TELECOMMUNICATIONS TRANSMISSION FACILITY COORDINATING COMMITTEE

2024 TTFCC ANNUAL REPORT

PRINCE GEORGE'S COUNTY, MARYLAND

Angela D. Alsobrooks
County Executive
"Prince George's Proud"

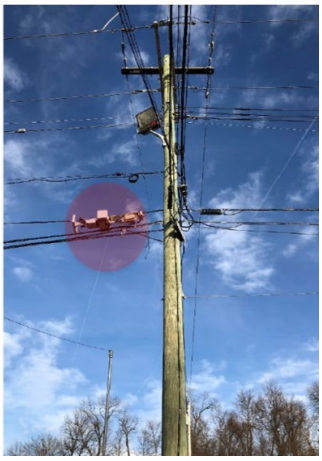
Cover Photo: Verizon Small Wireless Facility on a Light Pole

(Photo shows one of six Small Wireless Facility deployments by Verizon in the area of the Washington Commanders' football stadium. Siting the majority of these sites was subject to conditions of a Public Utility Easement in place since the stadium was constructed. The applications were received and reviewed in 2022 and final permitting was completed in 2023.)

The Prince George's County Telecommunications Transmission Facility Coordinating Committee (TTFCC) received 180 total applications in calendar year 2023 (CY23)—a decrease of 62 percent from CY22.

While the total applications decreased, the number of applications for Small Wireless Facilities (SWF)—commonly referred to as small cells—increased in CY23, with Prince George's County receiving 88 applications for SWF proposals in the public right-of-way compared to 50 in 2022. All were on behalf of T-Mobile.

86 of the SWF colocation applications in the public right-of-way were for strand-mounted antennas on Pepco utility poles, which involve colocating equipment without replacing the existing structure. Strand refers to the communications cables hung from utility poles; as the name implies, strand-mounted SWFs are attached to the cable, typically close to the pole. To the casual observer, the strand-mounted antenna may look similar to other infrastructure mounted on cables, including cable companies' fiber splice boxes and amplifiers. Two examples are shown in the photos below:



From the carriers' perspective, strand-mounted SWFs allow the reuse of existing infrastructure. In addition, because the new attachments hang horizontally in the active communications space along existing aerial strands or on a newly added cable strand, the attachments are colocated among devices already located within that space (such as cable and fiber splice cases). Most of these devices have built-in or integrated antennas; some include small external antennas.

The remaining two applications in the public right-of-way were for top-mounted small cell antennas on Pepco utility poles. In contrast to the strand-mounted deployments, the hosting poles were replaced by Pepco at a slightly higher elevation to accommodate the attachments and equipment cabinets.

Four new macro site applications for monopoles and towers were received in CY23, compared to two in 2022.

In addition to reviewing a proposal's structural and radio frequency information, zoning considerations are paramount. For example, if an applicant's proposal will impact the size of an equipment compound or other ground-related area and the site is subject to a Detailed Site Plan (DSP), the applicant must file an amendment to the DSP with the Maryland-National Capital Park and Planning Commission (M-NCPPC). This is a parallel and separate process from the TTFCC review and the TTFC will advise the applicant if they are not aware.

A significant zoning development impacting macro site applications has been the updated Prince George's County Code of Ordinance that went into effect on April 1, 2022, which requires a special exception for all new towers and monopoles. Special exceptions are determined by the County Council through a public hearing process.

The M-NCPPC representative on the committee is notified of all new macro structure applications upon receipt and is consulted on the appropriate requirements during the review process.

Both the M-NCPPC and Prince George's County Public Schools representatives are consulted on any applications that may impact property owned and controlled by their respective agencies.

The TTFCC's review of all applications—whether for significant new macro sites or any type of SWF—continues to follow existing guidelines, including the Prince George's County Design Manual for Small Wireless Facilities, and all applicable health, safety, and welfare sections of the Prince George's County Code and federal or state regulations and law. This includes Federal Communications Commission (FCC) rules and regulations regarding occupational and public limits for human exposure to radio frequency electromagnetic fields.

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1. Executive Summary

Applications Received in Calendar Year 2023

The TTFCC received 180 applications in calendar year 2023 (CY23), representing a 62 percent decrease from the 475 applications received in CY22.

Minor modification applications, in which a carrier upgrades, replaces, or removes equipment at existing sites, accounted for 79 applications—a decrease of 78 percent for that category from the previous year.

The large decrease can be attributed to what carriers attempt to accomplish when upgrading antennas, such as aligning deployment to frequencies that have been acquired from FCC auctions or taking advantage of technical improvements in the antennas.

Currently, the carriers are in a holding pattern as the FCC's spectrum auction authority has been suspended since March 9, 2023. For the first time since the auction authority was granted to the FCC in 1994, the U.S. Congress has allowed the FCC's authority to lapse, and the FCC lacks the ability to auction spectrum bands and issue wireless licenses. The FCC also declined to issue special temporary authority to individual carriers for specific frequencies already purchased. This has had a large impact on wireless sitings in the County and on a national level.

