STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
www.ct.gov/csc

May 20, 2010

Thomas F. Flynn III
Site Development Project Manager
Maxton Technology Inc.
1296 Blue Hills Avenue
Bloomfield, CT 06002

RE: **EM-CLEARWIRE-043-100326** – Clearwire Corporation notice of intent to modify an existing telecommunications facility located at 112 Sunset Ridge, East Hartford, Connecticut.

Dear Mr. Flynn:

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 with the following conditions:

- A revised structural analysis sealed by a Professional Engineer duly licensed in the State of Connecticut and taking into account all three dishes shall be submitted to the Council prior to the antenna and dish installation.

The proposed modifications are to be implemented as specified here and in your notice dated March 25, 2010, 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 Melody A. Currey, Mayor, Town of East Hartford
Michael J. Dayton, Town Planner, Town of East Hartford

EM-CLEARWIRE-043-100326

March 25, 2010

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

ORIGINAL

Re: Notice of Exempt Modification
Clearwire Corporation Notice to make an Exempt Modification to an Existing Facility at 112 Sunset Ridge, East Hartford, CT
Clearwire Site Number CT-HFD-0053

Dear Mr. Phelps,

Pursuant to Conn. Agency Regulations Sections 16-50j-73 and 16-50j-72(b), Clearwire Corporation (Clearwire) hereby gives notice to the Connecticut Siting Council (Council) and the Town of South Windsor, CT. of Clearwire's intent to make an exempt modification to an existing monopole tower (tower) located at 112 Sunset Ridge Road, East Haven, CT. Specifically, Clearwire plans to add three (3) antennas to the tower, one (1) per sector and to add three (3) microwave dishes, one (1) per sector for backhaul at the 100' AGL. Pursuant to the Council's regulations, (Conn. Agency Regulations Section 16-50j-72(b)), Clearwire's plans do not constitute a modification subject to the Council's review because Clearwire will not change the height of the tower, will not extend the boundaries of the compound, will not increase the noise levels at the site and will not increase the total radio frequency electromagnetic radiation power density at the site to levels above applicable standards. A copy of this notice has been sent to Mayor Melody Currie of the Town East Hartford, CT.

Clearwire is currently developing a 4G wireless broadband network to provide high-speed wireless data and VoIP service within the State of Connecticut. Clearwire's 4G service leverages the WiMAX technology to enable enhanced wireless data communications. In order to accomplish the upgrade at this site, Clearwire plans to add three (3) WiMAX antennas, three (3) dishes and to install additional WiMAX related electronic equipment at the base of the tower.

The tower is a 140' monopole located at 112 Sunset Ridge Road, East Hartford, Connecticut (Latitude 41 46 18 N Longitude 72 35 26 W). The tower is owned by the Town of East Hartford. Currently, AT&T, T-Mobile and Pocket are located on the tower, as well as a number of other public service antennas. Presently, Clearwire is not located at the site. Clearwire's base station equipment will be located on the ground next to the pole. A site plan with the tower elevations and site plan specifications is attached.

Clearwire will add three (3) antennas, one (1) to each sector, and mount three (3) microwave dishes, one (1) above each of those antennas. The center line for the microwave dishes will be 100'. Nine coaxial cables will be added to the structure, 2 per antenna and one per microwave dish. These cables will be inside the tower and bundled. To confirm that the tower

can support these changes, Clearwire commissioned Bay State Design Inc. to perform a structural analysis of the tower and the proposed changes. According to that structural dated March 5, 2010 and attached hereto, the structure is sufficient to support the proposed loading and will not need to be modified. The tower, with the additions and the modifications will be at less than 53.5% of its capacity.

Within the existing compound, Clearwire will install one (1) WiMAX radio and power cabinet on the existing pad at the site. The new equipment will be adjacent to the existing tower. Excluding brief, construction related noise during the addition of this equipment, the proposed changes to the tower will not increase noise levels at the site.

