

**STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL**

RE: APPLICATION BY CELLCO  
PARTNERSHIP, d/b/a VERIZON WIRELESS,  
FOR A CERTIFICATE OF ENVIRONMENTAL  
COMPATIBILITY AND PUBLIC NEED  
FOR A TELECOMMUNICATIONS FACILITY  
AT 723 LEETES ISLAND ROAD, (MEDLYN  
FARM), IN THE TOWN OF BRANFORD,  
CONNECTICUT

DOCKET NO. 413

Date: April 13, 2011

**INTERROGATORY RESPONSES TO TOWN OF BRANFORD  
FROM T-MOBILE NORTHEAST LLC**

The Intervenor, T-Mobile Northeast LLC ("T-Mobile"), submits the following responses to the first set of Pre-Hearing Interrogatories propounded by the Intervenor, Town of Branford in connection with the above-captioned Application.

1. What propagation model does the applicant employ to determine calculated coverage?  
**A1 This interrogatory is directed to the Applicant, Cellco Partnership d.b.a. Verizon Wireless ("Verizon"); therefore, a response from T-Mobile is not required.**
2. What is the frequency band that is depicted in these plots?  
**A2 This interrogatory is directed to the Applicant, Verizon; therefore, a response from T-Mobile is not required.**
3. What clutter model and what terrain data base were utilized in these calculations?  
**A3 This interrogatory is directed to the Applicant, Verizon; therefore, a response from T-Mobile is not required.**

4. What effective radiated power and antenna type along with beam tilt, if applicable, were utilized in these calculations?

**A4 This interrogatory is directed to the Applicant, Verizon; therefore, a response from T-Mobile is not required.**

5. Were drive tests ("scan tests") that would verify the results of the calculated plots conducted? If so, please provide the data sets which were generated by the tests and note whether the data needs to be corrected for variables including, but not limited to, antenna position, gain and line loss.

**A5 This interrogatory is directed to the Applicant, Verizon; therefore, a response from T-Mobile is not required.**

6. Have you performed continuous wave ("CW") tests from the proposed site or any other site either identified or considered?

**A6 T-Mobile did not perform any continuous wave tests for the Facility.**

7. In calculating the expected coverage from the proposed site, what antenna centerlines, antenna types and effective radiated power did the applicant assume would be put in use?

**A7 This interrogatory is directed to the Applicant, Verizon; therefore, a response from T-Mobile is not required.**

8. Have you performed a minimum height analysis to determine the minimum antenna centerline that it requires to meet its alleged coverage needs?

**A8 Yes. The lowest height that T-Mobile could utilize is the minimum height available on the Facility, which would be 80 feet above grade level. Please see T-Mobile's responses to the Council's First Set of Interrogatories, dated February 4, 2011.**

9. By what method was it determined that identified alternate sites did not meet the needs of the Applicant? If studies were conducted to confirm the utility of the alternate sites, please provide copies of those studies?

**A9 This interrogatory is directed to the Applicant, Verizon; therefore, a response from T-Mobile is not required.**

10. What antenna centerlines, antenna types and effective radiated power did the applicant assume to determine expected coverage from alternate sites indicated?

**A10 This interrogatory is directed to the Applicant, Verizon; therefore, a response from T-Mobile is not required.**

11. Is there another combination of alternate sites that could be utilized to achieve the alleged coverage needs?
- A11 T-Mobile has intervened in these proceedings to co-locate its antennas on the Facility proposed by the Applicant, Verizon. T-Mobile's intervention in this proceeding is supported by the legislative directive to share telecommunications facilities and avoid the unnecessary proliferation of telecommunications facilities. See General Statutes §§ 16-50p (b) (1) (a) and 16-50aa.**
12. What alternate means of achieving the alleged coverage needs have been explored? Please provide any studies upon which you relied in making this determination.
- A12 T-Mobile has intervened in these proceedings to co-locate its antennas on the Facility proposed by the Applicant, Verizon. T-Mobile's intervention in this proceeding is supported by the legislative directive to share telecommunications facilities and avoid the unnecessary proliferation of telecommunications facilities. See General Statutes §§ 16-50p (b) (1) (a) and 16-50aa.**
13. Does the applicant possess any data that support either dropped calls, customer complaints or other switch based or customer service representative based information that supports its claim of lack of service in the entire area that it claims it has a coverage issue?
- A13 This interrogatory is directed to the Applicant, Verizon; therefore, a response from T-Mobile is not required.**
14. Are there other sites in Branford at which you are considering developing wireless communications facilities? Please describe.
- A14 T-Mobile is considering two other prospective sites in Branford for telecommunications facilities at this time: (1) the telecommunications facility proposed at Pleasant Point Road (Docket 407) and (2) the telecommunications facility proposed at 84 Thimble Islands Road & 41 School Street (CTNH 803).**
15. Please name all carriers with whom you have reason to believe will co-locate on the proposed facility.
- A15 This interrogatory is directed to the Applicant, Verizon; therefore, a response from T-Mobile is not required.**