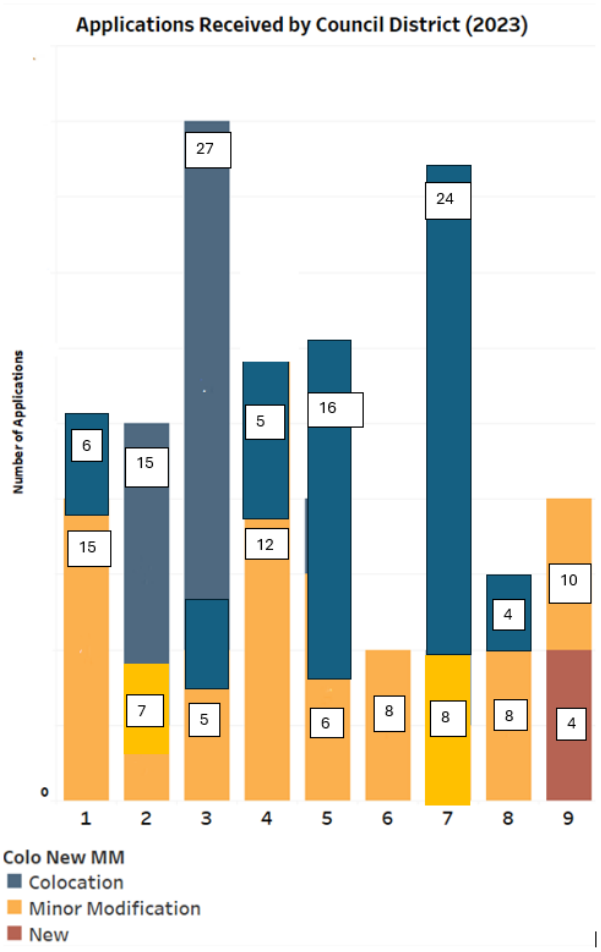
97 applications were for colocations on an existing structure. While 88 of these colocations represented SWF applications, the remaining applications were by carriers seeking to locate on existing macro sites.

Table 1: Applications Received by Type (2023)

Type	Number of Applications
Minor Modification	79
Colocation	97
New	4
Total	**180**

The chart in Figure 1 below shows the application types received in CY23 per Council District.

Figure 1: Applications Received by Council District (2023)



The TTFCC collected approximately $301,000 in application, resubmittal, and annual report fees from carriers during CY23. The County's costs for TTFCC activities, excluding indirect County staff time, were $409,499. These costs were expenditures for outside services provided at the County's request by the designated Telecommunications Transmission Facility Technical Consultant, which presently is CTC Technology & Energy (CTC).

Distribution of Wireless Sites Across the County

The level of application activity reflects wireless carriers' continued efforts to upgrade their networks for service. The table below shows the current number of wireless sites in the County (by type of support structure and Council District).

Table 2: Current Wireless Sites by Support Structure and Council District

Council District	Building	Light Pole	Monopole	Tower	Utility Pole	Water Tower	Total
1	19	3	23	26	23		94
2	30		9	14	106	1	160
3	28		17	4	48		97
4	20		33	21	1	3	78
5	23	13	45	12	30	2	125
6	9	3	24	18	3		57
7	23		16	7	5		51
8	21	7	21	12		5	66
9	10		50	48		3	111
Total	183	26	238	162	216	14	839

Carriers' Plans for Future Wireless Sites

The Annual Plan updates that carriers filed with the County in August 2023 indicate a potential for a significant number of incoming applications as 957 potential future sites were identified—104 macro sites and 853 SWFs (see Table 3). The carriers are not obligated to apply for all these sites, but applications cannot be accepted unless they are noted in the plans. Regarding macro sites, the carriers identified potential new builds as well as existing sites with the potential for colocation.

Table 3: Annual Plan Projections by Carrier

Carrier	Macro Sites	SWF
AT&T	24	13
Crown Castle	0	531
Dish Wireless	45	0
T-Mobile	7	0
Verizon	28	309
Total	104	853

Based on 2023 and prior years, the majority of potential sites noted in Crown Castle's plan are expected to be for SWFs on behalf of T-Mobile.

While Dish Wireless has indicated that it is seeking to expand its coverage and capacity in the National Capital Area, it has not yet proposed constructing new sites; Dish's plan only included colocating at existing sites.

2. Background and Current State

Since the TTFCC's inception in 2000, the Committee has received 5,242 applications and processed 4,948 applications. The graph on the following page (Figure 2) shows the application types (i.e., new site, colocation, or minor modification) processed between 2008 and 2023.

Antennas are currently permitted to be mounted at 839 locations in the County, distributed among six types of structures—monopoles, buildings, lattice towers, water towers, and light or utility poles (Table 4). Most macro locations support multiple antennas.

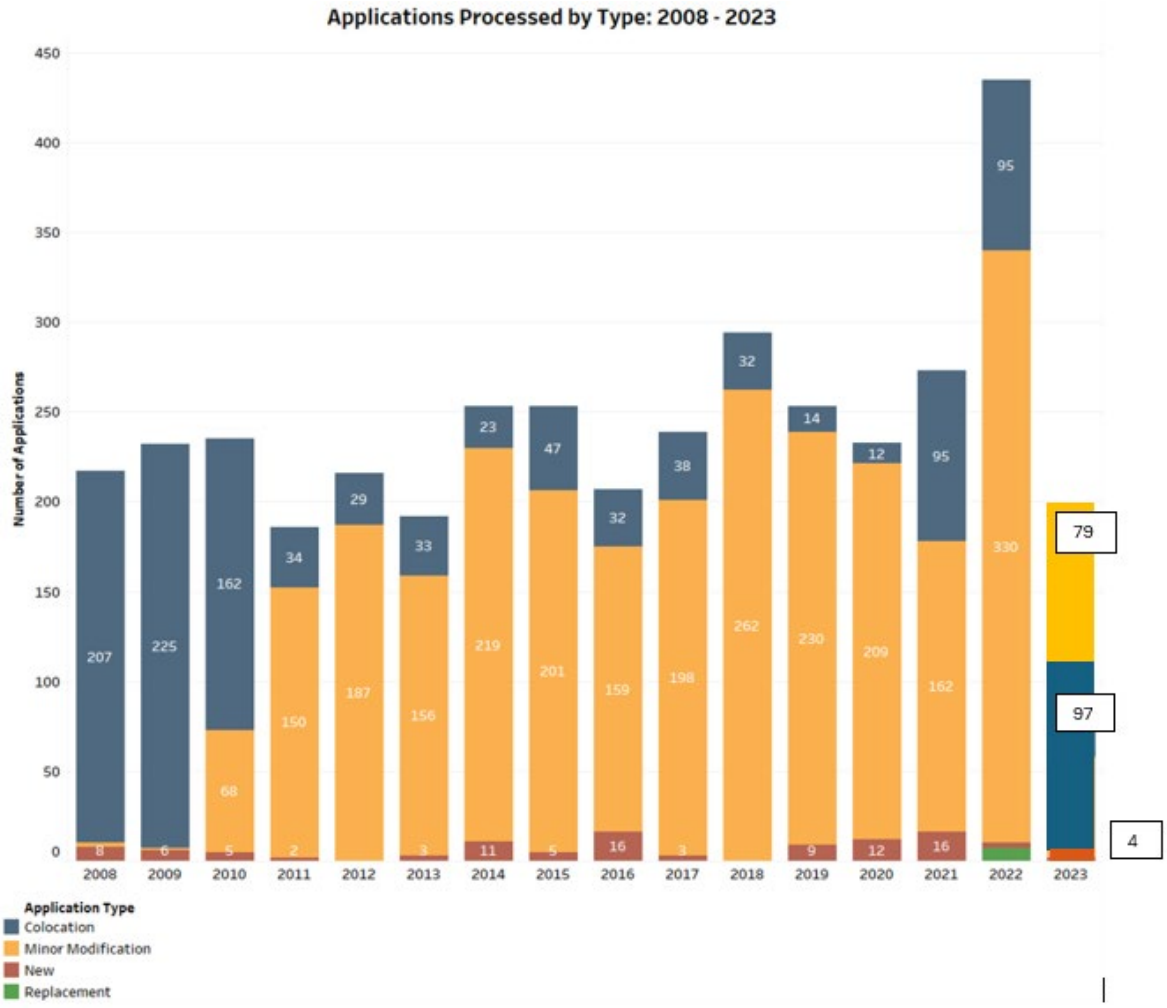
Sitings on utility poles in the public right-of-way saw the greatest increase from CY22 to CY23 as a result of the increase in SWF applications.

