

**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

December 4, 2008

APPLICANTS' RESPONSES TO CITY OF DANBURY
PRE-HEARING INTERROGATORIES
SET II

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

A1. The Tower Elevation in the Application behind Exhibit Tab 4 shows the monopole height as 140' AGL with antennas up to 140' AGL at various antenna centerlines.

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?

A2. T-Mobile's need for the proposed facility is not primarily driven by the quality of its coverage or capacity on Interstate 84 and the Sterling Woods Water Tank is closer to Route 7.

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

A3. Sites located in major metropolitan areas can be located very close, such as 2 or 3 blocks apart, or can be a mile or more apart. Generally in a major metropolitan area the coverage is dictated by capacity and frequency concerns rather than initial footprint size. Concerns regarding redundancy are looked at seriously in these areas. Typically these sites are designed to contain their coverage from overlapping adjacent sites out to one or two tiers past its designed objective area. This is typically achieved by using lower antenna heights, increased down tilt on antennas, reduced power levels and alternate design techniques such as façade mounted antennas. Large "umbrella" type sites, which basically blanket several layers of sites with unintended signal is not a practical design technique as frequency reuse becomes a problem and the ability to reduce capacity and limit performance problems is drastically reduced.

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.

A4. T-Mobile assumes that "narrow band" antenna as used in the question above is mistakenly used to refer to narrow "beam width" antennas. The term narrow band is typically used to describe the resonant frequency range of a device that passes a narrower range of frequencies for greater selectivity or frequency rejection as compared to a typical antenna or a broad band antenna, which may be resonant over several frequency bands. With regards to using a narrow beam width antenna, this is an option to provide greater ability to focus coverage to the intended coverage area and limit its footprint. This could also be achieved by attaching to the wall of the tank and using the structure itself as a limiting device. This path however limits the design as the site is polarized to one end of the target area forcing the coverage to be produced by one or potentially two sectors. This scenario forces the site to cover the objective by throwing coverage back over the entire coverage area from this point. In an area where the site has line of site to the entire objective area this is feasible. It does lead to an imbalance in traffic distribution on a site that was designed to utilize all 3 sectors for traffic loading and better frequency efficiency. However, it is theoretically possible from a strictly coverage stand point. Unfortunately, in this case, there is a ridge line feature that traverses the target area. So, although the approximate distance between the Optasite proposed tower facility and the water tank is about 0.75 miles, this distance puts the Optasite tower closer to the top of the ridge line and gives a better vantage point to provide a more balanced coverage approach. T-Mobile currently does deploy 65 degree horizontal beam width antennas on a majority of its sites as part of its design practice to ensure the ability to contain signal and reduce interference potential. These are considered to be narrow beam width antennas.

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.

A5. The search ring is an initial target area that represents more the area where candidate searches should be focused to produce coverage to an intended area as opposed to outlining the coverage objective itself.

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.

A6. The proposed site is located in the coverage area identified on both page 5 of the application and in attachment 2 contrary to this question's premise. The narrative on page 5 of the application is an introduction to the overall project and the need and benefits associated with the proposed tower facility by Optasite. The second paragraph first sentence generally outlines T-Mobile's current gaps in its network in this area of the City and does identify the area "north of I-84 and south of Candlewood Lake" as part of the intended coverage area and provides the reader with a overall geographic understanding for the project need. As noted on page 6 of the application, the reader is then referred to attachment 2 of the application and the T-Mobile plots for a better understanding of the specific need for the proposed Facility.

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.

A7. The answer to question 18 of the Siting Council's interrogatories is not inconsistent and does not conflict with the information contained in the application on page 5. As noted above, Page 5 of the application talks about all of T-Mobile's geographic gaps in coverage in this area of the City and provides the backdrop for further explanation for the need for the proposed site and future sites. The Council asked in Question 18 more specifically what the size of the coverage gap T-Mobile sought to cover from the proposed site was to which T-Mobile answered generally as 2 miles along Stadley Rough Road and surrounding side streets.

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.

A8. The sum of 7.4 square miles is the total area covered by the facility, whereas the 2 mile gap referenced in response to a separate question is more of a linear measurement along the Stadley Rough road corridor along the ridge line. The two measurement values are completely different samples. The theory of a shorter tower would only decrease the coverage potential along this road way.