16. Please identify the size of the search ring and explain why that radius was chosen and where the ring was centered.
- A16 The search area radius was approximately 0.5 miles. The site search area was based upon T-Mobile's assessment of the existing coverage in this area of Branford. This radius was used to identify a good starting search area for T-Mobile's site acquisition team to identify candidates which would address the target area. The ring was centered between Route 146 and the Amtrak rail line in Branford, approximately 0.30 miles west of the Route 146 rail line crossing.**
17. What is the percent of dropped calls in the target area?
- A17 Please see T-Mobile's responses to the Council's First Set of Interrogatories, dated February 4, 2011.**
18. If you conducted any drive tests, please produce the results of those drive tests?
- A18 No drive tests were conducted in this area.**
19. In any coverage simulations what angle of downtilt was assumed for each facility depicted in the coverage map generation?
- A19 This interrogatory is directed to the Applicant, Verizon; therefore, a response from T-Mobile is not required.**
20. Please describe the methods used by your visual impact consultant to calculate seasonal visibility.
- A20 This interrogatory is directed to the Applicant, Verizon; therefore, a response from T-Mobile is not required.**
21. What studies did you undertake to eliminate alternate technologies from consideration given that they are of lesser impact to surrounding property uses?
- A21 This interrogatory is directed to the Applicant, Verizon; therefore, a response from T-Mobile is not required. T-Mobile also objects to the conclusory statements contained in this interrogatory regarding "alternate technologies." Without waiving this objection, T-Mobile responds as follows: T-Mobile has intervened in these proceedings to co-locate its antennas on the Facility proposed by the Applicant, Verizon. T-Mobile's intervention in this proceeding is supported by the legislative directive to share telecommunications facilities and avoid the unnecessary proliferation of telecommunications facilities. See General Statutes §§ 16-50p (b) (1) (a) and 16-50aa.**

21. Who conducted the feasibility studies on alternate technologies?
- A21 This interrogatory is directed to the Applicant, Verizon; therefore, a response from T-Mobile is not required. See Response to Interrogatory 21, above (relying on the numbering as provided).**
22. Please provide the feasibility studies or data by which you determined the lack of feasibility?
- A22 This interrogatory is directed to the Applicant, Verizon; therefore, a response from T-Mobile is not required. See Response to Interrogatory 21, above.**
23. Have you employed stealth technology including flush mounting, combined antenna arrays (single antennas which will serve LTE, PCS and 850Mhz), and close centerline to centerline antennas (close meaning < 8ft)? If so, which of these technologies and where?
- A23 T-Mobile objects to this Interrogatory because it is unlimited in scope – the existing facilities nationwide that employ such technologies are too numerous to list. Additionally, T-Mobile notes that the Facility would employ stealth technology.**
24. Is there a particular standard or decibel signal strength which you believe is necessary for adequate coverage for PCS (1900MHz) service in the target coverage area? For 850MHz service? For 700 MHz?
- A24 T-Mobile has established -84 dBm as its minimum design threshold for in-vehicle use and -76dBm for in-building use. Of the three frequency bands listed, T-Mobile is currently only utilizing the 1900 MHz PCS band in the state of Connecticut. Please see T-Mobile's responses to the Council's First Set of Interrogatories, dated February 4, 2011.**
25. What particular dBm signal strength do you believe is necessary for in-vehicle coverage for PCS (1900MHz), 700 MHz and 850MHz in the target area?
- A25 T-Mobile's minimum design threshold for in-vehicle coverage is -84dBm. Of the three frequency bands listed, T-Mobile is currently only utilizing the 1900 MHz PCS band in the State of Connecticut. Please see T-Mobile's responses to the Council's First Set of Interrogatories, dated February 4, 2011.**