The number of tower sites decreased due to the decommissioning of Sprint sites at Pepco transmission towers where it was the only carrier. T-Mobile, which acquired Sprint, has declined to replace equipment at those sites as it reports its network coverage in the respective areas was already optimal. Overall, however, the total number of wireless sites in the County increased due to the increased number of SWFs on utility poles in the public right-of-way.

Table 4: Wireless Sites by Type of Support Structure (2022 – 2023)

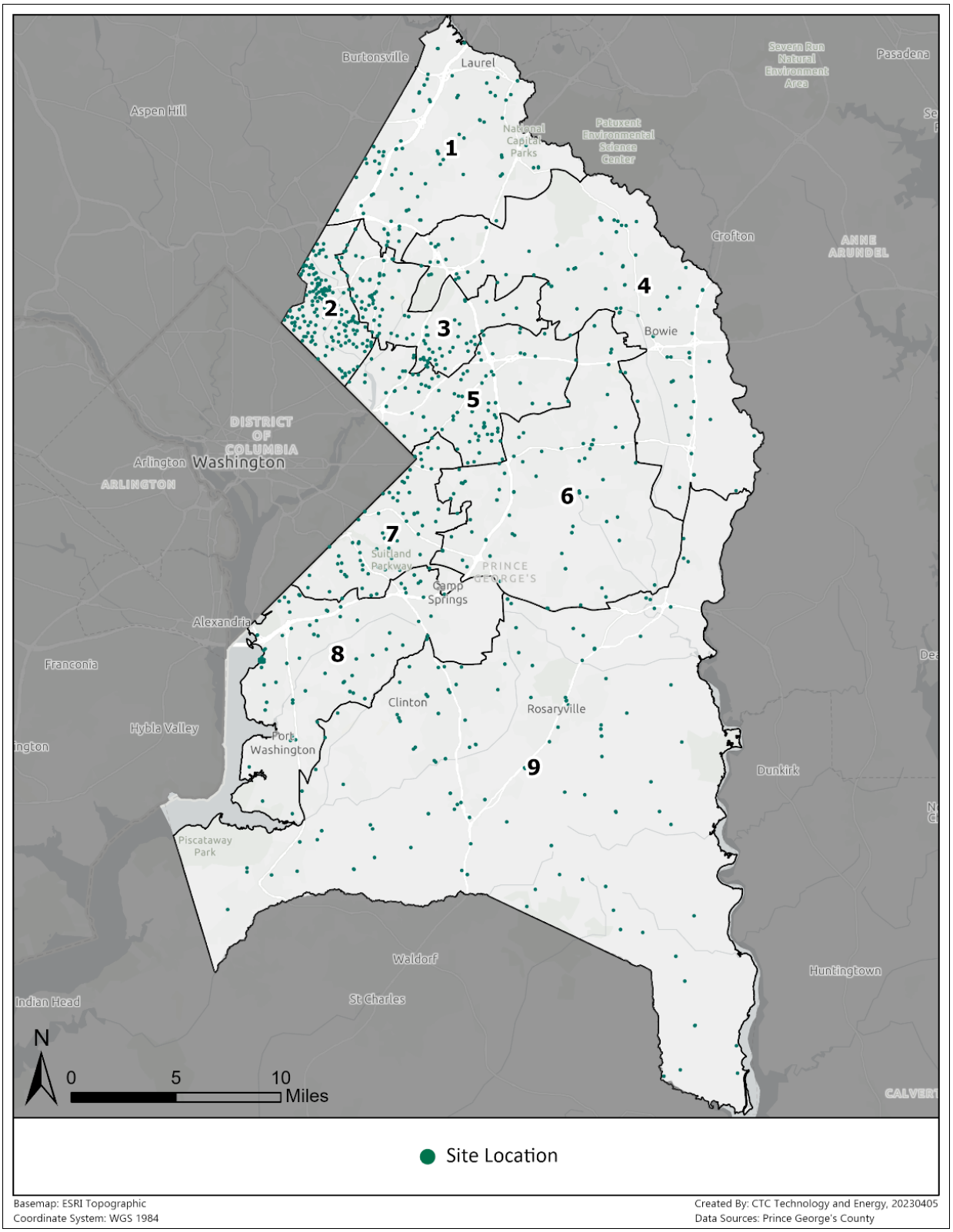
Type	Total	
	2022	2023
Monopole	236	238
Tower	182	162
Building	183	183
Water Tower	14	14
Light Pole	26	26
Utility Pole	119	216
Total	760	839

Figure 2: Applications Processed by Type (2008 - 2023)



The map in Figure 3, below, illustrates the locations of wireless sites in the County by Council District.