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".

A9. The proposed facility is primarily designed to provide coverage to an area that currently has unreliable or no T-Mobile service. The "very limited capacity relief" comes from the fact that coverage from this site will overlap by a factor that will allow for satisfactory handovers to adjacent sites. In this area, there will also exist the ability to shed some traffic off of these adjacent sites if capacity relief is ever needed.

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.

A10. See response to Siting Council Interrogatory 24. In an area that is severely terrain burdened, such as the Stadley Rough Road area, adding power to adjacent serving sectors will only increase the receive signal strength in unobstructed areas. At 1900 MHz, the ability to overcome local obstructions, especially terrain, is severely reduced when compared to frequency bands such as VHF transmissions. Additionally, a dramatic increase in transmit power to an extreme level will increase negative impacts such as reduced frequency reuse and increased interference potential since areas of unwanted signal will be increased as well.

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.

A11. See Applicants' Supplemental Submission dated August 25, 2008 which contains T-Mobile's search ring dating back to 2000.

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.

A12. Sprint/Nextel did not intervene in this Docket and as such is unavailable to answer the City's question. Optasite does note though that generally that the coverage patterns are consistent in comparing plots of the different carrier networks that were provided.

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

A13. Sprint/Nextel did not intervene in this Docket and as such is unavailable to provide this information in response to the City's request.

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.

A14. Optasite does not have any information in their possession or control that indicates Sprint/Nextel could locate on a tower less than 130 feet in height. T-Mobile has already stated its minimum height as 127' AGL at this proposed tower location in response to Siting Council Interrogatory 6.

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.

A15. Optasite has no such data in their possession or control. Optasite does not believe Sprint/Nextel would provide it with drive test data of its network given its decision not to intervene in this Docket.

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.

A16. Optasite does not have that information and has no such maps in its 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, 11 092J. Please explain why the maps do not include the numbered sites.

A17. All adjacent sites within a 15 mile radius were predicted. The plots only show sites that fit into the view at the scale plots were prepared at for clarity. The composite signal level for all surrounding sites was predicted and zoomed in for the printing of the plots. Signal from sites outside of the printing area is still present in the print area. Receive signal from adjacent sites may still be present in the uncolored areas, just below the -84 dBm threshold.

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.

A18. As noted in response to Question 6 above, there is no contradiction in the statements contained in these separate portions of the Application. These are all just helpful ways of guiding the reader to geographic reference points in the City where T-Mobile's network is currently deficient and areas where coverage will improve with the proposed tower facility. Siting Council applications are served on numerous agencies, state and local officials and made available to the public. As such applicants are encouraged to help readers of diverse backgrounds with easy to read narrative about coverage deficiencies, objectives, need and other aspects of a tower project in a non technical fashion. These various statements referenced by the City do that in a consistent fashion.

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.

A19. It is not clear what the City means by "assume that the 'gap in coverage' can be reduced in size". As to the second part of the question, T-Mobile does not utilize Distributed Antenna Systems (DAS) where a macro-site coverage solution is required. Many factors limit DAS deployment, which involves a different type of technology, including the availability of existing infrastructure to support such a build, terrain, and density. While DAS may work in certain applications such as coverage reinforcement to a very limited area and for capacity relief, DAS is not a viable option for T-Mobile in this area. T-Mobile is currently not planning any DAS solutions to cover macro-site areas such as this.

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.

A20. T-Mobile already provided its plot and analysis of the Nabby Road water tank in response to the City of Danbury's First Set of Interrogatories. (See Response to Question 12 and Exhibit F). As noted in response to Question 2 of the City's First Set of Interrogatories, the property on which the water tank sits is not available for leasing making the second part of the question moot.

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

A21. As explained in detail throughout the hearing process, information on sites have been evaluated by Optasite and T-Mobile. Questions as posed by the City are not always capable of a response by one individual and answers are dependent on the disciplines involved. Mr. Regulbuto has and continues to testify on Optasite's behalf from a real estate perspective and site evaluations. Mr. Fiedler and Mr. Heffernan have and continue to testify on T-Mobile's behalf from a real estate and technical perspective as it relates to site evaluations. Additional information has been garnered from public records sourced by the Applicants.