26. In the proposed coverage maps submitted by the Applicant, what loss margin was assumed in the modeling?
- A26 This interrogatory is directed to the Applicant, Verizon; therefore, a response from T-Mobile is not required.**
27. For any signal strength predicted by your coverage modeling, what percent-of-locations is assumed for reliability? (e.g: 85% of locations, 95%?)
- A27 T-Mobile objects to this Interrogatory because it is vague and confusing. As a general matter, T-Mobile strives for 100 percent reliability.**
28. Are you assuming that your target coverage is 'reliable service' or "adequate coverage"? Do these two terms differ? How do you define these two terms for the purposes of meeting the goals of the Telecommunications Act of 1996?
- A28 T-Mobile objects to this interrogatory to the extent it calls for a legal conclusion, specifically the interpretation and application of the Telecommunications Act of 1996. Without waiving this objection, please see T-Mobile's responses to Interrogatories 24 and 25, above.**
29. How many residences (as opposed to acres) will have year round views of the proposed towers? Seasonal views?
- A29 This interrogatory is directed to the Applicant, Verizon; therefore, a response from T-Mobile is not required.**
30. Your visual impact analysis indicates that a portion of the visibility of the tower will occur over open water. Did you simulate any of the views from open water or in any way determine the impact to the scenic views of tourists and residents using the open water for recreation?
- A30 This interrogatory is directed to the Applicant, Verizon; therefore, a response from T-Mobile is not required.**
31. What is the percentage of dropped calls and ineffective attempts, as compared to the remainder of the Market Trading Area for Branford?
- A31 T-Mobile objects to this interrogatory because it is overbroad and unduly burdensome. A "Market Trading Area" may include a large geographic area covering several States. Without waiving this objection, please see T-Mobile's responses to the Council's First Set of Interrogatories, dated February 4, 2011.**

32. What is the lowest height you can construct a tower to improve coverage (with and without co-located carriers)?

**A32 See T-Mobile's response to Interrogatory 8, above.**

33. Can you provide separate proposed and existing coverage maps depicting the coverage from the target levels up to -88dBm with the levels at -3dBm intervals (e.g.: -74 to -77dBm, -77dBm to -80dBm, etc)?

**A33 T-Mobile declines to produce an additional set of propagation plots. T-Mobile already provided propagation plots to the Council in response to the Council's First Set of Interrogatories, dated February 4, 2011.**

34. Please identify how many other future sites will be necessary, at a minimum to accomplish adequate coverage for Branford.

**A34 Please see T-Mobile's response to Interrogatory 14, above. T-Mobile cannot foreclose the possibility of exploring additional sites in the future as the need arises.**

35. Please identify any sites in addition to the Proposed Facility at which you intend to seek permission from the Siting Council to construct or modify a facility in the Branford area (Branford and adjacent towns)?

**A35 Please see T-Mobile's response to Interrogatory 14, above. T-Mobile has also proposed a telecommunications facility at Moose Hill Road, Guilford.**

36. Will construction practices for the proposed facility conform to local building and zoning ordinances and regulations?

**A36 This interrogatory is directed to the Applicant, Verizon; therefore, a response from T-Mobile is not required.**

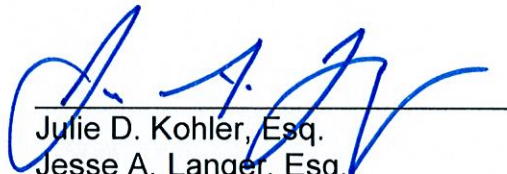
37. Can you provide coverage propagation maps and isolated propagation maps for the proposed facility on clear plastic overlays using a scale that matches that of the Application?

**A37 T-Mobile declines to produce an additional and enhanced set of propagation plots. T-Mobile already provided propagation plots to the Council in response to the Council's First Set of Interrogatories, dated February 4, 2011.**

38. What is the minimum dBm signal strength to accomplish hand off of a call to an adjacent cell for 700Mhz, 850 MHz and 1900 Mhz?
- A38 T-Mobile's minimum design threshold is -84 dBm. At signal levels below this value, a successful handover depends on the quality of the signal; however, the quality of the signal below this value decays more quickly due to external interfering sources – including network wide frequency reuse patterns. Finally, of the three frequency bands listed, T-Mobile is currently only utilizing the 1900 MHz PCS band in the State of Connecticut.**
39. What are the coordinates, antenna heights, antenna types, orientations, tilt, EIRP for all of your existing wireless facilities in Branford and adjacent towns which are directed into Branford?
- A39 T-Mobile objects to this interrogatory to the extent it seeks information irrelevant to the proceedings, specifically information about facilities located in Branford and adjacent towns that are not adjacent to the proposed Facility. T-Mobile also objects to this interrogatory to the extent it seeks proprietary information and otherwise privileged information. Notwithstanding this objection, T-Mobile provides the information contained in Attachment A appended hereto, which includes information regarding facilities adjacent to the proposed Facility.**

