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August 28, 2019

Honorable Chairperson Loretta Taylor
and Members of the Planning Board
Town of Cortlandt
1 Heady Street
Cortlandt Manor, New York 10567

RE: New York SMSA Limited Partnership d/b/a Verizon Wireless installation of a public utility personal wireless facility at the property known as 52 Montrose Station Road, Town of Cortlandt, NY

Hon. Chairperson Taylor and
Members of the Planning Board:

As you recall, we are the attorneys for New York SMSA Limited Partnership d/b/a Verizon Wireless ("Verizon Wireless") in connection with its request for a special permit to install a proposed public utility personal wireless facility ("Facility") at the above referenced property ("Property"). The Property consists of over 6 acres and is used for non-residential purposes. The Town of Cortlandt ("Town") permits personal wireless facilities, such as the Facility, on the Property by special permit from the Town Planning Board, in accordance with Chapter 277 of the Town Code ("Town Code").

The Facility consists of a telecommunications tower with small panel antennas, together with equipment in an approximately 1,600 square foot fenced compound. The Facility has been strategically located on a wooded portion of the 6 acre Property. The Facility will enable Verizon Wireless to remedy a significant gap in coverage in order for Verizon Wireless to furnish reliable wireless communications, including wireless 911 to the area. Verizon Wireless is licensed by the Federal Communications Commission to provide wireless communication services throughout the New York metropolitan area, including the Town.

In connection with the Facility, we received comments from the Town's Director of the Department of Technical Services, Michael Preziosi, P.E. ("Town Engineer") on March 11, 2019 and the Town's Consultant, The Center for Municipal Solutions ("Town Consultant"), dated April

19, 2019. Copies of such comments are attached hereto as Exhibit 1 for your reference. Kindly see our response to the Town Engineer & Town Consultant comments below.

Response to the Comments from Town Engineer:

Comment #1: *The submission lacks a property survey prepared by a licensed NYS Professional Land Surveyor. Setbacks to the property line cannot be accurately determined without a survey. The Tower as proposed does not meet dimensional setback requirements to the property line for the equipment pad and tower enclosure.*

The Applicant is advised that once a property survey is submitted and the site plan revised if setbacks are not met, a variance granted by the Town's Zoning Board is required. A request for a "waiver" is not the proper terminology.

It is my recommendation that the Engineer re-evaluate the location of the tower and equipment area to comply with dimensional setbacks.

The Applicant is also referred to 277-13.B which states that towers shall be located with a "minimum setback from any property line a distance equal to ½ the height of the tower or the existing setback requirement of the underlying zoning district, whichever is greater."

Response: Enclosed herewith are revised plans ("Revised Plans"), last dated July 15, 2019, prepared by Verizon Wireless' project engineer for this Facility, Scherer Design Group ("SDG"). Page Z10 of the Revised Plans is the requested survey. Kindly note that Verizon Wireless has "re-evaluated" the location of the Facility and that based on the topography, location of trees, size and shape of the Property, it determined that the proposed location is the best location for the Facility as it will be behind mature trees, away from the road and away from any neighboring residences, and will provide much needed reliable wireless communications, including wireless 911, to a significant gap in coverage that exists in that area of the Town. As indicated in the memo in support submitted previously: "Z. Setbacks §277-13: The Facility will comply with the all of the setback requirements set forth in Section 277-13, except for an individual side yard setback." In connection therewith, Verizon Wireless will require a variance from the Zoning Board of Appeals. However, the setback variance that Verizon Wireless requires is with respect to the Facility's setback from the Blue Mountain Reservation adjacent to the Property. Therefore, there are no structures in the proximate area and only woods between the Property and the adjacent Reservation, so the variance will have no adverse impact to the area.

Comment #2: *The break point and collapse zone has been improperly identified. The Applicant shall read the definitions of breakpoint and collapse zone in sections 277-4 and 277-6(H) of the Town's ordinance.*

Response: As indicated on Pages Z5 and Z6 of the Revised Plans, a break point has been incorporated into the tower design in accordance with Sections 277-4 and 277-6(H) of the Town Code.

Comment #3: *The Applicant is referred to Section 277-6.E(1). The Application is incomplete as the following information has not been submitted. Items (f), (g), (j) (m), (n), (o), (p), (q), (s), (u) (v), (w).*

- *Tower owner is not defined. Applicant "Verizon" shall clarify it they will maintain the Tower.*
- *Nearest residential / habitable structures and distances to are not shown on plans.*
- *The 12/19/2018 FCC compliance report submitted by Pinnacle Telecom Group was not signed and sealed by a licensed professional engineer in the State of New York.*
- *Existing landscaping not shown. Applicant is responsible for inventorying and survey locating all trees within 100-ft of proposed limits of disturbance in accordance with Chapter 283 -Trees of the Town's Ordinance. Once inventoried, Town's Consultant Arborist shall identify specie type and size.*
- *The 2/20/2019 RF Report does not accurately identify existing telecommunication sites within the vicinity of the proposed tower. Namely the towers located at 260 Croton Avenue and 451 Yorktown Road. The report implies they are pending. Approvals were granted and the telecommunication towers are active to the Town's understanding. The Applicant's Consultant shall revise and clarify.*
- *Extensive re-grading is proposed. Field based topography within 100-ft of the proposed limits of disturbance shall be provided. In addition the Applicant must provide a topographic and geomorphologic study within the disturbance limits. The Applicant shall complete a Steep Slope analysis in accordance with Town Code Chapter 259.*
- *A narrative discussing maintenance and discontinuance of use has not been provided.*

Response: Please note the following in response to the points listed above:

(i) Page T1 of the Revised Plans includes a note that the tower owner will maintain the tower and that the applicant is to be the owner of the tower;

(ii) Page Z2 of the Revised Plans provides the distance to the nearest residential / habitable structures;

(iii) Attached hereto as Exhibit 2 is an updated RF compliance report, dated June 27, 2019, prepared by Pinnacle Telecom Group ("Pinnacle Report"), which has been signed by a licensed professional engineer in the State of New York and updated to address the comments of the Town Engineer and Town Consultant;

(iv) Page Z11 of the Revised Plans shows the existing trees and notes those few trees that will need to be removed (upon approval and location of the Facility, SDG will work with the Town's arborist regarding any trees to be removed);

(v) The site at 260 Croton Avenue is Verizon Wireless' "Dickerson Mountain" site and is clearly identified as an existing site in C Squared's RF report. The location of the site and its coverage are depicted on all the plots in the RF Report by C Squared Systems LLC ("C Squared February Report") dated February 20, 2019, submitted with the initial application. The 451 Yorktown site is Verizon Wireless' "Croton Reservoir" site. As indicated in the C Squared Supplemental Report ("C Squared Supplemental Report"), submitted herewith as Exhibit 3, "[i]t is my understanding that such site was completed after the C Squared February Report. Notwithstanding,

the Croton Reservoir site is distant from the proposed site and provides a de minimis amount of coverage to the area [, as] reflected on the coverage plots." See such updated plots attached as a part of Exhibit 3 submitted herewith.

(vi) Pages Z3 and Z10 of the Revised Plans shows field based topography within 100ft. of the proposed limits of disturbance. Additionally, it is respectfully requested that the topographic and geomorphological study within the disturbance limits and a Steep Slope analysis in accordance with Town Code Chapter 259 both be a condition of the building permit, after the location of the Facility has been approved; and

(vii) Page T1 of the Revised Plans includes a note that the tower owner will maintain the Facility during expected monthly visits and that that the applicant will comply with code requirements regarding abandonment/discontinuance in that unlikely event.

Comment #4: *Section 277-6.F has not been submitted. Reference is made to submit written requests and responses for shared uses by other telecommunication companies.*

Response: Attached hereto as Exhibit 4 are letters to the other carriers offering collocation on the proposed Facility.

Comment #5: *Section 277-6.G is not acceptable. A structural certification of the Tower was provided dated 2/18/19 was not signed and sealed by the engineer preparing the evaluation. Furthermore the structural analysis was not submitted as part of this application. These documents must be submitted by the engineer preparing the certification with original wet seal and signature.*

Response: Attached hereto as Exhibit 5 is a signed and sealed structural certification letter from SDG, confirming that the "Tower, all attachments, and the Tower's foundation will be designed to meet the ANTI/TIA-222-G… and all county, state and federal structural requirements for loading, including wind and ice loads." Once the tower design has been approved by this Board, SDG will work with the tower manufacturer and submit the final structural analysis with seal and signature. It is therefore respectfully requested that the request for the structural analysis be a condition of the building permit approval.

Comment #6: *Section 277-6.J is not acceptable. A long form EAF was completed yet no environmental analysis was completed by the Applicant. The proposed construction of the 140-ft lattice tower and compound will require a tree removal and topcgraphical alteration. In addition total land disturbance may exceed 1acre necessitating a storm water pollution prevention plan in accordance with the SPDES General Permit for Construction Activities and Chapter 262 of Town Code. Other environmental approvals may also be required.*

Response: As noted above, a long EAF form was completed. Moreover, as indicated in note 5 on Page Z1 of the Revised Plans, "total land disturbance is to be below 1 acre," so no SWPPP is required.

Comment #7: *Section 277-6.K has not been submitted. A visual assessment and mitigation report has not been provided. This shall include at minimum a view shed analysis at an appropriate radius from the proposed tower as approved by the Planning Board.*

Response: Attached hereto as Exhibit 6 is a Visual Resource Assessment ("Visual Assessment"), which was prepared by Saratoga Associates, based on the May 4, 2019 balloon test. The Visual Assessment includes a viewshed analysis at an appropriate radius from the Facility and photo locations as discussed and determined by Town staff at the direction of this Board.

Comment #8: *Section 277-7 Location has not been addressed, specifically priority of location. This property is a residential (R-40) being the least prioritized property.*

Response: As noted by the Town Consultant, at the bottom of page 6 of its comments, Verizon Wireless has already submitted documentation addressing Section 277-7, as "[a]pplicant has submitted an Affidavit sworn to on 2/6/19 by John Pepe, Site Acquisition Consultant retained by Verizon Wireless and the C Squared Report, dated 2/20/19, which includes as Exhibits, drive test maps (conducted on 11/1/17) and propagation maps. The submitted documents claim that there are no [(a)] existing telecommunications towers or existing tall structures (or [(b)] sites with existing towers or structures) on which Verizon Wireless can locate its equipment and remedy its significant gap in coverage and that there is [(c), (d)] not property in non-residentially zoned areas of the Town, including municipally owned property where Verizon Wireless could locate a tower and remedy its significant gap in coverage."

Comment #9: *The Applicant is proposing a 140-ft lattice tower with 3 carriers. This is the maximum height permitted under section 277-9.*

Response: The proposed tower is consistent with the Town Code, as acknowledged by the Town Engineer.

Comment #10: *The 10-page plan set from SDG does not reference the Uniform Building Code and NYS Supplements. Furthermore the plan sets are labeled "Preliminary and Final" implying they are complete when they are not.*

Response: The Revised Plans submitted herewith now reference the applicable Uniform Building Code and NYS Supplements. See Page T1. Moreover, such Revised Plans no longer indicate they are "Final."

Comment #11: *I am recommending a performance security be submitted in accordance with Section 277-21. The amount of the bond shall be set at the cost of demolition and site restoration.*

Response: As noted in the Town Consultant's comments, in the first full paragraph on page 9, Verizon Wireless "has requested a temporary waiver of the bond until after the issuance of the Building Permit. Inasmuch as applicant is proposing a new wireless facility, as security, to assure the faithful performance of the terms and conditions of this chapter and any special use permit

issued, we recommend that the applicant submit, for review and approval, a bond after the issuance of the Building Permit, but prior to the start of construction. The amount of security bond will be confirmed once the facility design has been established." Consistent with the Town Consultant's comment, it is respectfully requested that any required bond be submitted "after the issuance of a building permit but prior to the start of construction."

Response to the Comments from Town Consultant:

Comment 1: *Pursuant to Section 277-6(B), "Any application for a special use permit for a telecommunications tower shall be signed by an officer of the applicant attesting to the truth and completeness of the information .... " Applicant has submitted its Planning Board Application for Special Permit signed by Csaba Szekely on behalf of New York SMSA d/b/a Verizon Wireless. However, Csaba Szekely's title is not referenced on the Application, and, as such, it is unknown if Csaba Szekely is an employee and an officer of the applicant authorized to sign on its behalf. We recommend that the applicant confirm that Csaba Szekely is an employee and an officer of New York SMSA d/b/a Verizon Wireless authorized to sign on its behalf.*

Response: Attached hereto as Exhibit 7 is another copy of the application signed by Verizon Wireless employee Mr. Szekely. Said application now provides Mr. Szekely's specific title as Real Estate and Regulatory Specialist/Project Manager for New York SMSA Limited Partnership d/b/a Verizon Wireless.

Comment 2: *Pursuant to Section 277-6(B), "The landowner, if different that the applicant, shall acknowledge the application and verify that they are aware of the application and are aware that the Town may deny the application or issue a permit with conditions." Applicant has submitted a Letter of Authorization signed by Laura Labriola, "Owner" on behalf of Bezo Enterprises, LLC. However, Laura Labriola's title with Bezo Enterprises, LLC is not referenced on the Application, and, as such, it is unknown if Laura Labriola is an employee and an officer of the owner authorized to sign on its behalf. In addition, the Letter of Authorization does not verify that the owner is aware that the Town may deny the application or issue a permit with conditions. We recommend that the applicant confirm that Laura Labriola is an employee and an officer of Bezo Enterprises, LLC and that the Letter of Authorization be revised to include that the owner is aware that the Town may deny the application or issue a permit with conditions.*

Response: Attached hereto as Exhibit 8 is a revised Letter of Authorization from the Property owner, which confirms that the Laura Labriola is the "Owner/Sole Member" of Bezo Enterprises, LLC and that the Property owner is aware that the Town may deny the application or issue a permit with conditions.

Comment 3: *Pursuant to Section 277-6(D), "The applicant shall state in writing: (1) That the applicant's proposed telecommunications tower will be maintained in a safe manner and in compliance with all conditions of the special use permit, without exception, unless specifically granted relief by the Board in writing, as well as all applicable and permissible local codes, ordinances, and regulations, including any and all applicable county, state and federal laws, rules*

and regulations. (2) That the construction of the telecommunications tower is legally permissible, including but not limited to the fact that the applicant is authorized to do business in New York State." The foregoing is contained in the Statement in Support submitted by Applicant, dated February 20, 2019, by Leslie J. Snyder of Snyder & Snyder, LLP, attorneys for applicant.

Response: Pursuant to the above, Verizon Wireless complied with the provision, so no additional response is required.

Comment 4: *Pursuant to Section 277-6(E)(1)(a-m, q), "No telecommunications tower shall be installed or constructed until the site plan is reviewed and approved by the Board." Applicant has submitted drawings entitled "Preliminary and Final Site Plans" (Rev. E, dated 02/008119) prepared on Verizon Wireless' behalf by Scherer Design Group, signed and sealed by Colleen Connolly, P.E., which were deemed incomplete as to "f", "g", "j", "m", and "q" by the Department of Technical Services in its March 11, 2019 Review Memorandum. We recommend that the drawings be revised as suggested in the Department of Technical Services' March 11, 2019 Review Memorandum.*

Response: As noted above, submitted herewith are the Revised Plans, which address the comments in the Department of Technical Services' March 11, 2019 Review Memorandum (a/k/a "Town Engineer" comments, herein).

Comment 5: *Pursuant to Section 277-6(E)(1)(n-p, r), "(n) The frequency, modulation and class of service of radio or other transmitting equipment. (o) The transmission and maximum effective radiated power of the antenna(s). (p) The direction of maximum lobes and associated radiation of the antenna(s). (r) Certification that NIER levels at the proposed site are within the threshold levels adopted by the FCC, though the certifying engineer need not be approved by the Town." Applicant has submitted an Antenna Site FCC Compliance Assessment and Report (Pinnacle Telecom Group, dated 12/19118, signed by Daniel J. Collins, Chief Technical Officer) with antenna and transmission data and certifying that the analysis of site RF compliance provided is consistent with the applicable FCC regulations, additional guidelines issued by the FCC, and industry practice.*

Response: As acknowledged, Verizon Wireless complied with the provision, so no additional response is required.

Comment 6: *The Pinnacle Report states that: "According to the FCC, the FCC MPE limit has been constructed in such a manner than continuous human exposure to RF emissions up to and including 100 percent of the MPE limit is acceptable and safe. As described, the analysis in this case shows that the maximum calculated RF level from the proposed operations at the site, is 0.7934 percent of the FCC MPE limit. In other words, the worst case calculated RF level from the antenna operations is more than 125 times below the limit established as safe for continuous human exposure to the RF emissions from antennas. The results of the calculations provide a clear demonstration of compliance with the FCC MPE limit. Moreover, because of the conservative calculation methodology and operational assumptions we applied in the analysis, RF levels*

actually caused by the antennas will be even less significant than the calculation results herein indicate." However, the Pinnacle Report is not signed and sealed by a New York state licensed professional engineer. We recommend that the Pinnacle Report be signed and sealed by a New York state licensed professional engineer.

Response: As noted above, attached hereto as Exhibit 2 is the Pinnacle Report, which is now signed and sealed by a New York state licensed professional engineer.

Comment 7: *Pursuant to Section 277-6(E)(1)(s), "Certification that the proposed antenna(s) will not cause interference with existing telecommunications devices, though the certifying engineer need not be approved by the Town." Applicant has submitted an Antenna Site FCC Compliance Assessment and Report (Pinnacle Telecom Group, dated 12/19/18, signed by Daniel J. Collins, Chief Technical Officer), which states: " ... we can provide a clear assurance that the proposed antenna operation will not interfere with public safety communications services enjoyed by the nearby residential and non-residential properties, or other existing telecommunications devices." However, the Pinnacle Report is not signed and sealed by a New York state licensed professional engineer. We recommend that the Pinnacle Report be signed and sealed by a New York state licensed professional engineer.*

Response: As noted above, attached hereto as Exhibit 2 is the Pinnacle Report, which is now signed and sealed by a New York state licensed professional engineer.

Comment 8: *Pursuant to Section 277-6(E)(l)(t), "A copy of the FCC license applicable to the use of the telecommunications tower." Applicant has submitted copies of its relevant FCC licenses. We note that the FCC License bearing Call Sign WQJQ689, Licensee, Cellco Partnership, is due to expire on 6/13/19.*

Response: As acknowledged, Verizon Wireless complied with this provision of the Town Code, so no additional response is required. Any licenses expiring after the submission have been renewed in due course.

Comment 9: *Pursuant to Section 277-6(E)(1)(v), "Propagation studies of the proposed site and all adjoining proposed or in-service or existing sites." The applicant has submitted an RF Report (C Squared Systems, LLC, dated 2/20/19, signed by Martin J. Lavin), which includes as Exhibits, drive test maps (conducted on 1111 /17) and propagation maps. The RF Report notes that the proposed facility is needed to remedy Verizon Wireless' gap in coverage and capacity needs. Only propagation maps for 750 MHz LTE and 2100 MHz LTE service were submitted. In order to determine the need for a new facility, we recommend that Verizon submit propagation maps for all frequencies that it is authorized to operate in this area, showing all existing and proposed adjacent sites. The RF Report at Section 1.1 Systems Considerations, states that Verizon Wireless network, over which it seeks to provide seamless and reliable service, includes licenses in the 700 (a/k/a 750), 850, 1900, and 2100 MHz frequency bands. We also recommend that current drive test data be provided, as well as detailed proof of need to operate at -85 dBm, which is ten times stronger than industry accepted -95 dBm. We recommend that the applicant submit propagation*

maps and drive test data as noted above. To confirm the accuracy of the data and maps provided, we require the applicant to complete the attached Propagation Data Study Sheet and attest to the maximum power being utilized for the maps.

Response: As indicated in the C Squared Supplemental Report, submitted herewith as Exhibit 3, "750 MHz is the frequency band which provides the most geographic area… To provide coverage plots at the other frequencies serves no purpose… [as] the coverage area from the higher frequencies… would be smaller geographically and fully encompassed in the proposed 750 MHz coverage." Additionally, as indicated in the C Squared Supplemental Report, "the request to see the coverage at -85 dBm is not applicable since the coverage is set forth in the C Squared February Report." Moreover, as stated in the C Squared Supplemental Report, "Verizon Wireless will not attest that Verizon Wireless will use maximum power at all sites as such a uniform pledge is sometimes incompatible with optimal system performance and could negatively impact service."

Comment 10: *In order to determine capacity needs, the applicant needs to specify which sectors of which sites need relief and to provide the appropriate key performance indicator. If any sector of any adjoining sites will need relief in the next year, we will need year over year data to show growth.*

Response: Kindly note that the C Squared Supplemental Report, attached hereto as Exhibit 3, provides that the "site is proposed in area where there is an established gap in coverage… Capacity issues are not relevant to this application."

Comment 11: *Applicant has also submitted an Antenna Site FCC Compliance Assessment and Report (Pinnacle Telecom Group, dated 12/19/18, signed by Daniel J. Collins, Chief Technical Officer). The Report notes that Verizon utilizes 700, 1900, and 2100 for this area of Westchester County. However, the submitted RF Report (C Squared Systems, LLC) notes that Verizon Wireless includes 700 (a/k/a 750), 850, 1900, and 2100 MHz frequency bands. We recommend that the FCC Compliance Assessment be revised to include all frequencies that Verizon is authorized to operate in this area.*

Response: As noted above, attached hereto as Exhibit 2 is the Pinnacle Report, which includes all frequencies noted in the Town Consultant's comment above.

Comment 12: *Pursuant to Section 277-6(F), "In the case of a new telecommunications tower, the applicant shall be required to submit a report demonstrating its efforts to secure shared use of existing telecommunications tower(s). Copies of written requests and responses for shared use shall be provided to the Board." Applicant has submitted an Affidavit sworn to on 2/6/19 by John Pepe, Site Acquisition Consultant retained by Verizon Wireless, which states " ... there are no towers or other tall structures in the area surrounding the property that would allow the Facility to provide the necessary coverage that is provided by the Facility at the Property."*

Response: As acknowledged, Verizon Wireless complied with the provision, so no additional response is required.

Comment 13: *Pursuant to Section 277-6(G), "Certification by a licensed engineer that the telecommunications tower and attachments both are designed and constructed ("as built") to meet all county, state and federal structural requirements for loads, including wind and ice loads." Applicant has submitted a Structural Certification letter (Scherer Design Group, LLC, dated 2/8/19, signed by Colleen Connelly, P.E.). We recommend that a full and complete Structural Analysis Report, including calculations, signed and sealed by a New York State professional engineer be submitted.*

Response: As noted above, attached hereto as Exhibit 5 is a signed and sealed structural certification letter from SDG, confirming that the "Tower, all attachments, and the Tower's foundation will be designed to meet the ANTI/TIA-222-G… and all county, state and federal structural requirements for loading, including wind and ice loads." Once the tower design has been approved by this Honorable Board, SDG will work with the tower manufacturer and submit the final "full and complete" structural analysis with seal and signature. It is therefore respectfully requested that the structural analysis be a condition of the building permit approval.

Comment 14: *Pursuant to Section 277-6(H), "Certification by a licensed engineer that the telecommunications tower is designed with a break point that would result in the telecommunications tower falling or collapsing within the boundaries of the property on which the telecommunications tower is placed." Applicant has submitted a Structural Certification letter (Scherer Design Group, LLC, dated 2/8/19, signed by Colleen Connelly, P.E.), which certifies that "The proposed Tower, all attachments, and the Tower's foundation will be designed to meet the ANTI/TIA-222-G [sic] 'Structural Standard for Antenna Supporting Structures and Antennas' and all county, state, and federal structural requirements for loading, including wind and ice loads." The Applicant has not provided the required break point analysis.*

Response: As noted above, once the tower design has been approved by this Honorable Board, SDG will work with the tower manufacturer to obtain the final "full and complete" structural analysis, including any required break point analysis. As indicated on Pages Z5 and Z6 of the Revised Plans, the tower is being designed with the requested break point. It is therefore respectfully requested that any required break point analysis be a condition of the building permit approval.

Comment 15: *Pursuant to Section 277-6(1), "After construction and prior to receiving a certificate of compliance, the applicant shall have certified by a licensed engineer that the telecommunications tower and related facilities are grounded and bonded so as to protect persons and property and installed with appropriate surge protectors." We recommend that prior to the issuance of the Certificate of Compliance, the applicant submit, for review and approval, a Certification Letter signed and sealed by a New York State professional engineer certifying that the telecommunications tower and related facilities are grounded and bonded and installed with appropriate surge protectors.*

Response: Prior to the issuance of the certificate of occupancy, Verizon Wireless' project engineer will submit a certification letter, signed and sealed by a New York State professional engineer, confirming that the Facility is grounded and bonded and installed with appropriate surge protectors.

Comment 16: *Pursuant to Section 277-6(J), "The applicant shall submit a completed long form EAF and a completed visual environmental assessment form (visual EAF addendum). The Board may require submission of a more detailed visual analysis based on the results of the visual EAF. We recommend that applicants seek preapplication meetings with the Zoning Board of Appeals to address the scope of the required visual assessment." Applicant has submitted a Long Environmental Assessment Form prepared on its behalf by Scherer Design Group, LLC, dated 2/19/19, and signed by Colleen Connolly, P.E. However, applicant has not submitted a completed visual environmental assessment form and, as stated by the Department of Technical Services in its March 11, 2019 Review Memorandum, other environmental approvals may also be required. We recommend that the applicant submit a visual environmental assessment form (visual EAF addendum, and any other environmental approvals that may also be required.*

Response: Please note that, according to the NYS DEC, the visual EAF addendum merged into the full EAF which, as noted above, was previously submitted. In addition, as indicated above, a Visual Assessment is submitted herewith as Exhibit 6 for this Board's review.

Comment 17: *Pursuant to Section 277-6(K), "A visual impact assessment which shall at the Board's request include: A Zone of Visibility Map which shall be provided in order to determine locations from which the tower may be seen. (2) Pictorial representations of "before and after" views from key viewpoints both inside and outside of the Town, including but not limited to state highways and other major roads; state and local parks; other public lands; historic districts; preserves and historic sites normally open to the public; and from any other location where the site is visible to a large number of visitors or travelers. If requested by the applicant, the Zoning Board of Appeals, acting in consultation with its consultants or experts, will provide guidance concerning the appropriate key sites at a presubmission conference. [Amended 1-18-2005 by L.L. No. 1-2005] (3) An assessment of the visual impact of the tower base, guy wires and accessory buildings from abutting and adjacent properties and streets." Although the applicant, by its attorneys, in its Statement in Support states that "The installation of the Facility will not have any adverse visual impact on the surrounding area since the Facility has been strategically located on the largely wooded 6 acre property." Applicant is proposing to install a 140' tower, and we recommend that this material be provided. The proposed 140' lattice tower will be visible to the adjacent homeowners and is the most visually obtrusive tower design. Although the Code does not specify required distances to be included in the Zone of Visibility Map, due to the residential surroundings, we recommend that all highways and roadways be considered out to a distance of five miles. Also, we recommend that a visual assessment be provided for any location requested by a landowner where the proposed tower will be visible from their property.*

Response: As noted above, attached hereto as Exhibit 6 is a Visual Assessment based on the May 4, 2019 balloon test, which includes a viewshed analysis and photo locations determined by Town staff at the direction of this Board.

Comment 18: *Pursuant to Section 277-6(M), "The applicant shall effectively screen from view its proposed telecommunications tower base and all related facilities and structures, subject to Board approval." The plans submitted by the applicant depict the installation of an 8' chain link fence. We recommend that the applicant confirm in writing that the 8' chain link fence will be installed with privacy slats and will be high enough so as to hide all of the equipment. The proposed project will include extensive site work and tree removal. We recommend that the applicant submit a landscaping plan depicting replacement plantings to further mitigate the proposed visual impact of this project.*

Response: As indicated above, the Facility is to be located behind mature trees, away from the road and away from any neighboring residences, such that no additional landscaping is proposed. Moreover, as indicated on Page Z7 of the Revised Plans, the proposed fences shall be 8' high so as to be high enough to screen the proposed equipment and shall be installed with privacy slats. Additionally, as indicated above, Page Z11 of the Revised Plans shows the existing trees and notes those few trees that will need to be removed. Upon approval and location of the Facility, SDG will work with the Town's arborist regarding the removal.

Comment 19: *Pursuant to Section 277-6(N), "All utilities leading to and away from any telecommunications tower site shall be installed underground and in compliance with all laws, rules and regulations of the Town, including specifically but not limited to the National Electrical Safety Code and the National Electrical Code where appropriate ... " The zoning drawings depict proposed telco and electric to be trenched underground from a proposed Verizon utility pole to be located near the front of the property along the driveway and proposed driveway extension to the equipment. The Applicant has proposed a new utility pole which does not comply with this section of the Code and needs to be explained.*

Response: Currently, Verizon Wireless is proposing all utilities to be installed in a trench underground, except where they cross the road. A utility pole on the Property is proposed to avoid any trenching within the existing road. To the extent that this Board requires trenching across the existing road, same can be accommodated.

Comment 20: *Pursuant to Section 277-6(O), "All telecommunications towers and accessory facilities shall be sited so as to have the least practical adverse visual effect on the environment and its character, and the residences in the area of the telecommunication tower site." The facility, as proposed, will substantially increase the visual impact to the surrounding area. To reduce the substantial visual impact from the proposed installation, we recommend that this facility be redesigned to conceal all antennas from view. Also, the material provided does not demonstrate the need for the proposed facility at 140' height. The need and minimum height required must be established. A concealment tower at a lower height would dramatically decrease the visual impact to the surrounding community.*

Response: As noted above, a Visual Assessment is submitted herewith as Exhibit 6. The Visual Assessment concludes that "the proposed Facility will not result in any adverse visual impact to the area." As the Facility "will not result in any adverse visual impact," a redesign is not necessary. Additionally, the minimum height is confirmed by the C Squared Supplemental Report submitted herewith.

Comment 21: *Pursuant to Section 277-6(P), "Accessory facilities shall maximize use of building materials, colors and textures designed to blend with the natural surroundings." As noted above, we recommend that the applicant submit a landscaping plan depicting plantings and site remediation.*

Response: As noted above, and as indicated on Pages Z1, Z5, Z6, Z7, Z11 of the Revised Plans, the Facility will be located on a wooded portion of the Property behind mature vegetation and enclosed within proposed 8' tall fences with brown privacy slats, such that no additional landscaping is necessary. Moreover, as indicated above, Page Z11 of the Revised Plans shows the existing trees and notes those few trees requiring removal.

Comment 22: *Pursuant to Section 277-6(Q), "An access road and parking will be provided to assure adequate emergency and service access. Maximum use of existing roads, whether public or private, shall be made to the extent not commercially or physically impracticable. Road construction shall at all times minimize ground disturbance and vegetation-cutting. Road grades shall closely follow natural contours to assure minimal visual disturbance and reduce soil erosion potential. Usual requirements regarding weight and carrying capacity for emergency vehicles should apply to access roads." The applicant, by its attorneys, in its Statement in Support states that "The Facility is unmanned requiring maintenance visits of approximately once per month. Access to the Facility will be provided via a proposed extension to an existing access drive off of Montrose Station Road. The Facility is designed with a parking area at the end of the proposed access drive next to the Compound."*

Response: As acknowledged, Verizon Wireless complied with the provision, so no additional response is required.

Comment 23: *Pursuant to Section 277-6(R), "A person who holds a special use permit for a telecommunications tower shall construct, operate, maintain, repair, modify or restore the permitted telecommunications tower in strict compliance with all current technical, safety and safety-related codes adopted by the Town, the county, the state, or the United States, including but not limited to the most recent editions of the National Electrical Safety Code and the National Electrical Code, as well as accepted and responsibly workmanlike industry practices and recommended practices of the National Association of Tower Erectors. The codes referred to are codes that include, but are not limited to construction, building, electrical, fire, safety, health and land use codes." Applicant, by its attorneys, in its Statement in Support states that "Verizon Wireless shall construct, operate, maintain, repair, modify or restore the Facility in strict compliance with all applicable technical, safety, and safety related codes."*

Response: As acknowledged, Verizon Wireless complied with the provision, so no additional response is required.

Comment 24: *Pursuant to Section 277-6(S), "A holder of a special use permit granted under this chapter shall obtain, at its own expense, all permits and licenses required by applicable law, rule, regulation or Law, and must maintain the same, in full force and effect, for as long as required by the Town or other appropriate governmental entity or agency." Applicant, by its attorneys, in its Statement in Support states that "Verizon Wireless shall obtain all required permits and licenses required by any applicable law, rule or regulation, and shall maintain same in full force and effect."*

Response: As acknowledged, Verizon Wireless complied with the provision, so no additional response is required.

Comment 25: *Pursuant to Section 277-6(V), "The applicant shall examine the feasibility of designing a proposed telecommunications tower to accommodate future demand for at least two additional commercial applications, e.g. future collocations. The scope of this examination shall be determined by the Board. The telecommunications tower shall be structurally designed to accommodate at least two additional antenna arrays equal to those of the applicant, and located as close to the applicant's antenna as possible without causing interference." Applicant has submitted a Structural Certification letter (Scherer Design Group, LLC, dated 2/8/19, signed by Colleen Connelly, P.E.), which certifies that "The Tower will be designed to be able to support up to four (4) colocators."*

Response: As acknowledged, Verizon Wireless complied with the provision, so no additional response is required.

Comment 26: *The proposed facility will be located at the lowest priority location pursuant to Section 277-7(A)(1)(4) "On other property in the Town."*

Response: The proposed Facility's location is consistent with the Town Code, as acknowledged by the Town's Consultant.

Comment 27: *Pursuant to Section 277-7(A)(2), "If the proposed property site is not the highest priority listed above, then a detailed explanation must be provided as to why a site of a higher priority was not selected. The person seeking such an exception must satisfactorily demonstrate the reason or reasons why such a permit should be granted for the proposed site, and the hardship that would be incurred by the applicant or service provider if not granted, or the benefits that might inure, and the beneficiaries of such an alternative site." Applicant has submitted an Affidavit sworn to on 2/6/19 by John Pepe, Site Acquisition Consultant retained by Verizon Wireless and an RF Report (C Squared Systems, LLC, dated 2/20/19, signed by Martin J. Lavin), which includes as Exhibits, drive test maps (conducted on 11/1/17) and propagation maps. The submitted documents claim that there are no existing telecommunications towers or existing tall structures*

(or sites with existing towers or structures) on which Verizon Wireless can locate its equipment and remedy its significant gap in coverage and that there is not property in non-residentially zoned areas of the Town, including municipally owned property where Verizon Wireless could locate a tower and remedy its significant gap in coverage. However, the documents do not note all alternative higher priority locations that that could accommodate co location or a new structure in a non-residential zone. We recommend that the applicant submit an Alternative Site Analysis to confirm that there are no existing higher priority locations for the proposed facility.

Response: As indicated in the beginning of the comment above, it is correctly noted that the submitted documents, including an Alternatives Affidavit from John Pepe and the C Squared February Report, find that "there are no existing telecommunications towers or existing tall structures… [or] property in non-residentially zoned areas of the Town, including municipally owned property where Verizon Wireless could…remedy its significant gap in coverage." Such documents "confirm that there are no existing higher priority locations for the proposed [F]acility." Therefore, documentation has already been submitted confirming "that there are no existing higher priority locations for the proposed [F]acility."

Comment 28: *Pursuant to Section 277-7(A)(3), "An applicant may not bypass sites of higher priority by stating the site presented is the only site leased or selected. An application shall address collocation as an option and if such option is not proposed, the applicant must explain why collocation is commercially or otherwise impracticable. Agreements between providers limiting or prohibiting collocation shall not be a valid basis for any claim of commercial impracticability or hardship." Applicant has submitted an Affidavit sworn to on 2/6/19 by John Pepe, Site Acquisition Consultant retained by Verizon Wireless, which states"... there are no towers or other tall structures in the area surrounding the property that would allow the Facility to provide the necessary coverage that is provided by the Facility at the Property." As noted above, we recommend that the applicant submit an Alternative Site Analysis to confirm that there are no existing higher priority locations for the proposed facility.*

Response: As noted above in response to Comment 27, Verizon Wireless already submitted documentation which provides "that there are no existing higher priority locations for the proposed [F]acility."

Comment 29: *Pursuant to Section 277-7(B), "Upon filing an application for a special use permit for a telecommunications tower, the applicant shall submit a written report demonstrating the applicant's review of the above locations in order of priority, demonstrating the technological reason for the site selection. If the site selected is not the highest priority, then a detailed written explanation as to why sites of a higher priority were not selected shall be included with the application." Applicant has submitted an Affidavit sworn to on 2/6/19 by John Pepe, Site Acquisition Consultant retained by Verizon Wireless and an RF Report (C Squared Systems, LLC, dated 2/20/19, signed by Martin J. Lavin), which includes as Exhibits, drive test maps (conducted on 11/1117) and propagation maps. The submitted documents claim that there are no existing telecommunications towers or existing tall structures (or sites with existing towers or structures) on which Verizon Wireless can locate its equipment and remedy its significant gap in coverage*

and that there is not property in non-residentially zoned areas of the Town, including municipally owned property where Verizon Wireless could locate a tower and remedy its significant gap in coverage. However, applicant has not proven its need for the proposed facility at this location. We recommend that the applicant submit propagation maps and current drive test data as noted above to confirm the accuracy of the data and maps provided, to confirm that the proposed Facility would provide the necessary coverage, and we recommend the applicant complete the attached Propagation Data Study Sheet and attest to the maximum power being utilized for the maps.

Response: As noted above in response to Comment 27, Verizon Wireless already submitted documentation which provides "that there are no existing higher priority locations for the proposed [F]acility." Moreover, the C Squared February Report, previously submitted and supplemented by Exhibit 3 herein, includes as Exhibits, drive test maps and propagation maps confirming the existing significant gap in coverage.

Comment 30: *Pursuant to Section 277-7(C), "The applicant shall, in writing, identify and disclose the number and locations of any additional sites that the applicant has, is or will be considering, reviewing or planning for telecommunications towers in the Town and all municipalities adjoining or adjacent to the Town for a two year period from the date of the subject application." Applicant has submitted an RF Report (C Squared Systems, LLC, dated 2/20/19, signed by Martin J. Lavin), which includes a list of Existing Network sites and a list of Proposed/Pending Sites in Cortlandt.*

Response: As acknowledged, Verizon Wireless complied with the provision, so no additional response is required.

Comment 31: *Pursuant to Section 277-8, "Shared use of existing telecommunications towers shall be preferred by the Town, as opposed to the proposed construction of new telecommunications towers. Additionally, where such shared use is unavailable, location of antennas on other preexisting structures shall be considered and preferred. The applicant shall submit a comprehensive report inventorying existing towers and other appropriate structures within four miles of any proposed new tower site, unless the applicant can show that some other distance is more reasonable, and outlining opportunities for shared use of existing facilities and the use of other preexisting structures as a preferred alternative to new construction." Applicant has submitted an Affidavit sworn to on 2/6/19 by John Pepe, Site Acquisition Consultant retained by Verizon Wireless and an RF Report (C Squared Systems, LLC, dated 2/20/19, signed by Martin J. Lavin). The submitted documents claim that there are no existing telecommunications towers or existing tall structures (or sites with existing towers or structures) on which Verizon Wireless can locate its equipment and remedy its significant gap in coverage and that there is not property in non-residentially zoned areas of the Town, including municipally owned property where Verizon Wireless could locate a tower and remedy its significant gap in coverage. We recommend that an Alternative Site Analysis be submitted as noted above.*

Response: As noted above in response to Comment 27, Verizon Wireless already submitted documentation confirming "that there are no existing higher priority locations for the proposed

[F]acility." Specifically, see section 5.0 of the C Squared February Report. Therefore, documentation has already been submitted confirming "that there are no existing higher priority locations for the proposed [F]acility."

Comment 32: *Pursuant to Section 277-9(A), "The applicant must submit documentation justifying to the Board the total height of any telecommunications tower and/or antenna and the basis therefor. Such justification shall be to provide service within the Town, to the extent practicable, unless good cause is shown." Applicant has submitted an RF Report (C Squared Systems, LLC, dated 2/20/19, signed by Martin J. Lavin). However, we recommend that complete propagation maps be submitted at 10 foot increases, beginning at 100' height, to determine the minimum height needed for a structure at this location.*

Response: Maps showing the coverage difference at 10 foot intervals are submitted herewith as a part of the C Squared Supplemental Report, Exhibit 3 hereto.

Comment 33: *Pursuant to Section 277-10(A), "Telecommunications towers shall not be artificially lighted or marked, except as required by law." Applicant, by its attorney, in its Statement in Support has stated that "The Tower will not be artificially lighted or marked."*

Response: As acknowledged, Verizon Wireless complied with the provision, so no additional response is required.

Comment 34: *Pursuant to Section 277-10(C), "If lighting is required, the applicant shall provide a detailed plan for sufficient lighting of as unobtrusive and inoffensive an effect as is permissible under state and federal regulations, and an artist's rendering or other visual representation showing the effect of light emanating from the site on neighboring habitable structures within 1,500 feet of all property lines on which the telecommunications tower is located." Applicant, by its attorney, in its Statement in Support has stated that "The only lighting proposed in connection with the Facility is a light on a timer in the equipment area. Such light will be pointing toward the ground so there will be no glare on surrounding properties." We recommend that the applicant explain the need for the light in the equipment area and the need for said light to be on a timer.*

Response: The light is to be used in connection with maintenance work and will be located within the equipment area. See Pages Z4 and Z7 of the Revised Plans. The light will be on a timer, such that when the technician turns on the light the timer starts counting down. In the event the technician fails to turn off the light, it will go off automatically after a limited amount of time. The timer will ensure that the light does not remain on for an extended period of time.

