

**MILESTONE COMMUNICATIONS
WESTERN ALBEMARLE HIGH SCHOOL
TIER III PERSONAL WIRELESS SERVICE FACILITY**

Resubmission 4/20/18

[Initial Submission: 10/30/17, rev'd 2/19/18]

Project Description:

Milestone Communications (the "Applicant") respectfully requests a Special Use Permit for a Tier III Personal Wireless Service Facility (PWSF) on property owned by the School Board of Albemarle County, Virginia, the campus of Western Albemarle High School, with address 5941 Rockfish Gap Turnpike, Crozet, VA 22932 on Tax Map parcel 05600-00-00-017C0 within the White Hall Magisterial District. The subject property is 75 acres, zoned Rural Areas (RA). The front of the parcel abuts Rockfish Gap Turnpike (U.S. 250W), which is an Entrance Corridor. The PWSF site is proposed for the southern edge of a large wooded area that buffers the school grounds from Rockfish Gap Turnpike, approximately 1,450 feet from Rockfish Gap Turnpike just north of the football field/track. The site is screened from residential neighborhoods and local roads by large tree buffers. Access would be through the existing parking lot near the football stadium along a new gravel road to be constructed behind the existing football stadium bleachers along the treeline. The site was selected by the Albemarle County Schools facilities manager and Western Albemarle High School principal so as not to interfere with current school uses and future development.

Founded in 2000, Milestone Communications develops wireless facilities in partnership with school and government landowners to achieve network coverage priorities for the wireless industry by finding solutions that are aesthetically and functionally optimized for their environments. The proposed location within the Western Albemarle High School grounds will provide the community and school with increased wireless communications coverage and capacity, the school with a free, reserved space for school use, and a share of rents from all carriers on the Milestone Communications monopole.

The proposed facility will provide wireless internet from the Albemarle County Schools' closed internet system to the homes of approximately 400 students in the western Crozet area, many of whom currently have no access to broadband. Shentel, which is licensed by the Federal Communications Commission (FCC) to provide wireless communications services within Albemarle County, desires to use the facility to provide coverage in the area. Shentel's objective is to provide reliable communications, improved in-building coverage, and in-car and on-street coverage. Verizon Wireless has provided a letter of interest to use the third proposed array to expand its coverage and capacity in the area.

The PWSF would consist of a 145' galvanized steel monopole with two-foot lightning rod within a 35' x 75' (2,625 square foot) compound. The facility would support antennas for use by Shentel at the 135' RAD center and would have room below that array for collocation opportunities for an additional carrier, as well as room within the compound for ground

equipment for additional carriers. The uppermost antenna array position of 145' would be reserved for school use. No rent would be charged to the county for such collocation, and the school board would receive financial remuneration identical to the terms of the Albemarle High School PWSF, as summarized below:

- School wireless facility at \$0 rent
- \$20,000 one-time payment for the monopole
- \$5,000 payment for each carrier that collocates
- 40% of gross rentals to Albemarle Schools
 - Each lease starts at \$30,000 gross receipts per year and increases 3 percent annually, which equates to a minimum of \$12,000 per year, per wireless provider.
 - Estimated income of \$400,000+ over a ten-year period assuming at least three wireless providers for six years.

Special Exceptions Requested:

The Applicant requests Special Exceptions for (a) modification of Section 5.1.40(b)(2)(c) to permit antenna standoff greater than 12” at the closest point from the monopole to the back of the antenna; the proposed arrays would meet the 18” standoff restriction for the farthest point from the monopole to the back of the antennas; and (b), a critical slope waiver pursuant to Section 4.2.5(a)(3)(d). Initially, the applicant requested a modification of Section 5.1.40(b)(2)(d) to permit the monopole to retain its gray galvanized steel finish to minimize visibility against the sky rather than to be painted brown to blend with trees. The applicant recognizes that, depending on location and perspective, brown may be preferable, and will adhere to the County’s decision whether brown or galvanized steel finish would be more appropriate for this facility.

Antenna Standoff: All of the proposed users of this facility have created modified flush-mounted antenna designs to comply with the County’s preferred 18” maximum standoff. These designs will not meet the 12” minimum standoff, so a special exception is requested.

Color/Finish: The monopole may be visible through the trees from one or more off-site parcels when the leaves are off the trees; from those views, brown would blend with the trees. In addition, the light poles around the school track are wooden, so the top of the monopole would appear more like the existing structures from locations where a grouping of poles could be seen. In the few places where the monopole may be seen above the treeline, a galvanized gray steel finish will blend with the sky better than brown. For that reason, the Architectural Review Board (ARB) recommended galvanized steel to minimize the visibility of the facility above the treeline on the Entrance Corridor.

Critical Slope Waiver: The applicant is requesting a critical slope waiver for grading needed for the site access behind the bleachers.

Wireless Coverage Needed:

Albemarle County Schools Department of Learning Engineering, Access, and Design (LEAD) has provided a packet, enclosed, describing the need for this wireless facility and how it would benefit the county school students in the area. During the two community meetings held during the regular Crozet Community Advisory Council (CCAC) meetings on December 20, 2017 and February 21, 2018, the majority of the questions from the Council and the public were about the benefits of the proposed facility to Albemarle County Public Schools (the “Schools”) and students in the surrounding community. During the February meeting, Ira Socol, Chief Technology and Innovation Office for the Schools, described the needs left unfilled in the western part of the county and how this facility could close that gap. Mr. Socol has explained that school funding does not allow his team to erect wireless communications monopoles throughout the southern and western regions of the County, yet he has been “strongly challenged by School Board members from those areas on our ability to provide students with a signal sufficient to carry multimedia into the homes of our students.” Quoting from the enclosed package from LINK/ACPS: “The Milestone Tower at Western Albemarle High School is an essential part of the commitment our Board of Education has made to provide connectivity to all students. If built at the requested height, this tower will do two critical things: First, it will allow our dedicated LTE signal to reach the homes of approximately 400 students, many of whom currently have no access to broadband. Second, the tower, if high enough to meet commercial needs, will provide a dedicated revenue stream that will help make our network self-sustaining after build out. That revenue will pay for system maintenance, system upgrades, and individual student connectivity devices In this century internet connectivity is as essential as electricity to a successful community. Connectivity was one of the key criteria Amazon listed in its search for a second headquarters. Connectivity options are high on the inquiry lists for those buying homes. Connectivity is essential to emergency services and general public safety. Connectivity is a basic part of business relocation choice – if workers cannot work from home as they do ‘at the office,’ many businesses will locate elsewhere. LINK|ACPS is designed to fill another gap – a gap that leaves too many rural children behind, because their ability to explore their world is limited when they leave school. That gap exacerbates the impacts of poverty and rural isolation, and creates a wall that blocks opportunity. The Milestone Tower is thus part of those essential goals of our County Schools, that we create an equitable environment for our children, and that we open every possible opportunity for every child.”

Milestone Communications’ business model is to construct a wireless facility on public property at no charge to the public and to permit the locality or school system to use the facility for its own communications system while sharing in the rent from commercial carriers that use the facility to enhance their commercial networks. The dedicated carrier for the second RAD center on the proposed site is Shentel, which desires to improve network coverage in the area. Please refer to the submitted propagation maps, which show a gap in coverage for in-building Shentel service east of the I-64 access. The proposed site would fill in the service gap for homes, businesses, and travelers along U.S. Route 250 and I-64 from the I-64 interchange east to State Route 683 (Brownsville Road). Further, this site will provide much-needed

coverage to Western Albemarle High school. Shentel receives a high number of complaints about poor service from parents, teachers and students attending after school activities at the high school.

Surrounding Properties:

All parcels surrounding the school parcel on the south side of Rockfish Gap Turnpike/Route 250 are zoned Rural Area. Property across Rockfish Gap Turnpike (including Old Trail) is zoned Village Residential, Neighborhood Model District, and R-1 Residential. U.S. Route 250 hosts a mix of residential and commercial uses. Brownsville Elementary and J.T. Henley Middle Schools are located on a large parcel on the north side of the highway east of the subject parcel.

U.S. Route 250 West is designated as an Entrance Corridor, so visibility is evaluated by the Architectural Review Board (ARB). The ARB reviewed the original application at its January 8, 2018 hearing and recommended approval of a Certificate of Authority for the ground equipment. The ARB provided advisory comments regarding color, plantings, and tree retention for screening the proposed monopole. Please note that the original application presented to the ARB was proposed with five (5) full (i.e. not flush-mounted) arrays.

Special Use Permit Support:

The County Code provides that the Planning Commission and the Board of Supervisors *“shall reasonably consider the following factors when they are reviewing and acting upon an application for a special use permit (County Code sections are in italics and/or bold):*

1. No substantial detriment. The proposed special use will not be a substantial detriment to adjacent lots.

The proposed facility will provide wireless internet from the Albemarle County schools’ closed internet system to the homes of approximately 400 students, many of whom currently have no access to broadband. Fire and police will have the use of the Schools’ system. The facility will support the wireless communications infrastructure of commercial carriers serving customers in the Crozet area with improved voice (including E911), data, and internet services. Staff has commented that the upper portion of the monopole will be visible to the surrounding residential properties and that the level of visual impact is a detriment to the adjacent lots. However, the applicant conducted a widely-publicized balloon test and two community meetings and has received negative comments from the owners of only one nearby parcel. Analysis of photographs provided by the objecting owner and multiple photosimulations of those views clearly show that the visibility from that parcel is through a forest that obscures the view of the monopole even in winter. Other immediately joining neighbors have expressed support for the project. In addition, Milestone has received letters of support from approximately a dozen neighbors who want improved internet and other communications services at their homes. The proposed PWSF would be approximately 1,450 feet from Rockfish Gap Turnpike in a wooded area providing a buffer to the north, west, and east. Because of the large size of the school parcel and the distance from Rockfish Gap Turnpike to the north and Brownsville Road to the east, the facility will not be visible from surrounding roadways except in passing at one point on Route 250 across from Brownsville Elementary School. Because of steep slopes, a pond, and a creek on the parcel north of the school property, the trees on this property would not be disturbed.

