



Rushern L. Baker, III
County Executive

PRINCE GEORGE'S COUNTY GOVERNMENT

OFFICE OF THE COUNTY EXECUTIVE

October 19, 2017

The Honorable Derrick L. Davis, Chairman
Prince George's County Council
14741 Governor Oden Bowie Drive
Prince George's County Council, 2nd Floor
Upper Marlboro, Maryland 20772

Dear Chairman Davis:

We are pleased to present for your consideration Prince George's County's 2017-2018 Telecommunications Transmission Facilities Coordinating Committee (TTFCC) Master Plan updated and Fiscal Year 2017 Annual Report. The Master Plan (Plan) provides locations where one or more wireless service providers have sited telecommunications antennas or may site antennas in the future. The Annual Report enclosed informs the County Executive, the County Council and our citizens of the TTFCC activities during Fiscal Year 2017.

The symbols shown on the Plan indicate existing antenna sites where an application to site antennas has been reviewed and recommended by the TTFCC. Some sites may not have been built yet due to the carrier's schedule. Locations include buildings, monopoles, electric utility transmission line towers and water tanks. The search rings identify areas where the telecommunication carriers (T-Mobile, Cingular/AT&T, Verizon, Sprint-Nextel and others) intend to site antennas in the future. The identification of these sites is an important part of the TTFCC's promotion of the use of co-location sites to limit the need to build new structures throughout the County.

The Plan is based on information provided to TTFCC as part of the telecommunications carriers' required Annual Plan updates. The specific locations of future antenna sites are provided to the TTFCC as proprietary information and are incorporated into a confidential TTFCC database that the County's Telecommunications Transmission Facility Coordinator maintains. As the TTFCC has directed, these confidential future search rings are shown on the Plan in areas approximately one mile in diameter. They do not identify the carrier or the specific site in order to maintain the carriers' confidentiality, yet still meet the intense of the County Code requirements for the Plan and address identified Homeland Security concerns.

The Plan provides public information to County citizens, elected officials and the telecommunications carriers. The Plan will facilitate public participation in the telecommunications siting process.

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The Honorable Derrick L. Davis
Page 2
October 19, 2017

The Annual Report summarizes the purpose, procedures, activities and history of the TTFCC. The Report offers a summary of the accomplishments and strategies that are recommended for further improving the TTFCC's activities.

Highlights of the Report are:

- The TTFCC reviewed 241 applications to place antennas in the County during Fiscal Year 2017.
- Three of the 241 applications were to construct new support structures.
- 80% of applications were to add or replace antennas at existing locations and were approved administratively.
- 193 applications were approved administratively.
- The TTFCC has reviewed 2,804 applications since its inception in 2000.

The TTFCC is very proud of the 2017-2018 Master Plan and Fiscal Year 2017 Annual Report. Together, they provide essential public information and facilitate public participation in the telecommunications siting process.

Should you have any questions or concerns, please do not hesitate to contact Michelle Lyons, TTFCC Chair at (301) 636-2020.

Sincerely,



Rushern L. Baker, III
County Executive

Enclosures

cc: Nicholas A. Majett, Chief Administrative Officer
Glenda R. Wilson, Chief of Staff
Barry L. Stanton, Deputy Chief Administrative Officer for Public Infrastructure
Brad W. Frome, Assistant Deputy Chief Administrative Officer for Public Infrastructure
Haitham A. Hijazi, Director, Department of Permitting, Inspections and Enforcement
Redis C. Floyd, Clerk of the County Council
Michelle D. Lyons, Chair, Telecommunications Transmission Facilities Coordinating
Committee, Department of Permitting, Inspections and Enforcement
James Crane, Telecommunications Transmission Facility Coordinator, Columbia
Telecommunications Corporation

TELECOMMUNICATIONS TRANSMISSION FACILITY COORDINATING COMMITTEE

2017 ANNUAL REPORT



**PRINCE GEORGE'S COUNTY
RUSHERN L. BAKER, III
COUNTY EXECUTIVE**

Cover Photo

DISTRIBUTED ANTENNA SYSTEMS

The cover photo shows an existing Crown Castle DAS site in Westminster, Md., approximately 70 miles from Prince George's County. The photos below show additional DAS sites in nearby Maryland jurisdictions: a Mobilitie site in Baltimore, a Verizon Wireless site in Sykesville, and an AT&T site in Potomac. Prince George's County can expect similar installations within its borders if the County decides to permit the pending applications from Mobilitie and Crown Castle.



Indeed, the TTFCC currently has 24 applications under review to place distributed antenna system (DAS) access points throughout the County. Mobilitie (representing Sprint) currently has one application recommended by the TTFCC at its September 2017 meeting; based on its annual plan, the company plans 231 additional sites. The remaining 23 pending applications are from Crown Castle (representing T-Mobile), which lists six sites planned for FY18 in its annual plan. (In FY16, the TTFCC recommended eight new tower applications to place DAS access points around FedEx Field to add additional capacity for smartphone demands in that vicinity, especially during events at that facility. However, these applications have yet to receive a permit to begin construction.)

The FCC defines DAS as a number of remote communications nodes deployed throughout the desired coverage area, each including at least one antenna for transmission and reception; a high-capacity signal transport medium (typically fiber optic cable) connecting each node to a central communications hub site; and radio transceivers located at the hub site to process or control the communications signals transmitted and received through the antennas. These potential DAS sites reduces the need for carriers to construct much larger monopoles or towers in primarily residential areas.

