A BILL
ENTITLED

AN ACT concerning
Small Wireless Facility Design Guidelines

FOR the purpose of adopting Small Wireless (SWF) Facility Design Guidelines in accordance with the Federal Communications Commission's (FCC) Declaratory Ruling and Third Report and Order (Order) (FCC 18-133); providing: General Guidelines; guidelines for existing wireless support structures; guidelines for new or replacement wireless support structures or poles; guidelines for antennas; guidelines for SWFs installed on wireless support structures; guidelines for ground mounted SWFs; guidelines on mid-span installations; construction and safety requirements; requirements for surety bonds or equivalent financial tools for the cost of removal and other costs; indemnity and hold harmless provisions; requiring the adoption of a certain manual; providing for the application of this Act; providing for the retroactive application of this Act; defining certain terms; and generally relating to small wireless facility guidelines.

EXPLANATION: CAPITALS INDICATE MATTER ADDED TO EXISTING LAW. [Brackets] indicate matter stricken from existing law. Strike out indicates matter stricken from bill. Underlining indicates amendments to bill.
By repealing and reenacting, without amendments
   Section 32-4-404(a) and (d)
Article 32. Planning, Zoning and Subdivision Control
   Title 4. Development
   Baltimore County Code, 2015

By repealing and reenacting, with amendments
   Section 32-4-404(b)
Article 32. Planning, Zoning and Subdivision Control
   Title 4. Development
   Baltimore County Code, 2015

SECTION 1. BE IT ENACTED BY THE COUNTY COUNCIL OF BALTIMORE

COUNTY, MARYLAND, that the Laws of Baltimore County shall read as follows:

SMALL WIRELESS FACILITY (SWF) DESIGN GUIDELINES

PURPOSE

In order to address the growing demand for wireless technology across the United States,
wireless telecommunications providers endeavor to increase the capacity of their networks by
incorporating small cell infrastructure and facilities to increase data capacity beyond what can be
supported by roof mounted equipment and cell towers. This new, lower-powered technology
requires infrastructure to be installed in closer proximity to wireless users on the ground.

These Small Wireless Facility Design Guidelines (Design Guidelines) are created to provide
objective, technically feasible criteria applied in a non-discriminatory manner that protect the
health, safety, and welfare of the public by minimizing and reducing impacts to public safety
within the County's Rights-of-Way, and to assist and guide wireless telecommunications
providers in the timely, efficient, safe, and aesthetically pleasing installation and deployment of
technologically competitive equipment.
These Design Guidelines apply to County-owned public Rights-of-Way (ROW) but do not restrict the County's right to regulate Small Wireless Facilities (SWF) or wireless support structures in non-ROW County-owned property or private property.

During a temporary emergency, an applicant is not subject to the provisions of these Design Guidelines. Any applicant seeking installation of a SWF needed during an emergency condition that poses an imminent threat to life or property must apply to the County for a temporary emergency-use permit no later than the business day following the installation. The County has the authority to approve a temporary emergency-use permit. A wireless telecommunications facility installed for temporary emergency use must be removed immediately after the conclusion of the emergency. The County may remove, at the operator's expense, any such facility that has not been removed immediately after the conclusion of the emergency.

A permit granted by the County shall not convey any right, title, or interest in the ROW, but shall be deemed a permit only to use and occupy the public ways for the limited purpose and terms stated in the permit.

The provisions in these Design Guidelines, or any subsequent SWF Guidelines and/or Manuals, shall not limit or prohibit the County's discretion to promulgate and make publicly available other information, materials or requirements in addition to, and/or separate from, any current or future Design Guidelines which do not conflict with state or federal law.
DEFINITIONS

The following words, terms, and phrases, when used in these Design Guidelines, shall have the meanings ascribed to them in this section except where the context clearly indicates a different meaning.

**Antenna** means communications equipment that transmits or receives electromagnetic radio frequency signals used in the provision of Wireless Services.

**Applicant** means an entity who is applying to install a Small Wireless Facility in the County right-of-way.

**Collocate** and **Collocation** mean the installation, mounting, maintenance, modification, operation, or replacement of SWFs in a County Public Right-of-Way on or adjacent to an existing Pole.

**County** has the meaning stated in § 1-2-104 of the Baltimore County Code, 2015.

**County Facilities** means and includes County-owned or managed property of all kinds, including without limitation County-owned support structures, County Public Rights-of-Way, and appurtenances the County may place in the Public Rights-of-Way.

**Decorative Pole** means a pole specially designed and placed for aesthetic purposes and on which no appurtenances or attachments, other than specially designed informational or directional signage or temporary holiday or special event attachments, have been placed or are permitted to be placed according to nondiscriminatory County codes.

**Make-Ready Charges** means the cost of all work that is required to accommodate or accomplish Make-Ready Construction.

**Make-Ready Construction** means all work that is required to accommodate Wireless Provider’s SWF on a County-owned support structure. Make-Ready Construction may
include, but is not limited to, engineering design, Pole loading analysis, electrical
collection, communications construction, support structure replacement, and a post-
construction inspection.

