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

Internet: ct.gov/csc

Daniel F. Caruso
Chairman

June 2, 2009

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

RE: **EM-T-MOBILE-164-090429B -** Omnipoint Communications, as subsidiary of T-Mobile USA, Inc., notice of intent to modify an existing telecommunications facility located at 297 East Barber 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 April 29, 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
Amtrak

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

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

Via Hand Delivery

April 30, 2009

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 are an original and five (5) copies of a Notice to Make an Exempt Modification to an Existing Facility for each of the following:

1. Bristol @ 985 Farmington Avenue;
2. Enfield @ 4 Oliver Road;
3. Cromwell @ 179 Shunpike Road;
4. East Windsor @ 232 South Main Street;
5. Windsor @ 297 Barber Street; and
6. Windsor @ 340 Bloomfield Avenue

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

Also enclosed are six (6) checks in the amount of $500.00 each 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
Thomas J. Regan

TJR/bh
Enclosures
40259330 v1 - REGANTJ - 025064/0016

cc/encls: via 1st Class Mail:

Arthur J. Ward, Mayor
City of Bristol
111 North Main Street
Bristol, CT 06010

Jeremy Shingleton, First Selectman
Town of Cromwell
Town Hall
41 West Street
Cromwell, CT 06416

Denise Menard, First Selectman
Town of East Windsor
Town Hall
11 Rye Street
East Windsor, CT 06016

Scott R. Kaupin, Mayor
Town of Enfield
Town Hall
820 Enfield Street
Enfield, CT 06082

Donald Trinks, Mayor
Town of Windsor
Town Hall
275 Broad Street
PO Box 472
Windsor, CT 06095-0472

CONNECTI(

EM-T-MOBILE-164-090429B

In re:
T-Mobile USA, Inc. Notice to Make an Exe. : **EXEMPT MODIFICATION NO.** _____
Modification to an Existing Facility, 297 East :
Barber Street, Windsor, Connecticut. : April 29, 2009

APR 29 2009
CONNECTICUT SITING COUNCIL

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 297 East Barber 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

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

change the height of the Tower, 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 120-foot monopole tower located at 297 East Barber Street in Windsor, Connecticut (41.813, -72.6501). The Tower is owned by Amtrak. There are other antenna systems located on the Tower. Currently, T-Mobile has 3 antennas and 6 Tower Mounted Amplifiers ("TMA") located on the Tower with a centerline of 120 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. The proposed antennas and TMA will have the same centerline as the existing antennas and TMA - 120 feet. To confirm the Tower can support these changes, T-Mobile commissioned Armor Tower to perform a structural analysis of the Tower (attached). According to the structural analysis, dated April 15, 2009, "...the subject tower [has been] found adequate within the scope of [the] analysis to support the proposed antenna loading" (Page 1, Structural Analysis).

In addition, T-Mobile plans to locate 6, 1-1/4 inch coax cables under the existing ice bridge. T-Mobile also proposes to install the UMTS equipment cabinet on its existing 10-foot by 10-foot (approximately) concrete pad. Hence, no increase in the size of the concrete pad is necessary. T-Mobile plans to slightly extend the existing chain link fence in order to allow the proposed equipment cabinet door to open. The fence-extension is necessary for safety purposes. T-Mobile plans to install power wiring and telephone wiring to service the proposed equipment at this site.

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

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 6.76% 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 14.25% 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: TJRegan

Thomas J. Regan
Brown Rudnick LLP
185 Asylum Street, CityPlace I
Hartford, CT 06103-3402
Email - tregan@brownrudnick.com
Phone - 860.509.6522
Fax - 860.509.6622

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

Certificate of Service

This is to certify that on this 29th day of April, 2009, the foregoing Notice of Exempt Modification was sent, via first class mail, to the following:

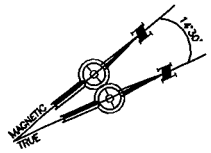
Town of Windsor
Mayor Donald Trinks
Town Hall
275 Broad Street
PO Box 472
Windsor, CT 06095

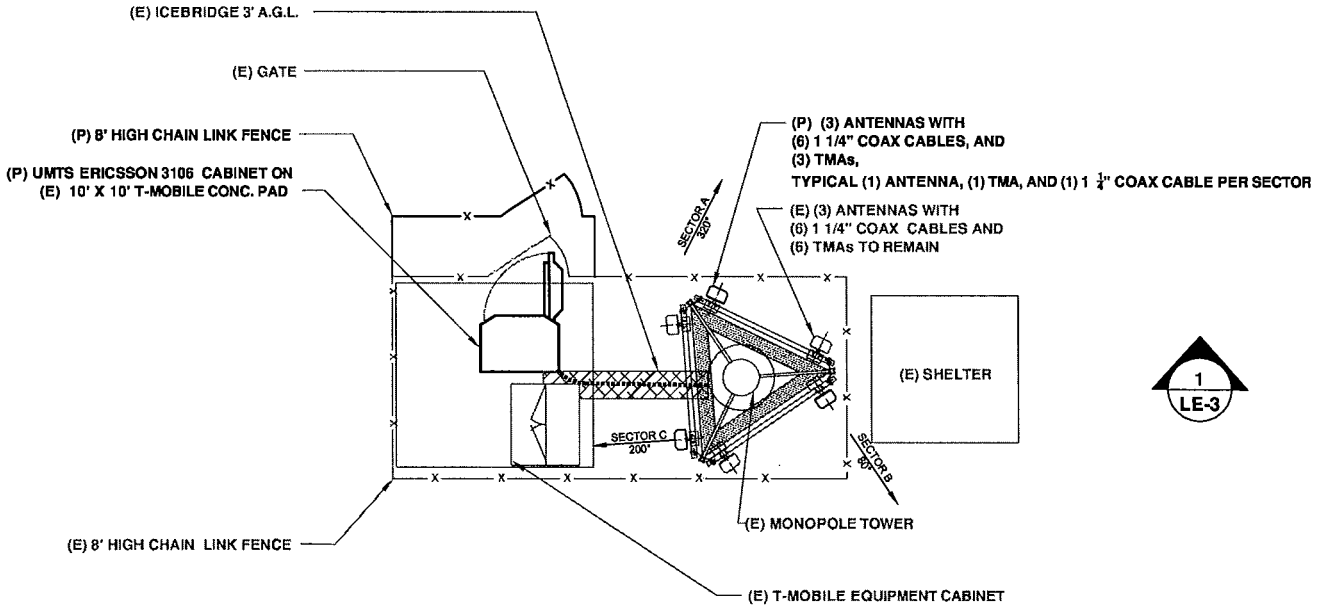
By: _____
Thomas J. Regan

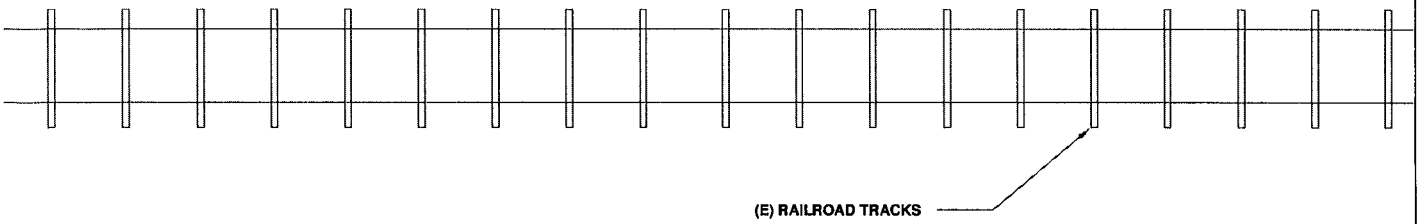
40259177 v1 - 025064/0016

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

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







ANTENNA AZIMUTHS:
SECTOR A= 80°
SECTOR B= 200°
SECTOR C= 320°

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.