Comment 35: *Pursuant to Section 277-11, "All telecommunications towers and antennas shall be located, fenced or otherwise secured in a manner which prevents unauthorized access. Specifically: A. All antennas, towers and other supporting structures, including guy wires, shall be made inaccessible to individuals and constructed or shielded in such a manner that they cannot be climbed or run into. B. Transmitters and telecommunications control points must be installed such that they are readily accessible only to persons authorized by the FCC's licensee to operate*

or service them." Pursuant to the zoning drawings, the proposed facility will be surrounded by an 8' tall chain link fence. We recommend that a lock be installed on the gate so there is no public access to the facility.

Response: As requested in the comment above, locks will be installed on the gates to the compounds. See Page Z7 of the Revised Plans.

Comment 36: *Pursuant to Section 277-12, "Telecommunications towers shall contain a sign no larger than four square feet to provide adequate notification to persons in the immediate area of the presence of an antenna that has transmission capabilities. The sign shall contain the name(s) of the owner(s) and operator(s) of the antenna(s) as well as emergency phone number(s). The sign shall be located so as to be visible from the access point of the site. No other signage, including advertising, shall be permitted on any antennas, antenna supporting structures or antenna towers unless required by law." Applicant by its attorney, in its Statement in Support has stated that "The Facility will contain a sign, no larger than four (4) square feet, with the name and emergency telephone number for Verizon Wireless, and a sign in accordance with FCC regulations regarding radio frequency emissions. No commercial or retail signage is proposed."*

Response: As acknowledged, Verizon Wireless complied with the provision, so no additional response is required.

Comment 37: *Pursuant to Section 277-13(B), "Telecommunications towers shall be located with a minimum setback from any property line a distance equal to 1/2 the height of the tower or the existing setback requirement of the underlying zoning district, whichever is greater. Further, any accessory structure shall be located so as to comply with the minimum setback requirements for the property on which it is situated." Applicant, by its attorney, in its Statement in Support has stated that "The Facility will comply with all of the setback requirements set forth in Section 277-13, except for an individual side yard setback. In connection therewith, Verizon Wireless will require a variance from the Zoning Board of Appeals." Pursuant to the Department of Technical Services March 11, 2019 Review Memorandum, an Engineer is to re-evaluate the location of the tower and equipment area to comply with dimensional setbacks. We recommend that the tower and equipment area be staked to mark the exact location for this project and confirm setbacks to adjacent property.*

Response: As noted above, Verizon Wireless "re-evaluated" the location of the Facility and that based on the topography, location of trees, size and shape of the Property, it determined that the proposed location is the best location for the Facility as it will be behind mature trees, away from the road and away from any neighboring residences, and will provide much needed reliable wireless communications, including wireless 911, to a significant gap in coverage that exists in that area of the Town. As indicated in the memo in support submitted previously: "Z. Setbacks §277-13: The Facility will comply with the all of the setback requirements set forth in Section 277-13, except for an individual side yard setback." In connection therewith, Verizon Wireless will require a variance from the Zoning Board of Appeals. However, the setback variance that Verizon Wireless requires is with respect to the Facility's setback from the Blue Mountain Reservation

adjacent to the Property. Therefore, there are no structures in the proximate area and only woods between the Property and the adjacent Reservation, so the variance will have no adverse impact to the area.

Comment 38: *Pursuant to Section 277-21, "The applicant and the owner of record of any proposed telecommunications tower property site shall be jointly required to execute and file with the Town a bond or other form of security acceptable to the Town as to type of security and the form and manner of execution in an amount deemed sufficient by the Board to assure the faithful performance of the terms and conditions of this chapter and any special use permit issued pursuant to this chapter. The full amount of the bond or security shall remain in full force and effect throughout the term of the special use permit and/or until the removal of the telecommunications tower, and any necessary site restoration is completed." Applicant has requested a temporary waiver of the bond until after the issuance of the Building Permit. Inasmuch as applicant is proposing a new wireless facility, as security, to assure the faithful performance of the terms and conditions of this chapter and any special use permit issued, we recommend that the applicant submit, for review and approval, a bond after the issuance of the Building Permit, but prior to the start of construction. The amount of security bond will be confirmed once the facility design has been established.*

Response: Pursuant to the above, it is respectfully requested that any required bond be submitted "after the issuance of a building permit but prior to the start of construction."

Comment 39: *Pursuant to Section 277-23, "A. A holder of a special use permit for a telecommunications tower shall secure and at all times maintain public liability insurance, property damage insurance and umbrella insurance coverage for the duration of the special use permit in amounts as set forth below (1) Public liability: $1,000,000 per person/per occurrence. (2) Property damage: $1,000,000 per any one claim. (3) Umbrella liability: $3,000,000. B. The public and personal liability and property damage insurance policy shall specifically include the Town and its officials, employees and agents as additional insureds. C. The public and personal liability insurance and property damage insurance policy shall be issued by an agent or representative of an insurance company licensed to do business in the state. D. The public liability and property damage insurance policy shall contain an endorsement obligating the insurance company to furnish the Town with at least 30 days' written notice in advance of the cancellation of the insurance. E. Renewal or replacement policies or certificates shall be delivered to the Town at least 15 days before the expiration of the insurance which such policies are to renew or replace. F. Before construction of a permitted telecommunications tower is initiated, but in no case later than 15 days after the grant of the special use permit, the holder of the special use permit shall deliver to the Town a copy of each of the policies or certificates representing the insurance in the required amounts." We recommend that the insurance requirements as noted above be required for this project.*

Response: Similar to the bond requirement noted above, it is respectfully requested that Verizon Wireless submit any reasonable request for insurance as a condition of the building permit.

Comment 40: *Pursuant to Section 277-24, "Any special use permit issued pursuant to this chapter shall contain a provision with respect to indemnity. Such provision shall require the holder of the special use permit, to the extent permitted by the law, to at all times defend, indemnify, protect, save, hold harmless and exempt the Town, officials of the Town, its officers, agents, servants, and employees from any and all penalties, damage or charges arising out of any and all claims, suits, demands, causes of action or award of damages, whether compensatory or punitive, or expenses arising therefrom, either at law or in equity, which might arise out of, or are caused by, the construction, erection, modification, location, products performance, operation, maintenance, repair, installation, replacement, removal or restoration of a telecommunications tower within the Town. With respect to the penalties, damages or charges referenced herein, reasonable attorneys' fees, consultants' fees and expert witness fees are included in those costs that are recoverable by the Town." Applicant has requested waiver of the indemnity requirement inasmuch as the Facility is not proposed to be on Town property.*

Response: As requested previously, since the Facility is not proposed to be located on Town property, Verizon Wireless respectfully requests a waiver from the indemnity requirement.

Comment 41: *We recommend that the applicant submit a full set of construction drawings depicting the specifications and installation of the proposed tower and its foundation; the specifications and mounting details of all proposed components to be installed on the proposed tower; and the specifications and installation of the proposed equipment compound; and the specifications and mounting details of all components in the proposed equipment compound.*

Response: As noted above, submitted herewith are the Revised Plans for this Facility, prepared by SDG and signed and sealed by Colleen Connelly, P.E., and last dated July 15, 2019. To the extent that such Revised Plans are not "construction drawings", it is respectfully submitted that "construction drawings" are only needed in connection with an application for building permit and that same will be submitted in connection with any building permit application.

As detailed above, Verizon Wireless has addressed all comments from the Town Engineer, and Town Consultant. It is respectfully submitted that the requested approvals be issued forthwith.

If you have any questions, please call me or Leslie Snyder at (914) 333-0700.

Respectfully submitted,
Snyder & Snyder, LLP

By: _____
Michael P. Sheridan

Enclosures
MS:sm
cc: Verizon Wireless
Z:\SSDATA\WPDATA\SS4\WP\NEWBANM\MAYBECK\CORTLANDT\ZONING\RESPONSE LETTER.MS.FIN.DOCX

Exhibit 1
Comments From Town Engineer and Comments From Town Consultant

TOWN OF CORTLANDT
DEPARTMENT OF TECHNICAL SERVICES
ENGINEERING DIVISION

Michael Preziosi, P.E.
Director – D.O.T.S

Arthur D'Angelo, Jr., P.E.
Deputy Director
D.O.T.S – Engineering

Town Hall, 1 Heady Street
Cortlandt Manor, NY 10567
Main #: 914-734-1060
Fax #: 914-734-1066

REVIEW MEMORANDUM

To: Town of Cortlandt Planning Board

Cc: Chris Kehoe, AICP – Deputy Director – Planning, Department of Technical Services
Tom Wood / Michael Cunningham ESQ. – Town Attorney / Asst. Town Attorney

From: Michael Preziosi, P.E. – Director, Department of Technical Services
Michael Preziosi, P.E.

Date: March 11, 2019

RE: PB 2019-05 New York SMSA Limited Partnership, d/b/a Verizon Wireless
52 Montrose Station Road Tax Map (43.20-4-42)

I have reviewed the 10 page set of drawings entitled "Preliminary and Final Site Plans" prepared by Scherer Design Group, LLC dated last revised 2/8/2019 and "Statement of Support" prepared by Snyder and Snyder, LLP with supporting documents received by the Planning Division on 2/21/2019 and offer the following comments pertaining to this Application.

1. The submission lacks a property survey prepared by a licensed NYS Professional Land Surveyor. Setbacks to the property line cannot be accurately determined without a survey. The Tower as proposed does not meet dimensional setback requirements to the property line for the equipment pad and tower enclosure.

   The Applicant is advised that once a property survey is submitted and the site plan revised if setbacks are not met, a variance granted by the Town's Zoning Board is required. A request for a "waiver" is not the proper terminology.

   It is my recommendation that the Engineer re-evaluate the location of the tower and equipment area to comply with dimensional setbacks.

   The Applicant is also referred to 277-13.B which states that towers shall be located with a "minimum setback from any property line a distance equal to ½ the height of the tower or the existing setback requirement of the underlying zoning district, whichever is greater."

2. The break point and collapse zone has been improperly identified. The Applicant shall read the definitions of breakpoint and collapse zone in sections 277-4 and 277-6(H) of the Town's ordinance.

3. The Applicant is referred to Section 277-6.E(1). The Application is incomplete as the following information has not been submitted. Items (f), (g), (j) (m), (n), (o), (p), (q), (s), (u) (v), (w).

    - Tower owner is not defined. Applicant "Verizon" shall clarify it they will maintain the Tower.

    - Nearest residential / habitable structures and distances to are not shown on plans.

    - The 12/19/2018 FCC compliance report submitted by Pinnacle Telecom Group was not signed and sealed by a licensed professional engineer in the State of New York.

    - Existing landscaping not shown. Applicant is responsible for inventorying and survey locating all trees within 100-ft of proposed limits of disturbance in accordance with Chapter 283 – Trees of the Town's Ordinance. Once inventoried, Town's Consultant Arborist shall identify specie type and size.

    - The 2/20/2019 RF Report does not accurately identify existing telecommunication sites within the vicinity of the proposed tower. Namely the towers located at 260 Croton Avenue and 451 Yorktown Road. The report implies they are pending. Approvals were granted and the telecommunication towers are active to the Town's understanding. The Applicant's Consultant shall revise and clarify.

    - Extensive re-grading is proposed. Field based topography within 100-ft of the proposed limits of disturbance shall be provided. In addition the Applicant must provide a topographic and geomorphologic study within the disturbance limits. The Applicant shall complete a Steep Slope analysis in accordance with Town Code Chapter 259.

    - A narrative discussing maintenance and discontinuance of use has not been provided.

4. Section 277-6.F has not been submitted. Reference is made to submit written requests and responses for shared uses by other telecommunication companies.

5. Section 277-6.G is not acceptable. A structural certification of the Tower was provided dated 2/18/19 was not signed and sealed by the engineer preparing the evaluation. Furthermore the structural analysis was not submitted as part of this application. These documents must be submitted by the engineer preparing the certification with original wet seal and signature.

6. Section 277-6.J is not acceptable. A long form EAF was completed yet no environmental analysis was completed by the Applicant. The proposed construction of the 140-ft lattice tower and compound will require a tree removal and topographical alteration. In addition total land disturbance may exceed 1 acre necessitating a storm water pollution prevention plan in accordance with the SPDES General Permit for Construction Activities and Chapter 262 of Town Code. Other environmental approvals may also be required.

7. Section 277-6.K has not been submitted. A visual assessment and mitigation report has not been provided. This shall include at minimum a view shed analysis at an appropriate radius from the proposed tower as approved by the Planning Board.

8. Section 277-7 Location has not been addressed, specifically priority of location. This property is a residential (R-40) being the least prioritized property.

9. The Applicant is proposing a 140-ft lattice tower with 3 carriers. This is the maximum height permitted under section 277-9.

10. The 10-page plan set from SDG does not reference the Uniform Building Code and NYS Supplements. Furthermore the plan sets are labeled "Preliminary and Final" implying they are complete when they are not.

11. I am recommending a performance security be submitted in accordance with Section 277-21. The amount of the bond shall be set at the cost of demolition and site restoration.

At this time the Application is deemed incomplete. I recommend adjourning until required information is submitted and the Application is reviewed and deemed substantially complete for a public hearing. I do recommend at an upcoming meeting the date for the balloon test be set.

Additional comments may arise during subsequent review. Error or omission of a comment does not mean acceptance by the Town of Cortlandt.

Cc: Applicant / Snyder and Snyder, LLP
PB 2019-05
DOTS Code Enforcement

THE CENTER FOR MUNICIPAL SOLUTIONS
70 CAMBRIDGE DRIVE
GLENMONT, NEW YORK 12077
(518) 439-3079
FAX (518) 478-0909

April 19, 2019

Copies ..... 1 Planning Board
..... Town Board
..... Zoning Board
..... 1 Legal Dept.
..... 1 DOTS Director
(via e-mail & regular mail)
..... C.A.C.
..... A.R.C.
..... Applicant
..... 1 Michael Sheridan, Esq.
.....
Sent 4/22/19

Snyder & Snyder, LLP
94 White Plains Road
Tarrytown, New York 10591
Attention: Leslie J. Snyder, Esq.

RE: New York SMSA Limited Partnership d/b/a Verizon Wireless (Verizon Wireless)
Proposed Installation of a New Wireless Telecommunications Facility
Planning Board Application
Premises: 52 Montrose Station Road, Cortlandt Manor, New York
Cortlandt, NY – Verizon – 52 Montrose Station Road, Cortland Manor NEW

Dear Ms. Snyder:

We have reviewed the application material submitted for the above-listed proposed installation of a new wireless telecommunications facility.

Verizon Wireless proposes to install a new wireless telecommunications facility at the subject premises (Sky Blue Equestrian Center) in Cortlandt Manor, New York. There are currently no other wireless service providers at this location.

A pre-application site visit was conducted with the Town on 4/01/19, to view the location and proposed area for installation of the facility.

Verizon Wireless is proposing to install a 140' lattice tower within a 20' x 20' compound surrounded by an 8' tall chain link fence with gate for access. On the tower, Verizon Wireless is proposing to install twelve (12) proposed Model NHH-65B-R2B panel antennas (four antennas (4) per sector) at Sectors A, B, and C at 137' centerline AGL, twelve (12) RRH's (four (4) per sector) at Sectors A, B, and C (Model B25 4x30-4R, Model B13 4x30, and Model B66A 4x45), and three (3) 6-circuit OVP Boxes (one (1) per sector) at Sectors A, B, and C. Although there are four (4) RRH's proposed to be installed per sector, only specifications for three (3) model types of RRH's were provided in the plans submitted. Verizon Wireless is also proposing to install an equipment compound, approximately 30' x 36', surrounded by an 8' chain link fence with double gate for access, within which it proposes to install related equipment consisting of one (1) 20kw diesel generator, one (1) work light, one (1) battery cabinet, one (1) Base Receiver Station cabinet, one (1) power telco cabinet, one (1) meter center, and one (1) telco cabinet. The telco and electric service will be trenched to the equipment platform. Related cabling and conduit will be routed from the equipment platform along a proposed ice bridge to the lattice tower, and up the lattice tower to the antenna sectors. The proposed equipment compound will be large enough to accommodate the equipment for three (3) additional carriers.

Pursuant to Section 277-5, "In order to ensure that the placement, construction and modification of telecommunications towers conforms to the Town's land use code or law, the Board creates a special use permit for a telecommunications tower. As such, the Board adopts an overall policy with respect to a special use permit for a telecommunications tower for the express purpose of achieving the following goals:

A. Implementing an application process for person(s) seeking a special use permit for a telecommunications tower.

B. Establishing a policy for examining an application for and issuing a special use permit for a telecommunications tower that is both fair and consistent with the current land use code or law of the Town.
C. Establishing reasonable time frames for granting or not granting a special use permit for a telecommunications tower, or recertifying or not recertifying, or revoking the special use permit granted under this chapter.
D. Promoting and encouraging, wherever possible, the sharing and/or collocation of a telecommunications tower among service providers.
E. Promoting and encouraging, wherever possible, the placement of a telecommunications tower in such a manner as to cause minimal disruption to aesthetic considerations of the land, property, buildings and other facilities adjacent to, surrounding and in generally the same area as the requested location of such a telecommunications tower."

Upon review and discussions, we offer the following comments:

Pursuant to Section 277-6(B), "Any application for a special use permit for a telecommunications tower shall be signed by an officer of the applicant attesting to the truth and completeness of the information...." Applicant has submitted its Planning Board Application for Special Permit signed by Csaba Szekely on behalf of New York SMSA d/b/a Verizon Wireless. However, Csaba Szekely's title is not referenced on the Application, and, as such, it is unknown if Csaba Szekely is an employee and an officer of the applicant authorized to sign on its behalf. We recommend that the applicant confirm that Csaba Szekely is an employee and an officer of New York SMSA d/b/a Verizon Wireless authorized to sign on its behalf.

Pursuant to Section 277-6(B), "The landowner, if different that the applicant, shall acknowledge the application and verify that they are aware of the application and are aware that the Town may deny the application or issue a permit with conditions." Applicant has submitted a Letter of Authorization signed by Laura Labriola, "Owner" on behalf of Bezo Enterprises, LLC. However, Laura Labriola's title with Bezo Enterprises, LLC is not referenced on the Application, and, as such, it is unknown if Laura Labriola is an employee and an officer of the owner authorized to sign on its behalf. In addition, the Letter of Authorization does not verify that the owner is aware that the Town may deny the application or issue a permit with conditions. We recommend that the applicant confirm that Laura Labriola is an employee and an officer of Bezo Enterprises, LLC and that the Letter of Authorization be revised to include that the owner is aware that the Town may deny the application or issue a permit with conditions.

Pursuant to Section 277-6(D), "The applicant shall state in writing: (1) That the applicant's proposed telecommunications tower will be maintained in a safe manner and in compliance with all conditions of the special use permit, without exception, unless specifically granted relief by the Board in writing, as well as all applicable and permissible local codes, ordinances, and regulations, including any and all applicable county, state and federal laws, rules and regulations. (2) That the construction of the telecommunications tower is legally permissible, including but not limited to the fact that the applicant is authorized to do business in New York State." The foregoing is contained in the Statement in Support submitted by Applicant, dated February 20, 2019, by Leslie J. Snyder of Snyder & Snyder, LLP, attorneys for applicant.

Pursuant to Section 277-6(E)(1)(a-m, q), "No telecommunications tower shall be installed or constructed until the site plan is reviewed and approved by the Board." Applicant has submitted drawings entitled "Preliminary and Final Site Plans" (Rev. E, dated 02/008/19) prepared on Verizon Wireless' behalf by Scherer Design Group, signed and sealed by Colleen Connolly, P.E., which were deemed incomplete as to "f", "g", "j", "m", and "q" by the Department of Technical Services in its March 11, 2019 Review Memorandum. We recommend that the drawings be revised as suggested in the Department of Technical Services' March 11, 2019 Review Memorandum.

Pursuant to Section 277-6(E)(1)(n-p, r), "(n) The frequency, modulation and class of service of radio or other transmitting equipment. (o) The transmission and maximum effective radiated power of the antenna(s). (p) The direction of maximum lobes and associated radiation of the antenna(s). (r) Certification that NIER levels at the proposed site are within the threshold levels adopted by the FCC, though the certifying engineer need not be approved by the Town." Applicant has submitted an Antenna Site FCC Compliance Assessment and Report (Pinnacle Telecom Group, dated 12/19/18, signed by Daniel J. Collins, Chief Technical Officer) with antenna and transmission data and certifying that the analysis of site RF compliance provided is consistent with the applicable FCC regulations, additional guidelines issued by the FCC, and industry practice.

The Pinnacle Report states that: "According to the FCC, the FCC MPE limit has been constructed in such a manner than continuous human exposure to RF emissions up to and including 100 percent of the MPE limit is acceptable and safe. As described, the analysis in this case shows that the maximum calculated RF level from the proposed operations at the site, is 0.7934 percent of the FCC MPE limit. In other words, the worst-case calculated RF level from the antenna operations is more than 125 times below the limit established as safe for continuous human exposure to the RF emissions from antennas. The results of the calculations provide a clear demonstration of compliance with the FCC MPE limit. Moreover, because of the conservative calculation methodology and operational assumptions we applied in the analysis, RF levels actually caused by the antennas will be even less significant than the calculation results herein indicate." However, the Pinnacle Report is not signed and sealed by a New York state licensed professional engineer. We recommend that the Pinnacle Report be signed and sealed by a New York state licensed professional engineer.

Pursuant to Section 277-6(E)(1)(s), "Certification that the proposed antenna(s) will not cause interference with existing telecommunications devices, though the certifying engineer need not be approved by the Town." Applicant has submitted an Antenna Site FCC Compliance Assessment and Report (Pinnacle Telecom Group, dated 12/19/18, signed by Daniel J. Collins, Chief Technical Officer), which states: "...we can provide a clear assurance that the proposed antenna operation will not interfere with public safety communications services enjoyed by the nearby residential and non-residential properties, or other existing telecommunications devices." However, the Pinnacle Report is not signed and sealed by a New York state licensed professional engineer. We recommend that the Pinnacle Report be signed and sealed by a New York state licensed professional engineer.

Pursuant to Section 277-6(E)(1)(t), "A copy of the FCC license applicable to the use of the telecommunications tower." Applicant has submitted copies of its relevant FCC licenses. We note that the FCC License bearing Call Sign WQJQ689, Licensee, Cellco Partnership, is due to expire on 6/13/19.

Pursuant to Section 277-6(E)(1)(v), "Propagation studies of the proposed site and all adjoining proposed or in-service or existing sites." The applicant has submitted an RF Report (C Squared Systems, LLC, dated 2/20/19, signed by Martin J. Lavin), which includes as Exhibits, drive test maps (conducted on 11/1/17) and propagation maps. The RF Report notes that the proposed facility is needed to remedy Verizon Wireless' gap in coverage and capacity needs. Only propagation maps for 750 MHz LTE and 2100 MHz LTE service were submitted. In order to determine the need for a new facility, we recommend that Verizon submit propagation maps for all frequencies that it is authorized to operate in this area, showing all existing and proposed adjacent sites. The RF Report at Section 1.1 Systems Considerations, states that Verizon Wireless network, over which it seeks to provide seamless and reliable service, includes licenses in the 700 (a/k/a 750), 850, 1900, and 2100 MHz frequency bands. We also recommend that current drive test data be provided, as well as detailed proof of need to operate at -85 dBm, which is ten times stronger than industry accepted -95 dBm. We recommend that the applicant submit propagation maps and drive test data as noted above. To confirm the accuracy of the data and maps provided, we require the applicant to complete the attached Propagation Data Study Sheet and attest to the maximum power being utilized for the maps.

In order to determine capacity needs, the applicant needs to specify which sectors of which sites need relief and to provide the appropriate key performance indicator. If any sector of any adjoining sites will need relief in the next year, we will need year over year data to show growth.

Applicant has also submitted an Antenna Site FCC Compliance Assessment and Report (Pinnacle Telecom Group, dated 12/19/18, signed by Daniel J. Collins, Chief Technical Officer). The Report notes that Verizon utilizes 700, 1900, and 2100 for this area of Westchester County. However, the submitted RF Report (C Squared Systems, LLC) notes that Verizon Wireless includes 700 (a/k/a 750), 850, 1900, and 2100 MHz frequency bands. We recommend that the FCC Compliance Assessment be revised to include all frequencies that Verizon is authorized to operate in this area

Pursuant to Section 277-6(F), "In the case of a new telecommunications tower, the applicant shall be required to submit a report demonstrating its efforts to secure shared use of existing telecommunications tower(s). Copies of written requests and responses for shared use shall be provided to the Board." Applicant has submitted an Affidavit sworn to on 2/6/19 by John Pepe, Site Acquisition Consultant retained by Verizon Wireless, which states "...there are no towers or other tall structures in the area surrounding the property that would allow the Facility to provide the necessary coverage that is provided by the Facility at the Property."

Pursuant to Section 277-6(G), "Certification by a licensed engineer that the telecommunications tower and attachments both are designed and constructed ("as built") to meet all county, state and federal structural requirements for loads, including wind and ice loads." Applicant has submitted a Structural Certification letter (Scherer Design Group, LLC, dated 2/8/19, signed by Colleen Connelly, P.E.). We recommend that a full and complete Structural Analysis Report, including calculations, signed and sealed by a New York State professional engineer be submitted.

Pursuant to Section 277-6(H), "Certification by a licensed engineer that the telecommunications tower is designed with a break point that would result in the telecommunications tower falling or collapsing within the boundaries of the property on which the telecommunications tower is placed." Applicant has submitted a Structural Certification letter (Scherer Design Group, LLC, dated 2/8/19, signed by Colleen Connelly, P.E.), which certifies that "The proposed Tower, all attachments, and the Tower's foundation will be designed to meet the ANTI/TIA-222-G [sic] 'Structural Standard for Antenna Supporting Structures and Antennas' and all county, state, and federal structural requirements for loading, including wind and ice loads." The Applicant has not provided the required break point analysis.

Pursuant to Section 277-6(I), "After construction and prior to receiving a certificate of compliance, the applicant shall have certified by a licensed engineer that the telecommunications tower and related facilities are grounded and bonded so as to protect persons and property and installed with appropriate surge protectors." We recommend that prior to the issuance of the Certificate of Compliance, the applicant submit, for review and approval, a Certification Letter signed and sealed by a New York State professional engineer certifying that the telecommunications tower and related facilities are grounded and bonded and installed with appropriate surge protectors.

Pursuant to Section 277-6(J), "The applicant shall submit a completed long form EAF and a completed visual environmental assessment form (visual EAF addendum). The Board may require submission of a more detailed visual analysis based on the results of the visual EAF. We recommend that applicants seek preapplication meetings with the Zoning Board of Appeals to address the scope of the required visual assessment." Applicant has submitted a Long Environmental Assessment Form prepared on its behalf by Scherer Design Group, LLC, dated 2/19/19, and signed by Colleen Connolly, P.E. However, applicant has not submitted a completed visual environmental assessment form and, as stated by the Department of Technical Services in its March 11, 2019 Review Memorandum, other environmental approvals may also be

required. We recommend that the applicant submit a visual environmental assessment form (visual EAF addendum, and any other environmental approvals that may also be required.

Pursuant to Section 277-6(K), "A visual impact assessment which shall at the Board's request include: A Zone of Visibility Map which shall be provided in order to determine locations from which the tower may be seen. (2) Pictorial representations of "before and after" views from key viewpoints both inside and outside of the Town, including but not limited to state highways and other major roads; state and local parks; other public lands; historic districts; preserves and historic sites normally open to the public; and from any other location where the site is visible to a large number of visitors or travelers. If requested by the applicant, the Zoning Board of Appeals, acting in consultation with its consultants or experts, will provide guidance concerning the appropriate key sites at a presubmission conference. [Amended 1-18-2005 by L.L. No. 1-2005] (3) An assessment of the visual impact of the tower base, guy wires and accessory buildings from abutting and adjacent properties and streets." Although the applicant, by its attorneys, in its Statement in Support states that "The installation of the Facility will not have any adverse visual impact on the surrounding area since the Facility has been strategically located on the largely wooded 6 acre property." Applicant is proposing to install a 140' tower, and we recommend that this material be provided. The proposed 140' lattice tower will be visible to the adjacent homeowners and is the most visually obtrusive tower design. Although the Code does not specify required distances to be included in the Zone of Visibility Map, due to the residential surroundings, we recommend that all highways and roadways be considered out to a distance of five miles. Also, we recommend that a visual assessment be provided for any location requested by a landowner where the proposed tower will be visible from their property.

Pursuant to Section 277-6(M), "The applicant shall effectively screen from view its proposed telecommunications tower base and all related facilities and structures, subject to Board approval." The plans submitted by the applicant depict the installation of an 8' chain link fence. We recommend that the applicant confirm in writing that the 8' chain link fence will be installed with privacy slats and will be high enough so as to hide all of the equipment. The proposed project will include extensive site work and tree removal. We recommend that the applicant submit a landscaping plan depicting replacement plantings to further mitigate the proposed visual impact of this project.

Pursuant to Section 277-6(N), "All utilities leading to and away from any telecommunications tower site shall be installed underground and in compliance with all laws, rules and regulations of the Town, including specifically but not limited to the National Electrical Safety Code and the National Electrical Code where appropriate..." The zoning drawings depict proposed telco and electric to be trenched underground from a proposed Verizon utility pole to be located near the front of the property along the driveway and proposed driveway extension to the equipment. The Applicant has proposed a new utility pole which does not comply with this section of the Code and needs to be explained.

Pursuant to Section 277-6(O), "All telecommunications towers and accessory facilities shall be sited so as to have the least practical adverse visual effect on the environment and its character, and the residences in the area of the telecommunication tower site." The facility, as proposed, will substantially increase the visual impact to the surrounding area. To reduce the substantial visual impact from the proposed installation, we recommend that this facility be redesigned to conceal all antennas from view. Also, the material provided does not demonstrate the need for the proposed facility at 140' height. The need and minimum height required must be established. A concealment tower at a lower height would dramatically decrease the visual impact to the surrounding community.

Pursuant to Section 277-6(P), "Accessory facilities shall maximize use of building materials, colors and textures designed to blend with the natural surroundings." As noted above, we recommend that the applicant submit a landscaping plan depicting plantings and site remediation.

Pursuant to Section 277-6(Q), "An access road and parking will be provided to assure adequate emergency and service access. Maximum use of existing roads, whether public or private, shall be made to the extent not commercially or physically impracticable. Road construction shall at all times minimize ground disturbance and vegetation-cutting. Road grades shall closely follow natural contours to assure minimal visual disturbance and reduce soil erosion potential. Usual requirements regarding weight and carrying capacity for emergency vehicles should apply to access roads." The applicant, by its attorneys, in its Statement in Support states that "The Facility is unmanned requiring maintenance visits of approximately once per month. Access to the Facility will be provided via a proposed extension to an existing access drive off of Montrose Station Road. The Facility is designed with a parking area at the end of the proposed access drive next to the Compound."

Pursuant to Section 277-6(R), "A person who holds a special use permit for a telecommunications tower shall construct, operate, maintain, repair, modify or restore the permitted telecommunications tower in strict compliance with all current technical, safety and safety-related codes adopted by the Town, the county, the state, or the United States, including but not limited to the most recent editions of the National Electrical Safety Code and the National Electrical Code, as well as accepted and responsibly workmanlike industry practices and recommended practices of the National Association of Tower Erectors. The codes referred to are codes that include, but are not limited to construction, building, electrical, fire, safety, health and land use codes." Applicant, by its attorneys, in its Statement in Support states that "Verizon Wireless shall construct, operate, maintain, repair, modify or restore the Facility in strict compliance with all applicable technical, safety, and safety related codes."

Pursuant to Section 277-6(S), "A holder of a special use permit granted under this chapter shall obtain, at its own expense, all permits and licenses required by applicable law, rule, regulation or Law, and must maintain the same, in full force and effect, for as long as required by the Town or other appropriate governmental entity or agency." Applicant, by its attorneys, in its Statement in Support states that "Verizon Wireless shall obtain all required permits and licenses required by any applicable law, rule or regulation, and shall maintain same in full force and effect."

Pursuant to Section 277-6(V), "The applicant shall examine the feasibility of designing a proposed telecommunications tower to accommodate future demand for at least two additional commercial applications, e.g. future collocations. The scope of this examination shall be determined by the Board. The telecommunications tower shall be structurally designed to accommodate at least two additional antenna arrays equal to those of the applicant, and located as close to the applicant's antenna as possible without causing interference." Applicant has submitted a Structural Certification letter (Scherer Design Group, LLC, dated 2/8/19, signed by Colleen Connelly, P.E.), which certifies that "The Tower will be designed to be able to support up to four (4) colocators."

The proposed facility will be located at the lowest priority location pursuant to Section 277-7(A)(1)(4) "On other property in the Town."

Pursuant to Section 277-7(A)(2), "If the proposed property site is not the highest priority listed above, then a detailed explanation must be provided as to why a site of a higher priority was not selected. The person seeking such an exception must satisfactorily demonstrate the reason or reasons why such a permit should be granted for the proposed site, and the hardship that would be incurred by the applicant or service provider if not granted, or the benefits that might inure, and the beneficiaries of such an alternative site." Applicant has submitted an Affidavit sworn to on 2/6/19 by John Pepe, Site Acquisition Consultant retained by Verizon Wireless and an RF Report (C Squared Systems, LLC, dated 2/20/19, signed by Martin J. Lavin), which includes as Exhibits, drive test maps (conducted on 11/1/17) and propagation maps. The submitted documents claim that there are no existing telecommunications towers or existing tall structures (or sites with existing towers or structures) on which Verizon Wireless can locate its equipment and remedy its significant

gap in coverage and that there is not property in non-residentially zoned areas of the Town, including municipally owned property where Verizon Wireless could locate a tower and remedy its significant gap in coverage. However, the documents do not note all alternative higher priority locations that that could accommodate colocation or a new structure in a non-residential zone. We recommend that the applicant submit an Alternative Site Analysis to confirm that there are no existing higher priority locations for the proposed facility.

Pursuant to Section 277-7(A)(3), "An applicant may not bypass sites of higher priority by stating the site presented is the only site leased or selected. An application shall address collocation as an option and if such option is not proposed, the applicant must explain why collocation is commercially or otherwise impracticable. Agreements between providers limiting or prohibiting collocation shall not be a valid basis for any claim of commercial impracticability or hardship." Applicant has submitted an Affidavit sworn to on 2/6/19 by John Pepe, Site Acquisition Consultant retained by Verizon Wireless, which states"...there are no towers or other tall structures in the area surrounding the property that would allow the Facility to provide the necessary coverage that is provided by the Facility at the Property." As noted above, we recommend that the applicant submit an Alternative Site Analysis to confirm that there are no existing higher priority locations for the proposed facility.

Pursuant to Section 277-7(B), "Upon filing an application for a special use permit for a telecommunications tower, the applicant shall submit a written report demonstrating the applicant's review of the above locations in order of priority, demonstrating the technological reason for the site selection. If the site selected is not the highest priority, then a detailed written explanation as to why sites of a higher priority were not selected shall be included with the application." Applicant has submitted an Affidavit sworn to on 2/6/19 by John Pepe, Site Acquisition Consultant retained by Verizon Wireless and an RF Report (C Squared Systems, LLC, dated 2/20/19, signed by Martin J. Lavin), which includes as Exhibits, drive test maps (conducted on 11/1/17) and propagation maps. The submitted documents claim that there are no existing telecommunications towers or existing tall structures (or sites with existing towers or structures) on which Verizon Wireless can locate its equipment and remedy its significant gap in coverage and that there is not property in non-residentially zoned areas of the Town, including municipally owned property where Verizon Wireless could locate a tower and remedy its significant gap in coverage. However, applicant has not proven its need for the proposed facility at this location. We recommend that the applicant submit propagation maps and current drive test data as noted above to confirm the accuracy of the data and maps provided, to confirm that the proposed Facility would provide the necessary coverage, and we recommend the applicant complete the attached Propagation Data Study Sheet and attest to the maximum power being utilized for the maps.

Pursuant to Section 277-7(C), "The applicant shall, in writing, identify and disclose the number and locations of any additional sites that the applicant has, is or will be considering, reviewing or planning for telecommunications towers in the Town and all municipalities adjoining or adjacent to the Town for a two-year period from the date of the subject application." Applicant has submitted an RF Report (C Squared Systems, LLC, dated 2/20/19, signed by Martin J. Lavin), which includes a list of Existing Network sites and a list of Proposed/Pending Sites in Cortlandt.

Pursuant to Section 277-8, "Shared use of existing telecommunications towers shall be preferred by the Town, as opposed to the proposed construction of new telecommunications towers. Additionally, where such shared use is unavailable, location of antennas on other preexisting structures shall be considered and preferred. The applicant shall submit a comprehensive report inventorying existing towers and other appropriate structures within four miles of any proposed new tower site, unless the applicant can show that some other distance is more reasonable, and outlining opportunities for shared use of existing facilities and the use of other preexisting structures as a preferred alternative to new construction." Applicant has submitted an Affidavit sworn to on 2/6/19 by John Pepe, Site Acquisition Consultant retained by Verizon Wireless and an RF Report (C Squared Systems, LLC, dated 2/20/19, signed by Martin J. Lavin). The

submitted documents claim that there are no existing telecommunications towers or existing tall structures (or sites with existing towers or structures) on which Verizon Wireless can locate its equipment and remedy its significant gap in coverage and that there is not property in non-residentially zoned areas of the Town, including municipally owned property where Verizon Wireless could locate a tower and remedy its significant gap in coverage. We recommend that an Alternative Site Analysis be submitted as noted above.

Pursuant to Section 277-9(A), "The applicant must submit documentation justifying to the Board the total height of any telecommunications tower and/or antenna and the basis therefor. Such justification shall be to provide service within the Town, to the extent practicable, unless good cause is shown." Applicant has submitted an RF Report (C Squared Systems, LLC, dated 2/20/19, signed by Martin J. Lavin). However, we recommend that complete propagation maps be submitted at 10 foot increases, beginning at 100' height, to determine the minimum height needed for a structure at this location.

Pursuant to Section 277-10(A), "Telecommunications towers shall not be artificially lighted or marked, except as required by law." Applicant, by its attorney, in its Statement in Support has stated that "The Tower will not be artificially lighted or marked."

Pursuant to Section 277-10(C), "If lighting is required, the applicant shall provide a detailed plan for sufficient lighting of as unobtrusive and inoffensive an effect as is permissible under state and federal regulations, and an artist's rendering or other visual representation showing the effect of light emanating from the site on neighboring habitable structures within 1,500 feet of all property lines on which the telecommunications tower is located." Applicant, by its attorney, in its Statement in Support has stated that "The only lighting proposed in connection with the Facility is a light on a timer in the equipment area. Such light will be pointing toward the ground so there will be no glare on surrounding properties." We recommend that the applicant explain the need for the light in the equipment area and the need for said light to be on a timer.

Pursuant to Section 277-11, "All telecommunications towers and antennas shall be located, fenced or otherwise secured in a manner which prevents unauthorized access. Specifically: A. All antennas, towers and other supporting structures, including guy wires, shall be made inaccessible to individuals and constructed or shielded in such a manner that they cannot be climbed or run into. B. Transmitters and telecommunications control points must be installed such that they are readily accessible only to persons authorized by the FCC's licensee to operate or service them." Pursuant to the zoning drawings, the proposed facility will be surrounded by an 8' tall chain link fence. We recommend that a lock be installed on the gate so there is no public access to the facility.

Pursuant to Section 277-12, "Telecommunications towers shall contain a sign no larger than four square feet to provide adequate notification to persons in the immediate area of the presence of an antenna that has transmission capabilities. The sign shall contain the name(s) of the owner(s) and operator(s) of the antenna(s) as well as emergency phone number(s). The sign shall be located so as to be visible from the access point of the site. No other signage, including advertising, shall be permitted on any antennas, antenna supporting structures or antenna towers unless required by law." Applicant by its attorney, in its Statement in Support has stated that "The Facility will contain a sign, no larger than four (4) square feet, with the name and emergency telephone number for Verizon Wireless, and a sign in accordance with FCC regulations regarding radio frequency emissions. No commercial or retail signage is proposed."

Pursuant to Section 277-13(B), "Telecommunications towers shall be located with a minimum setback from any property line a distance equal to 1/2 the height of the tower or the existing setback requirement of the underlying zoning district, whichever is greater. Further, any accessory structure shall be located so as to comply with the minimum setback requirements for the property on which it is situated." Applicant, by its attorney, in its Statement in Support has stated that "The Facility will comply with all of the setback

requirements set forth in Section 277-13, except for an individual side yard setback. In connection therewith, Verizon Wireless will require a variance from the Zoning Board of Appeals." Pursuant to the Department of Technical Services March 11, 2019 Review Memorandum, an Engineer is to re-evaluate the location of the tower and equipment area to comply with dimensional setbacks. We recommend that the tower and equipment area be staked to mark the exact location for this project and confirm setbacks to adjacent property.

Pursuant to Section 277-21, "The applicant and the owner of record of any proposed telecommunications tower property site shall be jointly required to execute and file with the Town a bond or other form of security acceptable to the Town as to type of security and the form and manner of execution in an amount deemed sufficient by the Board to assure the faithful performance of the terms and conditions of this chapter and any special use permit issued pursuant to this chapter. The full amount of the bond or security shall remain in full force and effect throughout the term of the special use permit and/or until the removal of the telecommunications tower, and any necessary site restoration is completed." Applicant has requested a temporary waiver of the bond until after the issuance of the Building Permit. Inasmuch as applicant is proposing a new wireless facility, as security, to assure the faithful performance of the terms and conditions of this chapter and any special use permit issued, we recommend that the applicant submit, for review and approval, a bond after the issuance of the Building Permit, but prior to the start of construction. The amount of security bond will be confirmed once the facility design has been established.