**Plan View** or **Plan** means a top view of a three-dimensional object.

**Pole** means a vertical, wood or metal, support structure, including a streetlight Pole or a
utility pole.

**Profile View** or **Profile** means a side view of a three-dimensional object.

**Small Wireless Facilities (SWF)**, consistent with 47 CFR 1.1312(e)(2), are facilities that
meet each of the following conditions:

1. The facilities—
   1. are mounted on structures 50 feet or less in height including their
      antennas as defined in 47 CFR 1.1320(d), or
   2. are mounted on structures no more than 10 percent taller than other
      adjacent structures, or
   3. do not extend existing structures on which they are located to a height
      of more than 50 feet or by more than 10 percent, whichever is greater;
2. Each antenna associated with the deployment, excluding associated
   antenna equipment (as defined in the definition of antenna in 47 CFR 1.1320(d)), is no
   more than three cubic feet in volume;
3. All other wireless equipment associated with the structure, including the
   wireless equipment associated with the antenna and any pre-existing associated
   equipment on the structure, is no more than 28 cubic feet in volume;
4. The facilities do not require antenna structure registration; and
The facilities do not result in human exposure to radiofrequency radiation in excess of the applicable safety standards specified in 47 CFR 1.1307(b).

**Support Structure** means a Pole or structure of any type whatsoever, that is used, or is to be used, to support a SWF.

**Wireless Service** means any fixed or mobile service using licensed or unlicensed wireless spectrum, including the use of Wi-Fi, provided to the public using a SWF.

**Wireless Provider** means:

1. a Wireless Service Provider; or
2. an entity that does not provide Wireless Service and that is not an electric utility but builds, installs or operates on behalf of a Wireless Service Provider, or leases to a Wireless Service Provider:
   1. SWFs;
   2. Wholesale wireless service; or
   3. Any other structure that supports or is capable of supporting an SWF.

**Wireless Service Provider** means an entity that provides Wireless Service to the public.

(A) GENERAL GUIDELINES

1. All SWFs and construction practices shall comply with, but not limited to, the latest versions of the United States Department of Transportation Manual on Uniform Traffic Control Devices (MUTCD), any State of Maryland (Department of Transportation) Manuals, the National Electric Code (NEC), the National Electrical Safety Code (NESC), the National Fire Prevention Association (NFPA) 70E (Standard for Electrical Safety in the Workplace),
Manual of Development Policies, Baltimore County Landscape Manual, Baltimore County
Historic Preservation Design Guidelines, Baltimore County Street Light Policy, Baltimore
County Complete Street Design Guidelines for Urban Areas, all other County Codes, manuals,
and regulations, and any other applicable local, state, and federal rules and regulations. A
wireless service provider Wireless Provider, owner, or operator shall construct and maintain
SWFs and wireless support structures in a manner that does not:

(a) obstruct, impede, or hinder the usual travel or public safety on a public right-of-
way;

(b) obstruct the legal use of a public right-of-way by any public or private utility
providers;

(c) violate nondiscriminatory applicable codes or regulations;

(d) violate the federal Americans with Disabilities Act of 1990 (42 U.S.C. Section
12101 et seq.);

(e) impede, obstruct, violate, conflict with, or hinder any mode of travel or access to
the public right-of-way, an alley, or driveway;

(f) obstruct any access to any fire escape, fire hydrant, doors, gates, stoops, public
transportation vehicles, shelters, street furniture or other improvements at any public
transportation stop (including, without limitation, bus stops, streetcar stops, and bike share
stations);

(g) obstruct the sight line of any alley or driveway, and a minimum of fifteen feet
(15’) shall be maintained between the pole and the outside edge of the alley or driveway and
twenty-five feet (25’) from intersecting street; or
(h) obstruct public works projects and submit to temporary rerouting, if needed.

(2) Utility Underground Required. All service, power, and communication lines to a proposed SWF shall be underground if all other utilities in the immediate area are also underground.

(3) Power and Fiber Optic Supply.

(a) Independent Power Source Required. SWFs located on County-owned support structures may not use the same power source providing power for the existing facilities’ original purposes. An independent power source must be contained within a separate conduit on the existing support structure.

(b) Applicant shall coordinate, establish, maintain and pay for all power and communication connections with private utilities, separate and apart from any county agreements.

(c) Emergency RF/ Power Shut-Off. Each approved wireless installation shall have a clearly marked disconnect switch adjacent to the electronics cabinet. Once the shut-off switch is placed in the open position, the electronics equipment related to the wireless installation shall not be energized. Additionally, no RF transmissions shall be emanating from any antenna related to the wireless installation.

(4) Wiring, Cables and Conduit Requirements.
(a) All wiring and cables must be housed within the steel support structure pole and extended vertically within a flexible conduit. In non-steel support structures, all wiring and cables must be inside a riser flush mounted to the pole.

(b) Above ground wires, cables, connections and conduits are prohibited, except as specified in these Design Guidelines based on the wireless support structure.

(c) Spools and/or coils of excess fiber optic or coaxial cables or any other wires shall not be stored on the pole except completely within the approved enclosures or cabinets.