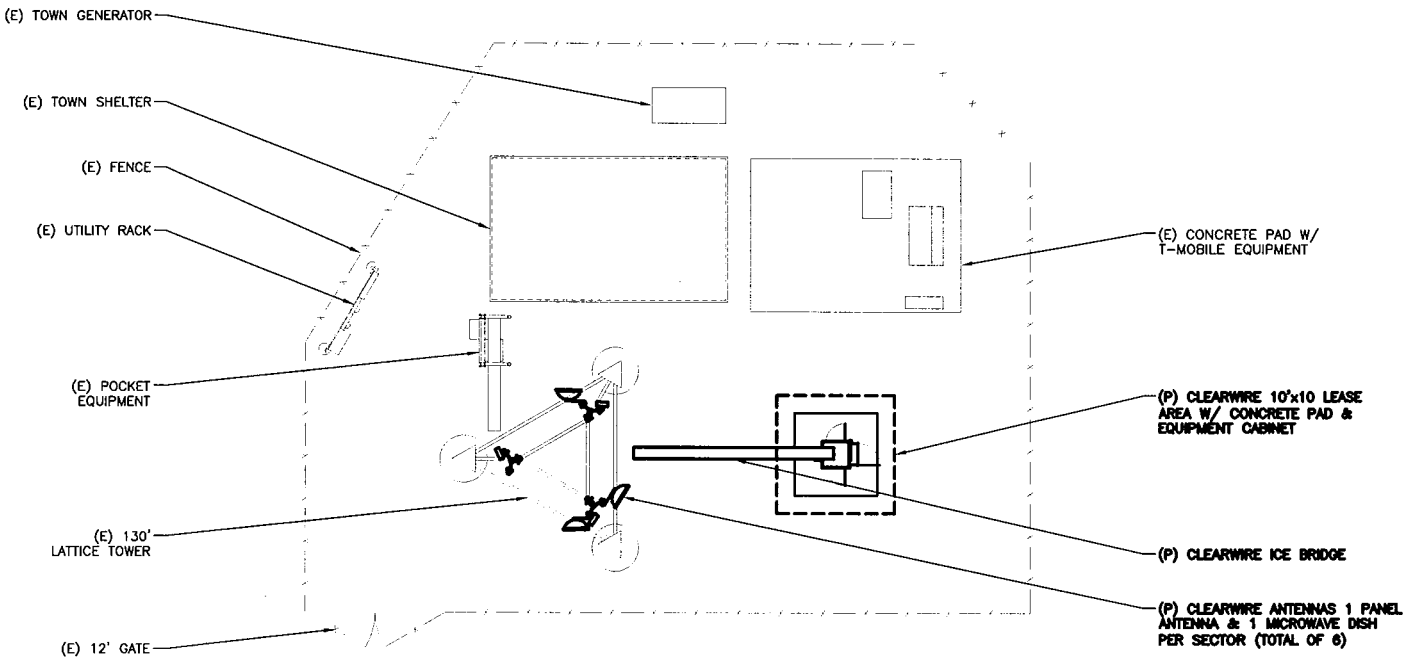
The addition of new WiMAX antennas and microwave dishes will not adversely impact the health and safety of the surrounding community or the people working on the tower. The total radio frequency exposure measured around the base of the tower will be well below the National Council on Radiation Protection and Measurements' (NCRP) standard adopted by the Federal Communications Commission (FCC). The worst case power density analysis for the WiMAX antennas and dishes, measured at the base of the tower, indicates that the WiMAX antennas and dishes will emit .36% of the NCRP's standard for maximum permissible exposure. The cumulative power density analysis indicates that all the antennas on the structure will emit 27.52% of the NRCP'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 base of the tower. The power density analysis is attached.

In conclusion, Clearwire's proposed plan to add three (3) WiMAX antennas, three (3) microwave dishes and the associated base station equipment does not constitute a modification subject to the Council's jurisdiction because Clearwire will not increase the height of the tower, will not extend the boundaries of the compound at the site, will not increase the noise levels at the site and the radio frequency electromagnetic radiation power density will stay within all applicable standards.

Respectfully Submitted

Thomas F. Flynn III
Site Development Project Manager
Maxton Technology Inc.
1296 Blue Hills Avenue
Bloomfield, CT 06002
508-821-6974
Tom.Flynn@maxtontech.com
Agent for Clearwire Corporation

Cc: Mayor Melody Currie
Town of East Hartford



1
L2

(P) = PROPOSED
(E) = EXISTING

COMPOUND PLAN

SCALE: N.T.S.