Pursuant to Section 277-23, " A. A holder of a special use permit for a telecommunications tower shall secure and at all times maintain public liability insurance, property damage insurance and umbrella insurance coverage for the duration of the special use permit in amounts as set forth below (1) Public liability: $1,000,000 per person/per occurrence. (2) Property damage: $1,000,000 per any one claim. (3) Umbrella liability: $3,000,000. B. The public and personal liability and property damage insurance policy shall specifically include the Town and its officials, employees and agents as additional insureds. C. The public and personal liability insurance and property damage insurance policy shall be issued by an agent or representative of an insurance company licensed to do business in the state. D. The public liability and property damage insurance policy shall contain an endorsement obligating the insurance company to furnish the Town with at least 30 days' written notice in advance of the cancellation of the insurance. E. Renewal or replacement policies or certificates shall be delivered to the Town at least 15 days before the expiration of the insurance which such policies are to renew or replace. F. Before construction of a permitted telecommunications tower is initiated, but in no case later than 15 days after the grant of the special use permit, the holder of the special use permit shall deliver to the Town a copy of each of the policies or certificates representing the insurance in the required amounts." We recommend that the insurance requirements as noted above be required for this project.

Pursuant to Section 277-24, "Any special use permit issued pursuant to this chapter shall contain a provision with respect to indemnity. Such provision shall require the holder of the special use permit, to the extent permitted by the law, to at all times defend, indemnify, protect, save, hold harmless and exempt the Town, officials of the Town, its officers, agents, servants, and employees from any and all penalties, damage or charges arising out of any and all claims, suits, demands, causes of action or award of damages, whether compensatory or punitive, or expenses arising therefrom, either at law or in equity, which might arise out of, or are caused by, the construction, erection, modification, location, products performance, operation, maintenance, repair, installation, replacement, removal or restoration of a telecommunications tower within the Town. With respect to the penalties, damages or charges referenced herein, reasonable attorneys' fees, consultants' fees and expert witness fees are included in those costs that are recoverable by the Town." Applicant has requested waiver of the indemnity requirement inasmuch as the Facility is not proposed to be on Town property.

We recommend that the applicant submit a full set of construction drawings depicting the specifications and installation of the proposed tower and its foundation; the specifications and mounting details of all proposed components to be installed on the proposed tower; and the specifications and installation of the proposed equipment compound; and the specifications and mounting details of all components in the proposed equipment compound.

Due to the amount of missing and incomplete material, we strongly recommend a conference call, with the applicant, including the individual(s) that will be submitting the material, to discuss the Code requirements and data that must be provided for this application so that the next submittal can be complete. Please contact Evamarie Wilson at 516-477-8051 or Al Tagliaferri at 914-316-5039, to establish a date and time for the call.

Upon review and discussion of all the submitted material required under the Town of Cortlandt Code, we find that there is essential outstanding material as noted above that must be submitted for review and approval and, therefore, this application is incomplete.

Sincerely,

R.A. Comi (electronic signature)

Richard A. Comi
CMS

cc: Chris Kehoe (via e-mail)
Michael Preziosi (via e-mail)
Al Tagliaferri (via e-mail)
Evamarie Wilson (via e-mail)

The Center for Municipal Solutions

Propagation Study Data Sheet

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
	GENERAL INFO:					
#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	**Losses:**					
#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					
#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	**Gains:**					
#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	**Result:**					
#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.

Exhibit 2
Pinnacle Report

PINNACLE TELECOM GROUP
Professional and Technical Services
Telecom Consulting

ANTENNA SITE FCC RF COMPLIANCE ASSESSMENT AND REPORT

PREPARED FOR

NEW YORK SMSA LIMITED PARTNERSHIP d/b/a VERIZON WIRELESS

"CORTLANDT" SITE
52 MONTROSE STATION ROAD
CORTLANDT, NY

JUNE 27, 2019

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Contents

Introduction and Summary

At the request of New York SMSA Limited Partnership d/b/a Verizon Wireless ("Verizon Wireless"), Pinnacle Telecom Group has performed an independent assessment of radiofrequency (RF) levels and related FCC compliance for the proposed installation of a wireless base station antenna operation on a new lattice tower to be erected at 52 Montrose Station Road in Cortlandt, NY. Verizon Wireless refers to the site as "Cortlandt", and the proposed operation involves directional panel antennas to facilitate wireless service provision in the 700 MHz, 850 MHz, 1900 MHz, and 2100 MHz frequency bands licensed to Verizon Wireless by the FCC.

The FCC requires wireless antenna operators to perform an assessment of potential human exposure to radiofrequency (RF) fields emanating from all the transmitting antennas at a site whenever antenna operations are added or modified, and to ensure compliance with the Maximum Permissible Exposure (MPE) limit in the FCC regulations. In this case, there are no other antenna operations at the site to include in the compliance assessment. Note that FCC regulations require any future antenna collocators to assess and assure continuing compliance based on the cumulative effects of all then-proposed and then-existing antennas at the site.

This report describes a mathematical analysis of RF levels resulting around the site in areas of unrestricted public access, that is, at ground level around the site. The compliance analysis employs a standard FCC formula for calculating the effects of the antennas in a very conservative manner, in order to overstate the RF levels and to ensure "safe-side" conclusions regarding compliance with the FCC limit for safe continuous exposure of the general public.

The results of a compliance assessment can be explained in layman's terms by describing the calculated RF levels as simple percentages of the FCC MPE limit. If the reference for that limit is 100 percent, then calculated RF levels higher than 100 percent indicate the MPE limit is exceeded, while calculated RF levels consistently lower than 100 percent serve as a clear and sufficient demonstration

of compliance with the MPE limit. We will also describe the overall worst-case calculated result via the "plain-English" equivalent "times-below-the-limit factor".

The results of the FCC RF compliance assessment in this case are as follows:

- At street level around the site, the conservatively calculated maximum RF level from the proposed antenna operations is 1.0038 percent of the FCC MPE limit. In other words, even with the significant degree of conservatism in the calculations, the worst-case calculated RF level is still more than 95 times below the FCC limit for safe, continuous exposure to the RF emissions from antennas.
- The results of the calculations provide a clear demonstration that the RF levels from the proposed antenna operations at the site satisfy the applicable criteria for controlling potential human exposure to RF fields, and the RF levels will be in clear compliance with the FCC regulations and limit concerning RF safety. Moreover, because of the conservative methodology and incorporated assumptions, RF levels actually caused by the antennas will be even less significant than the calculation results here indicate.

The remainder of this report provides the following:

- relevant technical data on the proposed Verizon Wireless antenna operations at the site;
- descriptions of the applicable FCC mathematical models for assessing MPE compliance, and application of the relevant technical data to those models; and
- the results of the analysis, and the compliance conclusion for the site.

In addition, Appendix A provides background on the FCC MPE limit, along with a list of FCC references on compliance.

Note on Non-Interference

In connection with the RF emissions from the proposed antenna operation, we note that Verizon Wireless has been granted by the FCC exclusive geographic rights to its channel frequencies, and is further subject to strict FCC technical standards on parameters such as maximum power and out-of-band emissions, as well as regulations related to non-interference. Therefore, we can provide a clear assurance that the proposed antenna operation will not interfere with public safety communications, or the usual and customary reception of radio, television, or other communications services enjoyed by the nearby residential and non-residential properties, or other existing telecommunications devices. At the same time, however, we would be professionally remiss in omitting a reference to a July 2003 FCC decision – a "Memorandum Opinion and Order" in "WT Docket No. 02-100" that related to interference. That FCC Order concluded that any local ordinance requiring a certification of non-interference related to a wireless antenna siting application represents "impermissible regulation" of RF interference, an area under exclusive FCC jurisdiction and federally-preempted from local regulation.

Antenna and Transmission Data

The table that follows provides the key compliance-related data for the proposed Verizon Wireless operations.

General Data	
Frequency Bands	700 MHz, 850 MHz, 1900 MHz, and 2100 MHz
Service Coverage Type	Sectorized
Antenna Type	Directional Panel
Antenna Centerline Height AGL	137 ft.
Antenna Line Loss	0 dB (conservatively ignored)
700 MHz Antenna Data	
Antenna Model (Max. Gain)	Commscope NHH-65B-R2B (14.9 dBi)
RF Channels per Sector	Four channels @ 40 watts

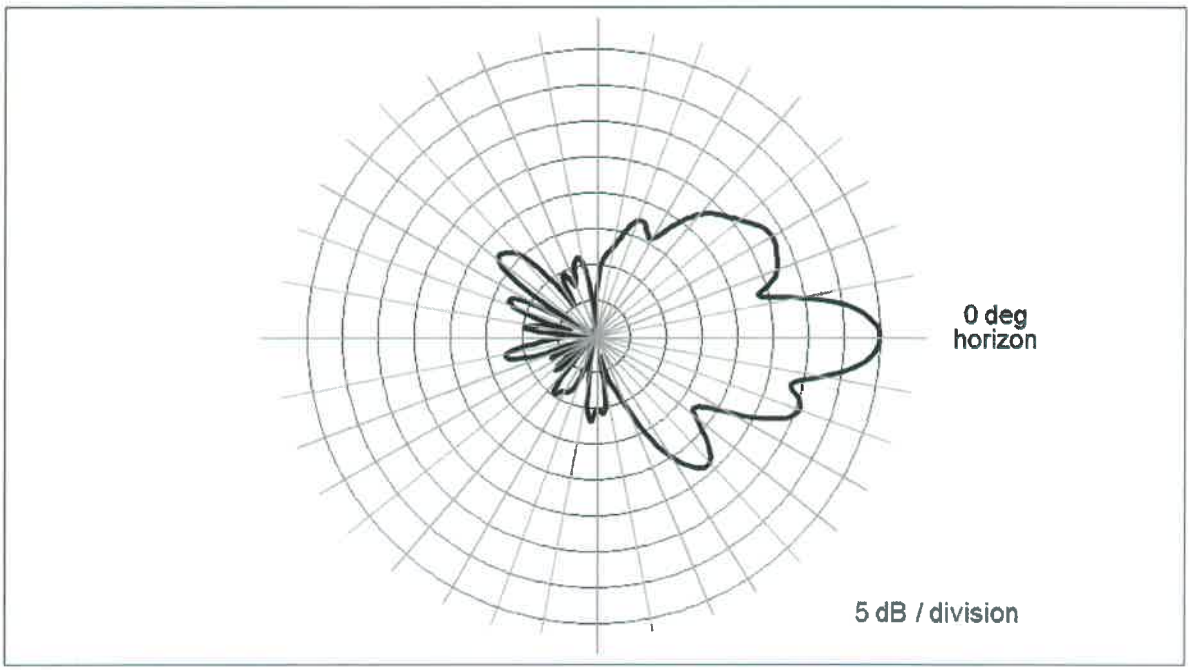
850 MHz Antenna Data	
Antenna Model (Max. Gain)	Commscope NHH-65B-R2B (15.0 dBi)
RF Channels per Sector	Four channels @ 40 watts
1900 MHz Antenna Data	
Antenna Model (Max. Gain)	Commscope NHH-65B-R2B (17.9 dBi)
RF Channels per Sector	Four channels @ 40 watts
2100 MHz Antenna Data	
Antenna Model (Max. Gain)	Commscope NHH-65B-R2B (18.4 dBi)
RF Channels per Sector	Four channels @ 40 watts

The antenna vertical-plane radiation pattern is used in the calculations of RF levels at street level around a site. Figure 1 that follows shows the vertical-plane pattern of the proposed antenna model in 700 MHZ band.

In this type of antenna pattern diagram, the antenna is effectively pointed at the three o'clock position (the horizon) and the pattern at different angles is described using decibel units. Note that the use of a decibel scale to describe the relative pattern at different angles actually serves to significantly understate the actual focusing effects of the antenna. Where the antenna pattern reads 20 dB the relative RF energy emitted at the corresponding downward angle is 1/100th of the maximum that occurs in the main beam (at 0 degrees); at 30 dB, the energy is only 1/1000th of the maximum.

Note that the automatic pattern-scaling feature of our internal software may skew side-by-side visual comparisons of different antenna models, or even different parties' depictions of the same antenna model.

Figure 1. Commscope NHH-65B-R2B – 700 MHz Vertical-plane Pattern



Compliance Analysis

FCC Office of Engineering and Technology Bulletin 65 ("OET Bulletin 65") provides guidelines for mathematical models to calculate the RF levels at various points around transmitting antennas. At street-level around an antenna site (in what is called the "far field" of the antennas), the RF levels are directly proportional to the total antenna input power and the relative antenna gain in the downward direction of interest – and the levels are otherwise inversely proportional to the square of the straight-line distance to the antenna. Conservative calculations also assume the potential RF exposure is enhanced by reflection of the RF energy from the intervening ground. Our calculations will assume a 100% "perfect" reflection, the worst-case approach.

The formula for street-level RF compliance calculations for any given wireless antenna operation is as follows:

$$MPE\% = (100 * TxPower * 10^{(Gmax-Vdisc/10)} * 4) / (MPE * 4\pi * R^2)$$

where

MPE%	=	RF level, expressed as a percentage of the MPE limit applicable to continuous exposure of the general public
100	=	factor to convert the raw result to a percentage
TxPower	=	maximum net power into antenna sector, in milliwatts, a function of the number of channels per sector, the transmitter power per channel, and line loss
$10^{(Gmax-Vdisc/10)}$	=	numeric equivalent of the relative antenna gain in the downward direction of interest, referenced to any applied antenna mechanical downtilt; data on the antenna vertical-plane pattern is taken from manufacturer specifications
4	=	factor to account for a 100-percent-efficient energy reflection from the ground, and the squared relationship between RF field strength and power density ($2^2 = 4$)
MPE	=	FCC general population MPE limit
R	=	straight-line distance from the RF source to the point of interest, centimeters

The street-level MPE% calculations are performed out to a distance of 500 feet from the facility to points 6.5 feet (approximately two meters, the FCC-recommended standing height) off the ground, as illustrated in the Figure 2 on the next page.

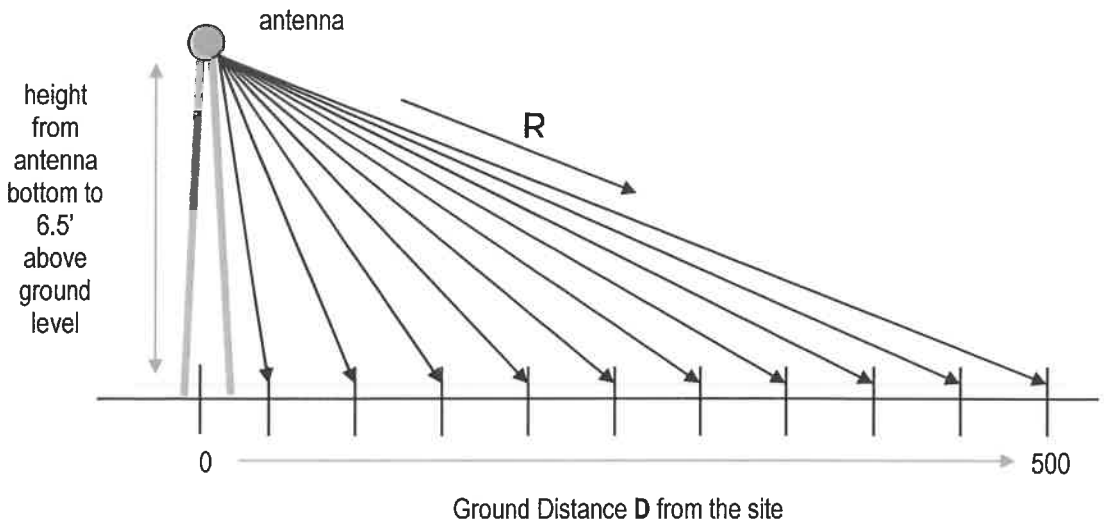


Figure 2. MPE% Calculation Geometry

It is popularly understood that the farther away one is from an antenna, the lower the RF level – which is generally but not universally correct. The results of MPE% calculations fairly close to the site will reflect the variations in the vertical-plane antenna pattern as well as the variation in straight-line distance to the antennas. Therefore, RF levels may actually increase slightly with increasing distance within the range of zero to 500 feet from the site.

As the distance approaches 500 feet and beyond, though, the antenna pattern factor becomes less significant, the RF levels become primarily distance-controlled, and as a result the RF levels generally decrease with increasing distance, and are well understood to be in compliance.

FCC compliance for a multiple-band antenna operation is assessed in the following manner. At each distance point along the ground, an MPE% calculation is made for the RF effect in each frequency band, and the sum of the individual MPE% contributions at each point is compared to 100 percent, which serves as the normalized reference for the FCC MPE limit. We refer to the sum of the individual MPE% contributions as "total MPE%", and any calculated MPE% total MPE% result exceeding 100 percent is, by definition, higher than the FCC limit and represents non-compliance and a need to mitigate the RF levels. If, on

the other hand, all results are below 100 percent, that set of results serves as a demonstration of compliance with the MPE limit.

We refer to the sum of the individual MPE% contributions as "total MPE%", and any calculated total MPE% result exceeding 100 percent is, by definition, higher than the FCC limit and represents non-compliance and a need to mitigate the potential exposure. If all results are consistently below 100 percent, on the other hand, that set of results serves as a clear and sufficient demonstration of compliance with the MPE limit.

Note that according to the FCC, when directional antennas such as the panels commonly used in wireless communications are used, the compliance assessments are based on the RF effect of a single (facing) antenna sector or, in cases of non-identical parameters, the worst-case effect of any individual sector.

The following conservative methodology and assumptions are incorporated into the MPE% calculations on a general basis:

1. The antennas are assumed to be operating continuously at maximum power, and at maximum channel capacity.
2. The power-attenuation effects of shadowing or other obstructions to the line-of-sight path from the antenna to the point of interest are ignored.
3. The calculations intentionally minimize the distance factor (R) by assuming a 6'6" human and performing the calculations from the bottom (rather than the centerline) of the antenna.
4. The potential RF exposure at ground level is assumed to be 100-percent enhanced (increased) via a "perfect" field reflection from the ground itself.

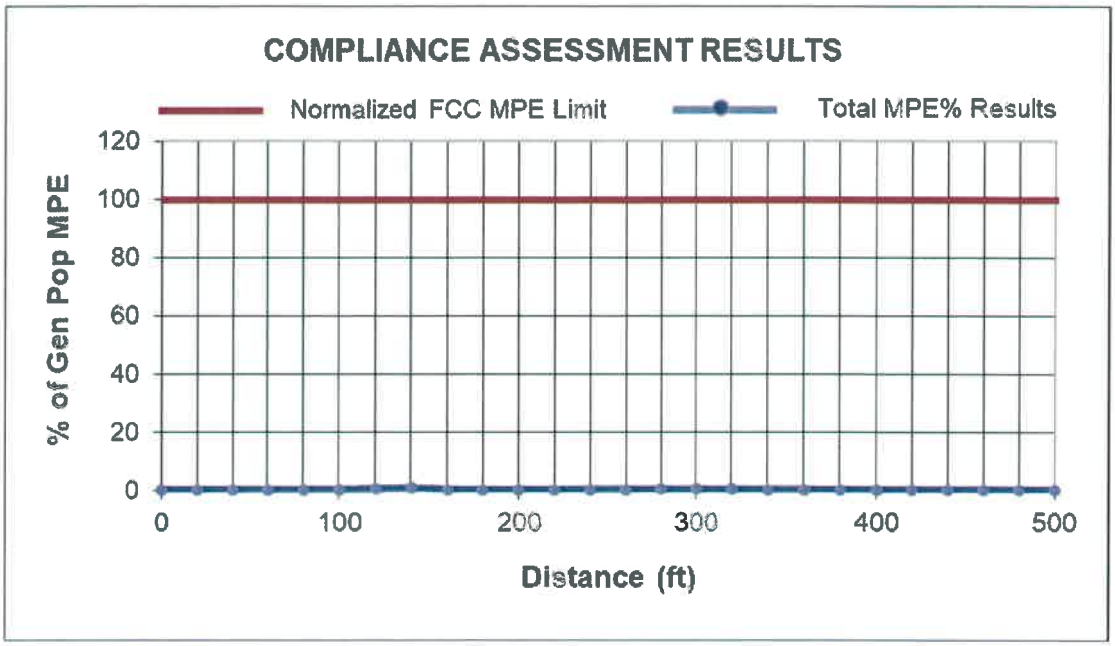
The net result of these assumptions is to significantly overstate the calculated RF exposure levels relative to the levels that will actually occur – and the purpose of this conservatism is to allow very "safe-side" conclusions about compliance.

The table that follows provides the results of the MPE% calculations for each frequency band, with the worst-case result highlighted in bold in the last column.

Ground Distance (ft)	Verizon Wireless 700 MHz MPE%	Verizon Wireless 850 MHz MPE%	Verizon Wireless 1900 MHz MPE%	Verizon Wireless 2100 MHz MPE%	Total MPE%
0	0.0213	0.0975	0.0181	0.0005	0.1374
20	0.0099	0.1234	0.0460	0.0002	0.1795
40	0.0117	0.1795	0.0417	0.0440	0.2768
60	0.0764	0.0668	0.0059	0.1383	0.2875
80	0.2594	0.0453	0.0015	0.0103	0.3165
100	0.3206	0.0263	0.0314	0.0004	0.3787
120	0.1598	0.0102	0.5003	0.0547	0.7251
140	0.0641	0.0119	0.4789	0.4490	**1.0038**
160	0.0424	0.0307	0.0199	0.3936	0.4865
180	0.0541	0.0195	0.0359	0.0079	0.1173
200	0.1016	0.0036	0.0027	0.0956	0.2036
220	0.1631	0.0020	0.0204	0.0443	0.2297
240	0.3160	0.0382	0.0115	0.0510	0.4168
260	0.3385	0.0609	0.0041	0.0730	0.4765
280	0.3872	0.1235	0.0304	0.0265	0.5676
300	0.3654	0.1434	0.0402	0.0030	0.5520
320	0.3139	0.1666	0.0152	0.0338	0.5296
340	0.2565	0.1478	0.0026	0.0409	0.4478
360	0.2024	0.1175	0.0029	0.0265	0.3492
380	0.1589	0.0809	0.0160	0.0076	0.2634
400	0.1324	0.0451	0.0241	0.0005	0.2022
420	0.1269	0.0170	0.0175	0.0036	0.1650
440	0.1165	0.0156	0.0160	0.0033	0.1515
460	0.1332	0.0032	0.0035	0.0045	0.1444
480	0.1710	0.0087	0.0011	0.0008	0.1817
500	0.1584	0.0081	0.0010	0.0008	0.1683

As indicated, even with the significant degree of conservatism built into the calculations, the maximum calculated RF level is 1.0038 percent of the FCC general population MPE limit – well below the 100-percent reference for compliance.

A graph of the overall street-level calculation results, provided on the next page, provides a clearer *visual* illustration of the relative insignificance of the calculated RF levels. The line representing the overall calculation results barely rises above the graph's baseline, and shows an obviously clear, consistent margin to the FCC MPE limit.



Compliance Conclusion

According to the FCC, the FCC MPE limit has been constructed in such a manner that continuous human exposure to RF emissions up to and including 100 percent of the MPE limit is acceptable and safe.

As described, the analysis in this case shows that the maximum calculated RF level from the proposed operations at the site, is 1.0038 percent of the FCC MPE limit. In other words, the worst-case calculated RF level from the antenna operations is more than 95 times below the limit established as safe for continuous human exposure to the RF emissions from antennas.

The results of the calculations provide a clear demonstration of compliance with the FCC MPE limit. Moreover, because of the conservative calculation methodology and operational assumptions we applied in the analysis, RF levels actually caused by the antennas will be even less significant than the calculation results here indicate.

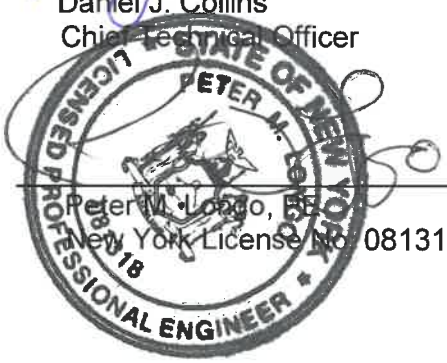
Certification

The undersigned certify as follows:

1. We have read and are familiar with the FCC regulations concerning RF safety and the control of human exposure to RF fields (47 CFR 1.1301 *et seq*).
2. To the best of our knowledge, the statements and information disclosed in this report are true, complete and accurate.
3. The analysis of site RF compliance provided herein is consistent with the applicable FCC regulations, additional guidelines issued by the FCC, and industry practice.
4. The results of the assessment indicate that the subject antenna operations are in full compliance with the FCC regulations concerning the control of potential RF exposure.

Daniel J. Collins
Chief Technical Officer

6/27/19
Date



Peter M. Losco, PE
New York License No. 081318

6/27/19
Date

Appendix A. Background on the FCC MPE Limit

FCC Rules and Regulations

As directed by the Telecommunications Act of 1996, the FCC has established limits for maximum continuous human exposure to RF fields.

The FCC maximum permissible exposure (MPE) limits represent the consensus of federal agencies and independent experts responsible for RF safety matters. Those agencies include the National Council on Radiation Protection and Measurements (NCRP), the Occupational Safety and Health Administration (OSHA), the National Institute for Occupational Safety and Health (NIOSH), the American National Standards Institute (ANSI), the Environmental Protection Agency (EPA), and the Food and Drug Administration (FDA). In formulating its guidelines, the FCC also considered input from the public and technical community – notably the Institute of Electrical and Electronics Engineers (IEEE).

The FCC's RF exposure guidelines are incorporated in Section 1.301 *et seq* of its Rules and Regulations (47 CFR 1.1301-1.1310). Those guidelines specify MPE limits for both occupational and general population exposure.

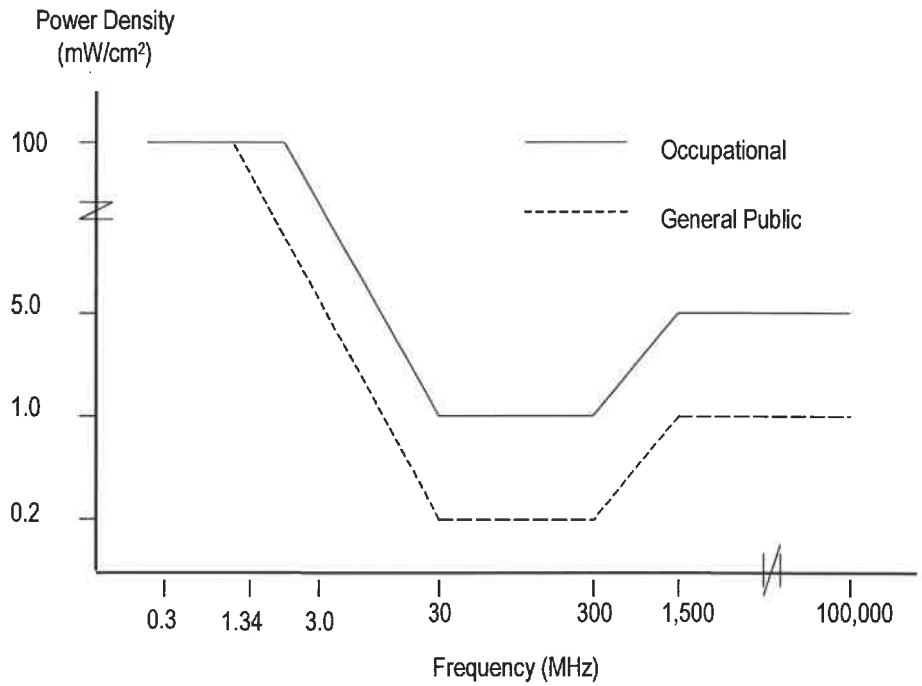
The specified continuous exposure MPE limits are based on known variation of human body susceptibility in different frequency ranges, and a Specific Absorption Rate (SAR) of 4 watts per kilogram, which is universally considered to accurately represent human capacity to dissipate incident RF energy (in the form of heat). The occupational MPE guidelines incorporate a safety factor of 10 or greater with respect to RF levels known to represent a health hazard, and an additional safety factor of five is applied to the MPE limits for general population exposure. Thus, the general population MPE limit has a built-in safety factor of more than 50. The limits were constructed to appropriately protect humans of both sexes and all ages and sizes and under all conditions – and continuous exposure at levels equal to or below the applicable MPE limits is considered to result in no adverse health effects or even health risk.

The reason for *two* tiers of MPE limits is based on an understanding and assumption that members of the general public are unlikely to have had appropriate RF safety training and may not be aware of the exposures they receive; occupational exposure in controlled environments, on the other hand, is assumed to involve individuals who have had such training, are aware of the exposures, and know how to maintain a safe personal work environment.

The FCC's RF exposure limits are expressed in two equivalent forms, using alternative units of field strength (expressed in volts per meter, or V/m), and power density (expressed in milliwatts per square centimeter, or mW/cm^2). The table on the next page lists the FCC limits for both occupational and general population exposures, using the mW/cm^2 reference, for the different radio frequency ranges.

Frequency Range (F) (MHz)	Occupational Exposure (mW/cm^2)	General Public Exposure (mW/cm^2)
0.3 - 1.34	100	100
1.34 - 3.0	100	$180 / F^2$
3.0 - 30	$900 / F^2$	$180 / F^2$
30 - 300	1.0	0.2
300 - 1,500	F / 300	F / 1500
1,500 - 100,000	5.0	1.0

The diagram below provides a graphical illustration of both the FCC's occupational and general population MPE limits.



Because the FCC's MPE limits are frequency-shaped, the exact MPE limits applicable to the instant situation depend on the frequency range used by the systems of interest.

The most appropriate method of determining RF compliance is to calculate the RF power density attributable to a particular system and compare that to the MPE limit applicable to the operating frequency in question. The result is usually expressed as a percentage of the MPE limit.

For potential exposure from multiple systems, the respective percentages of the MPE limits are added, and the total percentage compared to 100 (percent of the limit). If the result is less than 100, the total exposure is in compliance; if it is more than 100, exposure mitigation measures are necessary to achieve compliance.

Note that the FCC "categorically excludes" certain types of antenna facilities from the routine requirement to specifically (i.e., mathematically) demonstrate compliance with the MPE limit. Among those types of facilities are cellular antennas mounted on any type of tower, when the bottoms of the antennas are more than 10 meters (c. 32.8 feet) above ground. The basis for the categorical exclusion, according to the FCC, is the understanding that because of the low power and the directionality of the antennas, such facilities – individually and collectively – are well understood to have no significant effect on the human environment. As a result, the FCC automatically deems such facilities to be in compliance.

In addition, FCC Rules and Regulations Section 1.1307(b)(3) describes a provision known in the industry as "the 5% rule". It describes that when a specific location – like a spot on a rooftop – is subject to an overall exposure level exceeding the applicable MPE limit, operators with antennas whose MPE% contributions at the point of interest are less than 5% are exempted from the obligation otherwise shared by all operators to bring the site into compliance, and those antennas are automatically deemed by the FCC to satisfy the rooftop compliance requirement.

FCC References on Compliance

47 CFR, FCC Rules and Regulations, Part 1 (Practice and Procedure), Section 1.1310 (Radiofrequency radiation exposure limits).

FCC Second Memorandum Opinion and Order and Notice of Proposed Rulemaking (FCC 97-303), *In the Matter of Procedures for Reviewing Requests for Relief From State and Local Regulations Pursuant to Section 332(c)(7)(B)(v) of the Communications Act of 1934 (WT Docket 97-192), Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation (ET Docket 93-62), and Petition for Rulemaking of the Cellular Telecommunications Industry Association Concerning Amendment of the Commission's Rules to Preempt State and Local Regulation of Commercial Mobile Radio Service Transmitting Facilities*, released August 25, 1997.

FCC First Memorandum Opinion and Order, ET Docket 93-62, *In the Matter of Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation*, released December 24, 1996.

FCC Report and Order, ET Docket 93-62, *In the Matter of Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation*, released August 1, 1996.

FCC Office of Engineering and Technology (OET) Bulletin 65, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields", Edition 97-01, August 1997.

Exhibit 3
C Squared Supplemental Report

C Squared Systems

August 16, 2019

C Squared Systems, LLC ("C Squared"), a firm specializing in radio-frequency engineering and wireless communication networks, submits this supplemental report in connection with the application made by New York SMSA Limited Partnership d/b/a Verizon Wireless ("Verizon Wireless") for the proposed public utility wireless telecommunication facility at 52 Montrose Station Road, Cortlandt, New York ("Site"). This report was prepared in response to comments from Town's Director of the Department of Technical Services, Michael Preziosi, P.E. ("Town Engineer") on March 11, 2019 and the Town's Consultant, The Center for Municipal Solutions ("Town Consultant"), dated April 19, 2019. Kindly see our responses below.

***Town Engineer Comment**: The 2/20/2019 RF Report does not accurately identify existing telecommunication sites within the vicinity of the proposed tower. Namely the towers located at 260 Croton Avenue and 451 Yorktown Road. The report implies they are pending. Approvals were granted and the telecommunication towers are active to the Town's understanding. The Applicant's Consultant shall revise and clarify.*

Response: The Verizon Wireless site at 260 Croton Avenue (a/k/a "Dickerson Mountain" site) is clearly identified as an existing site on page 6 of C Squared's prior RF report, dated February 20, 2019 ("C Squared February Report"). The location of the site and its coverage are depicted on all the plots in the report.

The Verizon Wireless site at 451 Yorktown Road (a/k/a "Croton Reservoir" site) is a relatively recent part of Verizon Wireless' network. It is my understanding that such site was completed after the C Squared February Report. Notwithstanding, the Croton Reservoir site is distant from the proposed site and provides a de minimis amount of coverage to the area reflected on the coverage plots, as shown on the updated plots attached hereto as Exhibit A.

Town Consultant Comment: *Pursuant to Section 277-6(E)(1)(v), "Propagation studies of the proposed site and all adjoining proposed or in-service or existing sites." The applicant has submitted an RF Report (C Squared Systems, LLC, dated 2/20/19, signed by Martin J. Lavin), which includes as Exhibits, drive test maps (conducted on 11/11/17) and propagation maps. The RF Report notes that the proposed facility is needed to remedy Verizon Wireless' gap in coverage and capacity needs. Only propagation maps for 750 MHz LTE and 2100 MHz LTE service were submitted. In order to determine the need for a new facility, we recommend that Verizon submit propagation maps for all frequencies that it is authorized to operate in this area, showing all existing and proposed adjacent sites. The RF Report at Section 1.1 Systems Considerations, states that Verizon Wireless network, over which it seeks to provide seamless and reliable service, includes licenses in the 700 (a/k/a 750), 850, 1900, and 2100 MHz frequency bands. We also recommend that current drive test data be provided, as well as detailed proof of need to operate at -85 dBm, which is ten times stronger than industry accepted -95 dBm. We recommend that the applicant submit propagation maps and drive test data as noted above. To confirm the accuracy of the data and maps provided, we require the applicant to complete the attached Propagation Data Study Sheet and attest to the maximum power being utilized for the maps.*

Response: The 750 MHz is the frequency band which provides the most geographic area and the 2100 MHz frequency band is the frequency band which provides the least geographic coverage area. Therefore, with both of these bands in the C-Squared February Report, the best and worst scenarios were presented. To provide coverage plots at the other frequencies serves no purpose. As the need for coverage in the 750 MHz range has been established, there is no need to show the coverage area from the higher frequencies (i.e 850, 1900 MHz), which would be smaller geographically and full encompassed in the proposed 750 MHz coverage.

It is also important to note that the propagation maps already provided in the C Squared February Report depicts -85 dBm and -95 dBm coverage. Therefore the request to see the coverage at -85 dBm is not applicable since the coverage is set forth in the C Squared February Report.

Moreover, as a federally licensed wireless provider of its network, Verizon Wireless determines the appropriate power settings for its sites in accordance with its FCC license. Verizon Wireless reserves the right to set the power at appropriate levels and adjust same for the optimal functioning of its network. Therefore, Verizon Wireless will not attest that Verizon Wireless will use maximum power at all sites as such a uniform pledge is sometimes incompatible with optimal system performance and could negatively impact service.

Town Consultant Comment: *In order to determine capacity needs, the applicant needs to specify which sectors of which sites need relief and to provide the appropriate key performance indicator. If any sector of any adjoining sites will need relief in the next year, we will need year over year data to show growth.*

Response: The instant site is proposed in area where there is an established gap in coverage. Please see the C Squared February Report. Capacity issues are not relevant to this application.

Town Consultant Comment: *...the material provided does not demonstrate the need for the proposed facility at 140' height. The need and minimum height required must be established. A concealment tower at a lower height would dramatically decrease the visual impact to the surrounding community.*

Response: Attached hereto as Exhibit B are coverage maps showing the difference in coverage at varying heights. As demonstrated by these maps, the coverage decreases when lowering the height. Therefore, the need for the height of the 140' tower has been established. As for the visual impact, I refer this Board to the Visual Resource Analysis done in connection with this site which demonstrated that the 140' tower will have no adverse visual impact.

Town Consultant Comment: *... The submitted documents claim that there are no existing telecommunications towers or existing tall structures (or sites with existing towers or structures)*

on which Verizon Wireless can locate its equipment and remedy its significant gap in coverage and that there is not property in non-residentially zoned areas of the Town, including municipally owned property where Verizon Wireless could locate a tower and remedy its significant gap in coverage. However, the documents do not note all alternative higher priority locations that that could accommodate co location or a new structure in a non-residential zone. We recommend that the applicant submit an Alternative Site Analysis to confirm that there are no existing higher priority locations for the proposed facility.

Response: In the beginning of the comment above, the Town Consultant acknowledges that that *"submitted documents claim that there are no existing telecommunications towers or existing tall structures (or sites with existing towers or structures) on which Verizon Wireless can locate its equipment and remedy its significant gap in coverage and that there is not property in non-residentially zoned areas of the Town, including municipally owned property where Verizon Wireless could locate a tower and remedy its significant gap in coverage."* Therefore, no alternatives exist to the site which are either existing structures or non-residentially zoned property so that the documentation furnished does address all of the "higher priority" locations and "confirm that there are no existing higher priority locations for the proposed facility."

Town Consultant Comment: *... applicant has not proven its need for the proposed facility at this location. We recommend that the applicant submit propagation maps and current drive test data as noted above to confirm the accuracy of the data and maps provided, to confirm that the proposed Facility would provide the necessary coverage, and we recommend the applicant complete the attached Propagation Data Study Sheet and attest to the maximum power being utilized for the maps.*

Response: All of the plots requested/required/recommended above are already included in the C Squared February Report as submitted to the Town of Cortlandt and subsequently provided to the Town's Consultant. No additional plots are needed.

Finally, Verizon Wireless, and Verizon Wireless alone, determines the appropriate power settings for its sites. Verizon Wireless reserves the right to set the power at appropriate levels and adjust same for the optimal functioning of its network. Therefore, Verizon Wireless will not attest that it will use maximum power at all sites as such a uniform pledge is sometimes incompatible with optimal system performance and could negatively impact service.

Town Consultant Comment: *... we recommend that complete propagation maps be submitted at 10 foot increases, beginning at 100' height, to determine the minimum height needed for a structure at this location.*

Response: As noted above, plots of the in-building and in-vehicle coverage of the proposed site at tower heights of 100', 110', 120', 130' and 140' AGL are attached hereto as Exhibit B. As demonstrated by these maps, the coverage decreases when lowering the height of the tower. Reference is also made to the visual resource assessment which demonstrates the 140' tower will have no adverse visual impact. Therefore, the need for the height of the 140' Tower has been established.

Conclusion

As detailed herein and in our C Squared February Report, C Squared has demonstrated that Verizon Wireless has a significant gap in coverage in the Town of Cortlandt and the proposed Facility at the Site (52 Montrose Station Road) will remedy that significant gap in coverage. Moreover, there is no feasible alternative to the proposed Facility at the Site which would remedy the significant gap in coverage. Therefore, it is respectfully submitted that the proposed Facility at the 52 Montrose Station Road site should be approved forthwith.

Qualifications and Statement of Certification

I am a Radio Frequency Engineer for C Squared Systems, LLC, which has been retained by Verizon Wireless. I have extensive experience in the design and testing of Verizon Wireless' communication

facilities as part of its federally licensed network in New York. For example, I have participated in the design and performance of the Verizon Wireless' network in New York, participated in engineering efforts to provide a quality system build-out, evaluated zoning provisions applicable to wireless communication facilities in various communities, testified before local zoning boards in zoning hearings, prepared search areas for new installations, participated in drive tests and reviewed drive test results, participated in site visits, prepared RF designs for proposed installations, reviewed plans and prepared RF packages for zoning hearings, tested and evaluated new sites, and located and corrected system performance problem areas.

I have been involved in Verizon Wireless' design of the proposed wireless communication facility at the above site. I have personally visited the area, reviewed coverage data for the proposed installation, and reviewed RF coverage information for Verizon Wireless' existing sites. I certify to the best of my knowledge that the statements in this report are true and accurate.

Martin J. Lavin

Senior RF Engineer

Date: August 16, 2019

Z:\SSDATA\WPDATA\SS4\WP\NEWBANM\MAYBECK\CORTLANDT\ZONING\CSQUARED\LJSREPORT.CORTLANDT.MS.DOCX

C² Systems

Resume of: Martin J. Lavin 65 Dartmouth Drive, Auburn, NH 603-644-2820

SUMMARY: Over thirty years of experience in the RF and wireless communications industry.

