



**PSSM at Brookeville, Mandatory Referral, MR2020011**

---

- Joshua Penn, Planner Coordinator, [Joshua.Penn@montgomeryplanning.org](mailto:Joshua.Penn@montgomeryplanning.org), 301-495-4546
- Richard Weaver, Chief, [Richard.Weaver@montgomeryplanning.org](mailto:Richard.Weaver@montgomeryplanning.org), 301-495-4544
- 

Completed: 2/14/20

---

**Description**

**PSSM at Brookeville: MR2020012**

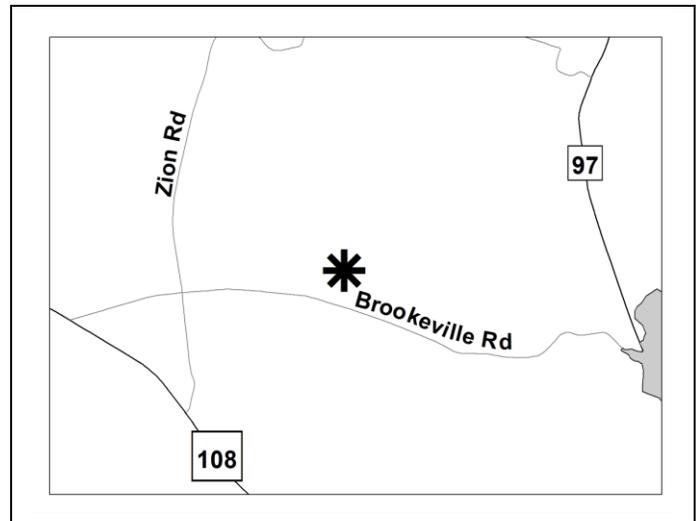
- Mandatory Referral associated with a request to construct a Public Safety System Modernization (PSSM) radio communications tower at 4301 Brookeville Road in Brookeville
- Zone: AR
- Property Size: 166.83 Ac
- Master Plan: *2005 Olney Master Plan*

**Staff Recommendation: Approval with Comments**

**Review Basis:** Md. Land Use Code Ann. § 20-301

**Applicant:** Montgomery County Department of Technology Services (DTS)

**Acceptance Date:** January 31, 2020



**Summary**

The review of this Mandatory Referral is in two parts:

- Part A – Preliminary/Final Forest Conservation Plan MR2020012**, discussed in a separate staff report, and
- Part B - Mandatory Referral MR2020012.**

The Applicant proposes to construct a 230 foot tall self-support tower at 4301 Brookeville Road near Brookeville, MD. The tower is considered a Public Use (59.3.4.9) under the Zoning Code and not a Telecommunications Facility (59.3.5.2.C). The Public Use category within the Zoning Ordinance does not provide review standards. However, because this use is similar in character to a telecommunications facility, the conditional use review standards for a telecommunications facility were used by staff to provide guidance to inform the review of the project for Planning Board consideration.

Staff recommends approval of the Mandatory Referral with comments to be transmitted to the Montgomery County Department of Technology Services.

## **RECOMMENDATIONS:**

Staff recommends approval of the Mandatory Referral with the following comments to be transmitted to the Montgomery County Department of General Services:

1. There should be no outdoor storage of equipment or other items.
2. Install a sign not more than two feet square affixed to the equipment compound identifying the owner, operator, and maintenance service provider of the support structure and the emergency telephone number of a contact person.
3. Submit documentation on height and location of the tower to the Department of Permitting Services prior to final inspection of the building permit.
4. Certify that the telecommunications tower is operating within Federal Communications Commission (FCC) standards on an annual basis, in addition, an actual radio frequency (RF) measurement should be provided after the telecommunications tower is installed, and after each co-location on the subject tower.
5. The owner of the tower is responsible for maintaining the tower in a safe condition.
6. Remove the tower and equipment compound within twelve months of cessation of the use of the facility.

## **Mandatory Referral Review**

This proposal for the construction of a new a Public Safety System Modernization (PSSM) radio communications tower requires the Mandatory Referral review process under the Montgomery County Planning Department's Uniform Standards for Mandatory Referral Review. State law requires all federal, state, and local governments and public utilities to submit proposed projects for a Mandatory Referral review and approval by the Commission. The law requires the Montgomery County Planning Board to review and approve the proposed location, character, grade and extent of any road, park, public way or ground, public (including federal) building or structure, or public utility (whether publicly or privately owned) prior to the project being located, constructed or authorized.

