

**STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL**

IN RE:

APPLICATION OF OPTASITE TOWERS LLC
AND OMNIPOINT COMMUNICATIONS, INC.
FOR A CERTIFICATE OF ENVIRONMENTAL
COMPATIBILITY AND PUBLIC NEED FOR
THE CONSTRUCTION, MAINTENANCE AND
OPERATION OF A TELECOMMUNICATIONS
FACILITY AT 39 MAENNERCHOR AVENUE,
TAFTVILLE, CONNECTICUT

DOCKET NO. 365

DATE: AUGUST 14, 2008

PRE-FILED TESTIMONY OF ALEX MURILLO

Q1. Please summarize your professional background in telecommunications.

A1. My career in the wireless industry has spanned the past ten years. For the past four years, my responsibilities as a contractor for T-Mobile have included the design and integration of the T-Mobile wireless network. Prior to this period, I was responsible for the design, integration, optimization and management of network buildouts for commercial wireless carriers, including AT&T Wireless and Voicestream (T-Mobile's predecessor).

Q2. What does your testimony address?

A2. The purpose of my testimony is to provide information relating to T-Mobile's existing network in this area of the state and to describe the need for a proposed facility in the area. This includes information on the general design of T-Mobile's network, the technical constraints in selecting proposed facilities, and

the specific need for a facility at the site proposed in the above referenced Application.

Q3. Please describe T-Mobile's wireless network in Connecticut.

A3. T-Mobile's predecessor entities began building a wireless network to provide PCS service in Connecticut in the mid 1990s. T-Mobile is licensed by the Federal Communications Commission to provide PCS service using frequencies in the 1900 MHz range. T-Mobile operates approximately 550 sites in Connecticut. Current efforts are directed to providing signal to areas without coverage and meeting demand for additional capacity within areas already served. Each new site must be chosen to meet the need for coverage and/or capacity without creating RF interference among sites.

Q4. What requirements does the nature of wireless technology place on T-Mobile's selection of cell site locations?

A4. Like all personal communications service providers, T-Mobile's wireless network is based on the principle of frequency reuse. Cell site locations must be chosen to provide for sufficient signal strength overlap to allow call hand-off between cells without creating unnecessary duplicative coverage and frequency interference. Terrain variations and local land use policies and development further limit cell site locations.

Technological advances in service, such as the availability of data and video services through customer handsets, are also significant factors in system

development. Increased customer demand and expectations resulting from those advances drive the need for additional sites.

T-Mobile's required lower limit threshold is -84 dBm, which is expected to provide reliable in-vehicle coverage. A higher threshold level of -76 dBm is the minimum required to provide reliable in-building coverage. At levels below the -84 dBm threshold, signal degradation would be expected to result in areas of unreliable service to T-Mobile customers for voice and data services. In addition, levels below -84 dBm would adversely affect T-Mobile's ability to provide reliable E-911 services as mandated by the federal government.

Q5. Please describe T-Mobile's need for the proposed facility.

A5. The interrelationship between the proposed facility and T-Mobile's existing system (including recently approved but not yet on-air sites) is depicted in the propagation plots included in Exhibit G of the Application. As shown, a proposed T-Mobile facility at this location is needed primarily to eliminate coverage gaps and provide new coverage along Routes 12, 97, and 169, including the Taftville section of Norwich.

Q6. How did T-Mobile analyze the proposed site?

A6. T-Mobile's RF engineers utilized propagation prediction tools to determine the potential effectiveness of the proposed locations in meeting the identified coverage need. That analysis took into account the coverage objective, T-Mobile's existing on-air sites in this area and the terrain that exists in this area.

The analysis confirmed that a facility at the proposed location would provide service to the target area and would improve service generally within the area. The analysis also revealed that an antenna center line of 117 ft. AGL at this location would allow T-Mobile to achieve the coverage objective levels in this area. At heights below this, the coverage in the target area starts to deteriorate and fall below the T-Mobile minimum required threshold of -84 dBm. These predictions were confirmed during an actual drive test of this area.

Q7. Please summarize the basis for the height of this proposed facility

A7. As indicated above, the results of the analysis conducted for the proposed Norwich facility confirmed the minimum height required to fully cover the intended coverage objective is 117 ft. AGL. At a height below 117 ft. AGL the coverage within the target area starts to fall below the required minimum T-Mobile coverage threshold of -84 dBm. Locating T-Mobile's antennas at a minimum height of 117 ft AGL will allow T-Mobile to provide adequate coverage within the targeted portions of Routes 12, 97, and 169, as well as the Taftville section of Norwich.

Q8. Is adequate coverage necessary to provide consistent and reliable 911 service?

A8. Yes, if coverage within an area is inadequate not only does routine call reliability suffer but so does 911/emergency call reliability.

8-14-08
Date

Alex Murillo
Alex Murillo

Subscribed and sworn before me this ^{14th}~~13th~~ day of August, 2008.

By: Carol J. Rudzinski
Notary Public Carol J. Rudzinski
My Commission Expires: 4/30/2012

Carol J. Rudzinski
Notary Public, Connecticut
My Commission Expires Apr. 30, 2012