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 4.0. of Tab 1 of the application.

A22. Mr. Regulbuto's pre-filed testimony states his knowledge about T-Mobile's system design because he was the individual who worked closely with T-Mobile's Radiofrequency Engineering Department throughout the process of Optasite's (now owned by SBA) site search and the information is helpful to his overall testimony regarding the lack of alternative sites.

Q23. Please explain why the answer to 4.0. 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.

A23. Mr. Regulbuto was so advised by T-Mobile prior to filing the Application. Given that the City asked about those sites during the Applicants' technical consultation with it, Optasite felt it important to advise both the City and the Siting Council in its Application materials that it followed up on the request and that the sites were evaluated by T-Mobile. T-Mobile has subsequently explained in testimony and responses to interrogatories in the Docket, including plots, that the DOT site at a given height would provide coverage to roughly half of the objective area. Effectively, the site would be shooting back up the ridge line from the southern end of it. Unfortunately, to achieve the height required to provide coverage to the target area, the DOT site would create an umbrella site scenario for the adjacent sites in the area. The same holds true for the Water Tank site which has also been evaluated and plots provided in the Docket.

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

A24. All sites were analyzed using a minimum of 57 dBm (500 watts) EiRP. This is on the high end of the output power range for T-Mobiles sites that generally range from 200 to 400 watts EiRP per channel for their output power. The variations in the output power result from varying cable lengths and losses, combining schemes, radio counts, and antenna gains. The higher values were utilized to give each alternate site a best case scenario prediction. This allows for a greater comfort level with the results and greater ability to pinpoint terrain obstructions in the area.

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

A25. Yes, these are maximum values.

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

A26. As noted in response to questions 24 and 25 above, the propagation maps provided to the Siting Council in this Docket already utilize the maximum power levels and no further information in this regard is required.

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

A27. Drive data has already been supplied to the Council in Exhibits G and H to the Applicants Responses to the City of Danbury's First Set of Interrogatories.

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.

A28. See response to question 16 above.

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".

A29. The City of Danbury's First Set of Interrogatories Question 9 were fully answered by T-Mobile in its response where it identified the specific modeling software it uses along with the specific parameters that were requested in that question. The parameters used were those employed by T-Mobile routinely. The City did not ask in that question for the "power component" to be provided. That information has been supplied as now requested in response to question 24 above.

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.

A30. T-Mobile's propagation model is typically tuned on a yearly basis with network drive data. In looking at the drive data that T-Mobile has submitted there are a few areas of difference between the drive data and the propagation plot initially provided. These differences are not alarming and are usually anticipated due to the fact that a radio environment is very dynamic. There are several factors that may lead to slight differences in the comparison. These will include hardware changes such as radio adds/combiner adds at adjacent sites, traffic loading on anticipated serving sites requiring a user to remain on a weaker serving cell until resources are available or changes in environmental factors such as the season/foilage considerations since the propagation model was last tuned. While a prediction plot will show anticipated presence of signal, during an active call there are several steps that occur and thresholds to meet before a mobile device will hand over to a new serving cell. The proper way to analyze the two forms is to look at the data and judge overall if the area is properly served or not based upon the trends shown in the data. In this case, the individual samples of data may not coincide exactly, but the outcome shows that as the user heads away from Interstate 84 in a northerly direction, along the ridge line that Stadley Rough road traverses, the data gets progressively worse until the user's receive signal strength is well below -100 dBm. The prediction plot will remain static based upon the tuned variables adjusted at the time of the last network drive, however if the same route were driven 10 consecutive times with the same phone there are so many variables that dictate what the receive signal strength will be at each point in space. The outcome at each sample point will most likely be slightly different at each sample point each time it is collected.

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.

A31. Due to the fact that the water tank is located on the east side of the ridge line, as expected it has some difficulty completely covering the west side of the ridge line, especially the roadways such as Great Plain Road, Taagan Point and Sunset Drive. These roads wrap fairly tight into the west side of the ridge line. In looking at the complete objective area, the area that remained uncovered measured approximately 1.30 square miles and is identifiable in propagation plots in Exhibit F to the City's First Set of Interrogatories.

