRANGER, P.E. NO. 17557 LICENSED PROFESSIONAL ENGINEER ★

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.

Foundation reactions are in comparison to Original Design reactions. The foundation is satisfactory if the foundation was properly designed and installed.

TOWER SUMMARY AND RESULTS

Member	Capacity	Results
Monopole	93.3%	Pass
Base Plate	75.3%	Pass
Anchor Rods	41.1%	Pass
Foundation	91.3% of Original Design	Pass

ANALYSIS METHOD

RISA Tower (Version 5.2.0.1), 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 being provided without the benefit of a site visit.

DOCUMENTS PROVIDED

Document	Remarks	Source
Preliminary Tower Summary	TTM Co-location document	G. Walker
Co-Location Application	TTM Application, dated 5/7/08	G. Walker
Previous Analysis	MEI Project #: CT00873M-07V0, dated 8/17/07	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.
6. The tower and structures have been properly maintained in accordance TIA Standard 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. Tower Mounted Amplifiers are assumed to be installed behind antennas.
9. All existing loading was obtained from the recent structural analysis by Malouf Engineering Intl., Inc. dated 8/17/07, site photos, and the provided preliminary tower summary and is assumed to be accurate.
10. All proposed coax is assumed to be internal to the monopole.

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

General Info

Site Name	Windsor
Site Number	59344
Site FA Number	10035043
Date of Analysis	8/27/2008
Company Performing Analysis	GPD Associates

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

Tower Info	Description	Date
Tower Type (G, SST, MP)	MP	
Tower Height (top of steel AGL)	100	
Tower Manufacturer	EEI	
Tower Model	n/a	
Manufacturer Drawings	EEI Job #: 3746	10/14/1998
Foundation Design	n/a	
Geotech Report	n/a	
Tower Mapping	n/a	
Previous Analysis	MEI Project #: CT00873M-07V0	8/17/2007

Design Parameters

Design Code Used	TIA/EIA-222-F
Location of Tower (County, State)	Hartford, Connecticut
Basic Wind Speed (mph)	80-fastest
Ice Thickness (in)	0.5"
Structure Classification (I, II, III)	
Exposure Category (B, C, D)	
Topographic Category (1 to 5)	

Analysis Results (% Maximum Usage)

Existing Condition	
Tower	65.0%
Foundation	63.5%
Guy Wire	n/a

*Foundation is based on Original Design Reactions

Proposed Condition	
Tower	93.3%
Foundation	91.3%
Guy Wire	n/a

*Foundation is based on Original Design Reactions

Steel Yield Strength (ksi)

Pole	65
Base Plate	60
Anchor Rods	75

Existing/Reserved

Antenna							Mount				Transmission Line		
Antenna Owner	Antenna Centerline (ft)	Quantity	Type	Model	EPA (ft²) each	Azimuth	Quantity	Type	Model	EPA (ft²) total	Quantity	Size	Attachment Leg/Face
AT&T Mobility	104	9	Panel	7770.00	5.9		1	13' LP Platform		24.80	12	1-1/4"	Internal
AT&T Mobility	104	6	TMA	CG-1900W850	Shielded			on same mount					

Proposed

Antenna							Mount				Transmission Line		
Antenna Owner	Antenna Centerline (ft)	Quantity	Type	Model	EPA (ft²) each	Azimuth	Quantity	Type	Model	EPA (ft²) total	Quantity	Size	Attachment Leg/Face
T-Mobile	94	9	Panel	APX16DWV-16DWV-S-E-ACU	6.7	30, 150, 270	1	13' LP Platform	PIROD	15.7	18	1-5/8"	Internal
T-Mobile	94	6	TMA	DTMA-1819-DD-12	Shielded			on same mount					

APPENDIX B

RISA Tower Output File

RISA Tower	Job	Page
	Windsor 59344	1 of 2
GPD Associates 520 South Main St. Suite 2531 Akron, OH 44311 Phone: (614) 210-0751 FAX: (614) 210-0752	Project 2008264.13	Date 10:07:02 08/27/08
	Client AT&T Mobility	Designed by bsmith

Tower Input Data

There is a pole section.
This tower is designed using the TIA/EIA-222-F standard.
The following design criteria apply:

Tower is located in Hartford County, Connecticut.
Basic wind speed of 80 mph.
Nominal ice thickness of 0.5000 in.
Ice density of 56 pcf.
A wind speed of 69 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 60 mph.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.333.
Local bending stresses due to climbing loads, feedline supports, and appurtenance mounts are not considered.

