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**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 52 STADLEY ROUGH ROAD,  
DANBURY, CONNECTICUT

DOCKET NO. 366

November 20, 2008

**SECOND SET OF PRE-HEARING INTERROGATORIES  
OF CITY OF DANBURY TO  
OPTASITE TOWERS LLC ("OPTASITE") AND  
OMNIPOINT COMMUNICATIONS, INC. ("T-MOBILE")**

For purposes of these interrogatories, "you" and "your" means Applicant.

Q1. Please state the exact height of the proposed facility with and without antennas affixed thereto.

Q2. If a gap in coverage exists in T-Mobile's network in the Danbury area, specifically along I-84, how could the placement of antennas on the Sterling Woods Water Tank result in a redundancy problem?

Q3. Please indicate generally how far apart sites are located in major metro areas and if there are redundancy issues in such circumstances.

Q4. Please indicate whether the redundant coverage referred to by Mr. Heffernan in his testimony on October 28, 2008 at pages 83-84 of the transcript, could be eliminated by the placement of narrow band antennas directed to the area needed to be covered, in conjunction with redrawing the service sectors so as not to direct signal coverage toward the redundant areas.

Q5. Please explain why a great portion of the search ring is outside the area that the application indicates is an integral component of T-Mobile's wireless network.

Q6. Please explain why the proposed site appears to be located north and outside of the coverage area identified on page 5 of the application as the gap in coverage.

Q7. Please explain why the response to Number 18. of the Connecticut Siting Council Pre-Hearing Interrogatories conflicts with the information contained in the application on page 5 which defines the area to be covered.

Q8. Please explain why a facility height to cover approximately 7.4 square miles is needed as indicated in the response to Number 17 of the Connecticut Siting Council Pre-Hearing Interrogatories, when the stated coverage gap is less than 2 miles. Please explain why a tower of lesser height would not be sufficient given this information.

Q9. Please indicate why the response to Number 23 of the Connecticut Siting Council Pre-Hearing Interrogatories indicates the proposed site will provide "very limited capacity relief" and "service to areas that have predominately unreliable or no T-Mobile service" when the application indicates on page 5 that a "gap in coverage exists".

Q10. With reference to the response to Number 23 of the Connecticut Siting Council Pre-Hearing Interrogatories, please explain why, aside from additional hardware, additional power cannot be utilized by T-Mobile to meet its coverage/capacity goals.

Q11. Please provide a copy of the 2005 search ring identified on page 96 of the transcript of the hearing occurring on October 28, 2008.

Q12. Please explain why the map showing the Nextel proposed site coverage at 130 ft. does not depict a greater area of coverage since Nextel operates at a lower frequency.

Q13. Please provide coverage maps for Nextel at 120 feet, 110 feet and 100 feet.

Q14. Please provide any information in your possession and control indicating that Nextel can locate on a tower less than 130 feet in height. Please indicate whether it would be necessary to locate T-Mobile at 137 feet if Nextel could not be located at a lower height.

- Q15. Please provide all drive test data in your possession and control for Nextel relative to this application. If no such data exists, please indicate if the applicant can obtain such information.
- Q16. Please indicate whether the Sprint/Nextel coverage maps were prepared at 700 MHz or 1950MHz. Please provide all such maps within your possession or control.
- Q17. Please indicate whether the propagation maps cover all of the sites as requested in Mr. Graiff's Finding 2. of his pre-filed testimony. Please explain the lack of coverage in the area, especially from the Carmen Hill site, 11092J. Please explain why the maps do not include the numbered sites.
- Q18. Please explain the contradiction in the description of the areas to be served in Attachment 2 of the application and page 5 of the application.
- Q19. Assume that the "gap in coverage" can be reduced in size and then please explain whether it is feasible to utilize a distributed antenna system ("DAS") system to serve the remaining area in need of coverage.

Q20. Please provide all data and analysis in your possession and control that indicates the Nabby Road water tank would provide coverage, as indicated by Mr. Heffernan in his testimony on October 28, 2008. Please indicate whether this site would provide adequate service in conjunction with a DAS system. Provide any studies within your possession and control regarding this matter.