EXPERIENCE:

C Squared Systems, LLC **2008-Present**
Senior RF Engineer

- Zoning Hearing Support
- Advanced Wireless Services RF System Design
- Wireless Broadband Access Systems Engineering
- Drive Test Services
- Intermodulation Studies
- RF Exposure Studies

U.S. Cellular, Bedford, NH **2002-2008**
Senior RF Engineer

- West Virginia / Maryland / Pennsylvania CDMA System Design and Optimization
- CDMA Capacity Planning and New Site Builds
- Subject Matter Expert for E-911, Public Safety Interference Issues, Collocation, and Technology Transitions

Independent Wireless One (Sprint Network Affiliate), Londonderry, NH **2000-2002**
Senior RF Engineer

- CDMA System Buildout in New Hampshire and Vermont
- Organized Field Office
- RF System Design and Site Selection Point of Contact with Site Acquisition and Construction
- Capacity Planning
- System Performance

Nextel, Reston, VA **1999-2000**
Senior Manager – Technology Development

- New Feature Development for the Motorola iDEN system
- Corporate RF Engineering Standards
- Evaluation of international and domestic spectrum acquisition opportunities

USI, Chantilly, VA **1999**
Program Manager

- Software development projects in Europe and U.S., including budget and schedule responsibility.
- Direct client contact for requirements gathering and proposal writing.

LCC International, McLean, VA **1991-1998**
Manager of Engineering

- Domestic and International Cellular & PCS System Design and Buildout
- Nationwide GSM Network Buildouts of Australia and New Zealand
- FCC PCS Pioneer's Preference
- Strategic Planning for LCC Initial Public Offering
- Responsible for RF Design and Site Selection for Los Angeles MTA
- Wrote network equipment RFP for two PCS MTAs
- Software Product Manager for CellCAD, ANET, and MetroNET
- Managed Drive Test Services, including all Timesheet and Expense Approval

Carl T. Jones Corporation / SAIC, Springfield, VA **1987-1991**
EMC/EMI Engineer

- Test and Measurement consulting for FCC compliance
- Broadcast (AM-FM-TV) consulting

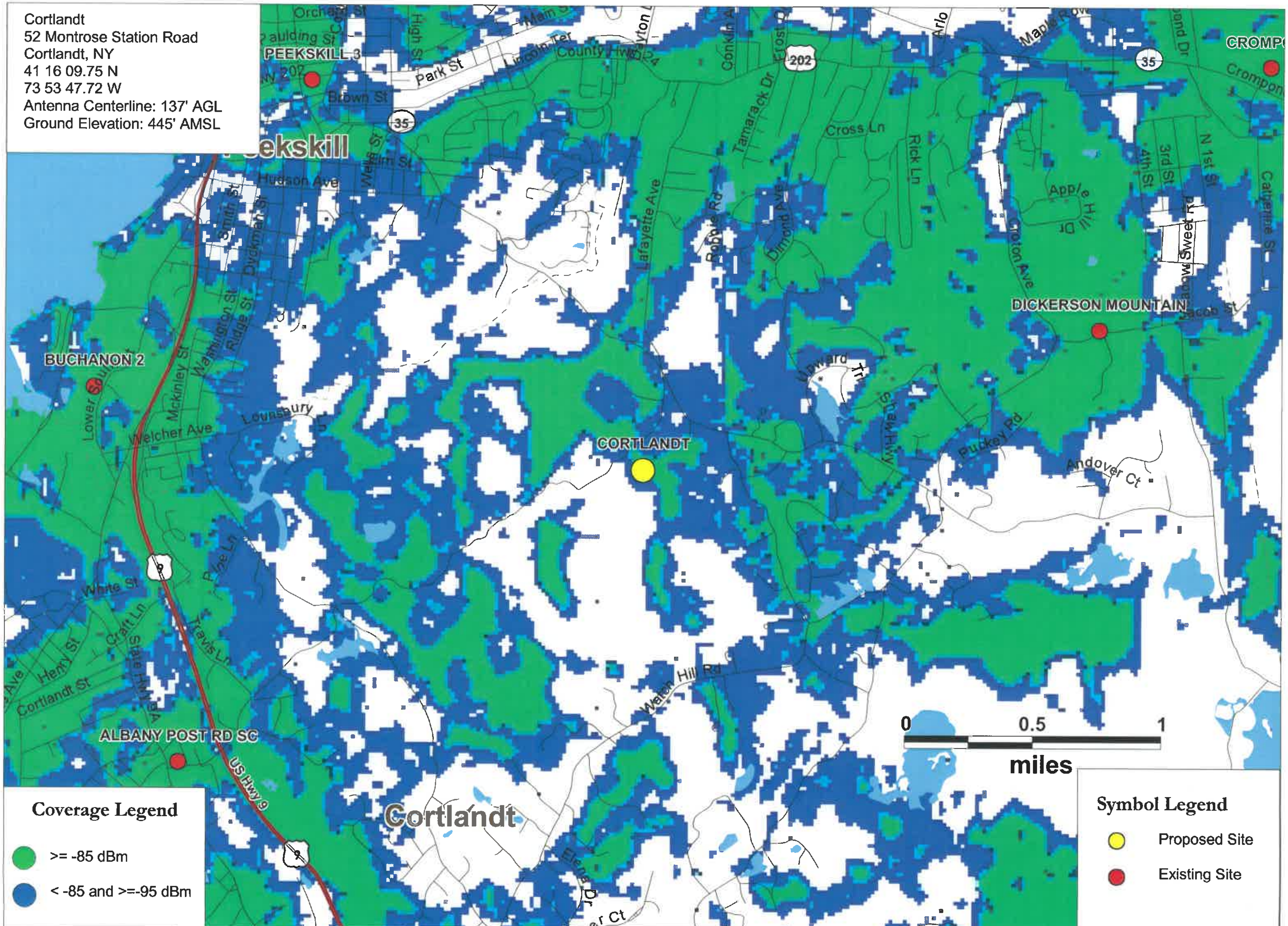
EDUCATION:

University of New Hampshire – Whittemore School of Business and Economics
Master of Business Administration

Rensselaer Polytechnic Institute
Bachelor of Science, Electrical Engineering

EXHIBIT A

Cortlandt
52 Montrose Station Road
Cortlandt, NY
41 16 09.75 N
73 53 47.72 W
Antenna Centerline: 137' AGL
Ground Elevation: 445' AMSL


PEEKSKILL 3
BUCHANON 2
CORTLANDT
DICKERSON MOUNTAIN
ALBANY POST RD SC
CROMP
Cortlandt
Park St
Brown St
Hudson Ave
Lafayette Ave
Robbie Rd
Dimond Ave
Tamarack Dr
Cross Ln
Rick Ln
Croton Ave
Lower South
Mckinley St
Washington St
Ridge St
Welcher Ave
Lounsbury
White St
Henry St
Cortlandt St
Craft Ln
Travis Ln
Pine Ln
US Hwy 9
Watch Hill Rd
Buckey Rd
Andover Ct
Shaw Hwy
0
0.5
1
miles

Coverage Legend

>= -85 dBm

< -85 and >=-95 dBm

Symbol Legend

Proposed Site

Existing Site

Existing 750 MHz LTE Coverage

Cortlandt

52 Montrose Station Road
Cortlandt, NY

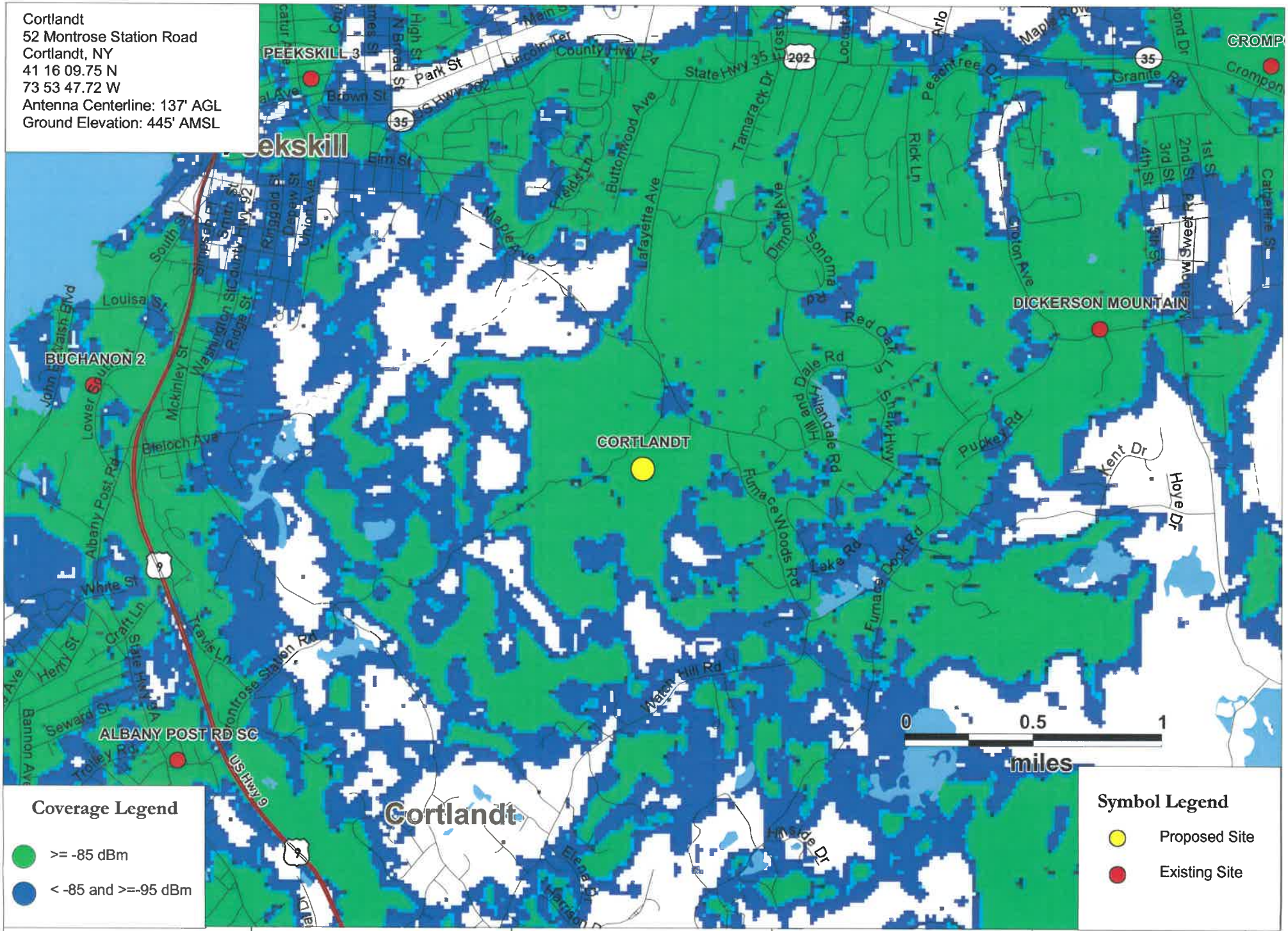
verizon

GENERAL NOTES

PREPARED ON

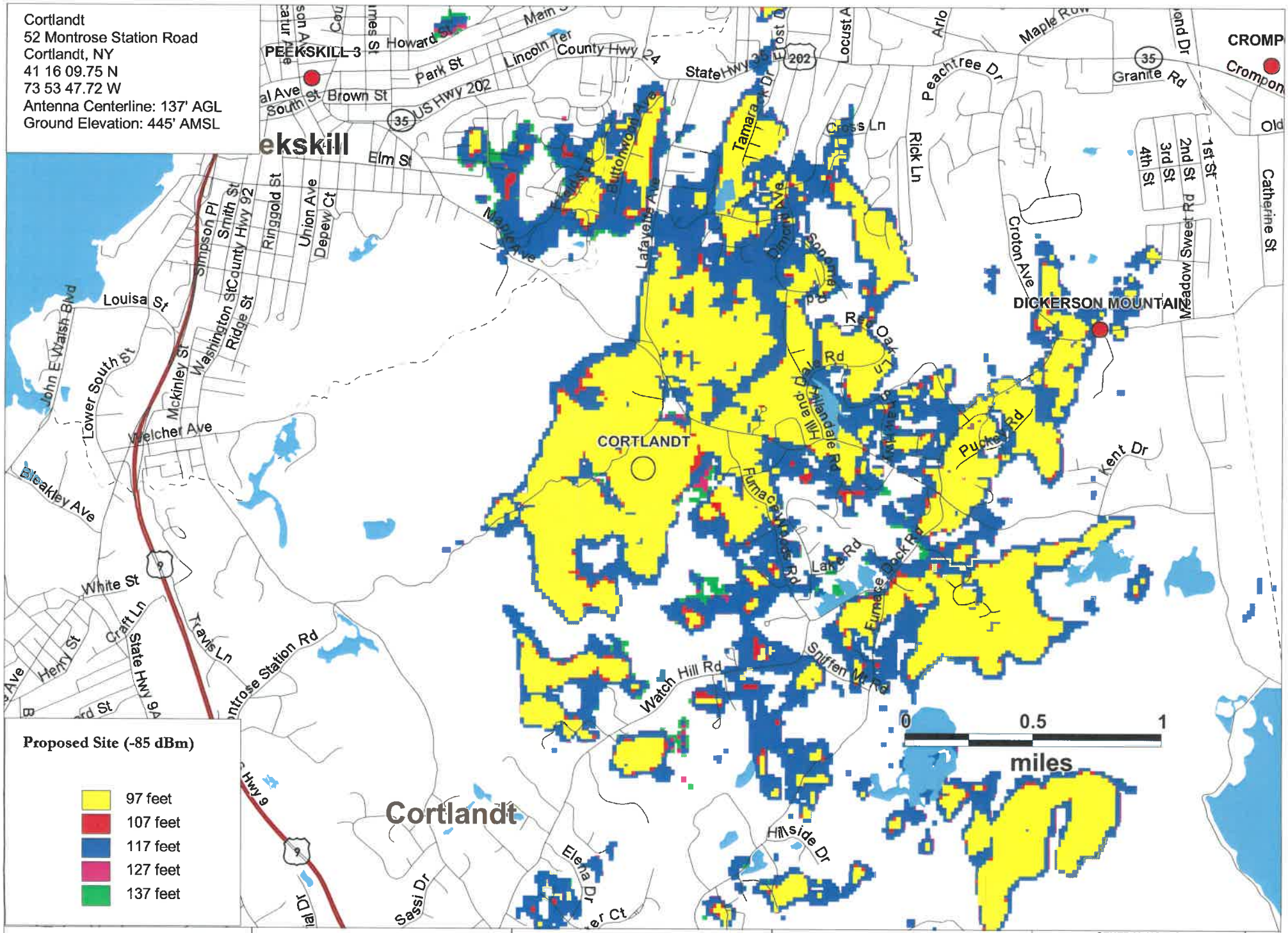
DATE: 07/19/2019

REV 0



Existing & Proposed 750 MHz LTE Coverage	Cortlandt	52 Montrose Station Road Cortlandt, NY	verizon	GENERAL NOTES PREPARED ON DATE: 07/19/2019 REV 0

EXHIBIT B



Height Analysis

Cortlandt

52 Montrose Station Road
Cortlandt, NY

verizon

GENERAL NOTES

PREPARED ON

DATE: 07/17/2019

REV 0

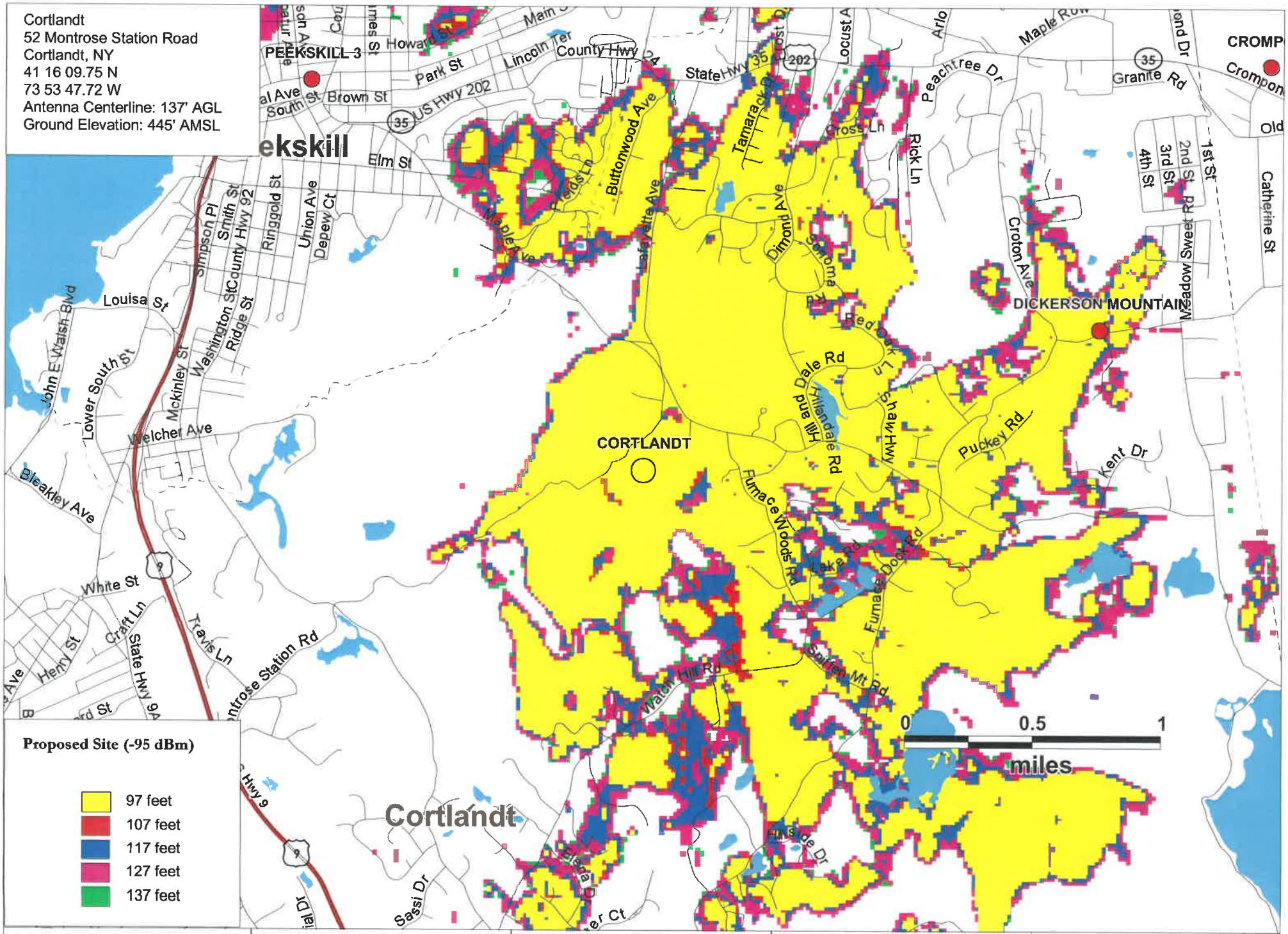

Cortlandt
52 Montrose Station Road
Cortlandt, NY
41 16 09.75 N
73 53 47.72 W
Antenna Centerline: 137' AGL
Ground Elevation: 445' AMSL
PEEKSKILL 3
CORTLANDT
DICKERSON MOUNTAIN
CROMP
Cortlandt
Proposed Site (-95 dBm)
97 feet
107 feet
117 feet
127 feet
137 feet
0
0.5
1
miles
Height Analysis
Cortlandt
52 Montrose Station Road
Cortlandt, NY
verizon
GENERAL NOTES
PREPARED ON
DATE: 07/17/2019
REV 0

Exhibit 4
Collocation Letters

Verizon Wireless
4 Centerock Road
West Nyack, NY 10994

Phone 914 714-7000

August 15, 2019

Sprint
301 Route 17 No.
3rd Floor
Rutherford, New Jersey 07070
Attn: Site Development North East Region/ Michael Ahl

RE: New York SMSA Limited Partnership d/b/a Verizon Wireless Public Utility Wireless Communication Facility Located at 52 Montrose Station Road, Town of Cortlandt, New York

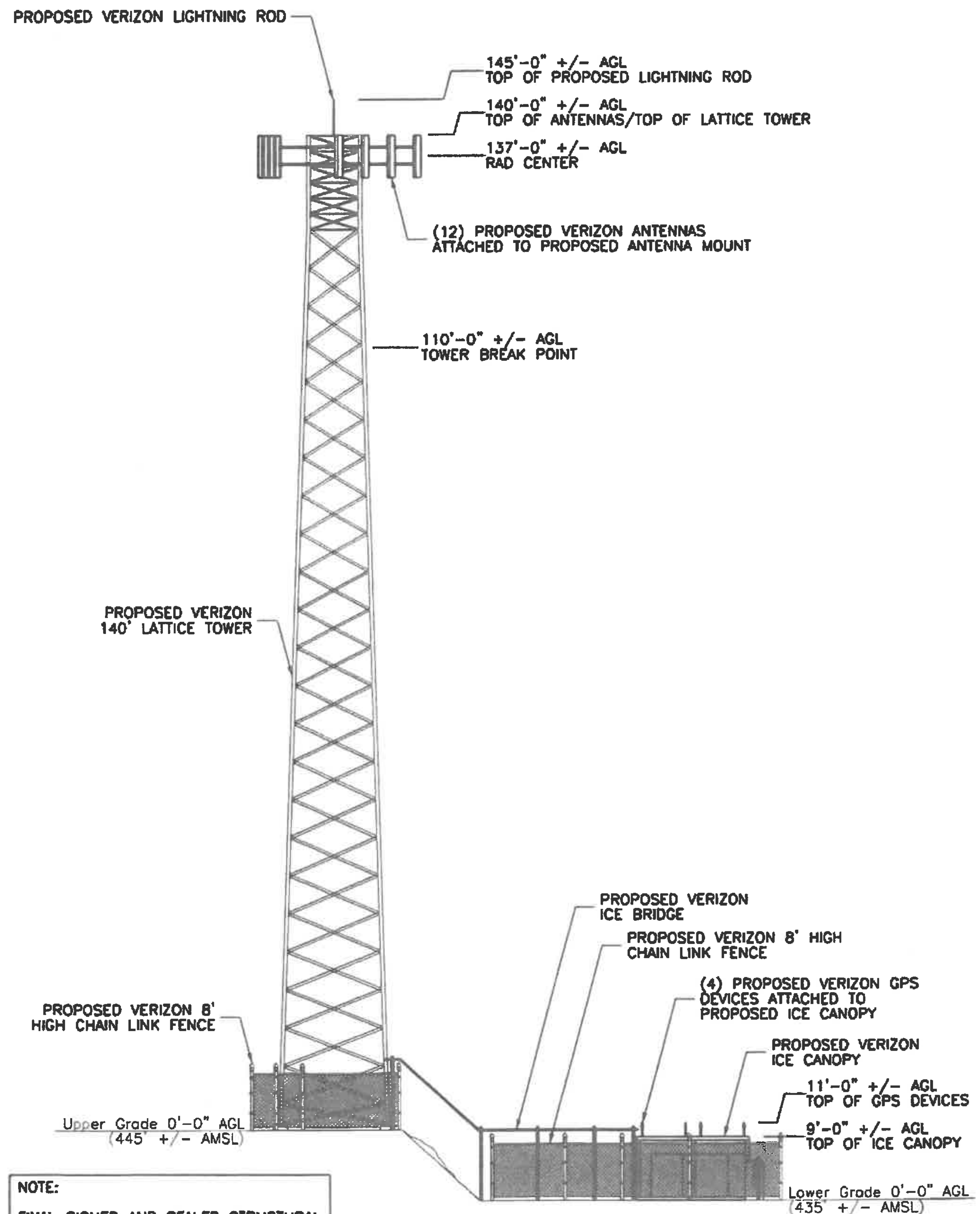
Dear Mr. Ahl:

New York SMSA Limited Partnership d/b/a Verizon Wireless has applied to the Town of Cortlandt ("Town") for zoning approvals to locate a public utility personal wireless communication facility at the captioned property. The facility has been designed to accommodate additional carriers. Further details of the facility are provided in the attached plan. The Town has required us to notify the other carriers of the project. If you have any interest in collocating on the facility, please contact Verizon Wireless' site acquisition consultant, John Pepe, at (201) 370-2363.

Sincerely,

Robert Czarniawski
Manager
New York SMSA Limited Partnership
d/b/a Verizon Wireless

z:\ssdata\wpdata\ss4\wp\newbanm\maybeck\cortlandt\zoning\co-location solicitation ltr.sprint.ms.doc



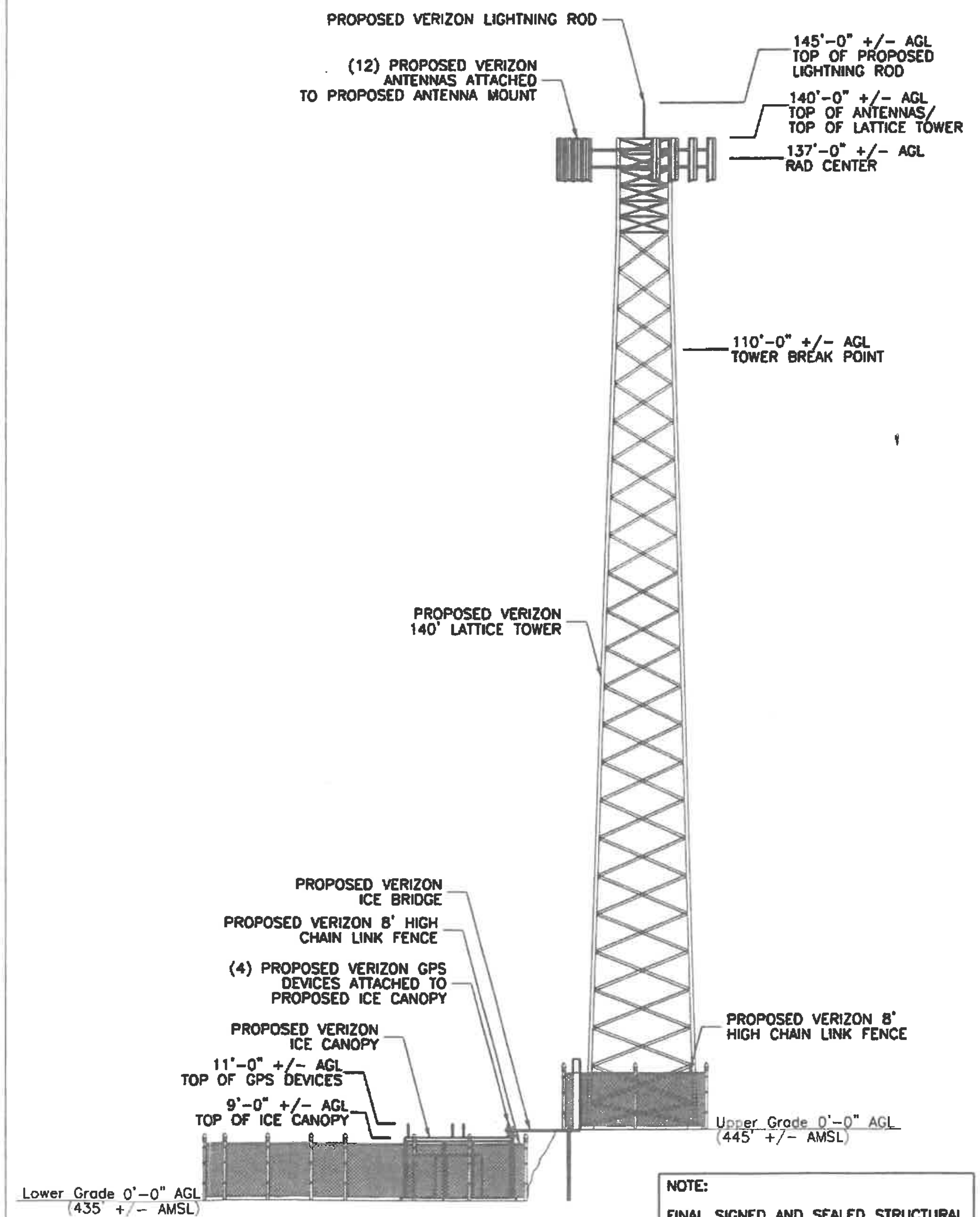
NOTE:

FINAL SIGNED AND SEALED STRUCTURAL CERTIFICATION AND ANALYSIS REPORTS OF THE PROPOSED LATTICE TOWER TO BE COMPLETED AND SUBMITTED ONCE PRELIMINARY SITE LAYOUT IS APPROVED.

1 **NORTHERN ELEVATION**

0 10' 20'

11x17 SCALE: 1"= 20'-0" 22x34 SCALE: 1" = 10'-0"



NOTE:

FINAL SIGNED AND SEALED STRUCTURAL CERTIFICATION AND ANALYSIS REPORTS OF THE PROPOSED LATTICE TOWER TO BE COMPLETED AND SUBMITTED ONCE PRELIMINARY SITE LAYOUT IS APPROVED.

2 **WESTERN ELEVATION**

0 10' 20'

11x17 SCALE: 1"= 20'-0" 22x34 SCALE: 1" = 10'-0"

SDG
SCHERER DESIGN GROUP, LLC

Shelbourne at Hunterdon
53 Frontage Road, Suite 260
Hampton, NJ 08827
Ph: 908.324.2612 • Fax: 908.324.2525
www.scherer designgroup.com

COLLEEN CONNOLLY
NY PROFESSIONAL ENGINEER
IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER, TO ALTER THIS DOCUMENT IN ANY WAY.
SIGNATURE AND SEAL NOT VALID UNLESS ORIGINAL.

APPLICANT:

verizon
WIRELESS
4 CENTEROCK ROAD
WEST NYACK, NY 10994

NO.	ISSUE OR REVISION	DATE	BY
H	ATTORNEY COMMENTS	07/15/19	DP
G	ATTORNEY COMMENTS	07/12/19	DP
F	TOWNSHIP COMMENTS	06/20/19	DP
E	ATTORNEY COMMENTS	02/08/19	HW
D	ATTORNEY COMMENTS	12/20/18	HW

PROJECT TITLE:

PRELIMINARY SITE PLAN

CORTLANDT

52 MONTROSE STATION RD
CORTLANDT, NY 10567
WESTCHESTER COUNTY

BLOCK: 1 LOT: 4
ZONE: R-40

SDG PROJECT #: 16VZN071

SCALE: AS NOTED	DATE: 11/13/17
DRAWN BY: JM	CHECKED BY: SK

DRAWING TITLE:

ELEVATIONS

DRAWING NO.:	PAGE NO.:
Z5	5 of 11

FedEx Shipment Receipt

Address Information

Ship to:	**Ship from:**
Michael Ahl	Leslie Snyder
Sprint	SNYDER and SNYDER
301 Route 17 No.	94 White Plains Road
3rd Floor	
RUTHERFORD, NJ	Tarrytown, NY
07070	10591
US	US
9143330700	9143330700

Shipment Information:
Tracking no.: 775998067251
Ship date: 08/15/2019
Estimated shipping charges: 14.94 USD

Package Information
Pricing option: FedEx Standard Rate
Service type: Priority Overnight
Package type: FedEx Envelope
Number of packages: 1
Total weight: 1 LBS
Declared Value: 1.00 USD
Special Services:
Pickup/Drop-off: Drop off package at FedEx location

Billing Information:
Bill transportation to: Snyder & Snyder-939
Your reference: NY- Cortlandt Sprint
P.O. no.:
Invoice no.:
Department no.:

Thank you for shipping online with FedEx ShipManager at fedex.com.

Please Note

FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is $1000, e.g., jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits; Consult the applicable FedEx Service Guide for details.
The estimated shipping charge may be different than the actual charges for your shipment. Differences may occur based on actual weight, dimensions, and other factors. Consult the applicable FedEx Service Guide or the FedEx Rate Sheets for details on how shipping charges are calculated.

verizon wireless

Verizon Wireless
4 Centerock Road
West Nyack, NY 10994

Phone 914 714-7000

August 15, 2019

T-Mobile USA, Inc.
4 Campus Drive
Parsippany, New Jersey 07054
Attn: Sabrina Bordin-Lambert

RE: New York SMSA Limited Partnership d/b/a Verizon Wireless
Public Utility Wireless Communication Facility Located at
52 Montrose Station Road, Town of Cortlandt, New York

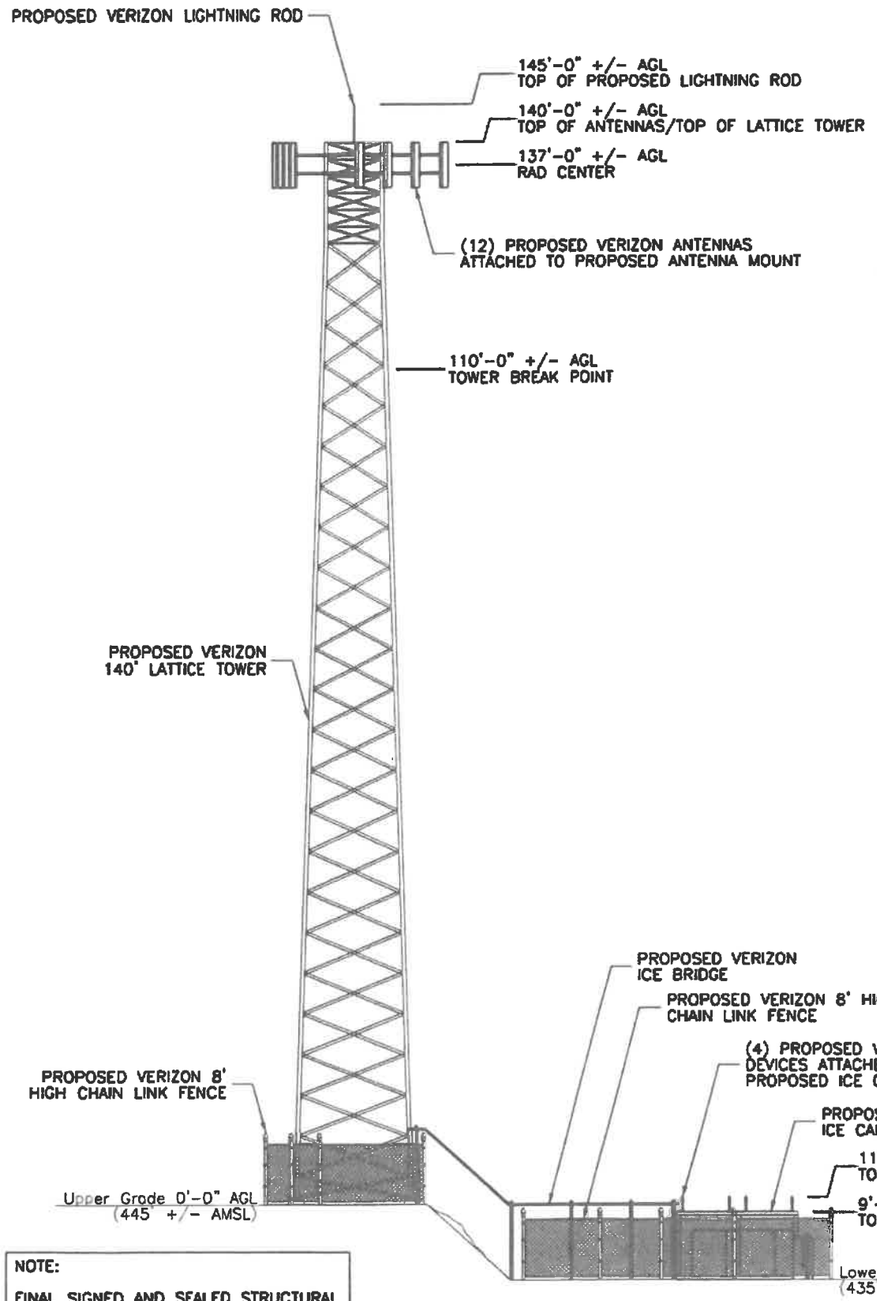
Dear Ms. Lambert:

New York SMSA Limited Partnership d/b/a Verizon Wireless has applied to the Town of Cortlandt ("Town") for zoning approvals to locate a public utility personal wireless communication facility at the captioned property. The facility has been designed to accommodate additional carriers. Further details of the facility are provided in the attached plan. The Town has required us to notify the other carriers of the project. If you have any interest in collocating on the facility, please contact Verizon Wireless' site acquisition consultant, John Pepe, at (201) 370-2363.

Sincerely

Robert Czarniawski
Manager
New York SMSA Limited Partnership
d/b/a Verizon Wireless

z:\ssdata\wpdata\ss4\wp\newbanm\maybeck\cortlandt\zoning\co-location solicitation ltr.t-mobile.ms.doc



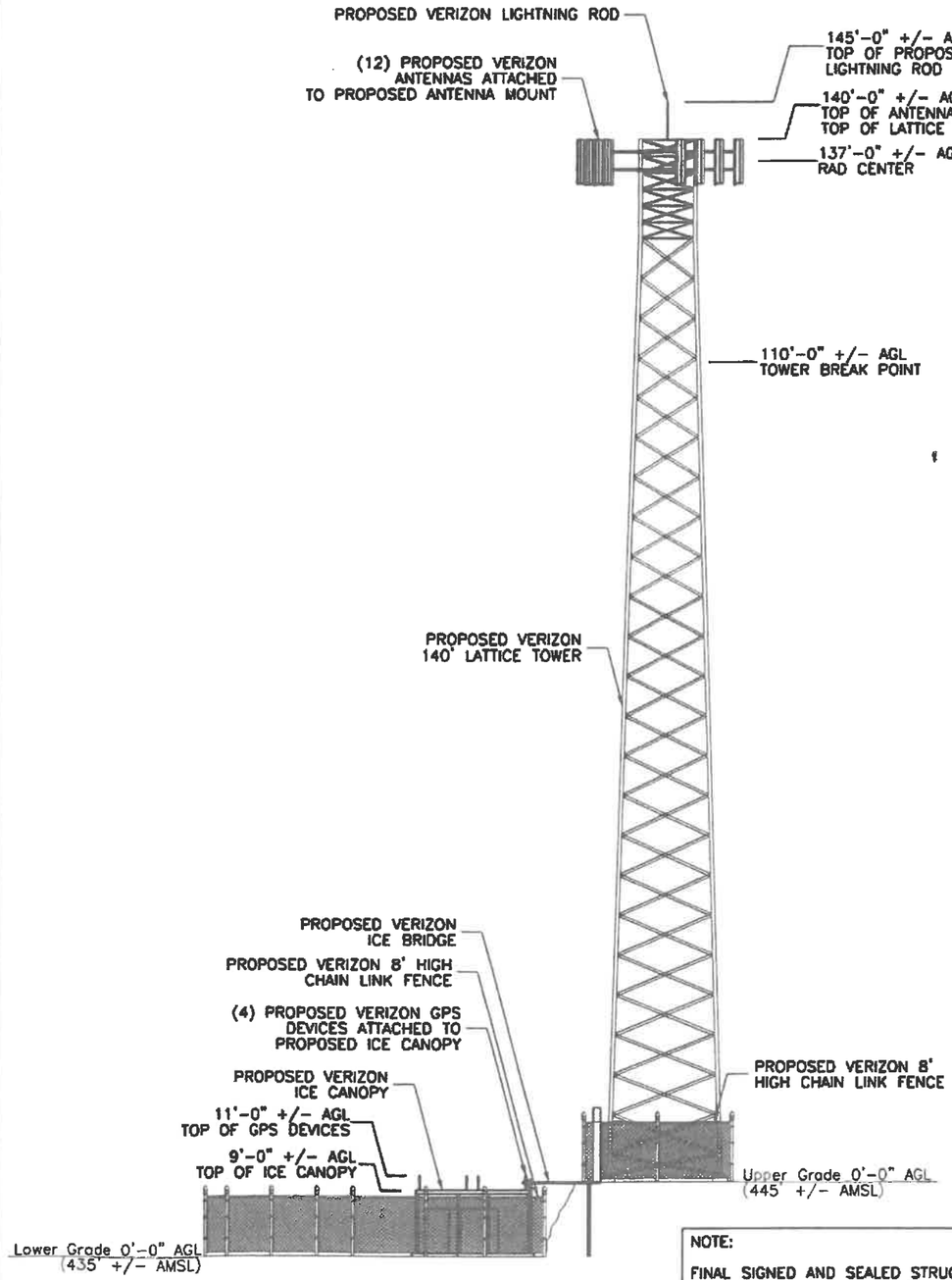
NOTE:

FINAL SIGNED AND SEALED STRUCTURAL CERTIFICATION AND ANALYSIS REPORTS OF THE PROPOSED LATTICE TOWER TO BE COMPLETED AND SUBMITTED ONCE PRELIMINARY SITE LAYOUT IS APPROVED.

1 **NORTHERN ELEVATION**

11x17 SCALE: 1"= 20'-0" | 22x34 SCALE: 1" = 10'-0"

0 10' 20'



NOTE:

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2 **WESTERN ELEVATION**

11x17 SCALE: 1"= 20'-0" | 22x34 SCALE: 1" = 10'-0"

0 10' 20'

SDG
SCHERER DESIGN GROUP, LLC
Shelbourne at Hunterdon
53 Frontage Road, Suite 260
Hampton, NJ 08827
Ph: 908.238.1212 Fax: 908.238.7525
www.schererdesigngroup.com

STATE OF NEW YORK
COLLEEN CONNOLLY
NY PROFESSIONAL ENGINEER
IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER, TO ALTER THIS DOCUMENT IN ANY WAY. SIGNATURE AND SEAL NOT VALID UNLESS ORIGINAL.