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
LDF6-50A (1-1/4 FOAM)	A	No	Inside Pole	100.00 - 1.00	12	No Ice	0.00	0.66
						1/2" Ice	0.00	0.66
LDF7-50A (1-5/8 FOAM)	C	No	Inside Pole	94.00 - 1.00	18	No Ice	0.00	0.82
						1/2" Ice	0.00	0.82

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Valmont 13' Platform w/o rails (GPD)	A	None		0.0000	100.00	No Ice	24.80	24.80	1.50
						1/2" Ice	26.20	26.20	2.50
(4) 7770.00	A	From Centroid-Leg	4.00 0.00 4.00	0.0000	100.00	No Ice	5.88	2.93	0.04
						1/2" Ice	6.31	3.27	0.07
(4) 7770.00	B	From Centroid-Leg	4.00 0.00 4.00	0.0000	100.00	No Ice	5.88	2.93	0.04
						1/2" Ice	6.31	3.27	0.07
(4) 7770.00	C	From Centroid-Leg	4.00 0.00 4.00	0.0000	100.00	No Ice	5.88	2.93	0.04
						1/2" Ice	6.31	3.27	0.07
(2) CG-1900/800-DB-FB-DIN	A	From Centroid-Leg	4.00 0.00 4.00	0.0000	100.00	No Ice	0.00	0.80	0.02
						1/2" Ice	0.00	0.93	0.03
(2) CG-1900/800-DB-FB-DIN	B	From Centroid-Leg	4.00 0.00 4.00	0.0000	100.00	No Ice	0.00	0.80	0.02
						1/2" Ice	0.00	0.93	0.03