2. Character of district unchanged. The character of the district will not be changed by the proposed special use.

Utility infrastructure is commonplace in our rural areas. Wireless facilities are as indispensable as telephone poles and lines, cable lines, and other installations dotting the landscape around us. A single monopole will not change the character of the area any more than any other vertical above-ground utility infrastructure.

The ARB commented during its hearing that this site presents a difference situation than the previously approved site at Albemarle High School in that it is surrounded by trees and much less visible from the Entrance Corridor. The ARB discussed the visual impact of the proposed facility on the Entrance Corridor (U.S. 250) based on its two points of visibility -- at the high school entrance and on the stretch of road in front of Brownsville Elementary School. As to the former view, they concluded that the 22 trees that the applicant proposes to plant along the front of the school near the school entrance would eliminate that view. As to the stretch along U.S. 250, ARB members noted that a driver would only see a fleeting view of the monopole in passing. The ARB did note that such view would increase if the large undeveloped area of land between the school property and U.S. 250 were to be cleared. Most of this acreage is part of a residential parcel fronting Savannah Court. It contains steep slopes, a stream, and a pond. County regulations would prevent cutting trees over a large area of the parcel. Along with the tree plantings along Rockfish Gap Turnpike, the applicant has also agreed to tree plantings along the southeast corner of the school track and has proposed two tree preservation areas as recommended by staff -- a 200' tree preservation area around the monopole in the northeast corner of the parcel and a 200' tree preservation area in the southeast corner of the parcel. These tree preservation areas will buffer neighboring residential properties to the greatest extent possible.

3. Harmony. The proposed special use will be in harmony with the purpose and intent of this chapter, with the uses permitted by right in the district, with the regulations provided in section 5 as applicable, and with the public health, safety and general welfare.

Good wireless service is essential to a convenient community, attractive to residents, newcomers to the area, and local business. Good wireless service allows residents to work from home, it allows students to do their homework at home instead of in the school parking lot -- or the parking lot of a business with free WiFi -- before or after school. It allows citizens to make emergency calls from home or on the road. It allows surveyors, mechanics, farmers, and other workers who need wireless on the road and in the field, to do their work. Modern infrastructure is not inharmonious with agricultural and residential uses as any farmer or homeowner knows.

4. Harmony. The proposed special use will be in harmony with the uses permitted by right in the district.

The proposed facility will not only not restrict by-right uses within the RA, Rural Areas district but it will support voice, data, and video transmission on mobile devices and computers in the area, which are activities that citizens expect to be able to do throughout the county, in their homes and on the roadways.

5. Harmony. The proposed special use will be in harmony with the regulations in Sec 5 as applicable

Please below for in-depth review of compliance with section 5.1.40 of the Zoning Ordinance.

6. Harmony. The proposed special use will be in harmony with the public health, safety and general welfare.

The proposed facility will provide much-needed coverage for the residences of 400 students who currently do not have access to the school internet. It will expand coverage and capacity for voice, data, and streaming for citizens in the western part of the county. The FCC estimates that 70% of 911 calls are made via mobile telephones. County fire and police will be able to use the Schools' wireless system. Information services via internet are important to public health as citizens access health information online or use the increasing number of medical record and health-related apps. Communications services are essential to general welfare so citizens can work at home, access information and entertainment, and communicate with family and friends.

Compliance with the Requirements of Section 5.1.40 of the Zoning Ordinance.

5.1.40(a) Application for Approval.

1. Application form and signatures. A completed application form, signed by the parcel owner, the parcel owner's agent or the contract purchaser, and the proposed facility's owner. If the owner's agent signs the application, he shall also submit written evidence of the existence and scope of the agency. If the contract purchaser signs the application, he shall also submit the owner's written consent to the application.

The applicant has previously provided an application form signed by the authorized signatory of the Albemarle County School Board, which is the owner of the subject property. Enclosed is the resubmission form signed by the applicant's agent (attorney).

2. Plat or survey of the parcel. A recorded plat or recorded boundary survey of the parcel on which the facility will be located; provided, if neither a recorded plat nor boundary survey exists, a copy of the legal description of the parcel and the Albemarle County Circuit Court deed book and page number.

A copy of the deed with legal description and plat of survey was submitted with the original application. The deed was recorded in the Clerk's Office of the Circuit Court for Albemarle County in Deed Book 506, page 311.

3. Ownership. The identity of the owner of the parcel and, if the owner is other than a real person, the complete legal name of the entity, a description of the type of entity, and written documentation that the person signing on behalf of the entity is authorized to do so.

The owner of the subject property is the Albemarle County School Board, which has provided a letter authorizing the Applicant to proceed with zoning for the project.

4. Plans and supporting drawings, calculations, and documentation. Except where the facility will be located entirely within an eligible support structure or an existing building, a scaled plan and a scaled elevation view and other supporting drawings, calculations, and other documentation required by the agent, signed and sealed by an appropriate licensed professional.

Please see enclosed the zoning drawings prepared by Entrex Communications Services, Inc., dated April 30, 2018, signed and sealed by J. Cabot Goudy, Professional Engineer.

The plans and supporting drawings, calculations, and documentation shall show:

(a) Existing and proposed improvements. The location and dimensions of all existing and proposed

improvements on the parcel including access roads and structures, the location and dimensions of significant natural features, and the maximum height above ground of the facility (also identified in height above sea level).

Sheet Z-1 shows the location of existing improvements on the parcel, including access roads and school buildings and other structures. Sheet Z-1A shows topography of the parcel, including critical slopes. Sheet Z-2 shows the location of the bleachers and topography of the proposed site access. Sheet Z-3 depicts a detailed compound plan for ground equipment with multiple lease areas and monopole. Sheet Z-4 provides an elevation of the proposed PWSF, with details of specific equipment on following sheets.

(b) Elevation and coordinates. The benchmarks and datum used for elevations shall coincide with the State Plane VA South US Survey Feet based on the North American Datum of 1983 (NAD 83), and the benchmarks shall be acceptable to the county engineer.

The elevation of the tower base is shown on Sheet Z-4 as approximately 684.9' AMSL.

(c) Design. The design of the facility, including the specific type of support structure and the design, type, location, size, height, and configuration of all existing and proposed antennas and other equipment.

As shown on Sheet Z-4 a monopole design is proposed. The monopole would be tapered to a diameter of 27.58" at the top and would be 145' tall. The equipment and dimensions requested by Shentel are detailed on Sheets Z-5, Z-6, and Z-7; a cross-section of the antenna array and layout and antenna types and details for Shentel are shown on Sheet Z-5. Details of the antenna configuration, mount design, and antennas for the Schools are depicted on Sheet Z-8.

(d) Color. Identification of each paint color on the facility, by manufacturer color name and color number. A paint chip or sample shall be provided for each color.

The Applicant will paint the monopole and attached antennas Sherwin Williams Java Brown unless the County determines that a galvanized stainless steel finish is preferable.

(e) Topography. Except where the facility would be attached to an eligible support structure or an existing building, the topography within two thousand (2,000) feet of the proposed facility, in contour intervals not to exceed ten (10) feet for all lands within Albemarle County and, in contour intervals shown on United States Geological Survey topographic survey maps or the best topographic data available, for lands not within Albemarle County.

Please see Sheet Z-1A of the zoning drawings.

(f) Trees. The caliper and species of all trees where the dripline is located within fifty (50) feet of the facility. The height, caliper, and species of any tree that the Applicant is relying on to provide screening of the monopole or tower. The height, caliper and species of the reference tree. The caliper and species of all trees that will be adversely impacted or removed during installation or maintenance of the facility shall be noted, regardless of their distances to the facility.

Please see Sheets Z-10 and Z-11 of the zoning drawings for tree survey details. As a proposed Tier III PWSF, the site does not have a reference tree for height evaluation purposes.

(g) Setbacks, parking, fencing, and landscaping. All existing and proposed setbacks, parking, fencing, and landscaping.

The proposed site would be set back approximately 1,450' from U.S. Route 250/Rockfish Gap Turnpike. Sheet Z-1 shows that the distance to the nearest residence on the parcel to the east would be approximately 681.3'. This sheet also shows the distance from the monopole to the subject parcel's eastern boundary line as 160.6' and shows the 100% of height (145') required fall-zone radius within the subject parcel. Please see Sheet Z-9 for location of the chain link fence around the equipment compound and Sheet Z-12 for details of the landscape plans along Rockfish Gap Turnpike, along the southeast side of the track, and along the front of the equipment compound.

(h) Location of accessways. The location of all existing vehicular accessways and the location and design of all proposed vehicular accessways.

Access to the site would be over the existing parking lot west of the football field, then along a ten foot (10') easement behind (north of) the bleachers along the forest line.

(i) Location of certain structures and district boundaries. Except where the facility would be attached to an eligible support structure or an existing building, residential and commercial structures, and residential and rural areas district boundaries.