(5) Lighting. Lighting associated with small wireless facilities is prohibited. Any internal lights associated with electronic equipment must be shielded from public view.

(6) Signage. Signage is prohibited on all SWFs and wireless support structures, including stickers, logos, and other non-essential graphics and information unless required by the FCC or the utility pole owner for safety reasons.

(7) Work Permits. All applicants and/or their operators Wireless Providers must acquire the appropriate work permit from the County for any activity for which consent is required.

(8) Interference with Right-of-Way. No part of a wireless telecommunications facility may alter vehicular circulation or parking within the right-of-way or impede vehicular or pedestrian access or visibility along the right-of-way. No operator Wireless Provider may locate or maintain an SWF in a manner that causes unreasonable interference, including sightlines and any audible tone. The operator Wireless Provider must move any facility, upon request of the County, at the operator’s Wireless Provider’s cost, if the County finds the facility to interfere with the right-of-way as described herein.
(9) Noise. All construction and operation activities must comply with the relevant County and State noise law and regulations. SWFs in residential neighborhoods may not create noise greater than 50 dB measured at 20 feet from the device.

(10) Historic Districts and Landmarked Properties.

(a) Certain communications facilities licensed or permitted by the Federal Communications Commission (FCC) are subject to Section 106 of the National Historic Preservation Act. Any person, organization, or business entity seeking state or federal assistance for a deployment may need to consult with State Historic Preservation Office (SHPO). Prior to submitting an application for SWFs and wireless support structures shall not be located within twenty feet (20’) of the front or side boundary lines of a recognized County or state Landmark, a National Historic Landmark, federal properties, or a property individually listed in the National Register of Historic Places the applicant must demonstrate that they have fulfilled their obligations under Section 106, as applicable.

(b) SWFs and wireless support structures located in County Historic Districts, are on the Final Landmarks list or in unnamed alleys within a historic district shall be a minimum of twenty feet (20’) from the property line extended across the alley entrance. If the properties adjacent to the alley have a building restriction line (BRL) the twenty feet (20’) shall be measured from the BRL County Historic District shall comply with County Historic Preservation Design Guidelines and all other applicable Baltimore County rules, procedures, manuals, policies, regulations and zoning requirements.

(c) Operator Wireless Providers shall comply with and observe all applicable County, State, and federal historic preservation laws and requirements.
(d) Each application shall disclose if it is within a County Historic District (as defined in the Baltimore County Code) with decorative poles, a Landmarked Property, or in an area of the County zoned or otherwise designated as a County Historic District.

(e) Concealment of SWFs and wireless support structures is required by the County in Historic Districts with decorative poles, the design of which shall be submitted to the County for approval with the application, but which shall be consistent with other decorative structures of similar types and height in the area.

(11) Spacing among streetscape elements.

(a) A standalone pole shall not be located within an existing street tree’s critical root zone. The protected zone shall be equal to one foot for each inch of the tree’s diameter or a minimum of fifteen feet (15’), whichever is greater. The protected zone shall be measured from the outside of the tree to protect root growth.

(b) Trees shall not be removed or have their critical root zones damaged without the prior approval of the County for the installation of small wireless infrastructure, regardless of whether the application is for a standalone pole or to replace an existing County streetlight or third party pole. Excavation to install a replacement streetlight or third party pole may damage an existing tree's critical root zone. As such the County reserves the right to deny a permit for a location where a tree has been recently removed or may require the replanting of a tree at a location specified by the County, in the County's sole discretion.

(c) Standalone poles shall not be placed where it limits the ability of the County to plant a street tree or other County structure in the future, regardless of whether the County plans to plant a tree in that location at the time the application is submitted.
(12) Repair of Damage to County Right-Of-Way.

(a) A wireless provider shall be required to promptly:

(1) Repair any damage to the public right–of–way or any damages to facilities in the right–of–way directly caused by the activities of the wireless provider, operator, owner Wireless Provider or an agent of same; and

(2) Return the right–of–way to the right–of–way’s condition before the damages caused by the wireless provider, operator, owner Wireless Provider or an agent of same.

(13) Public Hearing.

(a) The County may elect to provide public notice of an application and hold a public hearing before the approval of an application or waiver of any design guidelines. This does not modify any FCC shot clocks and any extensions must be mutually agreed upon.

(b) If the County elects to hold a public hearing on an application, the applicant shall be represented at the public hearing and be available to answer inquiries about the application.

(c) If the County receives written inquiries about an application, it may elect to forward the written inquiries to the applicant for an initial response, and the applicant must respond in a timely manner, but no later than three (3) days after receipt. An application will be considered incomplete until resolution is accepted by the County. The shot clock will be tolled if the applicant does not provide a response after three days.

(d) If the applicant agrees, the time for approving or denying an application shall be extended an additional 10 business days following a public hearing.
(14) Operability Time Frame.

(a) As part of the application process, the County may require a SWF to be fully operational within 120 days after the date the last or final permit is issued, unless the County and the applicant mutually agree to extend the period.