Table of Contents

1. Executive Summary	1
2. Background	2
3. FY 2017 TTFCC Activities	6
Minor Modification Applications	6
Co-Location Applications	7
New Facility Applications	7
4. Administration of the Antenna Siting Review Process.....	8
5. Future Expectations	10

1. Executive Summary

In FY 2017 the Telecommunications Transmission Facility Coordinating Committee (TTFCC) received and reviewed 241 applications (an increase from the 218 applications reviewed in FY16). The majority of the applications reviewed (193) were minor modification applications to add antennas or otherwise change existing antenna arrays; most of those were administratively approved by the TTFCC Chair as permitted in the County Code.

Of the 241 applications it reviewed, the TTFCC reviewed three applications for new towers. One application was from Verizon Wireless to construct a new monopole at Miracle Temple Church on Auth Road in Suitland, one application was from Milestone Communications to construct a new monopole on school property, and one application was from Crown Castle to address illegal modifications that were made to an existing monopole on Furgang Road in Upper Marlboro.

The carriers continue to upgrade their networks for service areas inside the Beltway, where concentrations of antennas are located to serve residents, travelers, and businesses. The table below shows the number of antenna sites and the number of monopoles (permitted by the Zoning Code up to 100 feet high in residential areas) in the County by Council District.

Table 1: Number of Antenna Sites and Monopoles by Council District

Council District	Total Number of Antenna Sites	Number of Monopoles Only
1	72	21
2	46	9
3	48	18
4	71	27
5	78	49
6	58	27
7	41	14
8	53	19
9	112	53
<i>Total</i>	579	237

TTFCC application fees collected during FY 2017 amounted to approximately \$270,181. The County's costs for TTFCC activities, excluding indirect County staff time, were \$175,500. These costs were expenditures for outside services provided by the designated Telecommunications Transmission Facility Coordinator, presently Columbia Telecommunications Corporation.

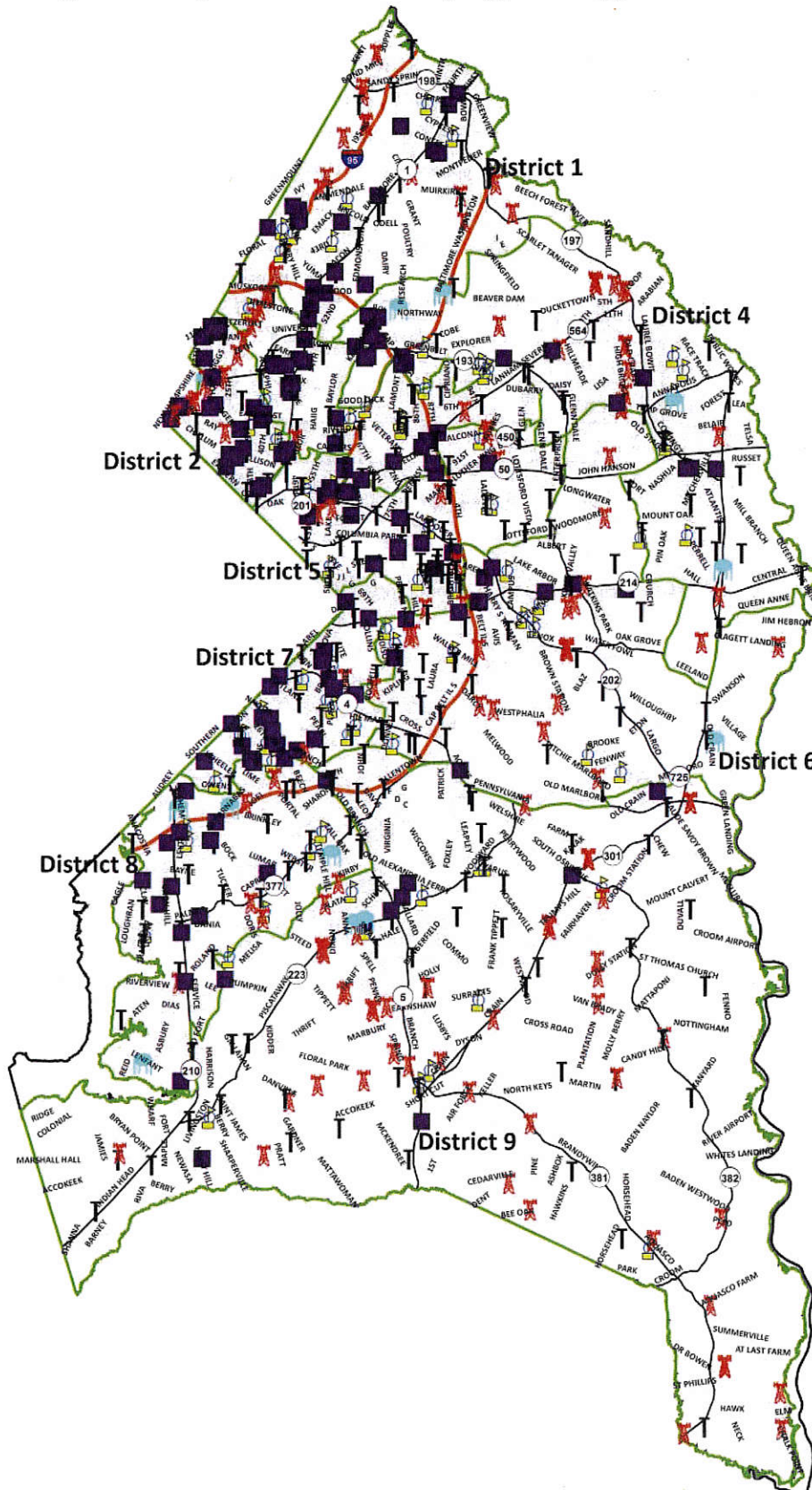
2. Background

Since the TTFCC's inception in 2000, the Committee has processed 2,804 applications, enabling carriers to place antennas at 579 locations in the County. Generally, antennas are mounted on four types of structures in the County—monopoles (shown in black on the map), buildings (purple), lattice towers (red), and water towers (turquoise). The following table shows the number of each type of antenna siting:

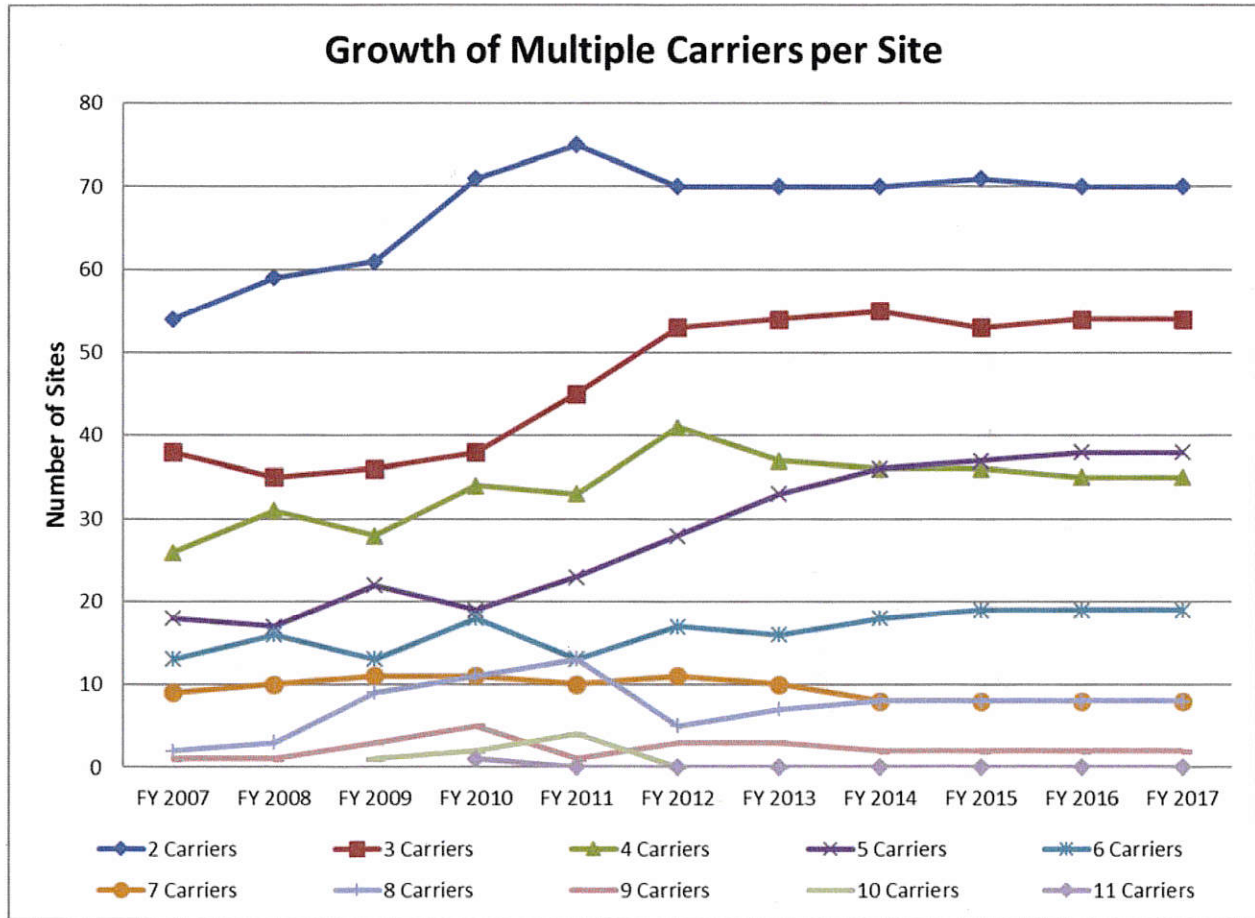
Type	Number
Monopole	237
Building	170
Tower	159
Water Tower	13
<i>Total</i>	579

The map on the page below illustrates the locations of antenna sites by type of support structure.