Figure 3: Map of Wireless Sites by Council District



Over time, the number of structures supporting multiple carriers' wireless facilities has grown. The maps below show the number of locations as well as the number of colocating carriers in 2005, 2010, and 2023.

Figure 4: Structures Supporting Multiple Antennas (2005)

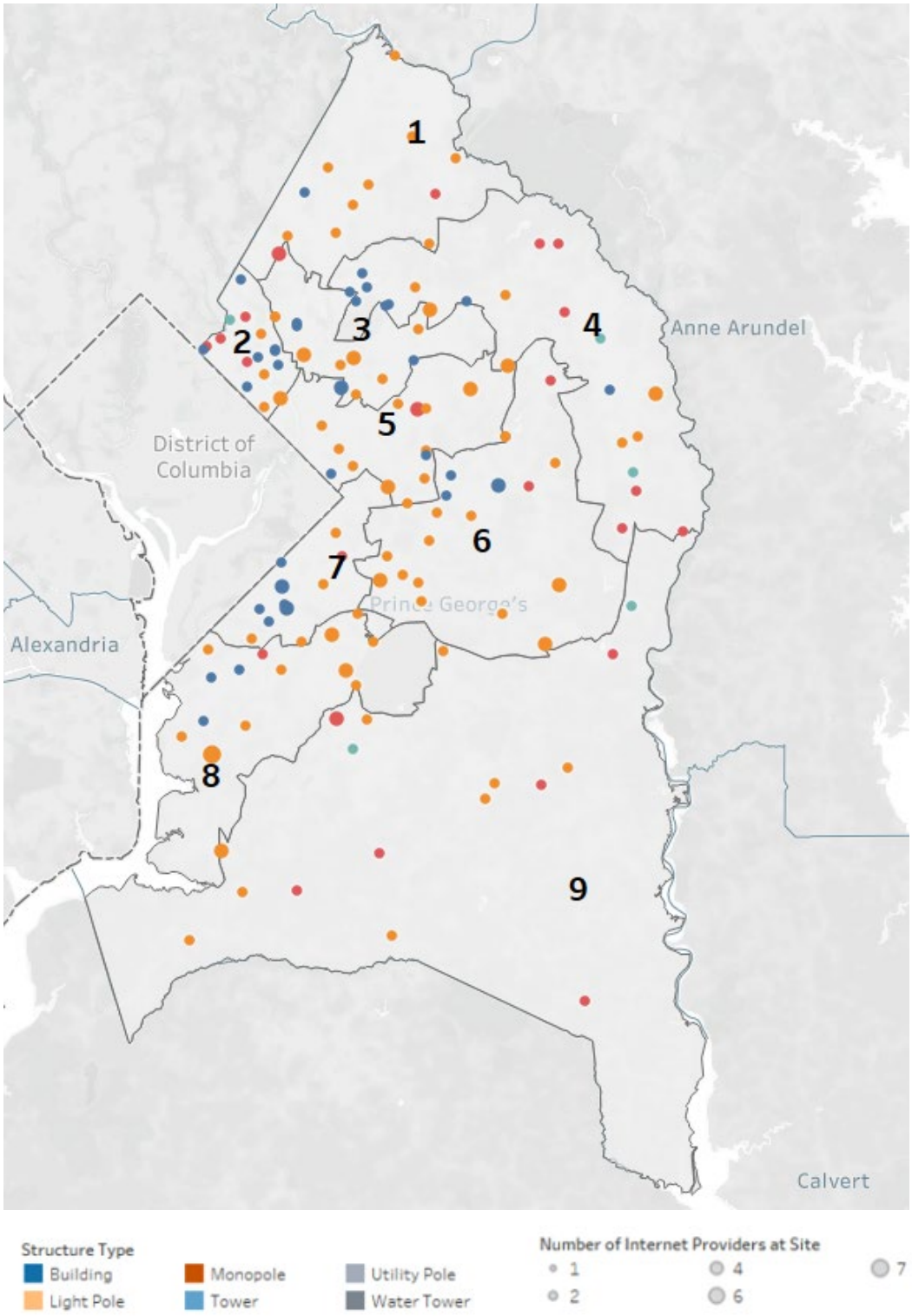


Figure 5: Structures Supporting Multiple Antennas (2010)