(b) The failure of a SWF to operate in the time established under subsection (a) of this section shall allow the County to:

   (1) cancel the County's approval of the SWF and supporting structure; and

   (2) cause the removal of the SWF and supporting structure by the wireless provider/operator at the wireless provider’s sole expense and in a time the County specifies and/or through the County’s use of any surety bond provided by the wireless provider/operator to remove the wireless facility.

(15) Concealment or Camouflaging of a SWF or supporting structure is strongly encouraged, and means to have the facility be covered, blended, painted, disguised, camouflaged or otherwise concealed such that the wireless facility blends into the surrounding environment and is visually unobtrusive, including but not limited to hidden beneath a façade, blended with surrounding area design, painted to match the supporting area, or disguised with real or artificial tree branches or shrubbery.

(a) All installations should use all design techniques to minimize visual impacts. Anti-graffiti finishes should be applied to all equipment cabinet designs reachable from ground level. Locations with the least visual impact should be chosen. Exhaust all options to minimize visual impact. The Wireless Provider shall promptly remove any graffiti.
(b) Any manufacturer decals or logos on equipment enclosures that may be visible to the public should be removed or painted over.

(c) Unless otherwise stated in these guidelines, cabling should always be concealed. Absolutely no visible cabling at any time. Cabling shall run within any pole upon which a SWF is mounted. If placed on a pole, conceal all cabling within the pole, with no doghouse and no looping cables. Match nearby poles to the maximum extent possible.

(d) Vertical elements should replicate the design, diameter and proportion of the vertical element they are intending to imitate. The dimension should not exceed 10% of the diameter of the pole. Applicant may request a waiver to be granted in the County's discretion in a non-discriminatory manner.

(e) Concealment of SWFs and wireless support structures is required, the design of which shall be submitted to the County for approval with the application, and shall be consistent with other structures of similar types and height in the area.

(16) Avoid electric meter enclosure if possible. Use an underground, unmetered connection. If not, use the narrowest electric meter and disconnect available.

(17) Equipment cabinets/shrouds not integrated into a pole or mounted on a cable strand may not exceed 12 cubic feet in volume, 24 inches in width, 18 inches in depth, and should be mounted directly behind any road signs located on a pole. Equipment cabinets and associated
components should not block any road signs or sightlines. The design of non-integrated
equipment cabinets/shrouds should be slim in profile to match the pole.

(18) Replacement decorative poles supporting SWFs are allowed when they are designed to
replicate other nearby decorative poles in color and style and not to exceed 50% 150% of the
existing height of the pole.

(19) Unless required to provide service, avoid pole locations near windows (especially
residential windows), historically/architecturally significant buildings, and ornamental light
standards.

(20) If there is a choice of using a location in the street or in an alley, the alley should be used.
Most preferable locations for SWFs are industrial areas, highway rights-of-way, retail and
commercial areas if not adjacent to a county park, residential area, historic district or design
Historic District.

(21) It is preferred SWFs and support structures not be installed:
(a) On medians and traffic islands (i.e. any public space that is contiguous only with
roadways and does not border any private property, regardless of whether it currently houses a
County owned streetlight or a third party utility pole);
(b) On bridges and tunnels;
(c) On poles that have traffic control devices;
Within areas less than two feet from the roadway/face of curb, sidewalk or shared use path as measured to the nearest part of a ground mounted cabinet or enclosure.

Within six feet from any permanent object or existing lawful encroachment into the right-of-way.

The owner/operators/wireless providers shall continue to maintain the aesthetics and safety of the SWFs and supporting structures at their own cost. Any deficiencies in maintenance shall be addressed by the owner/operator/wireless provider within thirty days and if not remedied may be corrected by the County at the owner/operator/wireless provider’s cost.

EXISTING WIRELESS SUPPORT STRUCTURES.

Collocation encouraged. The collocation of SWFs on existing support structures is strongly encouraged as a means to minimize the extent of intrusion of redundant support structures within the right-of-way. Such collocations must follow the latest structural integrity and safety requirements and guidelines.

Structural integrity of existing support structures.

The County shall not authorize any attachments to County-owned infrastructure that negatively impacts the structural integrity of said support structure.

The County may condition approval of the collocation on replacement or modification of the wireless support structure at the operator’s cost if the County determines that replacement or modification is necessary for compliance with the
County’s construction and/or safety standards. A replacement or modification of the wireless
support structure shall conform to the applicable design guideline(s) and the County’s s
applicable specifications for the type of structure being replaced. The County may retain
ownership of a replacement wireless support structure. The applicant shall be responsible for all
make-ready charges.

(3) Maximum Permitted Height. For an existing wireless support structure, the antenna and
any associated shroud or concealment material are permitted to be collocated at the top of the
existing wireless support structure and shall not increase the height of the existing wireless
support structure by more than ten (10) percent or 6 feet, whichever is greater, unless otherwise
specified in the Design Guidelines based on the specific context and characteristics of the
wireless support structure.

(4) Right to reserve space on wireless support structure or pole. The County may reserve
space for future public safety or transportation uses in the right-of-way or on a wireless support
structure or pole owned by the County in a documented and approved plan in place at the time an
application is filed.