## **PROJECT DESCRIPTION**

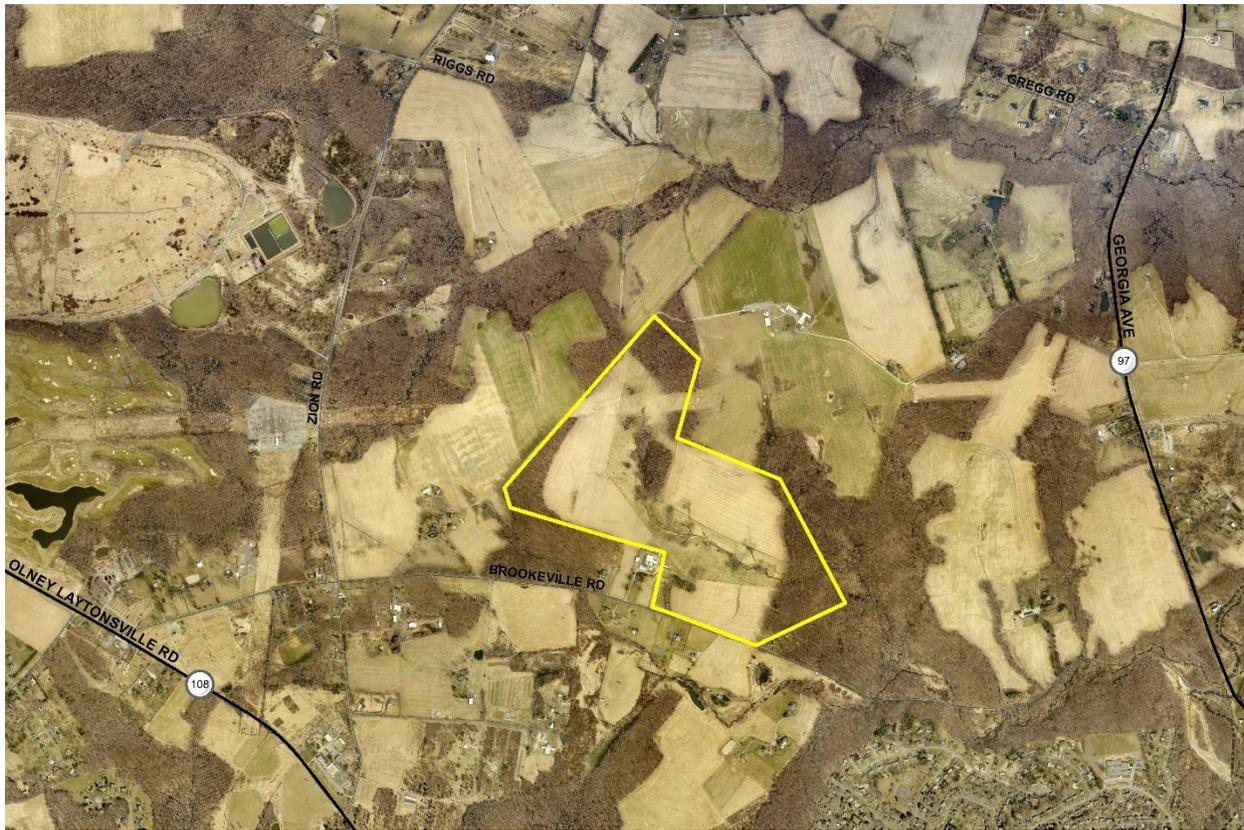
### **Background**

The Public Safety Systems Modernization (PSSM) Program will replace the older communications systems with a new system that supports the County's public safety agencies and personnel to protect the lives and ensure the safety of the public. The PSSM Program is a multi-department/agency multi-year \$110M capital project.

The Montgomery County Department of Technology Services (DTS) under the PSSM program has applied for this Mandatory Referral construct a 230 foot self-support tower at 4301 Brookeville Road near Brookeville, MD, Parcel 900 ("Property"). The applicant states that, "the current system fails to provide adequate radio coverage in several areas in the County" and that the, "new base stations are sited and designed to provide complete and effective coverage according to a '95/95' coverage mandate: 95 percent coverage reliability in 95 percent of the County service area." The applicant further states that in areas where existing radio coverage is inadequate, "there are significant consequences for emergency response personnel. A lack of radio service can increase response time, the number of personnel required to effectively respond to an emergency situation, and the amount of time it takes to resolve an incident."

### **Surrounding Neighborhood**

The Property is surrounded by larger farm parcels and zoned Agriculture Reserve (AR) zoned. Further away from the site to the south and west there are a number of historic sites. The larger vicinity has AR to the north, Rural Cluster (RC) zoning east of Georgia Avenue (MD 97), and RE-1 and R-200 zoning to the south.