PLAN

SCALE: 1" = 10'–0"

5 0 5 10 15

TRANSCEND WIRELESS
10 INDUSTRIAL AVE.
MAHWAH, NJ 0740
OFFICE: (210) 316-2085
FAX:(210) 684-0066

FOR

OMNIPOINT COMMUNICATIONS, INC. DBA T-MOBILE USA, INC
35 GRIFIN ROAD SOUTH
BLOOMFIEL, 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

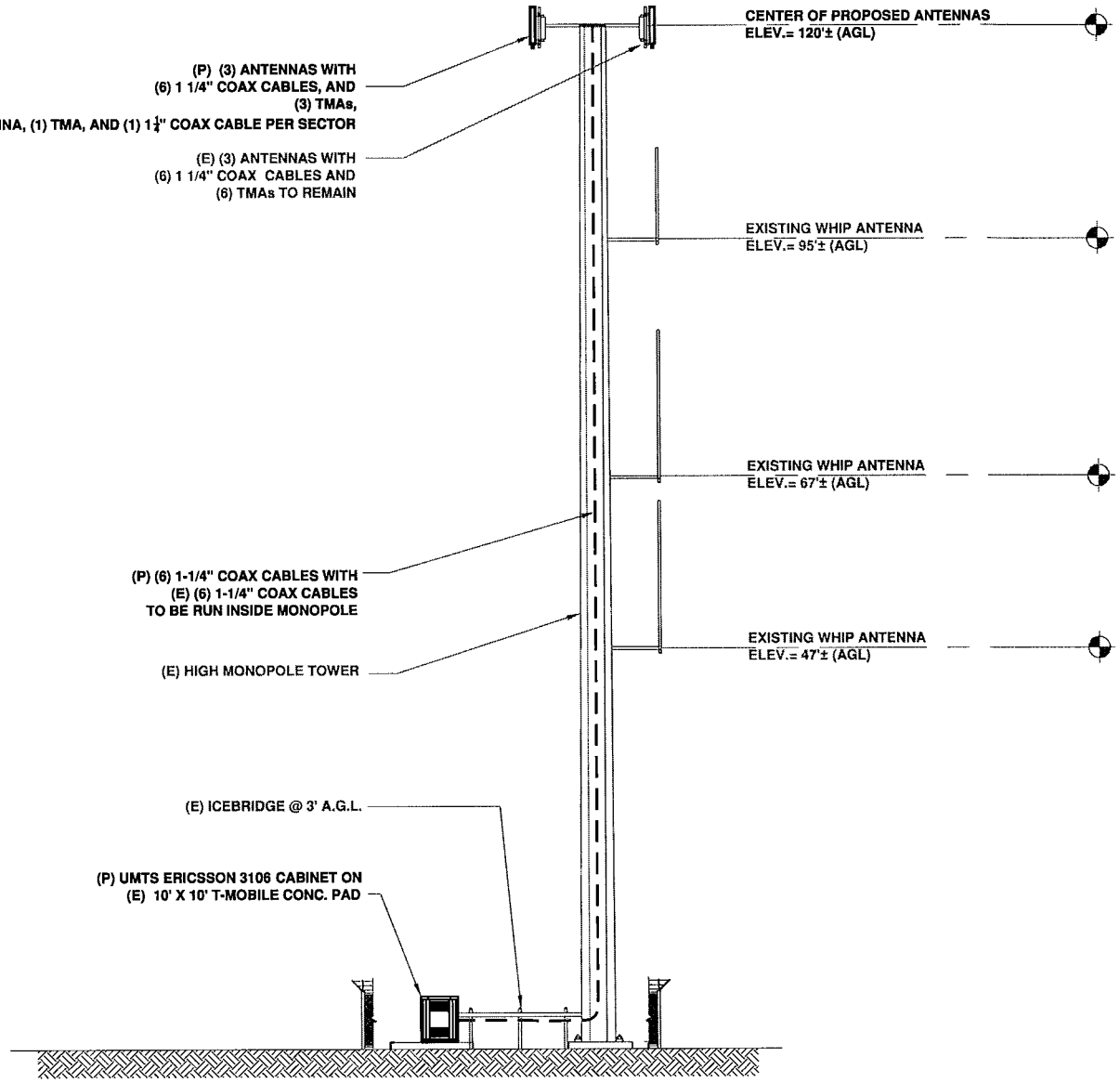
SITE NUMBER:	CT11175D
SITE NAME:	HARTFORD/ I-84 X40_1
ADDRESS:	297 EAST BARBER STREET WINDSOR, CT 06095
DRAWN BY	P.J.D.

REVISION	DATE
0: FINAL LE	03-13-09
A: REVIEW	02-06-09

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.



ELEVATION

SCALE: 1" = 20'-0"

10 0 10 20 30

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
10 INDUSTRIAL AVE.
MAHWAH, NJ 0740
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FAX:(210) 684-0066

FOR

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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.

ARMOR TOWER

Structural Analysis of 120 ft Monopole Tower

Site Number: T-Mobile CT11-175-D

Site Name: Hartford
County: Hartford
Location: 297 E.Barber St, Windsor, CT

Checked By:

Derek Hartzell
Structural Engineer

ATLANTIS GROUP
15 Cypress Street
Suite 300
Newton Centre, MA 02459

April 2009

ARMOR TOWER

April 15, 2009

Hans Fiedler
T-Mobile USA
35 Griffin Road South
Bloomfield, CT 06002

RE: CT11175D - Hartford
297 E. Barber Street, Windsor, CT

Dear Mr. Fiedler:

We have completed the structural analysis of the subject tower and **have found it to be adequate within the scope of this analysis to support the proposed antenna loading**. The tower was analyzed according to the requirements of EIA 222-F standard for Hartford County for 85 mph (fastest mile) wind speed with no ice and 74 mph wind with ½" ice.

The tower we analyzed is a 120' PiRod monopole consisting of (5) flanged pipe sections. Pole diameters range from 48" at the base to 18" at the top. Foundation capacities were predicated on supplied as-built details.

The antenna loading used in the analysis consisted of the following:

All existing antennas and transmission lines with the exception of the following:
Add (3) APX16DWV-16DWVS-CA20 (41 lb wt ea.), (3) RFS Twin TMAs (13 lb wt ea.), (6) 1-1/4" coax @ 120' for T-Mobile on existing platform.
Proposed feed lines are to be installed inside the pole.
The existing concrete slab is sufficient to support the proposed RBS 3106 Cabinet (1920 lb wt) based on normal soil values.

The results of the analysis showed all tower and foundation elements to be loaded within allowable limits. Note that data for the base flange thickness was not provided to us. Our analysis has conservatively assumed a plate thickness.

We appreciate the opportunity to provide our services to Atlantis Group and T-Mobile and if you have any questions concerning this analysis, please contact us.