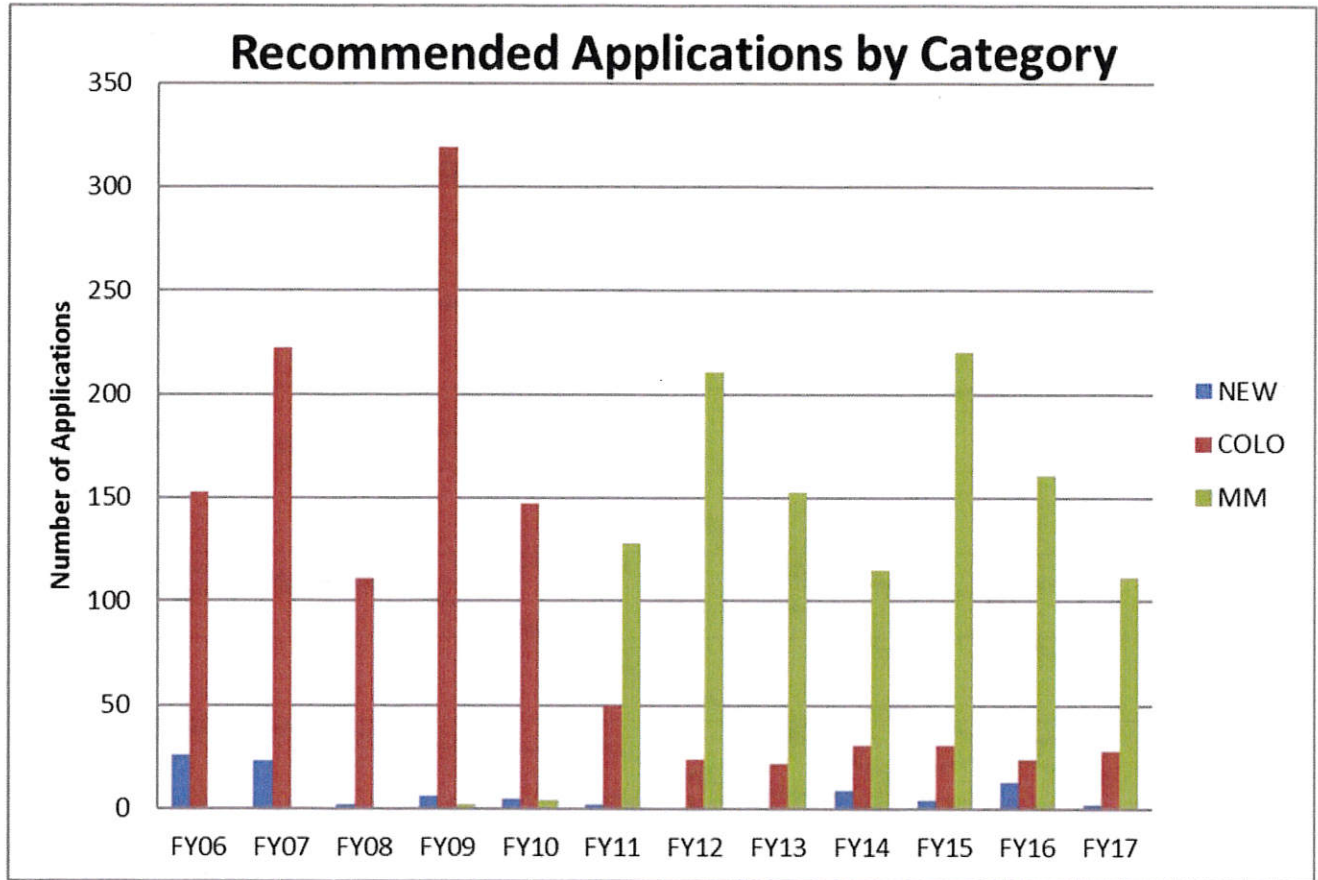
Figure 1: Map of Antenna Sites by Type of Support Structure



Many structures support multiple carriers' wireless facilities. The chart below shows the number of locations supporting multiple carriers.

