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@po.state.ct.us
www.ct.gov/csc

June 10, 2004

Karina Fournier
Zoning Department
T-Mobile
100 Filley Street
Bloomfield, CT 06002

RE: **TS-T-MOBILE-034-040527** - Omnipoint Communications, Inc. request for an order to approve tower sharing at an existing telecommunications facility located at 7 West View Drive, Danbury, Connecticut.

Dear Ms. Fournier:

At a public meeting held June 9, 2004, the Connecticut Siting Council (Council) ruled that the shared use of this existing tower site is technically, legally, environmentally, and economically feasible and meets public safety concerns, and therefore, in compliance with General Statutes § 16-50aa, the Council has ordered the shared use of this facility to avoid the unnecessary proliferation of tower structures with the condition that the missing bolts be replaced as recommended in the Structural Analysis report dated April 15, 2004 and sealed by Robert Adair, P.E. prior to the antenna installation. 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. Any additional change to this facility may require an explicit request to this agency pursuant to General Statutes § 16-50aa or notice pursuant to Regulations of Connecticut State Agencies Section 16-50j-73, as applicable. Such request or 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.

This decision applies only to this request for tower sharing and is not applicable to any other request or construction.

The proposed shared use is to be implemented as specified in your letter dated May 27, 2004.

Thank you for your attention and cooperation.

Very truly yours,

Pamela B. Katz

Pamela B. Katz, P.E.
Chairman

PBK/laf

c: Honorable Mark. D. Boughton, Mayor, City of Danbury
Dennis Elpern, City Planner, City of Danbury
Robert Kaufman

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CSC
CONNECTICUT SITING COUNCIL

TS-T-MOBILE-034-040527

T-Mobile®
Get more from life®

100 Filley Street, Bloomfield, CT 06002
860-692-7145 fax 860-692-7159

May 27, 2004

BY HAND

Pamela B. Katz, Chairman and
Members of the Siting Council
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: **Tower Sharing Request by T-Mobile**
7 West View Drive, Danbury, CT
Latitude: 41-24-16 / Longitude: 73-25-26

Dear Ms. Katz and Members of the Siting Council:

Pursuant to Connecticut General Statutes (C.G.S.) § 16-50aa, T-Mobile USA, Inc. acting through its wholly owned subsidiary Omnipoint Communications, Inc. ("T-Mobile") hereby requests an order from the Connecticut Siting Council ("Council") to approve the proposed shared use of an existing communications tower, located at 7 West View Drive, in Danbury ("West View Drive Facility"), owned by Robert Kaufman. T-Mobile and Mr. Kaufman have agreed to the shared use of the West View Drive Facility, as detailed below.

West View Drive Facility

The West View Drive Facility consists of a one hundred thirty three (133) foot high lattice tower ("Tower") owned and operated by Robert Kaufman. T-Mobile proposes to locate antennas at a mounting height of fifty (50) feet. The equipment will be located within the existing house that surrounds the tower.

WEST VIEW DRIVE FACILITY

As shown on the enclosed plans prepared by Natcomm, LLC, including a site plan and tower elevation of the West View Drive Facility, annexed hereto as Exhibit 1, T-Mobile proposes a shared use of the Facility by placing antennas on the tower and equipment needed to provide personal communications services ("PCS") within the existing site plan. T-Mobile will install twelve (12) antennas at the fifty (50) foot level of the Tower. Three (3) associated unmanned equipment cabinets will be located within the existing house surrounding the tower.

Connecticut General Statutes § 16-50aa provides that, upon written request for shared use approval, an order approving such use shall be issued, "if the council finds that the proposed shared use of the facility is technically, legally, environmentally and economically feasible and meets public safety concerns." (C.G.S. § 16-50aa(c)(1).) Further, upon approval of such shared use, it is exclusive and no local zoning or land use approvals are required C.G.S. §16-50x. Shared use of the West View Drive Facility satisfies the approval criteria set forth in C.G.S. § 16-50aa as follows:

A. Technical Feasibility The existing Tower and compound were designed to accommodate multiple carriers. A structural analysis of the Tower with the proposed T-Mobile installation has been performed and is attached as Exhibit 2. The structural analysis concludes that the tower can safely accommodate the proposed T-Mobile antennas. The proposed shared use of this Tower is technically feasible. Further there is sufficient room at the base of the facility, thus the site plan will not have to be altered.

B. Legal Feasibility Pursuant to C.G.S. § 16-50aa, the Council has been authorized to issue an order approving shared use of the existing West View Drive Facility. (C.G.S. § 16-50aa (C)(1)). Under the authority vested in the Council by C.G.S. § 16-50aa, an order by the Council approving the shared use of a tower would permit the Applicant to obtain a building permit for the proposed installation.

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

1.) The proposed installation would have a de minimis visual impact, and would not cause any significant change or alteration in the physical or environmental characteristics of the existing facility,

2.) The proposed installation by T-Mobile would not increase the height of the tower nor expand the House/site plan at the West View Drive Facility and will be of minimal impact to the facility;

3.) The proposed installation would not increase the noise levels at the existing facility boundaries by six decibels or more;

4.) Operation of T-Mobile's antennas at this site would not exceed the total radio frequency electromagnetic radiation power density level adopted by the FCC and Connecticut Department of Health. The "worst case" exposure calculated for the operation of this facility for all carriers would be approximately 29% of the standard. See Radio Frequency Field Survey dated May 14, 2004, prepared by C Squared Systems, annexed hereto as Exhibit 3;

5.) The proposed shared use of the West View Drive Facility will not require any water or sanitary facilities, or generate any air emissions or discharges to water bodies. Further, the installation will not generate any traffic other than for periodic maintenance visits.

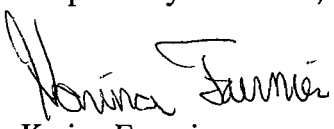
D. Economic Feasibility The Applicant and the tower owner have agreed to share use of the West View Drive Facility on terms agreeable to both parties. The proposed tower sharing is therefore economically feasible.

E. Public Safety As stated above and evidenced in the Radio Frequency Field Survey annexed hereto as Exhibit 3, the operation of T-Mobile's antennas at this site would not exceed the total radio frequency electromagnetic radiation power density level adopted by the FCC and Connecticut Department of Health. Further, the addition of T-Mobile's telecommunications service in the Danbury area through shared use of the West View Drive Facility is expected to enhance the safety and welfare of local residents and travelers through the area resulting in an improvement to public safety in this area.

Conclusion

As delineated above, the proposed shared use of the West View Drive Facility satisfies the criteria set forth in C.G.S. § 16-50aa, and advances the General Assembly's and the Siting Council's goal of preventing the proliferation of tower in the State of Connecticut. T-Mobile therefore requests the Siting Council issue an order approving the proposed shared use of the West View Drive Facility.

Respectfully submitted,



Karina Fournier
Zoning Dept.
T-Mobile
100 Filley St.
Bloomfield, CT 06002
(860) 692-7145

cc: Danbury Mayor, Mark D. Boughton

Exhibit 1

WEST VIEW DR. TOWER

7 WEST VIEW DRIVE
DANBURY, CT 06810

CT-11-923C

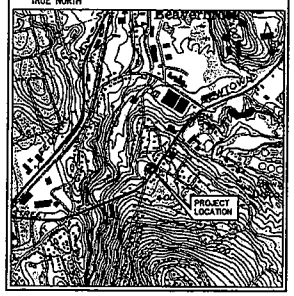
COLLOCATION

GENERAL NOTES

1. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES.
2. THE ARCHITECT/ENGINEER HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK. THE CONTRACTOR BIDDING THE JOB IS NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS.
3. THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE LESSEE/LICENSEE REPRESENTATIVE OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO THE SUBMISSION OF CONTRACTOR'S PROPOSAL OR PERFORMANCE OF WORK. IN THE EVENT OF DISCREPANCIES THE CONTRACTOR SHALL PRICE THE MORE COSTLY OR EXTENSIVE WORK, UNLESS DIRECTED IN WRITING OTHERWISE.
4. THE SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR AND ALL OTHER MATERIALS AND LABOR DEEMED NECESSARY TO COMPLETE THE WORK/PROJECT AS DESCRIBED HEREIN.
5. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO THE SUBMISSION OF BIDS OR PERFORMING WORK TO FAMILIARIZE HIMSELF WITH THE FIELD CONDITIONS AND TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
6. THE CONTRACTOR SHALL OBTAIN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS / CONTRACT DOCUMENTS.
7. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO THE MANUFACTURER'S / VENDOR'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
8. THE CONTRACTOR SHALL PROVIDE A FULL SET OF CONSTRUCTION DOCUMENTS AT THE SITE UPDATED WITH THE LATEST REVISIONS AND ADDENDUMS OR CLARIFICATIONS AVAILABLE FOR THE USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.
9. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY CONSTRUCTION CONTROL SURVEYS, ESTABLISHING AND MAINTAINING ALL LINES AND GRADES REQUIRED TO CONSTRUCT ALL IMPROVEMENTS AS SHOWN HEREIN.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.
12. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC. DURING CONSTRUCTION. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.
13. THE CONTRACTOR SHALL KEEP THE GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST OR SMUDGES OF ANY NATURE.
14. THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.
15. THE CONTRACTOR SHALL NOTIFY THE LESSEE/LICENSEE REPRESENTATIVE WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE WORK THAT IS IN CONFLICT UNTIL CONFLICT IS RESOLVED BY THE LESSEE/LICENSEE REPRESENTATIVE.
16. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS PROPERTY LINES, ETC. ON THE JOB.
17. ALL UNDERGROUND UTILITY INFORMATION WAS DETERMINED FROM SURFACE INVESTIGATIONS AND EXISTING PLANS OF RECORD. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO ANY SITE WORK. CALL THE FOLLOWING FOR ALL PRE-CONSTRUCTION NOTIFICATION 72 HOURS PRIOR TO ANY EXCAVATION ACTIVITY:
   DIG SAFE SYSTEM (MA, ME, NH, RI, VT): 1-888-344-7233
   CALL BEFORE YOU DIG (CT): 1-800-922-4455
18. PER FCC MANDATE, ENHANCED EMERGENCY (E911) SERVICE IS REQUIRED TO MEET NATIONWIDE STANDARDS FOR WIRELESS COMMUNICATIONS SYSTEMS. LESSEE/LICENSEE IMPLEMENTATION REQUIRES DEPLOYMENT OF EQUIPMENT AND ANTENNAS GENERALLY DEPICTED ON THIS PLAN, ATTACHED TO OR MOUNTED IN CLOSE PROXIMITY TO THE BTS RADIO CABINETS. LESSEE/LICENSEE RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO E911 EQUIPMENT AND LOCATION AS TECHNOLOGY EVOLVES TO MEET REQUIRED SPECIFICATIONS.

VICINITY MAP

SCALE: 1" = 1000'



DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE LESSEE/LICENSEE REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

SHEET INDEX

PROJECT SUMMARY

SITE NUMBER:	CT-11-923C
SITE NAME:	WEST VIEW DR. TOWER
SITE ADDRESS:	7 WEST VIEW DRIVE DANBURY, CT 06810
ASSESSOR'S MAP ID.:	MAP: L14, LOT: 107
CONSTRUCTION TYPE:	COLLOCATION
PROPERTY OWNER:	ROB KAUFMAN c/o SEVEN T LLC 39 PADANARAM ROAD DANBURY, CT 06810
CONTACT NAME:	ROB KAUFMAN (203) 743 5559
APPLICANT:	OMNIPOINT FACILITIES NETWORK 2 LLC 100 FILLEY STREET BLOOMFIELD, CT 06002 OFFICE: (860) 692-7100 FAX: (860) 692-7159
ZONING DISTRICT:	RA-8
JURISDICTION:	TOWN OF DANBURY

OMNIPOINT FACILITIES NETWORK 2 LLC
100 FILLEY STREET
BLOOMFIELD, CT 06002
OFFICE: (860) 692-7100
FAX: (860) 692-7159

Natcomm, LLC
63-2 North Branford Road
Branford, Connecticut 06405
(203) 488-0580

STATE OF CONNECTICUT
ANTHONY A. JOUBERT
6894
LICENSED PROFESSIONAL ENGINEER

APPROVALS

Omnipoint _____
LANDLORD _____
LEASING _____
R.F. _____
ZONING _____
CONSTRUCTION _____
A/E _____

PROJECT NO: 04052
DRAWN BY: CMS
CHECKED BY: AAJ

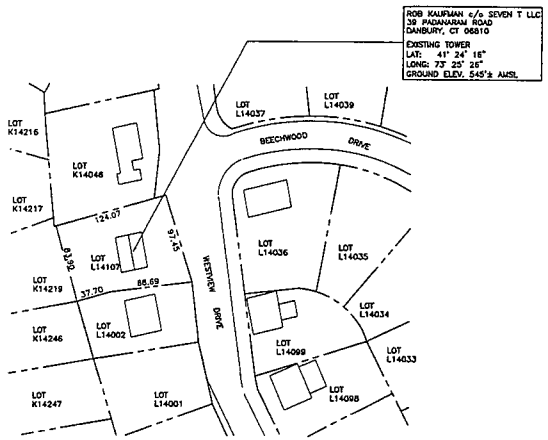
SUBMITTALS

2	04/28/04	CONSTRUCTION
1	04/21/04	CONSTRUCTION
0	04/16/04	CONSTRUCTION

CT-11-923C
WEST VIEW DR. TOWER
7 WEST VIEW DRIVE
DANBURY, CT 06810

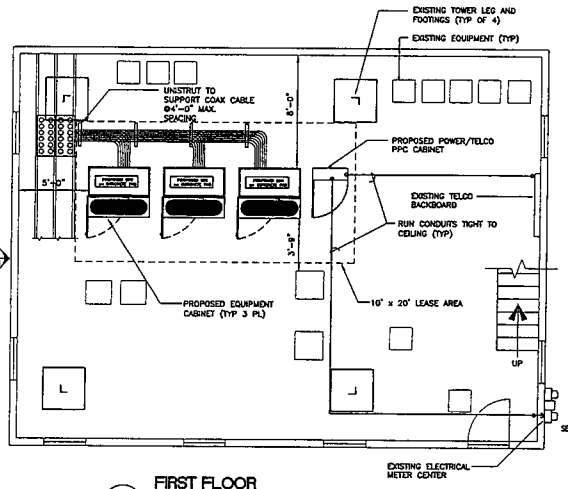
SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1