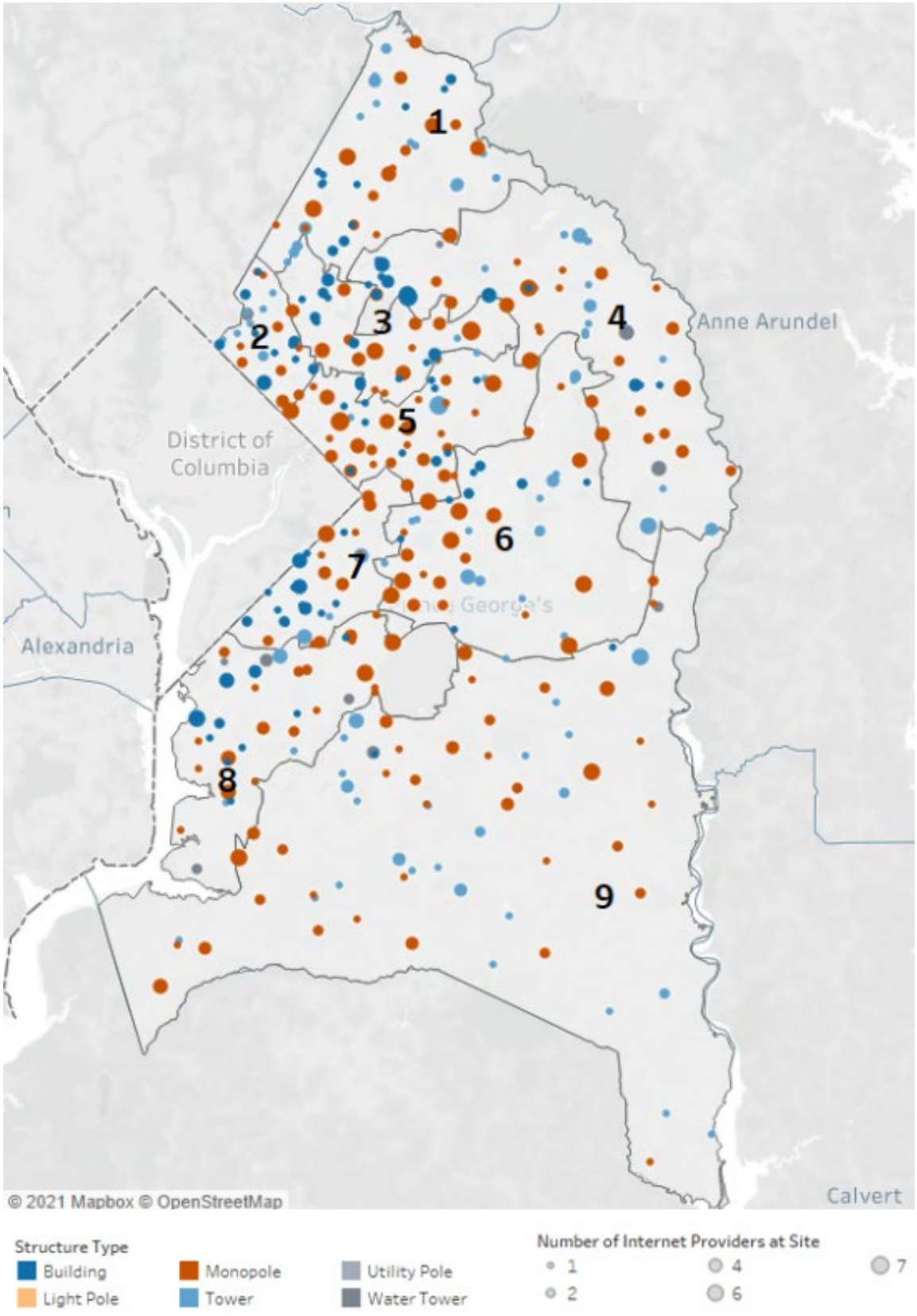
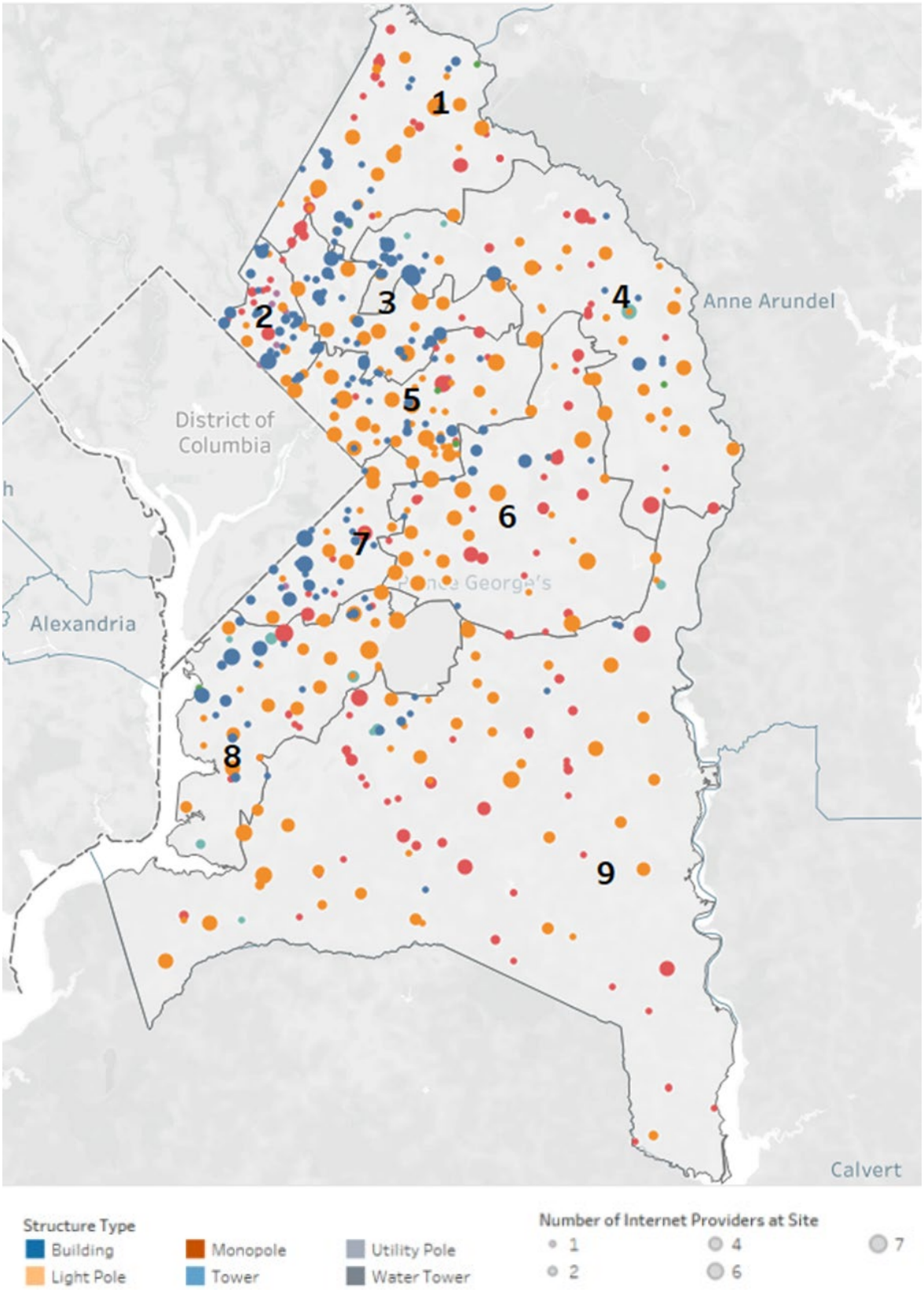


