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 651 PADDOCK AVENUE IN CITY OF MERIDEN, CONNECTICUT

DOCKET NO. 329

Date: April 26, 2007

PRE-FILED TESTIMONY OF SCOTT HEFFERNAN

Q.1. Please summarize your professional background in telecommunications.

A. My career in the wireless industry has spanned the past eleven years. For the past two 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 Nextel, AT&T Wireless, Cingular, and Voicestream (T-Mobile's predecessor). Additionally, I have been involved in network design for government entities such as the Department of Homeland Security, Department of the Army, Department of the Navy, and the United States Marine Corps.

Q.2. What does your testimony address?

A. 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 and the technical constraints in selecting proposed facilities.

Q.3. Please describe T-Mobile's wireless network in Connecticut.

A. 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.

Q.4. What requirements does the nature of wireless technology place on T-Mobile's selection of cell site locations?

A. 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.

Q.5. Please describe T-Mobile's need for the proposed site.

A. The interrelationship between the proposed Site and T-Mobile's existing system (including recently approved but not yet on-air sites) is depicted in the propagation plots included in Exhibit F of the Application. As shown, this proposed Site is needed primarily to provide service in coverage gaps along Route 15 (the Wilbur Cross Parkway) and the surrounding area.

Q.6. How did T-Mobile analyze the proposed sites?

A. T-Mobile's RF engineers first utilized propagation prediction tools to determine the potential effectiveness of the proposed locations in meeting the identified coverage need. That analysis confirmed that the Site would provide signal within the coverage gap along Route 15 and would improve service generally within the area.

In order to determine the minimum height required to achieve the coverage objective, T-Mobile then conducted a drive test. The drive test allowed T-Mobile to gather accurate signal strength measurements along the target routes at various heights.

The drive test revealed that an antenna center line of 117' would allow T-Mobile to achieve the coverage objective levels in this area. At 107' and below, the coverage along Route 15 starts to break apart and fall below the T-Mobile minimum required threshold of -84 dBm.

Q.7. Please summarize the basis for the height of this proposed facility

A. Based upon the results of the drive test conducted at the proposed Meriden facility, the minimum height required to fully cover the intended coverage objective is 117' AGL. At heights below 117' AGL, the coverage within the target area of Route 15, starts to fall below the required minimum T-Mobile coverage threshold of -84 dBm. A minimum height of 117' at the Site to locate T-Mobile's antennas, will allow T-Mobile to provide adequate coverage within the targeted portion of Route 15 and the surrounding area.

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

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

9. Has T-Mobile considered providing coverage to an area implementing numerous smaller structures, such as light poles? If so, what would be the impact to its system in that area?

A. T-Mobile has considered providing coverage to several areas utilizing smaller structures such as light poles. If the facilities are located properly and the terrain and canopy obstructions are not severe, the impact to the system can be positive. As for the objective area in Meriden however, the placement of several smaller structures would require the introduction of facilities into dense residential areas with small lots not suitable for telecommunication placement.

Q10. Have you reviewed the property located at 883 Paddock Road, and if so what height would you require to provide coverage from that location?

A. Based upon the results of the propagation modeling conducted for 883 Paddock Road the minimum height required to fully cover the intended coverage objective is 155' AGL.

Q11. Have you reviewed the property located at 528 Murdock Avenue (Nessing Field), and if so what height would you require to provide coverage from that location?

A. Based upon the results of the propagation modeling conducted for Nessing Field the minimum height required to fully cover the intended coverage objective is approximately 160 feet AGL.

The statements above are true and complete to the best of my knowledge.

04/27/07

Date

Scott Heffernan

Subscribed and sworn before me this 26th day of April, 2007.

By: _____

Notary