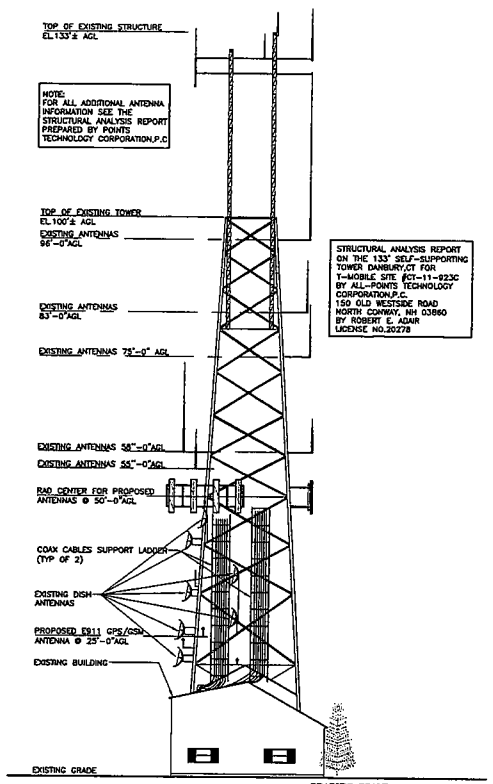
1 A-1 **SITE PLAN**
SCALE: 1" = 60'-0" NORTH

GRAPHIC SCALE
(IN FEET)
1 inch = 60 ft.



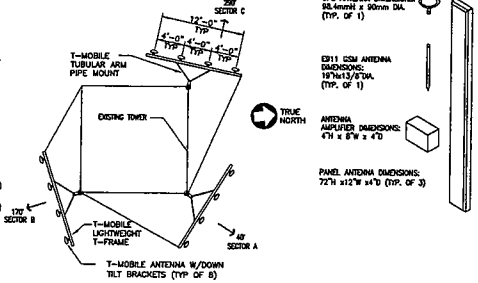
3 A-1 **FIRST FLOOR EQUIPMENT LAYOUT PLAN**
SCALE: 1/4" = 1'-0" NORTH

GRAPHIC SCALE
1/4" = 1'-0"

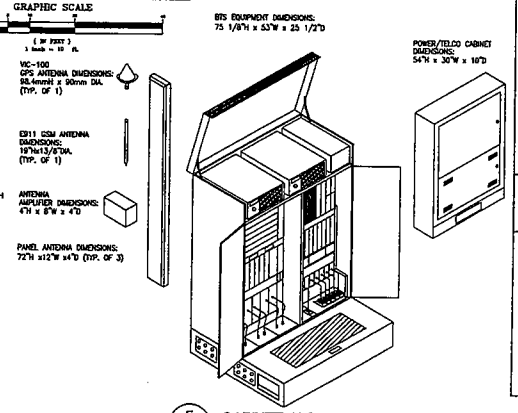


GRAPHIC SCALE
(IN FEET)
1 inch = 10 ft.

2 A-1 **SOUTH ELEVATION**
SCALE: 1" = 10'-0"



4 A-1 **ANTENNA ORIENTATION KEY**
NOT TO SCALE



5 A-1 **CABINET AND EQUIPMENT DETAIL**
NOT TO SCALE

NOTES

1) THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY CONSTRUCTION CONTROL SURVEYS AND MAINTAINING ALL LINES AND GRADES REQUIRED TO CONSTRUCT ALL IMPROVENTS SHOWN HEREIN.

2) ALL DIMENSIONS SHOWN THUS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS & ELEVATIONS WHICH EFFECTS THE CONTRACTORS WORK. CONTRACTOR TO VERIFY ALL DIMENSIONS WITH LESSEE/LICENSEE PRIOR TO CONSTRUCTION.

3) NORTH ARROW SHOWN ON PLANS REFERS TO TRUE NORTH. CONTRACTOR SHALL VERIFY TRUE NORTH & INFORM CONSTRUCTION MANAGER OF ANY DISCREPANCIES BEFORE STARTING CONSTRUCTION.

4) THE GENERAL CONTRACTOR AND/OR HIS SUB CONSULTANT SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS & INSPECTIONS WHICH MAY BE REQ'D FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTRY OR LOCAL GOVERNMENT AUTHORITY.

5) ANTENNA INSTALLATION SHALL BE CONDUCTED BY FIELD CREWS EXPERIENCED IN THE ASSEMBLY & ERECTION OF RADIO ANTENNAS, TRANSMISSION LINES & SUPPORT STRUCTURES.

6) COAXIAL CABLE CONNECTORS & TRANSMITTER EQUIPMENT SHALL BE PROVIDED BY THE LESSEE/LICENSEE & IS NOT INCLUDED IN THESE CONSTRUCTION DOCUMENTS. A SCHEDULE OF LESSEE/LICENSEE SUPPLIED MATERIALS IS ATTACHED TO THE BID DOCUMENTS (SEE ATTACHMENT #1). ALL OTHER HARDWARE TO BE PROVIDED BY THE CONTRACTOR. CONNECTION HARDWARE SHALL BE STAINLESS STEEL.

7) ANY EQUIPMENT THAT IS TO BE PAINTED SHALL BE PAINTED TO MATCH EXISTING. PAINT SHALL BE SHERWIN WILLIAMS, COROTHANE II. SURFACE PREPARATION & APPLICATION SHALL BE IN ACCORDANCE WITH MANF'S SPECIFICATIONS & LESSEE/LICENSEE GUIDELINES.

8) COORDINATION, LAYOUT, & FURNISHING OF CONDUIT, CABLE & ALL APPURTENANCES REQ'D FOR PROPER INSTALLATION OF ELECTRICAL & TELECOMMUNICATION SERVICE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

9) EQUIPMENT WILL BE INDEPENDENTLY POWERED WITH SEPARATE METER.

10) ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH LOCAL UTILITY COMPANY REQUIREMENTS & SPECIFICATIONS.

11) PRIOR TO EXCAVATION NEAR TOWER, CONTRACTOR TO CONTACT & COORDINATE WITH PROPERTY LESSEE/LICENSEE.

12) ALL ACTIVE SEWER, WATER, GAS, ELECTRIC, & OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, & WHERE REQ'D FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEER. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR PIER DRILLING AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW.

13) ALL INACTIVE SEWER, WATER, GAS, ELECTRIC & OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED &/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF UTILITY COMPANY.

14) THE AREAS OF THE PROPERTY DISTURBED BY THE WORK & NOT COVERED BY THE EQUIPMENT, DRIVEWAY OR GRAVEL, SHALL BE GRADED TO A UNIFORM SLOPE, FERTILIZED, SEEDED & COVERED WITH MULCH.

15) THE CONTRACTOR SHALL ESTABLISH & MAINTAIN SOIL EROSION & SEDIMENTATION CONTROLS AT ALL TIMES DURING CONSTRUCTION.

16) PER FCC MANDATE, ENHANCED EMERGENCY (E911) SERVICE REQ'D TO MEET NATIONWIDE STANDARDS FOR WIRELESS COMMUNICATIONS SYSTEMS. LESSEE/LICENSEE IMPLEMENTATION REQUIRES DEPLOYMENT OF EQUIPMENT & ANTENNAS GENERALLY DEPICTED ON THIS PLAN, ATTACHED TO OR MOUNTED IN CLOSE PROXIMITY TO THE BTS RADIO CABINETS. LESSEE/LICENSEE RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO (E911) EQUIPMENT & LOCATION AS TECHNOLOGY EVOLVES TO MEET REQ'D SPECIFICATION.

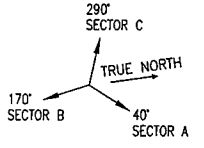
ABBREVIATIONS

SF	SQUARE FOOT	ADJ	ADJUSTABLE
APPROX	APPROXIMATE	SHT	SHEET
CONC	CONCRETE	SIM	SIMILAR
CONT	CONTINUOUS	C	CONDUIT
CJ	CONSTRUCTION JOINT	STL	STEEL
DIA	DIAMETER	TOC	TOP OF CONCRETE
DWG	DRAWING	TOM	TOP OF MASONRY
EGB	EQUIPMENT GROUND BAR	TYP	TYPICAL
EA	EACH	VIF	VERIFY IN FIELD
ELEC	ELECTRICAL	UON	UNLESS OTHERWISE NOTED
EL	ELEVATION	WWF	WELDED WIRE FABRIC
EQ	EQUAL	BTS	BASE TRANSMISSION STATION
EQUIP	EQUIPMENT	w/	WITH
EXT	EXTERIOR	LNA	LOW NOISE AMPLIFIER
FF	FINISHED FLOOR	PCS	PERSONAL COMM. SERVICES
FG	FINISHED GRADE	A-1	ANTENNA MARK NO.
GA	GAUGE	&	AND
GALV	GALVANIZED	@	AT
GC	GENERAL CONTRACTOR	℄	PLATE BAR
LG	LONG	MIN	MINIMUM
MAX	MAXIMUM	MTL	METAL
MECH	MECHANICAL	NIC	NOT IN CONTRACT
MFR	MANUFACTURER	NTS	NOT TO SCALE
MGB	MASTER GROUND	OC	ON CENTER
AGL	ABOVE GROUND LEVEL	OPP	OPPOSITE
ARL	ABOVE ROOF LEVEL		
AFL	ABOVE FLOOR LEVEL		

SYMBOLS AND MATERIALS

- NEW ANTENNA
- EXISTING ANTENNA
- ASPHALT
- NEW ACCESS EASEMENT
- CONCRETE
- ELECTRIC BOX
- LIGHT POLE
- FND. MONUMENT
- SPOT ELEVATION
- SET POINT
- REVISION
- GRID REFERENCE
- DETAIL REFERENCE (SHEET/SHEET)
- ELEVATION (SHEET/SHEET)
- SECTION (SHEET/SHEET)
- GROUT or PLASTER
- BRICK
- MASONRY
- CONCRETE
- EARTH
- GRAVEL
- PLYWOOD
- SAND
- WOOD CONT.
- WOOD BLOCKING
- STEEL
- CENTERLINE
- PROPERTY LINE
- STEPPED FOOTING
- MATCH LINE
- WORK POINT
- GROUND WIRE
- COAXIAL CABLE

ANTENNA ORIENTATION KEY



OMNIPOINT FACILITIES NETWORK 2 LLC
100 FILLEY STREET
BLOOMFIELD, CT 06002
OFFICE: (860) 692-7100
FAX: (860) 692-7159

Natcomm, LLC
83-2 North Branford Road
Branford, Connecticut 06405
Tel: (203) 488-0580
Fax: (203) 488-8587

STATE OF CONNECTICUT
ROBERT E. ADAIR
LICENSED PROFESSIONAL ENGINEER

Omnipoint	
LANDLORD	
LEASING	
R.F.	
ZONING	
CONSTRUCTION	
A/E	

PROJECT NO:	04052
DRAWN BY:	CMS
CHECKED BY:	AAJ

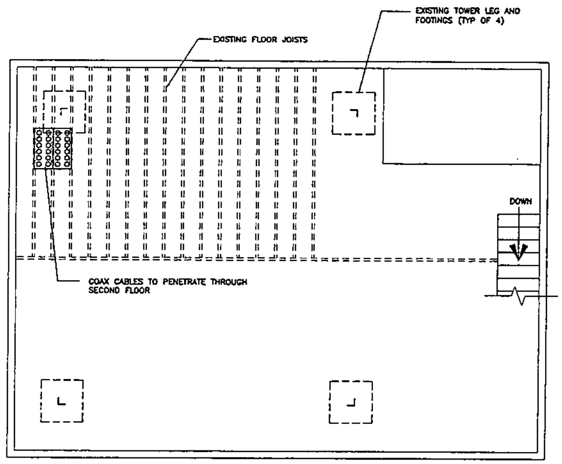
SUBMITTALS

2	04/28/04	CONSTRUCTION
1	04/21/04	CONSTRUCTION
0	04/16/04	CONSTRUCTION

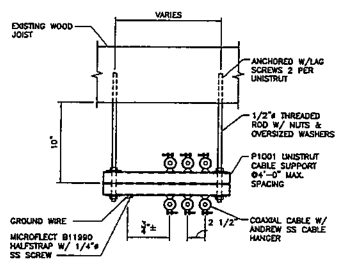
CT-11-923C
WEST VIEW DR. TOWER
7 WEST VIEW DRIVE
DANBURY, CT 06810

SHEET TITLE
PLANS, ELEVATION DETAILS AND NOTES

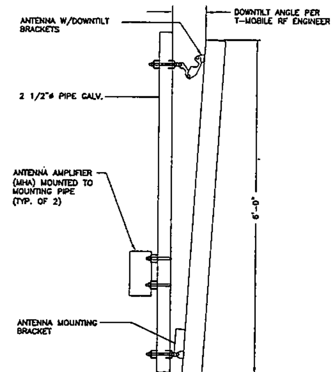
SHEET NUMBER
A-1



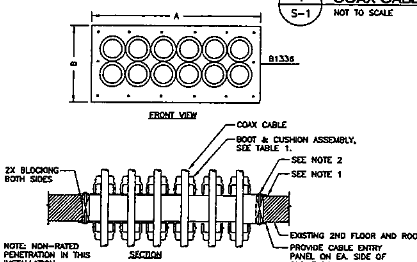
1 / S-1 SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0"
NORTH
GRAPHIC SCALE