Please see Sheet Z-1 of the zoning drawings.

(j) Proximity to airports. If the proposed monopole or tower will be taller than one hundred fifty (150) feet, the proximity of the facility to commercial and private airports.

The site will not be taller than 150 feet.

5. Photographs. Photographs of the location of the proposed monopole or tower shall be provided that include, for applications for Tier II facilities, the reference tree, and for applications for Tier III facilities, the area within fifty (50) feet of the proposed monopole or tower. These photographs shall include reference points to enable the lease area, the vehicular access, the trees that will remain, and the trees that will be removed, to be identified. In addition, photographs, where possible, or perspective drawings of the facility site and all existing facilities within two hundred (200) feet of the site, if any, and the area surrounding the site.

Please see the photographs of the proposed site area enclosed with the original application.

6. Balloon tests. For any proposed monopole or tower, photographs taken of a balloon test, which shall be conducted, if requested by the agent, as follows:

(a) Scheduling. The Applicant shall contact the agent within ten (10) days after the date the application was submitted to schedule a date and time when the balloon test will be conducted. The test shall be conducted within forty (40) days after the date the application was submitted, and the Applicant shall provide the agent with at least seven (7) days prior notice; provided that this deadline may be extended due to inclement weather or by the agreement of the Applicant and the agent.

(b) Marking key boundaries and locations. Prior to the balloon test, the locations of the access road, the lease area, the tower site, the reference tree, and the tallest tree within twenty five (25) feet of the proposed monopole shall be surveyed and staked or flagged in the field.

(c) Balloon height. The test shall consist of raising one or more balloons from the facility site to a height equal to the proposed facility.

(d) Balloon color or material. The balloons shall be of a color or material that provides maximum visibility.

(e) Photographing balloon test. The photographs of the balloon test shall be taken from the nearest residence and from appropriate locations on abutting properties, along each publicly used road from which the balloon is visible, and other properties and locations as deemed appropriate by the agent. The Applicant shall identify the camera type, film size, and focal length of the lens for

each photograph.

The Applicant conducted a public balloon test pursuant to these requirements on December 6, 2017. Photosimulations of the proposed facility were created from the photographs taken by the applicant's engineer and by staff during the test. The original photosimulations depicted a steel monopole with a single full array. A revised set was prepared to show five arrays, which was the number of arrays requested in the initial application. Photosimulations of additional views were later added, as requested by staff. Using only those views identified by staff as most visible, revised photosims were prepared showing the facility as currently proposed with only three flush-mounted antenna arrays. Two sets of these photosims are provided to show the proposed facility as it would appear if painted brown and as it would appear with a stainless steel finish.

7. Additions of antennas. If antennas are proposed to be added to an eligible support structure or an existing building, all existing antennas and other equipment on the structure, building, or facility, as well as all ground equipment, shall be identified by owner, type, and size. The method(s) by which the antennas will be attached to the mounting structure shall be depicted. NA

8. Site under conservation or open space easement. If the proposed facility would be located on lands subject to a conservation easement or an open space easement, a copy of the recorded deed of easement and the express written consent of all easement holders to the proposed facility. NA

9. Photographic simulations. At the request of the agent, photographic simulations of the proposed facility. Please see subsection 6 above.

5.1.40(b) Development Requirements.

1. General design. The facility shall be designed, installed, and maintained as follows:

(a) Guy wires. Guy wires are prohibited.

(b) Outdoor lighting. Outdoor lighting for the facility shall be permitted only during maintenance periods; regardless of the lumens emitted, each outdoor luminaire shall be fully shielded as required by section 4.17; provided that these restrictions shall not apply to any outdoor lighting required by federal law.

(c) Ground equipment. Any ground equipment shelter not located within an eligible support structure or an existing building shall be screened from all lot lines either by terrain, existing structures, existing vegetation, or by added vegetation approved by the agent.

(d) Whip antenna. A whip antenna less than six (6) inches in diameter may exceed the height of the facility, the eligible support structure, or the existing building.

(e) Grounding rod. A grounding rod, whose height shall not exceed two (2) feet and whose width shall not exceed one (1) inch in diameter at the base and tapering to a point, may be installed at the top of the facility, the eligible support structure, or the existing building.

All of the foregoing general design guidelines shall be met by the proposed site and facility.

2. Antennas and associated equipment. Antennas and associated equipment that are not entirely within a proposed facility, an eligible support structure, or an existing building shall be subject to the following:

(a) Number of arrays. The total number of arrays of antennas shall not exceed three (3). All types of antennas and dishes, regardless of their use, shall be counted toward the limit of three arrays.

The Applicant proposes three antenna arrays, as is shown on Sheet Z-4 of the zoning drawings.

(b) Size. Each antenna proposed under the pending application shall not exceed the size shown on the application, which size shall not exceed one thousand four hundred (1400) square inches.

None of the proposed antennas would exceed 1400 square inches each.

(c) Projection. No antenna shall project from the facility, structure or building beyond the minimum required by the mounting equipment, and in no case shall the closest point on the back of the antenna be more than twelve (12) inches from the facility, structure, or building; and in no case shall the farthest point of the back of the antenna be more than eighteen (18) inches from the facility, structure, or building; and

The Applicant proposes antenna mount designs that will meet the 18” maximum but will not meet the 12” standoff described above and requests a special exception for this modification.

(d) Color. Each antenna and associated equipment shall be a color that matches the facility, structure, or building.

The Applicant will ensure that the wireless providers using the facility match their antennas to the monopole.

3. Tree conservation plan; content. Before the building official issues a building permit for the facility, the Applicant shall submit a tree conservation plan prepared by a certified arborist. The plan shall be submitted to the agent for review and approval to ensure that all applicable requirements have been satisfied. The plan shall specify tree protection methods and procedures, identify all existing trees to be removed on the parcel for the installation, operation and maintenance of the facility, and identify all dead and dying trees that are recommended to be removed. In approving the plan, the agent may identify additional trees or lands up to two hundred (200) feet from the lease area to be included in the plan.

The tree conservation plan shall be submitted prior to building permit approval. The enclosed plans include a tree survey on Sheet Z-10 showing the height and diameter of existing trees within the access route and within and around the compound. Sheet Z-11 identifies those trees to remain and trees to be removed.

The applicant proposes to preserve existing trees on the school property in two areas: (a) within 180 – 200 feet radius of the facility in the northeast corner of the school property, and (b) in a roughly 200’ radius in the southeast corner of the school property, which will help to maintain the wooded buffer between the site and parcels to the south. As the April 4, 2018 staff report explains, “(o)n the northern and eastern most abutting parcel, TMP 56-17 & TMP 56-16D, is a stream with a 200 foot WPO buffer that is required by County code. Based on County code this area is to remain wooded and is not to be disturbed. This offsite environmental feature provides an additional 200 feet of permanent screening on offsite properties, which is regulated by County code.” The enclosed plans show these areas where trees would be preserved pursuant to the Albemarle County Code. With tree preservation on the school property around the site and south of the site and tree preservation on the parcel between the school property and U.S. 250, the potential increase of visual impact from tree cutting is minimized.

4. Creation of slopes steeper than 2:1. No slopes associated with the installation of the facility and its accessory uses shall be created that are steeper than 2:1 unless retaining walls, revetments, or other stabilization measures acceptable to the county engineer are employed.

The temporary construction access will affect steep slopes, and a Special Exception is requested to permit this limited use.

5. Ground equipment shelter; fencing. Any ground equipment shelter not located within an existing building shall be fenced only with the approval of the agent upon finding that the fence: (i) would protect the facility from trespass in areas of high volumes of vehicular or pedestrian traffic or, in the rural areas, to protect the facility from livestock or wildlife; (ii) would not be detrimental to the character of the area; and (iii) would not be detrimental to the public health, safety or general welfare.

As shown on Sheet Z-12 of the zoning drawings, the Applicant proposes a fence to protect the ground equipment from trespass and eight (8) Eastern red cedars to screen the compound from the track and field.

6. Screening and siting to minimize visibility. The site shall provide adequate opportunities for screening and the facility shall be sited to minimize its visibility from adjacent parcels and streets, regardless of their distance from the facility. The facility also shall be sited to minimize its visibility from any entrance corridor overlay district, state scenic river, national park, or national forest, regardless of whether the site is adjacent to the district, river, park or forest. If the facility would be located on lands subject to a conservation easement or an open space easement, or adjacent to a conservation easement or open space easement, the facility shall be sited so that it is not visible from any resources specifically identified for protection in the deed of easement.

Ground equipment shall be screened from the school uses by a closed slatted fence and landscaped buffer as described above. Ground equipment also will be screened further from neighboring properties by tree buffers to the north, east, and south. Tree preservation areas are proposed in the northeast and southeast corners of the school property.

Visibility of the facility from the school entrance and from the intersection of Rockfish Gap Turnpike/U.S. Route 250 and Old Trail Drive will be mitigated by tree plantings along the front of the school property. The other areas of concern for staff were residential properties surrounding, and closest to, the football field area. With the reduction in standoff and number of arrays, the visual impact will be mitigated as much as possible. The enclosed photosimulations depict four views identified by staff as most visible:

- (1) North of the site: view immediately in front of the residence at 5861 Rockfish Gap Turnpike, TMP 56-17F (photo is taken from the private drive);
- (2) North of the site: view from Rockfish Gap Turnpike at approximately 5870 Rockfish Gap Turnpike;
- (3) East of the site: view from the residential parcel east of the school at 479 Savannah Court, TMP 56-16E;
- (4) South of the site: view from the residential parcel immediately south of the football field at 5860-5880 Emerald Lane, TMPs 56-19F, 56-19G.