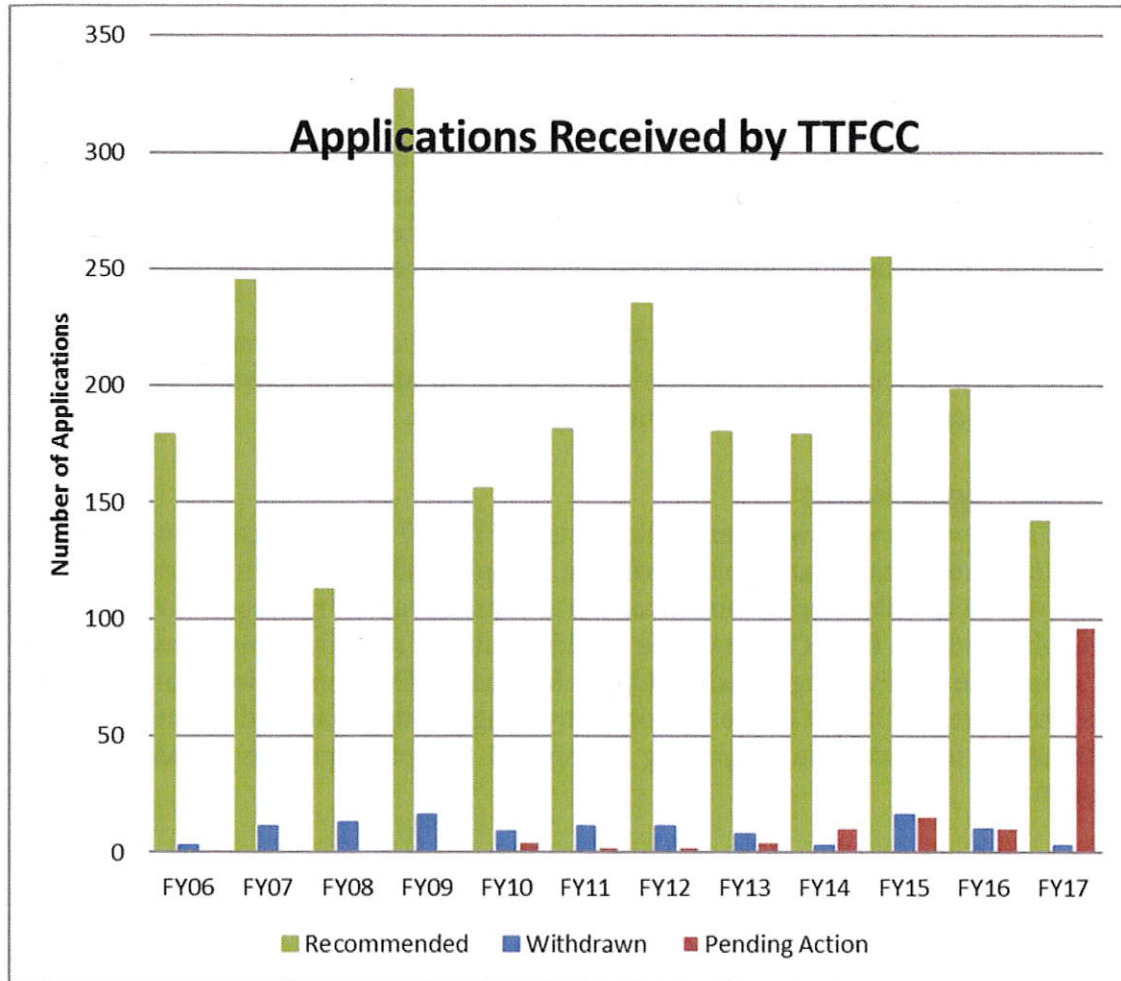


Over time, the nature of applications filed with the TTFCC has changed; in recent years, carriers overwhelmingly have been upgrading existing antenna arrays to add capacity to service areas, not expanding their coverage areas with new antenna sites (either through co-location or by building new towers). Consequently, for the past few years, the majority of TTFCC applications have been for minor modifications to existing sties. The table below shows the TTFCC's recommendations by application type (i.e., new sites, co-location, and minor modification) for FY 2017 and the prior 11 years.



3. FY 2017 TTFCC Activities

Carriers filed 241 applications in FY 2017 for TTFCC review and action. The table below illustrates the number of applications filed, by disposition (i.e., recommended by the TTFCC, subsequently withdrawn by the applicant, or pending action by the TTFCC) for FY 2017 and the prior 11 years.



In FY 2017 the TTFCC reviewed 241 applications, including some carried over from FY 2016.¹

Minor Modification Applications

The vast majority of the 241 applications reviewed by the TTFCC in FY 2017 (193 in total) were to modify an existing antenna array - which included replacing existing antennas or adding new antennas to an existing antenna array, adding additional transmitting equipment, and adding electrical generators.

¹ For a variety of reasons, applications are not always reviewed in the fiscal year in which they are filed. Some of the applications reviewed in FY 2017 were filed in FY 2016; similarly, some of the applications filed in FY 2017 will be reviewed in FY 2018.

Revisions were made to the County Code in 2008 to permit the Chair of the TTFCC to administratively approve minor modification applications. This process permits the applicant to apply for a building permit without having to wait for the next TTFCC meeting, at which the full Committee makes a recommendation on each application. Nearly all of the minor modification applications filed in FY 2017 (193, or 80 percent) were so approved. Of that total, 38 were approved with conditions, including approval of any changes that may be needed to a special exception on the property, modification to a structure prior to making the antenna changes, and approval by WSSC for work on its facilities.

Co-Location Applications

In FY 2017, carriers submitted 45 co-location applications seeking to place their antennas on structures where other carriers already have antennas. As has been the case for the past few years, the carriers have been upgrading their existing antenna arrays and installing antennas at new sites to add capacity to their networks to support LTE technology (i.e., the technology needed to support the high-bandwidth applications used on smartphones and other wireless devices).

While the TTFCC did not receive any applications to install distributed antenna systems (DAS) antennas in FY 16, it received 23 applications in FY17 to attach to existing PEPCO poles and expect more applications to be submitted throughout the year.

New Facility Applications

The TTFCC reviewed three new tower applications in FY 2017. One application was from Verizon Wireless to construct a new monopole at Miracle Temple Church on Auth Road in Suitland, one application was from Milestone Communications to construct a new monopole on school property, and one application was from Crown Castle to address illegal modifications that were made to the existing monopole on Furgang Road in Upper Marlboro. The application from Crown Castle addressed the increased height of the monopole by Cingular that extended the monopole past the allowable height for that zone, beginning the special exception process to address the illegal modification.

4. Administration of the Antenna Siting Review Process

The TTFCC was created in 2000 to “promote the appropriate and efficient location and co-location of telecommunications transmission facilities to minimize adverse impacts on other land uses in the County. The Telecommunications Transmission Facility Coordinating Committee shall, among other things, evaluate the esthetic effects of locating multiple telecommunications transmission facilities in a single location or on a single structure.” [County Code Section 5A.161]

The County Code requires that the TTFCC shall:

- (1) “Review the siting of each proposed telecommunications transmission facility;
- (2) Evaluate the technical rationale of proposed locations;
- (3) Recommend alternative sites and techniques where appropriate to mitigate the visual impact of the proposed and alternative site and provide a copy of the recommendation to the council member in whose district the telecommunications transmission facility is to be located;
- (4) Recommend provisions governing removal of the proposed telecommunications transmission facility at the end of its useful life, including the posting of a bond or other financial guarantee;
- (5) Facilitate public participation in the telecommunications transmission facility siting process; [and]
- (6) Report annually to the County Executive and/or the County Council [or] and as requested on siting policy issues.”

To assist the TTFCC in its review of applications to place wireless telecommunications facilities in the County, a Telecommunications Transmission Facility Coordinator was established to:

- Maintain a database of telecommunications facilities
- Provide information
- Serve as a technical resource to the public and interested carriers and agencies
- Review applications
- Evaluate the technical need for the facility
- Recommend alternative locations where appropriate

Costs for the work of the TTFCC are, in part, funded from TTFCC application fees established in 2008. Those fees are as follows:

\$2,500	TTFCC Application for a new tower, monopole, or support structure
\$1,500	TTFCC Application for a co-location on an existing structure
\$500	TTFCC Application for a minor modification to existing facilities
\$250	Modification or revision to a TTFCC Application
\$500	Annual Master Plan Update

Application fees collected during FY 2017 amounted to approximately \$270,181. The County’s costs for TTFCC activities, excluding indirect County staff time, were \$175,500. These costs were expenditures for outside services provided by the designated Telecommunications Transmission Facility Coordinator, presently Columbia Telecommunications Corporation.