3 / S-1 CABLE TRAY DETAIL
NOT TO SCALE



4 / S-1 COAX CABLE WAVPORT DETAIL
NOT TO SCALE



NOTE: NON-RATED PENETRATION IN THIS INSTALLATION

TABLE 1

CABLE SIZE	MICROFLECT BOOT & CUSHION ASSEMBLY
1/2"ø	B1346A
7/8"ø	B537A
1 1/4"ø	B1152A
1 5/8"ø	B535A

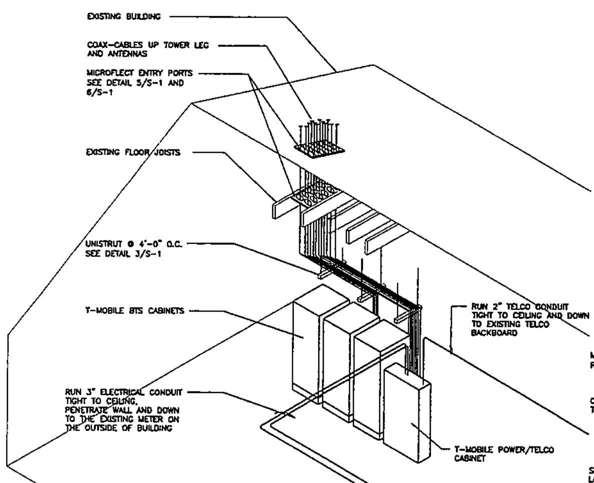
TABLE 2

No. CABLES	MICROFLECT CABLE ENTRY PANEL	A	B
1	B574	5"	5"
6	B1449	23"	17 1/2"
6	B576	25 1/2"	17 1/2"
12	B1118	25 1/2"	25 1/2"
12	B1336	34 1/2"	17 1/2"

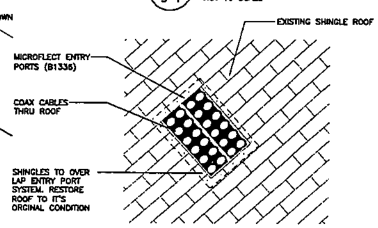
NOTES:

1. FASTEN CABLE ENTRY TO WALL W/ STAINLESS STEEL SCREWS W/ LEAD SHIELD INSERTS INTO BRICK, MASONRY, CONC. USE TOGGLE BOLTS INTO STUD WALLS AND ROOF.
2. DRILL HOLES 1/2" LARGER IN DIAMETER THAN CABLES THROUGH 2ND FLOOR AND ROOF TO MATCH HOLES IN THE CABLE ENTRY.
3. DETAIL BASED ON THE USE OF MIROFLECT AND HILTI. CONTRACTOR MAY SUBSTITUTE EQUAL MATERIALS APPROVED BY T-MOBILE.

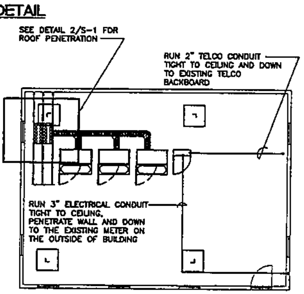
5 / S-1 COAX CABLE WAVPORT DETAIL
NOT TO SCALE



2 / S-1 COAX-CABLE ROUTING DIAGRAM
NOT TO SCALE



6 / S-1 ROOF PENETRATION
NOT TO SCALE



7 / S-1 KEY PLAN
NOT TO SCALE
NORTH

STRUCTURAL NOTES

1) DESIGN REQUIREMENTS ARE PER STATE BUILDING CODE & APPLICABLE SUPPLEMENTS, ANSI/ASCE7, EIA/TIA-222-F STRUCTURAL STANDARDS FOR STEEL ANTENNA SUPPORTING STRUCTURES.

2) CONTRACTOR SHALL VERIFY ALL DIMENSIONS & CONDITIONS IN THE FIELD PRIOR TO FABRICATION & ERECTION of ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION of THE CONSTRUCTION MANAGER.

3) DESIGN & CONSTRUCTION of STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE of STEEL CONSTRUCTION "SPECIFICATION FOR THE DESIGN, FABRICATION & ERECTION of STRUCTURAL STEEL FOR BUILDINGS".

4) STRUCTURAL & MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36 STRUCT. STEEL UNLESS OTHERWISE INDICATED.

5) STEEL PIPE SHALL CONFORM TO ASTM A500 "COLD-FORMED WELDED & SEAMLESS CARBON STEEL STRUCTURAL TUBING", GRADE A, or ASTM A53 PIPE STEEL BLACK & HOT-DIPPED ZINC-COATED WELDED & SEAMLESS TYPE E or S, GRADE B. PIPE SIZES INDICATED ARE NOMINAL. ACTUAL OUTSIDE DIAMETER IS LARGER.

6) STRUCTURAL CONNECTION BOLTS SHALL BE HIGH STRENGTH BOLTS (BEARING TYPE) & CONFORM TO ASTM A325 "HIGH STRENGTH BOLTS FOR STRUCTURAL JOINTS, INCLUDING SUITABLE NUTS & PLAIN HARDENED WASHERS". ALL BOLTS SHALL BE ø5/8" UON.

7) ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE w/ ASTM A123 "ZINC (HOT-DIP GALVANIZED COATINGS on IRON & STEEL PRODUCTS", UNLESS OTHERWISE NOTED.

8) ALL BOLTS, ANCHORS & MISCELLANEOUS HARDWARE SHALL BE GALV. IN ACCORDANCE w/ ASTM A153 "ZINC-COATING (HOT-DIP) on IRON & STEEL HARDWARE", UNLESS OTHERWISE NOTED.

9) FIELD WELDS, DRILL HOLES, SAW CUTS & ALL DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED w/ AN ORGANIC ZINC REPAIR PAINT COMPLYING w/ REQUIREMENTS of ASTM A780. GALVANIZING REPAIR PAINT SHALL HAVE 65 PERCENT ZINC BY WEIGHT, ZIRP BY DUNCAN GALVANIZING, GALVA BRIGHT PREMIUM BY CROWN or EQUAL. THICKNESS of APPLIED GALVANIZING REPAIR PAINT SHALL BE NOT NOT LESS THAN 4 COATS (ALLOW DRY TIME BETWEEN COATS) w/A RESULTING COATING THIcKNESS REQUIRED BY ASTM A123 or A153 as APPLICABLE.

10) CONTRACTOR SHALL COMPLY w/ AWS CODE FOR PROCEDURES, APPEARANCE & QUALITY of WELDS, & FOR METHODS USED IN CORRECTING WELDING. ALL WELDERS & WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE w/ AWS "STANDARD QUALIFICATION PROCEDURES". ALL WELDING SHALL BE DONE USING E70XX ELECTRODES & WELDING SHALL CONFORM TO AISC % DI.I. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL of STEEL CONSTRUCTION". 9TH EDITION.11.

11) INCORRECTLY FABRICATED, DAMAGED or OTHERWISE MISFITTING or NONCONFORMING MATERIALS or CONDITIONS SHALL BE REPORTED TO THE CONSTRUCTION MANAGER PRIOR TO REMEDIAL or CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE CONSTRUCTION MANAGER APPROVAL.

12) UNISTRUTS SHALL BE FORMED STEEL CHANNEL STRUT FRAMING as MANUFACTURED BY UNISTRUT CORP, WAYNE, MI OR EQUAL. STRUT MEMBERS SHALL BE 1-5/8"x 1-5/8"x12GA. UNLESS OTHERWISE NOTED, & SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.

13) EPOXY ANCHOR ASSEMBLY SHALL CONSIST of 1/2" DIAMETER STAINLESS STEEL ANCHOR ROD w/ NUTS & WASHERS. AN INTERNALLY THREADED INSERT, A SCREEN TUBE & A EPOXY ADHESIVE. THE ANCHORING SYSTEM SHALL BE THE HILTI-HIT HY-20 and/or HY-150 SYSTEMS (as SPECIFIED AN DWG.) or ENGINEERS APPROVED EQUAL w/ 4-1/4" MIN. EMBEDMENT DEPTH.

14) EXPANSION BOLTS SHALL CONFORM TO FEDERAL SPECIFICATION FF-S-325, GROUP II, TYPE 4, CLASS I, HILTI KWIK BOLT II or APPROVED EQUAL. INSTALLATION SHALL BE IN ACCORDANCE w/ THE MANUFACTURER'S RECOMMENDATIONS. MINIMUM EMBEDMENT SHALL BE THREE & ONE HALF (3 1/2) INCHES.

15) GRAVEL SUB BASE & CONCRETE SHALL BE PLACED AGAINST UNDISTURBED SOIL.

16) CONCRETE FOR FENCE & ICE BRIDGE SUPPORT SHALL BE 3000 PSI AIR ENTRAINED (4%-6%) NORMAL WEIGHT CONCRETE.

17) ALL CAST IN PLACE CONCRETE SHALL BE MIXED & PLACED IN ACCORDANCE w/ THE REQUIREMENTS OF ACI 318 & ACI 301.

18) THE FOLLOWING MINIMUM CONCRETE COVER OVER REINFORCING STEEL SHALL BE as FOLLOWS UNLESS NOTED OTHERWISE:

CONCRETE CAST AGAINST EARTH ... 3 INCHES.
CONCRETE EXPOSED TO EARTH or WATER
#6 & LARGER ....2 INCHES
#5 & SMALLER ....1 1/2 INCHES

ALL EXPOSED EDGES SHALL BE PROVIDED w/ A 3/4"x3/4" CHAMFER UNLESS NOTED OTHERWISE.

19) LUMBER SHALL COMPLY w/ THE REQUIREMENTS of THE AMERICAN INSTITUTE of TIMBER CONSTRUCTION & THE NATIONAL FOREST PRODUCTS ASSOCIATION'S NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION. ALL LUMBER SHALL BE PRESSURE TREATED & SHALL BE STRUCTURAL GRADE NO. 2 OR BETTER.

20) WHERE ROOF PENETRATIONS ARE REQ'D, THE CONTRACTOR SHALL CONTACT & COORDINATE RELATED WORK w/ THE BUILDING OWNER & THE EXISTING ROOF INSTALLER. WORK SHALL BE PERFORMED IN SUCH A MANNER as TO NOT VOID THE EXISTING ROOF WARRANTY.

21) PER FCC MANDATE, ENHANCED EMERGENCY (E911) SERVICE REQ'D TO MEET NATIONWIDE STANDARDS FOR WIRELESS COMMUNICATIONS SYSTEMS. LESSEE/LICENSEE IMPLEMENTATION REQUIRES DEPLOYMENT of EQUIPMENT & ANTENNAS GENERALLY DEPICTED on THIS PLAN, ATTACHED TO or MOUNTED IN CLOSE PROXIMITY TO THE BTS RADIO CABINETS. LESSEE/LICENSEE RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO (E911) EQUIPMENT & LOCATION as TECHNOLOGY EVOLVES TO MEET REQ'D SPECIFICATION.

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Branford, Connecticut 06405

Omnipoint
LANDLORD
LEASING
R.F.
ZONING
CONSTRUCTION
A/E

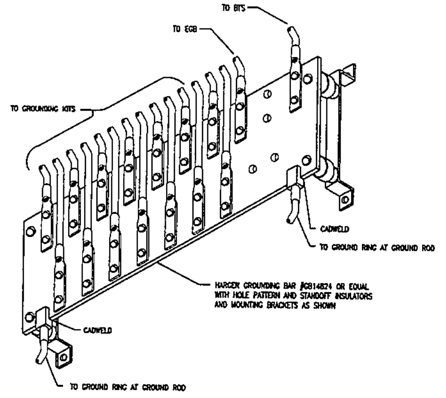
PROJECT NO: 04052
DRAWN BY: CMS
CHECKED BY: AAJ

SUBMITTALS		
2	04/28/04	CONSTRUCTION
1	04/21/04	CONSTRUCTION
0	04/16/04	CONSTRUCTION

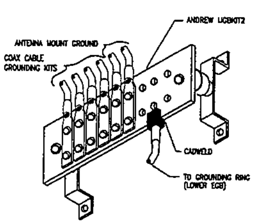
CT-11-923C
WEST VIEW DR. TOWER
7 WEST VIEW DRIVE
DANBURY, CT 06810

SHEET TITLE
STRUCTURAL NOTES, PLANS, SECTIONS AND DETAILS

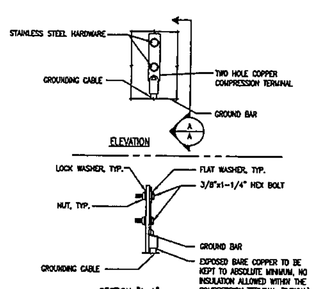
SHEET NUMBER
S-1



1 E-1 MASTER GROUND BAR (MGB)
NOT TO SCALE

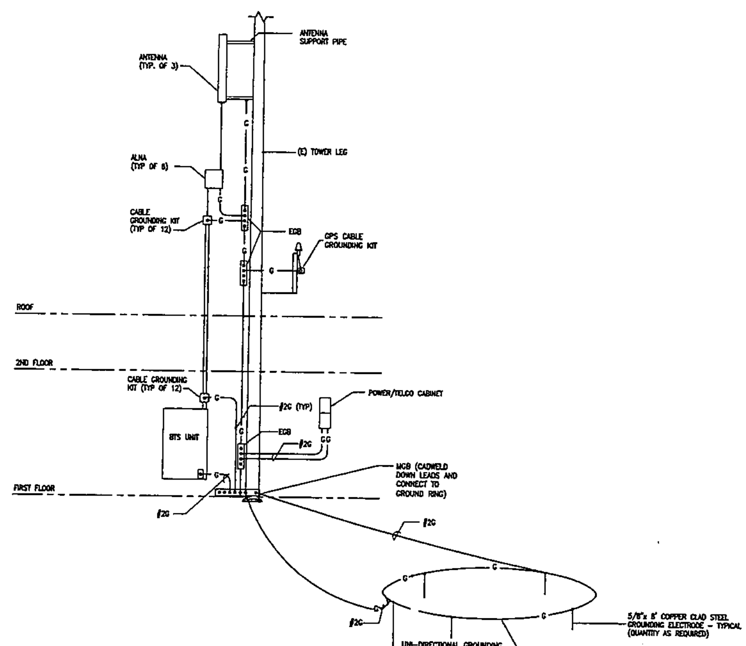


2 E-1 EQUIPMENT GROUND BAR (EGB)
NOT TO SCALE

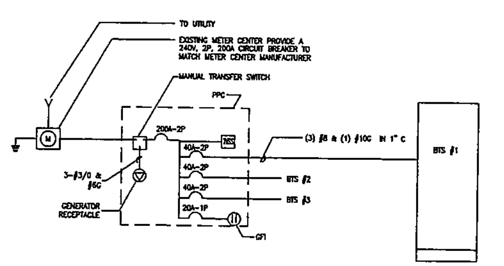


NOTE:
1. "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.
3. CADWELD DOWNLEADS FROM UPPER EGB, LOWER EGB, AND MCB.