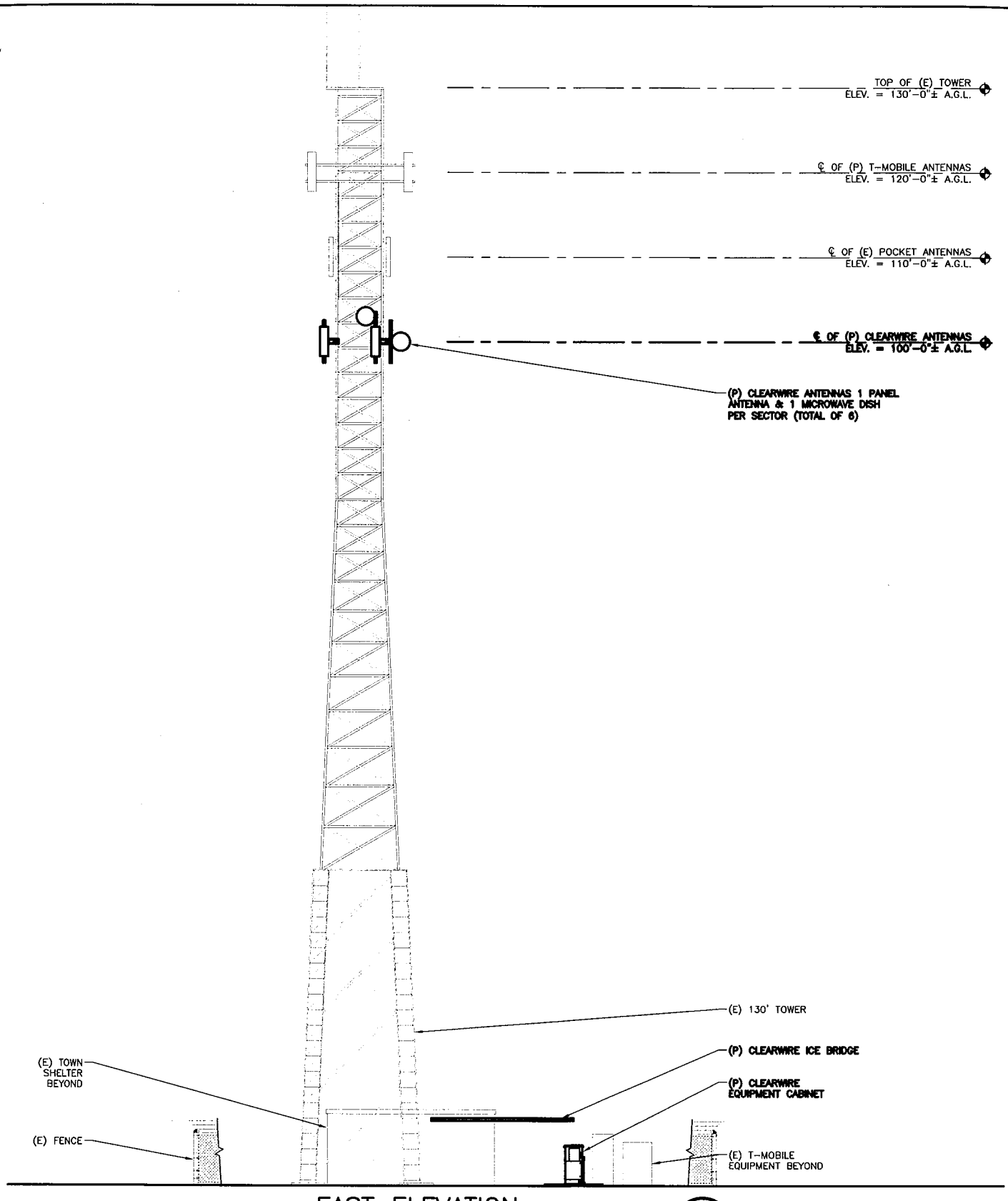
1

MAXTON
241 BOSTON POST RD WEST
MARLBOROUGH, MA. 01752
Phone: 508-229-4100
Fax: 508-485-5321

BAY STATE DESIGN
Bay State Design, Inc.
Architects • Engineers
241 BOSTON POST RD WEST
MARLBOROUGH, MA. 01752
Phone: 508-229-4100
Fax: 508-485-5321