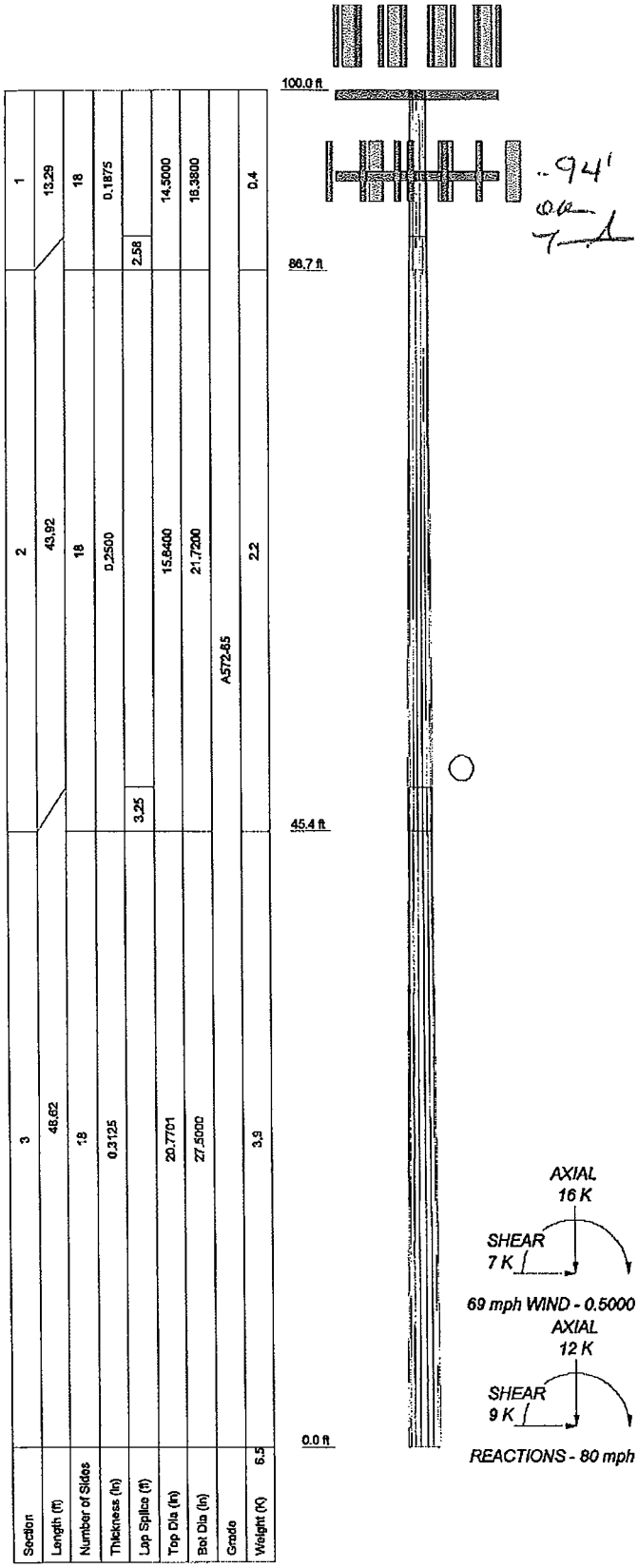
Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
(2) CG-1900/800-DB-FB-DIN	C	From Centroid-Leg	4.00 0.00 4.00	0.0000	100.00	No Ice 1/2" Ice	0.00 0.00	0.80 0.93	0.02 0.03
PiROD 13' Low Profile Platform	A	None		0.0000	94.00	No Ice 1/2" Ice	15.70 20.10	15.70 20.10	1.30 1.76
(3) APX16DWV-16DWV-S-E-A CU	A	From Centroid-Leg	3.46 2.00 0.00	30.0000	94.00	No Ice 1/2" Ice	6.70 7.13	2.00 2.33	0.04 0.07
(3) APX16DWV-16DWV-S-E-A CU	B	From Centroid-Leg	3.46 2.00 0.00	30.0000	94.00	No Ice 1/2" Ice	6.70 7.13	2.00 2.33	0.04 0.07
(3) APX16DWV-16DWV-S-E-A CU	C	From Centroid-Leg	3.46 2.00 0.00	30.0000	94.00	No Ice 1/2" Ice	6.70 7.13	2.00 2.33	0.04 0.07
(2) DTMA-1819-DD-12	A	From Centroid-Leg	3.46 2.00 0.00	30.0000	94.00	No Ice 1/2" Ice	0.00 0.00	0.41 0.52	0.01 0.02
(2) DTMA-1819-DD-12	B	From Centroid-Leg	3.46 2.00 0.00	30.0000	94.00	No Ice 1/2" Ice	0.00 0.00	0.41 0.52	0.01 0.02
(2) DTMA-1819-DD-12	C	From Centroid-Leg	3.46 2.00 0.00	30.0000	94.00	No Ice 1/2" Ice	0.00 0.00	0.41 0.52	0.01 0.02

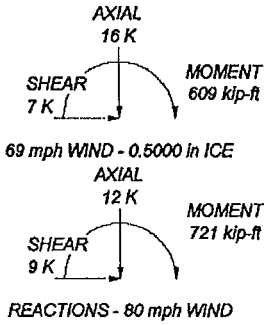
Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$SF*P_{allow}$ K	% Capacity	Pass Fail
L1	100 - 86.71	Pole	TP16.38x14.5x0.1875	1	-3.58	489.68	36.6	Pass
L2	86.71 - 45.37	Pole	TP21.72x15.64x0.25	2	-6.79	867.11	89.2	Pass
L3	45.37 - 0	Pole	TP27.5x20.7701x0.3125	3	-12.47	1401.92	93.3	Pass
							Summary	
						Pole (L3)	93.3	Pass
						RATING =	93.3	Pass

APPENDIX C

Tower Elevation Drawing





DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Valmont 13' Platform w/o rails (GPD)	100	PIROD 13' Low Profile Platform	94
(4) 7770.00	100	(3) APX16DWV-16DWV-S-E-ACU	94
(4) 7770.00	100	(3) APX16DWV-16DWV-S-E-ACU	94
(4) 7770.00	100	(3) APX16DWV-16DWV-S-E-ACU	94
(2) CG-1900/800-DB-FB-DIN	100	(2) DTMA-1819-DD-12	94
(2) CG-1900/800-DB-FB-DIN	100	(2) DTMA-1819-DD-12	94
(2) CG-1900/800-DB-FB-DIN	100	(2) DTMA-1819-DD-12	94