Sincerely,

ARMOR TOWER, INC.

Patrick Botimer
Structural Engineer

PRIMARY ASSUMPTIONS USED IN THE ANALYSIS

1. Allowable steel stresses are defined by AISC-ASD 9th Edition and all welds conform to AWS D1.1 specifications.

2. Armor Tower has been commissioned to analyze this tower according to the requirements of TIA/EIA 222-F for Hartford County, CT. Per this code, a basic wind speed of 85 mph (fastest-mile) without ice and 74 mph with ½" ice has been considered. It is the client's responsibility to check with local authorities or the tower owner if a greater wind or ice loading is required to be considered in the analysis. Note that Section 3108.4 of the International Building Code states that "Towers shall be designed to resist wind loads according to TIA/EIA-222."

3. The acceptability of the analyzed antenna loading is the responsibility of Atlantis Group and its affiliates to confirm with the respective carriers or tower owner.

4. Any deviation from the analyzed antenna loading will require a re-analysis of the tower for verification of structural integrity. Proposed feed lines are to be installed inside the tower.

5. This analysis assumes all tower members galvanized adequately to prevent corrosion of the steel and that all tower members are in "like new" condition with no physical deterioration. This analysis also assumes the tower has been maintained properly per TIA/EIA-222-F Annex E recommended inspection and maintenance procedures for tower owners and is in a plumb condition.

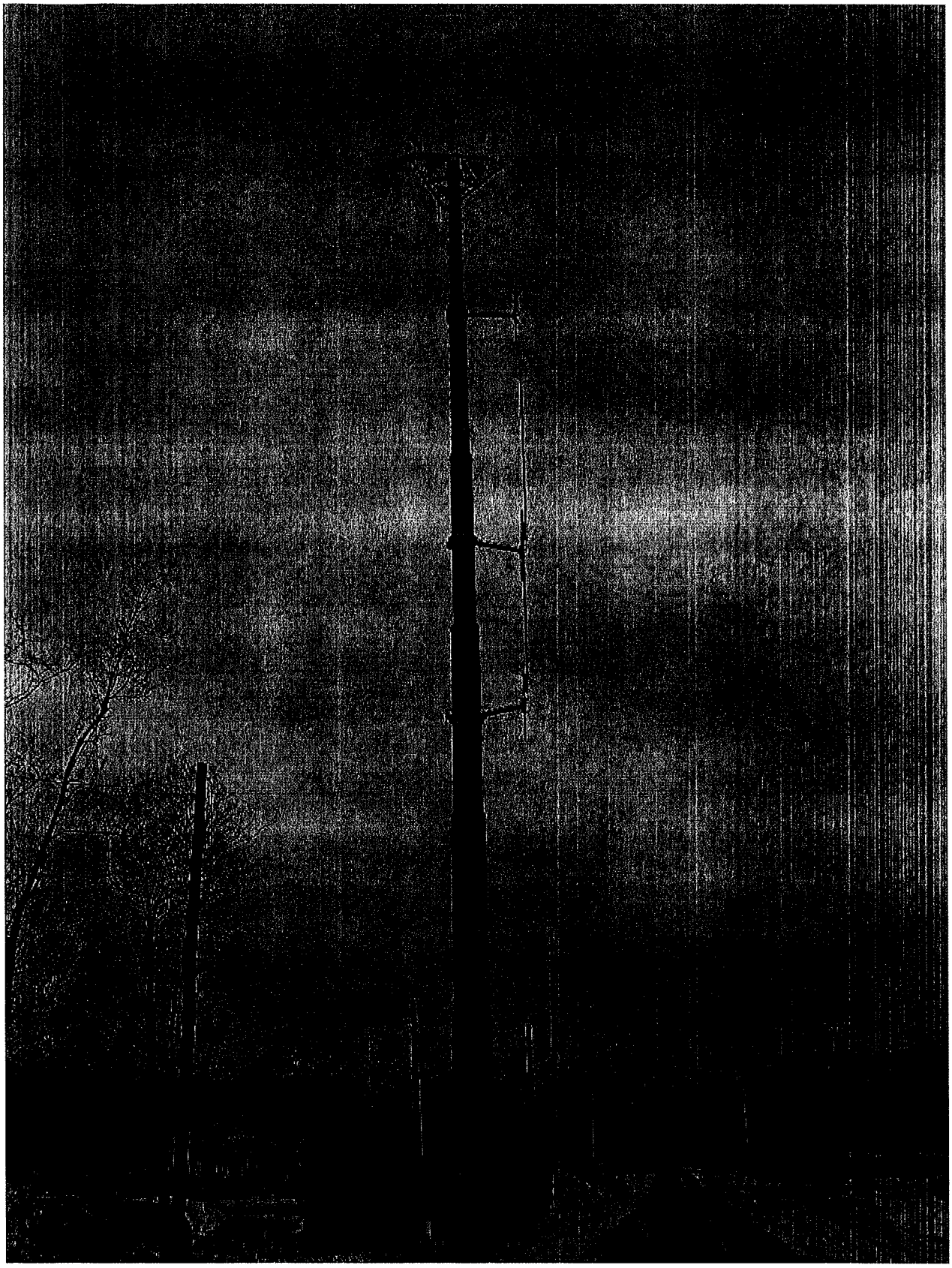
6. No accounting for residual stresses due to incorrect tower erection can be made. This analysis assumes all bolts are appropriately tightened providing necessary connection continuity and that the installation of the tower was performed by a qualified tower erector.