The thick tree buffers to the north, east, and south and proposed tree preservation areas, along with the very narrow profile of the facility with flush-mounted antennas will mitigate the visibility of the facility.

The property is not subject to a conservation easement and would not be visible from any state scenic river, national park, or national forest.

7. Open space plan resources. The facility shall not adversely impact resources identified in the natural resources chapter of the county's comprehensive plan and the parks and green systems chapters in any county master plan.

The facility would not adversely impact natural resources.

8. Horizontal separation of multiple facilities. The facility shall not be located so that it and three (3) or more existing or approved personal wireless service facilities would be within an area comprised of a circle centered anywhere on the ground having a radius of two hundred (200) feet.

No other PWSFs are within 200' of the proposed facility.

9. *Diameter of monopole. The maximum base diameter of the monopole shall be thirty (30) inches and the maximum diameter at the top of the monopole shall be eighteen (18) inches.*

NA to Tier III PWSFs.

10. *Height of monopole. The top of the monopole, measured in elevation above mean sea level, shall not be more than ten (10) feet taller than the tallest tree within twenty-five (25) feet of the monopole, and shall include any base, foundation or grading that raises the monopole above the pre-existing natural ground elevation.*

NA to Tier III PWSFs.

The proposal is a Tier III because it does not meet the height requirements of a Tier II; the proposed height does not require a special exception. During community meetings, the applicant was asked whether reducing the number of arrays would reduce the height. As Ira Socol, Chief Technology and Innovation Office for the Albemarle County Schools, explained to the community during the second CCAC meeting, a reduction in number of arrays will not reduce the monopole height because the Department of Learning Engineering, Access, and Design (LEAD) needs at least 145 feet in height to reach the homes of approximately 400 students based on his department's "mapping of existing student addresses and the need for its signal to be at an angle that will allow penetration to homes located below the street address." He stated further that the "County does not fund us in a way that would allow us to erect those [wireless communications monopoles] throughout the southern and western regions of the County" and that he has been "strongly challenged by School Board members from those areas on our ability to provide students with a signal sufficient to carry multimedia into the homes of our students." As shown on the new photosimulations, enclosed, the change in design would mitigate the visibility of the monopole from the areas of most concern to staff.

The site is located immediately north of the high school's track/football field in a heavily wooded area. Ball field lights, which are approximately 80'-90' tall, are located around the field. Staff has inquired why multiple short monopoles could not be installed in place of the ball field lights. The existing poles are not strong enough to hold the weight of wireless antennas and related equipment and are not tall enough for wireless equipment to meet RF needs. To use the ball field lights, multiple replacement poles would need to be installed around the track. Short monopoles just clear the trees so can only provide service for a single carrier; they are built by the carrier for the sole use of the carrier and benefit only the customers of the carrier. This project would not be economically viable other than as a multi-carrier facility. Each wireless facility requires many months – sometimes years – of planning and due diligence, and the project expenses are the same for a short pole as for a taller one, yet the short one supports only a single carrier. Multiple short poles would be required to provide the same benefit as this single proposed facility.

11. *Color of monopole, antennas, and equipment. Each monopole shall be a dark brown natural or painted wood color that blends into the surrounding trees. The antennas, supporting brackets, and all other equipment attached to the monopole shall be a color that closely matches that of the monopole. The ground equipment, the ground equipment shelter, and the concrete pad shall also be a color that closely matches that of the monopole, provided that the ground equipment and the concrete pad need not closely match the color of the monopole if they are enclosed within a ground equipment shelter or within or behind an approved structure, façade or fencing that: (i) is a color that closely matches that of the monopole; (ii) is consistent with the character of the area; and (iii) makes the ground equipment, ground equipment shelter, and the concrete pad invisible at any time of year from any other parcel or a public or private street.*

The Applicant's original application included a request for a special exception to this requirement in order to retain the galvanized steel color and finish of the monopole. This request was withdrawn with its February 19, 2018 revision based on the results of the balloon test and recognition that the ball field lights were wooden. However, based on the recommendation of the ARB, the applicant is willing to return to the stainless steel proposal if the County desires. The antennas and brackets will be painted or finished to blend with the monopole's color and finish. Ground equipment will be screened by fencing and trees.

Enclosed with this resubmission are the four photosimulations described above in two versions – one showing the facility as galvanized steel and one as painted Sherwin Williams Java Brown. The ARB recommended galvanized steel to mitigate visibility where skylit along Rockfish Gap Turnpike. From locations where the view of the facility is through a forested area (e.g. from 479 Savannah Court), the facility would blend with its surroundings if painted Java Brown. The applicant is willing to accept the county's choice and would comply with a condition to use either color.

12. Placement of cables, wiring, and similar attachments. Each wood or concrete monopole shall be constructed so that all cables, wiring, and similar attachments that run vertically from the ground equipment to the antennas are placed on the monopole to face the interior of the site and away from public view, as determined by the agent. Metal monopoles shall be constructed so that vertical cables, wiring, and similar attachments are contained within the monopole's structure. NA to Tier III, but cables will be routed through the monopole.

13. Special use permit conditions. All conditions of approval of a special use permit. Noted.

5.1.40(c) Applicability of Other Regulations in this Chapter.

1. Building site. A facility is not required to be located within a building site. Noted.

2. Vehicular access. Vehicular access to the facility site or tower site shall be subject to the requirements of section 4.2 and shall not be exempt under section 4.2.6(c).

A special exception is requested for a steep slopes waiver for the access route.

3. Setbacks. Notwithstanding section 4.10.3.1(b), the agent may authorize a facility to be located closer in distance than the height of the tower or other mounting structure to any lot line if the Applicant obtains an easement or other recordable document showing agreement between the lot owners, acceptable to the county attorney as to addressing development on the part of the abutting parcel sharing the common lot line that is within the monopole or tower's fall zone. If the right-of-way for a public street is within the fall zone, the Virginia Department of Transportation shall be included in the staff review, in lieu of recording an easement or other document.

The 100% of height of the monopole setback will be met well within the parcel boundaries.

5.1.40(d) Performance Standards and Requirements for Approved Applications.

1. Building permit application; submitting certification of monopole height and revised plans. The following shall be submitted with the building permit application: (i) certification by a registered surveyor stating the height of the reference tree that is used to determine the permissible height of the monopole; and (ii) a final revised set of plans for the construction of the facility. The agent shall review the surveyor's certificate and the plans to ensure that all applicable requirements have been satisfied. Noted.

2. Tree conservation plan; compliance; amendment. The installation, operation, and maintenance of the facility shall be conducted in accordance with the tree conservation plan. The Applicant shall not remove

existing trees within the lease area or within one hundred (100) feet in all directions surrounding the lease area of any part of the facility except for those trees identified on the plan to be removed for the installation, operation, and maintenance of the facility and dead and dying trees. Before the Applicant removes any tree not designated for removal on the approved plan, the Applicant shall submit and obtain approval of an amended plan. The agent may approve the amended plan if the proposed tree removal will not adversely affect the visibility of the facility from any location off of the parcel. The agent may impose reasonable conditions to ensure that the purposes of this paragraph are achieved. Noted.

3. Completion of installation; submitting certifications of compliance. Within thirty (30) days after completion of the installation of the facility, the Applicant shall provide to the agent prior to issuance of a certificate of occupancy: (i) certification by a registered surveyor stating the height of the tower or monopole, measured both in feet above ground level and in elevation above mean sea level, using the benchmarks or reference datum identified in the application; and (ii) certification stating that the lightning rod's height does not exceed two (2) feet above the top of the tower or monopole and its width does not exceed a diameter of one (1) inch. Noted.

4. Discontinuance of use; notice thereof; removal; surety. Within thirty (30) days after a tower or monopole's use for personal wireless service or any service facilitated by transmission equipment is discontinued, the owner of the facility shall notify the zoning administrator in writing that the facility's use has discontinued. The facility and any transmission equipment shall be disassembled and removed from the facility site within ninety (90) days after the date its use for personal wireless service or any service facilitated by transmission equipment is discontinued. If the agent determines at any time that surety is required to guarantee that the facility will be removed as required, the agent may require that the parcel owner or the owner of the facility submit a certified check, a bond with surety, or a letter of credit, in an amount sufficient for, and conditioned upon, the removal of the facility. The type and form of the surety guarantee shall be to the satisfaction of the agent and the county attorney. In determining whether surety should be required, the agent shall consider the following: (i) whether there is a change in technology that makes it likely that the monopole or tower will be unnecessary in the near future; (ii) the permittee fails to comply with applicable regulations or conditions; (iii) the permittee fails to timely remove another monopole or tower within the county; and (iv) whenever otherwise deemed necessary by the agent. Noted.