**Figure 1: 2019 Aerial Photograph of the Vicinity (Property shown in yellow)**

### **Site Description**

The Property is hilly and generally sloping from the northwest to the southeast. There are some large pockets of forest in the corners of the Property. There is a stream that begins in the middle of the Property flowing to the southeast. The Property is a large active piece of farmland generally undeveloped with the exception of one house (not designated as historic) and some agricultural outbuildings. The main farm house and majority of the farm buildings are on a separate smaller parcel (parcel 147 and 4.4 acres) at the southwestern edge of the Property. In the southeast corner of the Property is an existing 183 foot telecommunications monopole approved by Special Exception No. S-2156.



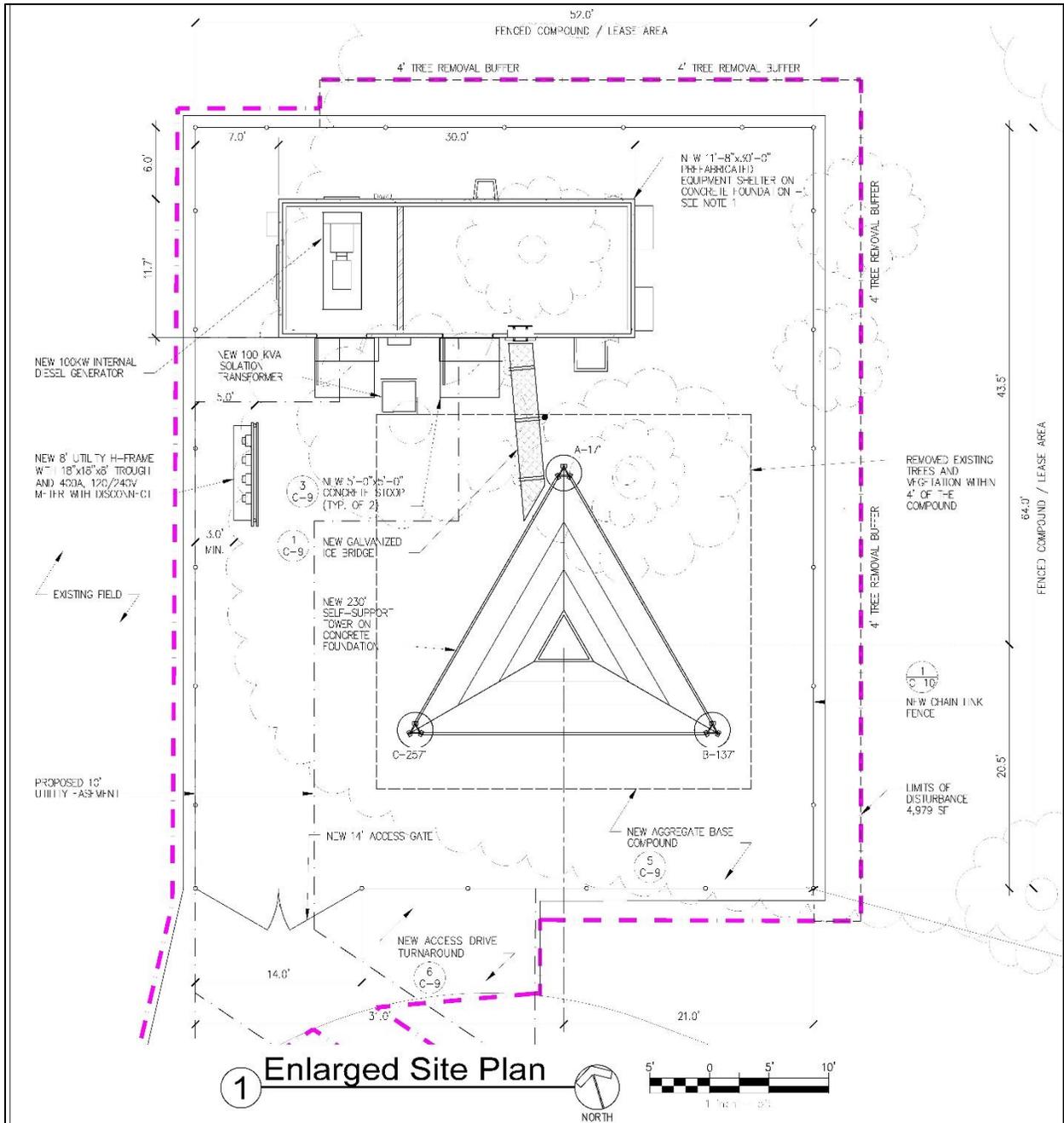
Figure 2: 2019 Aerial Photograph of the Property

**Proposed Project**

The 230 foot tall Class III lattice tower with a 10’ lightning rod will be a total of 240 feet in height and adjacent to an existing 183 foot tower currently onsite. The industry standard, red and white strobes will be installed as a beacon on the tower.