TTFCC Fiscal Year 2017 Annual Report

The current TTFCC members are:

TTFCC Chair

- Michelle Lyons, Administrator of Boards and Commissions,
Prince George's County Department of Permits, Inspections and Enforcement

TTFCC Vice-Chair

- Clarence Moseley, Permits Supervisor, Permits Information and Management Section,
Prince George's County Department of Permits, Inspections and Enforcement

TTFCC Members

- Lakisha Pingshaw, Broadband Manager,
Prince George's County Office of Information Technology
- James Stepowany, Acting Planning Coordinator, Permit Review Section,
Maryland National Capital Parks and Planning Commission
- Collette Gresham, Committee Director
Prince George's County Council
- Vincent Curl, Facility Supervisor, Maintenance Department,
Prince George's County Public Schools
- Mary Rea, Planner III, Site/Road Permit Section,
Prince George's County Department of Permits, Inspections and Enforcement

Additional support to the TTFCC is provided by:

- Jared McCarthy, Associate County Attorney,
Prince George's County Office of Law
- TTFCC Facility Coordinator
Columbia Telecommunications Corporation

Interested parties may find all general public information about the TTFCC at the Committee's website (<http://www.princegeorgescountymd.gov/693/Telecommunications-Transmission-Facility>). Included on the website, once the material is approved by the County Council, is a Master Plan map illustrating all of the carriers' proposed locations for new antennas based on the information the carriers provide the County with each annual update of their future planned antenna sites.

In addition, the County requires that a carrier seeking to construct a new tower or monopole in the County send a public notice to property owners and community organizations within a mile of the location proposed for the structure. The carriers are also obligated to notify the TTFCC Chair of any meetings that are subsequently held in response to those notices.

TTFCC meetings are generally held on the third Wednesday of each month. All meetings are open to the public. However, in the event that all the applications in a given month have been administratively approved, no meeting is held. There were three such months in FY 2017.

5. Future Expectations

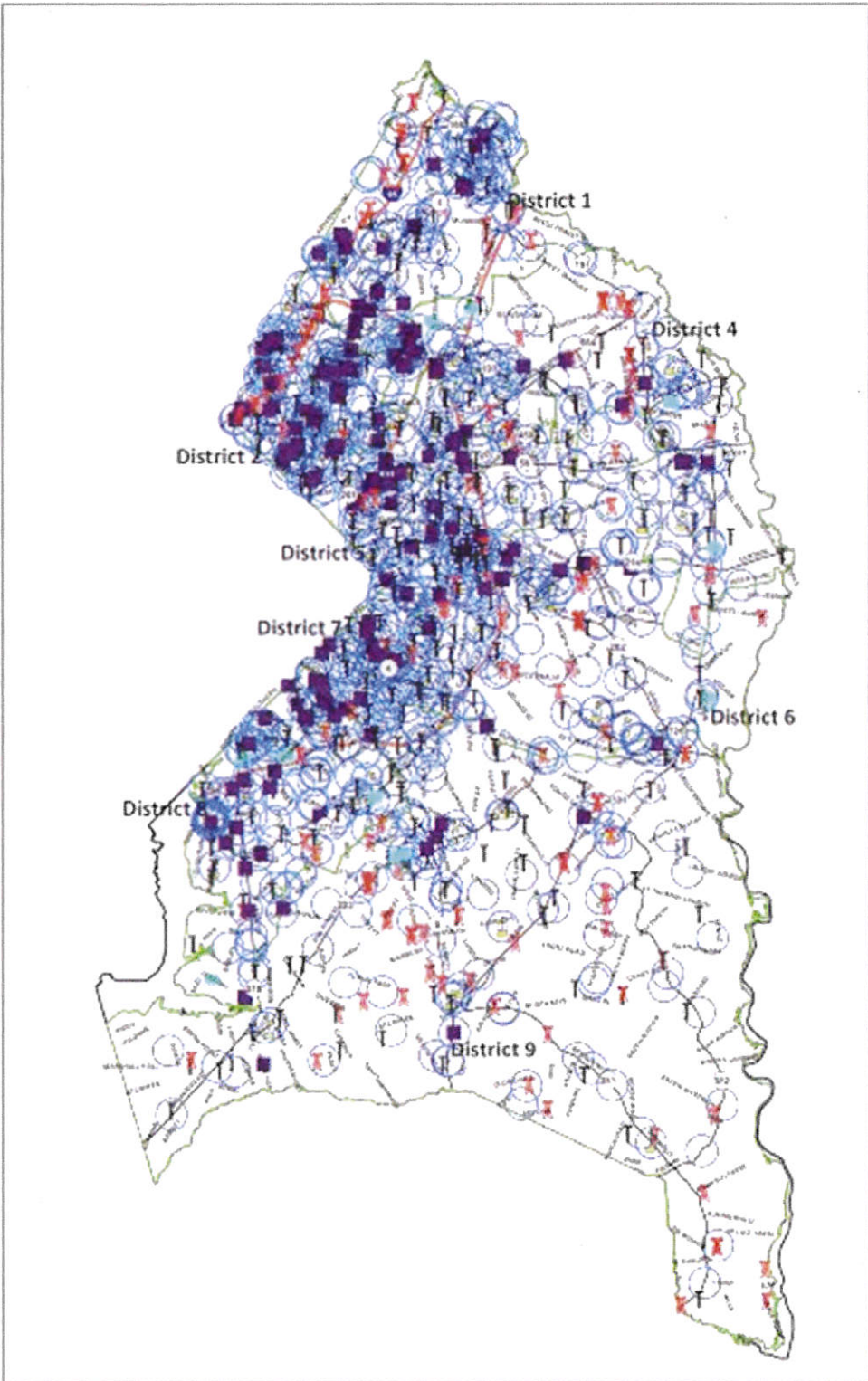
The maps below illustrate the location and number of future antenna sites planned by the carriers based on their annual plan updates filed with the County in August 2017 and the one preceding year. Cumulatively, there are a total of 822 future sites listed by all carriers for FY 2017 and beyond. As the maps illustrate, the TTFCC expects a significant increase in the number of applications it receives in FY 18.