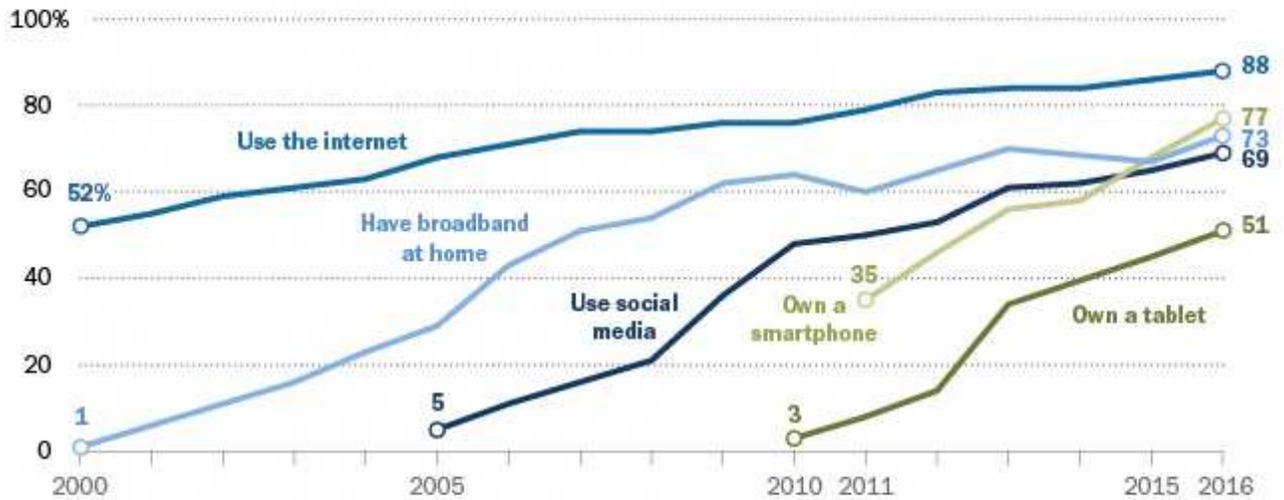
Consistency with the Albemarle County Comprehensive Plan:

Chapter 12 -- Community Facilities.

1. Strategy 10e is to "(c)ontinue to ensure that Personal Wireless Service Facilities are provided in accordance with the County's personal wireless service policy." The Personal Wireless Service Facilities Policy dates from December 2000 (the "Wireless Policy"). Since that time, the entire world has experienced a wireless revolution. According to the Pew Research Center, 75% of U.S. adults use a smart phone (92% of adults 18-25), 70% use social media, 50% own a tablet (see chart below). Approximately 50% of homes no longer have landline telephone service and rely on mobile phones for communication. Increasingly, consumers are foregoing cable for streaming services over the internet. Consumer demand for broadband in some areas has outstripped the capacity of available wireless networks, and in some rural areas, reliable broadband is still not available, creating a "wireless divide" that increasingly leaves behind those without access to modern technology.

The evolution of technology adoption and usage

% of U.S. adults who ...



Source: Surveys conducted 2000–2016. Internet use figures based on pooled analysis of all surveys conducted during each calendar year.

PEW RESEARCH CENTER

In 2000, when the Wireless Policy was created, internet usage was in its infancy, and smart phones did not become widely used until the mid-2000s. The sole objective of the Wireless Policy is to minimize the visibility of PWSF's to protect the county's significant natural scenic, and historic resources by employing the strategies listed below. While protecting our rural areas, we must also recognize that wireless services have become indispensable to our lives and that wireless infrastructure is necessary to provide these services. Citizen demand requires providers to build facilities with greater capacity and technologies to serve more and more users using the services for more functions (e.g. internet, streaming video, video calling, etc.) in the same area that previously needed merely emergency cell phone coverage for a fraction of the population.

Comments regarding the proposed facility follow each strategy in italics.

- Be designed to minimize visibility;

The proposed facility would be located within a wooded area having deep wooded buffers on all but the school side. The applicant proposes tree preservation areas and new plantings to screen views from all directions. Use of a monopole design will minimize the profile of the facility. The height is kept low enough to minimize visibility while providing room for multiple carriers to make the site economically feasible for the applicant and to maximize revenue for the schools.

- Utilize existing structures where possible;

There are no vertical structures in the area that could be used for collocation. The existing ball field poles are not strong enough to support wireless equipment and are too short to meet RF objectives.

- Utilize ground based equipment for new facilities;

All ground equipment will be screened from other uses by a compound fence and landscaping along the front of the compound.

- Mount antennas close to the supporting structure;

The Schools, Shentel, and future collocators will adhere to an 18" maximum standoff as depicted in the plans.

- Be limited in size and be designed in keeping with the character of the area;

The height is kept low enough to minimize visibility while providing room for multiple carriers to make the site economically feasible for the applicant and to maximize revenue for the schools. Visual impact on the surrounding neighborhoods and roadways will be minimized by using flush-mounted antennas.

- Not be located on ridgetops or along the ridgeline;

The proposed site is not on a ridgetop or along a ridgeline.

- Be provided with an adequate backdrop so that they are not skylined;

The balloon test results show tree cover and backdrop from different vantage points.

- Not adversely impact slopes in excess of 25%, wooded areas, streams and stream buffers, and wetlands in the Rural Area;

The proposed lease areas does not include steep slopes, stream protection areas, or wetlands and will entail minimal tree removal in order to hide the base of the monopole and ground equipment. The temporary construction easement will require grading a small area of slope in excess of 25%; therefore, a Special Exception is requested for this use.

- Not adversely impact historic and scenic resources; and

No historic resources will be affected. The impact on Route 250, an Entrance Corridor, will be evaluated during the application process.

- Not adversely impact land shown as Parks and Green Systems in the Master Plans for the Development Areas.

The proposed facility would not be visible from parks within the Crozet Village Development Area.

2. Strategy 10f is to “(d)velop a broadband policy to reflect the County’s desire to have internet service speeds appropriate for educational, business, and residential purposes in all parts of the County.”

In the 17 years since the Wireless Policy was adopted, wireless has become an integral part of life, and demand for wireless services has multiplied beyond all expectation. County officials have recognized that wireless service, including wireless cell phone coverage and internet service, is a necessity, not a luxury, for the county’s citizens, that usage continues to increase rapidly, and that the single goal of minimizing visibility may not best serve citizens in areas where wireless service is poor or inadequate.

Wireless facilities, if appropriately sited and designed, may be appropriate in any zoning district, even in Avoidance Areas and on Entrance Corridors. It is the purview of the county to weigh the benefits of each facility against any perceived visual impact, to determine if any visual impact is sufficiently mitigated, and to make decisions about SUP requests that are in the best interests of the county. The purpose of the Tier III PWSF is to permit PWSFs other than antenna attachments or treetop facilities in locations where they are appropriate, with conditions as may be adopted by the Board of Supervisors. The school board voted in favor of this facility and believes it is in the best interest of the school system, its students and faculty, and, by implication, the county at large.

3. Objective 3 is to “(p)rovide physical facilities that enable the School Division to provide a high quality educational system for students in Albemarle County.”

Traditional physical school facilities such as school buildings and sports fields are not the only resources needed to provide a high quality education today. Schools require students to have internet connectivity in school and at home. Albemarle County Schools have a closed internet system for students and teachers to use for research, homework preparation and sharing, teaching websites, and many more applications. Robust wireless service in the schools and in homes is essential for educating county students.

Conclusion:

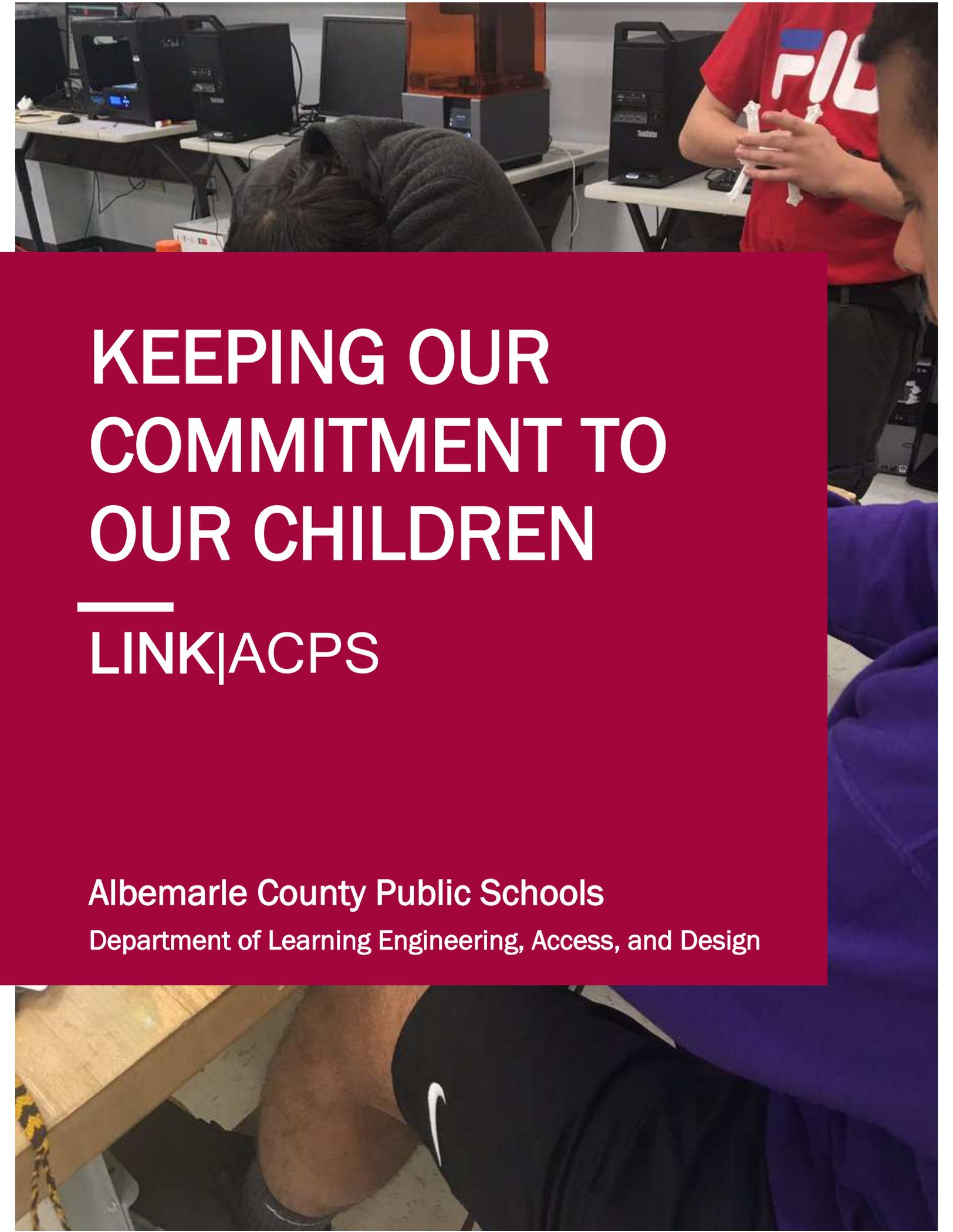
Milestone Communications has worked with the Albemarle County Schools to plan a communications facility that would serve citizens in an underserved area of Western Albemarle County. The facility would provide broadband internet to the homes of approximately 400 students who are not able to access Schools’ closed internet at home to do schoolwork and submit assignments. It would expand wireless networks of Shentel and other wireless providers while providing economic benefit to the school system. The proposed facility would be sited to have minimal visual impact on roadways and neighboring residential areas.