3 E-1 TYPICAL GROUND BAR CONNECTIONS DETAIL
NOT TO SCALE



4 E-1 GROUND RISER DIAGRAM
NOT TO SCALE



5 E-1 POWER RISER DIAGRAM
NOT TO SCALE

ELECTRICAL LEGEND

Symbol	Description
▬	NEW PANEL BOARD, SURFACE MOUNTED
▬	EXISTING PANEL BOARD, SURFACE MOUNTED
T	DRY TYPE TRANSFORMER
M	METER
	CIRCUIT BREAKER
	NON-FUSIBLE DISCONNECT SWITCH, MOUNTED 54" A.F.F.
	FUSIBLE DISCONNECT SWITCH, MOUNTED 54" A.F.F.
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR WITH BUILT-IN FUSES, SURFACE MOUNTED
	DUPLEX OUTLET, SURFACE MOUNTED, 20 AMPS, 125 VOLTS, SINGLE PHASE
J	JUNCTION BOX, SURFACE MOUNTED 18" A.F.F.
	EXPOSED WIRING
	HOME RUNS, MINIMUM 2#10 + 1#10G IN 3/4" CONDUIT U.O.N.
A.F.F.	ABOVE FINISHED FLOOR
U.O.N.	UNLESS OTHERWISE NOTED
WP	WEATHERPROOF
GFI	GROUND FAULT INTERRUPTER
A	AMPERE
V	VOLT
KWH	KILOWATT - HOUR
C	CONDUIT
G	GROUND
	GROUND
MGB	MASTER GROUND BAR ○MECHANICAL CONNECTION •CADWELD CONNECTION
EGB	EQUIPMENT GROUND BAR ○MECHANICAL CONNECTION •CADWELD CONNECTION
—G—	GROUND COPPER WIRE, SIZE AS NOTED
	EXPOSED WIRING
	COAXIAL CABLE
	5/8"x8' COPPER CLAD STEEL GROUND ROD
	•EXOTHERMIC (CADWELD) OR ○MECHANICAL (COMPRESSION TYPE) CONNECTION
PPC	POWER PROTECTION CABINET

ELECTRICAL AND GROUNDING NOTES

1. ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.
2. ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.
3. THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.
4. GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.
5. ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS OR SCHEDULE 80 PVC (AS PERMITTED BY CODE) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.
6. BURIED CONDUIT SHALL BE SCHEDULE 40 PVC.
7. ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, ORTHWN.
8. RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL UTILITY DEMARCATION POINT AND T-MOBILE CELL SITE PPC AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION WITH UTILITY COMPANY.
9. RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND T-MOBILE CELL SITE TELCO CABINET AND BTS CABINET AS INDICATED ON THIS DRAWING PROVIDE FULL LENGTH PULL ROPE IN INSTALLED TELCO CONDUIT. PROVIDE GREENLEE CONDUIT MEASURING TAPE AT EACH END.
10. WHERE CONDUIT BETWEEN BTS AND T-MOBILE CELL SITE PPC AND BETWEEN BTS AND T-MOBILE CELL SITE TELCO SERVICE CABINET ARE UNDERGROUND USE PVC, SCHEDULE 40 CONDUIT. ABOVE THE GROUND PORTION OF THESE CONDUITS SHALL BE PVC CONDUIT.
11. ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
12. PPC SUPPLIED BY T-MOBILE.
13. GROUNDING SHALL COMPLY WITH NEC ART. 250.
14. GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY T-MOBILE.
15. USE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) AND #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING AS INDICATED ON THE DRAWING.
16. ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
17. ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AT RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY. BOND ANY METAL OBJECTS WITHIN 6 FEET OF T-MOBILE EQUIPMENT OR CABINET TO MASTER GROUND BAR OR GROUNDING RING.
18. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
19. APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTIONS.
20. BOND ANTENNA MOUNTING BRACKETS, COAXIAL CABLE GROUND KITS, AND ALNA TO EGB PLACED NEAR THE ANTENNA LOCATION.
21. BOND ANTENNA EGB'S AND MCB TO GROUND RING.
22. TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION. 5 OHMS MINIMUM RESISTANCE REQUIRED.

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STATE OF CONNECTICUT LICENSED PROFESSIONAL ENGINEER

APPROVALS
Omnipoint ______
LANDLORD ______
LEASING ______
R.F. ______
ZONING ______
CONSTRUCTION ______
A/E ______

PROJECT NO:	04052
DRAWN BY:	CMS
CHECKED BY:	AAJ

SUBMITTALS

2	04/28/04	CONSTRUCTION
1	04/21/04	CONSTRUCTION
0	04/16/04	CONSTRUCTION

CT-11-923C
WEST VIEW DR. TOWER
7 WEST VIEW DRIVE
DANBURY, CT 06810

SHEET TITLE
ELECTRICAL AND GROUNDING NOTES, RISERS, AND DETAILS

SHEET NUMBER
E-1

Exhibit 2

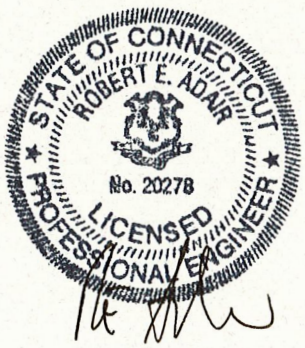
ALL-POINTS TECHNOLOGY CORPORATION, P.C.

STRUCTURAL ANALYSIS REPORT
133' SELF-SUPPORTING TOWER
DANBURY, CONNECTICUT

T-Mobile Site #CT-11-923C; Danbury West View Drive

Prepared for
T-Mobile USA, Inc.

April 15, 2004



APT Project #CT107680

☐ 3 SADDLEBROOK DRIVE • KILLINGWORTH, CONNECTICUT 06419 • PHONE: 860-663-1697 • FAX: 860-663-0935
☒ 150 OLD WESTSIDE ROAD • NORTH CONWAY, NEW HAMPSHIRE 03860 • PHONE/FAX: 603-356-5214

STRUCTURAL ANALYSIS REPORT
133' SELF-SUPPORTING TOWER
DANBURY, CONNECTICUT
prepared for
T-Mobile USA

EXECUTIVE SUMMARY:

All-Points Technology Corporation, P.C. (APT) performed a condition assessment and structural analysis of this 100-foot self-supporting tower with 33' ROHN 25G extension. The analysis was performed with the addition of twelve EMS Wireless DR65-19 panel antennas on three 12' T-frame sector mounts at 50-feet. Waveguide cables are to be twenty-four 1-5/8" cables, assumed to be installed on a new waveguide ladder in a 12-wide by 2-deep stacked arrangement.

Our analysis indicates the tower is capable of supporting the proposed antennas. One minor maintenance item, installation of bracing bolts at the 25' elevation, should be addressed.

Base foundations could not be conclusively evaluated, as information on their design or construction was not provided to APT. Given the relatively low loads on the foundations relative to the tower steel capacity, the foundations are likely to be adequate.

INTRODUCTION:

A condition assessment inspection and structural analysis was performed by APT on the above-mentioned communications tower for T-Mobile USA. The tower is located at 7 West View Drive in Danbury, Connecticut.

Robert E. Adair, P.E. visited the tower site on April 7, 2004 to record information regarding physical and dimensional properties of the structure and its appurtenances. Mr. Adair climbed the structure to the 90' elevation to compile data necessary to perform the structural analysis.

The structure is a 100-foot four-legged steel self-supporting tower with two 30' ROHN 25G extensions. The analysis was performed with the existing antenna inventory and antenna array proposed by T-Mobile.

Analysis of the tower was conducted using the following antennas (proposed antennas shown in **bold** text):

Antenna	Leg/Face	Elev.	Mount	Coax.
GPS	N. face	20'	4' standoff	1/2"
1.2M satellite dish	SW leg	21'	18" sidearm	3/8"
GPS	S. face	23'	1' standoff	1/4"
1.2M satellite dish	S. face	26'	2' standoff	3/8"
1.0M satellite dish	S. face	28'	2' standoff	1/4"
1.0M satellite dish	S. face	33'	2' standoff	1/4"
2' x 3' grid	W. face	34'	Pipe mount	1/2"
3' yagi	W. face	34'	On above pipe mount	1/4"
0.75M satellite dish	S. face	36'	Pipe mount	1/4"
1.0M satellite dish	S. face	42'	2' standoff	1/4"
0.75M satellite dish	S. face	46'	Pipe mount	1/4"
1.2M satellite dish	SW leg	50'	Pipe mount	3/8"
(3) 7' omni whips	SW, NW, NE legs	55'	(3) 2' sidearms	(3) 7/8"
6' omni whip	SE leg	58'	6' standoff	7/8"
18' omni whip	SE leg	58'	On above standoff	1/2"
20' omni whip	SW leg	58'	6' standoff	1/2"
11' omni whip	NE leg	58'	6' standoff	7/8"
16' omni whip	NE leg	58'	On above standoff	1/2"
4' yagi	NE leg	58'	On above standoff	1/2"
Directional whip	NW leg	64'	1' standoff	1/2"
DB809M 9' omni whip	SE leg	66'	1' sidearm	(2) 7/8"
(3) panels	SE, SW legs, W. face	75'	Pipe mounts	(3) 1/2"
Empty 6' standoff	SE leg	76'	N.A.	N.A.
3' omni whip	E. face	81'	4' sidearm	1-1/4"
9' omni whip	SE leg	82'	4' sidearm	(2) 7/8"
9' whip (inv.)	SW leg	83'	6' standoff	7/8"
7' omni whip	SW leg	83'	On above standoff	1/2"
4' yagi	S. face	83'	Pipe mount	1/2"
(2) 2' x 3' grids	W. face	83'	Pipe mount	(2) 3/8"
2' omni whip	W. face	83'	On above pipe mount	(2) 3/8"
12' omni whip	SE leg	83'	6' standoff	7/8"
(2) empty 6' standoffs	NE, NW legs	83'	N.A.	N.A.
3' yagi	E. face	85'	Pipe mount	1/2"
4' yagi	E. face	88'	Pipe mount	7/8"
3' x 6' grid	SW leg	88'	3' standoff	1/2"

Empty 6' sidearm	N. face	89'	N.A.	N.A.
6' yagi	SE leg	93'	Pipe mount	1/2"
5' omni whip	E. face	93'	4' sidearm	7/8"
10' horiz. ROHN 25G	SW leg	96'	Empty 6' standoff	N.A.
30' omni whip	NE leg	96'	6' standoff	7/8"
(2) 9' omni whips (1 inv.)	NW leg	96'	6' standoff	(2) 7/8"
8-bay (?) antenna	W. face	100'	Plate on horiz. brace	1-5/8"
14' omni whip	SW leg	100'	Diagonal X-arm	7/8"
(2) 9' omni whips	Tower center	102'	(2) 2' sidearms on pipe	(2) 7/8"
9' omni whip	E. face	104'	Pipe extension	7/8"
10' omni whip	E. face	104'	Pipe extension	1-1/4"
18' omni whip	E. face	104'	Pipe extension	7/8"
10' omni whip	Southern ROHN 25G	111'	18" sidearm	1-5/8"
4-bay FM	Southern ROHN 25G	118'	Leg	7/8"
1-bay FM	Northern ROHN 25G	124'	2' standoff	7/8"
4' omni whip	Cross-arm joining 25Gs	127'	Pipe on lower X-arm	7/8"
4' omni whip	Cross-arm joining 25Gs	127'	Pipe on lower X-arm	7/8"
8' omni whip	Cross-arm joining 25Gs	127'	Pipe on lower X-arm	7/8"
7' omni whip	Cross-arm joining 25Gs	129'	Pipe on upper X-arm	7/8"
4' omni whip	Cross-arm joining 25Gs	129'	Pipe on upper X-arm	7/8"
8' omni whip	Southern ROHN 25G	132'	Leg	7/8"
4' omni whip	Cross-arm joining 25Gs	135'	Pipe on upper X-arm	7/8"

FIELD INSPECTION:

- **General Condition:** The tower, a galvanized steel structure, appeared to be in good condition. No signs of movement or overstress of the tower were observed.