The tower will be built to Structure Class III standards, which has a “return period” of 1700 years. This means the observed wind speed is statistically likely to meet or exceed the design wind load only once every 1700 years. According to the applicant, Class III structures are capable of withstanding storms that would otherwise devastate nearby structures, and these structures are frequently among the last structures standing after a catastrophic weather event.

The site layout for the project is shown in Figures 4 and 5. The tower will be contained within approximately a 52’ x 64’ pad site area in the southeast area of the Property. A 11’8” x 30’ shelter with an internal generator will be next to the tower.



**Figure 4: Compound Layout**

Figure 6 shows the tower configuration and Figures 6 and 7 show the range of service coverage before and after the tower's completion.

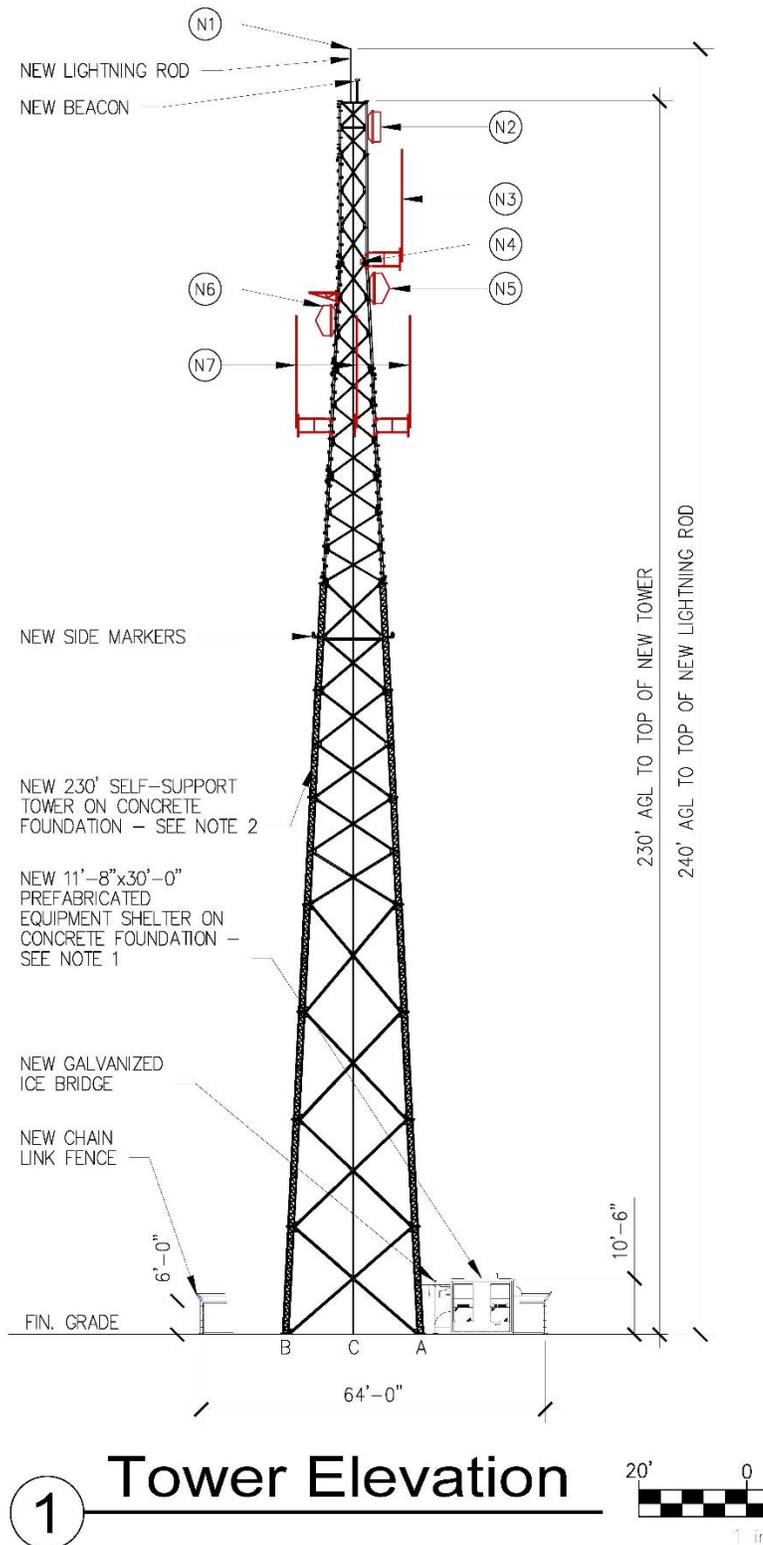
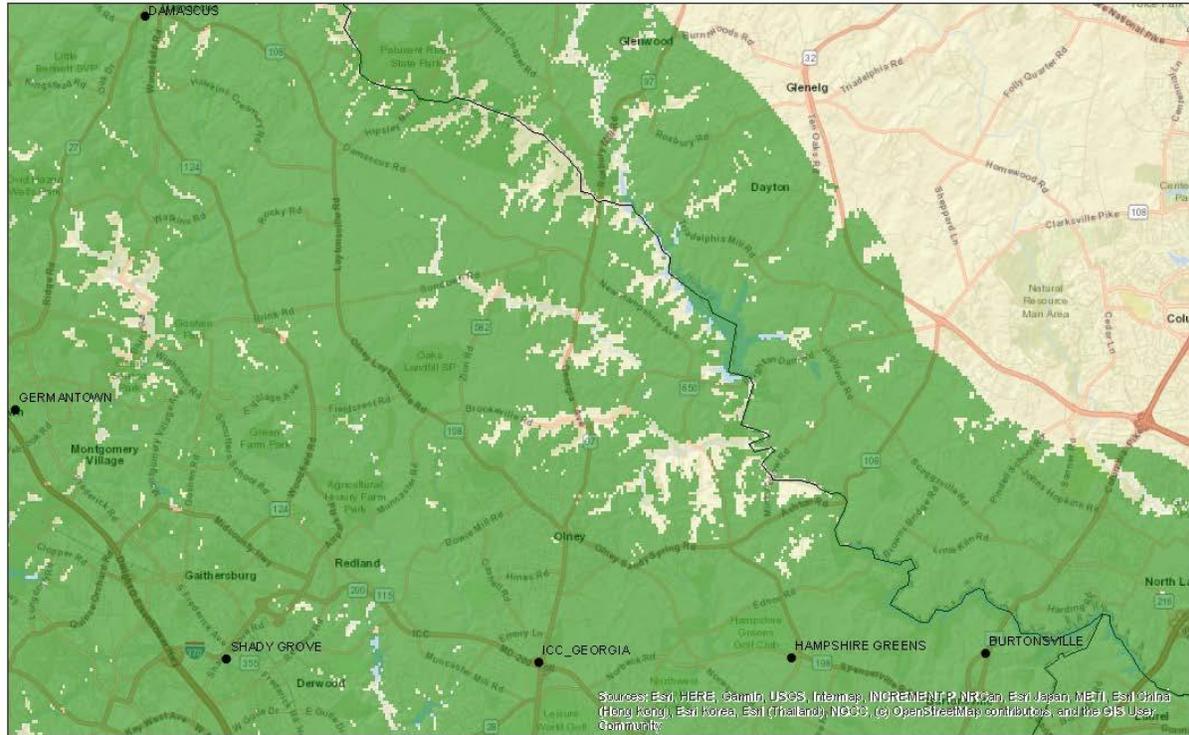


Figure 5: Tower Design

Montgomery County, Maryland  
 Portable Radio Round Trip Coverage  
 22 Site Design Brookeville 2 Removed  
 August 28, 2019



For Information Only



0 1 2 4 Miles  
 1 in = 2 miles

The shaded area represents round trip coverage at DAQ 3.4, to/from an APX portable at hip level in a swivel case, equipped with a 1/2 wave flex whip antenna and remote speaker mic, with building penetration loss zones as defined in the RFP