The location of the facility has been dictated by the needs and future planning of the county schools’ facility management and WAHS principal. The height of the proposed monopole cannot be lower and still adequately serve the needs identified by the county schools. In this resubmission, in response to

concerns expressed by county staff and the CCAC, the applicant has reduced the size of its proposed facility to three arrays instead of five with maximum antenna standoff of 18" to minimize the profile of the monopole as much as possible.

In addition to the plantings along the front of the school property and southeast of the track and the tree preservation area around the site, an additional tree preservation area on the school property southeast of the track is proposed, and existing areas of tree screening on the property between the school property and U.S. 250 are identified as areas where trees cannot be cut under county regulation of slopes and stream buffers.

We respectfully request approval of this Tier III Personal Wireless Service Facility application and the related Special Exceptions in order to expand and improve wireless services to the designated portion of western Albemarle County.



KEEPING OUR COMMITMENT TO OUR CHILDREN

LINK|ACPS

Albemarle County Public Schools

Department of Learning Engineering, Access, and Design

LEAD | ACPS

Ira Socol

*Executive Director of
Technologies and
Innovation*

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LINK|ACPS

Our Mission

The mission of LINK|ACPS is to help build equity of opportunity across the 25 schools and almost 14,000 students that make up the Albemarle County Public Schools.

Because of a combination of topography, wealth disparity, and the widely spaced populations in our rural areas, some of our children can go home and continue their learning through broad access to the internet, while others cannot.

LINK|ACPS, a combination of dedicated fiber optic connectivity and LTE distribution capacity, is designed to close that home access gap, allowing a greater chance of success for every child.

THE MILESTONE TOWER AT WESTERN ALBEMARLE HIGH SCHOOL

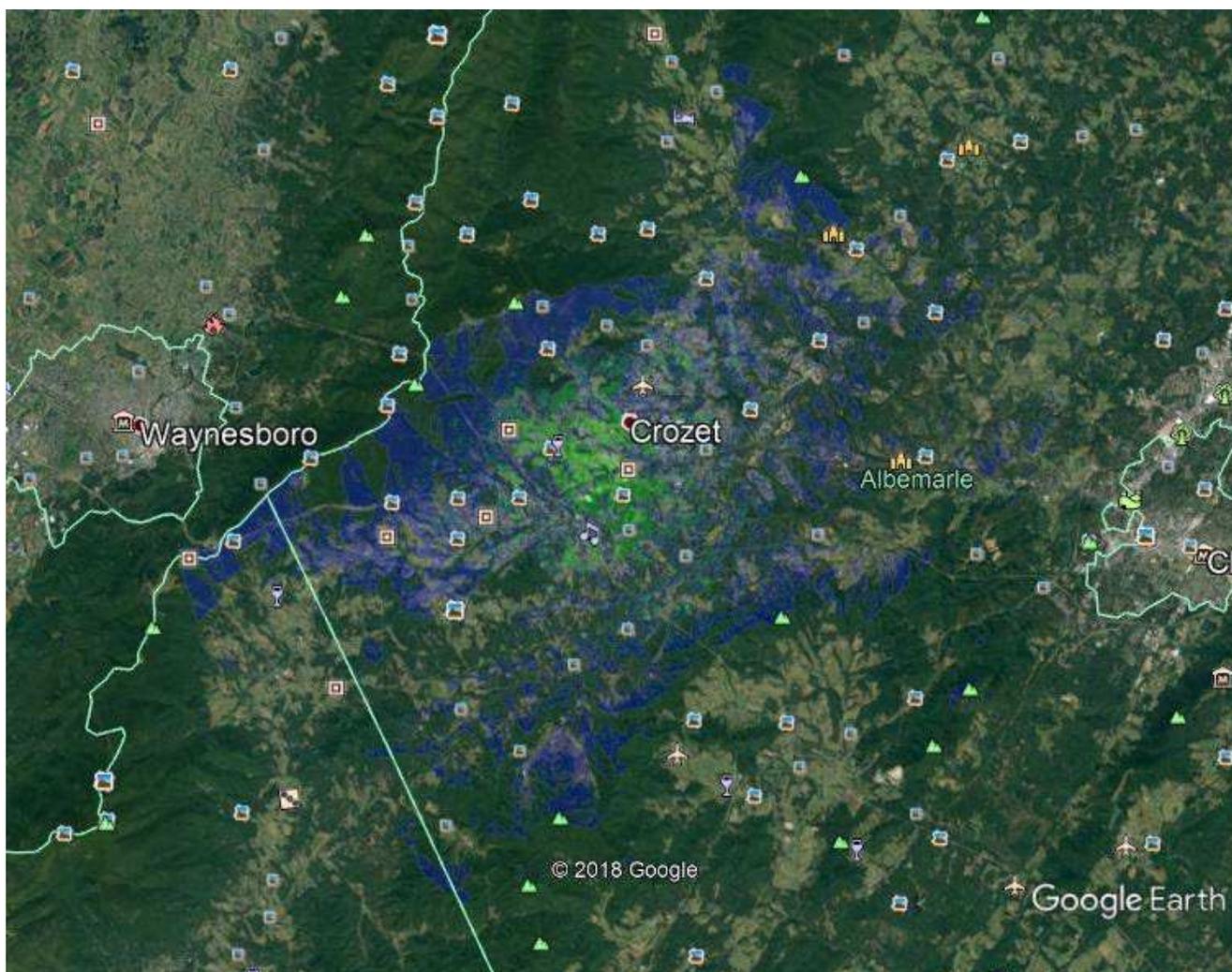
The Milestone Tower at Western Albemarle High School is an essential part of the commitment our Board of Education has made to provide connectivity to all students. If built at the requested height, this tower will do two critical things: First, it will allow our dedicated LTE signal to reach the homes of approximately 400 students, many of whom currently have no access to broadband. Second, the tower, if high enough to meet commercial needs, will provide a dedicated revenue stream that will help make our network self-sustaining after build out. That revenue will pay for system maintenance, system upgrades, and individual student connectivity devices.

THE PROMISE OF EQUITY AND OPPORTUNITY

“Last spring a junior at Western Albemarle High School described leaving his after school job at 9:00 or 10:00 pm and stopping, on his way home to Whitehall, at a gas station with a WiFi signal in order to do his homework. I know that we can do better for our children.” - *Ira Socol, Executive Director of Technologies and Innovation, Albemarle County Public Schools, to the School Board, January 2018*

In this century internet connectivity is as essential as electricity to a successful community. Connectivity was one of the key criteria Amazon listed in its search for a second headquarters. Connectivity options are high on the inquiry lists for those buying homes. Connectivity is essential to emergency services and general public safety. Connectivity is a basic part of business relocation choice - if workers cannot work from home as they do ‘at the office,’ many businesses will locate elsewhere.

LINK|ACPS is designed to fill another gap - a gap that leaves too many rural children behind, because their ability to explore their world is limited when they leave school. That gap exacerbates the impacts of poverty and rural isolation, and creates a wall that blocks opportunity. The Milestone Tower is thus part of those essential goals of our County Schools, that we create an equitable environment for our children, and that we open every possible opportunity for every child.