Figure 6: Structures Supporting Multiple Antennas (2023)



3. Calendar Year 2023 TTFCC Activities

In CY23, carriers and infrastructure companies filed 180 applications for TTFCC review. For a variety of reasons, applications are not always reviewed in the year in which they are filed. Some of the applications reviewed in 2023 were filed in 2022; similarly, some of the applications filed in 2024 will be reviewed in 2025.

The charts below (Figure 7 and Figure 8) illustrate the applications that received a disposition following submission to the TTFCC in 2023 and the prior 15 years. The potential outcomes for an application are:

1. Recommended by the TTFCC,
2. Not recommended by the TTFCC,
3. Subsequently withdrawn by the applicant, or
4. 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 (RFI) sent by the TTFCC in response to an incomplete or inaccurate application. In some cases the amount of corrections and issues identified in order to place the proposal on the meeting agenda will lead a carrier to withdraw that proposal.

Any discrepancies found in an initial submission, and sometimes resubmissions, are returned to the applicant for correction. Therefore, the process has seen the majority of applications recommended if found to meet requirements, although negative recommendations by the committee are not uncommon.

One proposal for an SWF in the public right-of-way was not recommended by the TTFCC at the June 2023 meeting. The proposal was submitted with several waiver requests for its height and proximity to an intersection, the curb, a residential driveway, and a public park. While an applicant may ask for certain requirements and setbacks to be waived, the TTFCC has the authorization to waive requirements only to a minimum extent required for compliance and each case must be considered in context.

Figure 7: Applications Processed by Type of Outcome (2023)

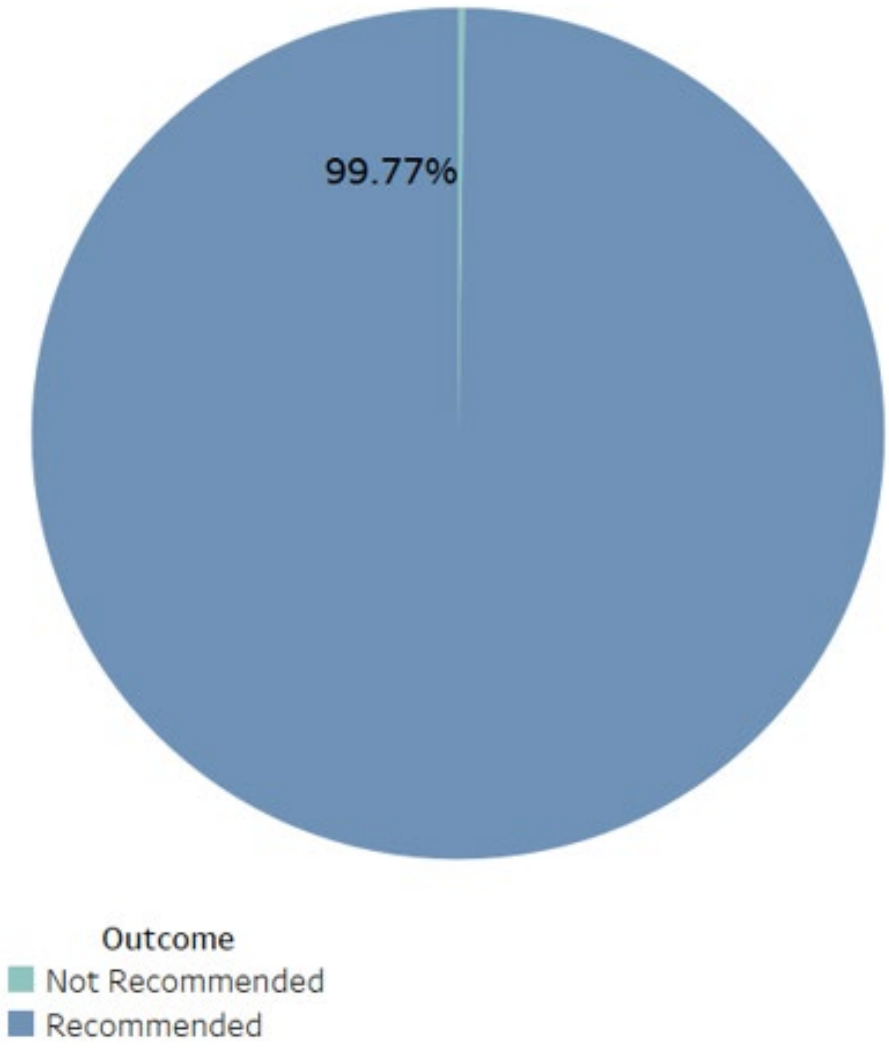
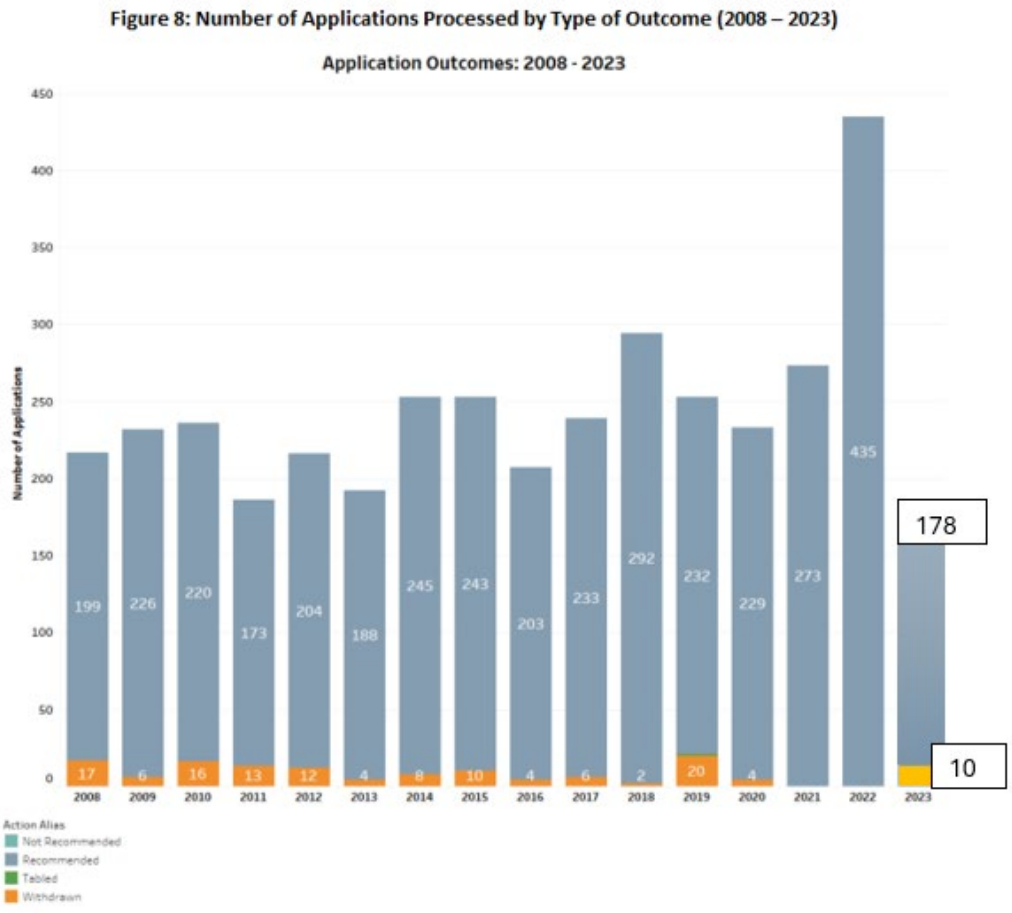


