TELECOMMUNICATIONS TRANSMISSION FACILITY COORDINATING COMMITTEE

2018 ANNUAL REPORT

PRINCE GEORGE'S COUNTY
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COUNTY EXECUTIVE

Cover Photo

Small Cell Technology in the Public Right-of-Way

The cover photo shows an existing Crown Castle "small cell" site in Ocean City, Md., approximately 100 miles from Prince George's County. The photos below show additional small cell sites in Roanoke, Virginia (left) and Morgan County, Alabama (right). All three demonstrate how small cell technology is frequently deployed in more visible and publicly assessible sites than traditional tower and monopole sites.

A significant portion of future wireless siting in Prince George's County is expected to comprise small cells and Distributed Antenna Systems (DAS), which improve wireless providers' network capacity by increasing the density of antennas in high-traffic areas.

While there have been successful small cell colocations within Prince George's County on existing privately owned structures, including commercial buildings, the projected increase in applications is for colocations on structures located in what is commonly understood as the public right-of-way (ROW). Any installations on these structures must abide by the County's permitting process and not conflict with any existing franchise, license, or contracting agreements related to the ROW.

Prince George's County has experience reviewing applications and issuing permits for siting in the ROW, including by entities such as cable and telephone companies, traditional utilities, and governmental users (e.g., traffic lights, traffic signs, fire hydrants, sidewalks, and trails). Evaluating small cell and DAS applications will require extensive engineering review and ongoing analysis of relevant FCC regulations and state legislation. (Nationwide, the anticipated increase of applications to deploy small cells in ROWs has made the enactment of effective siting policies a priority for many local governments in addition to Prince George's County.)

While the TTFCC received 23 applications to install DAS antennas on existing Pepco poles in FY 2017, the Committee only received two applications to install DAS antennas on existing Pepco poles in FY 2018. The County currently is not accepting DAS/small cell applications for structures in the ROW such as utility poles. The process for small cell applications in the ROW is being formalized and should be available in the near future.

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1. Executive Summary

In FY 2018 the Telecommunications Transmission Facility Coordinating Committee (TTFCC) received and reviewed 289 applications (an increase from the 241 applications reviewed in FY17). The majority of the applications reviewed 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 289 applications reviewed, only two were for new monopoles. These are described in Section 3 (New Facility Applications).

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 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	Building	Monopole	Tower	Utility Pole	Water Tower	Total
1	18	22	26			66
2	28	8	8		1	45
3	27	19	3			49
4	20	26	18		3	67
5	21	46	10		2	79
6	9	24	19		1	53
7	20	11	5	1		37
8	19	19	13		4	55
9	13	44	37		1	95
Total	175	219	139	1	12	546

The TTFCC collected approximately $295,500 in application fees during FY 2018. The County's costs for TTFCC activities, excluding indirect County staff time, were $332,027. These costs were expenditures for outside services provided at the County's request by the designated Telecommunications Transmission Facility Coordinator, which presently is Columbia Telecommunications Corporation.