clearwire
5808 LAKE WASHINGTON BLVD.
NE SUITE 300
KIRKLAND, WA 98033

PROJECT LOCATION: SUNSET RIDGE CT-HFD0053D 112 SUNSET RIDGE DRIVE EAST HARTFORD, CT 06118	SITE TYPE: LATTICE TOWER		BSDA PROJ. #: 2908.050
	PROJECT MANAGER: JP	DRAWN BY: NS	SHEET: L1
APPROVED BY:	DATE: 02/22/10	REVISION: 0	



EAST ELEVATION

1

SCALE: N.T.S.

(P) = PROPOSED
(E) = EXISTING

MAXTON
241 BOSTON POST RD WEST
MARLBOROUGH, MA. 01752
Phone: 508-229-4100
Fax: 508-485-5321

BAY STATE DESIGN
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Architects • Engineers
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MARLBOROUGH, MA. 01752
Phone: 508-229-4100
Fax: 508-485-5321

clearwire
5808 LAKE WASHINGTON BLVD.
NE SUITE 300
KIRKLAND, WA 98033

PROJECT LOCATION:
SUNSET RIDGE
CT-HFD0053D
112 SUNSET RIDGE DRIVE
EAST HARTFORD, CT 06118

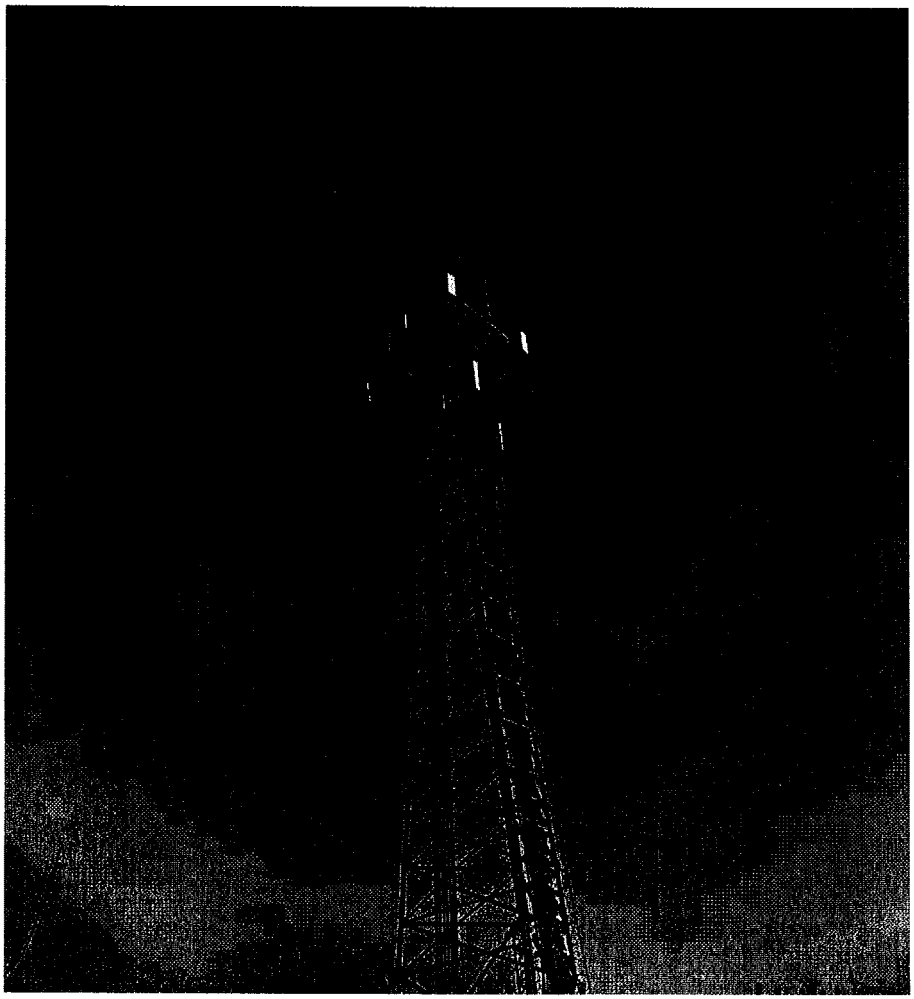
SITE TYPE:
LATTICE TOWER

PROJECT MANAGER: JP
DRAWN BY: NS
APPROVED BY:
DATE: 02/22/10
REVISION: 0

BSDA PROJ. #: 2908.050
SHEET: L2

BAY STATE
DESIGN

STRUCTURAL ANALYSIS REPORT



clearwire
wireless broadband

CT-HFD0053D

112 Sunset Ridge Drive
East Hartford, CT

March 5, 2010

Bay State Design, Inc. 241 Boston Post Road Marlborough, MA 01752 TEL: (508) 229-4100 FAX: (508) 485-5321
Architects • Engineers

INTRODUCTION:

The purpose of this analysis is to determine the structural capability of the existing 140'-0" Self Support Tower at 112 Sunset Ridge Drive in East Hartford, CT. Clearwire is proposing to add the following wireless equipment on the tower at an elevation of 100'-0":

3	Kathrein 804 10054 Panel Antenna
3	Samsung WiMAX U-RAS Flexible RRU
1	Andrew VHLP12-18 2'-0" Microwave Dish
1	Andrew VHLP1-23 1'-0" Microwave Dish

In addition, a total of (6) 5/16" ethernet cables (run inside a flexible 2" conduit) and (2) lines of ½" coax will be run on the tower face to the proposed antennas. Coax is to be installed to the same face as the existing Pocket Communications lines.

ASSUMPTIONS:

All engineering services have been performed on the basis that the information used is current and accurate. This information may consist of, but is not necessarily limited to:

- Information supplied by the client regarding the structure itself, the antenna and feed line loading on the structure and its components, or other relevant information.
- Information from drawings in the possession of Bay State Design, Inc., or generated by field inspections or measurements of the structure.

It is the responsibility of the client to ensure that the information provided to Bay State Design, Inc. and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, BSD assumes that all structures were constructed in accordance with the drawings / specifications and are in good condition and have not significantly changed from the "as new" condition.

All services were performed to codes specified by the client. BSD does not imply to have met any other codes or requirements unless explicitly agreed in writing. If wind and ice loads or other relevant parameters are different from the minimum values recommended by code, the client shall specify the exact requirement.

All services are performed in accordance with generally accepted engineering principles and practices. Bay State Design, Inc. is not responsible for the conclusions, opinions and recommendations made by others based on the information provided.

REFERENCES:

This structural analysis was evaluated using RISA Tower, a general-purpose modeling, analysis, and design program created specifically for communications towers in accordance with the following:

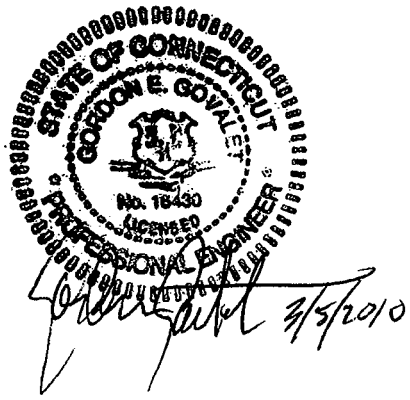
- TIA/EIA 222-F Structural Standards for Steel Antenna Tower and Antenna Supporting Structures
- International Building Code 2003 Edition
- CT State Building Code 2005

Bay State Design, Inc. was provided with a copy of a previous structural analysis for this tower prepared by URS Corporation for Pocket Communications dated 6/9/2009. In addition, the existing tower inventory was verified on a January 22, 2010 site visit conducted by Bay State Design, Inc.