(a) A reservation of space shall not preclude placement of a pole or collocation of a
SWF.

(b) If replacement of the County's pole or wireless support structure is necessary to
accommodate the collocation of the SWF and the future use, the operator Wireless Provider shall
pay for the replacement of the pole or wireless support structure, and the replaced pole or
wireless support structure must accommodate the future use.
(5) Existing Third-Party Utility or Third-Party Streetlight Poles.

(a) Poles owned by a third party (i.e. poles installed in public space by entities other than the County) are typically wood utility poles and are located throughout the County's rights-of-way and alleyways.

(b) With the consent of the pole owner, operators Wireless Providers may submit applications to install infrastructure attached to these poles.

(1) Wireless Providers shall comply with pole owner technical requirements, application requirements and processes, in addition to the requirements and procedures required by the County. Where the pole owner requires make-ready and/or pole replacement, Wireless Providers shall also work according to procedures and terms established by the pole owner or owners, including those for coordination with other attachers to the pole.

(c) These guidelines do not allow the installation of new third party utility poles in the ROW without prior County approval. Any application must indicate whether the installation is a replacement of an existing or a new third party pole.

(d) All wireless facilities and equipment on third party poles, including antennas, antenna related equipment, cabinets, shrouds, conduit, and mounting hardware shall be a grey powder coated finish, or match existing infrastructure, in the sole discretion of the County.

(6) Existing government infrastructure on a light pole, traffic signal, or elsewhere nearby may preclude small cell installation at a given location. A pole may be deemed unsuitable for a SWF if there is existing County-owned technology already on the structure, such as cameras, sensors, etc.

(C) NEW OR REPLACEMENT WIRELESS SUPPORT STRUCTURES/POLES.
1 (1) Selection of New, Replacement or Existing Pole.
   
2      (a) Operators Wireless Providers shall not propose new wireless support structures or poles where utility poles and/or streetlight poles exist, unless they can demonstrate that it is not technically possible to use or replace an existing pole.
   
3      (b) The standard approach for attaching to a County streetlight pole will be for the streetlight pole to be replaced with a light pole within five feet (5') of the location designed to accommodate the SWF. In the event the applicant believes the existing pole can support the structure and fulfill all other aesthetic and technical standards, the applicant shall provide an industry-standard PLA certified by a Maryland Professional Engineer indicating that the specific pole will safely support the load. Replacement poles shall resemble existing poles.
   
4      (c) Required Setbacks.
5          (1) The centerline of new support structures shall be installed in alignment with existing street trees and other poles along the same right-of-way when possible.
6          (2) In no case shall a new support structure be located less than two feet from any of the road-way/face of curb, sidewalk, or shared use path as measured to the nearest part of the support structure, unless existing poles in the area are less than two feet.
7          (3) New support structures shall be located a minimum of six feet from any permanent object, structure or existing lawful encroachment into the right of way.
8      (b) (d) Fall Zones. Fall-Zone requirements for wireless support structures shall be consistent with the requirements for other structures of similar types and height within the right-of-way and the SWFs and any supporting structures, collocations or poles must be built to maximize safety and setbacks in the event of a fall.
(e) (e) Required Spacing. Collocation is strongly encouraged. If not feasible, a minimum of 300 linear feet between SWFs or wireless support structures is required.

(f) Streetlight Requirements. Street lights are placed at all intersections, tee-turnarounds, and cul-de-sacs. For streets of 30' or less, a streetlight based on the 14' ornamental pole with 100-watt sodium vapor, colonial type fixture is to be used and the type of light must be approved by the County and (if BGE-owned) BGE. Due to future maintenance issues, specialty fixtures/poles typically will not be considered (see section III-C of the County’s Street Light Policy). Lights are placed along the public roadways within the public right-of-way at a spacing of approximately 150' to 175' on alternating sides of the street, when feasible. Streets in the 36-42 foot width usually require a 25' or 30' steel or fiberglass pole with a 150-watt sodium vapor pendant mounted fixture on a standard 6' arm. These lights are placed about 175' to 200' apart on alternating sides of the street. Mercury Vapor or Metal Halides fixtures are not acceptable. On totally residential settings, the County will consider 14-foot ornamental street lights for roadways up to 40 feet upon written request and at the discretion of the County.

(2) Maximum Permitted Height.

(a) For a new wireless support structure in a business or industrial zone, the overall height of the wireless support structure and any collocated antennas shall not be more than forty-five feet in height above established grade measured at the base of the wireless support structure.

(b) The County shall limit the maximum permissible height of wireless support structures in residential zones to not more than thirty-five feet in height above established grade measured at the base of the structure.
(3) Design Requirements.

(a) Shape and Dimensions. All new wireless support structures shall be constructed of solid hot-dipped galvanized steel (or other substitute material approved by the County in advance), be round in shape with the pole shaft tapered in diameter from the base to the top with a maximum of twelve (12) inches at the base. If the applicant requires a larger diameter, applicant may request a waiver, however the larger base shall not interfere with sightlines, pedestrian flow, or ADA compliance and requirements.