MATERIAL STRENGTH

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

TOWER DESIGN NOTES

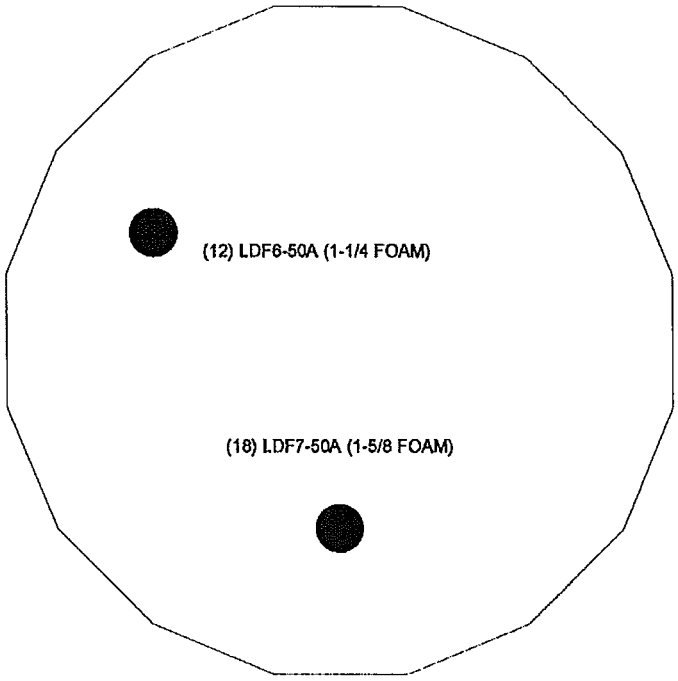
1. Tower is located in Hartford County, Connecticut.
2. Tower designed for a 80 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 69 mph basic wind with 0.50 in ice.
4. Deflections are based upon a 60 mph wind.
5. TOWER RATING: 93.3%

GPD Associates
520 South Main St. Suite 2531
Akron, OH 44311
Phone: (614) 210-0751
FAX: (614) 210-0752

Job: Windsor 59344			
Project: 2008264.13			
Client: AT&T Mobility	Drawn by: bsmith	App'd:	
Code: TIA/EIA-222-F	Date: 08/27/08	Scale: NTS	
Path: G:\Telecom\2008264\13\RSA\Windsor (59344).eri		Dwg No. E-1	

Feedline Plan

_____ Round _____ Flat _____ App In Face App Out Face



GPD GROUP
GPD Associates
520 South Main St. Suite 2531
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Job: *Windsor 59344*			
Project: *2008264.13*			
Client: AT&T Mobility	Drawn by: bsmith	App'd:	
Code: TIA/EIA-222-F	Date: 08/27/08	Scale: NTS	
Path: G:\Telecom\2008264\13\RSA\Windsor (59344).er		Dwg No. E-7	

APPENDIX D

Base Plate & Anchor Rod Analysis

Anchor Rod and Base Plate Stresses

Windsor, 59344

Overturning Moment =	721.00	k*ft
Axial Force =	12.00	k
Shear Force =	9.00	k

Anchor Rods		
Pole Diameter =	27.5	in
Number of Rods =	8	
Rod Grade (Fy) =	75	ksi
Rod Circle =	53	in
Rod Diameter =	2.25	in
Net Tensile Area =	3.25	in^2
0 Degrees		
Max Tension on Rod =	56.22	kips
Max Compression on Rod =	59.22	kips
45 Degrees		
Max Tension on Rod =	80.12	kips
Max Compression on Rod =	83.12	kips
Allow. Rod Force =	195.00	kips
Anchor Rod Capacity =	41.1%	OK

Base Plate		
Plate Strength (Fy) =	60	ksi
Plate Thickness =	2.5	in
Plate Width =	48.5	in
Est. Dist. b/w Rods =	6	in
w_{calc} =	52.50	in
e =	11.625	in
w_{max} =	41.089	in
w =	41.09	in
S =	42.80	in^3
fb =	45.15	ksi
Fb =	60	ksi
Base Plate Capacity =	75.3%	OK