- **Bolted Connections of Lattice Bracing:** Connections were visually inspected to the maximum extent practicable. APT noted missing bolts at the intersection of X-braces at the 25' elevation. We recommend bolts be installed with appropriately sized spacers at these locations. All other connections that were observed appeared to be sound..

- **Splice Connections:** Observed splice connections were in good condition, with no loose or missing bolts noted.

- **Base Foundations:** Observed concrete piers appeared to be in good condition, with no evidence of movement or overstress.

STRUCTURAL ANALYSIS:

Methodology:

The structural analysis was done in accordance with EIA/TIA-222-F, Structural Standards for Steel Antenna Towers and Antenna Supporting Structures; and the American Institute of Steel Construction (AISC), Manual of Steel Construction, Allowable Stress Design, Ninth Edition.

The analysis was conducted using a wind speed of 85 miles per hour and one-half inch of radial ice over the entire structure and all appurtenances. The EIA/TIA Standard requires a minimum wind speed of 85 miles per hour for Fairfield County, Connecticut. The tower was analyzed by calculating the resultant wind loading and associated maximum bending moments, shear forces, and axial loads. The moments and forces were used to calculate stresses in leg and bracing members, which were compared to allowable stresses according to AISC.

Two loading conditions were evaluated in accordance with EIA/TIA-222-F to determine tower capacity. The more demanding of the two cases is used to calculate tower capacity:

- Case 1 = Wind Load (without ice) + Tower Dead Load
- Case 2 = 0.75 Wind Load (with ice) + Ice Load + Tower Dead Load

In addition, the TIA/EIA standard permits a one-third increase in allowable stresses for towers less than 700-feet tall. Allowable stresses of tower members were increased by one-third when computing the load capacity values shown below.

Analysis:

Our analysis determined the existing tower is capable of supporting the additional proposed antennas. The following table summarizes the results of the analysis based on compressive stresses of individual leg members:

Elevation	Capacity
0-14'	**64%**
14'-20'	**40%**
20'-29'	**40%**
29'-50'	**35%**
50'-80'	**26%**
80'-100'	**13%**

Bracing Members:

Bracing members are generally installed in an X-brace configuration, with each compression member paired with a corresponding tension member. Bracing was evaluated by calculating bracing member's allowable compression and tension loads and assessing each tower section's ability to resist calculated shear forces.

Bracing members were determined to be appropriately sized.

Anchor & Splice Bolts:

Splice and anchor bolts were evaluated under the proposed loading. All splice and anchor bolts are adequately sized.

Base Foundations:

Evaluation of the existing base foundations was not performed, as information on their design or construction was not provided to APT.

Base reactions imposed with the additional antennas were calculated as follows:

Tension:	63.8 kips
Compression:	69.9 kips
Total Shear:	33.9 kips
Overturning Moment:	2012 ft-kips

CONCLUSIONS AND RECOMMENDATIONS:

Our structural analysis indicates the 100-foot self-supporting tower located on West View Drive in Danbury, Connecticut is capable of supporting the antenna array proposed by T-Mobile USA.

Evaluation of tower foundations could not be conducted, as information on their design or construction was not provided to APT. Given the relatively low loads on the foundations relative to the tower steel capacity, the foundations are likely to be adequate.

We recommend that bolts missing at the intersection of X-braces at the 25' elevation be installed as part of routine maintenance.

LIMITATIONS:

This report is based on the following:

1. Tower is properly installed and maintained.
2. All members are in new condition.
3. All required members are in place.
4. All bolts are in place and are properly tightened.
5. Tower is in plumb condition.
6. All tower members were properly designed, detailed, fabricated, and installed and have been properly maintained since erection.

All-Points Technology Corporation, P.C. (APT) is not responsible for any modifications completed prior to or hereafter which APT is not or was not directly involved. Modifications include but are not limited to:

1. Replacing or strengthening bracing members.
2. Reinforcing leg members in any manner.
3. Installing antennas and/or mounting brackets or side arms.
4. Extending tower.

APT hereby states that this document represents the entire report and that it assumes no liability for any factual changes that may occur after the date of this report. All representations, recommendations, and conclusions are based upon the information contained and set forth herein. If you are aware of any information which is contrary to that which is contained herein, or you are aware of any defects arising from the original design, material, fabrication and erection deficiencies, you should disregard this report and immediately contact APT. APT disclaims all liability for any representation, recommendation, or conclusion not expressly stated herein.

Appendix A

Tower Schematic

All-Points Technology Corp., P.C.
150 OLD WESTSIDE ROAD
NORTH CONWAY, NH 03860
PHONE/FAX: (603) 356-5214
MOBILE: (603) 496-5853
www.allpointstech.com

TOWER SCHEMATIC

SHEET: 1 OF 1

SCALE: 1" = 20' | DRAWN BY: REA

DATE: 13 APR 04 | APT JOB #CT107680

T-Mobile

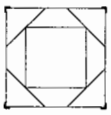
100 Filley Street
Bloomfield, CT 06002

T-MOBILE SITE #CT-11-923C
WEST VIEW DR., DANBURY

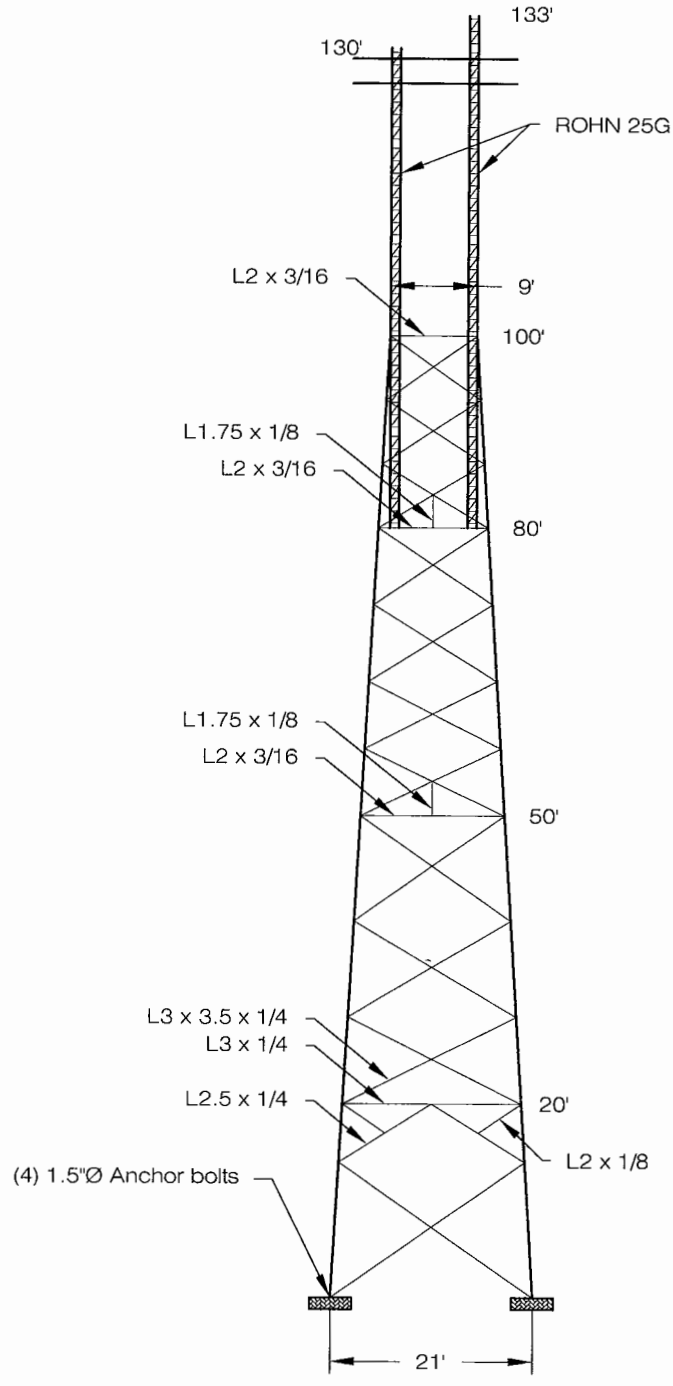
133' SELF-SUPPORTING TOWER
7 WEST VIEW DRIVE
DANBURY, CONNECTICUT

Antennas not shown for clarity.
Building not shown.

Internal Bracing - 50' & 80'



Internal Bracing - 20'



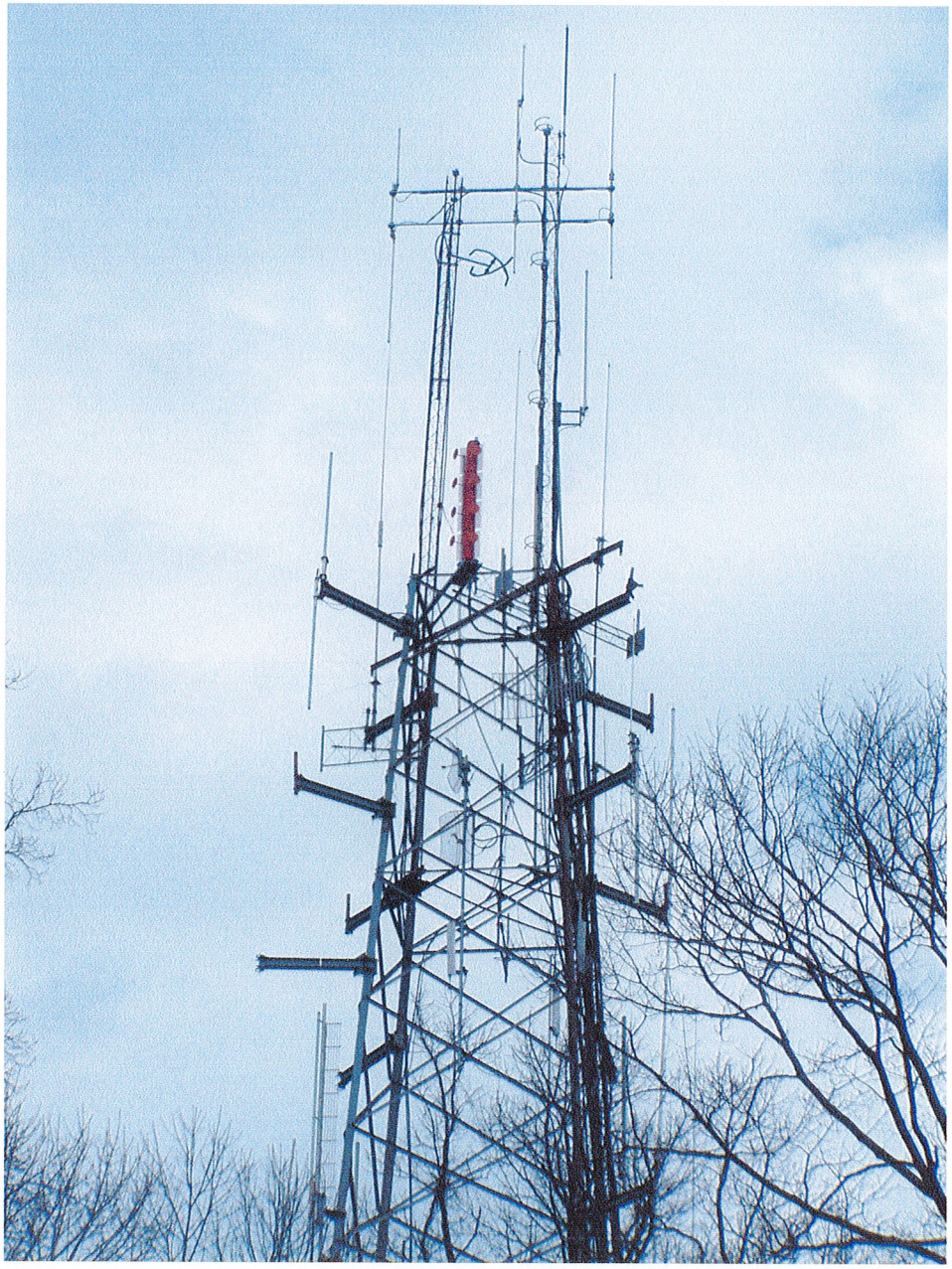
ELEVATION

Legs	L6 x 1/2	L6 x 3/8	L5 x 3/8	
Diagonals	L4 x 1/4	L3 x 3/16	L2.5 x 3/16	L2 x 3/16
Splice Bolts	(18) 5/8"Ø	(16) 5/8"Ø	(14) 5/8"Ø	(12) 5/8"Ø

Appendix B

Photographs

T-MOBILE USA
133' SELF-SUPPORTING TOWER
DANBURY, CONNECTICUT



Telephoto view of tower from
65' to top, showing existing antennas.

Photos taken April 7, 2004 by All-Points Technology Corp., P.C.

T-MOBILE USA
133' SELF-SUPPORTING TOWER
DANBURY, CONNECTICUT

Photo of tower from 25' to 60', showing existing antennas.

Photos taken April 7, 2004 by All-Points Technology Corp., P.C.