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.

A32. See Applicants' response to Q15 of the City's First Set of Interrogatories. It is difficult to provide a blanket answer for the minimum vertical separation of antennas required at each site. There are many differing variables with each unique scenario. Depending on the adjacent carriers frequency bands, power levels, antenna patterns and filtering systems certain interference cases such as intermodulation interference, receiver desensitization, or transmitter noise can occur at many places. Many occurrences are handled with proper filtering techniques and increased electrical separation, however since each case is unique, the minimum distance will always be a varying value. The typically used 10 foot separation value is a widely used spacing distance due to the fact that as a rule of thumb most carriers have had a high percentage of interference-free installations using this spacing. There is also a construction consideration to take into account with regards to vertical antenna spacing. Since most panel antennas used in the commercial wireless industry range from 4 to 8 feet in length most of the 10 foot separation is consumed by the antenna length itself. Additional space is typically required for cabling of bottom-fed antennas, down tilt motors or other additional hardware that may be deployed at each carrier's installation. Another point to observe is that most tower manufacturers design their towers with cable ports spaced at 10 foot increments since it is such a widely adopted spacing.

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.

A33. For T-Mobile's drive test dated June 26, 2006, the following values were used. A transmit power of 42.46 dBm (17.6 watts) was fed into an omni-directional antenna with a gain of 10 dBi. This produced an output EIRP of 52.46 dBm. The link budget for a macro-site solution at 127 feet has a calculated output power of 54.24 dBm. A correction factor of +2 dB (rounded up) was added to the drive test data since all sample points are collected in whole number increments. This is the maximum anticipated output power for T-mobile's proposed installation.

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.

A34. Statistics regarding customer complaints, dropped calls, customer cancellations and individual site statistics are proprietary to T-Mobile employees and contractors. They are used internally to identify problem areas, equipment failures and to aid in the design of future search areas.

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?

A35. The tower site location and host property are "fairly level" as noted from all the materials including the topographic contours on the site access map behind Tab 4 of the application which indicate the facility site area only has about a 5' grade change from one corner of the compound to the next which includes the area referred to above as a "berm" which the survey indicates as "edge of fill".

Q36. Please explain why the dimension of the tower is required to be 5 feet in diameter at the base and 1 1/2 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).

A36. The application materials behind Tab 4 specifically states these as approximate dimensions for reference during the Siting Council Certificate process and no where is it stated these are required dimensions. The final dimensions of the pole will be included in any D&M plan filing and will incorporate specific antenna loading to ensure the pole will be structural sufficient for proposed and future shared use of the tower facility.

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.

A37. The power density calculations were produced using a worst case scenario. 8 channels is a high channel count for a single sector, however it is used because it is feasible that in the future 8 channels may be a reality. 265 watts EIRP per channel is the anticipated output power. This value does not necessarily pertain to adjacent adjoining sites as each site may have different total loss values in their transmission path budgets.

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.

A38. As noted in the body of the letter, Verizon has a need for a facility in this area and intends to collocate at a future time when the project is included in their budget. Optasite and Verizon would enter into a site specific lease agreement at that time.

Q39. Please provide a copy of the Master Site Agreement between Optasite and Nextel referred to in Tab 6 of the application.

A39. Optasite and Nextel's Master Site Agreement goes beyond the scope of this Docket and Sprint/Nextel is not a party in this proceeding.

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.

A40. This question is not relevant to this Docket.

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.

A41. This information has been previously bulk filed and provided to the City.

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.

A42. T-Mobile's Radio Frequency Engineering team did review the information provided by Senator Elect McLachlan. This information did not provide any usable data such as receive signal strength, signal quality, serving sector id's, handover events or other information that would be required to evaluate it. T-Mobile has performed detailed testing in this area and is confident in the results provided in earlier interrogatory responses and sees no need for additional drive data or so called "call testing" done jointly or otherwise.

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.

A43. Many candidates were analyzed over the many years that this ring has been in existence as described in detail in responses to prior interrogatories and testimony. T-Mobile's directive in any ring is to consider any existing tower or structure that can produce the desired coverage before looking for locations for a new tower build. T-Mobile has done it's own searches in the area in addition 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.