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

9510246893.1.Design 21

Figure 6: Coverage Map (in green) without Tower

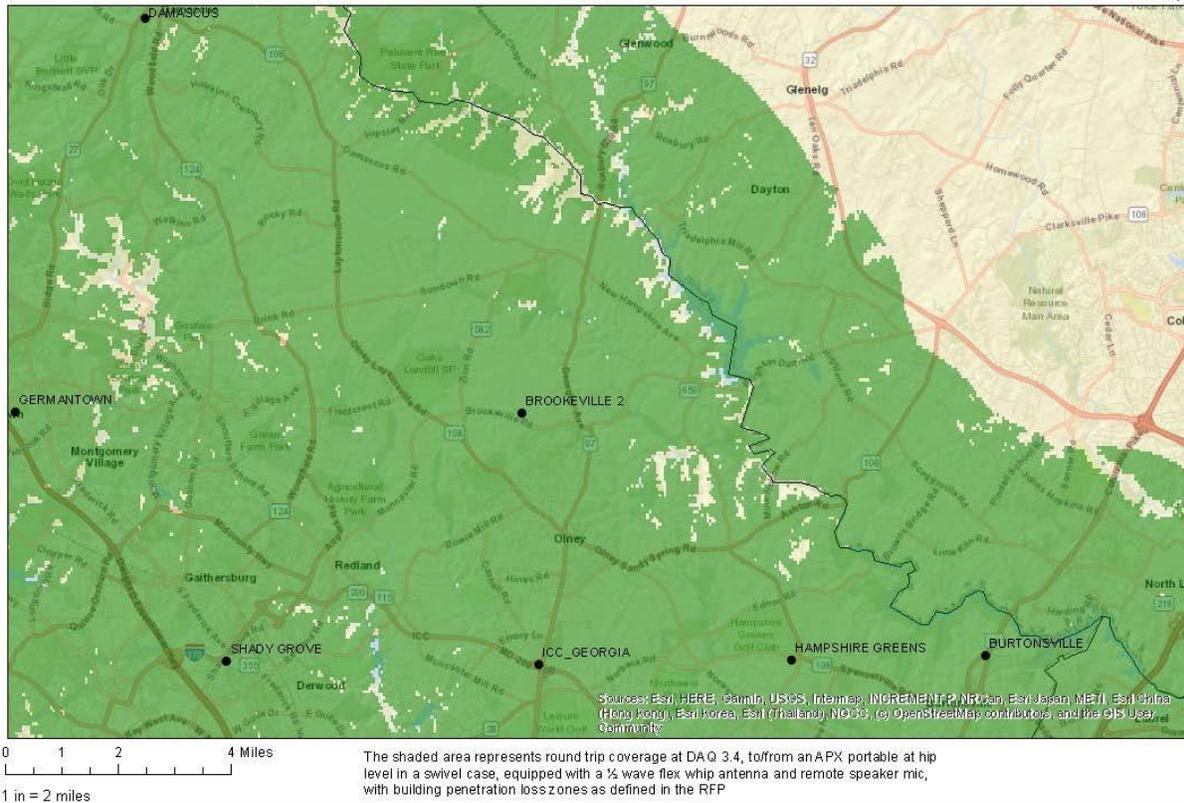


Figure 7: Coverage Map (in green) with Tower

### Master Plan Consistency

The 2005 Olney Master Plan has no specific language or recommendations on the Property but does have some general recommendations

*Protecting the existing communities from potential negative impacts of future growth is a significant objective of the Olney Master Plan, achieved mainly by discouraging proliferation of commercial uses outside the Town Center.*

The proposed public safety tower is not a commercial use but a public use intended for providing adequate communication for the protection of the residents of Montgomery County.

*Maintain the character and existing scale of development in the rural communities in Northern Olney. Prohibit additional zoning for commercial uses, or expansion of commercially zoned areas in these communities.*

This Application is not rezoning or adding any commercial uses but for a public safety tower which is not a commercial use but a public use intended for providing adequate communication for the protection of the residents of Montgomery County.

The project, while taking into consideration of the use and purpose of safety, is in substantial conformance with the Master Plan.

### **Neighborhood Compatibility**

Although the tower will be visible from many locations in the area, the importance of the function of the tower must be weighed against the diminished viewshed. This location is already visually disrupted by the existing 183 foot monopole. Given the importance of the facility and the need to provide coverage, the impact on neighborhood compatibility should be weighed against the safety of the citizens.

### **Zoning**

The Subject Property is in the AR zone under the Montgomery County Zoning Ordinance (Chapter 59) (the "Zoning Code"). The AR zone is considered an agricultural zone.