APPLICANT:

verizon
WIRELESS

4 CENTEROCK ROAD
WEST NYACK, NY 10994

NO.	ISSUE OR REVISION	DATE	BY
H	ATTORNEY COMMENTS	07/15/19	DP
G	ATTORNEY COMMENTS	07/12/19	DP
F	TOWNSHIP COMMENTS	06/20/19	DP
E	ATTORNEY COMMENTS	02/08/19	HW
D	ATTORNEY COMMENTS	12/20/18	HW

PROJECT TITLE:

PRELIMINARY SITE PLAN

CORTLANDT

52 MONTROSE STATION RD
CORTLANDT, NY 10567
WESTCHESTER COUNTY

BLOCK: 1 LOT: 4
ZONE: R-40

SDG PROJECT #: 16VZN071

SCALE: AS NOTED	DATE: 11/13/17
DRAWN BY: JM	CHECKED BY: SK

DRAWING TITLE:

ELEVATIONS

DRAWING NO.:	PAGE NO.:
Z5	5 of 11

FedEx Shipment Receipt

Address Information

Ship to:	**Ship from:**
Sabrina Bordin-Lambert	Leslie Snyder
T-Mobile USA, Inc.	SNYDER and SNYDER
4 Campus Drive	94 White Plains Road
PARSIPPANY, NJ	Tarrytown, NY
07054	10591
US	US
9143330700	9143330700

Shipment Information:
Tracking no.: 775997945325
Ship date: 08/15/2019
Estimated shipping charges: 14.94 USD

Package Information
Pricing option: FedEx Standard Rate
Service type: Priority Overnight
Package type: FedEx Envelope
Number of packages: 1
Total weight: 1 LBS
Declared Value: 1.00 USD
Special Services:
Pickup/Drop-off: Drop off package at FedEx location

Billing Information:
Bill transportation to: Snyder & Snyder-939
Your reference: NY- Cortlandt T-Mobile
P.O. no.:
Invoice no.:
Department no.:

Thank you for shipping online with FedEx ShipManager at fedex.com.

Please Note

Verizon Wireless
4 Centerock Road
West Nyack, NY 10994

Phone 914 714-7000

August 15, 2019

AT&T
15 East Midland Avenue
Paramus, New Jersey 07652
Attn: Network Operations North East Region

RE: New York SMSA Limited Partnership d/b/a Verizon Wireless Public Utility Wireless Communication Facility Located at 52 Montrose Station Road, Town of Cortlandt, New York

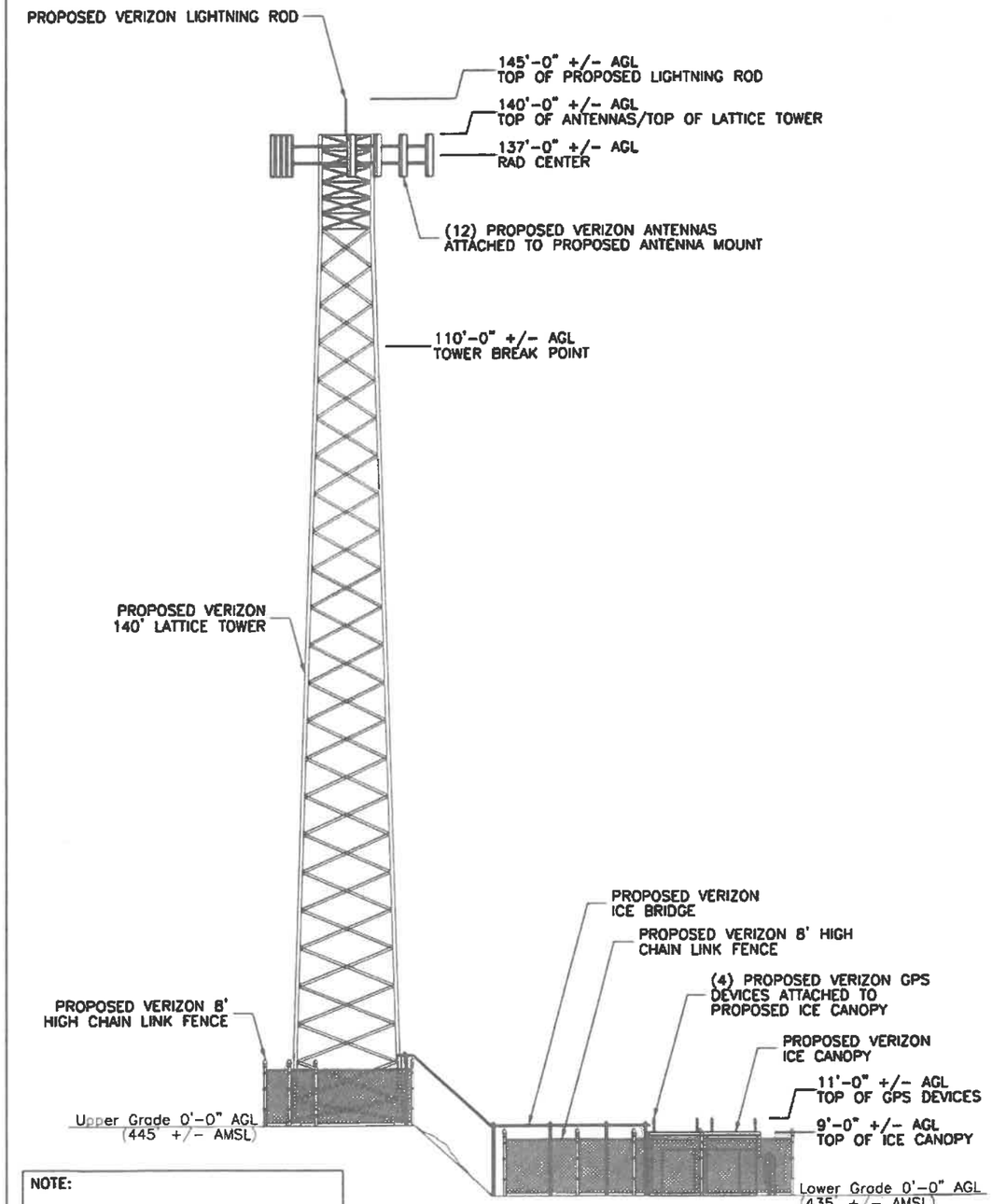
Ladies and Gentlemen:

New York SMSA Limited Partnership d/b/a Verizon Wireless has applied to the Town of Cortlandt ("Town") for zoning approvals to locate a public utility personal wireless communication facility at the captioned property. The facility has been designed to accommodate additional carriers. Further details of the facility are provided in the attached plan. The Town has required us to notify the other carriers of the project. If you have any interest in collocating on the facility, please contact Verizon Wireless' site acquisition consultant, John Pepe, at (201) 370-2363.

Sincerely,

Robert Czarniawski
Manager
New York SMSA Limited Partnership
d/b/a Verizon Wireless

z:\ssdata\wpdata\ss4\wp\newbanm\maybeck\cortlandt\zoning\co-location solicitation ltr.at&t.ms.doc



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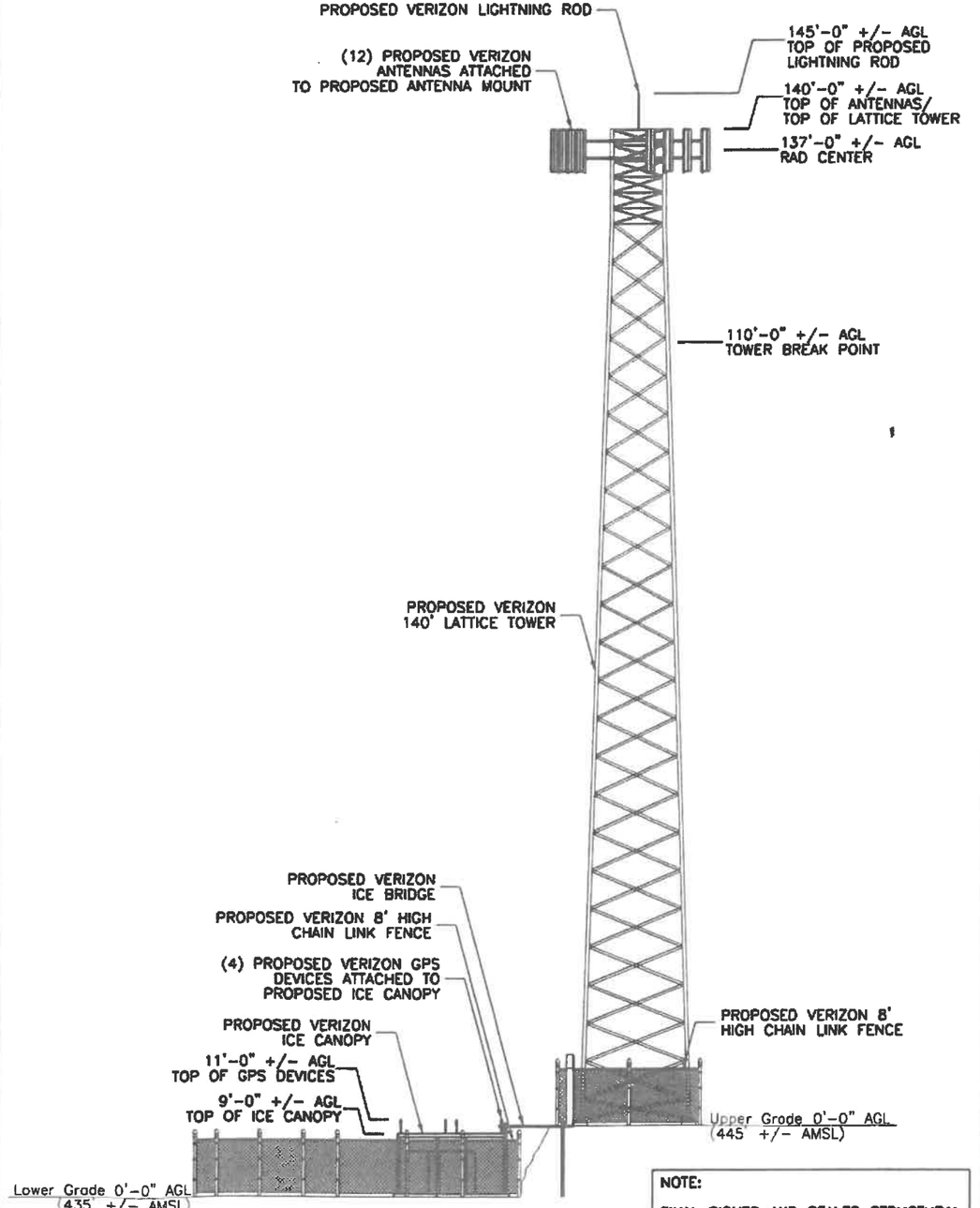
1 **NORTHERN ELEVATION**

11x17 SCALE: 1"= 20'-0" | 22x34 SCALE: 1" = 10'-0"

0 10' 20'



NOTE:

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2 **WESTERN ELEVATION**

11x17 SCALE: 1"= 20'-0" | 22x34 SCALE: 1" = 10'-0"

0 10' 20'

SDG
SCHERER DESIGN GROUP, LLC
Shelbourne at Hunterdon
53 Frontage Road, Suite 260
Hampton, NJ 08827
Ph 908.238.9512 Fx 908.322.2525
www.schererdesigngroup.com

STATE OF NEW YORK
COLLEEN CONNOLLY
NY PROFESSIONAL ENGINEER
IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER, TO ALTER THIS DOCUMENT IN ANY WAY.
SIGNATURE AND SEAL NOT VALID UNLESS ORIGINAL.

APPLICANT:

verizon
WIRELESS

4 CENTEROCK ROAD
WEST NYACK, NY 10994

NO.	ISSUE OR REVISION	DATE	BY
H	ATTORNEY COMMENTS	07/15/19	DP
G	ATTORNEY COMMENTS	07/12/19	DP
F	TOWNSHIP COMMENTS	06/20/19	DP
E	ATTORNEY COMMENTS	02/08/19	HW
D	ATTORNEY COMMENTS	12/20/18	HW

PROJECT TITLE:

PRELIMINARY
SITE PLAN

CORTLANDT

52 MONTROSE STATION RD
CORTLANDT, NY 10567
WESTCHESTER COUNTY

BLOCK: 1 LOT: 4
ZONE: R-40

SDG PROJECT #: 16VZN071

SCALE: AS NOTED	DATE: 11/13/17
DRAWN BY: JM	CHECKED BY: SK

DRAWING TITLE:

ELEVATIONS

DRAWING NO.:	PAGE NO.:
Z5	5 of 11

FedEx Shipment Receipt

Address Information

Ship to:	**Ship from:**
Network Operations NE Region	Leslie Snyder
AT&T	SNYDER and SNYDER
15 East Midland Avenue	94 White Plains Road
PARAMUS, NJ	Tarrytown, NY
07652	10591
US	US
9143330700	9143330700

Shipment Information:
Tracking no.: 775998022201
Ship date: 08/15/2019
Estimated shipping charges: 14.94 USD

Package Information
Pricing option: FedEx Standard Rate
Service type: Priority Overnight
Package type: FedEx Envelope
Number of packages: 1
Total weight: 1 LBS
Declared Value: 1.00 USD
Special Services:
Pickup/Drop-off: Drop off package at FedEx location

Billing Information:
Bill transportation to: Snyder & Snyder-939
Your reference: NY- Cortlandt AT&T
P.O. no.:
Invoice no.:
Department no.:

Thank you for shipping online with FedEx ShipManager at fedex.com.

Please Note

Exhibit 5
Structural Certification Letter

SCHERER DESIGN GROUP, LLC
Consulting Engineers • Construction Inspectors

Colleen Connolly, PE
Glenn J. Scherer, PE
Steven Krug, PE

Town of Cortlandt
1 Heady Street
Cortlandt Manor, NY 10567

July 15, 2019

RE: Verizon Site Name: Cortlandt
52 Montrose Station Road
Cortlandt, NY 10567

Town of Cortlandt, NY
Structural Certification

To Whom It May Concern:

New York SMSA Limited Partnership d/b/a Verizon Wireless is proposing the installation of a public utility wireless telecommunications facility of a 140' Telecommunications Tower ("Tower") with antennas mounted thereon, together with related equipment including a backup generator, at the base thereof within a new fenced compound.

The proposed Tower, all attachments, and the Tower's foundation will be designed to meet the ANTI/TIA-222-G "Structural Standard for Antenna Supporting Structures and Antennas" and all county, state, and federal structural requirements for loading, including wind and ice loads. The Tower will be designed to be able to support up to four (4) co-locators.

Should you have any questions, please do not hesitate to call me at (908) 323-2513.

Sincerely,

STATE OF NEW YORK
COLLEEN CONNOLLY
087018
LICENSED PROFESSIONAL ENGINEER

Colleen Connolly, P.E., PTOE

Shelbourne at Hunterdon • 53 Frontage Road, Suite 260 • Hampton, NJ 08827
Ph 908.323.2513 • Fax 908.323.2525

Exhibit 6
Visual Assessment

SARATOGA ASSOCIATES

Proposed Wireless Telecommunications Facility

Site Name: Cortlandt
52 Montrose Station Rd
Cortlandt, NY 10567

VISUAL RESOURCE ASSESSMENT

Prepared for:
New York SMSA Limited Partnership
d/b/a Verizon Wireless

August 27, 2019

Landscape Architects, Architects, Engineers and Planners, P.C.

New York SMSA Limited Partnership d/b/a Verizon Wireless ("Verizon Wireless") seeks special permit approval from the Town of Cortlandt Planning Board to construct a wireless telecommunications facility (the "Facility") on property at 52 Montrose Station Road ("host property" or "site"). To address issues of potential visual impact, Saratoga Associates, Landscape Architects, Architects, Engineers, and Planners, P.C. was retained to conduct a Visual Resource Assessment ("VRA") of the proposed project.

The viewshed for this VRA extends to a two-mile radius from the Facility (hereafter referred to as the "2-mile viewshed area"). Viewshed analysis demonstrates that the Facility will be substantially or completely screened by existing woodland vegetation beyond a radius of 1-mile (refer to Figure A2 in Appendix A herein). As such, assessment of the potential impact of the Facility on specific visual resources is largely focused on viewpoints within a 1-mile radius ("1-mile VRA study area") of the Facility.

PROJECT DESCRIPTION

The Facility will be located at 41° 16' 10.16" N, 73° 53' 48.11" W ("Facility site"). The 6.1± acre host property is identified in Town of Cortlandt tax records as tax parcel 44.07-1-4.

The Facility includes the construction of a 140-foot-tall galvanized steel lattice frame telecommunications tower designed to support collocation. The telecommunications tower will be located within a fenced enclosure. Associated ground equipment will be within an approximately 1,025 square foot fenced compound approximately 30 feet northwest of the telecommunications tower. Access to the Facility site will be from a new access drive leading to Montrose Station Road.

LANDSCAPE SETTING

The Facility is proposed within the Town of Cortlandt, NY (2018 estimated population 42,380[1]). The 2-mile viewshed area is largely suburban in character comprised of low to moderate density (i.e., 1 to 5+ acre) single-family residential lots and undeveloped woodland open space.

The topography within the 2-mile viewshed area is characterized by a rolling and often steeply sloped landscape. The tree canopy occupies approximately 5,842 acres of the 8,041-acre 2-mile viewshed area (72.7%).[2]

The host property is zoned R-40 (Residence – 40,000 square foot lot) as defined by the Cortlandt Code. The host property is substantially wooded. Built structures include an occupied caretaker residence, horse stables, multi-function building and riding corrals.

---

[1] https://www.census.gov/quickfacts/fact/table/cortlandttownwestchestercountynewyork/PST045218

[2] Tree cover calculations are based on areas with 50% or greater tree canopy coverage within 30-meter x 30-meter grid cells as presented in the National Land Cover Database (NLCD) 2011 Percent Tree Canopy dataset. https://viewer.nationalmap.gov/basic/#productSearch

Montrose Station Road is a dead-end street terminating at a cul-de-sac at the Blue Sky Stables (host property).

The host property is directly adjacent to the 1,538-acre Blue Mountain Reservation, a Westchester County Park.

VIEWSHED ANALYSIS

Viewshed mapping identifies the geographic area within which there is a relatively high probability that some portion of the Facility could be visible within the 2-mile viewshed area.

One viewshed overlay was prepared defining the area within which there would be no visibility of the Facility due to the screening effect of intervening topography. This "bare earth" condition identifies the maximum potential geographic area within which further investigation is appropriate. A second viewshed overlay was prepared illustrating the screening effect of existing mature vegetation and buildings. The more realistic "land cover" condition identifies the geographic area where one would expect to be substantially screened by intervening forest vegetation.

Global Mapper 20.0 GIS software was used to generate viewshed areas based on publicly available topographic and land cover datasets. Topographic data was derived 2-meter resolution digital elevation models (DEM) acquired from the New York State GIS Clearinghouse.[3] Using Global Mapper's viewshed analysis tool, the proposed Facility's location and height were input and a conservative offset of six feet was applied to account for the observer's eye level.

Within approximately 1 mile of the site, existing forest vegetation was manually digitized from ½-foot resolution digital ortho-photographs (2016) acquired from NYS Orthos On-line.[4] For the remainder of the 2-mile viewshed area, existing forest vegetation is based on areas with 75% or greater tree canopy coverage as presented in the National Land Cover Database (NLCD) 2011 Percent Tree Canopy dataset.[5] Building footprints were imported from the Westchester County GIS Data Warehouse.[6]

The screening effect of vegetation and built structures was incorporated by conservatively allocating 50 feet in vertical height to forest areas and 25 feet to building footprints. Forested areas and building footprints were removed from the viewshed result to account for affected areas located within structures or densely wooded cover.

Based on field observation, most trees in forested portions of the study area are taller than 50 feet. This height therefore represents a conservative estimate of the efficacy of vegetative

[3] https://orthos.dhses.ny.gov/
[4] https://orthos.dhses.ny.gov/
[5] https://viewer.nationalmap.gov/basic/#productSearch
[6] https://giswww.westchestergov.com/wcgis/MunPlan/bed.htm

screening. It is important to note that digitized vegetation is based on interpretation of forest areas that are clearly distinguishable in the source aerial photography. As such, the potential screening value of site-specific vegetative cover such as small hedgerows, street trees and individual trees and other areas of non-forest tree cover may not be represented in the viewshed analysis.

It is noteworthy that untrained reviewers often misinterpret "bare earth" condition viewshed maps to represent wintertime, or leafless condition visibility. In fact, deciduous woodlands provide a substantial visual barrier in all seasons. Since the digitized forest cover overlay generally identifies only larger stands of woodland vegetation that are clearly distinguishable from aerial photography, the land cover viewshed map is substantially representative of both leaf-on and leaf-off seasons. Most importantly, the bare earth condition map is provided only to assist experienced visual analysts identify the maximum potential geographic area within which further investigation is appropriate. Such bare earth viewshed maps are generally not appropriate for public interpretation, and do not represent visibility in leafless conditions.

By themselves, the viewshed maps do not determine how much of the proposed Facility would be visible above intervening landform or vegetation (e.g., 100%, 50%, 10% etc. of total tower height), but rather the geographic area within which some portion of the Facility would theoretically be visible. Their primary purpose is to provide a general understanding of a Facility's potential visibility and identify areas where further investigation is appropriate.

Figure A1 identifies areas of potential project visibility at a macro scale within the 2-mile viewshed area. Figure A2 provides a more localized assessment potential visibility within the 1-mile VRA study area. Figure A1 and Figure A2 are provided in Appendix A.

The land cover viewshed overlay illustrates that of the 8,041 acres within the 2-mile viewshed area, a direct view (e.g., not screened or filtered by intervening vegetation) of some portion of the Facility is theoretically possible from approximately 0.6% of such viewshed area. The land cover viewshed overlay illustrates that of the 2,010 acres within the 1-mile VRA study area, a direct view of some portion of the Facility is theoretically possible from approximately 1.7% of such viewshed area. Notwithstanding, the photos herein (refer to Appendix B) confirm that the actual total area from which the Facility can be viewed is significantly less than even the small theoretical percentage within the 2-mile and 1-mile study areas indicated by the land cover viewshed maps.

This assessment finds that there are no large geographic areas where Facility views will occur. Places within the public right-of-way where Facility views are found are isolated locations where narrow view corridors exist through rare small openings in roadside vegetation and between structures. In all cases, affected road segments are short and Facility views will be brief and intermittent through roadside vegetation. Moreover, given the complex visual stimuli

encountered by motorists travelling in a moving vehicle, even if the Facility is visible, it is probable that viewer recognition of the Facility would be limited to a fraction of the total available viewing time. As the tendency of motorists is to focus down the road, peripheral views of the Facility will go largely unnoticed by most travelers.

VISUAL RESOURCES

Scenic Resources of National and Statewide Significance - To avoid subjectivity in assessing potential visual impact, the New York State Department of Environmental Conservation's ("NYSDEC") Program Policy on Assessing and Mitigating Visual Impact (DEP-00-02) ("DEC Visual Policy") provides guidance in the determination of visual significance under the State Environmental Quality Review Act (SEQRA). Visual impact is defined by the DEC Visual Policy as follows:

> "Aesthetic impact occurs when there is a detrimental effect on the perceived beauty of a place or structure. Significant aesthetic impacts are those that may cause a diminishment of the public enjoyment and appreciation of an inventoried resource, or one that impairs the character or quality of such a place."[7]
>
> According to the DEC Visual Policy, "[m]ere visibility, even startling visibility of a project proposal, should not be a threshold for decision making."[8]

The DEC Visual Policy defines an "inventoried resource" as a place recognized for its beauty and designated through federal or state democratic political processes in recognition of its aesthetic value.[9] Inventoried resources are a matter of public record and are not arbitrarily or subjectively determined. The DEC Visual Policy contains specific criteria defining places considered to be aesthetic resources. These places are high value sites including state parks, scenic roads, wild, scenic and recreational rivers, state forests, wildlife management areas, scenic areas of statewide significance, Heritage Areas, National Natural Landmarks, state or federally designated trails, properties or districts listed or eligible for listing on the National Register of Historic Places, among others.

No "inventoried resources" are found within the 1-mile VRA study radius. Both the viewshed analysis and the balloon test demonstrate that the Facility is substantially or fully screened by dense woodland vegetation beyond the 1-mile radius. Therefore, due to vegetation and distance, the Facility will not be readily visible from any scenic resource of statewide or national significance beyond the 1-mile VRA study radius.

[7] DEC Visual Policy, p.5. (https://www.dec.ny.gov/docs/permits_ej_operations_pdf/visual2000.pdf)
[8] DEC Visual Policy, p.9.
[9] DEC Visual Policy, p.1.

Aesthetic Resources of Local Importance - Aesthetic resources of local importance are publicly accessible places generally recognized and enjoyed by community residents and visitors for their unique aesthetic value. Aesthetic resources of local importance are established through local democratic processes and are not arbitrarily or subjectively determined. Such places are most commonly municipal parks, trails, bikeways, and may also include not-for-profit conservation lands and open space preserves.

Places meeting this criterion with the 1-mile VRA study area include:

- Blue Mountain Reservation – The 1,538-acre Blue Mountain Reservation is a county park that features miles of trails for mountain biking, strolling and nature study, and offers challenging hikes to the tops of two large peaks, Mt. Spitzenberg and Blue Mountain. Also located at the park is the Sportsman Center, a recreation facility offering target ranges. The Blue Mountain Reservation is heavily wooded with few opportunities for views beyond the immediate foreground.

  No views of the Facility were found from any trail inside the park during the balloon test due to the dense local vegetation. Similarly no view of the Facility was found from the summit of Blue Mountain (elev. 680 feet) (refer to photos included in Figure B16. The only Facility view found within the Blue Mountain Reservation was along a park utility road where it intersects with the Montrose Station Road cul-de-sac and such visibility is limited in nature. Accordingly, the Facility will not be readily visible to park visitors.

- Briarcliff-Peekskill Trailway – The Briarcliff-Peekskill Trailway is a 12-mile unpaved walking trail that runs from Ossining to the Blue Mountain Reservation. Based on viewshed analysis, the Facility will not be visible from the Briarcliff-Peekskill Trailway due to the density of the forest vegetation.

- City of Peekskill Parks – A portion of the City of Peekskill's Depew Park is located approximately 3/4-mile northwest of the Facility. Based on viewshed analysis, the Facility will not be visible from this recreation facility.

The location of these aesthetic resources of local importance is indicated on Figures A1 and A2.

Other Areas of Local Interest - While not rising to the threshold of national or statewide significance or local importance, other places of local interest have been included in this visual assessment at the request of Town staff to represent potential Facility views from roadways, residential neighborhoods and adjacent or nearby residential properties. Such locations are not representative of any aesthetically significant place as defined under the DEC Visual Policy and are not directly addressed under SEQRA. These places include:

- Residential Areas - Within the ½-mile of the Facility residential development includes single-family parcels fronting, or directly accessed from Montrose Station Road, Maple Avenue and Furnace Wood Road. Other residential development is within planned single-family subdivisions on Galloway Lane and Fairgreen Court.

  Between ½- and 1-mile from the Facility residential development is located along, or in planned single-family residential neighborhoods off of Maple Avenue, Lafayette Avenue, Furnace Woods Road and Watch Hill Road including, but not limited to Cortlandt Estates, Hill and Dale Road, Lake View Avenue, Dimond Avenue and Manor Drive.

  Dense woodland and well landscaped understory areas commonly limit views from residential properties to the immediate foreground. From most residential properties, views of the Facility will be substantially screened by intervening dense mature woodland vegetation – even during winter leaf-off-season.

  Facility views along Montrose Station Road will be substantially limited to the vicinity of the cul-de-sac at Blue Sky Stables. Figures C2 (A-B) and C3 (A-B) in Appendix C illustrate this view. A very brief, isolated and intermittent glimpse of the upper portion of the Facility is found on Montrose Station Road north of Blue Sky Stables. This view is limited to approximately 100 feet of road frontage on Montrose Station Road and will be substantially or completely screened during summer leaf-on season. Figures C1 (A-B) in Appendix C illustrate this view. No other Facility views were discovered on Montrose Station Road.

- Roadways - Approximately 16 miles of public roadways are within the 1-mile VRA study area. Maple Avenue at Montrose Station Road has an AADT of 2,249 vehicles. Furnace Woods Road has an AADT of 1,882 vehicles and Watch Hill Road at Blue Mountain Middle School has an AADT of 2,249 vehicles.

  Views of the Facility from these public roads will be substantially or fully screened by dense roadside vegetation from virtually all public roadways within the 1-mile VRA study area.

  A discrete project view is found on Furnace Wood Road near the intersection with Galloway Lane. This view through an opening in roadside vegetation is limited to approximately 200 feet of road frontage. No other Facility views were discovered on Furnace Wood Road. Figure C5 (A-B) in Appendix C illustrates this view.

  A brief view of the upper portion of the Facility is found along the southbound axis of Lafayette Road near Damian Way. This view is limited to approximately 500 feet of roadway. Figure C6 (A-B) in Appendix C illustrates this view. No other Facility views were discovered on Lafayette Avenue.

A discrete view of the Facility is found on Maple Avenue though a small opening in roadside vegetation approximately 600 feet south of Montrose Station Road. This view, limited to approximately 100 feet of road frontage, is highly filtered through deciduous branches and will be substantially or completely screened during summer leaf-on season. Figure C7 (A-B) in Appendix C illustrates this view. No other Facility views were discovered on Maple Avenue.

STUDY AREA RECONNAISSANCE

A balloon visibility test was conducted on May 4, 2019, to allow the general public and local decision-makers an opportunity to observe the location and potential visibility of the Project.

One 4-foot± diameter red balloon was raised to the approximately top elevation of the proposed tower. The balloon was raised approximately 25 feet west of the proposed tower center in order to avoid dense overhead tree canopy. The balloon was raised at approximately 8:00am and remained aloft until 2:15pm. Fog was present in the study area at the time of the balloon launch until approximately 9:00am. The weather was mostly cloudy to partly sunny with visibility greater than 10 miles for the remainder of the balloon test. Winds were generally calm for the duration of the test.

In advance of the balloon test, the Town Engineer and Town Planner, as directed by the Town of Cortlandt Planning Board provided Verizon Wireless with a list of 25 locations to photograph balloon visibility.[10] While the balloon was in the air, an experienced visual analyst (Matthew Allen, RLA) visited each predetermined location and took a photograph from the nearest publicly accessible vantage point in the vicinity of the subject location. For each photographed view, the visual analyst took care to select a photo position where the balloon was most exposed. Photos were also taken from other locations where balloon was not visible to balance the photo record and document visual conditions representative of the surrounding area.

Photographs were taken using a Canon EOS 6D Mark II digital single lens reflex ("DSLR") 26-mega pixel camera with a lens setting of 50mm to simulate normal human eyesight relative to scale. The precise coordinate of each photo location was recorded in the field using a handheld global positioning system (GPS) unit. The Canon EOS D6 Mark II also has a built in GPS sensor which imbeds photo coordinates in the photo file meta data.

Photographs taken during the field reconnaissance are provided in Appendix B in the order listed below (photographs VP01–VP100 a/k/a Figures B1-B15). Simulations of the proposed Facility are

[10] As we did not have permission to enter private property, four (4) of the pre-identified 25 locations were consolidated into two (2) viewpoints located at the nearest public ROW (end of driveways). See VP-5 and VP-6 herein. We also added six (6) locations that were not pre-identified locations to address potential views from roadside locations in areas in the immediate vicinity of the Facility, which accounts for the total of 29 locations noted in this assessment.

included as Appendix C and those simulations are indicated in the last column below (Figures C1(A-B)-C7(A-B)).

Photographs taken from visual resources during the May 4, 2019 balloon test are provided as in Appendix B. Photographs were taken from the following places:

Map ID/ Picture # (Appendix B)	Location Description	Direction to Tower	Distance to Tower (feet)	Theoretical View Indicated by Land Cover Viewshed - (See Figure A2)	Balloon Visible*	Photo/ Simulation Provided as
1	Montrose Station Road near #32 and #36	WSW	380	NO	Filtered**	Figure C1(A-B)
2	Montrose Station Road near #34	W	770	NO	NO	
3	Montrose Station Road near #5	SSW	1,520	NO	NO	
4	Montrose Station Road near #20	SSW	1,100	YES	YES	Figure C2(A-B)
5	Montrose Station Road near #26 and #39	S	620	YES	YES	Figure C3(A-B)
6	Montrose Station Road near #49 and #57	SSE	570	YES	YES	Figure C4(A-B)
7	Blue Summit Reservation – Utility Road	ESE	1,180	NO	NO	
8	Blue Mountain Reservation – Blue Mountain Summit	ESE	1,980	NO	NO	
9	Montrose Station Road at Maple Avenue	SSW	2,120	NO	NO	
10	Maple Avenue near #2117	SSW	1,720	YES	Filtered**	Figure C5(A-B)
11	Maple Avenue near #2139	SW	1,610	NO	NO	
12	Maple Avenue near Furnace Woods Road	WSW	2,220	YES	NO	
13	Fairgreen Court at Maple Avenue	WSW	2,490	NO	NO	
14	Furnace Woods Road near Galloway Lane	W	2,130	YES	YES	Figure C6(A-B)
15	Veronica Court near #10	NW	2,610	NO	NO	
16	Veronica Court at Furnace Woods Road	WNW	3,050	NO	NO	
17	Fairgreen Court at cul-de-sac	WSW	2,910	YES	NO	
18	Hill and Dale Road at Maple Avenue	W	3,900	NO	NO	
19	Cross Road near Furnace Dock Road	W	6,800	NO	NO	
20	Croton Avenue near #200	WSW	8,960	NO	NO	
21	Dickerson Road at Hilltop Drive	WNW	7,900	NO	NO	
22	Furnace Dock Road near #343	NW	6,690	NO	NO	
23	Charles Cook Park	NNW	8,620	NO	NO	
24	Watch Hill Road near Furnace Woods Elem. School	SSE	4,560	YES	NO	
25	Montrose Station Road at Washington Street	ENE	6,910	NO	NO	
26	Lafayette Avenue near Damian Way	S	3,940	YES	YES	Figure C7(A-B)
27	Greenlawn Road at Robbie Road	W	5,280	YES	NO	
28	Chapel Hill Drive	SSE	5,670	NO	NO	
29	1969 Crompond Rd. (NY Pres. Hudson Valley Hospital)	S	8,150	NO	NO	

Terminology

* "Balloon Visible" differs from "Theoretical View Indicated by Land Cover Viewshed" due to the use of a highly conservative estimate of tree height in viewshed calculation (50 feet). In most cases mature woodland vegetation is significantly taller resulting in reduced project visibility.
** "Filtered" visibility indicates photo locations where the balloon was visible through intervening deciduous vegetation during winter leaf-off season. Such views will likely be partially or fully screened during summer leaf-on season.

PHOTO SIMULATIONS

To illustrate how the Facility will appear photo simulations were prepared from seven (7) affected photo locations. Photo simulations were developed by superimposing a rendering of a three-dimensional computer model of the proposed Facility into the base photograph taken from each corresponding visual receptor and adjusting to ensure the model reflects the appropriate size

and exact location of the tower. The three-dimensional computer model was developed using *3D Studio Max Design®* software (3D Studio Max).

Simulated perspectives (camera views) were matched to the corresponding base photograph for each simulated view by replicating the precise coordinates of the field camera position (as recorded by handheld GPS) and the focal length of the camera lens used (e.g. 50mm). Precisely matching these parameters assures scale accuracy between the base photograph and the subsequent simulated view. The camera's elevation (Z) value is derived from digital elevation model (DEM) data plus the camera's height above ground level. The camera's target position was set to match the bearing of the corresponding existing condition photograph as recorded in the field. With the existing conditions photograph displayed as a "viewport background," and the viewport properties set to match the photograph's pixel dimensions, minor camera adjustments were made (horizontal and vertical positioning, and camera roll) to align the horizon in the background photograph with the corresponding features of the 3D model.

To verify the camera alignment, elements visible within the photograph (e.g., balloon[11], existing buildings, utility poles, topography, etc.) were identified and digitized from digital orthophotos as needed. Each element was assigned a Z value based on DEM data and then imported to 3D Studio Max. A 3D terrain model was also created (using DEM data) to replicate the existing local topography. The digitized elements were then aligned with corresponding elements in the photograph by adjusting the camera target. If necessary, slight camera adjustments were made for accurate alignment.

A daylight system was created matching the exact date and time of each baseline photograph to assure proper shading and shadowing of modeled elements.

Once the camera alignment was verified, a to-scale 3D model of the proposed 140-foot-tall lattice frame style telecommunications tower was merged into the model space. The 3D model of Facility was constructed in sufficient detail to accurately convey visual character and reveal impacts. The scale, alignment, elevations and location of the visible elements of the proposed tower are true to the conceptual design. Post production editing (i.e., airbrush out portion of tower that falls below or behind foreground topography and vegetation) was completed using Adobe Photoshop software. The methodology accurately represents the location, height and visual character of the proposed tower.

[11] In some photo simulations the top of the proposed tower may appear offset from the horizontal and/or vertical position of the red balloon visible in the corresponding existing conditions photograph. This is attributed to the offset location of the balloon which was tethered approximately 25 feet west of the proposed tower center to avoid dense overhead tree canopy.

Photo simulations are provided in Appendix C.

Summary and Conclusions

The Facility involves the construction of a 140-foot-tall galvanized steel lattice frame telecommunications tower designed to support to support collocation.

The study area is characterized by a rolling, steeply sloped and heavily wooded landscape with broad tracts of mature second growth deciduous forest that effectively block or screen views of the Facility from most locations.

This assessment demonstrates that there are no large geographic areas where Facility views will occur. Places where Facility views are found are isolated locations where narrow view corridors exist through rare small openings in roadside vegetation.

Additionally, as demonstrated above, the Facility will not be visible from any scenic resource of statewide or national significance, including places listed on or eligible for listing on the National Register of Historic Places.

Based on the location of the Facility, it is clear that project visibility is not of a size or extent that it would constitute an unacceptable magnitude.

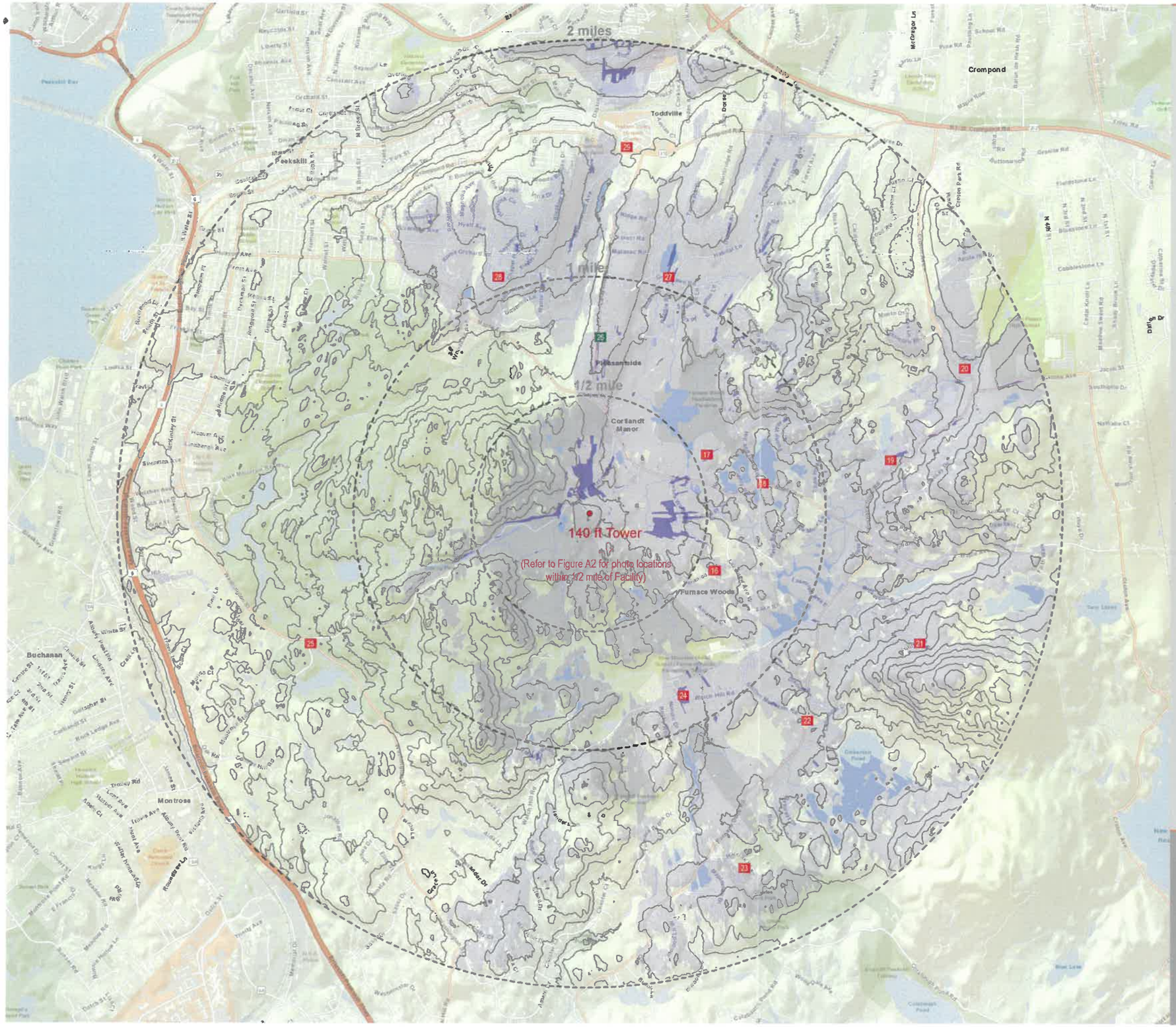
When considered within the framework of the DEC Visual Policy's definition of "significant adverse visual impact", it is clear the Facility will not cause a diminishment of the public enjoyment and appreciation of any scenic or historic resource, or one that impairs the character or quality of such a place. As such, the proposed Facility will not result in any adverse visual impact to the area.