Appendix C

Calculations

All-Points Technology Corp., P.C.
150 Old Westside Road
North Conway, NH 03860
(603) 356-5214

Client: **T-Mobile USA**
Job: **Danbury, CT** Job No.: **CT107680**
Calculated By: **R. Adair** Date: **13-Apr-04**

General Information

Tower Manufacturer	Unknown	
Tower Type	Self-supporting Tower	
Total Height of Tower	100	ft.
Wind Speed EIA-TIA: Fairfield County	85	mph.
Radial Ice	0.5	in.
25% Reduction for ice	yes	(yes or no)
1/3 increase for allowable loads	yes	(yes or no)
Number of faces	4	faces

Antenna Force Calculations based on EIA/TIA-222-F, using the following formulas:
Force on discrete appurtenance: F=Qz*Gh*Ca*A
Force on microwave antennae: F=Cr*A*Gh*Kz*V^2, where Cr=((Ca^2)+(Cs^2))^(1/2)
Gh=.65+.60/(h/33)^(1/7) = Gh= 1.16
V as specified EIA-222-F

Fy	36	ksi
E (Modulus of Elasticity)	29000	ksi
Fb	0.6	
K	1	
Tower taper	0.12	ft/ft

Section No.	Section Length	Leg Spread @ Base of section	Leg Size (Description)	Width of Leg to Wind	Leg Properties		
					Area	r_z	Unbraced Lengths
1	14.0	21.00	L6 x 6 x 1/2	6.00	5.75	1.860	168
2	6.0	19.32	L6 x 6 x 1/2	6.00	5.75	1.860	72
3	9.0	18.60	L6 x 6 x 1/2	6.00	5.75	1.860	108
4	21.0	17.52	L6 x 6 x 1/2	6.00	5.75	1.860	120
5	30.0	15.00	L6 x 6 x 3/8	6.00	4.36	1.880	84
6	20.0	11.40	L5 x 5 x 3/8	5.00	3.61	1.560	80
Top		9.00					
	100						

All-Points Technology Corp., P.C.
150 Old Westside Road
North Conway, NH 03860
(603) 356-5214

Client: **T-Mobile USA**
Job: **Danbury, CT**
Calculated By: **R. Adair**

Job No.: **CT107680**
Date: **13-Apr-04**

Tower Summary

Section ***1*** ***type***

Ag = 289 sf z = 7 ft

	Quantity Per Face	Length (ft.)	Width (in.)	Area (sf)	Area w/ ice	Wt. Per ft.	Wt. (lbs.) Tower	Wt. (lbs.) Ice
Flat Members								
Leg	2	14.0	6.0	**Inside building - no wind load**		19.6	1095.7	**None**
Diagonal	2	24.0	4.0	**Inside building - no wind load**		6.6	1269.5	**None**

Section ***2*** ***type***

Ag = 117 sf z = 17 ft

	Quantity Per Face	Length (ft.)	Width (in.)	Area (sf)	Area w/ ice	Wt. Per ft.	Wt. (lbs.) Tower	Wt. (lbs.) Ice
Flat Members								
Leg	2	6.0	6.0	6.0	7.0	19.6	469.6	121.3
Diagonal	2	10.9	2.5	4.5	6.3	4.1	356.6	405.9
Horizontal	1	18.1	3.0	4.5	6.0	4.9	354.8	394.2
Sub-diagonal	2	5.4	2.0	1.8	2.7	1.7	71.8	169.1

Section ***3*** ***type***

Ag = 167 sf z = 24.5 ft

	Quantity Per Face	Length (ft.)	Width (in.)	Area (sf)	Area w/ ice	Wt. Per ft.	Wt. (lbs.) Tower	Wt. (lbs.) Ice
Flat Members								
Leg	2	9.0	6.0	9.0	10.5	19.6	704.4	182.0
Diagonal	2	20.2	3.0	10.1	13.4	4.9	790.4	878.2

Section ***4*** ***type***

Ag = 352 sf z = 40 ft

	Quantity Per Face	Length (ft.)	Width (in.)	Area (sf)	Area w/ ice	Wt. Per ft.	Wt. (lbs.) Tower	Wt. (lbs.) Ice
Flat Members								
Leg	2	21.0	6.0	21.0	24.5	19.6	1643.5	424.7
Diagonal	4	18.6	3.0	18.6	24.8	3.7	1103.4	1619.3
Horizontal	1	14.5	2.0	2.4	3.6	2.4	141.5	225.6

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Job: **Danbury, CT**
Calculated By: **R. Adair**

Job No.: **CT107680**
Date: **13-Apr-04**

Section ***5*** ***type***

Ag = 411 sf z = 65 ft

	Quantity Per Face	Length (ft.)	Width (in.)	Area (sf)	Area w/ ice	Wt. Per ft.	Wt. (lbs.) Tower	Wt. (lbs.) Ice
Flat Members								
Leg	2	30.0	6.0	30.0	35.0	14.8	1780.3	606.7
Diagonal	8	14.4	2.5	24.1	33.7	3.1	1418.7	2156.6
Horizontal	1	11.0	2.5	2.3	3.2	2.4	107.2	205.0
Vertical	1	3.5	1.8	0.5	0.8	1.4	20.2	49.0

Section ***6*** ***type***

Ag = 212 sf z = 90 ft

	Quantity Per Face	Length (ft.)	Width (in.)	Area (sf)	Area w/ ice	Wt. Per ft.	Wt. (lbs.) Tower	Wt. (lbs.) Ice
Round Members								
ROHN 25G Legs	4	20.0	1.3	8.3	15.0	0.8	65.6	85.5
ROHN Z-bracing	28	1.2	0.3	0.9	3.6	0.3	34.4	65.5
ROHN Horiz. bracing	32	0.8	0.3	0.7	2.9	0.3	27.8	52.9
Flat Members								
Leg	2	20.0	5.0	16.7	20.0	12.3	982.7	342.2
Diagonal	8	11.8	2.0	15.7	23.5	2.4	918.9	1464.6
Horizontal	1	9.0	2.5	1.9	2.6	3.1	110.5	168.0
Vertical	1	3.3	1.8	0.5	0.8	1.4	19.2	46.7

All-Points Technology Corp., P.C.
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(603) 356-5214

Client: **T-Mobile USA**
Job: **Danbury, CT** Job No.: **CT107680**
Calculated By: **R. Adair** Date: **13-Apr-04**

Antennas

Type	Elev. (z)	Coeff. (C)	Kz	Qz	Area (no ice)	Area (ice)	Force (no ice)	Force (ice)	Weight (no ice)	Weight (w/ ice)	Orient	Ca	Cs
GPS	20	1.0	1.00	18.50	1.0	2.0	**22**	**42**	25	40			
GPS	23	1.0	1.00	18.50	1.0	1.5	**21**	**33**	25	40			
3' yagi & grid	34	1.2	1.01	18.65	1.7	3.2	**44**	**83**	75	125			
(3) 7' whips	55	1.2	1.16	21.40	6.6	10.4	**198**	**310**	150	225			
(5) whips, 4' yagi	58	1.2	1.17	21.73	17.3	25.1	**525**	**759**	300	400			
Directional whip	64	1.2	1.21	22.35	5.2	7.3	**162**	**228**	50	75			
9' omni whip	66	1.2	1.22	22.55	2.8	3.8	**86**	**118**	50	75			
(3) panels	75	1.4	1.26	23.39	9.2	12.6	**349**	**480**	75	125			
Empty standoff	76	2.0	1.27	23.47	3.0	3.5	**164**	**191**	60	80			
3' whip	81	1.2	1.29	23.91	2.7	4.1	**91**	**135**	45	60			
9' whip	82	1.2	1.30	23.99	4.7	6.5	**157**	**217**	50	75			
(4) whips, 4' yagi, (2) grids	83	1.2	1.30	24.07	15.5	22.5	**520**	**756**	300	400			
3' yagi	85	1.2	1.31	24.24	1.1	2.1	**38**	**72**	25	40			
4' yagi, grid	88	1.2	1.32	24.48	5.7	10.0	**195**	**342**	50	100			
Empty sidearm	89	2	1.33	24.56	2.3	5.0	**132**	**287**	50	75			
5' whip, 6' yagi	93	1.2	1.34	24.87	6.2	9.9	**213**	**343**	75	125			
(2) 9' whips, 30' whip	96	1.2	1.36	25.09	16.7	23.5	**585**	**824**	150	225			
14' whip, 8-bay antenna	100	1.6	1.37	25.39	24.7	29.0	**1166**	**1371**	300	400			
(2) 9' whips	102	1.2	1.38	25.53	7.6	10.6	**270**	**377**	100	150			
(3) whips	104	1.2	1.39	25.68	9.4	14.1	**336**	**506**	125	175			
10' whip	111	1.2	1.41	26.16	2.6	3.6	**93**	**133**	50	75			
ROHN 25G	115	1.2	1.43	26.42	14.8	30.7	**546**	**1132**	240	350			
4-bay FM	118	1.2	1.44	26.62	1.3	2.3	**46**	**84**	100	180			
1-bay FM	124	1.2	1.46	27.00	3.7	5.5	**138**	**207**	50	75			
(3) whips	127	1.2	1.47	27.18	4.9	7.4	**185**	**280**	100	150			
(2) whips	129	1.2	1.48	27.31	4.2	6.4	**161**	**243**	75	120			
8' whip	132	1.2	1.49	27.48	1.9	2.6	**72**	**101**	50	75			
4' whip	135	1.2	1.50	27.66	2.3	3.4	**87**	**132**	35	60			
Dishes													
1.2M satellite dish	21	0.00397	1.00	0.0000	12.2	12.7	**407**	**423**	35	60	0	0.0040	0.0000
1.2M satellite dish	26	0.00397	1.00	0.0000	12.2	12.7	**407**	**423**	35	60	0	0.0040	0.0000
1.0M satellite dish	28	0.00397	1.00	0.0000	8.5	8.9	**283**	**297**	30	50	0	0.0040	0.0000
1.0M satellite dish	33	0.00397	1.00	0.0000	8.5	8.9	**283**	**297**	30	50	0	0.0040	0.0000
0.75M satellite dish	36	0.00397	1.03	0.0000	4.8	5.1	**164**	**174**	25	40	0	0.0040	0.0000
1.0M satellite dish	42	0.00397	1.07	0.0000	8.5	8.9	**304**	**318**	30	50	0	0.0040	0.0000
0.75M satellite dish	46	0.00397	1.10	0.0000	4.8	5.1	**176**	**187**	25	40	0	0.0040	0.0000
1.2M satellite dish	50	0.00397	1.13	0.0000	12.2	12.7	**458**	**477**	35	60	0	0.0040	0.0000
		0.00000	1.00	0.0000									
Proposed Antennas													
(12) DR65-19 on (3)	50	1.4	1.13	20.83	98.0	115.7	**3320**	**3920**	1470	2100			

All-Points Technology Corp., P.C.
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Client: **T-Mobile USA**
Job: **Danbury, CT**
Calculated By: **R. Adair**

Job No.: **CT107680**
Date: **13-Apr-04**

Existing Wind Load Without Ice

Section	Midpoint Height	Areas					Factors			Rr	Kz	Qz	Gh	e	Cf	Wind Load	Section Length	Uniform Load
		Gross	Flats	Rounds	Ae	Aa	Df	Dr	Ca									
1	7	289.2	0.0	0.0	0.0	32.08	1	1	1.2	0.57	1.00	18.50	1.16	0.00	3.40	**827 lbs.**	14.0	**59 lbs/ft.**
2	17	116.8	16.9	0.0	16.9	13.75	1	1	1.2	0.58	1.00	18.50	1.16	0.14	2.79	**1367 lbs.**	6.0	**228 lbs/ft.**
3	24.5	167.0	19.1	0.0	19.1	20.10	1	1	1.2	0.58	1.00	18.50	1.16	0.11	2.91	**1711 lbs.**	9.0	**190 lbs/ft.**
4	39.5	352.0	42.0	0.0	42.0	45.11	1	1	1.2	0.58	1.05	19.47	1.16	0.12	2.89	**3969 lbs.**	21.0	**189 lbs/ft.**
5	65	411.0	56.9	0.0	56.9	52.97	1	1	1.2	0.58	1.21	22.45	1.16	0.14	2.81	**5834 lbs.**	30.0	**194 lbs/ft.**
6	90	212.3	34.7	9.9	40.6	22.32	1	1	1.2	0.59	1.33	24.64	1.16	0.21	2.56	**3744 lbs.**	20.0	**187 lbs/ft.**

Existing Wind Load With Ice

Section	Midpoint Height	Areas					Factors			Rr	Kz	Qz	Gh	e	Cf	Wind Load	Section Length	Uniform Load
		Gross	Flats	Rounds	Ae	Ai	Df	Dr	Ca									
1	7	289.2	0.0	0.0	0.0	51.33	1	1	1.2	0.57	1.00	18.50	1.16	0.00	3.40	**1324 lbs.**	14.0	**95 lbs/ft.**
2	17	116.8	22.1	0.0	22.1	22.00	1	1	1.2	0.59	1.00	18.50	1.16	0.19	2.63	**1817 lbs.**	6.0	**303 lbs/ft.**
3	24.5	167.0	23.9	0.0	23.9	31.35	1	1	1.2	0.58	1.00	18.50	1.16	0.14	2.80	**2247 lbs.**	9.0	**250 lbs/ft.**
4	39.5	352.0	52.9	0.0	52.9	67.15	1	1	1.2	0.58	1.05	19.47	1.16	0.15	2.77	**5140 lbs.**	21.0	**245 lbs/ft.**
5	65	411.0	72.7	0.0	72.7	77.05	1	1	1.2	0.59	1.21	22.45	1.16	0.18	2.68	**7486 lbs.**	30.0	**250 lbs/ft.**
6	90	212.3	46.9	21.5	60.3	32.65	1	1	1.2	0.62	1.33	24.64	1.16	0.32	2.24	**4988 lbs.**	20.0	**249 lbs/ft.**

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North Conway, NH 03860
(603) 356-5214

