

July 9, 2018

Town of Chester
Dept: Planning Board
1786 Kings Highway
Chester, NY 10918

Attn: Don Serotta -- Chairman

Don:

On June 26, 2018 I received a technical document from Verizon in response to my May 22nd report requesting clarifications to the information they provided in their May 16th report. I have had a chance to review the information Verizon provided on June 26th and have provided my comments which is contained here.

To help with linking the various reports I am using the same items listed in the May 16th and 22rd reports provided by myself to the Planning Board.

Overall Verizon did provide answers to most of the clarification requests put forth.

I have not arranged for a time to talk with the Verizon engineer, Mike Crosby. However, I intend on having a talk with him this week.

Therefore, here are my comments regarding the items which required clarification:

Item 1: Closed

Item 2: Provide the existing sites surrounding the search ring propagation plot with the search ring included.

What was provided was the original search ring and a map showing the existing Verizon sites on a map with the search ring included.

What was and is still requested is a propagation map showing the RF coverage of the existing Verizon cell sites only and with the Silvertail search ring being displayed on the same map.

Comments: Verizon provided a propagation plot of the existing 700MHz coverage, page 12, as well as the 2100 MHz coverage, page 17 Both plots indicated the existing coverage with the Silvertail search ring displayed on the map.

This is closed.

Item 3: Provide the existing and proposed site Propagation Plots with Search Ring included

What was provided was a map showing the existing Verizon sites on a map with the search ring included.

What was and is still requested is a propagation map showing the RF coverage of the existing Verizon cell sites and the proposed cell site along with the Silvertail search ring being displayed on the same map.

Comments: Verizon provided a propagation plot of the existing 700MHz coverage along with the inclusion of the proposed Silvertail site with the Silvertail search ring displayed on the map, page 13. Verizon also provided a propagation plot of the existing 2100MHz coverage along with the inclusion of the proposed Silvertail site with the Silvertail search ring displayed on the map, page 18.

This is closed.

Item 4: Closed

Item 5: Provide a propagation plot showing existing in-building coverage problems with the search ring included.

What was provided was a propagation map indicating RF coverage in different tiers of coverage that was identified as capacity offload.

What was and is still requested is a propagation map showing the RF in-building coverage of the existing Verizon cell sites with the Silvertail search ring being displayed on the same map.

Comments: Not directly answered. A propagation plot of the existing inbuilding was not really provided but could be inferred from the other plots using the values Verizon claims is inbuilding coverage. This was from page 12 for the 700MHz propagation and page 17 for the 2100MHz propagation.

Item 6: Provide a propagation plot showing with the proposed site in-building coverage improvements with the search ring included.

What was provided was a propagation map indicating RF coverage in different tiers of coverage that was identified as capacity offload.

What was and is still requested is a propagation map showing the RF in-building coverage of the existing and proposed cell along with the Silvertail search ring being displayed on the map

Comment: Verizon provided a propagation plot for Inbuilding coverage at a signal level indicating improved inbuilding coverage for the 700MHz service shown on page 14 and that of the 2100MHz service shown on page 19. Both plots were meant to indicate improvements in inbuilding coverage based on the signal levels that Verizon claims is sufficient for this to take place.

This item is closed

Item 7: Provide clarification on the FDV plot in Attachment 2 from the December 8, 2017 report.

What was requested was clarification to the FDV plot that was provided in the December 8, 2017 report.

However, what was provided was an Average Schedule Eligible User (ASEU) plot instead which had no scale on the y axis, a set of green data that was unexplained, and no clarification as to if the data timeframe itself.

During the teleconference on May 15th with Verizon the FDV data clarification requested. The Verizon team indicated the FDV plot had the Y axis scale omitted on purpose and that the data was a maximum daily number. However, during the Planning Board meeting the FDV data was described as being total daily traffic.

What is requested is the following regarding the FDV and now the ASEU plots.

- a) Clarification is requested regarding the FDV plot provided. (1) Please define what the Y axis is. (2) Is the data displayed daily max or max total daily traffic. (3) Why does the smoothing yellow line show a significantly different slope then the trending line. (4) Does the FDV plot represent all the LTE channels in the gamma sector of the Bellvale cell site or just one channel.
- b) For the ASEU plot some clarification is now requested. (1) Define what is the y axis. (2) Is the data displayed daily max or max total daily traffic or something else. (3) Why does the smoothing yellow line show a significantly different slope then the trending line. (4) Why is the X axis different for the ASEU than that used for the FDV. (5) What does the green line represent on the ASEU plot.

Comments: Verizon did not respond with any clarification to the previous FDV plots provided and hence none of the clarifications listed in (a) above were addressed. Instead they provided another set of information regarding the voice and data traffic for the Bellvale gamma sector.

They did however provide another ASEU plot with different time reference. Along with the ASEU Verizon provided an AvgAC traffic plot as well as an RRC plot.

Regarding questions of (b) Verizon provided another ASEU plot with a different timeline for the X axis. The one question answered is that the new traffic plot provided was based on max active connections. None of the other questions put forth in (b) were answered for the information previously provided. Instead a new plot was introduced representing ASEU making it a third set of data provided.