Respectfully Submitted,  
T-MOBILE NORTHEAST LLC

By:



Julie D. Kohler, Esq.  
Jesse A. Langer, Esq.  
Cohen and Wolf, P.C.  
1115 Broad Street  
Bridgeport, CT 06604  
Tel. (203) 368-0211  
Fax (203) 394-9901  
[jkohler@cohenandwolf.com](mailto:jkohler@cohenandwolf.com)  
[jlanger@cohenandwolf.com](mailto:jlanger@cohenandwolf.com)



## CERTIFICATION

I hereby certify that on this day a copy of the foregoing, including all attachments, was delivered by Electronic Mail and regular mail, postage prepaid, to all parties and intervenors of record, as follows:

Kenneth C. Baldwin, Esq.  
Robinson & Cole LLP  
280 Trumbull Street  
Hartford, CT 06103-3597  
**(Via Email: [kbaldwin@rc.com](mailto:kbaldwin@rc.com))**

Christopher B. Fisher, Esq.  
Lucia Chiocchio, Esq.  
Cuddy & Feder, LLP  
445 Hamilton Avenue, 14<sup>th</sup> Floor  
White Plains, NY 10601  
**(Via Email: [CFisher@cuddyfeder.com](mailto:CFisher@cuddyfeder.com))**  
**(Via Email: [LChiocchio@cuddyfeder.com](mailto:LChiocchio@cuddyfeder.com))**

Keith R. Ainsworth, Esq.  
Evans Feldman & Ainsworth, LLC  
261 Bradley Street  
P.O. Box 1694  
New Haven, CT 06507-1694  
**(Via Email: [krainsworth@snet.net](mailto:krainsworth@snet.net))**



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Jesse Langer

# **ATTACHMENT A**

SITEID	LATITUDE	LONGITUDE	CELL	Antenna Height	ANTTYPE	MAKE
CTNH801B	41.2746	-72.7932	CTNH801A	122	APXV18_209014_02	RFS
CTNH801B	41.2746	-72.7932	CTNH801B	122	APXV18_209014_02	RFS
CTNH801B	41.2746	-72.7932	CTNH801C	122	APXV18_209014_02	RFS
CT11328F	41.2742	-72.8137	CT11328A	96	DR651802_PL2Q	EMS
CT11328F	41.2742	-72.8137	CT11328B	96	DR651802_PL2Q	EMS
CT11328F	41.2742	-72.8137	CT11328C	96	DR651802_PL2Q	EMS
CTNH107A	41.2885	-72.8138	CTNH107A	125	APX16DWV_16DWVS_02	RFS
CTNH107A	41.2885	-72.8138	CTNH107B	125	APX16DWV_16DWVS_02	RFS
CTNH107A	41.2885	-72.8138	CTNH107C	125	APX16DWV_16DWVS_02	RFS
CT11025B	41.2939	-72.7857	CT11025A	122	RR651902_P	EMS
CT11025B	41.2939	-72.7857	CT11025B	122	RR90_17_02DP	EMS
CT11025B	41.2939	-72.7857	CT11025C	122	RR90_17_02DP	EMS
CTNH806A	41.2643	-72.6952	CTNH806A	85	APX16DWV_16DWVS_02	RFS
CTNH806A	41.2643	-72.6952	CTNH806B	85	APX16DWV_16DWVS_02	RFS
CTNH806A	41.2643	-72.6952	CTNH806C	85	APX16DWV_16DWVS_02	RFS
CT11027D	41.3004	-72.7077	CT11027A	130	RR90_17_02DP	EMS
CT11027D	41.3004	-72.7077	CT11027B	130	RR90_17_02DP	EMS
CT11027D	41.3004	-72.7077	CT11027C	130	RR90_17_02DP	EMS
CT11026C	41.3151	-72.7497	CT11026A	118	RR90_17_02DP	EMS
CT11026C	41.3151	-72.7497	CT11026B	118	RR90_17_02DP	EMS
CT11026C	41.3151	-72.7497	CT11026C	118	RR90_17_02DP	EMS