Client: **T-Mobile USA**
Job: **Danbury, CT**
Calculated By: **R. Adair**

Job No.: **CT107680**
Date: **13-Apr-04**

Proposed Wind Load Without Ice

Section	Midpoint Height	Areas					Factors			Rr	Kz	Qz	Gh	e	Cf	Wind Load	Section Length	Uniform Load
		Gross	Flats	Rounds	Ae	Aa	Df	Dr	Ca									
1	7	289.2	0.0	0.0	0.0	59.80	1	1	1.2	0.57	1.00	18.50	1.16	0.00	3.40	**1542 lbs.**	14.0	**110 lbs/ft.**
2	17	116.8	16.9	0.0	16.9	25.63	1	1	1.2	0.58	1.00	18.50	1.16	0.14	2.79	**1673 lbs.**	6.0	**279 lbs/ft.**
3	24.5	167.0	19.1	0.0	19.1	37.92	1	1	1.2	0.58	1.00	18.50	1.16	0.11	2.91	**2170 lbs.**	9.0	**241 lbs/ft.**
4	39.5	352.0	42.0	0.0	42.0	86.69	1	1	1.2	0.58	1.05	19.47	1.16	0.12	2.89	**5098 lbs.**	21.0	**243 lbs/ft.**
5	65	411.0	56.9	0.0	56.9	52.97	1	1	1.2	0.58	1.21	22.45	1.16	0.14	2.81	**5834 lbs.**	30.0	**194 lbs/ft.**
6	90	212.3	34.7	9.9	40.6	22.32	1	1	1.2	0.59	1.33	24.64	1.16	0.21	2.56	**3744 lbs.**	20.0	**187 lbs/ft.**

Proposed Wind Load With Ice

Section	Midpoint Height	Areas					Factors			Rr	Kz	Qz	Gh	e	Cf	Wind Load	Section Length	Uniform Load
		Gross	Flats	Rounds	Ae	Ai	Df	Dr	Ca									
1	7	289.2	0.0	0.0	0.0	80.80	1	1	1.2	0.57	1.00	18.50	1.16	0.00	3.40	**2084 lbs.**	14.0	**149 lbs/ft.**
2	17	116.8	22.1	0.0	22.1	34.63	1	1	1.2	0.59	1.00	18.50	1.16	0.19	2.63	**2143 lbs.**	6.0	**357 lbs/ft.**
3	24.5	167.0	23.9	0.0	23.9	50.29	1	1	1.2	0.58	1.00	18.50	1.16	0.14	2.80	**2736 lbs.**	9.0	**304 lbs/ft.**
4	39.5	352.0	52.9	0.0	52.9	111.36	1	1	1.2	0.58	1.05	19.47	1.16	0.15	2.77	**6340 lbs.**	21.0	**302 lbs/ft.**
5	65	411.0	72.7	0.0	72.7	77.05	1	1	1.2	0.59	1.21	22.45	1.16	0.18	2.68	**7486 lbs.**	30.0	**250 lbs/ft.**
6	90	212.3	46.9	21.5	60.3	32.65	1	1	1.2	0.62	1.33	24.64	1.16	0.32	2.24	**4988 lbs.**	20.0	**249 lbs/ft.**

All-Points Technology Corp., P.C.
150 Old Westside Road
North Conway, NH 03860
(603) 356-5214

Client: **T-Mobile USA**
Job: **Danbury, CT** Job No.: **CT107680**
Calculated By: **R. Adair** Date: **13-Apr-04**

Uplift Force per Leg

	Existing			***Proposed***		
	W_o-DL	.75W_l-DL-I	W_l-DL-I	W_o-DL	.75W_l-DL-I	W_l-DL-I
Elev.	Force	Force	Force	Force	Force	Force
0	**56.0**	**50.6**	**70.8**	**63.8**	**57.4**	**79.0**
20	**43.9**	**39.4**	**55.4**	**48.6**	**43.5**	**60.1**
50	**26.1**	**23.8**	**32.9**	**26.1**	**23.8**	**32.9**
80	**10.2**	**9.3**	**12.9**	**10.2**	**9.3**	**12.9**

Tension in Anchor Bolts - Shear in Splice Bolts

		Existing			***Proposed***		
		W_o-DL	.75W_l-DL-I	W_l-DL-I	W_o-DL	.75W_l-DL-I	W_l-DL-I
Elev.	# of Bolts	Force/Bolt	Force/Bolt	Force/Bolt	Force/Bolt	Force/Bolt	Force/Bolt
0	4	**13.99**	**12.66**	**17.69**	**15.94**	**14.34**	**19.75**
0	18	**3.11**	**2.81**	**3.93**	**3.54**	**3.19**	**4.39**
20	16	**2.74**	**2.46**	**3.46**	**3.04**	**2.72**	**3.76**
50	14	**1.87**	**1.70**	**2.35**	**1.87**	**1.70**	**2.35**
80	12	**0.85**	**0.78**	**1.08**	**0.85**	**0.78**	**1.08**

Shear in Anchor Bolts - Tension in Splice Bolts

		Existing			***Proposed***		
Elev.	**Bolt Size (dia.)**	W_o	.75W_l	W_l	W_o	.75W_l	W_l
0	1 1/2	1.75	1.69	2.26	2.12	2.01	2.68
0	5/8	0.39	0.38	0.50	0.47	0.45	0.59
20	5/8	0.40	0.39	0.51	0.48	0.45	0.60
50	5/8	0.31	0.31	0.41	0.31	0.31	0.41
80	5/8	0.21	0.21	0.28	0.21	0.21	0.28

All-Points Technology Corp., P.C.
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Client: **T-Mobile USA**
Job: **Danbury, CT** Job No.: **CT107680**
Calculated By: **R. Adair** Date: **13-Apr-04**

Evaluation of Bracing Members

Center Bolted? Yes
Yield Strength (F_Y): 36 ksi C_C = 126.1

Section	Member	K Value	Length (ft.)	Area (in.^{2})	r_x (in.)	r_z (in.)	kL/r_x	kL/r_z
1	L4 x 4 x 1/4	1.0	24.04	1.940	1.250	0.795	173.1	181.5
2	L2.5 x 2.5 x 1/4	1.0	10.87	1.190	0.769	0.491	127.2	132.9
3	L3 x 3 x 1/4	1.0	20.16	1.440	0.930	0.592	195.1	204.4
4	L3 x 3 x 3/16	1.0	18.59	1.090	0.939	0.596	178.2	187.1
5	L2.5 x 2.5 x 3/16	1.0	14.44	0.902	0.778	0.495	167.1	175.0
6	L2 x 2 x 3/16	1.0	11.77	0.715	0.617	0.394	171.7	179.2

Section	All. Tens. (k)	F_a (ksi)	All. Comp. (k)	Brace Angle	All. Shear (k)	Act. Shear (k)	Stress Ratio
1	41.90	4.53	8.80	0.95	48.97	27.94	57%
2	25.70	8.46	10.07	0.31	49.01	27.94	57%
3	31.10	3.58	5.15	0.46	55.68	25.72	46%
4	23.54	4.26	4.65	0.55	40.11	25.72	64%
5	19.48	4.87	4.40	0.49	34.43	22.89	66%
6	15.44	4.65	3.32	0.58	25.86	17.49	68%

All-Points Technology Corp., P.C.
150 Old Westside Road
North Conway, NH 03860
(603) 356-5214

Client: **T-Mobile USA**
Job: **Danbury, CT**
Calculated By: **R. Adair**

Job No.: **CT107680**
Date: **13-Apr-04**

Evaluation of Leg Members

						Existing		***Proposed***	
Section	Size	Kl/r	Cc	Fa allow	133% Allow	$D+W_o$	D+.75Wl+l	$D+W_o$	D+.75Wl+l
1	L6 x 6 x 1/2	90.32	126.04	14.16	18.88	10.68	10.70	12.16	12.10
2	L6 x 6 x 1/2	38.71	126.04	19.29	25.72	9.10	9.14	10.18	10.18
3	L6 x 6 x 1/2	58.06	126.04	17.61	23.48	8.37	8.42	9.29	9.31
4	L6 x 6 x 1/2	64.52	126.04	16.98	22.65	7.31	7.37	7.97	8.02
5	L6 x 6 x 3/8	44.68	126.04	18.81	25.07	6.52	6.60	6.52	6.60
6	L5 x 5 x 3/8	51.28	126.04	18.23	24.31	3.08	3.18	3.08	3.18

Percent Capacity

		Existing			***Proposed***			***Maximum***	
Section	Base Elev.	$D+W_o$	D+.75Wl+l	Secondary	$D+W_o$	D+.75Wl+l	Secondary	Existing	Proposed
1	0	*57%*	*57%*	0%	*64%*	*64%*	0%	***57%***	***64%***
2	14	35%	*36%*	0%	*40%*	*40%*	0%	***36%***	***40%***
3	20	36%	*36%*	0%	*40%*	*40%*	0%	***36%***	***40%***
4	29	32%	*33%*	0%	*35%*	*35%*	0%	***33%***	***35%***
5	50	26%	*26%*	0%	*26%*	*26%*	0%	***26%***	***26%***
6	80	13%	*13%*	0%	*13%*	*13%*	0%	***13%***	***13%***

Maximum Reactions:

Uplift: **63.8 kips**
Compression: **69.9 kips**
Shear: **33.9 kips**
Overturning Moment: **2012.4 ft-kips**

Exhibit 3

C Squared Systems
13 Forest Drive
East Kingston, NH 03827
Phone 603-770-3143
Email support@csquaredsystems.com

Radio Frequency Field Survey

Of

West View Drive Tower, CT11-923-C

WEST VIEW DRIVE TOWER
7 WESTVIEW DRIVE
DANBURY, CT

Introduction

This report was prepared on behalf of T-Mobile to document an evaluation conducted at their candidate site, CT11-923-C, located at 7 Westview Drive in Danbury CT. The purpose of this evaluation was to measure the cumulative power density emanating from all antennas currently installed on the West View Drive tower before the proposed installation of T-Mobile transmission equipment.

The detected measurements were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments.

All results presented herein are listed as a percentage of Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE STD C95.1. The FCC regulates Maximum Permissible Exposure in units of milliwatts per square centimeter (mW/cm^2). The number of mW/cm^2 measured is called the power density. The exposure limit for power density varies with frequency. Radio Broadcasters, Wireless Carriers, and Paging Service Providers use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

Site Description

The West View Drive Tower site is located at 7 Westview Drive in Danbury, CT, which is situated on the crest of Shelter Rock near the Danbury - Bethel town line. The geographic co-ordinates of the towers are North 41° 24' 16", West 73° 25' 26" (NAD 83).

Two broadcast antennas are mounted on the upper levels of the tower. **IT Communications** is licensed to operate a Low Power television station (LPTV) broadcast facility on this site, on Channel 22 (518-524 MHz) under Call Sign **W22BN**. **Danbury Community Radio** is licensed to operate a "Full Service" FM station with an assigned frequency of 93.3 MHz, under Call Sign **WFAR**.

Several wireless service providers, which consist of **American Mobile**, **Arch Wireless**, **Beepage, Cingular Interactive**, **LoJack**, **Metrocall, MobileComm,** and **SkyTel,** have antennas installed at various heights on this towers and transmitters installed at this location. **Hoffman Fuels**, **Federal Express**, and two other unknown operators have transmitters installed at this location.

Site Data

Carrier	Freq (MHz)	Antenna Type	# of Channels per Sector	# of Sectors	Height of Antennas	Power per Channel (Watts ERP)
T-Mobile	1900	EMS RR65-18-VDPL2	8	3	50'	141

RF Exposure Prediction Methods

The FCC has established the following equation to estimate the power density in the far-field region.

$$\text{Power Density} = \left(\frac{4 \times EIRP}{4 \times \pi \times R^2}\right) \times \text{Off Beam Loss}$$

Where:

EIRP = Effective Isotropic Radiated Power

R = Radial distance = $\sqrt{(H^2 + V^2)}$

H = Horizontal distance from antenna

V = Vertical distance from bottom of antenna

The near Field Power density is calculated as follows:

$$\text{Power Density} = \frac{Pi * 180 / \theta}{\pi * R * h}$$

Where:

Pi = Antenna Input power

R = distance

h = antenna length

Survey Results

Measured results, both the Spatial Average and Maximum Peak values are detailed in Table 1 as presented below. All measured results were recorded on May 12, 2004 between the hours of 11:30 to 2:00 PM. The local weather conditions during this assessment were clear and sunny with an ambient temperature of 70 ° F.

Each measurement point corresponds to the indicted location marked on the aerial photograph presented in Figure 1.