Q21. Please indicate who responded to and is now responding to the City of Danbury Interrogatories regarding alternate sites.

Q22. Please indicate why Mr. Regulbuto, an employee of SBA Network Services, LLC formerly Optasite, Inc., is able to testify regarding T-Mobile's system design as indicated in 4.Q. of Tab 1 of the application.

Q23. Please explain why the answer to 4.Q. of Tab 1 of the application indicates that a facility at the DOT site would not provide service to the "targeted" area, and that a facility at the water tank would not provide the "coverage" to the area where service is needed.

Q24. Please indicate what power levels were utilized in developing all propagation maps in the application.

Q25. Please indicate whether the power levels referred to above are the maximum power levels available.

Q26. Please provide the maximum power for each location per the attached Propagation Study Data Sheet. Provide all propagation maps utilizing those power levels.

Q27. Please provide all backup documentation and data utilized to develop the propagation maps contained in the application.

Q28. Please indicate what frequency the Sprint/Nextel propagation maps were prepared at. If they were not prepared at 850 MHz, please provide propagation maps at that level or lower.

Q29. Please explain what the parameters identified in the response to Q9. of the City of Danbury Pre-Hearing Interrogatories mean in terms of the coverage in the propagation maps. Please explain why these specific parameters were utilized. Please indicate why a number of possible alternative parameters were not utilized. Please explain why there was no discussion of, or data provided on "power component".

Q30. Please indicate why there are differences between the drive test maps and propagation maps, even though the applicant indicates the propagation maps are in tune with real world drive data.

- Q31. In follow up to the response to Q2. of the City of Danbury Pre-Hearing Interrogatories, please indicate what specific coverage is not provided by the water tank, the size of the area, and where the area is located. Please provide all maps or data in your possession and control providing this information.
- Q32. In follow up to the response to Q15. of the City of Danbury Pre-Hearing Interrogatories for T-Mobile, please indicate what the smaller separation distances are and provide documentation verifying the industry standard. Please indicate the minimum vertical separation distance that is required.
- Q33. In follow up to the drive test results dated June 26, 2006, and provided as Exhibit H of the City of Danbury Pre-Hearing Interrogatories, please indicate what power was utilized in conducting the drive test. What was the "gain" of the antenna utilized? Was any correction factor utilized to simulate a tower at the proposed site? If so, what was this factor and did this factor utilize the maximum ERP that could be utilized at the proposed site? If the maximum ERP was not used, please explain why. If it was utilized, please provide all documentation within your possession and control regarding these results.
- Q34. Please provide all records within your possession and control, including but not limited to statistics, regarding customer complaints concerning gap coverage problems, complaints about dropped calls, and identify the sites of dropped calls, and customer cancellation of service as a result of no service or inadequate service.
- Q35. Please explain why the site evaluation report in Tab 4 of the application indicates the ground elevation is 545 AMSL in one section and indicates the site is located within a fairly level area in another portion. Is the berm on the site taken into consideration in this report?

- Q36. Please explain why the dimension of the tower is required to be 5 feet in diameter at the base and 1½ feet in diameter at the top as indicated in Tab 4 of the application? Please explain why there is not a means by which to reduce the dimension of the tower so that it would be less visible. Please provide any and all backup documentation in your possession and control to support your position regarding the necessity of the proposed diameter(s).
- Q37. Please elaborate on the information provided in the Technical Memo in Tab 4 of the application to indicate whether there will be 8 channels in each sector and if the ERP will be 265 watts per channel. Please indicate if this will be true at the proposed site and all adjoining sites.
- Q38. Please provide a copy of the Verizon Wireless lease or license agreement supporting the letter dated May 8, 2008 from Sandy Carter provided in Tab 6 of the application.
- Q39. Please provide a copy of the Master Site Agreement between Optasite and Nextel referred to in Tab 6 of the application.
- Q40. Please indicate whether you know if any carrier has supplied detailed rent provisions from lease agreements to other land use boards during the course of deliberations for an approval.