Regarding what was provided the new ASEU plot indicates that Bellvale gamma sector needs capacity relief for the 700MHz band. On the same ASEU plot the AWS (2100MHz) band is shown that was not capacity constrained. However, Verizon indicated that nothing could be done to help relieve the capacity issue for the gamma sector.

The new traffic data plot, AvgAC, also indicates that the Bellvale gamma sector needs capacity relief for the 700Mhz band. Also included on the ASEU plot was the AWS (2100MHz) band which was not at capacity and apparently could not be used to help relieve the capacity issue for the gamma sector.

The third plot shown for capacity pertaining to the Bellvale Gamma sector was the Daily RRC connections. The plot had both the 700MHz and AWS (2100MHz) bands on the plot. For the RRC plot provided the Y axis was not defined and therefore no further review was possible.

In summary for this section nothing could be determined from the RRU plot provided due to the vagueness of the information provided. However, both the ASEU and AvgAC plots indicate that the gamma sector for the Bellvale site needs capacity relief.

Item 8: Provide a list and brief technical justification for the rejection of all the sites identified and investigated that are in the search ring.

What was provided was a discussion regarding the process used.

The technical justifications, RF coverage and capacity relief for the Bellvale Gamma sector for the rejected sites, was not provided.

Therefore, what is requested are two RF propagation plots using the same scale that was used in attachment 2 of the May 16th report from Verizon. One propagation plot showing the RF coverage of the Creamery Pond Rd site by itself and then a second propagation plot that includes the existing Verizon cell sites. Both propagation plots should also have the Silvertail search ring being displayed on the same map

At the Planning Board meeting Verizon said they would provide data on all the alternative sites looked at in the Silvertail search ring.

It is strongly recommended that Verizon provide two propagation plots of each alternative cell site for clarification as demonstrate why it was not selected for potential use. One propagation plot showing the rejected sites potential RF coverage and the second plot showing the rejected sites RF coverage with all the existing Verizon cell sites. Again, the propagation plot should be of the same scale as the other propagation plots and have the Silvertail search ring depicted in each plot

Also, at the Planning board meeting the potential use of the high-power transmission lines was questioned. Verizon said they would they will provide a letter stating that they were not allowed to install antennas on the high-power transmission line structures in the Silvertail search area.

Comments: Verizon in this report provided a list of all locations reviewed in their desire to meet the search ring requirements. Verizon did provide a detailed list of candidate sites reviewed and provided a propagation plot overlaying the alternative candidate sites with the Silvertail site.

The potential for using a power line tower was not mentioned as a candidate site

In reviewing these comparative plots it was assumed that the same settings were used in all the propagation plots.

Based on the alternative candidate site list and the propagation plots provided by Verizon the Silvertail site appears to provide the best overall coverage as compare to the alternatives locations considered by Verizon.

Item 9: Provide a brief description of what capacity relief alternatives were considered or done for the Bellvale site- no modifications could be made

What was provided was general description of the process used.

At the planning board meeting Verizon emphasized there was a definite capacity requirement for the proposed site to off load the gamma sector of the Bellvale cell site. Specifically, Verizon said that the capacity offload was needed for the Sugarloaf area. Verizon also said that the reason why all the possible spectrum assets available at their disposal were not used at the Bellvale cell site for capacity relieve is that the PCS channels available for use could not reach the Sugarloaf area, which is in the Silvertail search ring.

Following a brief discussion at the Planning Board meeting with Verizon it is requested that a capacity map be shown for the area indicating a % distribution of traffic on the Gamma Sector of the Bellvale cell site without the PCS channels and then one with the PCS channels being put into service

The same data that was used for the FDV plots previously provided should be used for the traffic distribution so there is consistency in the information being presented to the Planning Board.

Also, the plots should be of the same scale as that used for the RF propagation plots. Additionally, the Silvertail search ring needs to be included in the plots as well.

What is being asked for is:

- a) A plot showing the capacity distribution on the existing Gamma sector of the Bellvale site using a map of the same scale as that used for the RF propagation plots requested and utilizing the same FDV data previously provided. The Silvertail search ring is also requested to be included on the traffic plot.
- b) A plot showing the capacity distribution of the Gamma sector of the Bellvale site with the inclusion of the PCS channels. The Silvertail search ring is also requested to be included in the traffic plot. This is effectively a traffic off-loading plot that shows the effect of the PCS channels improvement of capacity to the site as well as how again using the FDV data previously presented.

Comment: Verizon did not provide any answers to item.

Item 10: This item is closed.

Item 11: This item is closed.

Item 12: Provide clarification as to the use of 5G for the proposed site and surrounding sites. Specifically, will this require any changes to the proposed site.

Verizon said they could not provide any clarification regarding 5G and the potential alterations to the proposed site, the surrounding existing sites or future sites.

Comment: No additional information provided

Item 13: Consider placing a shroud around the antenna array.

Verizon provided clarification that they will not consider any shroud or other solution except painting the antennas. *(during the Planning Board meeting)*

Comment: No additional information provided

Regards,

Clint Smith P.E.