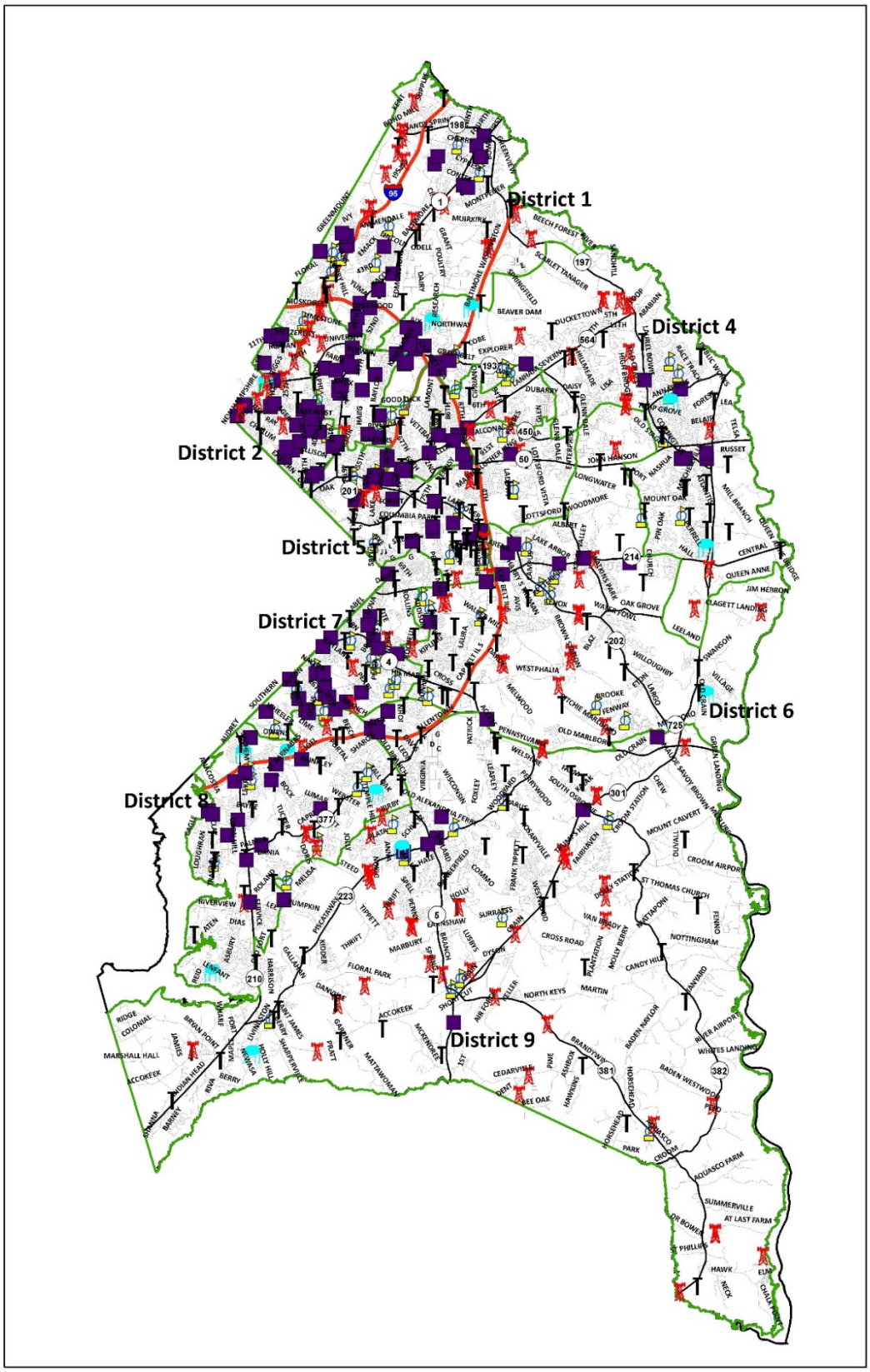
2. Background

Since the TTFCC's inception in 2000, the Committee has processed 3,092 applications, enabling carriers to place antennas at 546 locations in the County. (Most locations support multiple antennas.) Generally, antennas are mounted on four types of structures in the County—monopoles (shown in black on the map below), buildings (purple), lattice towers (red), and water towers (turquoise). The following table shows the number of each type of antenna siting:

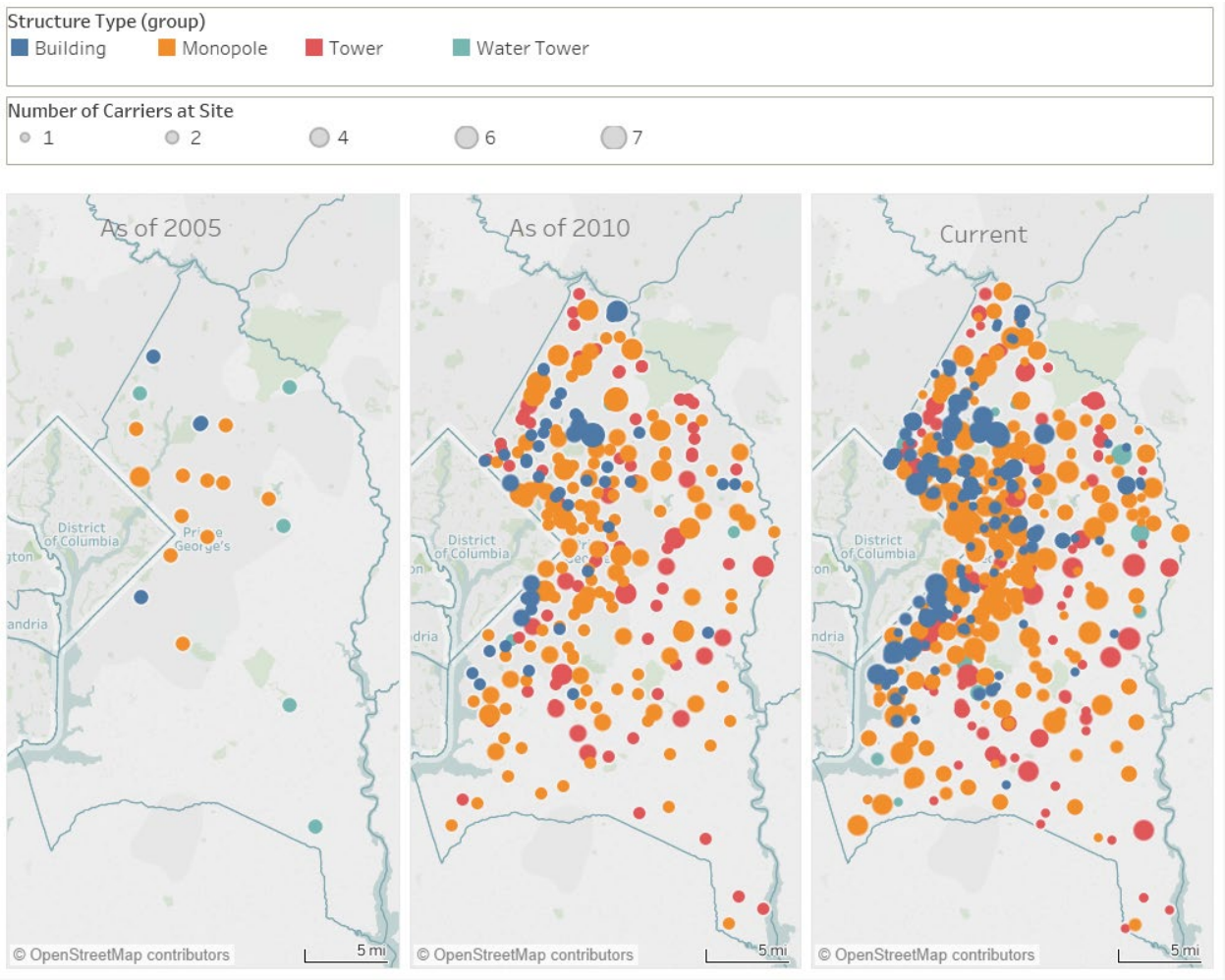
Type	**Number**
Monopole	219
Building	175
Tower	139
Water Tower	12
Utility Pole	1
Total	**546**

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

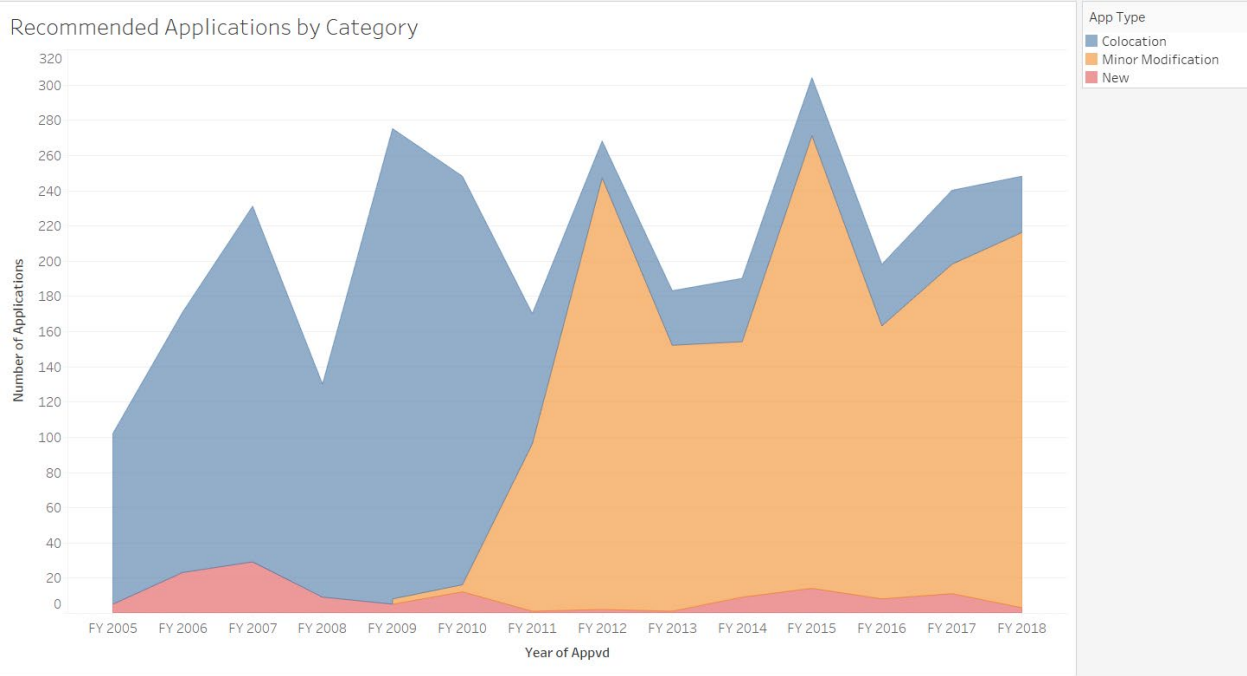
Figure 1: Map of Antenna Sites by Type of Support Structure