- Q41. Please provide all documentation within your possession and control which identifies the existence of any other carriers who have indicated in a legally binding manner that they will locate on the proposed facility if approved.
- Q42. Please indicate whether you have analyzed and reviewed the drive test dated August 29, 2008 prepared by Michael McLachlan, Chief of Staff. Please indicate whether the applicant is willing to engage in an additional call test, jointly with the City, to determine service levels in the claimed gap area, as T-Mobile has done elsewhere in other applications in the country.
- Q43. Please indicate whether Mr. Heffernan or anyone acting on his client's behalf, reviewed any sites that did not require the placement of a tower. Please indicate whether T-Mobile searched for any sites, or left the entire site selection process to Optasite.
- Q44. Please indicate whether T-Mobile has an in house engineer, RF or otherwise, or if it relies entirely on consultants. If so, has all proof of need been provided to the applicant by its in-house employees.
- Q45. Please indicate how Optasite distinguishes between a capacity or a coverage need for the "gap area" claimed by the applicant.

Q46. Please indicate at what height a facility at the DOT site would provide sufficient coverage using the specific propagation and drive test criteria as presented by the applicant and also utilizing the criteria as the City has requested elsewhere in these interrogatories (Question #26). Please provide the propagation mapping for the 170 feet height which you indicate would be required at the DOT site.

Q47. In follow up to Mr. Heffernan's testimony on page 76 of the transcript of the hearing on October 28, 2008, please indicate what T-Mobile would do if a need arose for additional antennas, the space was filled and it was not possible to install antennas at a higher location. Would T-Mobile install the antennas below the 127 ft. height, thus requiring a five foot platform arm at 130 feet. Please indicate whether T-Mobile is willing to commit that it would never need more than three antennas at this location.

Q48. Please indicate whether you have identified/investigated the open space referred to by Mr. Martin as being south of the mobile home site. Please provide any documentation in your possession and control relative to this site.

Q49. Please identify the "good sites" that Mr. Heffernan refers to in the transcript of the hearing on October 28, 2008 at page 89.

Q50. Please identify the dual sites you have located since the October 28, 2008 hearing and please provide all data and information within your possession and control that you have obtained relative to such search.

- Q51. Please identify the terrain obstructions that Mr. Heffernan states exist next to the subject, in his testimony at the hearing on October 28, 2008.
- Q52. Please explain why the application indicates holes in coverage exist, and yet the results of the drive tests and other data indicate coverage exists.
- Q53. Please indicate whether the proposed signal will operate below T-Mobile's minimum design threshold. Please indicate whether this signal is what T-Mobile absolutely needs to operate, or whether it is proposed in order to remain competitive in the market place.
- Q54. Please explain the location of and provide all details regarding the multiple site solutions referred to by Mr. Heffernan at the hearing on October 28, 2008, at page 140 of the transcript. Please provide all documentation within your possession and control regarding the two tower solution.
- Q55. Please explain why Mr. Bascom indicated he was concerned about moving the tower toward the wetlands at the hearing on October 28, 2008 at page 131 of the transcript, yet he did not indicate he was so concerned in other parts of his testimony.

Q56. Please provide any and all information in your possession and control depicting and or describing the views of the proposed tower from the home at 14 Indian Spring Road. Please provide views from both the proposed location, as well as the location with the tower moved 40-45 feet to the north and east toward the wetlands.

Q57. Please provide all data within your possession and control that indicates antennas cannot extend more than 10-15 feet above an existing water tank, with the tank remaining structurally sound.

Q58. Please indicate when the application was presented to the "wetlands" board in Danbury, as indicated by Mr. Regulbuto on page 126 of the transcript for the hearing on October 28, 2008.

Q59. Please explain how Optasite will design the tower so that it will not fall on the adjacent neighboring properties in the event of a failure.

Q60. Please explain the meaning of the phrases "partial year round views" and "partial seasonal views" utilized on page 11 of the application. Please indicate whether persons having a partial year round view will also have partial seasonal views.

Q61. Please explain how it was determined that only 14 residences will have partial year round views of the facility and only an 10 additional residences will have partial seasonal views of the facility.

Q62. Please indicate how many residences will be able to view the facility in complete leaf off conditions and for what duration.