Submitted by:

Matthew W. Allen, RLA

APPENDIX A

Viewshed Maps



LEGEND

- Bare Earth Viewshed Area (Excludes existing vegetation and structures)
- Land Cover Viewshed Area (Includes existing vegetation and structures)

Photo Locations (Refer to Figure A2 for photo locations within 1/2 mile of Facility)

- Balloon Visible
- Balloon Visible Through Trees
- Balloon not Visible

Note: Viewshed areas are not definitive. Viewshed mapping provides a general understanding of where the proposed project is theoretically visible based on regional topographic, forest and building cover data sources.

The "Bare Earth' condition overlay identifies areas where the proposed telecommunictions tower high point may be visible without consideration of the screening effect of existing vegetation or built structures. Bare earth analysis is provided to assist experienced visual analysts identify the maximum potential geographic area within which further investigation is appropriate. This topography-only viewshed map is not representative of project visibility during winter season leaf-off conditions.

The "Land Cover" condition viewshed area includes the screening effect of intervening vegetation and buildings. Vegetated areas and buildings were manually digitized from 2016 one-foot resolution digital orthoimagery. All digitized tree cover is assumed to be 50 feet tall and all digitized buildings are assumed to be 25 feet tall.

0 ft 2000 ft 4000 ft 6000 ft

FIGURE A1

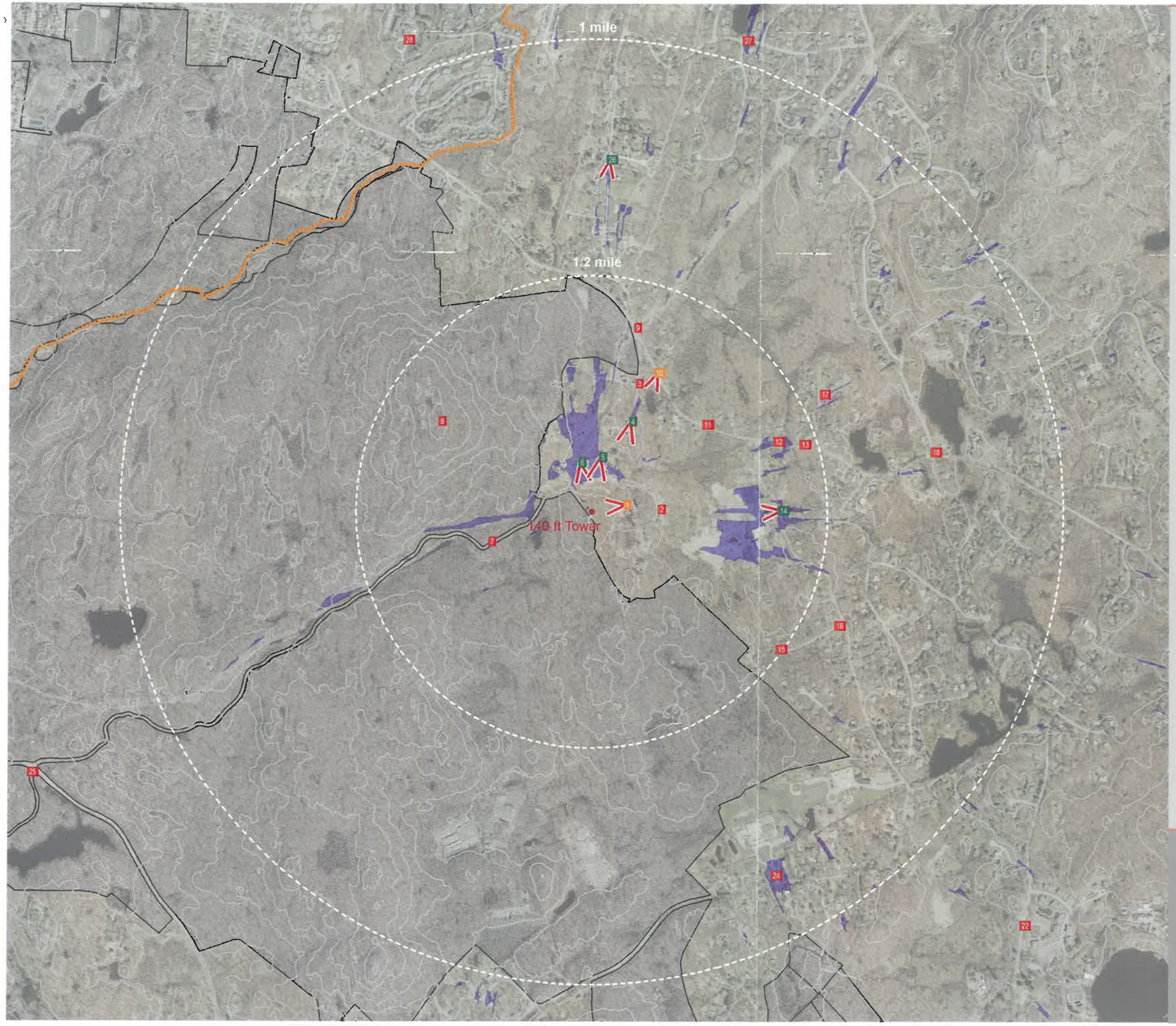
VIEWSHED/PHOTO LOCATION MAP - 2 MILE RADIUS

Visual Resource Assessment

Proposed Telecommunications Tower

verizon

Cortlandt Site
52 Montrose Station Road
Cortlandt, NY 10567



LEGEND

Land Cover Viewshed Area
(Includes existing vegetation and structures)

Photo Locations

Balloon Visible

Balloon Visible Through Trees

Balloon not Visible

Photo Simulation

Scenic Resources

LWRP Community

Municipal Recreation Area

National Register of Historic Places Site

Note: Viewshed areas are not definitive. Viewshed mapping provides a general understanding of where the proposed project is theoretically visible based on regional topographic, forest and building cover data sources.

The "Land Cover" condition viewshed area includes the screening effect of intervening vegetation and buildings. Vegetated areas and buildings were manually digitized from 2016 one-foot resolution digital orthoimagery. All digitized tree cover is assumed to be 50 feet tall and all digitized buildings are assumed to be 25 feet tall.

0 ft 1000 ft 2000 ft 3000 ft

FIGURE A2

VIEWSHED/PHOTO LOCATION MAP - 1 MILE RADIUS

Visual Resource Assessment

Proposed Telecommunications Tower

verizon

Cortlandt Site
52 Montrose Station Road
Cortlandt, NY 10567

APPENDIX B

Photographs

VP1 - Montrose Station Road near #32 and #36

Distance: 380 Feet

VP2 - Montrose Station Road near #34

Distance: 770 Feet

PHOTO LOG

Figure B1

Visual Resource Assessment

Proposed Telecommunications Tower

SARATOGA ASSOCIATES

verizon

Cortlandt Site
52 Montrose Station Rd
Cortlandt, NY 10567

VP3 - Montrose Station Road near #5

Distance: 1,520 Feet

VP4 - Montrose Station Road near #20

Distance: 1,100 Feet

PHOTO LOG

Figure B2

Visual Resource Assessment

Proposed Telecommunications Tower

SARATOGA ASSOCIATES

verizon

Cortlandt Site
52 Montrose Station Rd
Cortlandt, NY 10567

VP5 - Montrose Station Road near #26 and #39

Distance: 620 Feet

VP6 - Montrose Station Road near #49 and #57

Distance: 570 Feet

PHOTO LOG

Figure B3

Visual Resource Assessment

Proposed Telecommunications Tower

SARATOGA ASSOCIATES

verizon

Cortlandt Site
52 Montrose Station Rd
Cortlandt, NY 10567

VP7 - Blue Mountain Reservation - Utility Road

Distance: 1,180 Feet

VP8 - Blue Mountain Reservation – Blue Mountain Summit

Distance: 1,980 Feet

PHOTO LOG

Figure B4

Visual Resource Assessment

Proposed Telecommunications Tower

SARATOGA ASSOCIATES

verizon

Cortlandt Site
52 Montrose Station Rd
Cortlandt, NY 10567

VP9 - Montrose Station Road at Maple Avenue

Distance: 2,120 Feet

VP10 - Maple Avenue near #2117

Distance: 1,720 Feet

PHOTO LOG

Figure B5

Visual Resource Assessment

Proposed Telecommunications Tower

SARATOGA ASSOCIATES

verizon

Cortlandt Site
52 Montrose Station Rd
Cortlandt, NY 10567

VP11 - Maple Avenue near #2139 Distance: 1,610 Feet

VP12- Maple Avenue near Furnace Woods Road Distance: 2,220 Feet

PHOTO LOG

Figure B6

Visual Resource Assessment

Proposed Telecommunications Tower

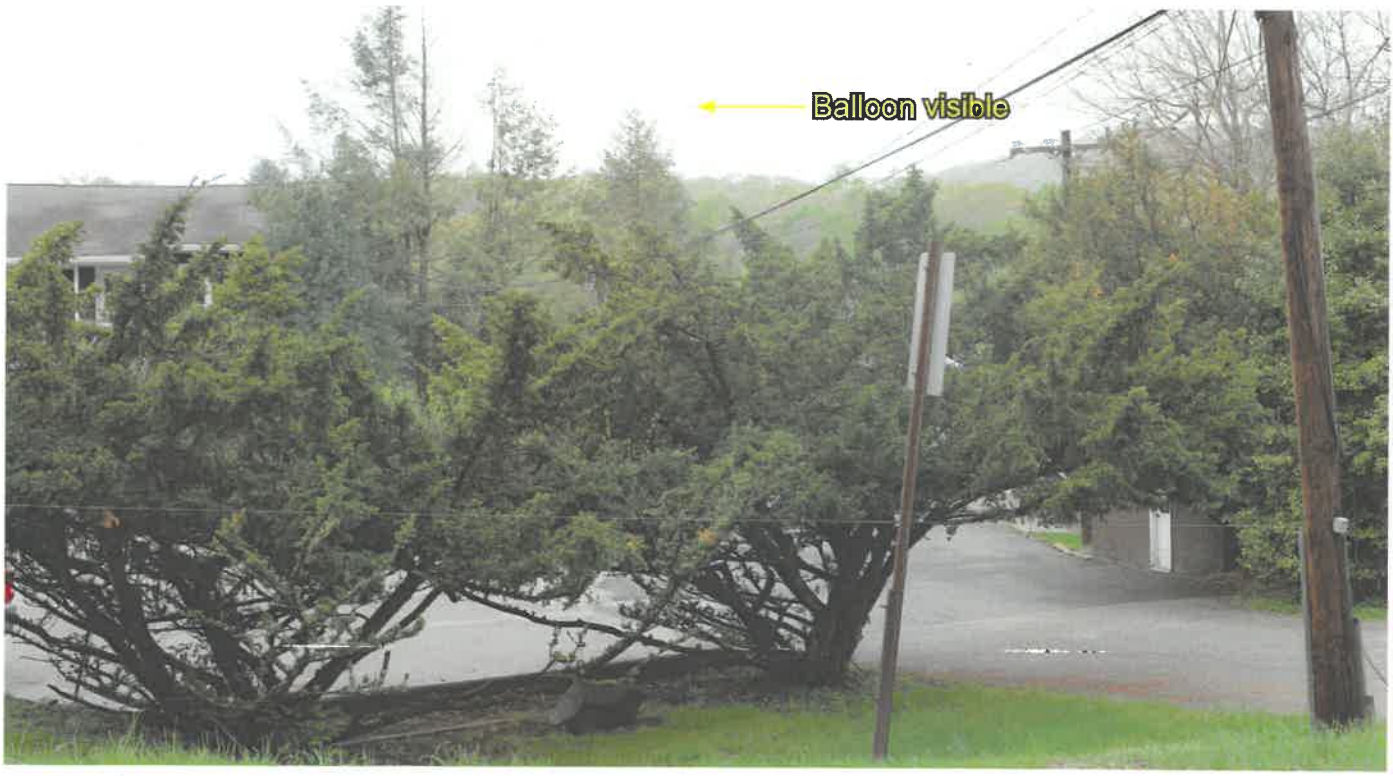
SARATOGA ASSOCIATES

verizon

Cortlandt Site
52 Montrose Station Rd
Cortlandt, NY 10567

VP13- Fairgreen Court at Maple Avenue

Distance: 2,490 Feet



VP14 - Furnace Woods Road near Galloway Lane

Distance: 2,130 Feet

PHOTO LOG

Figure B7

Visual Resource Assessment

Proposed Telecommunications Tower

SARATOGA ASSOCIATES

verizon

Cortlandt Site
52 Montrose Station Rd
Cortlandt, NY 10567

VP15 - Veronica Court near #10 Distance: 2,610 Feet

VP16 - Veronica Court at Furnace Woods Road Distance: 3,050 Feet

PHOTO LOG

Figure B8

Visual Resource Assessment

Proposed Telecommunications Tower

SARATOGA ASSOCIATES

verizon

Cortlandt Site
52 Montrose Station Rd
Cortlandt, NY 10567

VP17- Fairgreen Court at cul-de-sac

Distance: 2,910 Feet

VP18- Hill and Dale Road at Maple Avenue

Distance: 3,900 Feet

PHOTO LOG

Figure B9

Visual Resource Assessment

Proposed Telecommunications Tower

SARATOGA ASSOCIATES

verizon

Cortlandt Site
52 Montrose Station Rd
Cortlandt, NY 10567

VP19 - Cross Road near Furnace Dock Road

Distance: 6,800 Feet

VP20 - Croton Avenue near #200

Distance: 8,960 Feet

PHOTO LOG

Figure B10

Visual Resource Assessment

Proposed Telecommunications Tower

SARATOGA ASSOCIATES

verizon

Cortlandt Site
52 Montrose Station Rd
Cortlandt, NY 10567

VP21 - Dickerson Road at Hilltop Drive

Distance: 7,900 Feet

VP22 - Furnace Dock Road near #343

Distance: 6,690 Feet

PHOTO LOG

Figure B11

Visual Resource Assessment

Proposed Telecommunications Tower

SARATOGA ASSOCIATES

verizon

Cortlandt Site
52 Montrose Station Rd
Cortlandt, NY 10567

VP23- Charles Cook Park

Distance: 8,620 Feet

VP24 - Watch Hill Road near Furnace Woods Elementary School

Distance: 4,560 Feet

PHOTO LOG

Figure B12

Visual Resource Assessment

Proposed Telecommunications Tower

SARATOGA ASSOCIATES

verizon

Cortlandt Site
52 Montrose Station Rd
Cortlandt, NY 10567

VP25 - Montrose Station Road at Washington Street

Distance: 6,910 Feet

VP26 - Lafayette Avenue near Damian Way

Distance: 3,940 Feet

PHOTO LOG

Figure B13

Visual Resource Assessment

Proposed Telecommunications Tower

SARATOGA ASSOCIATES

verizon

Cortlandt Site
52 Montrose Station Rd
Cortlandt, NY 10567

VP27 - Greenlawn Road at Robbie Road

Distance: 5,280 Feet

VP28 - Chapel Hill Drive

Distance: 5,670 Feet

PHOTO LOG

Figure B14

Visual Resource Assessment

Proposed Telecommunications Tower

SARATOGA ASSOCIATES

verizon

Cortlandt Site
52 Montrose Station Rd
Cortlandt, NY 10567

VP29 - 1969 Crompond Road (NY Presbyterian Hudson Valley Hospital) Distance: 8,150 Feet

PHOTO LOG

Figure B15

Visual Resource Assessment

Proposed Telecommunications Tower

SARATOGA ASSOCIATES

verizon

Cortlandt Site
52 Montrose Station Rd
Cortlandt, NY 10567

APPENDIX C

Photo Simulations

Photograph Information

Date:	May 4, 2019
Time:	9:55 am
Focal Length:	50mm
Camera:	Canon EOS 6D MarkII
Photo Location:	41° 16' 10.5168" N 73° 53' 42.7200"W
Distance:	380 Feet

To appear at the correct scale this page is intended to be viewed 18 inches from the reader's eye when printed on 11"x17" paper.

Existing Condition

VP1 - Montrose Station Road near #32 and #36

SARATOGA ASSOCIATES

Figure C1-A

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

verizon

Cortlandt Site
52 Montrose Station Roade
Cortlandt, NY 10567

Photograph Information

Date:	May 4, 2019
Time:	9:55 am
Focal Length:	50mm
Camera:	Canon EOS 6D MarkII
Photo Location:	41° 16' 10.5168" N 73° 53' 42.7200"W
Distance:	380 Feet

To appear at the correct scale this page is intended to be viewed 18 inches from the reader's eye when printed on 11"x17" paper.

Simulated Condition - 140 ft. Lattice Tower

VP1 - Montrose Station Road near #32 and #36

SARATOGA ASSOCIATES

Figure C1-B

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

verizon

Cortlandt Site
52 Montrose Station Roade
Cortlandt, NY 10567

Photograph Information

Date:	May 4, 2019
Time:	9:36 am
Focal Length:	50mm
Camera:	Canon EOS 6D MarkII
Photo Location:	41° 16' 19.7232" N 73° 53' 41.9042" W
Distance:	1,100 Feet

To appear at the correct scale this page is intended to be viewed 18 inches from the reader's eye when printed on 11"x17" paper.

Existing Condition

VP4 - Montrose Station Road near #20

SARATOGA ASSOCIATES

Figure C2-A

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

verizon

Cortlandt Site
52 Montrose Station Roade
Cortlandt, NY 10567

Photograph Information

Date:	May 4, 2019
Time:	9:36 am
Focal Length:	50mm
Camera:	Canon EOS 6D MarkII
Photo Location:	41° 16' 19.7232" N 73° 53' 41.9042" W
Distance:	1,100 Feet

To appear at the correct scale this page is intended to be viewed 18 inches from the reader's eye when printed on 11"x17" paper.

Simulated Condition - 140 ft. Lattice Tower

VP4 - Montrose Station Road near #20

SARATOGA ASSOCIATES

Figure C2-B

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

verizon

Cortlandt Site
52 Montrose Station Roade
Cortlandt, NY 10567

Photograph Information

Date:	May 4, 2019
Time:	9:18 am
Focal Length:	50mm
Camera:	Canon EOS 6D MarkII
Photo Location:	41° 16' 15.8219" N 73° 53' 46.3740" W
Distance:	620 Feet

To appear at the correct scale this page is intended to be viewed 18 inches from the reader's eye when printed on 11"x17" paper.

Existing Condition

VP5 - Montrose Station Road near #26 and # 39

Figure C3-A

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

SARATOGA ASSOCIATES

verizon

Cortlandt Site
52 Montrose Station Roade
Cortlandt, NY 10567

Photograph Information

Date:	May 4, 2019
Time:	9:18 am
Focal Length:	50mm
Camera:	Canon EOS 6D MarkII
Photo Location:	41° 16' 15.8219" N 73° 53' 46.3740" W
Distance:	620 Feet

*To appear at the correct scale this page is intended to be viewed 18 inches from the reader's eye when printed on 11"x17" paper.

Simulated Condition - 140 ft. Lattice Tower

VP5 - Montrose Station Road near #26 and # 39

SARATOGA ASSOCIATES

Figure C3-B

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

verizon

Cortlandt Site
52 Montrose Station Roade
Cortlandt, NY 10567

Photograph Information

Date:	May 4, 2019
Time:	9:42 am
Focal Length:	50mm
Camera:	Canon EOS 6D MarkII
Photo Location:	41° 16' 15.0456" N 73° 53' 49.4304" W
Distance:	570 Feet

To appear at the correct scale this page is intended to be viewed 18 inches from the reader's eye when printed on 11"x17" paper.

Existing Condition

VP6 - Montrose Station Road near #49 and #57

Figure C4-A

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

SARATOGA ASSOCIATES

verizon

Cortlandt Site
52 Montrose Station Roade
Cortlandt, NY 10567

Photograph Information

Date:	May 4, 2019
Time:	9:42 am
Focal Length:	50mm
Camera:	Canon EOS 6D MarkII
Photo Location:	41° 16' 15.0456" N 73° 53' 49.4304" W
Distance:	570 Feet

To appear at the correct scale this page is intended to be viewed 18 inches from the reader's eye when printed on 11"x17" paper.

Simulated Condition - 140 ft. Lattice Tower

VP6 - Montrose Station Road near #49 and #57

SARATOGA ASSOCIATES

Figure C4-B

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

verizon

Cortlandt Site
52 Montrose Station Roade
Cortlandt, NY 10567

Photograph Information

Date:	May 4, 2019
Time:	11:51 pm
Focal Length:	50mm
Camera:	Canon EOS 6D MarkII
Photo Location:	41° 16' 25.0608" N 73° 53' 37.8960"W
Distance:	1,720 Feet

To appear at the correct scale this page is intended to be viewed 18 inches from the reader's eye when printed on 11"x17" paper.

Existing Condition

VP10 - Maple Avenue near #2117

Figure C5-A

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

SARATOGA ASSOCIATES

verizon

Cortlandt Site
52 Montrose Station Roade
Cortlandt, NY 10567

Photograph Information

Date:	May 4, 2019
Time:	11:51 pm
Focal Length:	50mm
Camera:	Canon EOS 6D MarkII
Photo Location:	41° 16' 25.0608" N 73° 53' 37.8960"W
Distance:	1,720 Feet

To appear at the correct scale this page is intended to be viewed 18 inches from the reader's eye when printed on 11"x17" paper.

Simulated Condition - 140 ft. Lattice Tower

VP10 - Maple Avenue near #2117

SARATOGA ASSOCIATES

Figure C5-B

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

verizon

Cortlandt Site
52 Montrose Station Roade
Cortlandt, NY 10567

Photograph Information

Date:	May 4, 2019
Time:	10:09 am
Focal Length:	50mm
Camera:	Canon EOS 6D MarkII
Photo Location:	41° 16' 09.7788" N 73° 53' 19.8240"W
Distance:	2,130 Feet

To appear at the correct scale this page is intended to be viewed 18 inches from the reader's eye when printed on 11"x17" paper.

Existing Condition

VP14 - Furnace Woods Road near Galloway Lane

Figure C6-A

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

SARATOGA ASSOCIATES

verizon

Cortlandt Site
52 Montrose Station Roade
Cortlandt, NY 10567

Photograph Information

Date:	May 4, 2019
Time:	10:09 am
Focal Length:	50mm
Camera:	Canon EOS 6D MarkII
Photo Location:	41° 16' 09.7788" N 73° 53' 19.8240"W
Distance:	2,130 Feet

To appear at the correct scale this page is intended to be viewed 18 inches from the reader's eye when printed on 11"x17" paper.

Simulated Condition - 140 ft. Lattice Tower

VP14 - Furnace Woods Road near Galloway Lane

Figure C6-B

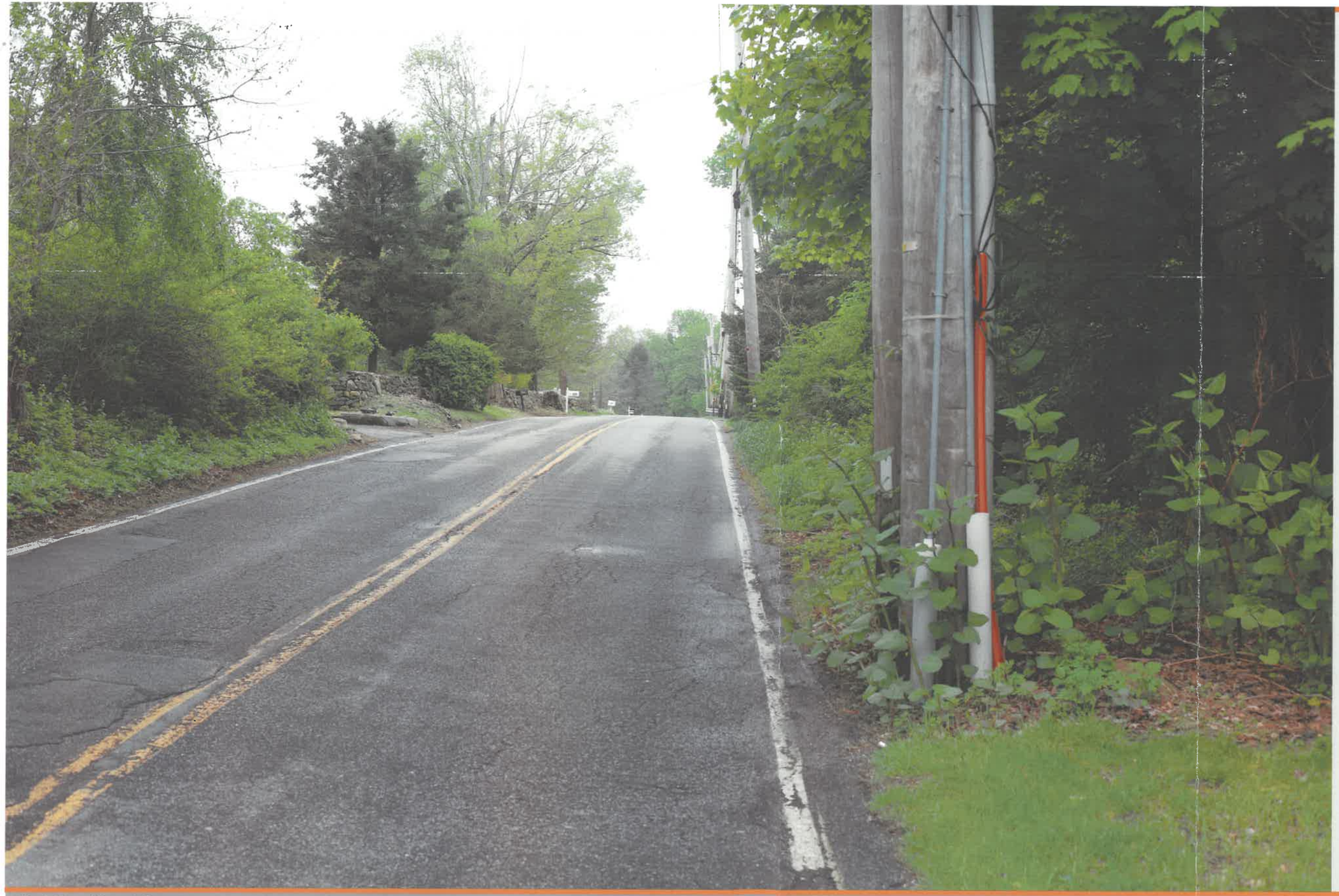
Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

SARATOGA ASSOCIATES

verizon

Cortlandt Site
52 Montrose Station Roade
Cortlandt, NY 10567



Photograph Information

Date:	May 4, 2019
Time:	11:45 pm
Focal Length:	50mm
Camera:	Canon EOS 6D MarkII
Photo Location:	41° 16' 48.5796" N 73° 53' 44.8836" W
Distance:	3,940 Feet

To appear at the correct scale this page is intended to be viewed 18 inches from the reader's eye when printed on 11"x17" paper.

Existing Condition

VP26 - Lafayette Avenue near Damian Way

SARATOGA ASSOCIATES

Figure C7-A

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

verizon

Cortlandt Site
52 Montrose Station Roade
Cortlandt, NY 10567

Photograph Information

Date:	May 4, 2019
Time:	11:45 pm
Focal Length:	50mm
Camera:	Canon EOS 6D MarkII
Photo Location:	41° 16' 48.5796" N 73° 53' 44.8836" W
Distance:	3,940 Feet

To appear at the correct scale this page is intended to be viewed 18 inches from the reader's eye when printed on 11"x17" paper.

Simulated Condition - 140 ft. Lattice Tower

VP26 - Lafayette Avenue near Damian Way

SARATOGA ASSOCIATES

Figure C7-B

Visual Resource Assessment

PROPOSED TELECOMMUNICATIONS TOWER

verizon

Cortlandt Site
52 Montrose Station Roade
Cortlandt, NY 10567

Exhibit 7
Application with Title of Signatory

TOWN OF CORTLANDT
PLANNING BOARD APPLICATION

CHECK APPROVAL (S) REQUESTED

___ Lot Line Adjustment
___ Preliminary Subdivision
___ Conventional
___ Cluster-open space
___ Final Subdivision
___ Site Development Plan
___ Site Development Plan Amendment
___ Special Permit
___ Wetlands Permit
___ Steep Slopes Permit

For Official Use Only:
PB No. _____
Date Received _____
Fee Paid _____

1. Name of Proposed Development Personal Wireless Services Facilities at 52 Montrose Station

2. Name of Applicant New York SMSA Limited Partnership d/b/a Verizon Wireless Phone (914) 333-0700
   Address c/o Snyder & Snyder, LLP, 94 White Plains Road, Tarrytown, New York 10591
   Street No. & Name Town State Zip

3. Owner of Record Bezo Enterprises, LLC Phone _____
   Address 52 Montrose Station Road, Cortlandt Manor, New York, 10567
   Street No. & Name Town State Zip

4. Engineer/Architect Scherer Design Group Phone (908) 323-2513
   Address 53 Frontage Road, Suite 260, Hampton, New Jersey, 08827
   Street No. & Name Town State Zip

5. Land Surveyor N/A Phone _____
   Address _____
   Street No. & Name Town State Zip

6. Attorney Leslie J. Snyder Phone (914) 333-0700
   Address Snyder & Snyder, LLP, 94 White Plains Road, Tarrytown, New York, 10591
   Street No. & Name Town State Zip

7. Site Location: On the South (direction) side of Montrose Station Road (street)
   +/- 1,570 feet East (direction) of Maple Avenue (street)

8. Tax lot designation: Section: 44.07 Block 1 Lot(s) 4

9. Total Area: +/- 1,600 SF No. of Lots 1 Sq. Ft. of Building N/A
   + Extension to access drive
   Zoning Dist. R-40 Proposed Use Personal Wireless Services Facility No. Of Parking Spaces N/A

10. If this application is for a cluster-open space subdivision give date and Resolution number of Town Board authorization. Date: _____ Res. # _____

PLEASE CHECK APPROPRIATE SPACE: **I consent to the extension of the 62-day Public Hearing and review period. See instructions item # 4.** **YES** ___ **NO** X (At this time)

CONFIRMATION ALL TAXES PAID: _____ **Date:** _____
Receiver of Taxes

STATE OF NEW YORK;)
COUNTY OF WESTCHESTER:) SS
TOWN OF CORTLANDT)

Csaba Szekely (Real Estate and Regulatory Specialist/ Project Manager for New York SMSA Limited Partnership d/b/a Verizon Wireless) on behalf of New York SMSA
I, Limited Partnership d/b/a Verizon Wireless hereby depose and say that all the above statements and the statements contained in the papers submitted herewith are true. New York SMSA Limited Partnership d/b/a Verizon Wireless
By: _____

Mailing Address
c/o Snyder & Snyder, LLP
94 White Plains Road
Tarrytown, New York 10591

SWORN to before me this
21st day of May, 2019

NOTARY PUBLIC Ashley Lane

ASHLEY LANE
NOTARY PUBLIC-STATE OF NEW YORK
No. 01LA6352259
Qualified in Rockland County
My Commission Expires 12-27-2020

Exhibit 8
Revised Letter of Authorization

LETTER OF AUTHORIZATION

Municipality: Town of Cortlandt

APPLICATION FOR APPROVALS

BEZO ENTERPRISES, LLC, the owner of the property located at 52 Montrose Station Road, Cortlandt Manor, New York (the "Property"), does hereby appoint New York SMSA Limited Partnership d/b/a Verizon Wireless ("Verizon Wireless"), and its authorized representatives, as the owner's agent for the purpose of consummating any applications necessary to insure Verizon Wireless' ability to use the Property for the purpose of installing a communications facility on the Property, consisting of antennas and related equipment. The Property Owner is aware that Verizon Wireless has filed/will file applications for any necessary approval with the applicable Board[s] and/or the Building Department and that the Town of Cortlandt may deny the application or issue a permit with conditions.

Assessor's Parcel Number: Section 44.07, Block 1, Lot 4

Signature of Property Owner:
BEZO ENTERPRISES, LLC

By: Laura Labriola
LAURA LABRIOLA
Title with Bezo Enterprises, LLC: Owner, Sole Member
Dated: July 15, 2019

Sworn to and subscribed to before me on this
15 day of July, 2019.

MARIA C TORREBLANCA
Notary Public – State of New York
NO. 01TO6367758
Qualified in Westchester County
My Commission Expires Nov 27, 2021

Signature of Notary

Authorized Agent:
New York SMSA Limited Partnership d/b/a Verizon Wireless

OF WORK

Telecommunications Facility Including
elated Equipment with Associated
Lattice Tower and the Installation
inets Within a Proposed Fenced
nd at Grade.

DIRECTORY

VERIZON:

RF ENGINEER:
Ali Aljibori
(914) 714-7224

CONSTRUCTION MANAGER:
Scott Pinkham
(845) 505-0607

Property Specialist:
Alex Moss
(201) 290-4680

ENGINEERING PROJECT MANAGER:
Steve Krug
(908) 323-2513

SDG
SCHERER DESIGN GROUP, LLC

Shelbourne at Hunterdon
53 Frontage Road, Suite 260
Hampton, NJ 08827
Ph 908.323.2513 Fax 908.323.2525
www.schererdesigngroup.com

STATE OF NEW YORK
COLLEEN CONNOLLY
LICENSED PROFESSIONAL ENGINEER

COLLEEN CONNOLLY
NY PROFESSIONAL ENGINEER # 087018

APPLICANT:

verizon
WIRELESS

4 CENTEROCK ROAD
WEST NYACK, NY 10994

	ATTORNEY	

ORDINATES

): 435' +/- (NAVD88)
5' +/- (NAVD88)

SCRIPTION

ZONE: R-40
SECTION: 44.7

NOTES

LIMINARY. FINAL SURVEYS SHALL BE ROVED.

LOCATION, INCLUDING GEOMORPHOLOGIC AND ELIMINARY SITE LAYOUT IS APPROVED.

TION PLANS TO BE SUBMITTED ONCE

TYPE, AND SIZE OF TREES TO BE REMOVED

ND AS SUCH NO STORM WATER POLLUTION

SSMENT FORM AND VISUAL ENVIRONMENTAL IARY SITE LAYOUT IS APPROVED.

BE COMPLETED ONCE PRELIMINARY SITE

ONLY LIGHT THE PROPOSED EQUIPMENT ELDING AND SIZE OF PROPOSED LIGHTS, Y LINE. LIGHTS WILL BE ON A 60 MINUTE ICIAN LEAVES SITE.

WER TO BE COMPLETED ONCE PRELIMINARY

N AND ANALYSIS REPORTS OF THE BMITTED ONCE PRELIMINARY SITE LAYOUT

S TO BE STAKED OUT PRIOR TO

FICATIONS, DETAILS, AND INSTALLATION UIPMENT LOCATION, AND ALL REQUIRED ITE LAYOUT IS APPROVED.

PERMIT HAS BEEN RECEIVED.

SITE INCLUDING THE TOWER, WHILE IT D IN CONNECTION WITH SAME.

ARDING ABANDONMENT/DISCONTINUANCE

NO.	ISSUE OR REVISION	DATE	BY
G	COMMENTS	07/12/19	DP
F	TOWNSHIP COMMENTS	06/20/19	DP
E	ATTORNEY COMMENTS	02/08/19	HW
D	ATTORNEY COMMENTS	12/20/18	HW

PROJECT TITLE:

PRELIMINARY SITE PLAN

CORTLANDT

52 MONTROSE STATION RD
CORTLANDT, NY 10567
WESTCHESTER COUNTY

BLOCK: 1 LOT: 4
ZONE: R-40

SDG PROJECT #: 16VZN071

SCALE: AS NOTED	DATE: 11/13/17
DRAWN BY: JM	CHECKED BY: SK

DRAWING TITLE:

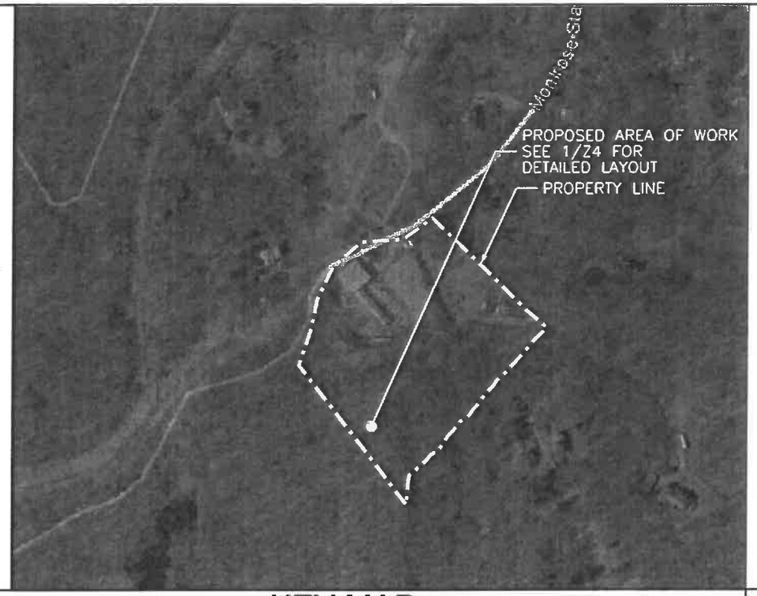
COVER PAGE

DRAWING NO.:	PAGE NO.:
Z1	1 of 11

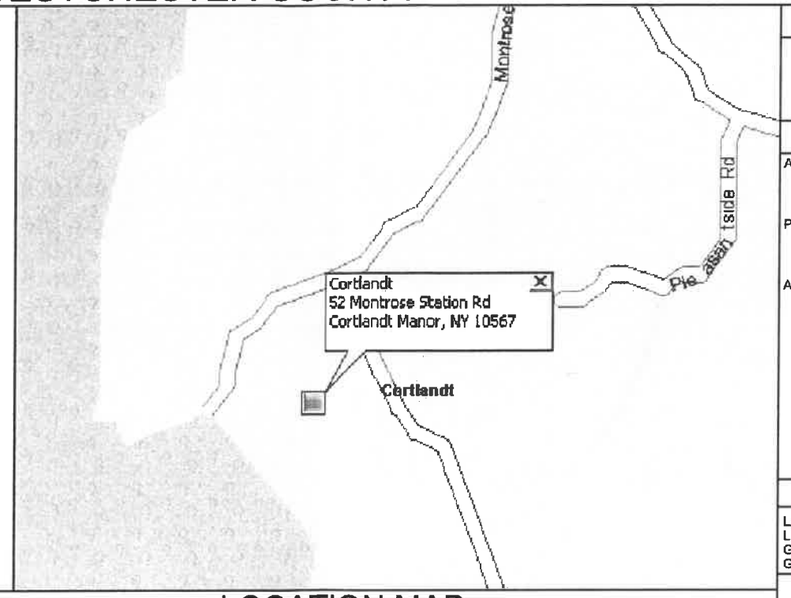
verizon

4 CENTEROCK ROAD
WEST NYACK, NY 10994

CORTLANDT
52 MONTROSE STATION RD
CORTLANDT, NY 10567
WESTCHESTER COUNTY



KEY MAP
22x34 SCALE: 1" = 200'-0"
11x17 SCALE: 1"= 400'-0"



LOCATION MAP
22x34 SCALE: 1" = 200'-0"
11x17 SCALE: 1"= 400'-0"

SCOPE OF WORK

The Installation of an Unmanned Telecommunications Facility Including Small Panel Antennas and Related Equipment with Associated Appurtenances on a Proposed Lattice Tower and the Installation of Proposed Equipment Cabinets Within a Proposed Fenced Compound at Grade.