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 colocation or by building new towers). Consequently, for the past few years, the majority of TTFCC applications have been for minor modifications to existing sites. The table below shows the TTFCC's recommendations by application type (i.e., new site, colocation, or minor modification) for FY 2018 and the prior 12 years.

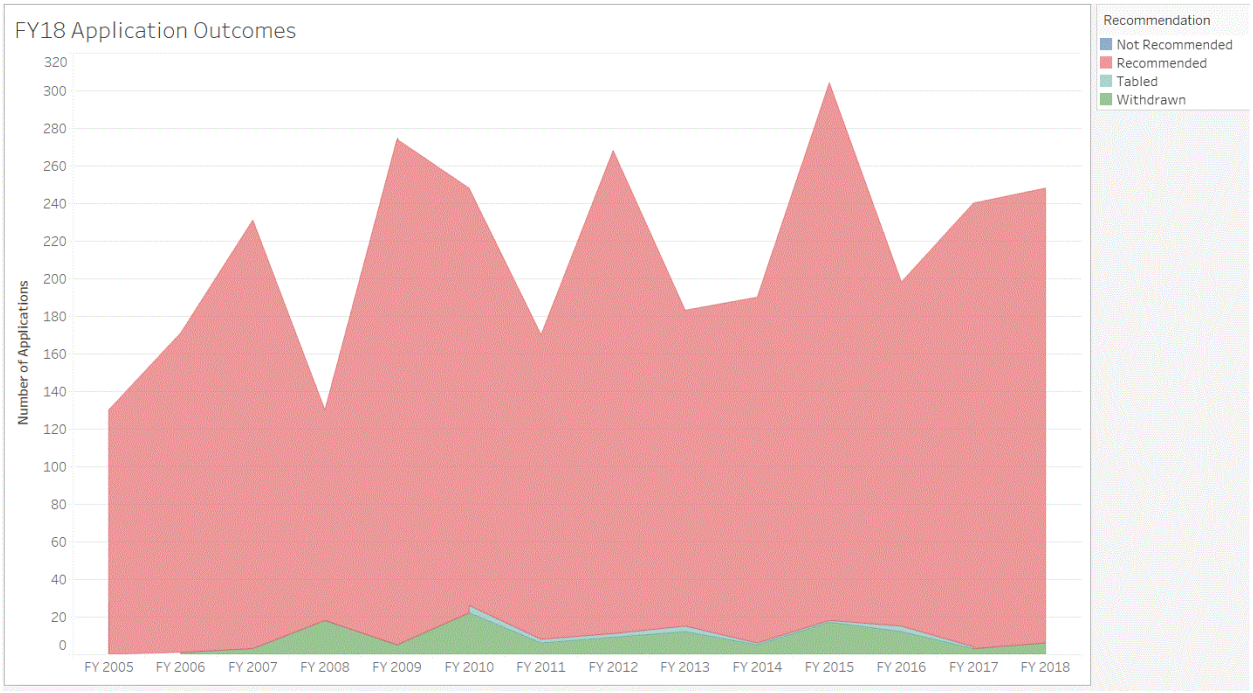


While successful siting is a goal shared by Prince George's County and the providers, there will always be the possibility that, following installation, the County may require the removal or relocation of small cell facilities within the ROW due to conflicts with ongoing County ROW improvement projects, the abandonment of the permitted facilities by the owner, or a support structure owner other than the County revoking permission for an attachment.