(b) Transformer Base. All new wireless support structures shall include a one-piece cast aluminum designed to allow transformer base in a breakaway design, consistent with generally accepted engineering standards and subject to the County's review and approval.

(c) Foundation/Footer.

(1) All new wireless support structures must be supported with a reinforced concrete foundation and footer designed, stamped, sealed and signed by a professional engineer licensed and registered in the State of Maryland, and subject to the County's review and approval.

(2) Anchor bolts must be constructed from steel (high strength, hot dip galvanized) per ASTM A36, and any other applicable state or County regulation and code. Design of the connection of the pole to the foundation shall be stamped, sealed and signed by a professional engineer licensed and registered in the State of Maryland and subject to the County's review and approval.

(3) All anchor bolts must be concealed from public view with an appropriate pole boot or cover, powder coated to match the pole.
(d) Color. New wireless support structures, including the breakaway transformer base, shall have a powder coated finish in the dark earth tone colors such as dark green, dark brown, gray, or black consistent with the color of other poles in the immediate vicinity.

(4) Multiple requests for wireless support structures. If multiple requests are received by the County to install two or more poles that would violate applicable spacing requirements outlined in the Design Guidelines, or to collocate two or more SWFs on the same wireless support structure, the County may resolve conflicting requests through whatever reasonable and nondiscriminatory manner it deems appropriate.

(5) Exemption to County undergrounding requirements.

(a) SWF operators Wireless Providers may seek an exemption from the County of the undergrounding requirements for the placement of a new wireless support structure to support SWFs if the operator Wireless Provider is unable to achieve its service objective using a SWF.

(b) The County shall process waivers in a reasonable and nondiscriminatory manner that does not have the effect of prohibiting the provision of wireless service.

(D) ANTENNA.

(1) Location. All antennas to be installed on new or existing wireless support structures shall be mounted to the top of the wireless support structure and aligned with the centerline of the wireless support structure, unless otherwise agreed to by the County based on the specific context and characteristics of the wireless support structure.
(2) Size. Each antenna shall be located entirely within an enclosure of not more than six cubic feet in volume or, in the case of an antenna that has exposed elements, the antenna and all of its exposed elements could fit within an enclosure of not more than six cubic feet in volume. The height shall not exceed four (4) feet.

(3) Design.

(a) Shape. Antennas shall be cylindrical in shape, or completely housed within a cylindrical enclosure or radome.

(b) Color. Exposed antennas and antenna enclosures shall match the color specifications of the structure.

(E) SWFs INSTALLED ON WIRELESS SUPPORT STRUCTURES.

(1) Size. Exclusive of the antenna, all wireless equipment associated with the facility shall not cumulatively exceed twenty-eight cubic feet in volume. The calculation of equipment volume shall not include electric meters, concealment elements, telecommunications demarcation boxes, grounding equipment, power transfer switches, cut-off switches, and vertical cable runs for the connection of power and other services.

(2) Equipment Enclosures Required. All small cell facilities mounted to wireless support structures or located on the ground shall be fully contained within enclosures or cabinets.

(3) Required Clear Height. All SWFs mounted to a wireless support structure shall provide a minimum of 10 feet of clear space on the pole as measured from established grade to the lowest point of any facility/equipment cabinets or concealment apparatus mounted to the support structure.
Maximum Horizontal Offset from Support Structure. SWF equipment cabinets or enclosures shall not extend more than fourteen inches (1420") beyond the pole of centerline in all directions.

Design.

(a) Cabinet or Enclosure Shape.

(1) SWF equipment cabinets or enclosures attached to a supporting structure shall be matching in shape to what they are attached, with the vertical dimensions being greater than the horizontal.

(2) Generally, the cabinet or enclosure shall be no wider than the maximum diameter of the support structure, but no more than three feet (3’) total.

(b) Installation Method.

(1) All pole mounted equipment cabinets or enclosures must be installed as flush to the pole as possible.

(2) Any installation brackets connecting the cabinets or enclosure to the pole shall not extend more than 2 inches from the pole, and shall include metal flaps (or wings) to fully conceal the gap between the cabinet and pole.

(c) Color. Cabinets or enclosures shall match the color specification of the structure.

GROUND MOUNTED SWFs.

Location.

(a) Required Setbacks.
(1) In no case shall ground mounted SWFs be located less than two feet from the road-way/face of curb, sidewalk, or shared use path as measured to the nearest part of the cabinet or enclosure.

(2) Ground mounted SWFs and associated required screening shall be located a minimum of six feet from any permanent object or existing lawful encroachment into the right-of-way.

(3) SWFs shall have a minimum 60-foot setback from residential buildings and a minimum 20-foot setback from commercial buildings.

(2) Size. All SWF equipment associated with the facility shall not cumulatively exceed twenty-eight (28) cubic feet in volume. The calculation of equipment volume shall not include electric meters, concealment elements, telecommunications demarcation boxes, grounding equipment, power transfer switches, cut-off switches, and vertical cable runs for the connection of power and other services.