PROJECT DIRECTORY

APPLICANT:
Verizon Wireless
4 Centerock Road
West Nyack, NY 10994

PROPERTY OWNER:
Bezo Enterprises LLC
40 Waters Edge
Rye, NY 10580

ATTORNEY:
Leslie Snyder
Snyder & Snyder, LLP
94 White Plains Road
Tarrytown, NY 10591
(914) 333-0700

VERIZON:

RF ENGINEER:
Ali Aljibori
(914) 714-7224

CONSTRUCTION MANAGER:
Scott Pinkham
(845) 505-0607

Property Specialist:
Alex Moss
(201) 290-4680

ENGINEERING PROJECT MANAGER:
Steve Krug
(908) 323-2513

SITE COORDINATES

LATITUDE: N41°16'10.16" (NAD83)
LONGITUDE: W73°53'48.11" (NAD83)
GROUND ELEVATION (COMPOUND): 435' +/- (NAVD88)
GROUND ELEVATION (TOWER): 445' +/- (NAVD88)

LEGAL DESCRIPTION

BLOCK: 1
LOT: 4
ZONE: R-40
SECTION: 44.7

DWG.	DWG. TITLE
Z1	COVER PAGE
Z2	RADIUS MAP
Z3	SITE PLANS AND SITE PLAN NOTES
Z4	COMPOUND LAYOUT
Z5	ELEVATIONS
Z6	ELEVATIONS
Z7	DETAILS
Z8	SPECIFICATIONS
Z9	PROPERTY OWNERS LIST
Z10	PRELIMINARY EXISTING CONDITIONS SURVEY
Z11	PRELIMINARY TREE REMOVAL PLAN

(TYPICAL DRAFTING STANDARDS FOR ALL SHEETS)	
Existing	Light, Upper And Lower Case Lettering When Labeling Existing Features
PROPOSED	BOLD, UPPER CASE LETTERING WHEN LABELING PROPOSED FEATURES
————	Light Lines Represent Existing Features
————	DARK LINES REPRESENT PROPOSED FEATURES

APPLICABLE BUILDING CODES AND STANDARDS

SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

BUILDING CODE: INTERNATIONAL BUILDING CODE (IBC), 2015 AS ADOPTED BY NEW YORK

CODE SUPPLEMENT: 2017 NYS UNIFORM CODE SUPPLEMENT, EFFECTIVE DATE OCTOBER 31, 2017

ELECTRICAL CODE: NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 70 - 2014, NATIONAL ELECTRICAL CODE, AS ADOPTED BY NEW YORK

MECHANICAL CODE: INTERNATIONAL MECHANICAL CODE (IMC), 2015 AS ADOPTED BY NEW YORK

PLUMBING CODE: NATIONAL STANDARD PLUMBING CODE, 2015 AS ADOPTED BY NEW YORK

LIGHTNING PROTECTION CODE: NFPA 780 - 2006, LIGHTNING PROTECTION CODE

FUEL GAS CODE: INTERNATIONAL FUEL GAS CODE (IFGC), 2015 AS ADOPTED BY NEW YORK

ENERGY CODE: INTERNATIONAL ENERGY CONSERVATION CODE, 2015 AS ADOPTED BY NEW YORK

SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST APPROVED OF THE FOLLOWING STANDARDS:

AMERICAN CONCRETE INSTITUTE (ACI) 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, ASD, THIRTEENTH EDITION, AISC 360, SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS

TIA-222-G, STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES, TIA 607 COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 101 (2015), LIFE SAFETY CODE, NFPA 37 (2002), STATIONARY COMBUSTION ENGINES AND GAS TURBINES, NFPA 853 (2003), STANDARD FOR THE INSTALLATION OF STATIONARY FUEL POWER PLANTS

AMERICAN WELDING SOCIETY (AWS) D1.1 (2004), STRUCTURAL WELDING CODE - STEEL

INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) 81, GUIDE FOR MEASURING EARTH RESISTIVITY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A GROUND SYSTEM IEEE 1100 (1999) RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRONIC EQUIPMENT

IEEE C2 NATIONAL ELECTRIC SAFETY CODE (NESC) 2012

TELCORDIA GR-1275 GENERAL INSTALLATION REQUIREMENTS

ANSI T1.311, FOR TELECOM - DC POWER SYSTEMS - TELECOM, ENVIRONMENTAL PROTECTION

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

PROJECT NOTES

1. ALL SURVEYS SHOWN IN THESE DRAWINGS ARE PRELIMINARY. FINAL SURVEYS SHALL BE COMPLETED ONCE PRELIMINARY SITE LAYOUT IS APPROVED.
2. ENVIRONMENTAL ANALYSIS OF THE PROPOSED SITE LOCATION, INCLUDING GEOMORPHOLOGIC AND STEEP SLOPE STUDIES, TO BE COMPLETED ONCE PRELIMINARY SITE LAYOUT IS APPROVED.
3. FINAL TREE REMOVAL AND TOPOGRAPHICAL ALTERATION PLANS TO BE SUBMITTED ONCE PRELIMINARY SITE LAYOUT IS APPROVED.
4. TOWN CONSULTANT ARBORIST TO IDENTIFY SPECIES, TYPE, AND SIZE OF TREES TO BE REMOVED ONCE FINAL TREE SURVEY IS COMPLETED.
5. TOTAL LAND DISTURBANCE IS TO BE BELOW 1 ACRE, AND AS SUCH NO STORM WATER POLLUTION PREVENTION PLAN IS REQUIRED.
6. FINAL COMPLETED LONG FORM ENVIRONMENTAL ASSESSMENT FORM AND VISUAL ENVIRONMENTAL ASSESSMENT FORM TO BE SUBMITTED ONCE PRELIMINARY SITE LAYOUT IS APPROVED.
7. LANDSCAPING PLAN DEPICTING SITE REMEDIATION TO BE COMPLETED ONCE PRELIMINARY SITE LAYOUT IS APPROVED.
8. ALL PROPOSED SITE LIGHTING SHALL BE SHIELDED TO ONLY LIGHT THE PROPOSED EQUIPMENT CABINETS IN THE EQUIPMENT COMPOUND. DUE TO SHIELDING AND SIZE OF PROPOSED LIGHTS, SITE LIGHTING WILL NOT BE VISIBLE BEYOND PROPERTY LINE. LIGHTS WILL BE ON A 60 MINUTE MANUAL TIMER TO AVOID BEING LEFT ON AFTER TECHNICIAN LEAVES SITE.
9. BREAK POINT ANALYSIS OF THE PROPOSED LATTICE TOWER TO BE COMPLETED ONCE PRELIMINARY SITE LAYOUT IS APPROVED.
10. FINAL SIGNED AND SEALED STRUCTURAL CERTIFICATION AND ANALYSIS REPORTS OF THE PROPOSED LATTICE TOWER TO BE COMPLETED AND SUBMITTED ONCE PRELIMINARY SITE LAYOUT IS APPROVED.
11. PROPOSED LATTICE TOWER AND EQUIPMENT LOCATIONS TO BE STAKED OUT PRIOR TO CONSTRUCTION.
12. CONSTRUCTION DRAWINGS SHOWING COMPLETE SPECIFICATIONS, DETAILS, AND INSTALLATION INFORMATION FOR THE PROPOSED LATTICE TOWER, EQUIPMENT LOCATION, AND ALL REQUIRED FOUNDATIONS TO BE COMPLETED ONCE PRELIMINARY SITE LAYOUT IS APPROVED.
13. CONSTRUCTION SHALL NOT COMMENCE UNTIL BUILDING PERMIT HAS BEEN RECEIVED.
14. VERIZON TO MAINTAIN ITS EQUIPMENT/STRUCTURES AT SITE INCLUDING THE TOWER, WHILE IT IS OWNER OF SAME. MONTHLY SITE VISITS ARE EXPECTED IN CONNECTION WITH SAME.
15. APPLICANT TO COMPLY WITH CODE REQUIREMENTS REGARDING ABANDONMENT/DISCONTINUANCE IN THE UNLIKELY EVENT SAME OCCURS.

SDG
SCHERER DESIGN GROUP, LLC
Shelbourne at Hunterdon
53 Frontage Road, Suite 260
Hampton, NJ 08827
Ph 908.323.2513 Fax 908.323.2525
www.schererdesigngroup.com

STATE OF NEW YORK
KATHLEEN CONNOLLY
087018
LICENSED PROFESSIONAL ENGINEER

KATHLEEN CONNOLLY
NY PROFESSIONAL ENGINEER # 087018
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APPLICANT

verizon
WIRELESS

4 CENTEROCK ROAD
WEST NYACK, NY 10994

NO.	ISSUE OR REVISION	DATE	BY
H	ATTORNEY COMMENTS	07/15/19	DP
G	ATTORNEY COMMENTS	07/12/19	DP
F	TOWNSHIP COMMENTS	06/20/19	DP
E	ATTORNEY COMMENTS	02/08/19	HW
D	ATTORNEY COMMENTS	12/20/18	HW

PROJECT TITLE:

PRELIMINARY SITE PLAN

CORTLANDT

52 MONTROSE STATION RD
CORTLANDT, NY 10567
WESTCHESTER COUNTY

BLOCK: 1 LOT: 4
ZONE: R-40

SDG PROJECT #: 16VZN071

SCALE: AS NOTED	DATE: 11/13/17
DRAWN BY: JM	CHECKED BY: SK

DRAWING TITLE:

COVER PAGE

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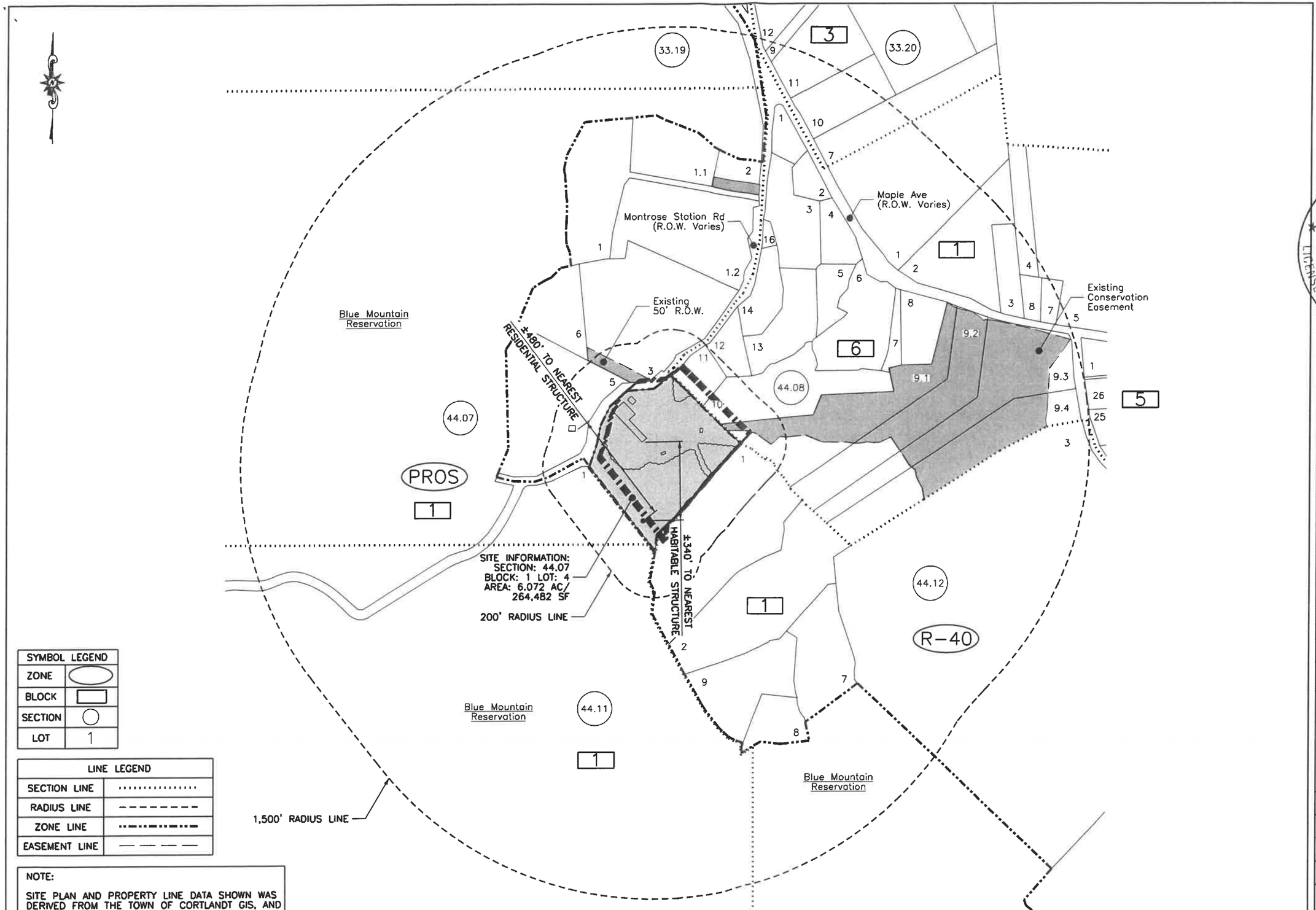
Z1	1 of 11



SYMBOL LEGEND	
ZONE	
BLOCK	
SECTION	
LOT	1

LINE LEGEND	
SECTION LINE	.....
RADIUS LINE	- - - - - - -
ZONE LINE	·-·-·-·-·-·
EASEMENT LINE	— — — —

NOTE:

SITE PLAN AND PROPERTY LINE DATA SHOWN WAS DERIVED FROM THE TOWN OF CORTLANDT GIS, AND TAX MAPS #44.07, #44.08, #44.11 AND #44.12 (LAST REVISED OCTOBER 2015).

1 **RADIUS MAP**

11x17 SCALE: 1"= 400'-0" | 22x34 SCALE: 1" = 200'-0"

0 200' 400'

SDG
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STATE OF NEW YORK
COLLEEN CONNOLLY
LICENSED PROFESSIONAL ENGINEER
LIC. NO. 087018

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NY PROFESSIONAL ENGINEER # 087018
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701 APPLICANT:

verizon
WIRELESS

4 CENTEROCK ROAD
WEST NYACK, NY 10994

NO.	ISSUE OR REVISION	DATE	BY
H	ATTORNEY COMMENTS	07/15/19	DP
G	ATTORNEY COMMENTS	07/12/19	DP
F	TOWNSHIP COMMENTS	06/20/19	DP
E	ATTORNEY COMMENTS	02/08/19	HW
D	ATTORNEY COMMENTS	12/20/18	HW

PROJECT TITLE:

PRELIMINARY
SITE PLAN

CORTLANDT

52 MONTROSE STATION RD
CORTLANDT, NY 10567
WESTCHESTER COUNTY

BLOCK: 1 LOT: 4
ZONE: R-40

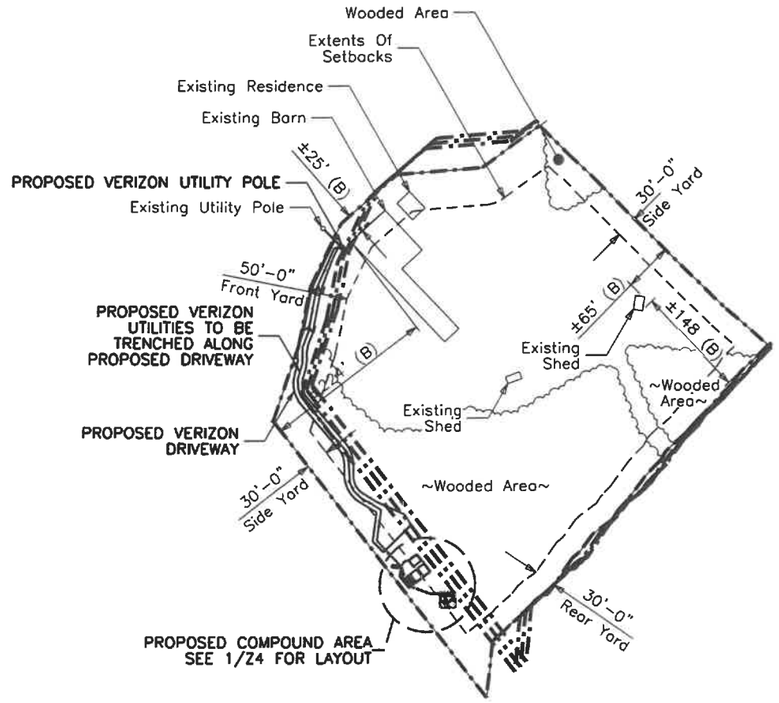
SDG PROJECT #: 16VZN071

SCALE: AS NOTED	DATE: 11/13/17
DRAWN BY: JM	CHECKED BY: SK

DRAWING TITLE:

RADIUS MAP

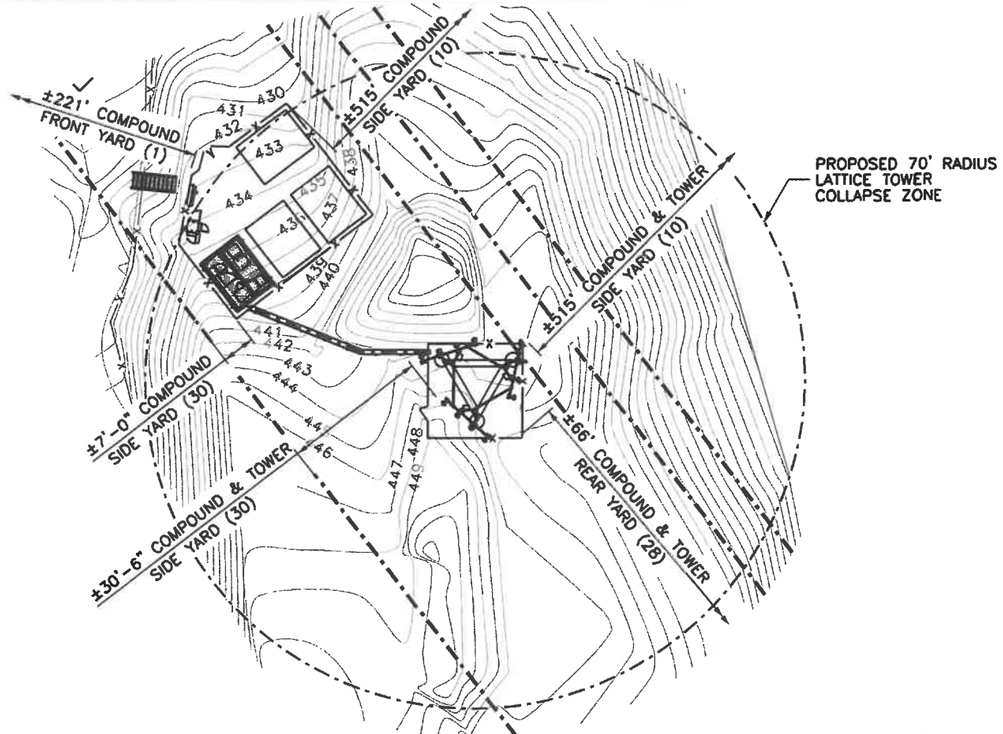
DRAWING NO.:	PAGE NO.:
Z2	2 of 11



1 **OVERALL SITE PLAN**

11x17 SCALE: 1"= 200'-0" | 22x34 SCALE: 1" = 100'-0"

0 100' 200'



2 **DETAILED SITE PLAN**

11x17 SCALE: 1/32"= 1'-0" | 22x34 SCALE: 1/16" = 1'-0"

0 16' 32'

ZONING ORDINANCE DISTRICT R-40			
(SECTION 307-17)	REQUIRED	EXISTING	PROPOSED
Min. Lot Area	40,000 SF	261,664 SF	No Change
Min. Lot Width	150'	552'	No Change
Max. Height	2-1/2 Stories/35'	1-1/2 Stories/±20'	±9' (Equipment Canopy)
Min. Front Yard	50'	±25' *	±221'
Min. Side Yard	30'	±65'	±7'-0" **
Min. Rear Yard	30'	±148'	±66'
Max. Building Coverage	65% Of F.A.R	±3%	±3.07%
Min. Landscape Coverage	60%	±72%	±69%

WIRELESS ORDINANCE			
(CHAPTER 277)	REQUIRED	EXISTING	PROPOSED
Nearest Residential Structure	N/A	N/A	±480'
Nearest Habitable Structure	N/A	N/A	±340'
Proposed Utilities	Installed Underground	N/A	Installed Underground
Max. Tower Height	140'/ 3 Carriers	N/A	±140'
Tower Setback From Property Line	1/2 The Height Of The Tower (70')	N/A	±34'-0" **

* = EXISTING NON-CONFORMITY
** = WAIVER REQUIRED

3 **BULK REQUIREMENTS**

11x17 SCALE: NTS | 22x34 SCALE: NTS

1. SITE PLAN AND PROPERTY LINE DATA SHOWN WAS DERIVED FROM THE WESTCHESTER COUNTY GIS (LAST REVISED OCTOBER, 2015), EXISTING CONDITIONS SURVEY BY COPPENS LAND SURVEYING (DATED 07/20/16), FIELD MEASUREMENTS PERFORMED BY SCHERER DESIGN GROUP AND AERIAL PHOTOGRAPHY. THIS OVERALL SITE PLAN DOES NOT CONSTITUTE A BOUNDARY SURVEY.
2. THE PROPOSED USE OF THE DEVELOPMENT IS FOR AN UNMANNED WIRELESS COMMUNICATION FACILITY, THE FACILITY WILL NOT BE STAFFED FULL TIME. IT WILL BE VISITED FOR MAINTENANCE APPROXIMATELY ONCE PER MONTH. THE SITE TECHNICIAN MAY PARK NEAR THE COMPOUND IN A PROPOSED GRAVEL AREA.
3. ACCESS TO THE SITE WILL BE VIA A PROPOSED DRIVEWAY. TRAFFIC IMPACTS WILL BE NEGLIGIBLE SINCE THE SITE IS UNMANNED.
4. SANITARY AND WATER FACILITIES ARE NOT REQUIRED. ELECTRIC AND TELEPHONE ARE THE ONLY UTILITIES THAT ARE REQUIRED. UTILITIES WILL BE PROVIDED FROM EXISTING SERVICES.
5. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES AND MEET ALL CURRENT UTILITY COMPANY REQUIREMENTS AND SPECIFICATIONS.
6. WATER COURSES OR FLOOD PLAINS WILL NOT BE AFFECTED BY THIS PROPOSAL.
7. THE TOTAL SOIL DISTURBANCE SHALL NOT EXCEED 1 ACRE. A GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES IS NOT REQUIRED.
8. SOIL EROSION AND SEDIMENT CONTROL PERMIT IS NOT REQUIRED SINCE THE PROPOSED AREA OF DISTURBANCE IS LESS THAN 1 ACRE.
9. PROPOSED FACILITY WILL BE MONITORED 24 HOURS A DAY, 7 DAYS A WEEK FROM A REMOTE LOCATION.
10. TOWER LIGHTING IS NOT PROPOSED.
11. TRASH DISPOSAL IS NOT REQUIRED IN CONNECTION WITH THE PROPOSED INSTALLATION.
12. THE CONTRACTOR SHALL ABIDE BY ALL CURRENT LOCAL, STATE, AND NATIONAL CODES THAT ARE APPLICABLE.
13. THE TOWER WITH ALL PROPOSED EQUIPMENT AND ANTENNAS ATTACHED SHALL BE CONFIRMED TO MEET OR EXCEED THE REQUIREMENTS OF INTERNATIONAL BUILDING CODE, 2015, AS ADOPTED BY NEW YORK AND TIA-222-G.

4 **SITE PLAN NOTES**

11x17 SCALE: NTS | 22x34 SCALE: NTS

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APPLICANT:

verizon WIRELESS

4 CENTEROCK ROAD
WEST NYACK, NY 10994

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E	ATTORNEY COMMENTS	02/08/19	HW
D	ATTORNEY COMMENTS	12/20/18	HW

PROJECT TITLE:

PRELIMINARY SITE PLAN

CORTLANDT

52 MONTROSE STATION RD
CORTLANDT, NY 10567
WESTCHESTER COUNTY

BLOCK: 1 LOT: 4
ZONE: R-40

SDG PROJECT #: 16VZN071

SCALE: AS NOTED	DATE: 11/13/17
DRAWN BY: JM	CHECKED BY: SK

DRAWING TITLE:

SITE PLANS AND SITE PLAN NOTES

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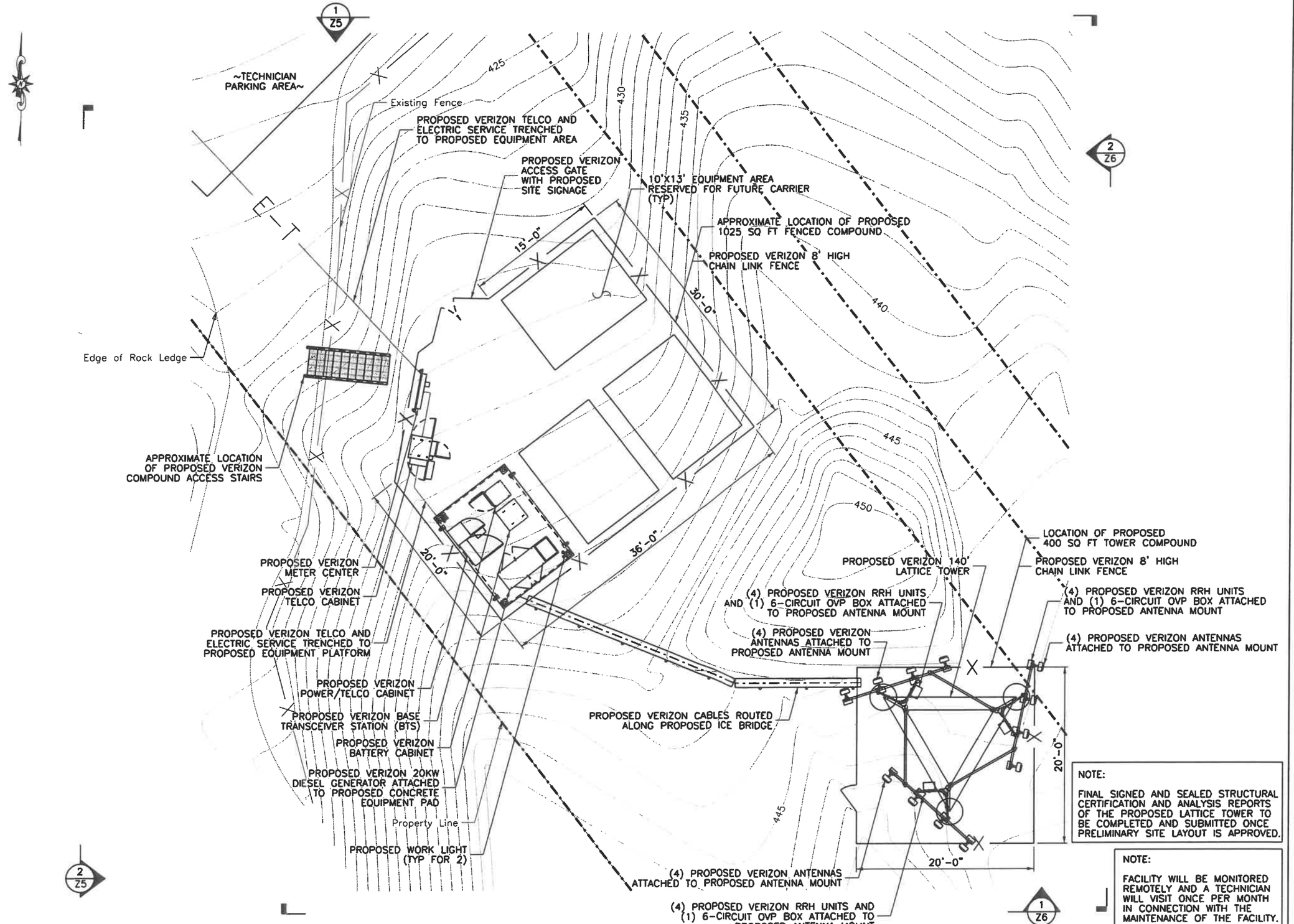
Z3	3 of 11



NOTE:

FINAL SIGNED AND SEALED STRUCTURAL CERTIFICATION AND ANALYSIS REPORTS OF THE PROPOSED LATTICE TOWER TO BE COMPLETED AND SUBMITTED ONCE PRELIMINARY SITE LAYOUT IS APPROVED.

NOTE:

FACILITY WILL BE MONITORED REMOTELY AND A TECHNICIAN WILL VISIT ONCE PER MONTH IN CONNECTION WITH THE MAINTENANCE OF THE FACILITY.

1 **COMPOUND LAYOUT**

11x17 SCALE: 3/32"= 1'-0" | 22x34 SCALE: 3/16" = 1'-0"

0 5' 10'

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SCALE: AS NOTED	DATE: 11/13/17
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COMPOUND LAYOUT

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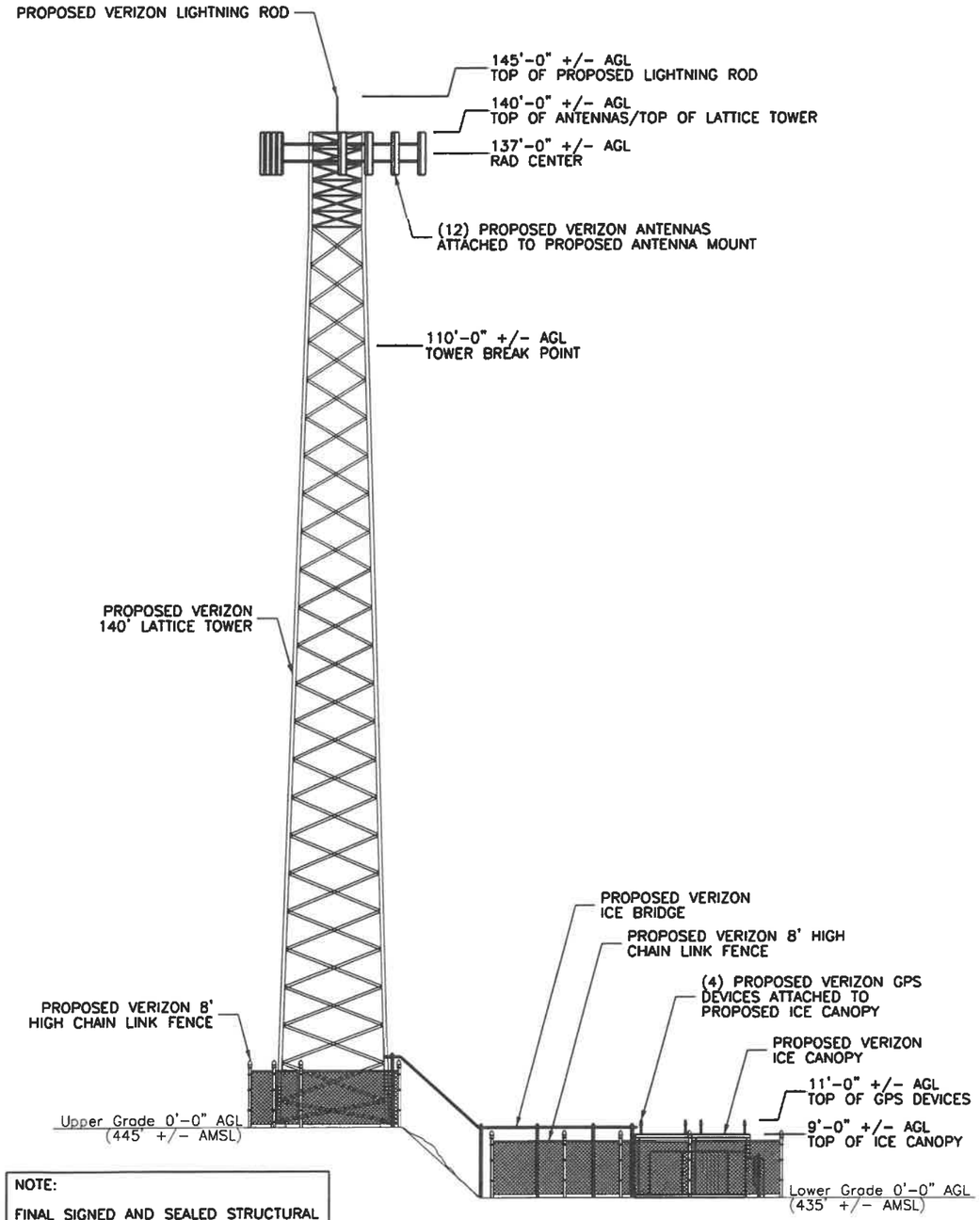
Z4	4 of 11



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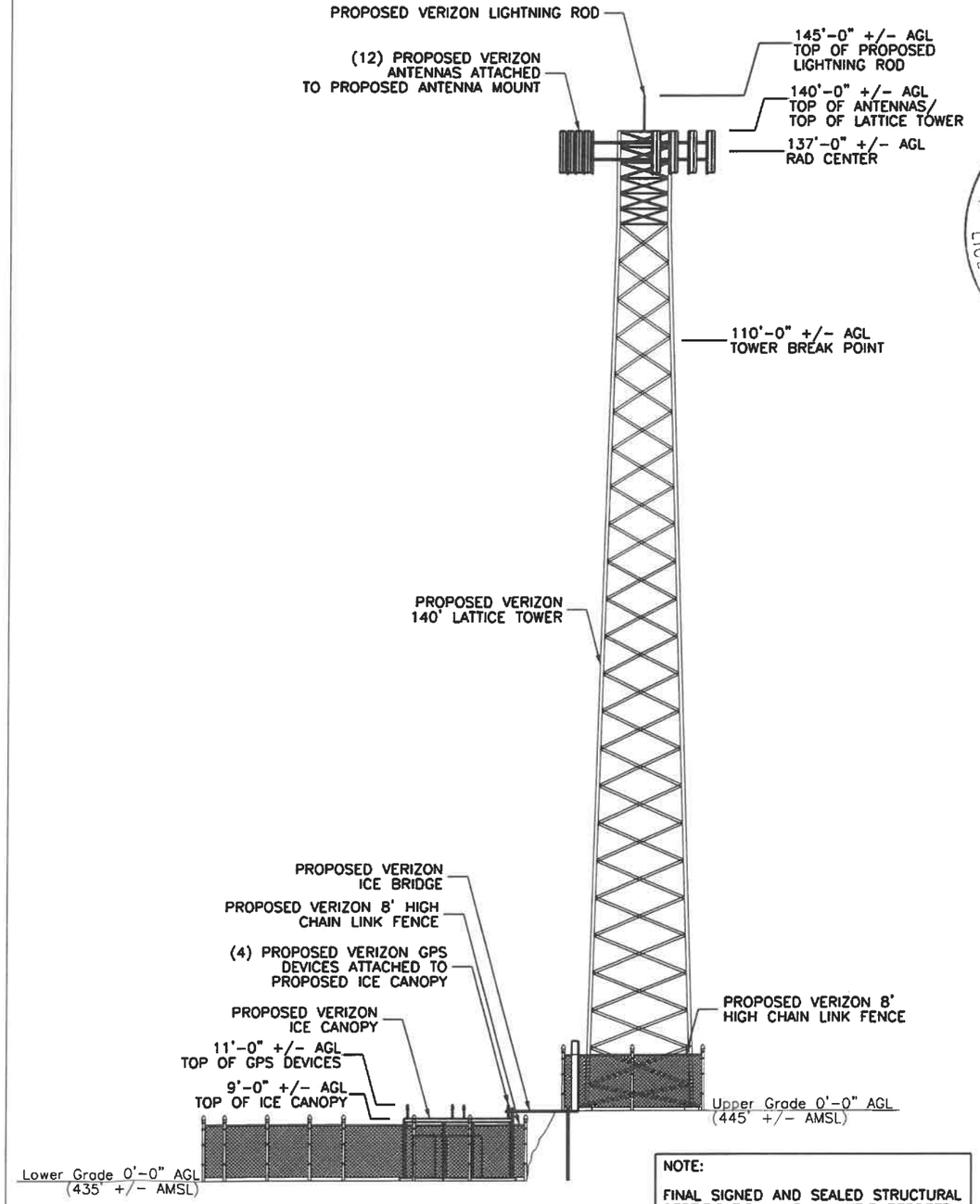
1 **NORTHERN ELEVATION**

11x17 SCALE: 1"= 20'-0" | 22x34 SCALE: 1" = 10'-0" | 0 10' 20'



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2 **WESTERN ELEVATION**

11x17 SCALE: 1"= 20'-0" | 22x34 SCALE: 1" = 10'-0" | 0 10' 20'

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APPLICANT:

verizon
WIRELESS

4 CENTEROCK ROAD
WEST NYACK, NY 10994

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PROJECT TITLE:

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CORTLANDT, NY 10567
WESTCHESTER COUNTY

BLOCK: 1 LOT: 4
ZONE: R-40

SDG PROJECT #: 16VZN071

SCALE: AS NOTED | DATE: 11/13/17

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ELEVATIONS

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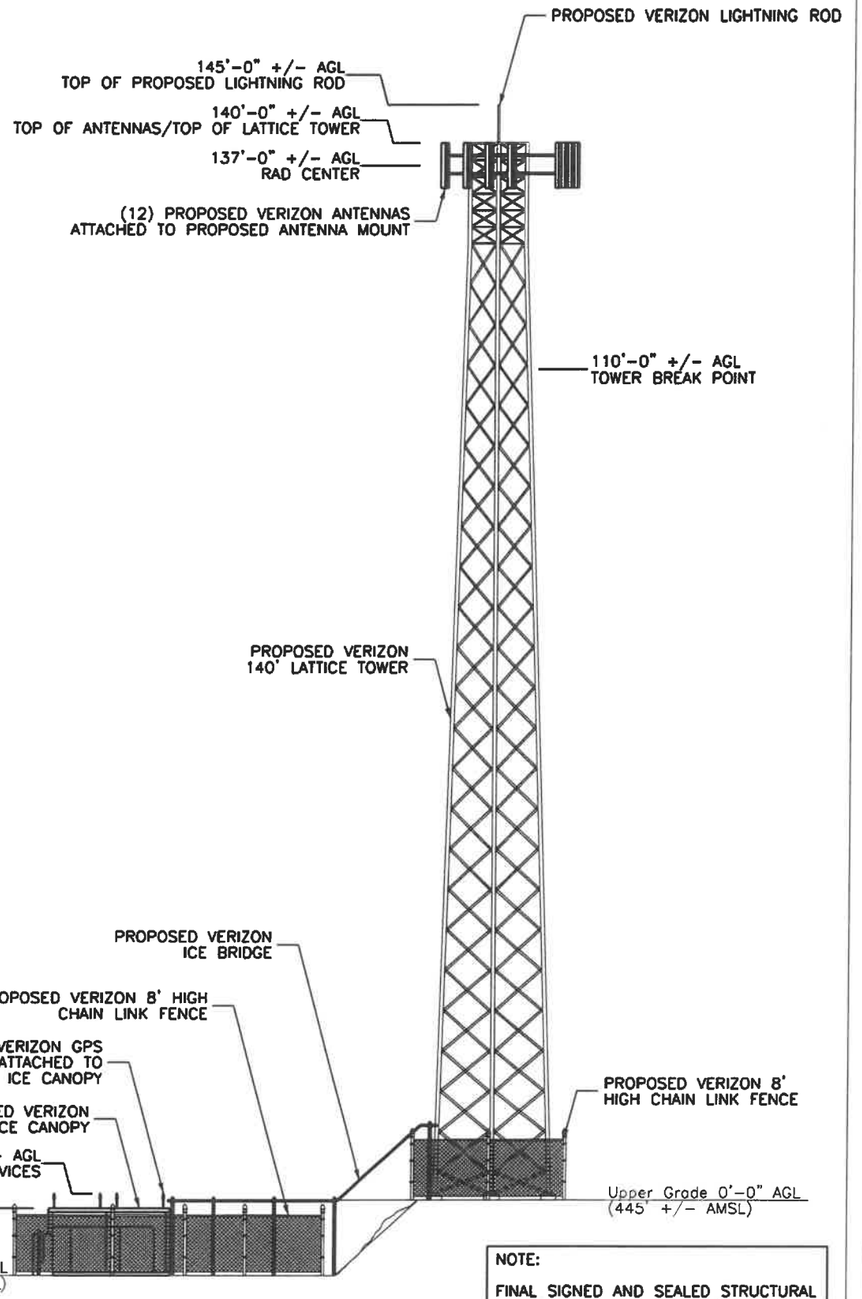

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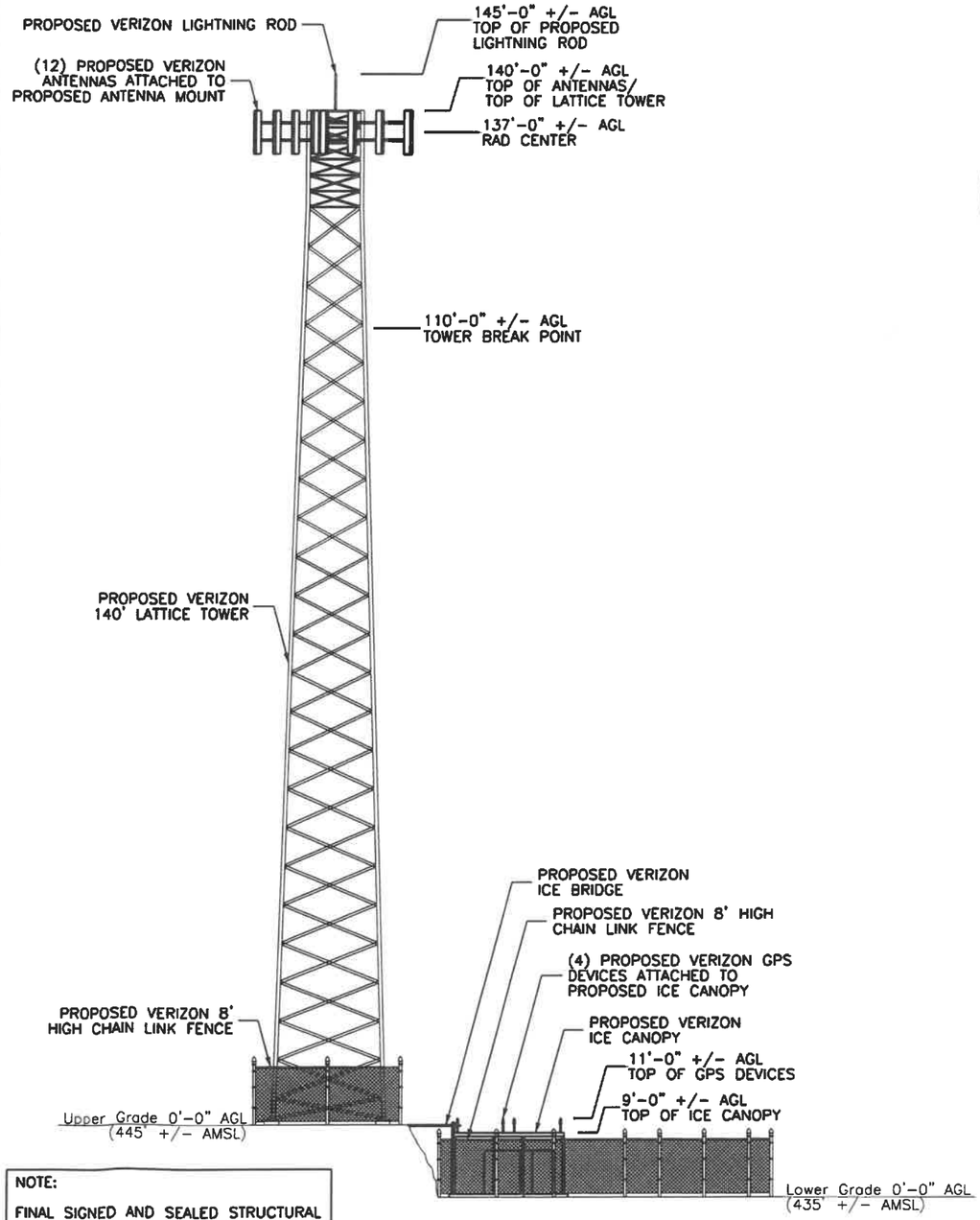
1 **SOUTHERN ELEVATION**

11x17 SCALE: 1"= 20'-0" | 22x34 SCALE: 1" = 10'-0"

0 10' 20'



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2 **EASTERN ELEVATION**

11x17 SCALE: 1"= 20'-0" | 22x34 SCALE: 1" = 10'-0"

0 10' 20'

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NOTARY PUBLIC

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APPLICANT:

verizon
WIRELESS

4 CENTEROCK ROAD
WEST NYACK, NY 10994

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PROJECT TITLE:

PRELIMINARY
SITE PLAN

CORTLANDT

52 MONTROSE STATION RD
CORTLANDT, NY 10567
WESTCHESTER COUNTY

BLOCK: 1 LOT: 4
ZONE: R-40

SDG PROJECT #: 16VZN071

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ELEVATIONS

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GPS/AVIATION SPECIAL PURPOSE ANTENNAS
GPS Timing Reference Antennas

GPS-TMG-40N, 40 dB Internal Amplifier

The GPS-TMG-40 timing reference antennas are specifically designed for long-lasting, trouble-free deployments in congested cell-site applications. Their 40 dB high gain amplifier is well suited to address attenuation issues associated with applications requiring longer cable runs.