3. FY 2018 TTFCC Activities

In FY 2018, carriers filed 289 applications for TTFCC review. The TTFCC's review included those applications as well as any carried over from FY 2017.[1]

The chart below illustrates the applications that received a disposition following submission to the TTFCC in FY 2018 and the prior 12 years. This includes those recommended by the TTFCC, not recommended by the TTFCC, subsequently withdrawn by the applicant, or tabled due to administrative issues. Circumstances leading to a withdrawal may include the applicant filing in the wrong jurisdiction, submitting the wrong type of application for the proposed scope of work or not responding to Requests for Information.



Minor Modification Applications

Of the 289 applications reviewed by the TTFCC in FY 2018, the vast majority—229—were to modify an existing antenna array. These included applications to replace existing antennas, add new antennas to an existing array, add additional transmitting equipment, and add electrical generators.

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

[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 2018 were filed in FY 2017; similarly, some of the applications filed in FY 2018 will be reviewed in FY 2019.

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.

Colocation Applications

In FY 2018, the TTFCC reviewed 58 colocation applications seeking to place antennas on structures where other carriers already have antennas. Like minor modification applications (which are to upgrade a carrier's existing antenna arrays), these colocation applications (which are requests to install antennas at sites where another carrier has antennas, but the applicant does not) represent the carriers' ongoing focus on adding 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).

New Facility Applications

The TTFCC reviewed two applications in FY 2018 to construct new monopoles.

Crown Castle applied to construct a 100-foot monopole in the area of Route 50 and Church Road adjacent to Freeway Airport; the monopole would replace the incumbent structure at 3513 Church Road, which was being demolished due to residential home construction.

The second application, filed on behalf of Verizon, was also for a replacement monopole. The proposed 95-foot monopole at 7781 Landover Rd. would replace a monopole that had been used solely for Verizon Wireless internal communications. The new structure would be available for commercial use and colocation.

4. Administration of the Wireless Facility 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 funded in part by 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 colocation 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

The TTFCC collected approximately $295,500 in application fees during FY 2018. The County's costs for TTFCC activities, excluding indirect County staff time, were $332,027. These costs were expenditures for outside services provided at the County's request by the designated Telecommunications Transmission Facility Coordinator (Columbia Telecommunications Corporation). These services included an engineering review of each submission for compliance

with County and FCC regulations. Many applications required multiple submissions due to errors by the applicants. While an application for a new site requires a site survey by the Coordinator, it is policy for all existing sites to be visited and photographed once per year. To track the progress of each of the hundreds of submissions and the status of the site surveys, Columbia Telecommunications developed and populated a database that captures updates regarding sites and applications in real time.

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
- Columbia Telecommunications Corporation, TTFCC Facility Coordinator

The Committee's website (http://www.princegeorgescountymd.gov/693/Telecommunications-Transmission-Facility) features public information about the TTFCC, including (once the material is approved by the County Council) a Master Plan map illustrating carriers' proposed locations for new antennas based on the annual information the carriers provide the County.

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 applications in a given month have been administratively approved, no meeting is held. There were three such months in FY 2018.