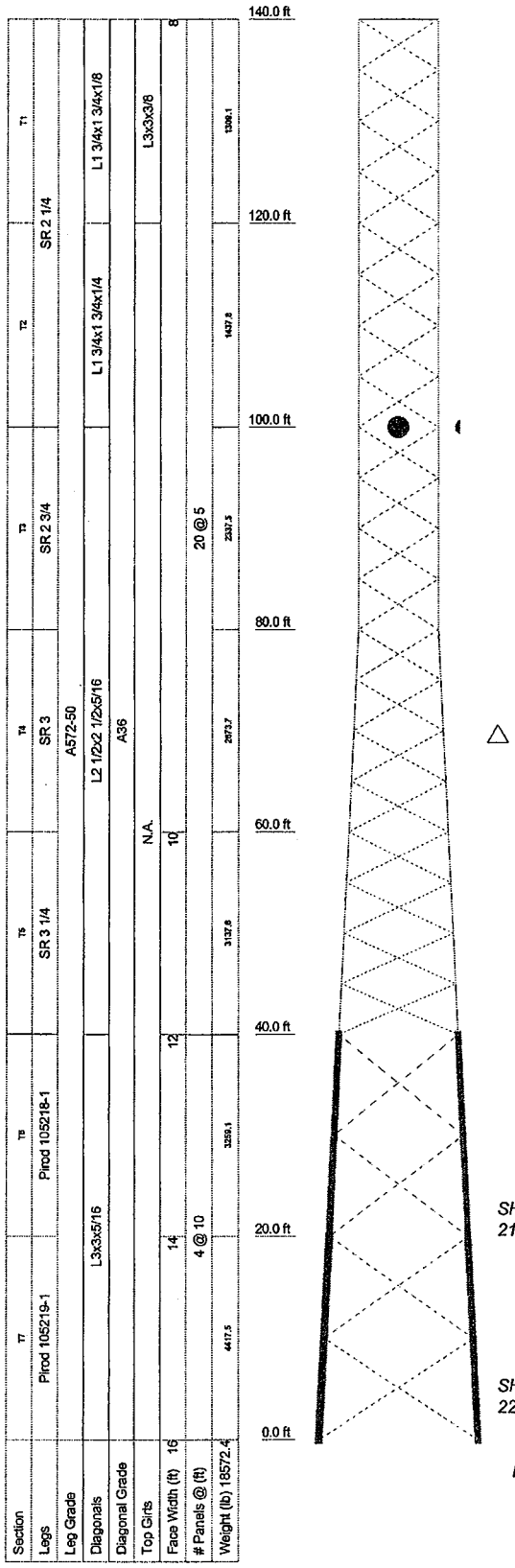
CONCLUSION:

Based on our analysis, Bay State Design, Inc. has concluded the above referenced tower is sufficient to support the proposed Clearwire loading. The tower is rated at 53.5% of its structural capacity.

Bay State Design, Inc. reviewed existing foundation calculations prepared by URS Corporation. A comparison of new reactions to reactions calculated by URS indicates the foundation is adequate to support the proposed loading.



Gordon E. Govalet, P.E.
Vice President
Bay State Design, Inc.



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
14' Dipole (Town)	147	(3) RFS-TMA (Sheilded) (T-Mobile)	120
7' Whip (Town)	143	APX16PV-16PVL-C w/Mount (T-Mobile)	120
7' Whip (Town)	143	APXV18-206517S-C w/Mounting Hardware (Pocket)	110
7' Whip (Town)	143	APXV18-206517S-C w/Mounting Hardware (Pocket)	110
3' Stand-Off (Town)	138	APXV18-206517S-C w/Mounting Hardware (Pocket)	110
3' Stand-Off (Town)	138	84010054 (Clearwire)	100
3' Stand-Off (Town)	138	84010054 (Clearwire)	100
20'-4" Bay Dipole (Town)	130	RRU (Clearwire) (Clearwire)	100
20'-4" Bay Dipole (Town)	130	RRU (Clearwire) (Clearwire)	100
20'-4" Bay Dipole (Town)	130	RRU (Clearwire) (Clearwire)	100
APX16PV-16PVL-C w/mount (T-Mobile)	120	2.0 ft. Standoff (Clearwire)	100
APX16PV-16PVL-C w/mount (T-Mobile-)	120	2.0 ft. Standoff (Clearwire)	100
10' Boom Gate w/ 3 2 -3/8" Pipe (Vertical) (T-Mobile)	120	2.0 ft. Standoff (Clearwire)	100
APX16PV-16PVL-C w/Mount (T-Mobile)	120	3"x 5.5' pipe (Clearwire)	100
APX16PV-16PVL-C w/Mount (T-mobile)	120	3"x 5.5' pipe (Clearwire)	100
APX16PV-16PVL-C w/mount (T-Mobile)	120	3"x 5.5' pipe (Clearwire)	100
(3) RFS-TMA (Sheilded) (T-Mobile)	120	Andrew VHLP2 (Clearwire)	100
(3) RFS-TMA (Sheilded) (T-Mobile)	120	Andrew VHLP1 (Clearwire)	100