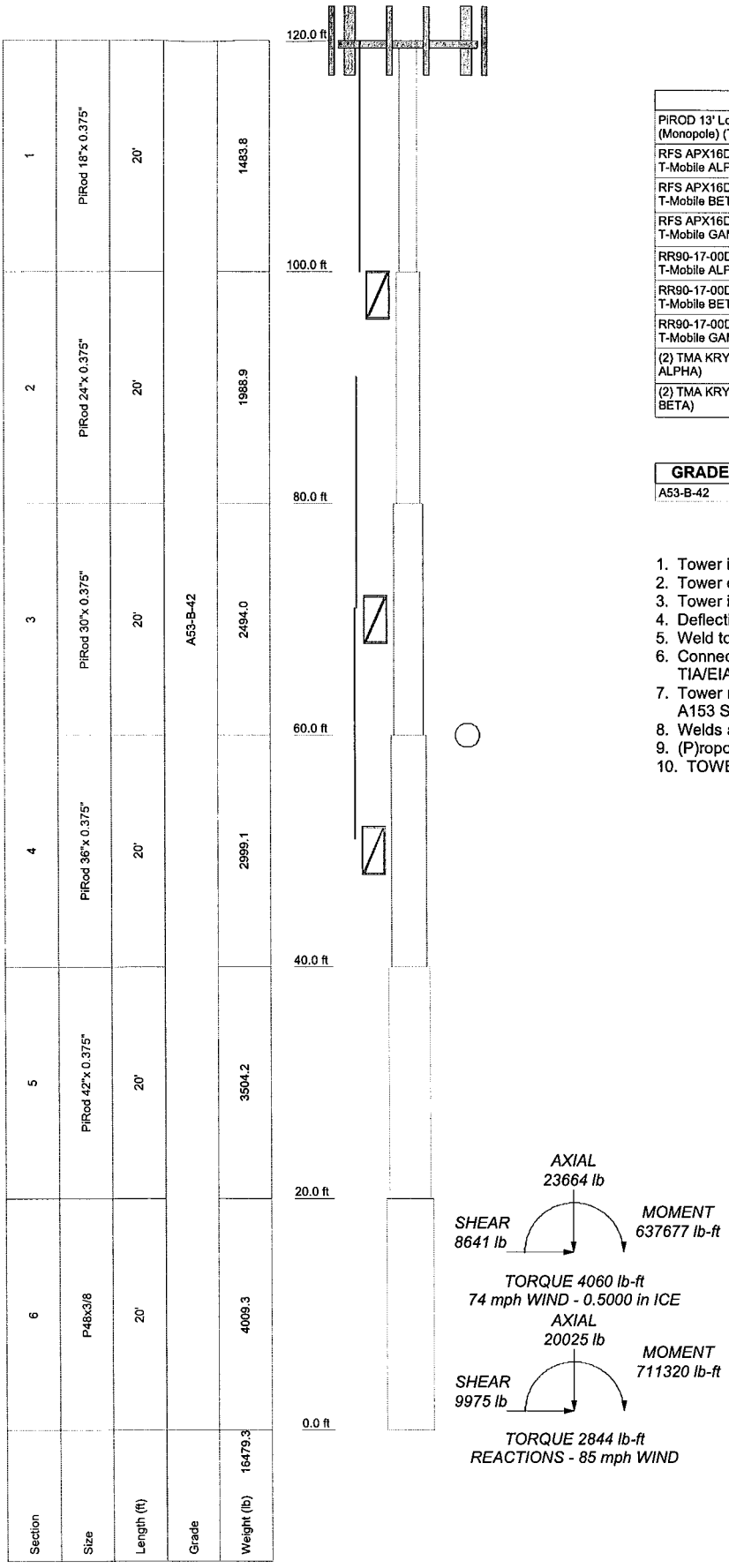
7. This analysis has compared the current tower reactions with the design tower reactions. It is our assumption that the foundations were properly designed and installed to be able to develop the full design tower reactions.

8. No conclusions, expressed or implied, shall indicate that Armor Tower has made an evaluation of the original design, materials, fabrication, or potential erection deficiencies. Any information contrary to that assumed for the purpose of preparing this analysis could alter the findings and conclusions as stated.

9. Tower member sizes, geometry, and existing data are based on customer supplied data.

10. The investigation of the load-carrying capacities of the antenna supporting frames/mounts is outside the scope of this analysis.





Section	Size	Length (ft)	Grade	Weight (lb)
1	PiRod 18"x 0.375"	20'	A53-B-42	1483.8
2	PiRod 24"x 0.375"	20'		1988.9
3	PiRod 30"x 0.375"	20'		2494.0
4	PiRod 36"x 0.375"	20'		2999.1
5	PiRod 42"x 0.375"	20'		3504.2
6	P48x3/8	20'		4009.3
				16479.3

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
PIROD 13' Low Profile Platform (Monopole) (T-Mobile)	120	(2) TMA KRY112 144 1 ((E) T-Mobile GAMMA)	120
RFS APX16DWV-16DWVS-CA20 ((P) T-Mobile ALPHA)	120	RFS ATMAA1412D-1A20 AWS TwinTMA ((P) T-Mobile ALPHA)	120
RFS APX16DWV-16DWVS-CA20 ((P) T-Mobile BETA)	120	RFS ATMAA1412D-1A20 AWS TwinTMA ((P) T-Mobile BETA)	120
RFS APX16DWV-16DWVS-CA20 ((P) T-Mobile GAMMA)	120	RFS ATMAA1412D-1A20 AWS TwinTMA ((P) T-Mobile GAMMA)	120
RR90-17-00DP w/Mount Pipe ((E) T-Mobile ALPHA)	120	PD220	120 - 100
		Single Arm side mount	98
RR90-17-00DP w/Mount Pipe ((E) T-Mobile BETA)	120	2" Sch40 x 4'	98
		PD220	91 - 71
RR90-17-00DP w/Mount Pipe ((E) T-Mobile GAMMA)	120	PD220	71 - 51
		2" Sch40 x 4'	70
(2) TMA KRY112 144 1 ((E) T-Mobile ALPHA)	120	Single Arm side mount	70
		Single Arm side mount	50
(2) TMA KRY112 144 1 ((E) T-Mobile BETA)	120	2" Sch40 x 4'	50

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A53-B-42	42 ksi	63 ksi			

TOWER DESIGN NOTES

1. Tower is located in Hartford 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 50 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 ASTM A123 and ASTM A153 Standards.
8. Welds are fabricated with ER-70S-6 electrodes.
9. (P)roposed T-Mobile Installation
10. TOWER RATING: 68.2%