Measurement Point	Spatial Average % General Population MPE	Maximum Peak % General Population MPE	Location Details
1	< 1.0	1.5	Outside of entrance to building at base of Tower
2	3.6	4.2	Southeast corner of building at base of Tower
3	1.3	2.05	Southwest corner of building at base of Tower
4	1.05	1.7	Northwest corner of building at base of Tower
5	< 1.0	1.05	Northeast corner of building at base of Tower
6	< 1.0	1.2	Westview Dr directly east of Tower
7	1.9	3.75	Westview Dr southeast of Tower
8	1.7	2.35	Westview Dr south of Tower
9	1.6	2.8	Westview Dr south of Tower
10	1.2	2.05	Westview Dr south of Tower
11	1.6	2.45	Westview Dr south of Tower
12	1.55	2.45	Westview Dr south of Tower
13	< 1.0	1.6	Westview Dr south of Tower
14	< 1.0	1.2	Westview Dr south of Tower
15	< 1.0	1.5	Westview Dr south of Tower
16	< 1.0	1.9	Westview Dr south of Tower
17	1.2	2.15	Westview Dr south of Tower
18	< 1.0	1.4	Cal-De-Sac at end of Westview Dr.
19	< 1.0	1.6	Cal-De-Sac at end of Westview Dr.
20	< 1.0	1.5	Westview Dr northwest of Tower
21	< 1.0	1.15	Intersection of Westview and Beechwood
22	< 1.0	1.2	Westview Dr north of Tower
23	< 1.0	< 1.0	Westview Dr north of Tower
24	< 1.0	< 1.0	Westview Dr north of Tower
25	< 1.0	1.2	Westview Dr north of Tower
26	< 1.0	< 1.0	Intersection of Topstone and Westview
27	< 1.0	1.3	Topstone Dr Northwest of Tower
28	< 1.0	< 1.0	Topstone Dr Northwest of Tower
29	1.15	1.9	Topstone Dr Northwest of Tower
30	1.6	2.7	Topstone Dr Northwest of Tower
31	1.2	1.95	Topstone Dr west of Tower
32	1.25	2.15	Topstone Dr west of Tower
33	< 1.0	< 1.0	Beechwood Drive northeast of Tower
34	< 1.0	1.2	Beechwood Drive northeast of Tower
35	< 1.0	1.5	Beechwood Drive east of Tower

Table 1. Measured Results

Measurement Point	Spatial Average % General Population MPE	Maximum Peak % General Population MPE	Location Details
36	1.3	1.95	Beechwood Drive east of Tower
37	1.5	1.95	Beechwood Drive southeast of Tower
38	1.15	1.95	Beechwood Drive southeast of Tower
39	1.2	2.05	Beechwood Drive southeast of Tower
40	< 1.0	1.6	Beechwood Drive southeast of Tower
41	< 1.0	1.7	Beechwood Drive southeast of Tower
42	< 1.0	1.8	Beechwood Drive southeast of Tower
43	< 1.0	1.2	Beechwood Drive southeast of Tower
44	< 1.0	< 1.0	Beechwood Drive southeast of Tower
45	< 1.0	< 1.0	Intersection of Beechwood and Topstone
46	< 1.0	1.9	Topstone Drive southeast of Tower
47	< 1.0	< 1.0	Topstone Dr Southeast of Tower
48	< 1.0	2.25	Topstone Dr Southeast of Tower
49	< 1.0	1.15	Topstone Dr Southeast of Tower
50	< 1.0	3.1	Topstone Dr East of Tower
51	< 1.0	< 1.0	Topstone Dr East of Tower
52	< 1.0	1.2	Topstone Dr Northeast of Tower
53	< 1.0	< 1.0	Topstone Dr Northeast of Tower
54	< 1.0	< 1.0	Topstone Dr Northeast of Tower
55	< 1.0	1.05	Topstone Dr Northeast of Tower
56	< 1.0	1.15	Topstone Drive southeast of Tower
57	< 1.0	1.4	Topstone Dr Northwest of Tower
58	< 1.0	1.6	Topstone Dr Northwest of Tower
59	< 1.0	1.15	Topstone Dr North of Tower
60	< 1.0	< 1.0	Topstone Dr North of Tower
61	< 1.0	< 1.0	Cal-De-Sac at end of Fleetwood Dr.
62	< 1.0	< 1.0	Cal-De-Sac at end of Fleetwood Dr.
63	< 1.0	< 1.0	Fleetwood Dr Southwest of Tower
64	< 1.0	1.6	Fleetwood Dr Southwest of Tower
65	< 1.0	2.25	Fleetwood Dr Southwest of Tower
66	1.8	2.65	Fleetwood Dr Southwest of Tower
67	2.1	3.45	Fleetwood Dr Southwest of Tower
68	1.55	2.45	Fleetwood Dr Southwest of Tower
69	1.15	1.6	Fleetwood Dr South of Tower
70	< 1.0	1.3	Fleetwood Dr South of Tower

Table 1. Measured Results (Continued)

Possible "Worst Case" Results

The Spatial Average % MPE values measured on 05/12/2004, as detailed in Table 1, are added to the calculated "Worst Case" exposure at the base of the tower of 25.4% MPE, to determine the possible "Worst case" MPE value in the vicinity of the West Hartford site after activation of the T-Mobile facility.

Measurement Point	Spatial Average % General Population MPE	Spatial Average % General Population MPE with "Worst Case" T-Mobile Calculated Exposure
1	< 1.0	< 26.4
2	3.6	29.00
3	1.3	26.70
4	1.05	26.45
5	< 1.0	< 26.4
6	< 1.0	< 26.4
7	1.9	27.30
8	1.7	27.10
9	1.6	27.00
10	1.2	26.60
11	1.6	27.00
12	1.55	26.95
13	< 1.0	< 26.4
14	< 1.0	< 26.4
15	< 1.0	< 26.4
16	< 1.0	< 26.4
17	1.2	26.60
18	< 1.0	< 26.4
19	< 1.0	< 26.4
20	< 1.0	< 26.4
21	< 1.0	< 26.4
22	< 1.0	< 26.4
23	< 1.0	< 26.4
24	< 1.0	< 26.4
25	< 1.0	< 26.4
26	< 1.0	< 26.4
27	< 1.0	< 26.4
28	< 1.0	< 26.4
29	1.15	26.55
30	1.6	27.00
31	1.2	26.60
32	1.25	26.65
33	< 1.0	< 26.4
34	< 1.0	< 26.4
35	< 1.0	< 26.4

Table 2. Possible "Worst Case" Results with T-Mobile

Measurement Point	Spatial Average % General Population MPE	Spatial Average % General Population MPE with "Worst Case" T-Mobile Calculated Exposure
36	1.3	26.7
37	1.5	26.9
38	1.15	26.55
39	1.2	26.6
40	< 1.0	< 26.4
41	< 1.0	< 26.4
42	< 1.0	< 26.4
43	< 1.0	< 26.4
44	< 1.0	< 26.4
45	< 1.0	< 26.4
46	< 1.0	< 26.4
47	< 1.0	< 26.4
48	< 1.0	< 26.4
49	< 1.0	< 26.4
50	< 1.0	< 26.4
51	< 1.0	< 26.4
52	< 1.0	< 26.4
53	< 1.0	< 26.4
54	< 1.0	< 26.4
55	< 1.0	< 26.4
56	< 1.0	< 26.4
57	< 1.0	< 26.4
58	< 1.0	< 26.4
59	< 1.0	< 26.4
60	< 1.0	< 26.4
61	< 1.0	< 26.4
62	< 1.0	< 26.4
63	< 1.0	< 26.4
64	< 1.0	< 26.4
65	< 1.0	< 26.4
66	1.8	27.2
67	2.1	27.5
68	1.55	26.95
69	1.15	26.55
70	< 1.0	< 26.4

Table 2. Possible "Worst Case" Results with T-Mobile

Aerial View of Measurement Locations

Figure 1, as presented below, depicts the locations of field measurement points overlaid onto an aerial photograph of the Westview Drive Tower.

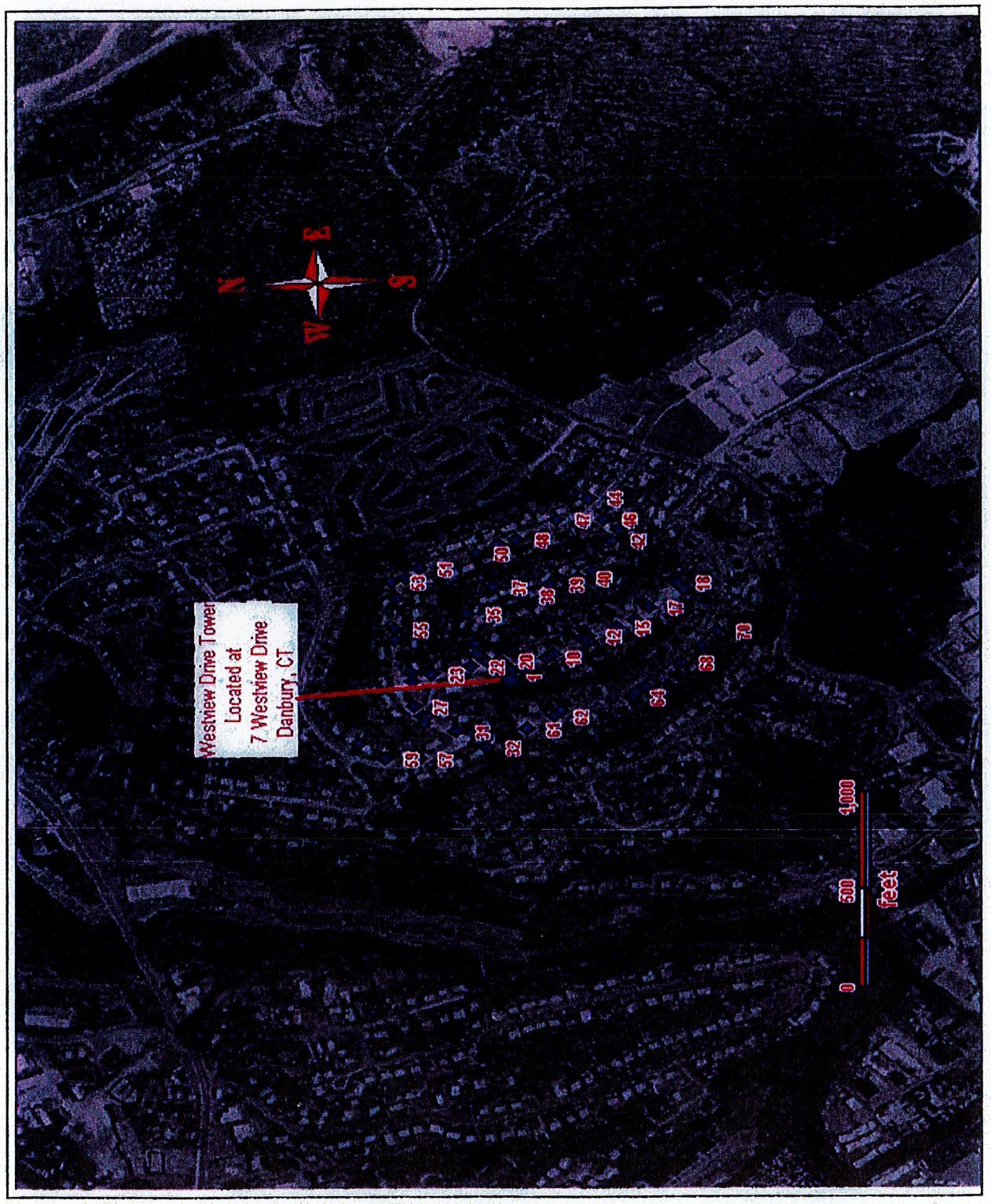


Figure 1. Aerial View of Westview Drive Tower - 2-Meter Resolution

Results

The "worst case" spatial average power density measured during this assessment was 3.6 % of the FCC MPE limits for General Population/Uncontrolled exposure as outlined in FCC OET Bulletin 65 Edition 97-01. This worst-case measurement was recorded near the southeastern corner of the building at the base of the West View Tower, which corresponds to Measurement Location # 2, as presented in Table 1. As can be seen from the data presented, this measured value of 3.9% and calculated value of 25.4% are well below the General Population/Uncontrolled MPE limits.

Power density was sampled on the public roadways within the immediate vicinity of the West View Drive Tower and no detected levels were greater than 1.9 % MPE. Power density levels must remain below 100% in order to comply with the General Population/Uncontrolled Radio Frequency exposure limits, as prescribed by the Federal Communications Commission.

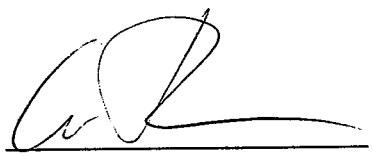
The possible "Worst Case" cumulative power density, with the proposed T-Mobile antennas was computed to be within the mandated General Population/Uncontrolled limits for Maximum Permissible Exposure, as delineated in the Federal Communications Commission's Radio Frequency exposure rules published in 47 CFR 1.1307(b)(1)-(b)(3). The majority of the points studied were shown to be less than 10% of he General Population/Uncontrolled MPE limit. The possible "Worst Case" power density, with T-Mobile antennas operating at full power, was shown to be 29.0% MPE of the General Population/Uncontrolled MPE limit.

Conclusion

The area within the immediate vicinity of the West View Drive Tower site, located at 7 Westview Drive in Danbury, CT, was surveyed and found to be within the mandated General Population/Uncontrolled limits for Maximum Permissible Exposure, as delineated in the Federal Communications Commission's Radio Frequency exposure rules published in 47 CFR 1.1307(b)(1)-(b)(3). In addition, worst case calculated values were determined, assuming T-Mobile to be transmitting at full power on all channels. The possible "worst case" power density at this facility is 29.0% of the General Population/Uncontrolled MPE limit.

Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The measurements were obtained with properly calibrated equipment using techniques in compliance with ANSI/IEEE Std. C95.3, ANSI/IEE Std. C95.1 and FCC OET Bulletin 65 Edition 97-01.



Curtis Crown
C Squared Systems

May 17, 2004
Date

Miscellaneous

T-Mobile®
Get more from life®

100 Filley Street, Bloomfield, CT 06002
860-692-7145 fax 860-692-7159

May 27, 2004

Mayor, Mark D. Boughton
City of Danbury
155 Deer Hill Ave
Danbury, CT 06810

RE: **Wireless Telecommunications Facility**
7 West View Drive, Danbury, CT

Dear Mayor Boughton:

Omnipoint Communications, Inc. a.k.a. T-Mobile (formerly VoiceStream Corp.) intends to co-locate antennas on the monopole located at 7 West View Drive, Danbury. Attached, please find a copy of our application to the CT Siting Council.

Of you have any questions or concerns, please feel free to call me at 860-692-7145, or the CT Siting Council.

Very Truly Yours,

Karina Fournier
T-Mobile Zoning Dept.

Attachment- Application

Cc: CSC