Figure 8: Number of Applications Processed by Type of Outcome (2008 – 2023)



Minor Modification Applications

Of the 180 applications received by the TTFCC in 2023, 43 percent were to modify an existing wireless siting location. These included applications to replace existing antennas, add new antennas to an existing array, add additional transmitting equipment, add electrical generators and other ground equipment, or in some cases remove all equipment when a carrier decides to decommission its presence at a site. Decommissioning has increased in the last five years due to T-Mobile's acquisition of Sprint, resulting in either applications for the replacement of Sprint's equipment at many sites with T-Mobile attachments or the complete decommission of some legacy Sprint sites.

Revisions were made to the County Code in 2008 to permit the Chair of the TTFCC to administratively approve minor modification applications, which allows the applicant to apply for

a building permit without having to wait for the next scheduled TTFCC meeting (i.e., at which the full Committee makes a recommendation on each application).

Colocation Applications

In 2023, the TTFCC received 97 colocation applications seeking to place antennas on existing structures where the carrier did not currently have antennas. Like minor modification applications, which are to upgrade a carrier's existing antenna arrays, these colocation applications represent the carriers' ongoing focus on adding capacity to their current networks. In some cases, carriers apply to colocate because an existing nearby wireless site such as a building is being decommissioned or demolished and the carrier is relocating.

88 colocation applications were received to colocate SWFs on utility poles in the public right-of-way:

- 86 of the SWF colocations on utility poles were strand mount proposals submitted by Crown Castle on behalf of T-Mobile. These were recommended with the exception of one application that did not meet the public park setback requirement as defined in the County Code.
- The remaining two SWF applications were for utility poles in which the antennas were mounted at the top of the pole.

Eight of the colocation applications were from Dish Wireless for macro sites. One of these applications involved extending the height of the existing tower to accommodate the proposed deployment. All were recommended.

The remaining colocation application was from Verizon to colocate on an existing monopole.

New Facility Applications

The TTFCC received four applications to construct new macro sites—two monopoles and two towers.

Verizon applied to construct a 160-foot monopole on the grounds of the Baden Volunteer Fire Department. The application was recommended by the Committee in February 2023, and will be able to support a total of four carriers.

A proposal was also received from Verizon for a 100-foot monopole in a residential neighborhood in the area of Old Allentown Road and Airport Drive in Fort Washington. The application was recommended by the Committee in March 2023, and will be able to support at least one other carrier.

Pepco applied for two replacement towers located on its own substations. A 300-foot tower at the Chalk Point substation in Aquasco and a 300-foot tower at its Burtonsville substation were reviewed and recommended at the November 2023, TTFCC meeting. Both structures will be available for commercial colocation in addition to supporting Pepco's internal communications.

The TTFCC also reviewed and recommended an application that had been received prior to 2023 from the Prince George's County Office of Homeland Security (OHS) for a new public safety communications tower on a parcel adjacent to the Missouri Avenue Solid Waste Acceptance & Recycling Center.