(3) Maximum Permitted Height. The maximum height for ground mounted SWFs cabinet shall not exceed two and one-half feet (2.5 ') as measured from established grade at the base of the facility.

(4) Equipment Enclosures Required. All ground mounted SWFs shall be fully contained within enclosures or cabinets.
(5) Design Requirements.

(a) Screening required. Evergreen plant material shall be used for screening and shall be planted and maintained to ensure that the equipment will be screened to its full height two years of planting without obstructing the view of motor traffic or pedestrians.

(b) Concrete Pad or Slab. In accordance with state and local standards approved by the County.

(c) Breakaway Design. All objects placed within the clear zone shall feature breakaway design.

(d) Color. Ground mounted small wireless facility cabinets and enclosures shall be dark green or black powder coated finish.

(G) MID-SPAN INSTALLATIONS. SWFs installed on strand or cables between utility poles shall be subject to the following requirements:

(a) Midspan wireless installations cannot exceed 18 inches in length, 15 inches in height, and 12 inches in depth.

(b) Must comply with all requirements in this document, including but not limited to RF, clearances from other attachments, and power disconnect.

(c) Strand mounted devices must have RF warning tags and contain the company site name and 24-hour contact phone number.

(d) May not exceed five (5) cubic feet in volume.

(H) CONSTRUCTION AND SAFETY REQUIREMENTS.
(1) Approval of the collocation, replacement, or modification of the wireless support structure is conditioned upon an operator's assumption of costs the County determines is necessary for compliance with its written construction or safety standards.

(2) Prevention of failures and accidents. The owner or operator of a SWF sited in the right-of-way shall at all times employ ordinary and reasonable care and install and maintain in use nothing less than the best available technology for preventing failures and accidents which are likely to cause damage, injury, or nuisance to the public.

(3) Compliance with fire safety and FCC regulations. SWFs, wires, cables, fixtures, and other equipment shall be installed and maintained in substantial compliance with the requirements of the National Electric Code, all FCC, state, and local regulations, and in such manner that will not interfere with the use of other property.

MINIMUM REQUIRED SUBMISSIONS.

(1) Site Plans and Structural Calculations.

(a) The applicant must submit fully-dimensional scale site plans including GIS zoning map with proposed location, elevation drawings and structural calculations prepared, sealed, stamped and signed by a Professional Engineer licensed and registered by the State of Maryland. Drawings must depict any existing wireless facilities (SWF or otherwise), with all existing transmission equipment identified; other improvements; the proposed facility, with all proposed transmission equipment and other improvements; and the boundaries of the area surrounding the proposed facility and any associated access or utility easements.
of-way and setbacks. SWF zoning map data, including relevant pole and antenna locations, shall be provided to the County in an electronic GIS format to be approved by the County. Submittals must encompass as much of an area as is necessary to capture construction boundaries and nearby features, such as property boundaries, set-backs to nearest residential structures and other buildings, site entries, utilities and nearby roads. The County reserves the right to request a revised submittal for a larger affected area view.

(b) Photo Simulations: For all applications, photo simulations from at least three reasonable line of-sight locations near the proposed project site. The photo simulations must be taken from the viewpoints, including at least 3 varying heights along the proposed line of sight, of the greatest pedestrian or vehicular traffic. Angle of photo simulation must be at least 90 degrees or greater and provide a full profile depiction. Photo simulations must be included in the application packet.

(2) Equipment Specifications. For all equipment depicted on the plans, the applicant must include:

(a) the manufacturer’s name and model number and full cut sheets for each component;

(b) physical dimensions including, without limitation, height, width, depth, volume and weight with mounts and other necessary hardware;

(c) Technical rendering of all external components, including enclosures and all attachment hardware; and

(d) Which sections(s) from the Design Guidelines standards match the desired design.
Name of the structure owner (if not the County) and written permission from the owner to attach to the structure.

SURETY BOND OR EQUIVALENT FINANCIAL TOOL FOR COST OF REMOVAL OR RECOUPMENT OF UNPAID RATES OR FEES.

(a) All owners, wireless providers, and/or operators must procure and provide to the County a renewable bond, or must provide proof of an equivalent financial mechanism, to ensure compliance with all provisions of the Design Guidelines. The amounts shall be sufficient to:

1. Provide for the removal of abandoned or improperly maintained wireless facilities or poles, including those that the county determines need to be removed to protect public health, safety, or welfare and restore the right-of-way;
2. Cover the costs of any damage to county property caused by an operator Wireless Provider or its agent; and
3. Recoup rates or fees that have not been paid by a wireless provider Wireless Provider more than thirty days past due, as long as the County has given reasonable notice to the wireless provider/operator/owner Wireless Provider.

(b) Two acceptable alternatives to a bond include a funds set-aside and a letter of credit.