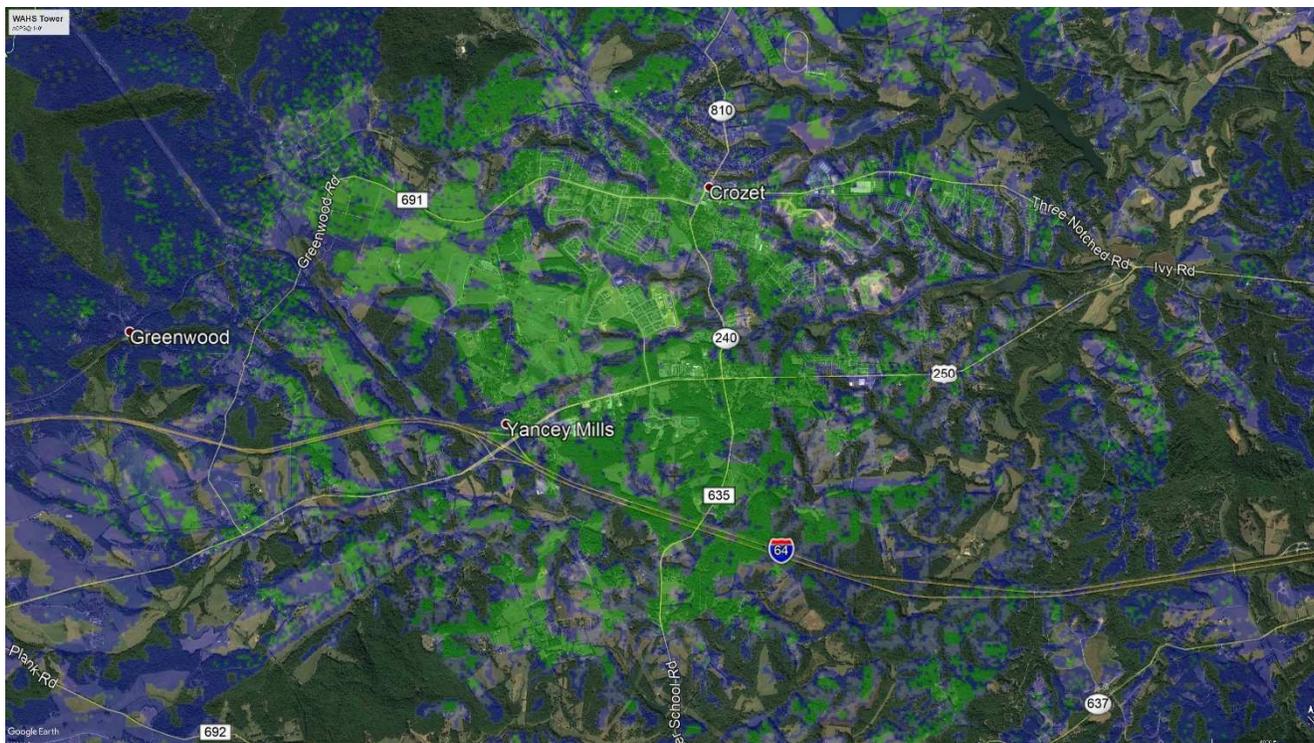
Coverage at 140' tower height (LINK|ACPS)

Propagation maps are based on topography only and do not show impact of trees on signals of the kind used by ACPS.

Green = signal strength will likely allow 'MiFi' type connection (LINK|ACPS)

Blue = signal strength will require antenna outside home (LINK|ACPS)

On all maps these color references represent coverage using the type of network equipment used by ACPS.

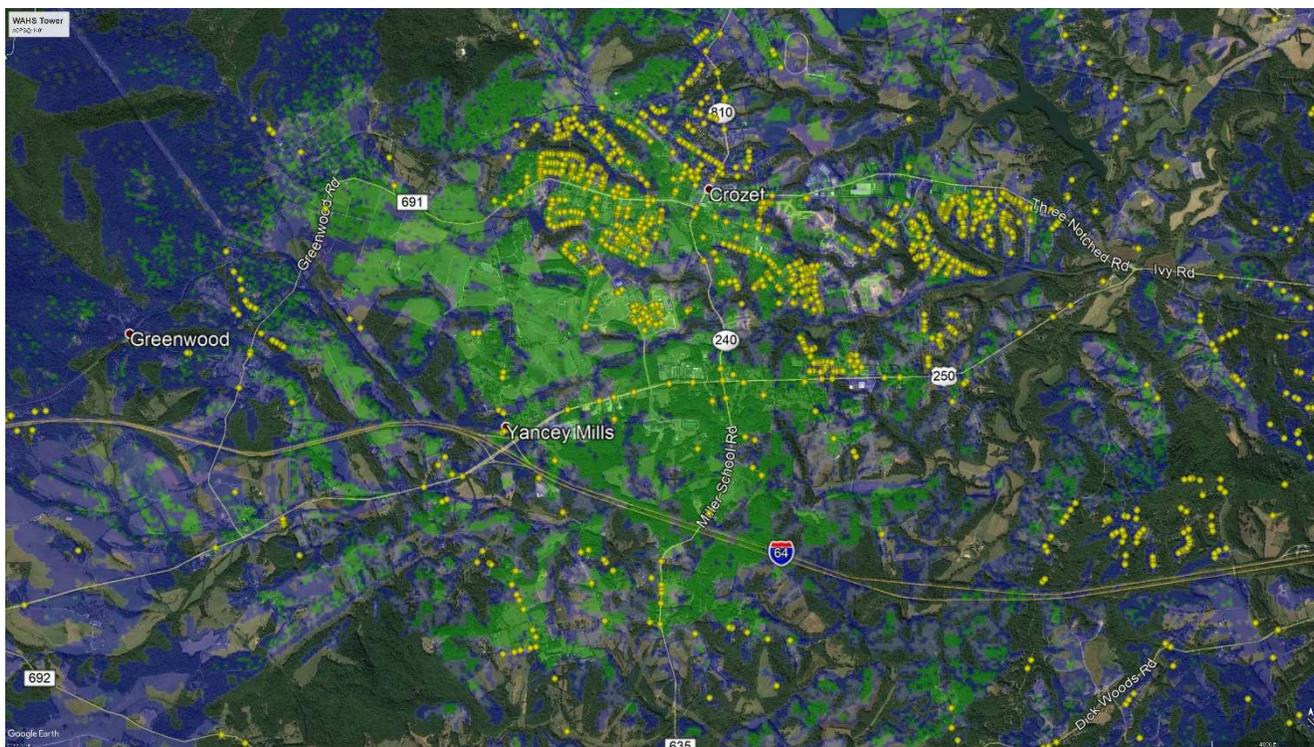


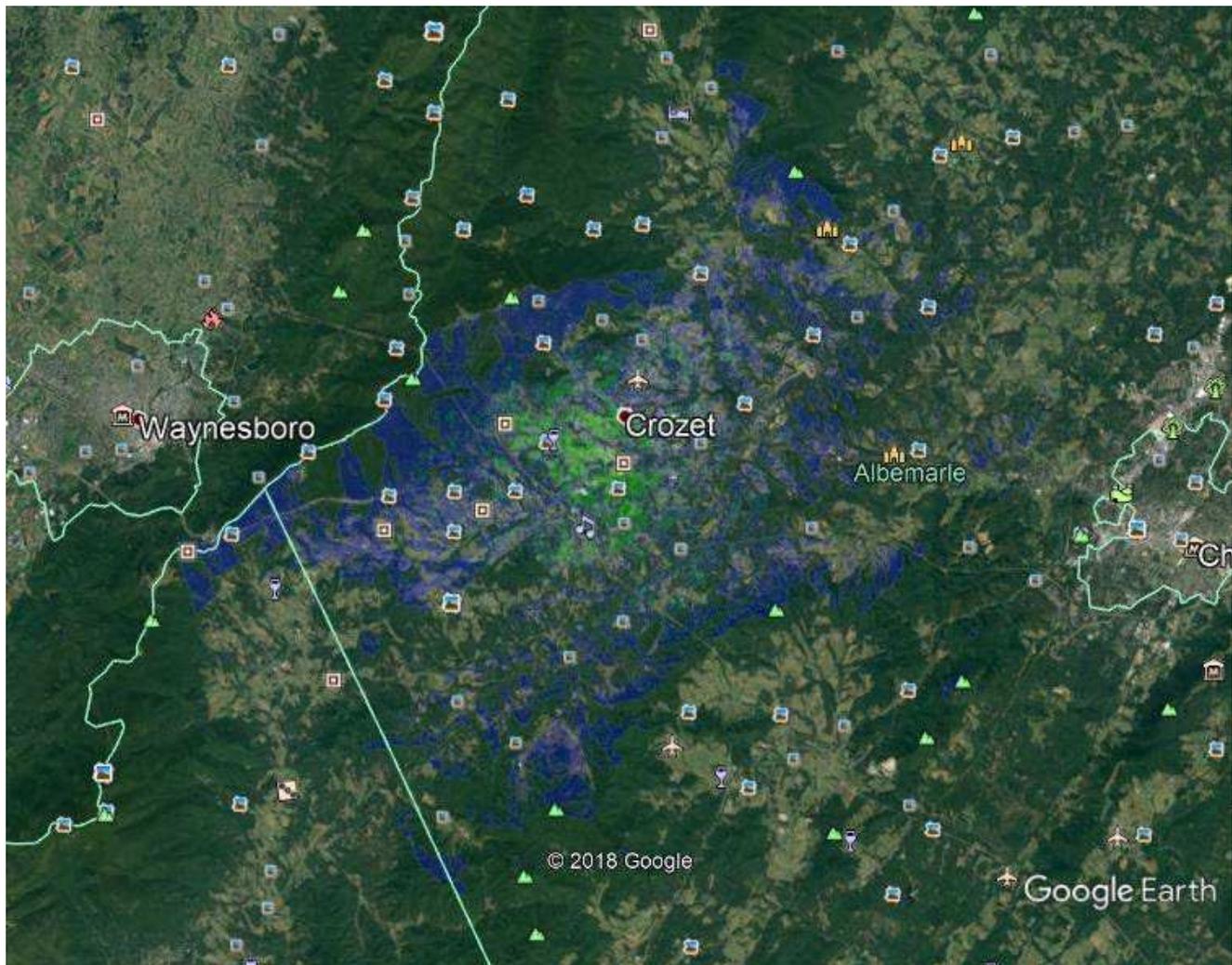
140' Tower Height, close up of Crozet, and
(below) with student addresses mapped