With a continual growing population, ² Prince George's County is expected to see an increase in a variety of carrier applications:

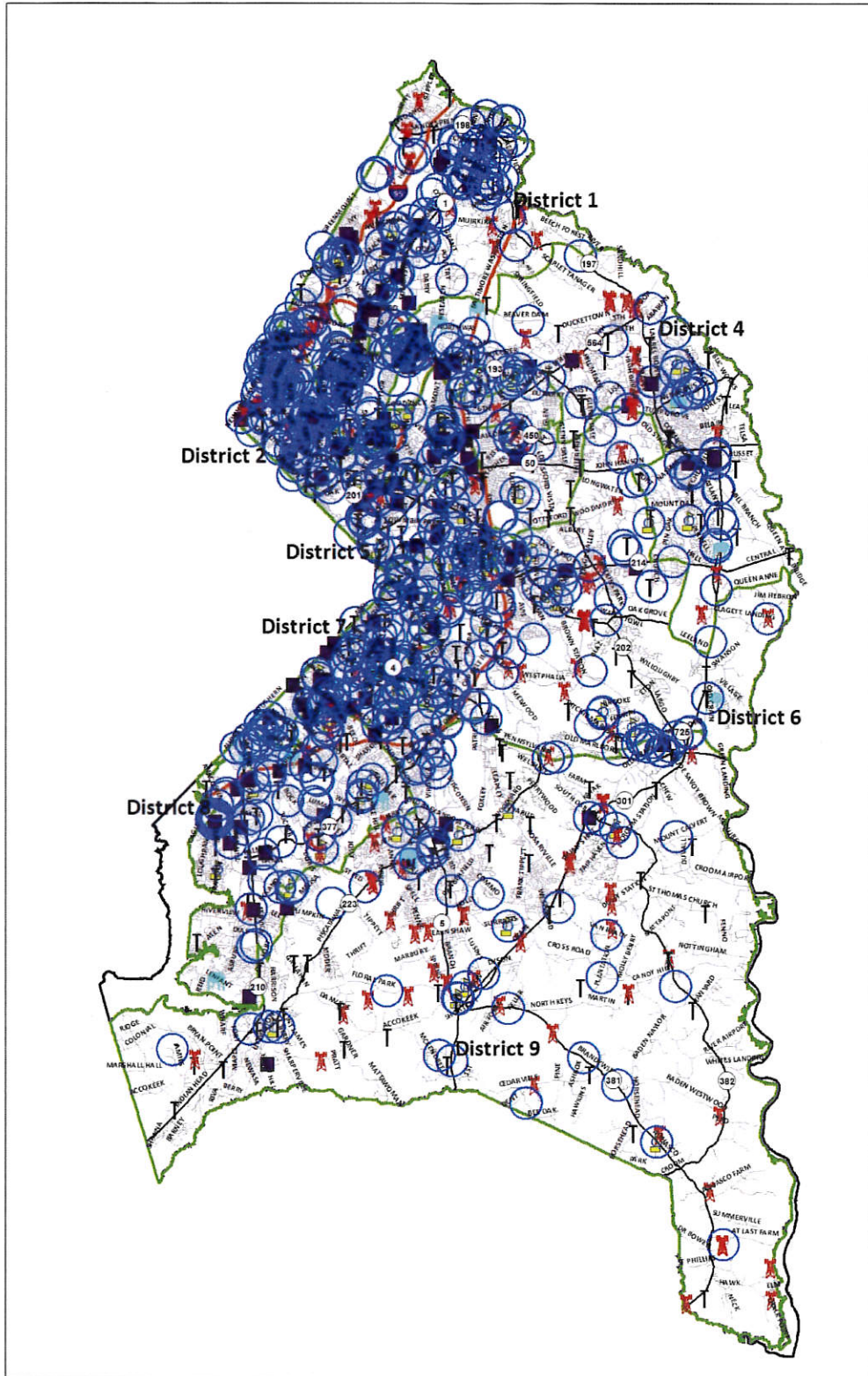
- Modifications and additions
 - Age, obsolescence, and development of new types of antennas lead carriers to modify their equipment on existing sites
- Machine-to-machine communications
 - Some carriers adopt or specialize in services designed for specific clients that facilitate machine-to-machine communications
- DAS/small cell
 - The ongoing goal to increase capacity is expected to lead carriers to seek low-level sites in a variety of areas
- New and/or replacement towers
 - As carriers adapt to emerging technologies and strategies, it is expected that some older structures will be replaced and new locations sought
- Existing structures
 - New co-locations on existing buildings will continue to be encouraged as a reasonable strategy to meet carriers' coverage and capacity needs