INDEMNITY AND HOLD HARMLESS, DEFENSE AND INSURANCE.
(1) An owner, wireless provider, and/or operator, as applicable, A Wireless Provider shall indemnify, protect, defend and hold harmless the County and its officers and employees against any claims, loss, suits, judgments, costs, liens, expenses, fees, damage, or liability, including any attorneys' fees, resulting from the SWF or supporting structure. Said owner, wireless provider, and/or operator Wireless Provider shall also hold the County and/or its agent(s) harmless in the event any action by the County and/or its agent(s) negligently or recklessly disrupts, destroys, and incapacitates small cell facility or wireless support structure in the public way created under these Design Guideline Guidelines.

(2) During the period in which the facilities of owner, wireless provider, and/or operator a Wireless Provider are located on or attached to the County's assets or rights–of–way, the County may require a wireless provider Wireless Provider to:

(a) Carry, at the owner, wireless provider, and/or operator's Wireless Provider’s sole cost and expense, the following types of third–party insurance:

   (i) Property insurance for the replacement cost of all wireless facilities and poles against all risks;

   (ii) Workers’ compensation insurance, as required by law;

   (iii) Commercial general liability insurance of at least $2,000,000 per claim, with respect to the owner, wireless provider, and/or operator's Wireless Provider’s activities in, on, or around the authority improvements or rights–of–way, including coverage for bodily injury and property damage; and

   (iv) Environmental insurance, insurance, including but not limited to coverage for environmental remediation;
(b) include the County as an additional insured on the commercial general liability policy and provide certification and documentation of inclusion of the authority in a commercial general liability policy as reasonably required by the authority; and

(c) Provide that the County and its employees, officers, and officials are immune from liability for any claim, including a tort claim, arising from the installation or operation of wireless facilities and wireless support structures.

(L) SEVERABILITY. If any of the provisions in these Design Standards Guidelines are declared by a court or other lawful authority to be unenforceable or invalid for any reason, the remaining provisions hereof shall not be affected thereby and shall remain enforceable to the full extent permitted by law.

(K) RETENTION OF LOCAL POLICE POWER. EFFECT OF FUTURE CHANGE IN GOVERNING LAW. These Design Guidelines are intended to establish only the minimum restrictions upon the police power of the County necessary to comply with the final rules adopted by the Federal Communications Commission regarding permissible local regulations of wireless facilities and wireless support structures. Nothing in these Design Guidelines shall be construed as surrender by the County of its right and power to adopt future ordinances, rules, and regulations in the exercise of its police power applying to wireless facilities to the maximum extent allowed by applicable law. Issuance of any permit pursuant to these Design Guidelines and any license agreement shall not grant the applicant any vested rights in the event of a change in governing law, including any vested right for applicant to remain regulated under the laws, ordinances, rules, and regulations in effect at the time of issuance of a permit. In the event of any
future change in governing law (including, but not limited to, invalidation or modification of the
final rules of the Federal Communications Commission in effect at the time of initial adoption of
these Design Guidelines), the County at all times reserves the right to regulate wireless facilities
under new governing law as changed and to apply new County regulations allowed by the
changed law to all pre-existing wireless facilities.

SECTION 2. AND BE IT FURTHER ENACTED, that the Laws of Baltimore County
shall read as follows:

Article 32. Planning, Zoning and Subdivision Control
Title 4. Development

§ 32-4-404.
(a) In order to implement the standards and requirements set forth in this subtitle, the
county shall prepare development manuals in accordance with the requirements of this section
and submit the manuals to the Planning Board for its action under subsection (d) of this section.
(b) The appropriate county agencies shall prepare the following manuals and submit
them to the Planning Board:
(1) A Design Manual;
(2) A Manual of Standard Details;
(3) A Manual of Standard Specifications;
(4) A Manual of Stormwater Management Policy;
(5) A Manual of Sediment Control and Slope Protection;
(6) A Manual of Uniform Traffic-Control Devices; [and]


(8) A SMALL WIRELESS FACILITY MANUAL.

(d) (1) Each agency that is required to prepare a manual under this section, shall submit

the manual to the Planning Board for its review and approval.

(2) Within 75 days after the submission of a manual to the Planning Board, the

Planning Board shall:

(i) Conduct a public hearing; and

(ii) Allow any person a reasonable opportunity to comment upon the proposed

manual during the public hearing.

(3) Within 75 days after the public hearing, the Planning Board shall:

(i) Approve the manual, with any amendments the Planning Board considers

appropriate; and

(ii) Submit the approved manual, as amended, to the County Council for its adoption.

(4) Within 90 days after submission of the manual to the County Council, the County

Council shall adopt the manual with any amendments the council considers appropriate.

(5) The manual shall become effective as of the date of adoption by the County

Council.

SECTION 3. AND BE IT FURTHER ENACTED, that the appropriate county agencies

shall jointly prepare and make ready for adoption a Small Wireless Facility Manual in

accordance with § 32-4-404(d) of the Baltimore County Code, 2015 (BCC) not more than twelve

months after the effective date of this Act and that on adoption of the manual in accordance with
BCC § 32-4-404(d), Section 1 of this Act shall be considered null and void with regard to any small wireless facility application filed after the date of adoption of the manual.

SECTION 4. AND BE IT FURTHER ENACTED, that this Act, having passed by the affirmative vote of five members of the County Council shall take effect on enactment retroactive to April 14, 2019.