5. Future Expectations

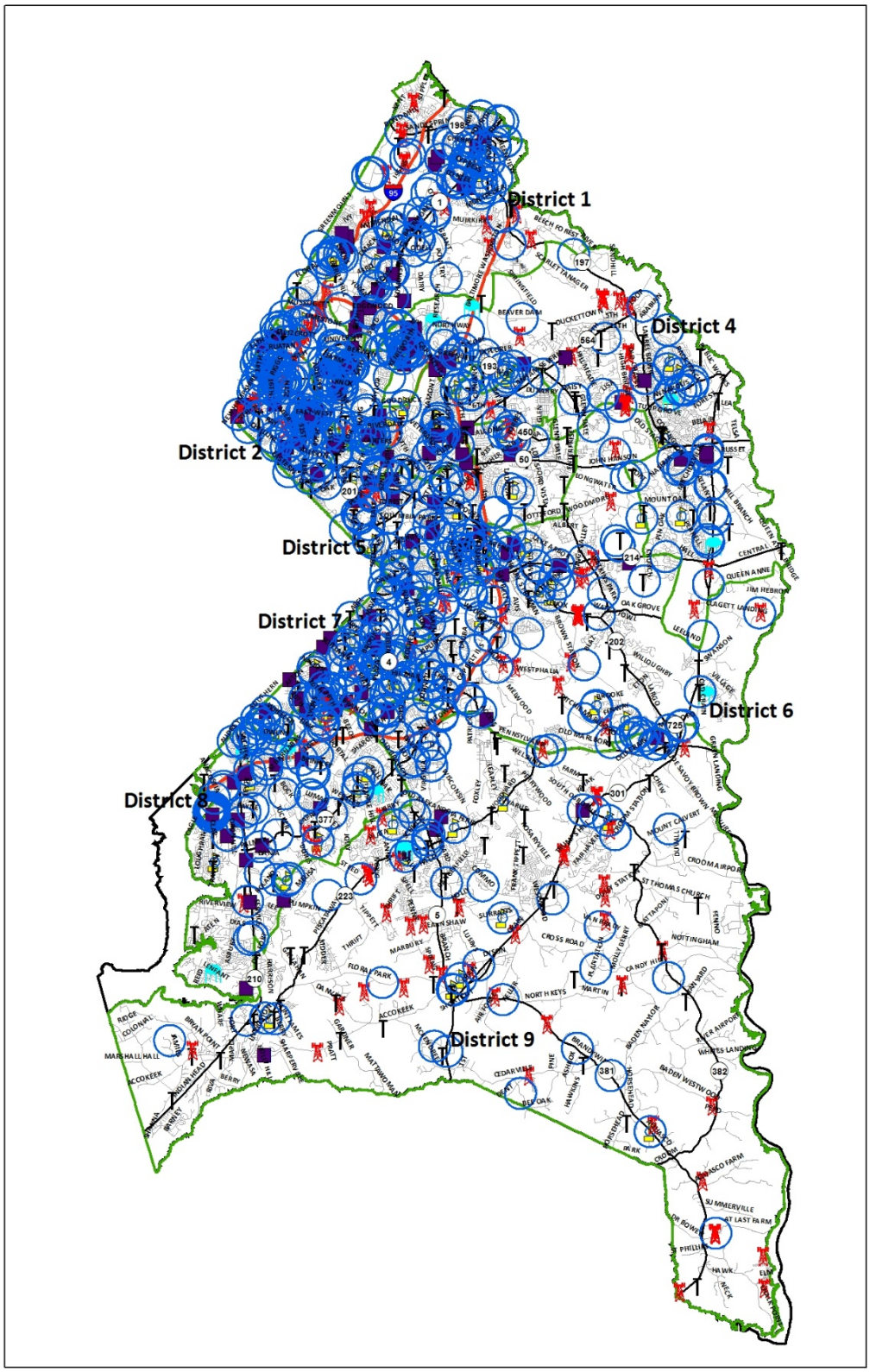
The maps below illustrate the location and number of future antenna sites planned by the carriers based on the annual plan updates they filed with the County in August 2018 and the preceding year. Cumulatively, there are a total of 589 future sites listed by all carriers for FY 2018 and beyond. As the maps illustrate, the TTFCC expects a significant increase in the number of applications it receives in FY 2019.

Given the County's growing population[2] and a range of industry trends (including increased capacity demand for machine-to-machine communications), Prince George's County will likely see an increase in all types of carrier applications:

- Modifications and additions
    - Age, obseolscence, and development of new types of antennas lead carriers to modify their equipment on existing sites
    - The ongoing goal to incease capacity is expected to lead carriers to seek relatively low-height mounting sites for DAS/small cell antennas in a variety of areas
- New and/or replacment towers and monopoles
    - As carriers adapt to emerging technologies and strateigies, it is expected that some older structures will be replaced and new locations sought
- Existing structures
    - New colocations 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 Rates, http://msa.maryland.gov/msa/mdmanual/01glance/html/pop.html (accessed September 2018).

2017-2018 Master Plan



2018-2019 Master Plan