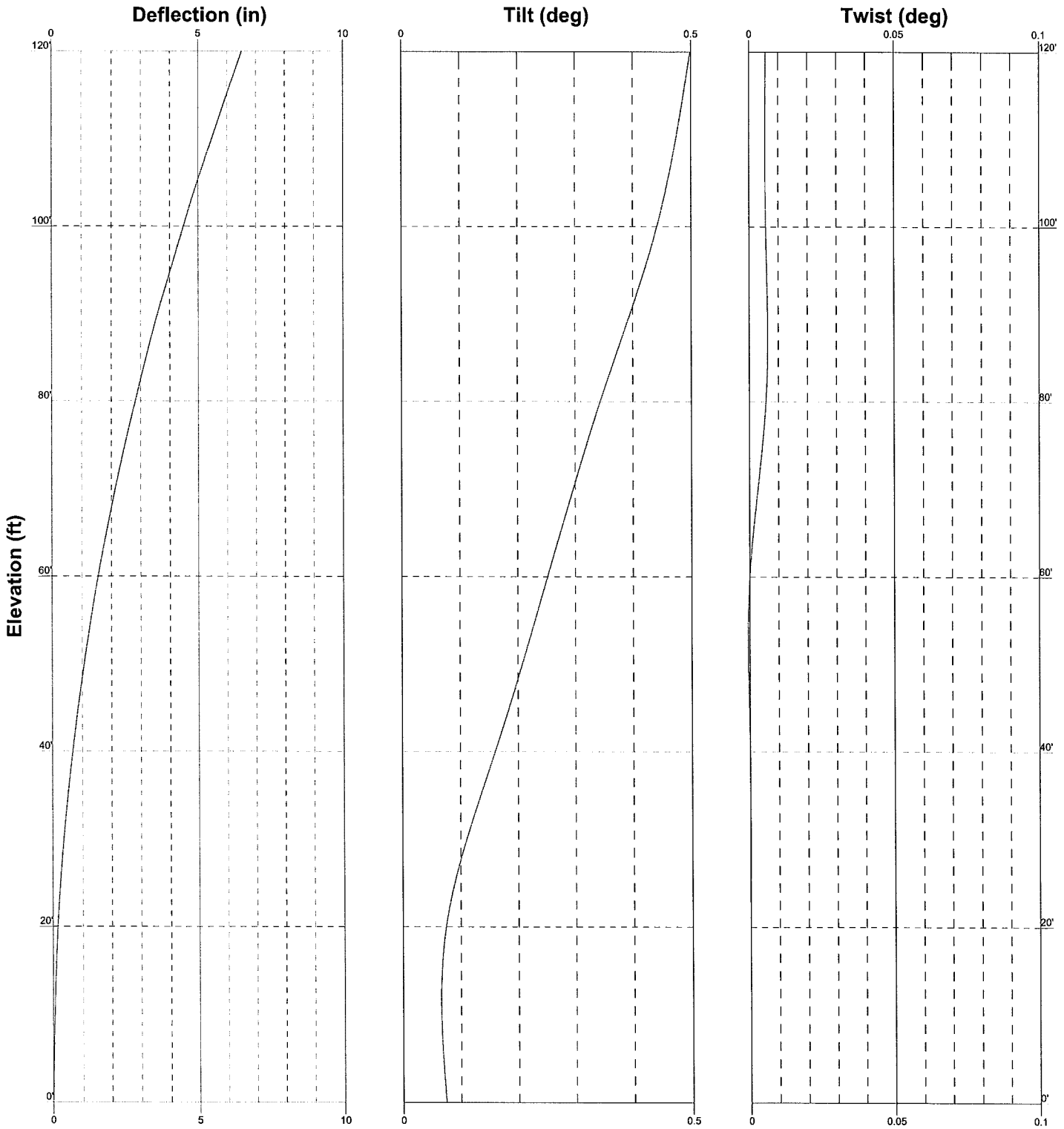
ARMOR TOWER

Armor Tower
1 North Main St.
Cortland, NY 13047
Phone: (607)591-5381
FAX: (866)870-0840

Job:	***120' PIROD MONOPOLE ANALYSIS***		
Project:	***T-Mobile CT11-175-D - Hartford, CT***		
Client: Atlantis Group	Drawn by: Patrick Botimer	App'd:	
Code: TIA/EIA-222-F	Date: 04/16/09	Scale: NTS	
Path: Z:\Atlantis Group\T-Mobile\CT11175D Hartford\Risa\Calcs\120MP.en		Dwg No. E-1	

TIA/EIA-222-F - Service - 50 mph

Maximum Values



ARMOR TOWER

Armor Tower
1 North Main St.
Cortland, NY 13047
Phone: (607)591-5381
FAX: (866)870-0840

Job: ***120' PIROD MONOPOLE ANALYSIS***			
Project: ***T-Mobile CT11-175-D - Hartford, CT***			
Client: Atlantis Group	Drawn by: Patrick Botimer	App'd:	
Code: TIA/EIA-222-F	Date: 04/16/09	Scale: NTS	
Path: Z:\Atlantis Group\T-Mobile\CT11175D Hartford\RisaCalcs\120MP.eri		Dwg No. E-5	

Feedline Plan

_____ Round _____ Flat _____ App In Face ..... App Out Face

ARMOR TOWER
Armor Tower
1 North Main St.
Cortland, NY 13047
Phone: (607)591-5381
FAX: (866)870-0840

Job: ***120' PIROD MONOPOLE ANALYSIS***			
Project: ***T-Mobile CT11-175-D - Hartford, CT***			
Client: Atlantis Group	Drawn by: Patrick Botimer	App'd:	
Code: TIA/EIA-222-F	Date: 04/16/09	Scale: NTS	
Path: Z:\Atlantis Group\T-Mobile\CT11175D Hartford\Rfsa\Cp\cs\120MP.en		Dwg No. E-7	

ARMOR TOWER	Job	Page
	120' PIROD MONOPOLE ANALYSIS	1 of 7
Armor Tower *1 North Main St.* *Cortland, NY 13047* *Phone: (607)591-5381* *FAX: (866)870-0840*	**Project** T-Mobile CT11-175-D - Hartford, CT	**Date** 09:08:23 04/16/09
	Client Atlantis Group	**Designed by** Patrick Botimer

Force Totals

Load Case	*Vertical Forces* lb	*Sum of Forces X* lb	*Sum of Forces Z* lb	*Sum of Overturning Moments, M_x* lb-ft	*Sum of Overturning Moments, M_z* lb-ft	*Sum of Torques* lb-ft
Leg Weight	16479.26					
Bracing Weight	0.00					
Total Member Self-Weight	16479.26			1521.78	2635.79	
Total Weight	20025.27			1521.78	2635.79	
Wind 0 deg - No Ice		97.45	-9806.18	-684618.72	-4595.78	-2429.39
Wind 30 deg - No Ice		5043.75	-8541.12	-596309.11	-350872.33	-1402.61
Wind 60 deg - No Ice		8638.58	-4987.48	-347811.20	-602426.66	0.00
Wind 90 deg - No Ice		9918.71	-97.45	-5709.80	-691855.00	1402.61
Wind 120 deg - No Ice		8541.12	4818.69	338329.30	-595195.09	2429.39
Wind 150 deg - No Ice		4874.96	8443.67	592121.09	-338346.88	2805.22
Wind 180 deg - No Ice		-97.45	9806.18	687662.27	9867.36	2429.39
Wind 210 deg - No Ice		-5043.75	8541.12	599352.66	356143.91	1402.61
Wind 240 deg - No Ice		-8638.58	4987.48	350854.75	607698.25	0.00
Wind 270 deg - No Ice		-9918.71	97.45	8753.35	697126.59	-1402.61
Wind 300 deg - No Ice		-8541.12	-4818.69	-335285.75	600466.68	-2429.39
Wind 330 deg - No Ice		-4874.96	-8443.67	-589077.54	343618.47	-2805.22
Member Ice	2455.68					
Total Weight Ice	23663.57			2275.09	3940.58	
Wind 0 deg - Ice		104.14	-8460.18	-606639.07	-3787.47	-3473.56
Wind 30 deg - Ice		4380.41	-7378.80	-528924.06	-311670.98	-2005.46
Wind 60 deg - Ice		7482.95	-4320.28	-308874.67	-534986.63	0.00
Wind 90 deg - Ice		8580.43	-104.14	-5452.96	-613897.16	2005.46
Wind 120 deg - Ice		7378.80	4139.90	300039.49	-527258.58	3473.56
Wind 150 deg - Ice		4200.03	7274.66	525746.20	-298285.61	4010.92
Wind 180 deg - Ice		-104.14	8460.18	611189.25	11668.62	3473.56
Wind 210 deg - Ice		-4380.41	7378.80	533474.25	319552.13	2005.46
Wind 240 deg - Ice		-7482.95	4320.28	313424.86	542867.78	0.00
Wind 270 deg - Ice		-8580.43	104.14	10003.14	621778.31	-2005.46
Wind 300 deg - Ice		-7378.80	-4139.90	-295489.30	535139.73	-3473.56
Wind 330 deg - Ice		-4200.03	-7274.66	-521196.01	306166.76	-4010.92
Total Weight	20025.27			1521.78	2635.79	
Wind 0 deg - Service		33.72	-3393.14	-235910.83	109.70	-840.62
Wind 30 deg - Service		1745.24	-2955.41	-205353.87	-119709.17	-485.33
Wind 60 deg - Service		2989.13	-1725.77	-119368.44	-206752.20	0.00
Wind 90 deg - Service		3432.08	-33.72	-994.25	-237696.26	485.33
Wind 120 deg - Service		2955.41	1667.37	118050.42	-204249.92	840.62
Wind 150 deg - Service		1686.84	2921.69	205867.65	-115375.11	970.67
Wind 180 deg - Service		-33.72	3393.14	238926.88	5114.25	840.62
Wind 210 deg - Service		-1745.24	2955.41	208369.92	124933.13	485.33
Wind 240 deg - Service		-2989.13	1725.77	122384.49	211976.15	0.00
Wind 270 deg - Service		-3432.08	33.72	4010.30	242920.21	-485.33
Wind 300 deg - Service		-2955.41	-1667.37	-115034.37	209473.87	-840.62
Wind 330 deg - Service		-1686.84	-2921.69	-202851.60	120599.06	-970.67