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower is located in Hartford County, Connecticut.
2. Tower designed for a 80.00 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 69.00 mph basic wind with 0.50 in ice.
4. Deflections are based upon a 50.00 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. TOWER RATING: 53.7%

MAX. CORNER REACTIONS AT BASE:
DOWN: 129497 lb
UPLIFT: -103353 lb
SHEAR: 15731 lb

AXIAL
41347 lb

SHEAR
21827 lb

MOMENT
1595823 lb-ft

TORQUE 10114 lb-ft
69.00 mph WIND - 0.50 in ICE

AXIAL
26861 lb

SHEAR
22741 lb

MOMENT
1670339 lb-ft

TORQUE 10145 lb-ft
REACTIONS - 80.00 mph WIND

Bay State Design
241 Boston Post Road West
Marlborough, MA 01752
Phone: (508) 229-4100
FAX: (508) 485-5321

Job: ***HFD0053D- 140 ft. Support Tower***			
Project: ***112 Sunset Ridge Road, E. Hartford CT***			
Client: Clearwire	Drawn by: AAP	App'd:	
Code: TIA/EIA-222-F	Date: 03/05/10	Scale: NTS	
Path: N:\AP\HFD0053D E. HARTFORD CT\2-18-10 Proposed Condition of HFD0053D.eri		Dwg No. E-1	

CLEAR™

4400 Carillon Point
Kirkland, WA 98033

To: Maxton
From: Frantz Pierre – Radio Frequency Engineer
Cc: Micah Hawthorne
Subject: Power Density Report for CT-HFD0053
Date: March 25, 2010

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1. Introduction:

This report is the result of Electromagnetic Field Intensities (EMF – Power Densities) study for the Clearwire broadband antenna installation on a steel lattice tower at 112 Sunset Ridge Drive, East Hartford, 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 Clearwire transmitters are in the (2496 – 2960) Frequency Band
2) The emissions from the Clearwire Microwave dishes are in the 11 GHz Frequency Band
3) The model number for Clearwire Antenna is Argus LLPX310R
4) The model number for the Microwave dish is Andrew VHLP2.5-11 with 30" Diameter.
5) The Clearwire Panel antenna centerline is 100 feet.
6) The Clearwire Microwave dish centerline is 100 feet.
7) The Maximum Transmit power from any Clearwire panel antenna is 251 Watts Effective Isotropic Radiated Power (EiRP) assuming 2 channels per sector.
8) The Maximum Transmit power from any Clearwire Microwave Dish is 346 Watts Effective Isotropic Radiated Power (EiRP) assuming 1 channel per dish.
9) All antennas are simultaneously transmitting and receiving 24 hours per day.
10) 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 used with the above information to perform the calculations.

3: Conclusion:

Based on the above worst case assumptions, the power density calculation from the Clearwire antenna installation on a steel lattice tower at 112 Sunset Ridge Drive, East Hartford, CT, is 0.003587 mW/cm^2. This value represents 0.36% 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 Clearwire 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 all other carriers is 27.16 %. The combined Power Density for this site is 27.52% of the M.P.E. standard.

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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www.ct.gov/csc

April 1, 2010

The Honorable Melody A. Currey
Mayor
Town of East Hartford
Town Hall
740 Main Street
East Hartford, CT 06108-3114

RE: **EM-CLEARWIRE-043-100326** – Clearwire Corporation notice of intent to modify an existing telecommunications facility located at 112 Sunset Ridge, East Hartford, Connecticut.

Dear Mayor Currey:

The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

If you have any questions or comments regarding this proposal, please call me or inform the Council by April 15, 2010.

Thank you for your cooperation and consideration.

Very truly yours,

S. Derek Phelps
Executive Director

SDP/jbw

Enclosure: Notice of Intent

c: Michael J. Dayton, Town Planner, Town of East Hartford