The proprietary quadrifiler helix design, coupled with multi-stage filtering provides superior out-of-band rejection and lower elevation pattern performance than traditional patch antennas.

Their unique radome shape sheds water and ice, while eliminating problems associated with bird perching. The antenna may be purchased by itself or with pipe mounting hardware. Custom models or site kits options are also available.

This antenna is made of materials that fully comply with provisions stipulated by EU directives RoHS 2002/95/EC.

This antenna also features ESD, reverse polarity protection and transit voltage suppression.

PCTEL

Antenna Element Electrical Specifications

Frequency Band	Antenna Gain	Nominal Impedance	VSWR	Polarization	Connector
1575.42 +/- 10 MHz	3.5 dBic	50 ohms	≤ 1.5:1	Right hand circular	N, female (one - bottom fed)

Mechanical Specifications

Antenna Dimensions	Shipping Dimensions	Antenna Weight	Shipping Weight	Radome Color
5.0" H x 3.2" D (126 H x 81 mm)	7.5" L x 4.4" W x 3.8" D (190 x 112 x 96 mm)	0.6 lbs (0.3 kg)	1.9 lbs (0.9 kg)	White

Environmental Specifications

Temperature Range	Humidity
-40°C to +85°C	95%

Mounting

All mounting options fit pipes of 1"-1.45" (25 mm-37 mm) maximum diameter.

Model	Options
GPS-TMG-40N	Does not include mounting hardware.
GPS-TMG-40NMS	Includes universal mounting hardware consisting of collar (GPS-TMG-MNT) and pipe clamp (GPS-TMG-LMNT).
GPS-TMG-40NCS	Includes economy collar mount (GPS-TMG-MRNMNT).

Low Noise Amplifier Specifications

Frequency Band (MHz): 1575.42 +/- 12 MHz
Amplifier Gain: 40 dB +/- 4 dB
Nominal Impedance: 50 ohms
Output VSWR: < 2.0:1
Maximum Noise Figure: < 2.5 dB @ +25°C
DC Voltage: 3.3-9.0 V (regulated)
DC Current: ≤ 40 mA
Filtering: 3 stage filtering including pre-selector
Bandwidth: ≥ 40 dB @ +/- 50 MHz off center frequency

PCTEL, Inc. WEB: www.antenna.com 177

1 GPS SPECIFICATION

11x17 SCALE: NTS 22x34 SCALE: NTS

INFORMATION

This is an ACCESS POINT to an area with transmitting antennas.

Obey all postings and boundaries beyond this point.

Call Verizon Wireless at 1-800-264-6620 for more information.

STATE: ________ SWITCH: ____________

Site ID: ______________________________

verizon

⚠ NOTICE ⚠

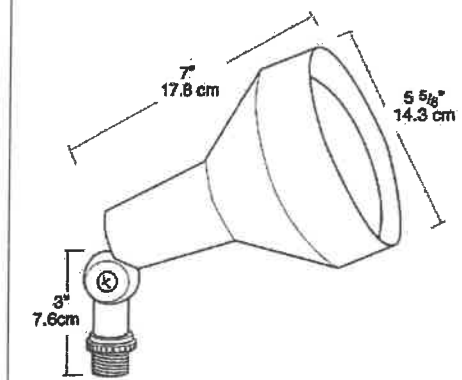
GENERAL RADIO FREQUENCY (RF) SAFETY GUIDELINES

Until ALL applicable antennas have been deactivated, please observe the following:

- ⚠ Obey all posted signs.
- ⚠ Assume all antennas are transmitting.
- ⚠ Do not touch any antenna.
- ⚠ Do not stand in front of any antenna.
- ⚠ Do not walk in front of any antenna.
- ⚠ Do not walk beyond any signs, barriers, or visual markers towards any antenna.
- ⚠ Contact antenna owner or property owner if there are any questions or concerns.

2 VERIZON ANTENNA SIGNS

11x17 SCALE: NTS 22x34 SCALE: NTS



Features

- Lamp recessed 1" from lip for side glare reduction
- Set screw for hood, grill or visor attachment
- Large Silicone rubber gasket provides weatherproof protection around the lamp and socket
- Caution: When using as an uplight in outdoor applications a Hood or a Visor must be used
- HV1 Visor with integral guard and glass lens for maximum glare reduction and lamp protection
- HG1 Guard: Protects lamp from damage and vandalism
- HH1 Hood with glass lens reduces glare and protects lamp from water and impact damage

Technical Specifications

Listings

UL Listing: Suitable for wet locations. Suitable for mounting within 1.2m (4ft) of the ground. When using as an uplight in outdoor applications, a Hood or a Visor must be used.

Electrical

Sockets: Porcelain with all copper current carrying components.

Construction

Swivels: Fully adjustable with sure-grip locks. 1/2" NPS threaded arm with serrated locking swivel fits all standard mounting covers. Color matched EZ Grip lock nuts.

Housings: Die cast aluminum with powder coat finish.

Gaskets: High temperature silicone rubber extends around both socket and lamp.

Optical

Lamps: Medium base Par-38 lamps up to 150 watts. Halogen lamps give brighter light and choice of beam spreads.

Other

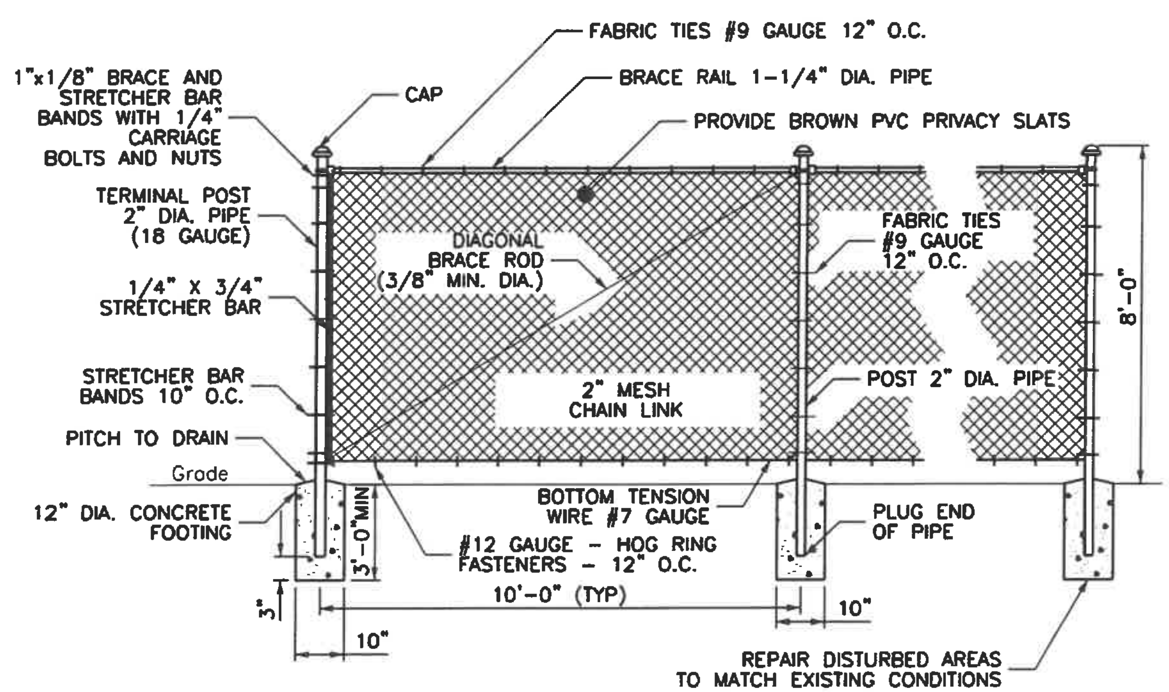
Buy American Act Compliance: RAB values USA manufacturing! Upon request, RAB may be able to manufacture this product to be compliant with the Buy American Act (BAA). Please contact customer service to request a quote for the product to be made BAA compliant.

NOTE:

PROPOSED LIGHTING ON A TIMER SWITCH AND WILL ONLY BE IN USE WHEN A SITE TECHNICIAN IS AT THE SITE (APPROXIMATELY ONCE PER MONTH).

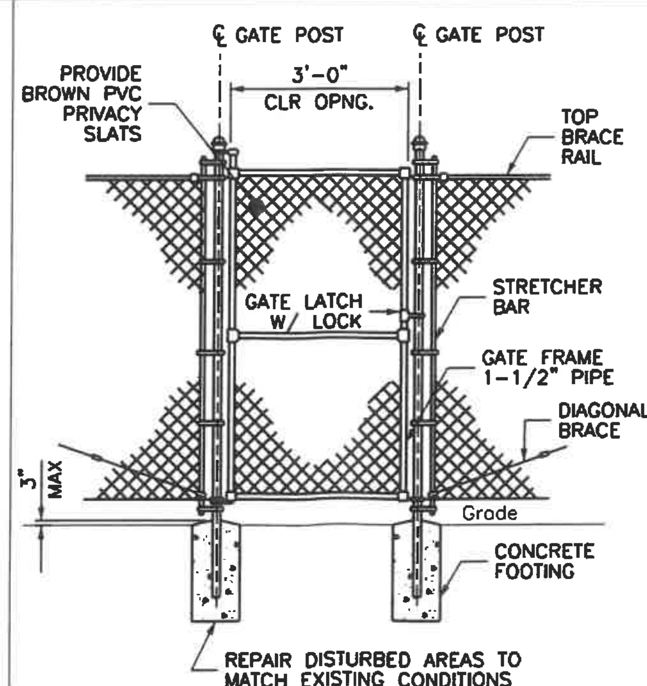
3 WORK LIGHT SPECIFICATIONS

11x17 SCALE: NTS 22x34 SCALE: NTS



4 FENCE DETAIL

11x17 SCALE: NTS 22x34 SCALE: NTS

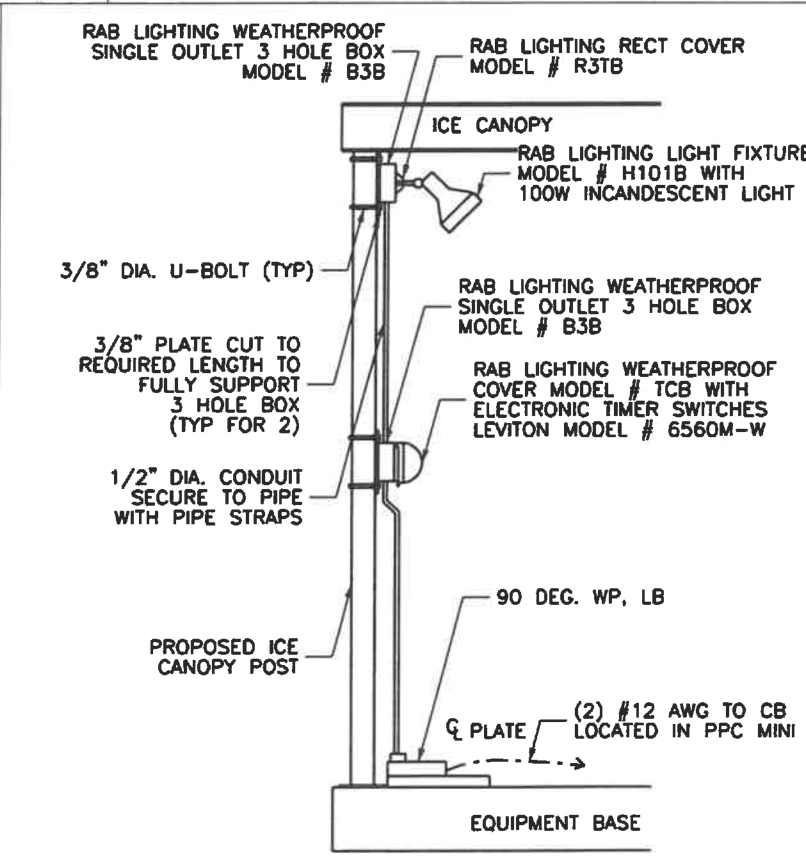


NOTE:

GATE LATCH SHALL BE 1-3/8" O.D. PLUNGER ROD WITH MUSHROOM TYPE CATCH AND LOCK. KEYED OR COMBINATION AS PER CONSTRUCTION COORDINATOR.

5 GATE DETAIL

11x17 SCALE: NTS 22x34 SCALE: NTS



6 WORK LIGHT DETAIL

11x17 SCALE: NTS 22x34 SCALE: NTS

SDG SCHERER DESIGN GROUP, LLC

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APPLICANT:

verizon WIRELESS

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WEST NYACK, NY 10994

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D	ATTORNEY COMMENTS	12/20/18	HW

PROJECT TITLE:

PRELIMINARY SITE PLAN

CORTLANDT

52 MONTROSE STATION RD
CORTLANDT, NY 10567
WESTCHESTER COUNTY

BLOCK: 1 LOT: 4
ZONE: R-40

SDG PROJECT #: 16VZN071

SCALE: AS NOTED	DATE: 11/13/17
DRAWN BY: JM	CHECKED BY: SK

DRAWING TITLE:

DETAILS

DRAWING NO.:	PAGE NO.:
Z7	7 of 11

1 RRH UNIT SPECIFICATION

REMOTE RADIO HEAD
B25 RRH 4X30-4R
WEIGHT: 51.0 lbs (WITH SOLAR SHIELD)

DIMENSIONS: H21.4"xW12.0"xD7.2"
(WITH SOLAR SHIELD)

CONFIGURATION:
LTE AND PCS

NOTE:

ANTENNAS AND RRHS SUBJECT TO CHANGE BASED UPON AVAILABILITY AT THE TIME OF CONSTRUCTION.

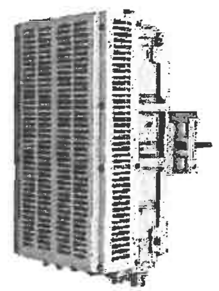
11x17 SCALE: NTS | 22x34 SCALE: NTS

2 RRH UNIT SPECIFICATION

B13 RRH 4X30
REMOTE RADIO HEAD

WEIGHT: 55.6 lbs (WITH SOLAR SHIELD)

DIMENSIONS: H20.9"xW11.8"xD7.5"
(WITH SOLAR SHIELD)



NOTE:

ANTENNAS AND RRHS SUBJECT TO CHANGE BASED UPON AVAILABILITY AT THE TIME OF CONSTRUCTION.

11x17 SCALE: NTS | 22x34 SCALE: NTS

3 RRH UNIT SPECIFICATION

B66A RRH 4X45
REMOTE RADIO HEAD

WEIGHT: 56.8 lbs (WITH SOLAR SHIELD)

DIMENSIONS: H25.8"xW11.8"xD7.2"
(WITH SOLAR SHIELD)

NOTE:

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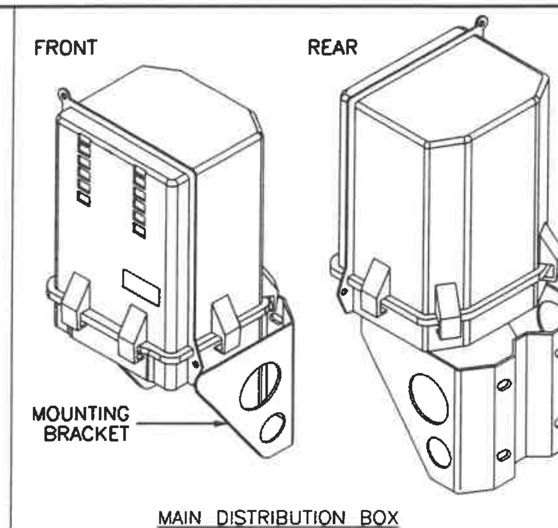
11x17 SCALE: NTS | 22x34 SCALE: NTS

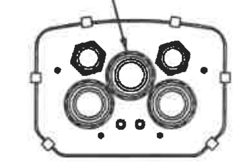
4 6-CIRCUIT OVP BOX SPECIFICATION

MANUFACTURER: RAYCAP

DIMENSIONS: 10.31"Dx15.73"Wx19.15"H

WEIGHT: 32.0 LBS (SYSTEM)
5.5 LBS (MOUNT)
37.5 LBS (TOTAL)

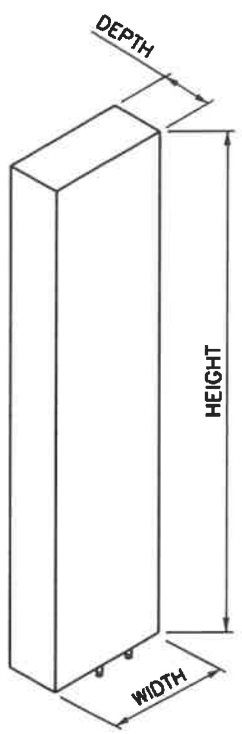




11x17 SCALE: NTS | 22x34 SCALE: NTS

5 ANTENNA SPECIFICATIONS

NHH-65B-R2B
WEIGHT: 43.7 lbs (WITHOUT BRACKETS)
DIMENSIONS: H72.0"xW11.9"xD7.1"



NOTE:

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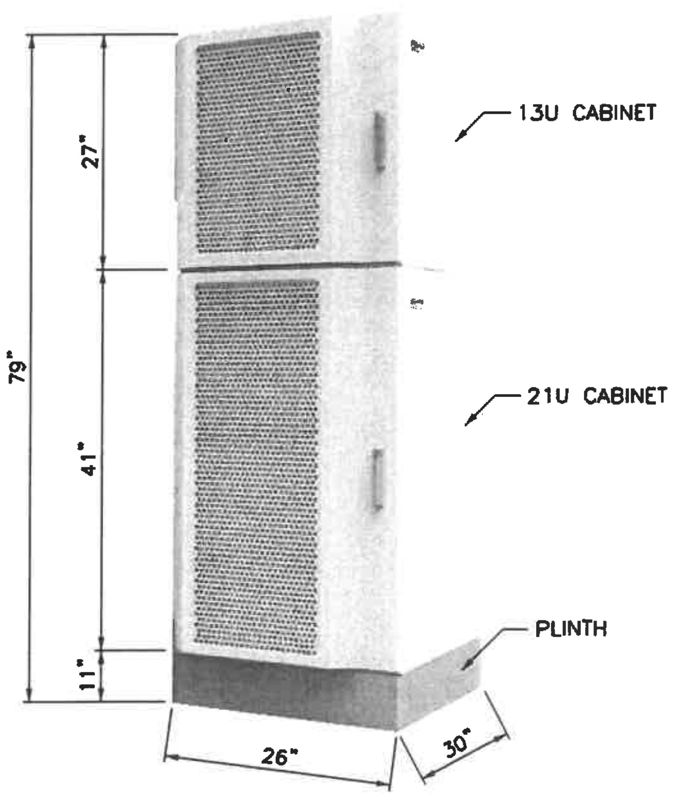
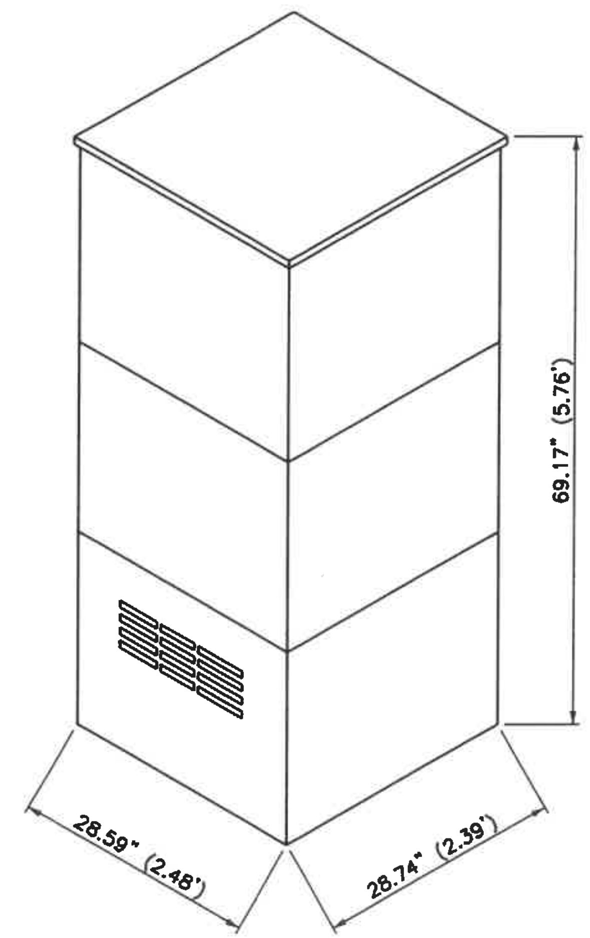
6 BASE TRANSCEIVER STATION



11x17 SCALE: NTS | 22x34 SCALE: NTS

7 BATTERY CABINET



11x17 SCALE: NTS | 22x34 SCALE: NTS

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APPLICANT:

verizon
WIRELESS

4 CENTEROCK ROAD
WEST NYACK, NY 10994

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G	ATTORNEY COMMENTS	07/12/19	DP
F	TOWNSHIP COMMENTS	06/20/19	DP
E	ATTORNEY COMMENTS	02/08/19	HW
D	ATTORNEY COMMENTS	12/20/18	HW

PROJECT TITLE:

PRELIMINARY SITE PLAN

CORTLANDT

52 MONTROSE STATION RD
CORTLANDT, NY 10567
WESTCHESTER COUNTY

BLOCK: 1 LOT: 4
ZONE: R-40

SDG PROJECT #: 16VZN071

SCALE: AS NOTED	DATE: 11/13/17
DRAWN BY: JM	CHECKED BY: SK

DRAWING TITLE:

SPECIFICATIONS

DRAWING NO.:	PAGE NO.:
Z8	8 of 11

PROPERTY OWNERS LIST:

	Property Address	Owner		Mailing Address		
16	MONTROSE STATION RD	S4K MAPLE AVE LLC		1106 MAIN ST	PEEKSKILL, NY	10566
26	MONTROSE STATION RD	FEIN JONATHAN L	& KARDOS THERESA E	26 MONTROSE STATION RD	CORTLANDT MANOR, NY	10567
2119	MAPLE AVE	PERRY ALAN	REDA PATRICIA	2119 MAPLE AVE	CORTLANDT MANOR, NY	10567
39	MONTROSE STATION RD	ERRICO MICHAEL & STEPHANIE		39 MONTROSE STATION RD	CORTLANDT MANOR, NY	10567
2154	MAPLE AVE	MILLER PATRICIA	KOZIOL BRIAN	2154 MAPLE AVE	CORTLANDT MANOR, NY	10567
2169	MAPLE AVE	GHIGLIAZZA PAULA		2169 MAPLE AVE	CORTLANDT MANOR, NY	10567
181	WATCH HILL RD	COUNTY OF WESTCHESTER	BLUE MT RES	148 MARTINE AVE RM 720	WHITE PLAINS, NY	10607
2139	MAPLE AVE	MAHONEY SHARRON		2139 MAPLE AVE	CORTLANDT MANOR, NY	10567
20	MONTROSE STATION RD	HANLEY JOHN & LINDA		20 MONTROSE STATION RD	CORTLANDT MANOR, NY	10567
1	MONTROSE STATION RD	RENZI DAVID M		1 MONTROSE STATION RD	CORTLANDT MANOR, NY	10567
2094	MAPLE AVE	ARTOPE WESTLEY	MONTAGUE CLARA M	2094 MAPLE AVE	CORTLANDT MANOR, NY	10567
33	MONTROSE STATION RD	PICCIANO PAZ LIVING TRUST		216 8TH ST, PO BOX 92	VERPLANCK, NY	10596
2091	MAPLE AVE	PERRY A WILLIAM		2091 MAPLE AVE	CORTLANDT MANOR, NY	10567
34	MONTROSE STATION RD	JONES MARION J	CORSA WILLIAM J	34 MONTROSE STATION RD	CORTLANDT MANOR, NY	10567
49	MONTROSE STATION RD	BOYLE FAMILY IRREV TRUST	DUBRISINGH M /BOYLE D TRUSTEE	49 MONTROSE STATION RD	CORTLANDT MANOR, NY	10567
35	MONTROSE STATION RD	PICCIANO PAZ LIVING TRUST		216 8TH ST, PO BOX 92	VERPLANCK, NY	10596
2117	MAPLE AVE	S4K MAPLE AVE LLC		1106 MAIN ST	PEEKSKILL, NY	10566
52	MONTROSE STATION RD	BEZO ENTERPRISES LLC		34 DEARBORN AVENUE	RYE, NY	10580
2124	MAPLE AVE	SCHMIDT NANCY		2124 MAPLE AVE	CORTLANDT MANOR, NY	10567
24	MONTROSE STATION RD	SEIFERHELD REGINA P	C/O RENO	10 SEDGEWICK RD	POUGHKEEPSIE, NY	12603
5	MONTROSE STATION RD	TRUE ROSEMARY		5 MONTROSE STATION RD	CORTLANDT MANOR, NY	10567
2123	MAPLE AVE	PERRY CHARLES W & MARION L L/E	PERRY ALAN	2123 MAPLE AVE	CORTLANDT MANOR, NY	10567
0	MAPLE AVE	DEROSA ANTHONY		30A SUNSET HILL ROAD	BETHEL, CT	6801
0	MAPLE AVE	TOWN OF CORTLANDT		1 HEADY STREET	CORTLANDT MANOR, NY	10567
0	MONTROSE STATION RD	COUNTY OF WESTCHESTER		148 MARTINE AVE RM 720	WHITE PLAINS, NY	10607
165	FURNACE WOODS RD	PICCIANO ENTERPRISES LLC		216 8TH ST, PO BOX 92	VERPLANCK, NY	10596
2177	MAPLE AVE	PALKA RICHARD & MICHELE		2177 MAPLE AVE	CORTLANDT MANOR, NY	10567
2127	MAPLE AVE	FONTANA JOSEPH C & LORRAINE F		2127 MAPLE AVE	CORTLANDT MANOR, NY	10567
9	MONTROSE STATION RD	KEMPSKI MICHAEL	PUSEY-KEMPSKI DAWN	9 MONTROSE STATION RD	CORTLANDT MANOR, NY	10567
310	LAFAYETTE AVE	TRACEY STEVEN J & KATE M		310 LAFAYETTE AVE	CORTLANDT MANOR, NY	10567
32	MONTROSE STATION RD	SALAMON JONATHAN H		32 MONTROSE STATION RD	CORTLANDT MANOR, NY	10567
2158	MAPLE AVE	COSTABLE HANNAH L/E	COSTABLE JOHN & SEPHEN & PAUL	2158 MAPLE AVE	CORTLANDT MANOR, NY	10567
141	FURNACE WOODS RD	CONGREGATION YESHIVATH	OHR HAMEIR	PO BOX 2130	PEEKSKILL, NY	10566
16	MONTROSE STATION RD	S4K MAPLE AVE LLC		1106 MAIN ST	PEEKSKILL, NY	10566
57	MONTROSE STATION RD	PARENTI PHYLLIS LINDA TRUST	VREDENBURGH KARALYN TRSTEE	57 MONTROSE STATION RD	CORTLANDT MANOR, NY	10567
170	FURNACE WOODS RD	SARI JORGE G INGA		170 FURNACE WOODS RD	CORTLANDT MANOR, NY	10567
0	MAPLE AVE	TURNER KIM	KUCNY TOMAS	2137 MAPLE AVE	CORTLANDT MANOR, NY	10567
7	MONTROSE STATION RD	FUERST ROBERT & LINDA		7 MONTROSE STATION RD	CORTLANDT MANOR, NY	10567
0	MAPLE AVE	PERRY ALAN W		2091 MAPLE AVE	CORTLANDT MANOR, NY	10567
174	FURNACE WOODS RD	BURSZTYN JOAN		174 FURNACE WOODS RD	CORTLANDT MANOR, NY	10567
2100	MAPLE AVE	ALBERTS SANDRA L		2100 MAPLE AVE	CORTLANDT MANOR, NY	10567
173	FURNACE WOODS RD	PICCIANO PAZ T LIVING TRUST		PO BOX 92	VERPLANCK, NY	10596
28	MONTROSE STATION RD	TOWN OF CORTLANDT		1 HEADY ST	CORTLANDT MANOR, NY	10567
2170	MAPLE AVE	WHALEN SEAN C	NATHANSON ARIEL B	2170 MAPLE AVE	CORTLANDT MANOR, NY	10567
181	WATCH HILL RD	COUNTY OF WESTCHESTER	BLUE MT RES	148 MARTINE AVE RM 720	WHITE PLAINS, NY	10607
2137	MAPLE AVE	TURNER KIM	KUCNY TOMAS	2137 MAPLE AVE	CORTLANDT MANOR, NY	10567
36	MONTROSE STATION RD	HATZMANN GEORGE		27 FLAX POND WOODS RD.	SETAUKET, NY	11733
0	MAPLE AVE	TOWN OF CORTLANDT		1 HEADY ST	CORTLANDT MANOR, NY	10567
2146	MAPLE AVE	TATLIAN EDWARD		2146 MAPLE AVE	CORTLANDT MANOR, NY	10567

1 **PROPERTY OWNERS LIST**

11x17 SCALE: NTS 22x34 SCALE: NTS

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APPLICANT:

verizon WIRELESS

4 CENTEROCK ROAD
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F	TOWNSHIP COMMENTS	06/20/19	DP
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D	ATTORNEY COMMENTS	12/20/18	HW

PROJECT TITLE:

PRELIMINARY SITE PLAN

CORTLANDT

52 MONTROSE STATION RD
CORTLANDT, NY 10567
WESTCHESTER COUNTY

BLOCK: 1 LOT: 4
ZONE: R-40

SDG PROJECT #: 16VZN071

SCALE: AS NOTED | DATE: 11/13/17

DRAWN BY: JM | CHECKED BY: SK

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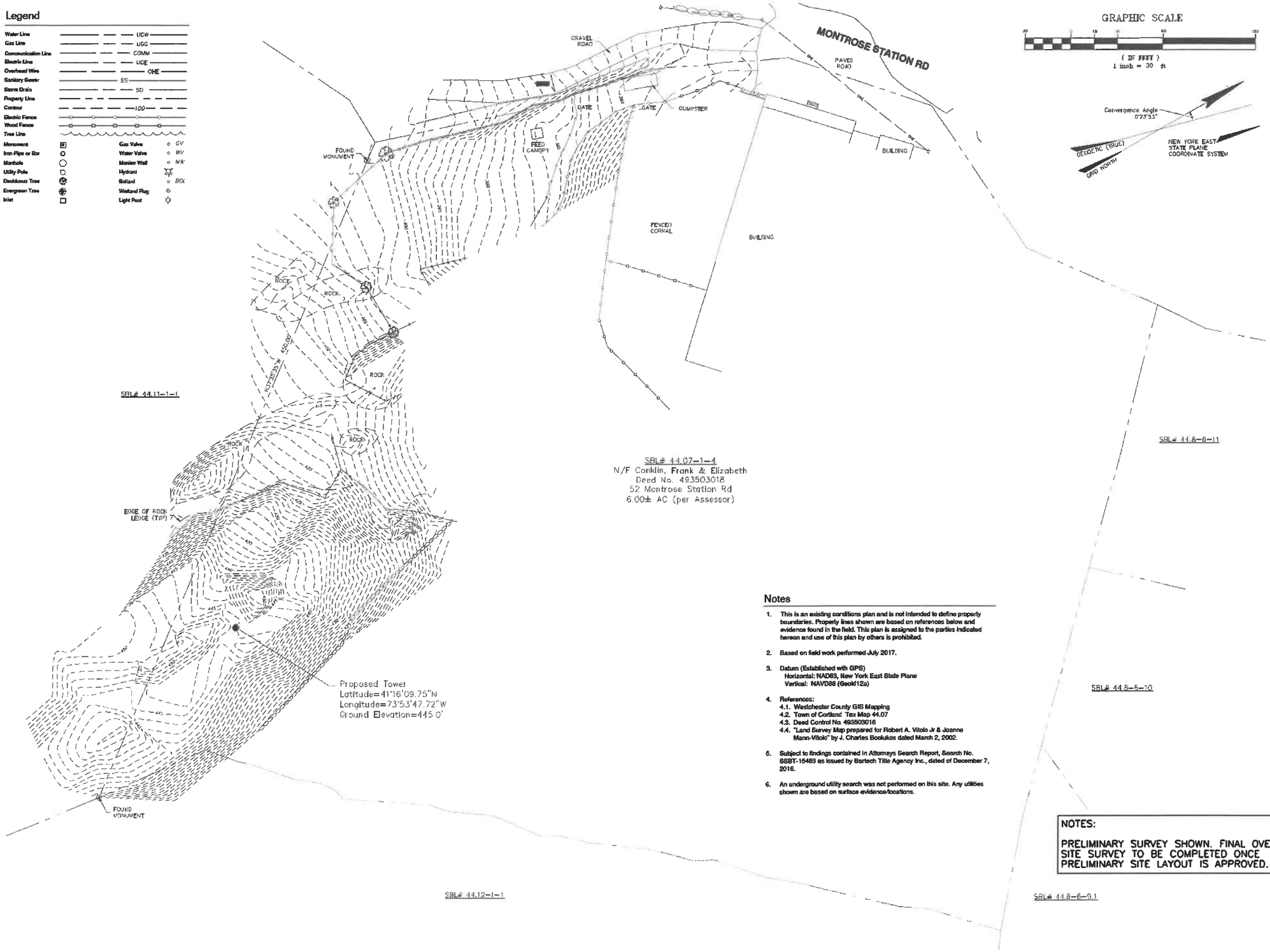
PROPERTY OWNERS LIST

DRAWING NO.: Z9 | PAGE NO.: 9 of 11

Legend

Water Line	UCW	Gas Valve	GV
Gas Line	UGC	Water Valve	WV
Communication Line	COMM	Monitor Well	MW
Electric Line	UCE	Hydrant	
Overhead Wire	OHE	Bollard	BOL
Sanitary Sewer	SS	Wetland Flag	
Storm Drain	SD	Light Post	
Property Line			
Contour	100		
Electric Fence			
Wood Fence			
Tree Line			
Monument			
Iron Pipe or Bar			
Manhole			
Utility Pole			
Deciduous Tree			
Evergreen Tree			
Inlet			



GRAPHIC SCALE

(IN FEET)
1 inch = 30 ft

Notes

1. This is an existing conditions plan and is not intended to define property boundaries. Property lines shown are based on references below and evidence found in the field. This plan is assigned to the parties indicated hereon and use of this plan by others is prohibited.
2. Based on field work performed July 2017.
3. Datum (Established with GPS)
   Horizontal: NAD83, New York East State Plane
   Vertical: NAVD88 (Geoid12a)
4. References:
   4.1. Westchester County GIS Mapping
   4.2. Town of Cortland Tax Map 44.07
   4.3. Deed Control No. 493503018
   4.4. "Land Survey Map prepared for Robert A. Vitolo Jr & Joanne Mann-Vitolo" by J. Charles Bookukos dated March 2, 2002.
5. Subject to findings contained in Attorneys Search Report, Search No. SSBT-15483 as issued by Bartech Title Agency Inc., dated of December 7, 2016.
6. An underground utility search was not performed on this site. Any utilities shown are based on surface evidence/locations.

NOTES:

PRELIMINARY SURVEY SHOWN. FINAL OVERALL SITE SURVEY TO BE COMPLETED ONCE PRELIMINARY SITE LAYOUT IS APPROVED.

1	EXISTING CONDITIONS SURVEY
11x17 SCALE: NTS	22x34 SCALE: NTS

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WESTCHESTER COUNTY

BLOCK: 1 LOT: 4
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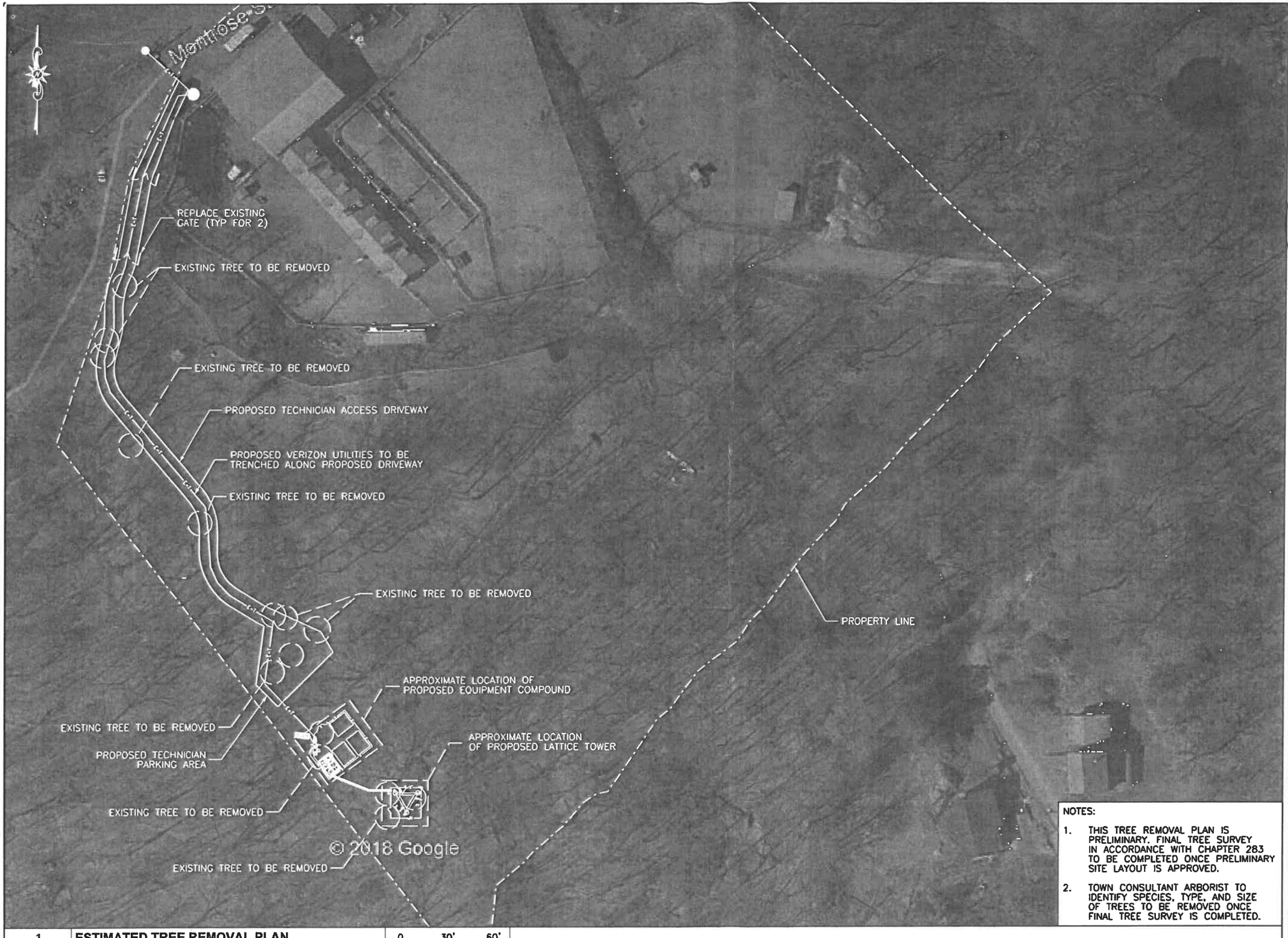
PRELIMINARY EXISTING CONDITIONS SURVEY

DRAWING NO.:	PAGE NO.:
Z10	10 of 11



NOTES:

1. THIS TREE REMOVAL PLAN IS PRELIMINARY. FINAL TREE SURVEY IN ACCORDANCE WITH CHAPTER 283 TO BE COMPLETED ONCE PRELIMINARY SITE LAYOUT IS APPROVED.
2. TOWN CONSULTANT ARBORIST TO IDENTIFY SPECIES, TYPE, AND SIZE OF TREES TO BE REMOVED ONCE FINAL TREE SURVEY IS COMPLETED.

1 **ESTIMATED TREE REMOVAL PLAN**

11x17 SCALE: 1"= 60'-0" | 22x34 SCALE: 1" = 30'-0"

0 30' 60'

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PRELIMINARY TREE REMOVAL PLAN

DRAWING NO.:	PAGE NO.:
Z11	11 of 11