The proposed use under the Zoning Code is "Public Use (Except Utilities)," covered by Section 3.4.9 of the Code. **A Public Use is a permitted use in all zones.** According to the Zoning Code:

*Public Use (Except Utilities) means a publicly-owned or publicly operated use. Public Use (Except Utilities) includes County office buildings, maintenance facilities, public schools and parks, post office, State and Federal buildings. Public Use (Except Utilities) does not include a Public Utility Structure (see Section 3.6.7.E, Public Utility Structure).*

According to Section 3.6.7.E of the Zoning Code:

*Public Utility Structure means a utility structure other than transmission lines or pipelines. Public Utility Structure includes structures for the occupancy, use, support, or housing of switching equipment, regulators, stationary transformers, and other such devices for supplying electric service or other public utilities.*

Section 3.4.9 does not provide review standards for a public utility structure. Although the proposed use is a public use and not a conditional use, it is similar in character to a telecommunications facility, which is a conditional use, and therefore similar guidance should inform the review of the project. Staff looked to Section 3.5.2.C of the Code, "Telecommunications Tower," to provide the best guidance to inform this report.

A Telecommunications Tower in the AR Zone is a Limited Use or Conditional Use in the land use table. This tower would exceed the maximum height limit (179 feet) and the size limit of the omni-directional antennae (15 feet). For these reasons, Staff compared the Public Use PSSM tower to the Conditional Use standards in the Code, again to inform the Board.

In the Conditional Use process, the Hearing Examiner is the approving body for those applications. However, this application is for Mandatory Referral only and the Hearing Examiner is not involved in this Application and is only referenced below to demonstrate how the Zoning Code is written.

The Conditional Use standards for a Telecommunications Tower are numerous, but because the application is for a Mandatory Referral and not a Conditional Use, **these standards are not mandatory**; only the most pertinent standards from §59.3.5.2.C.2.c are discussed below.

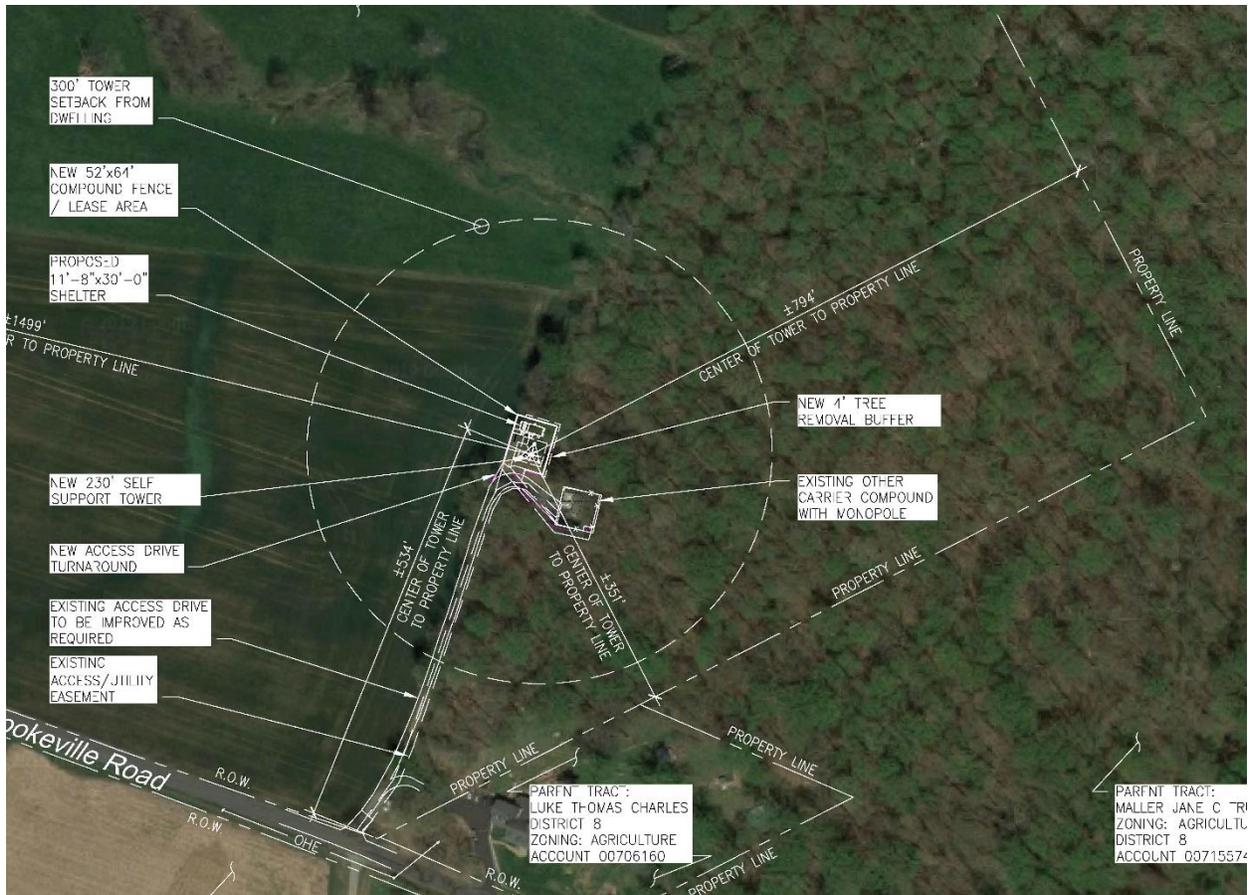
*i. Before the Hearing Examiner approves any conditional use for a Telecommunications Tower, the proposed facility must be reviewed by the County Transmission Facility Coordinating Group. The applicant for a conditional use must file a recommendation from the Transmission Facility Coordinating Group with the Hearing Examiner at least 5 days before the date set for the public hearing. The recommendation must be no more than 90 days old.*