4. Administration of the Wireless Facility Siting Review Process

The TTFCC was created in 2000 to "promote the appropriate and efficient location and colocation of telecommunications transmission facilities to minimize adverse impacts on other land uses in the County." The TTFCC shall, among other duties, "evaluate the esthetic effects of locating multiple telecommunications transmission facilities in a single location or on a single structure." [County Code Section 5A.153]

As part of the TTFCC's responsibilities, the County Code requires that it shall:

1. Serve as a central source of information and provide technical advice on the siting of telecommunications transmission facilities for the County, the Maryland National Capital Park and Planning Commission, the Board of Education and other public landowners, private landowners, licensed telecommunication carriers, and the general public

2. Promote the appropriate and efficient location and colocation of telecommunications transmission facilities to minimize adverse impacts on other land uses in the County

3. Evaluate the esthetic effects of locating multiple telecommunications transmission facilities in a single location or on a single structure

4. 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 and any at-large Council members

5. 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

6. Facilitate public participation in the telecommunications transmission facility siting process

7. Report annually to the County Executive 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 Technical Consultant role was established to:

1. Prepare a master plan of existing and planned telecommunications transmission facilities in the County
2. Maintain a database of telecommunications facilities reviewed by the TTFCC and those facilities proposed to be located in the County
3. Advise the County on telecommunications matters as requested
4. Review the siting of each proposed telecommunications transmission facility
5. Serve as a technical resource to the public and interested carriers and agencies
6. Evaluate the technical rationale of the proposed locations
7. Evaluate alternative sites and techniques where appropriate to mitigate the visual impact of the proposed and alternative sites and report the findings to the TTFCC

Fees Collected

Costs for the work of the TTFCC are funded in part by TTFCC application fees established in 2008 and revised in 2020 to include SWF applications. Those fees are as follows:

$3,000	TTFCC application to install or mount one SWF on a new pole
$1,800	TTFCC application to install or mount one SWF on a replacement pole
$1,500	TTFCC application to colocate one SWF on an existing structure
$800	TTFCC application for a minor modification to one SWF

$2,500	TTFCC application (excluding SWF) for a new tower, monopole, or support structure located outside the public right-of-way
$1,500	TTFCC application (excluding SWF) for a colocation on an existing structure located outside the public right-of-way
$500	TTFCC application for a minor modification to an existing facility (excluding SWF) located outside the public right-of-way
$250	Modification or revision to a TTFCC application
$500	Annual Master Plan update

The TTFCC collected approximately $301,000 in application and annual plan fees during 2023. The County's costs for TTFCC activities, excluding indirect County staff time, were $409,499. These costs were expenditures for outside services provided at the County's request by the designated Telecommunications Transmission Facility Technical Consultant (CTC Technology & Energy). These services included an engineering review of each submission for compliance with County and FCC regulations. The majority of applications required multiple submissions due to errors by the applicants.

Site Visits

While an application for a new site requires a site survey by the Technical Consultant, it is the County's policy that all existing sites also be visited and photographed on a regular basis. To track the progress of each of the ongoing submissions and the status of the site surveys, CTC Technology & Energy developed and populated a database that captures updates regarding sites and applications in real time.

Electronic Applications

On August 1, 2019, the TTFCC began requiring applications to be submitted electronically using the Prince George's County Department of Permitting, Inspections and Enforcement's (DPIE) existing online Permitting and Licensing System.[1] The development of this process was part of an effort within DPIE to accurately track each type of wireless siting application and ensure that FCC "shot clock" requirements are met by all responsible parties.

The change from a paper to electronic system benefits both the applicants and the TTFCC as it allows for timely tracking of fees, deadlines, and the disposition of individual applications.

[1] https://dpiepermits.princegeorgescountymd.gov/

TTFCC Membership

The current TTFCC members are:

TTFCC Chair/Coordinator

- 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 and Licensing Division,

  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, Planning Technician III, Development Review Division,

  Maryland National Capital Parks and Planning Commission

- Nathaniel K. Tutt III, Administration,

  Prince George's County Council

- Vincent Curl, Facility Supervisor, Maintenance Department,

  Prince George's County Public Schools

- Sherif Elkabbani, Chief, Street Lights and Signal Section,

  OEPM/Department of Public Works & Transportation

Additional support to the TTFCC is provided by:

- Tracy M. Benjamin, Principal Associate County Attorney,

  Prince George's County Office of Law

- CTC Technology & Energy, TTFCC Technical Consultant

Public Information

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 has required that a carrier seeking to construct a new tower or monopole in the County, extend the height of a structure, or locate a wireless facility in the public-right-of-way send a public notice to property owners and community organizations within one 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, the Chair may choose not to hold a meeting. A meeting was held in each month of calendar year 2023, with the exception of December.

5. Future Expectations for Wireless Siting in the County

The map below (Figure 9) illustrates the location and number of future antenna sites planned by carriers based on the Annual Plan updates they filed with the County in August 2023. Cumulatively, there are a total of 957 future sites listed by all carriers.

Prince George's County will likely continue to see carrier applications of the following types:

- Minor modifications
    - Age, obsolescence, and development of new types of antennas lead carriers to modify their equipment on existing sites; this includes initiatives by the major carriers to develop dedicated data networks for public safety such as the First Responders Network Authority (FirstNet). This can also include decommissioning due to industry developments such as the acquisition of Sprint by T-Mobile.
- New and/or replacement towers and monopoles
    - As carriers adapt to emerging technologies and strategies, it is expected that they will replace some older structures and seek new locations.
- Colocations
    - New colocations on existing macro sites, including buildings, will continue to be encouraged as a reasonable strategy to meet carriers' coverage and capacity needs.
    - The ongoing goal to increase capacity is expected to lead carriers to seek relatively low-height mounting sites for 5G deployment in a variety of areas, most predominantly in the public right-of-way.

It is expected that applications that qualify as SWFs under the FCC's definition will continue to be submitted, reflecting the trends stated above. Until 2020, Prince George's County had permitted a relatively small number of SWFs on private property. The trend toward applications in the public right-of-way increased by 176 percent in 2023, with 88 applications compared to 50 in 2022.

Legislation passed in February 2020, as well as the County's Design Manual, provide applicants with the guidelines and procedures to successfully site their desired SWFs while applying the FCC requirements unique to SWFs.

Figure 9: Sites Proposed in Carriers' Annual Plans (2023 and beyond)