A44. In addition to having in-house engineers, including the RF Engineering Management team, T-Mobile does utilize consultants to handle many aspects of network design and optimization. All proof of need has been provided with the consent of T-Mobile's in-house engineers and employees.

Q45. Please indicate how Optasite distinguishes between a capacity or a coverage need for the "gap area" claimed by the applicant.

A45. Optasite, as a tower infrastructure provider, does not make such distinctions. This question can be posed to T-Mobile if desired at the upcoming continued hearing on December 8th.

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.

A46. T-Mobile's RF Engineering team did analyze the DOT property up to a height of 170'. At this height the objective was not completely covered. At this height and location, this is not a viable solution for T-Mobile. It is located just off Interstate 84, where we are not looking for coverage from this particular site. To provide coverage to the entire objective area, the structure would need to be in excess of 200 feet in height. Proper network design still needs to be the driving factor in candidate analysis. This would definitely not be an acceptable approach for T-Mobile's network performance. See Applicants Responses to the City's First Set of Interrogatories, Exhibit F for a copy of the propagation plot already provided in the Docket.

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.

A47. Neither T-Mobile nor the City's consultants can state with 100 percent accuracy what the future needs will be for any carrier with regards to capacity, technology evolutions or antenna requirements. It would be irresponsible for T-Mobile to state that it would never require more than three antennas at this facility. If all of the stated hypothetical situations were to happen, T-Mobile would consider all options available to allow for the site to handle T-Mobile's required equipment which could include changes in antenna number or mounting configuration. Each unique scenario could be handled in many ways and would have to be assessed if required in the future.

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.

A48. From reviewing the map and references with Mr. Martin at the hearing, Optasite believes this to be "open space" which is noted as such on City tax maps. Given same, Optasite has not done any further research on the parcel which was rejected as part of Mr. Regulbuto's initial site search that relied in part on City tax maps in the City's possession.

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

A49. The "good sites" referred to in prior testimony consisted of the general locations for sites 1, 5 and 6 as provided by the residents and is a technical reference only. The general area of

these locations appear to be areas that T-Mobile would consider testing to confirm if coverage could be provided to the coverage objective. T-Mobile has not stated that these would be one site solutions. This also assumes that the City and its residents have done due diligence in providing these points which it appears they have not in full given that one is in the immediate area of the Sprint tower site that was previously denied by the City several years ago and all have significantly greater environmental and visual impacts based on information supplied by Optasite and its consultants. See Applicants Supplemental Information dated October 10, 2008 for more information in this regard.

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.

A50. See Applicants' Supplemental Submission dated December 1, 2008 and the scope of the Council's inquiry in this regard.

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.

A51. The terrain obstructions in this area are the ridge line itself. There are several factors from this that have to be considered in site placement including the plateau-like appearance of the ridge line and the constrictive nature in which many of the roads such as Stadley Rough Road and Great Plain Road wrap around the terrain. This geographic layout intensifies the terrain and canopy attenuating factors dramatically in these areas.

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.

A52. The drive test did confirm that that T-Mobile's existing signal is below its minimum design threshold of -84 dBm throughout a large percentage of the coverage objective. Additionally, there are many areas that cross below the -100 dBm threshold limit. Although there may be a presence of some detectable signal, it does not meet T-Mobile's requirements for providing reliable service for voice, data and emergency 911 calls in this area.

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.

A53. Coverage needs to be considered as a gradient as opposed to a line in the sand. On average, in radio environments where coverage levels fall below T-Mobile's minimum design threshold of -84 dBm, the ability to keep the desired signal at the required signal quality decreases due to signal to noise ratio constraints. In a digital radio environment, when the desired signal starts to lose its ability to be identified out of the existing noise, data either gets lost or requires data packets to be retransmitted. This increased bit error rate and inefficient transmission scenario often leads to dropped calls or lost data sessions. The result is often unreliable voice and data services for users of T-Mobile's network. This can also affect users attempting to place emergency 911 calls from these areas. T-Mobile's minimum design threshold of -84 dBm is the result of extensive testing on its network nationwide. T-Mobile's ability to stay

competitive in the wireless marketplace is directly related to its ability to provide reliable service to its customers.

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.