Green = signal strength will likely allow 'MiFi' type connection ([LINK|ACPS](#))

Blue = signal strength will require antenna outside home ([LINK|ACPS](#))

Yellow = student home address street locations

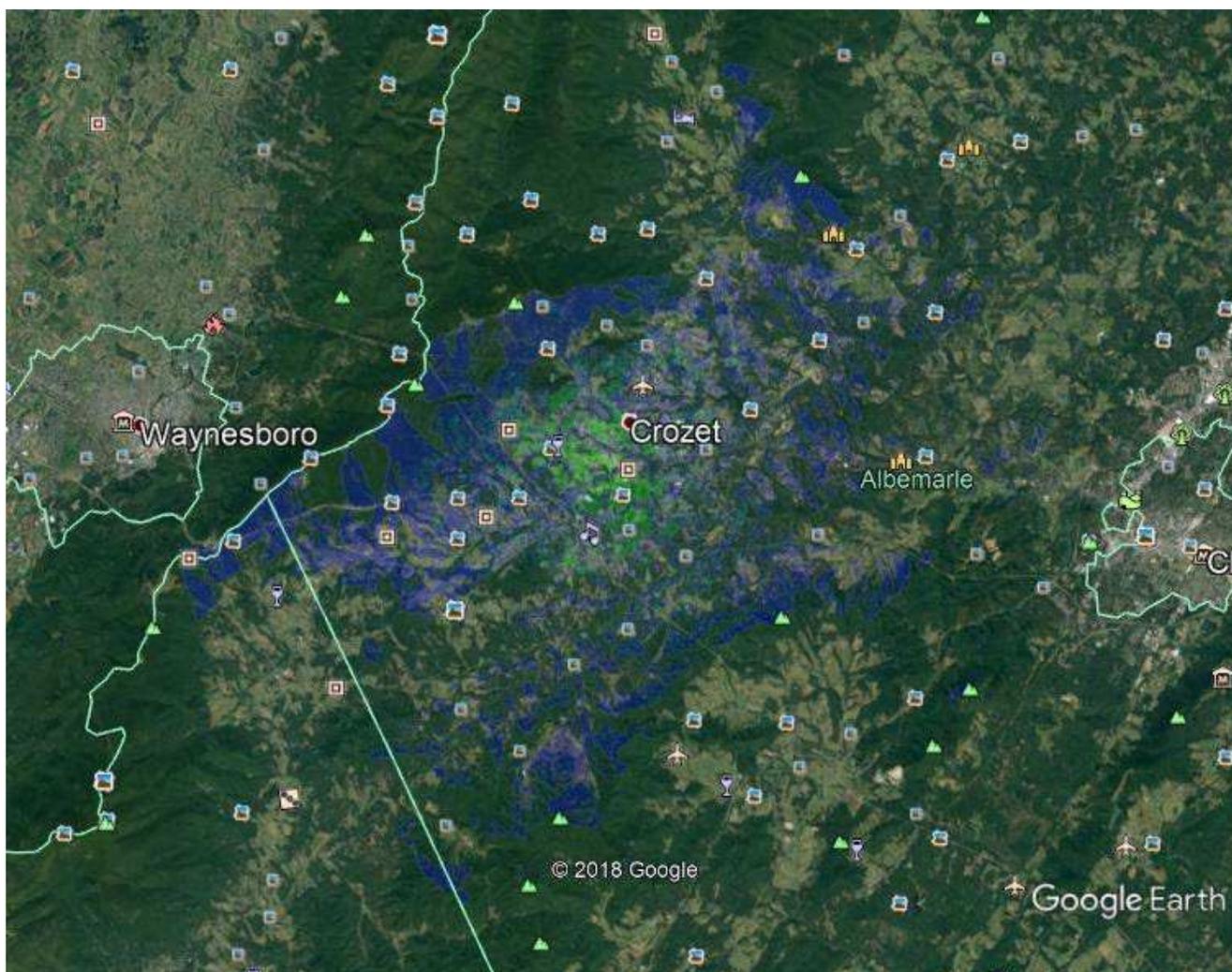




Coverage at 120' (2nd Commercial Carrier Maximum Height)

Green = signal strength will likely allow 'MiFi' type connection (LINK|ACPS)

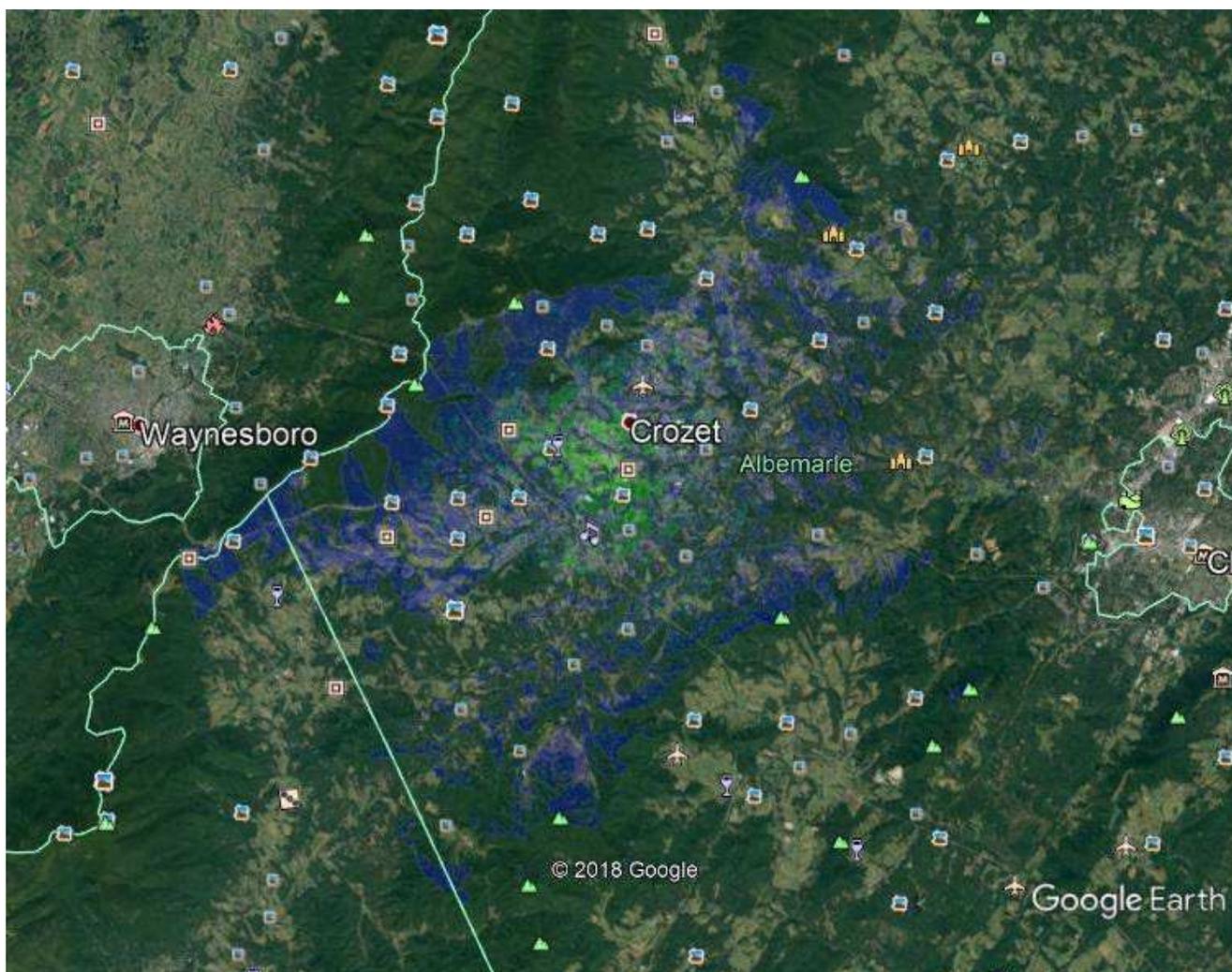
Blue = signal strength will require antenna outside home (LINK|ACPS)



Coverage at 100' (4th Commercial Carrier Maximum Height)

Green = signal strength will likely allow 'MiFi" type connection (LINK|ACPS)

Blue = signal strength will require antenna outside home (LINK|ACPS)



Coverage at 80'

Green = signal strength will likely allow 'MiFi" type connection (LINK|ACPS)

Blue = signal strength will require antenna outside home (LINK|ACPS)

The Albemarle County Public Schools

Pamela R. Moran
Superintendent

Matt Haas
Deputy Superintendent

Deborah Collins
Assistant Superintendent for Student Learning

Dean Tistadt
Chief Operating Officer

Ira Socol
Executive Director of Technologies and Innovation

Bernard Hairston
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LEAD | ACPS

LINK|ACPS is a student access service of the Department of Learning Engineering, Access, and Design of the Albemarle County Public Schools.

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