Q63. Please indicate whether you have examined the list of historic sites identified in item 33 of the neighbors concerns and whether any of the listed sites are referred to in the SHPO correspondence.

Q64. Please address the comment by a member of the public at the 9/9/08 hearing indicating that people were able to obtain three bars of service in the area in question.

Q65. Please provide all information within your possession and control regarding your determinations about the unsuitability of 184 Great Plain Road referred to in the response to Q.2 of the City of Danbury Pre-Hearing Interrogatories.

Q66. Please indicate whether you kept logs, notes or records of your meetings, visits and discussions regarding the subject property, including communications with the present and previous landowner of the subject site, and all alternate sites. If so, please provide copies of all logs, notes or records within your possession and control.



### Propagation Study Data Sheet for Proposed Facility

Applicant: \_\_\_\_\_ Name/title person completing form: \_\_\_\_\_  
 Proposed Site Name: \_\_\_\_\_ Site Address: \_\_\_\_\_

Instructions: Complete this form, attach radio and antenna spec sheets and include with the RF Propagation Study. All nearby sites (adjacent) providing coverage in and near the proposed site are to be included in the study. Use an additional form if more than 3 sites

Line No.	ITEM	UNIT	Proposed site Data	Adjacent site #1 Data	Adjacent site #2 Data	Adjacent site #3 Data
	<b>GENERAL INFO:</b>					
#1	Site Name					
#2	Site Address					
#3	Tower or structure height	feet				
#4	Antenna mounting height agl	feet				
#5	Network Technology					
#6	Operating Frequency	MgHz				
#7	Base Station Manufacturer					
#8	Base Station Model #					
#9	Radio Max Power	Watts				
#10	Is pilot channel used for propagation (yes or no)					
#11	If yes, pilot channel power (min. 20% of power)	Watts				
#12	Convert Power to dBm	dBm				
#13	<b>Losses:</b>					
#14	Is there a combiner					
#15	If yes make and model					
#16	If yes, combiner loss	dB				
#17	Cable losses:					
#18	Cable diameter	In.				
#19	Cable lgth. From antenna to equipment	Ft				
#20	Cable loss per 100 ft.	dB				
#21	Calculated loss	dB				
#22	Connectors					
#23	Number of connectors					
#24	Loss per connector	dB				
#25	Calculated Loss	dB				
#26	Jumpers:					
#27	Number of jumpers					
#28	Loss per jumper	dB				
#29	Calculated loss	dB				
#30	Total calculated loss:	dB				
#31	<b>Gains:</b>					
#32	Is there an in line amplifier					
#33	If yes, gain	dB				
#34	Antenna Mftg.					
#35	Antenna Model #					
#36	Antenna gain	dB				
#37	Total gain:	dB				
#38	<b>Result:</b>					
#39	Transmission Power	dBm				
#40	ERP	Watts				

**To Calculate ERP (Line #40) of an Antenna:**

- Step #1: Insert the radio power in Watts in line 9 and pilot power, if applicable in Line 11.
- Step #2: Convert the radio power or pilot power, as applicable, into dBm units. Insert the result into Line #12
- Step #3: Add all dB losses: Line #16 + Line #21+ Line #25 + Line #29; Insert the result into Line #30
- Step #4: Add all dB gains: Line #33 + Line #36; Insert the result into Line #37
- Step #5: Add Line #37 to Line #12. Subtract from the result, Line #30. Insert the result into Line #39.
- Step #6: Convert the number in Line #39 into Watts. Record the result in Line #40.





Dated at Danbury, Connecticut, this 20th day of November 2008.

City of Danbury



Robin L. Edwards  
Assistant Corporation Counsel  
City of Danbury  
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(203) 797-4518

**CERTIFICATE OF SERVICE**

I hereby certify that the original copy of the foregoing was delivered to the Connecticut Siting Council via overnight mail, with an electronic copy sent via email, and one (1) copy of the above was mailed to the Applicant's legal counsel via overnight mail, with a copy also electronically delivered, as follows:

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Dated: November 20, 2008

City of Danbury



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