A54. See responses to Questions 49 and 50 above. No specific documentation was prepared by Mr. Heffernan regarding a two tower solution as no specific sites were readily identified for this analysis. Rather, testimony was requested on the subject generally which was provided to the Council and is based on Mr. Heffernan's use of computer predictions of various sites in this area of the City including predictions of Resident and City identified locations.

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.

A55. Mr. Bascom was asked about moving the tower into the wetlands at the hearing as opposed to towards it. His initial reaction as a site planning engineer was simply to query why and express some modest concern for moving the tower into the wetlands. Subsequent information was supplied to the Council in the Applicants' December 1, 2008 Supplemental Submission on this subject which was developed by Mr. Bascom and the Applicants' wetlands consultants which concludes that such a move would not involve significant adverse environmental effects given the quantity and quality of the isolated wetlands involved.

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.

A56. The Applicants do not have any such photos in their possession or control and have not sought to take photos from this private parcel as the City apparently has.

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.

A57. Mr. Bascom testified as a professional engineer on this subject and his testimony is based on his experience and opinion as a professional engineer.

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.

A58. Mr. Regulbuto erroneously referred to the "wetlands" board and meant to say the City as part of the technical consultation process as administered by the City.

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.

A59. The tower will be designed in accordance with the State Building Code and can incorporate a yield point if required by the Siting Council.

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.

A60. Please refer to the detailed report prepared by VHB included in Tab 5 of the Application and other materials prepared by VHB and supplied in this Docket. Generally, a partial year round view indicates a portion of the tower can be viewed year round from the property irrespective of the season whereas a partial seasonal view indicates that the tower will not be visible when leaves are on the trees and only through the trees in months where deciduous tree cover is absent leaves.

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.

A61. See VHB's reports which include the methodology and basis for the conclusions reached.

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

A62. See page 4 of VHB's report behind Tab 5 of the Application which concludes 10 of seasonal duration which is the time between leaves falling in the Fall and budding in the Spring.

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.

A63. Yes. See Exhibit A to Applicants Supplemental Submission dated September 2, 2008 and Applicants Response to the City's First Set of Interrogatories Question 12 which addressed this question.

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.

A64. The question and comment are simply too vague to address and are addressed by T-Mobile's drive data, testimony and reports in this Docket.

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 Q2 of the City of Danbury Pre-Hearing Interrogatories.

A65. As noted in response to Question 2 of the City's First Set of Interrogatories, this location was rejected due to its size (a .64 acre parcel of land), its development as a pizza parlor and deli and the density of the surrounding neighborhood when compared to the proposed site.

Documents that went into that determination were included and are readily available to the City (i.e. the zoning map and tax assessors card which were included in the initial response to this question and/or bulk filed in this Docket). T-Mobile has not identified any other specific information that went into its decision to abandon efforts to lease this property location, but its representatives are available for cross-examination on the topic.

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.

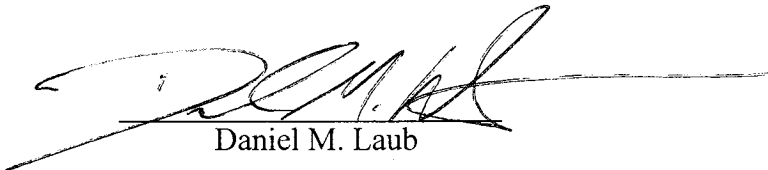
A66. The scope of the request is overbroad, seeks information which the Applicants have objected to previously and goes well beyond the scope of what is appropriate in an administrative as opposed to judicial proceeding. Moreover, this type of information is already largely contained in a different format in the testimony and reports already provided to the Council such as the pre-filed testimony of Mr. Regulbuto and the site search report he prepared behind Tab 3 of the Application. The Applicants' witness panel is available for cross-examination on issues of relevance as it relates to their discussions with the property owners of the subject site and alternative sites they investigated.

CERTIFICATE OF SERVICE

I hereby certify that on this day, an original and twenty copies of Optasite's and T-Mobile's responses to The City of Danbury's second set of interrogatories were served on the Connecticut Siting Council by hand with an electronic copy sent via email and copy served via overnight mail and email to:

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Dated: Decmeber 4, 2008



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