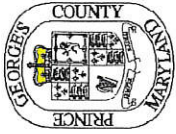
² State of Maryland Population Growth 9/14/17 <http://msa.maryland.gov/msa/mdmanual/01glance/html/pop.html>

2016-2017 Master Plan



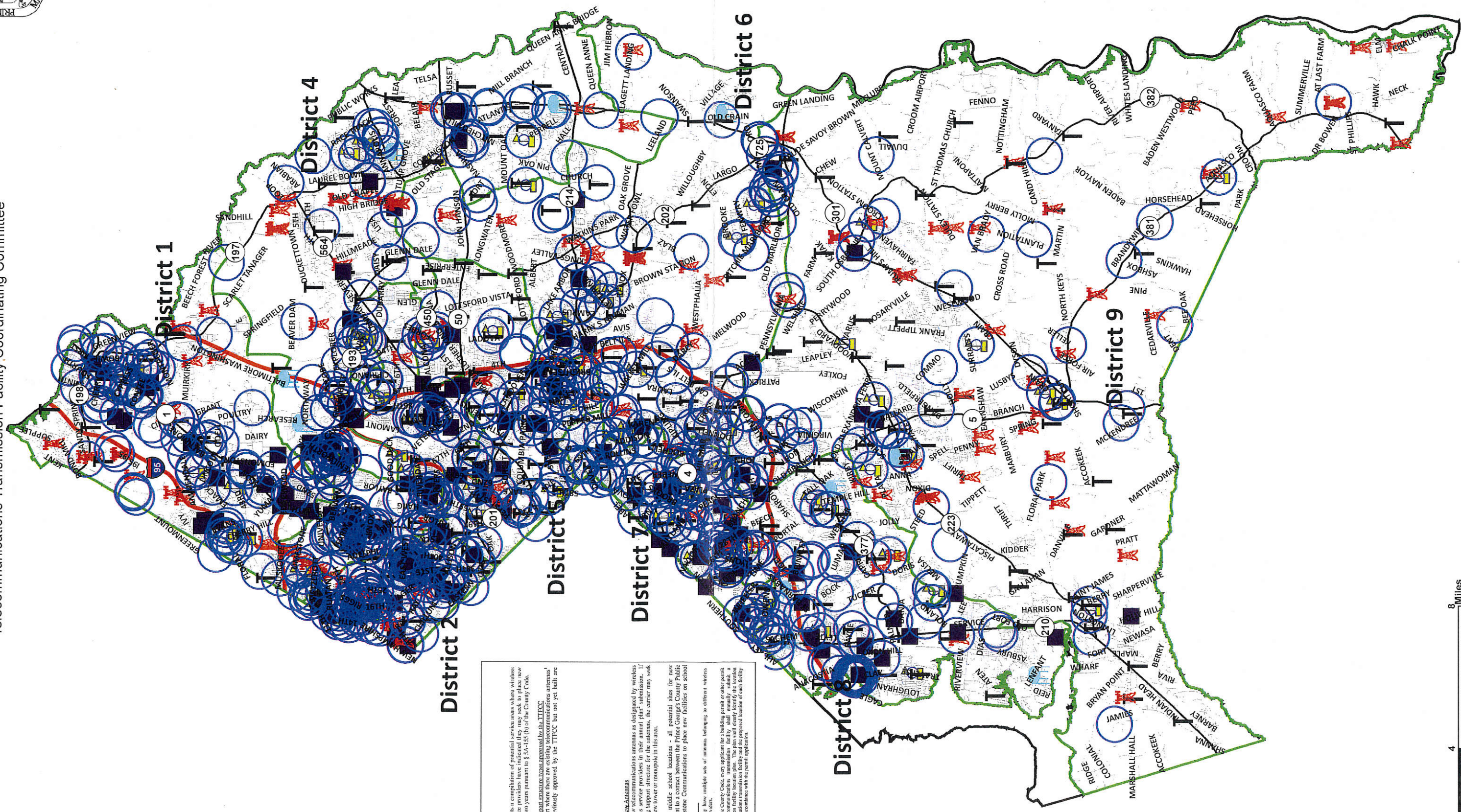
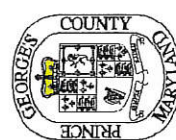
2017-2018 Master Plan





Telecommunications Transmission Facilities Master Plan 2017-2018

Telecommunications Transmission Facility Coordinating Committee



Legend

This Master Plan represents a compilation of potential service areas where wireless telecommunications service providers have indicated they may seek to place new antennas within the next two years pursuant to § 5A-153 (b) of the County Code.

Existing locations and support structures types approved by the TTECC

Locations and type support where there are existing telecommunications antennas¹ or proposed antennas previously approved by the TTECC but not yet built are shown below:

- Water Tower
- Building
- Monopole
- Tower

Target Service Area for New Antennas

- Target area for new telecommunications antennas as designated by wireless telecommunications service providers in their annual plan² submission. If there is no existing support structure for the antennas, the carrier may seek construction of a new tower or monopole in this area.

School Locations

- High school and middle school locations - all potential sites for new telecommunications service providers to submit to the Prince George's County Public Schools and Wilkesboro Communications to place new facilities on school property.

¹Some existing structures may have multiple sets of antennas, belonging to different wireless telecommunications service providers.

²Pursuant to § 5A-153 (b) of the County Code, every applicant for a building permit or other permit for the erection of a telecommunications transmission facility shall normally submit, a copy of the annual plan submission to the TTECC. The annual plan submission is a compilation of every existing telecommunications transmission facility and the proposed location of each facility in the environment or located in accordance with the permit application.