Load Combinations

Comb. No.	*Description*
1	Dead Only
2	Dead+Wind 0 deg - No Ice

Comb. No.	Description
3	Dead+Wind 30 deg - No Ice
4	Dead+Wind 60 deg - No Ice
5	Dead+Wind 90 deg - No Ice
6	Dead+Wind 120 deg - No Ice
7	Dead+Wind 150 deg - No Ice
8	Dead+Wind 180 deg - No Ice
9	Dead+Wind 210 deg - No Ice
10	Dead+Wind 240 deg - No Ice
11	Dead+Wind 270 deg - No Ice
12	Dead+Wind 300 deg - No Ice
13	Dead+Wind 330 deg - No Ice
14	Dead+Ice+Temp
15	Dead+Wind 0 deg+Ice+Temp
16	Dead+Wind 30 deg+Ice+Temp
17	Dead+Wind 60 deg+Ice+Temp
18	Dead+Wind 90 deg+Ice+Temp
19	Dead+Wind 120 deg+Ice+Temp
20	Dead+Wind 150 deg+Ice+Temp
21	Dead+Wind 180 deg+Ice+Temp
22	Dead+Wind 210 deg+Ice+Temp
23	Dead+Wind 240 deg+Ice+Temp
24	Dead+Wind 270 deg+Ice+Temp
25	Dead+Wind 300 deg+Ice+Temp
26	Dead+Wind 330 deg+Ice+Temp
27	Dead+Wind 0 deg - Service
28	Dead+Wind 30 deg - Service
29	Dead+Wind 60 deg - Service
30	Dead+Wind 90 deg - Service
31	Dead+Wind 120 deg - Service
32	Dead+Wind 150 deg - Service
33	Dead+Wind 180 deg - Service
34	Dead+Wind 210 deg - Service
35	Dead+Wind 240 deg - Service
36	Dead+Wind 270 deg - Service
37	Dead+Wind 300 deg - Service
38	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
L1	120 - 100	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-4300.26	204.72	-118.19
			Max. Mx	11	-3236.05	53908.11	-65.09
			Max. My	8	-3236.85	107.07	-53856.10
			Max. Vy	11	-3173.17	53908.11	-65.09
			Max. Vx	8	3172.36	107.07	-53856.10
			Max. Torque	26			1119.64
L2	100 - 80	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-7169.99	1350.72	-779.84
			Max. Mx	11	-5672.35	130897.62	-1173.57
			Max. My	8	-5674.00	1546.64	-129757.81
			Max. Vy	11	-4390.62	130897.62	-1173.57
			Max. Vx	8	4348.23	1546.64	-129757.81
			Max. Torque	26			1970.79
L3	80 - 60	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-10652.42	2685.52	-1550.49
			Max. Mx	11	-8643.87	233833.37	-2743.64

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
			Max. My	8	-8645.82	3492.99	-231097.23
			Max. Vy	11	-5806.83	233833.37	-2743.64
			Max. Vx	8	5726.81	3492.99	-231097.23
			Max. Torque	26			3304.57
L4	60 - 40	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-14704.36	3982.54	-2299.32
			Max. Mx	11	-12135.77	365323.13	-4936.30
			Max. My	8	-12137.47	6064.01	-360274.25
			Max. Vy	11	-7215.57	365323.13	-4936.30
			Max. Vx	8	7101.68	6064.01	-360274.25
			Max. Torque	26			4033.64
L5	40 - 20	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-18950.41	4005.27	-2312.45
			Max. Mx	11	-15876.57	522478.09	-6912.18
			Max. My	8	-15877.47	8047.05	-515152.84
			Max. Vy	11	-8494.27	522478.09	-6912.18
			Max. Vx	8	8380.88	8047.05	-515152.84
			Max. Torque	26			4050.54
L6	20 - 0	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-23663.57	4018.26	-2319.95
			Max. Mx	11	-20024.18	706679.43	-8871.71
			Max. My	8	-20024.20	10009.00	-697092.50
			Max. Vy	11	-9920.90	706679.43	-8871.71
			Max. Vx	8	9808.35	10009.00	-697092.50
			Max. Torque	26			4060.10

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
Pole	Max. Vert	14	23663.57	0.00	-0.00
	Max. H_x	11	20025.27	9918.71	-97.45
	Max. H_z	2	20025.27	-97.45	9806.18
	Max. M_x	2	693984.51	-97.45	9806.18
	Max. M_z	5	701296.27	-9918.71	97.45
	Max. Torsion	26	4060.10	4200.03	7274.66
	Min. Vert	35	20025.27	2989.13	-1725.77
	Min. H_x	5	20025.27	-9918.71	97.45
	Min. H_z	8	20025.27	97.45	-9806.18
	Min. M_x	8	-697092.51	97.45	-9806.18
	Min. M_z	11	-706679.44	9918.71	-97.45
	Min. Torsion	20	-4060.10	-4200.03	-7274.66

Tower Mast Reaction Summary

Load Combination	Vertical lb	$Shear_x$ lb	$Shear_z$ lb	Overturning Moment, M_x lb-ft	Overturning Moment, M_z lb-ft	Torque lb-ft
Dead Only	20025.27	-0.00	0.00	1538.87	2665.41	0.00
Dead+Wind 0 deg - No Ice	20025.27	97.45	-9806.18	-693984.51	-4627.46	-2462.88
Dead+Wind 30 deg - No Ice	20025.27	5043.75	-8541.13	-604458.03	-355640.51	-1421.94
Dead+Wind 60 deg - No Ice	20025.27	8638.58	-4987.48	-352552.28	-610638.46	-0.00