T-Mobile

T-Mobile USA Inc.
35 Griffin Rd South, Bloomfield, CT 06002-1853
Phone: (860) 692-7100
Fax: (860) 692-7159

Technical Memo

To: Maxton
From: Farid Marbouh - Radio Frequency Engineer
cc: Jason Overbey
Subject: Power Density Report for CTHA130A
Date: May 29, 2009

1. Introduction:

This report is the result of an Electromagnetic Field Intensities (EMF - Power Densities) study for the T-Mobile antenna installation on a Monopole at 419 Broad Street, Windsor, 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 (1935-1944.8), (2140-2145), (2110-2120)MHz frequency Band.
2) The antenna array consists of three sectors, with 2 antennas per sector.
3) The model number for GSM antenna is APX16DWV-16DWV.
3) The model number for UMTS antenna is APX16DWV-16DWV.
4) GSM antenna center line height is 94 ft.
4) UMTS antenna center line height is 94 ft.
5) The maximum transmit power from any GSM sector is 2334.1 Watts Effective Radiated Power (EiRP) assuming 8 channels per sector.
5) The maximum transmit power from any UMTS sector is 2735.84 Watts Effective Radiated Power (EiRP) assuming 2 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 antenna installation on a Monopole at 419 Broad Street, Windsor, CT, is 0.14363 mW/cm^2. This value represents 14.363% of the Maximum Permissible Exposure (MPE) standard of 1 milliwatt per square centimeter (mW/cm^2) 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.
The combined Power Density from other carriers is 9.76%. The combined Power Density for the site is 24.123% of the M.P.E. standard.

Connecticut Market

T-Mobile

Worst Case Power Density

Site:	**CTHA130A**
Site Address:	**419 Broad Street**
Town:	**Windsor**
Tower Height:	**100 ft.**
Tower Style:	**Monopole**

GSM Data		**UMTS Data**	
Base Station TX output	20 W	**Base Station TX output**	40 W
Number of channels	8	**Number of channels**	2
Antenna Model	APX16DWV-16DWV	**Antenna Model**	APX16DWV-16DWV
Cable Size	7/8 in.	**Cable Size**	7/8 in.
Cable Length	100 ft.	**Cable Length**	100 ft.
Antenna Height	94.0 ft.	**Antenna Height**	94.0 ft.
Ground Reflection	1.6	**Ground Reflection**	1.6
Frequency	1945.0 MHz	**Frequency**	2.1 GHz
Jumper & Connector loss	4.50 dB	**Jumper & Connector loss**	1.50 dB
Antenna Gain	18.0 dBi	**Antenna Gain**	18.0 dBi
Cable Loss per foot	0.0186 dB	**Cable Loss per foot**	0.0116 dB
Total Cable Loss	1.8600 dB	**Total Cable Loss**	1.1600 dB
Total Attenuation	6.3600 dB	**Total Attenuation**	2.6600 dB
Total EIRP per Channel	54.65 dBm	**Total EIRP per Channel**	61.36 dBm
(In Watts)	291.76 W	**(In Watts)**	1367.92 W
Total EIRP per Sector	63.68 dBm	**Total EIRP per Sector**	64.37 dBm
(In Watts)	2334.10 W	**(In Watts)**	2735.84 W
nsg	11.6400	**nsg**	15.3400
Power Density (S) =	**0.066126 mW/cm^2**	**Power Density (S) =**	**0.077508 mW/cm^2**
T-Mobile Worst Case % MPE =		**14.3634%**	

Equation Used :

$$S = \frac{(1000)(grf)^2 (Power) * 10^{(nsg/10)}}{4\pi (R)^2}$$

Office of Engineering and Technology (OET) Bulletin 65, Edition 97-01, August 1997

Co-Location Total

Carrier	**% of Standard**
Verizon	
Cingular	9.7600 %
Sprint	
AT&T Wireless	
Nextel	
MetroPCS	
Other Antenna Systems	
Total Excluding T-Mobile	**9.7600 %**
T-Mobile	14.3634
Total % MPE for Site	**24.1234%**