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Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	lb	lb	lb	lb-ft	lb-ft	lb-ft
Dead+Wind 90 deg - No Ice	20025.27	9918.71	-97.45	-5764.70	-701296.27	1421.94
Dead+Wind 120 deg - No Ice	20025.27	8541.13	4818.69	342984.75	-603321.94	2462.88
Dead+Wind 150 deg - No Ice	20025.27	4874.96	8443.67	600248.84	-342966.18	2843.90
Dead+Wind 180 deg - No Ice	20025.27	-97.45	9806.18	697092.51	10008.92	2462.87
Dead+Wind 210 deg - No Ice	20025.27	-5043.75	8541.13	607566.51	361022.81	1421.92
Dead+Wind 240 deg - No Ice	20025.27	-8638.58	4987.48	355660.24	616021.60	-0.00
Dead+Wind 270 deg - No Ice	20025.27	-9918.71	97.45	8871.66	706679.44	-1421.92
Dead+Wind 300 deg - No Ice	20025.27	-8541.13	-4818.69	-339878.28	608704.28	-2462.87
Dead+Wind 330 deg - No Ice	20025.27	-4874.96	-8443.67	-597141.84	348347.65	-2843.90
Dead+Ice+Temp	23663.57	-0.00	0.00	2319.95	4018.26	0.00
Dead+Wind 0 deg+Ice+Temp	23663.57	104.14	-8460.18	-617086.46	-3799.11	-3516.15
Dead+Wind 30 deg+Ice+Temp	23663.57	4380.41	-7378.80	-538019.91	-316986.35	-2030.04
Dead+Wind 60 deg+Ice+Temp	23663.57	7482.95	-4320.28	-314166.99	-544153.18	-0.00
Dead+Wind 90 deg+Ice+Temp	23663.57	8580.43	-104.14	-5508.27	-624432.08	2030.04
Dead+Wind 120 deg+Ice+Temp	23663.57	7378.80	4139.90	305253.10	-536312.11	3516.15
Dead+Wind 150 deg+Ice+Temp	23663.57	4200.03	7274.66	534848.97	-303403.33	4060.10
Dead+Wind 180 deg+Ice+Temp	23663.57	-104.14	8460.18	621757.93	11886.88	3516.12
Dead+Wind 210 deg+Ice+Temp	23663.57	-4380.41	7378.80	542692.33	325075.76	2030.01
Dead+Wind 240 deg+Ice+Temp	23663.57	-7482.95	4320.28	318838.39	552244.28	-0.00
Dead+Wind 270 deg+Ice+Temp	23663.57	-8580.43	104.14	10177.70	632523.22	-2030.01
Dead+Wind 300 deg+Ice+Temp	23663.57	-7378.80	-4139.90	-300584.63	544401.60	-3516.12
Dead+Wind 330 deg+Ice+Temp	23663.57	-4200.03	-7274.66	-530179.47	311491.13	-4060.10
Dead+Wind 0 deg - Service	20025.27	33.72	-3393.14	-239130.88	159.74	-852.57
Dead+Wind 30 deg - Service	20025.27	1745.24	-2955.41	-208151.29	-121305.58	-492.23
Dead+Wind 60 deg - Service	20025.27	2989.13	-1725.77	-120981.32	-209545.80	-0.00
Dead+Wind 90 deg - Service	20025.27	3432.08	-33.72	-978.07	-240917.09	492.23
Dead+Wind 120 deg - Service	20025.27	2955.41	1667.37	119703.78	-207013.55	852.57
Dead+Wind 150 deg - Service	20025.27	1686.84	2921.69	208727.64	-116919.50	984.46
Dead+Wind 180 deg - Service	20025.27	-33.72	3393.14	242239.57	5224.44	852.57
Dead+Wind 210 deg - Service	20025.27	-1745.24	2955.41	211260.03	126689.86	492.23
Dead+Wind 240 deg - Service	20025.27	-2989.13	1725.77	124090.00	214930.18	-0.00
Dead+Wind 270 deg - Service	20025.27	-3432.08	33.72	4086.63	246301.48	-492.23
Dead+Wind 300 deg - Service	20025.27	-2955.41	-1667.37	-116595.28	212397.84	-852.57
Dead+Wind 330 deg - Service	20025.27	-1686.84	-2921.69	-205619.08	122303.69	-984.46

Maximum Tower Deflections - Service Wind

Section No.	Elevation	Horz. Deflection	Gov. Load Comb.	Tilt	Twist
	ft	in		°	°
L1	120 - 100	6.501	35	0.5010	0.0059
L2	100 - 80	4.486	35	0.4388	0.0048
L3	80 - 60	2.817	35	0.3448	0.0034
L4	60 - 40	1.552	35	0.2504	0.0022
L5	40 - 20	0.677	35	0.1605	0.0011
L6	20 - 0	0.169	35	0.0770	0.0005

Critical Deflections and Radius of Curvature - Service Wind

Elevation	Appurtenance	Gov. Load Comb.	Deflection	Tilt	Twist	Radius of Curvature
ft			in	°	°	ft
120'	PiROD 13' Low Profile Platform (Monopole)	35	6.501	0.5010	0.0059	45915

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Elevation	*Appurtenance*	*Gov. Load Comb.*	*Deflection*	*Tilt*	*Twist*	*Radius of Curvature*
ft			*in*	°	°	*ft*
115'	PD220	35	5.981	0.4874	0.0057	45915
110'	PD220	35	5.467	0.4730	0.0054	22958
105'	PD220	35	4.967	0.4571	0.0051	15305
100'	PD220	35	4.486	0.4388	0.0048	12000
98'	Single Arm side mount	35	4.301	0.4307	0.0046	11639
91'	PD220	35	3.685	0.3992	0.0041	11708
86'	PD220	35	3.275	0.3748	0.0038	11839
81'	PD220	35	2.891	0.3498	0.0034	11961
76'	PD220	35	2.532	0.3252	0.0031	11997
71'	PD220	35	2.198	0.3011	0.0028	11994
70'	Single Arm side mount	35	2.135	0.2963	0.0027	11993
66'	PD220	35	1.889	0.2776	0.0025	11990
61'	PD220	35	1.605	0.2549	0.0022	12022
56'	PD220	35	1.346	0.2327	0.0019	12329
51'	PD220	35	1.112	0.2108	0.0017	12784
50'	Single Arm side mount	35	1.068	0.2064	0.0016	12880

Maximum Tower Deflections - Design Wind

Section No.	*Elevation*	*Horz. Deflection*	*Gov. Load Comb.*	*Tilt*	*Twist*
	ft	*in*		°	°
L1	120 - 100	18.533	10	1.4282	0.0248
L2	100 - 80	12.793	10	1.2494	0.0197
L3	80 - 60	8.040	10	0.9827	0.0140
L4	60 - 40	4.433	10	0.7141	0.0089
L5	40 - 20	1.937	10	0.4587	0.0047
L6	20 - 0	0.485	10	0.2204	0.0019

Critical Deflections and Radius of Curvature - Design Wind

Elevation	*Appurtenance*	*Gov. Load Comb.*	*Deflection*	*Tilt*	*Twist*	*Radius of Curvature*
ft			*in*	°	°	*ft*
120'	PiROD 13' Low Profile Platform (Monopole)	10	18.533	1.4282	0.0248	16069
115'	PD220	10	17.051	1.3889	0.0236	16069
110'	PD220	10	15.589	1.3474	0.0223	8034
105'	PD220	10	14.163	1.3017	0.0210	5356
100'	PD220	10	12.793	1.2494	0.0197	4201
98'	Single Arm side mount	10	12.265	1.2262	0.0191	4076
91'	PD220	10	10.510	1.1366	0.0171	4111
86'	PD220	10	9.344	1.0674	0.0157	4165
81'	PD220	10	8.250	0.9968	0.0142	4215
76'	PD220	10	7.228	0.9271	0.0129	4228
71'	PD220	10	6.276	0.8591	0.0116	4224
70'	Single Arm side mount	10	6.094	0.8457	0.0113	4224
66'	PD220	10	5.395	0.7925	0.0103	4220
61'	PD220	10	4.586	0.7271	0.0091	4229
56'	PD220	10	3.847	0.6627	0.0080	4337
51'	PD220	10	3.178	0.5990	0.0069	4498
50'	Single Arm side mount	10	3.052	0.5863	0.0066	4532

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Base Plate Design Data

Plate Thickness	Number of Anchor Bolts	Anchor Bolt Size	Actual Allowable Ratio Bolt Tension	Actual Allowable Ratio Concrete Stress	Actual Allowable Ratio Plate Stress	Actual Allowable Ratio Stiffener Stress	Controlling Condition	Critical Ratio
in		in	lb	ksi	ksi	ksi		
1.0000	36	1.0000	14655.00 32397.67 0.45	1.513 2.800 0.54	24.561 27.000 0.91	0.000 0.000 0.00	Plate	0.91 ✓

Compression Checks

Pole Design Data

Section No.	Elevation	L	L_u	Kl/r	F_a	A	Actual P	Allow. P_a	Ratio $\frac{P}{P_a}$
	ft	ft	ft		ksi	in^2	lb	lb	
L1	120 - 100 (1)	20'	0'	0.0	25.200	20.7640	-3235.68	523252.00	0.006
L2	100 - 80 (2)	20'	0'	0.0	25.200	27.8325	-5671.55	701380.00	0.008
L3	80 - 60 (3)	20'	0'	0.0	25.075	34.9011	-8642.92	875146.00	0.010
L4	60 - 40 (4)	20'	0'	0.0	23.696	41.9697	-12134.90	994507.00	0.012
L5	40 - 20 (5)	20'	0'	0.0	22.711	49.0383	-15876.10	1113690.00	0.014
L6	20 - 0 (6)	20'	0'	0.0	21.972	56.1069	-20024.20	1232770.00	0.016

Pole Bending Design Data

Section No.	Elevation	Actual M_x	Actual f_{bx}	Allow. F_{bx}	Ratio $\frac{f_{bx}}{F_{bx}}$	Actual M_y	Actual f_{by}	Allow. F_{by}	Ratio $\frac{f_{by}}{F_{by}}$
	ft	lb-ft	ksi	ksi		lb-ft	ksi	ksi	
L1	120 - 100 (1)	53928.33	-7.220	27.720	0.260	0.00	0.000	27.720	0.000
L2	100 - 80 (2)	131417.50	-9.743	27.720	0.351	0.00	0.000	27.720	0.000
L3	80 - 60 (3)	235100.83	-11.051	25.075	0.441	0.00	0.000	25.075	0.000
L4	60 - 40 (4)	367696.67	-11.927	23.696	0.503	0.00	0.000	23.696	0.000
L5	40 - 20 (5)	525988.33	-12.479	22.711	0.549	0.00	0.000	22.711	0.000
L6	20 - 0 (6)	711320.83	-12.878	21.972	0.586	0.00	0.000	21.972	0.000

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Pole Interaction Design Data

Section No.	*Elevation*	*Ratio* $\frac{P}{P_a}$	*Ratio* $\frac{f_{bx}}{F_{bx}}$	*Ratio* $\frac{f_{by}}{F_{by}}$	*Comb. Stress Ratio*	*Allow. Stress Ratio*	*Criteria*
	ft						
L1	120 - 100 (1)	0.006	0.260	0.000	0.267 ✔	1.333	H1-3 ✔
L2	100 - 80 (2)	0.008	0.351	0.000	0.360 ✔	1.333	H1-3 ✔
L3	80 - 60 (3)	0.010	0.441	0.000	0.451 ✔	1.333	H1-3 ✔
L4	60 - 40 (4)	0.012	0.503	0.000	0.516 ✔	1.333	H1-3 ✔
L5	40 - 20 (5)	0.014	0.549	0.000	0.564 ✔	1.333	H1-3 ✔
L6	20 - 0 (6)	0.016	0.586	0.000	0.602 ✔	1.333	H1-3 ✔

Section Capacity Table

Section No.	*Elevation* *ft*	*Component Type*	*Critical Element*	*P* *lb*	*SF*P_{allow}* *lb*	*% Capacity*	*Pass Fail*
L1	120 - 100	Pole	1	-3235.68	697494.89	20.0	Pass
L2	100 - 80	Pole	2	-5671.55	934939.50	27.0	Pass
L3	80 - 60	Pole	3	-8642.92	1166569.57	33.8	Pass
L4	60 - 40	Pole	4	-12134.90	1325677.78	38.7	Pass
L5	40 - 20	Pole	5	-15876.10	1484548.71	42.3	Pass
L6	20 - 0	Pole	6	-20024.20	1643282.34	45.2	Pass
						Summary	
					Pole (L6)	45.2	Pass
					Base Plate	68.2	Pass
					RATING =	**68.2**	**Pass**

Check Foundations

Design Reactions:

OTM: 1489 Kip-ft

Shear: 15 Kip

Current Reactions:

OTM: 711 Kip-ft

Shear: 10 Kip

Foundations OK

T-Mobile

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Technical Memo

To: HPC
From: Farid Marbouh - Radio Frequency Engineer
cc: Jason Overbey
Subject: Power Density Report for CT11175D
Date: April 23, 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 297 E Barber 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 RR90-17-02DP.
3) The model number for UMTS antenna is APX16DWV-16DWV.
4) GSM antenna center line height is 120 ft.
4) UMTS antenna center line height is 120 ft.
5) The maximum transmit power from any GSM sector is 1543.55 Watts Effective Radiated Power (EiRP) assuming 8 channels per sector.
5) The maximum transmit power from any UMTS sector is 2458.61 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 297 E Barber Street, Windsor, CT, is 0.06756 mW/cm^2. This value represents 6.756% 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 7.49%. The combined Power Density for the site is 14.246% of the M.P.E. standard.

Connecticut Market

T-Mobile

Worst Case Power Density

Site:	**CT11175D**
Site Address:	**297 E Barber Street**
Town:	**Windsor**
Tower Height:	**120 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	RR90-17-02DP	**Antenna Model**	APX16DWV-16DWV
Cable Size	1 1/4 in.	**Cable Size**	1 1/4 in.
Cable Length	140 ft.	**Cable Length**	140 ft.
Antenna Height	120.0 ft.	**Antenna Height**	120.0 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	16.5 dBi	**Antenna Gain**	18.0 dBi
Cable Loss per foot	0.0154 dB	**Cable Loss per foot**	0.0116 dB
Total Cable Loss	2.1560 dB	**Total Cable Loss**	1.6240 dB
Total Attenuation	6.6560 dB	**Total Attenuation**	3.1240 dB
Total EIRP per Channel	52.85 dBm	**Total EIRP per Channel**	60.90 dBm
(In Watts)	192.94 W	**(In Watts)**	1229.31 W
Total EIRP per Sector	61.89 dBm	**Total EIRP per Sector**	63.91 dBm
(In Watts)	1543.55 W	**(In Watts)**	2458.61 W
nsg	9.8440	**nsg**	14.8760
Power Density (S) =	**0.026057 mW/cm^2**	**Power Density (S) =**	**0.041505 mW/cm^2**
T-Mobile Worst Case % MPE =		**6.7562%**	

Equation Used :

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

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Co-Location Total

Carrier	**% of Standard**
Verizon	
Cingular	
Sprint	
AT&T Wireless	
Nextel	
MetroPCS	
Other Antenna Systems	7.4900 %
Total Excluding T-Mobile	**7.4900 %**
T-Mobile	6.7562
Total % MPE for Site	**14.2462%**