The Transmission Facility Coordinating Group “Recommended (approval), conditioned on approval through the Mandatory Referral process” the tower application at its October 3, 2019 meeting.

*ii. A Telecommunications Tower must be set back from the property line, as measured from the base of the support structure, as follows:*

*(d) The Hearing Examiner may reduce the setback requirement to not less than the building setback for a detached house building type in the applicable zone or to a distance of one foot from an off-site dwelling for every foot of height of the support structure, whichever is greater, if evidence indicates that a reduced setback will allow the support structure to be located on the property in a less visually obtrusive location than locations on-site where all setback requirements can be met after considering the height of the structure, topography, existing vegetation, nearby residential properties, and visibility from the street. A reduced setback may be approved only if there is a location on the property where the setback requirements can be met.*

There are no existing dwellings within 300 feet of the proposed tower location and the tower location meets the building, front rear and side, setbacks of the zone. This proposed tower does meet this recommended setback.



**Figure 3: Aerial Photograph With Setbacks**

*iii. The maximum height of a support structure and antenna is 135 feet, unless it can be demonstrated that additional height up to 179 feet is needed for service, collocation, or public safety communication purposes. At the completion of construction, before the support structure may be used to transmit any signal, and before the final inspection required by the building permit, the applicant must certify to DPS that the height and location of the support structure conforms with the height and location of the support structure on the building permit.*

The proposed height of 240 feet (including lightning rod); While it does exceed the height normally allowed under a Conditional Use, the height is necessary for public safety communication purposes.

*iv. The support structure must be located to minimize its visual impact. Screening under Division 6.5 is not required, however, the Hearing Examiner may require the support structure to be less visually obtrusive by use of screening, coloring, stealth design, or other visual mitigation options, after considering the height of the structure, topography, existing vegetation and environmental features, and nearby residential properties.*

Screening at ground level is sufficient when incorporating the existing vegetation between the tower and Brookville Road.

*viii. The equipment compound must have sufficient area to accommodate equipment sheds or cabinets associated with all the carriers. Outdoor storage of equipment or other items is prohibited.*

The equipment compound contains an 11' 8" x 30' shelter with an internal generator and has sufficient area inside for the required equipment. No outdoor storage is proposed or recommended.

*ix. The support structure must be removed at the cost of the owner of the Telecommunications Tower when the Telecommunications Tower is no longer in use by any wireless communication carrier for more than 12 months.*

Staff has included a similar provision in its comments.

*x. The support structure must be identified by a sign 2 square feet or smaller, affixed to the support structure or any equipment building. The sign must identify the owner and the maintenance service provider of the support structure or any attached antenna and provide the telephone number of a person to contact regarding the structure. The sign must be updated and the Hearing Examiner notified within 10 days of any change in ownership.*

Staff has included this provision in its comments.

*xi. Each owner of the Telecommunications Tower is responsible for maintaining the wireless communications tower in a safe condition.*

Staff has included this provision in its comments.

## **Transportation**

The project will be an unmanned facility that will generate no more than 10 visits per day. Therefore, normal operations of the facility will generate less than 50 total weekday peak-hour person trips and the project is therefore exempt from the Local Area Transportation Review (LATR) test and any requirement for further traffic analysis.

According to the *2005 Olney Master Plan*, Brookeville Road in front of the subject property has a designated right-of-way of 70 feet and is classified as a Rustic Road with two travel lanes. The subject property is a unplatted parcel and no dedication has been done. The Property should dedicate all necessary right-of-way if the property is ever platted.

On 2/26/19 the Applicant met with the Rustic Roads Advisory Committee. They did not have any objections with the application. They indicated to the Applicant they wanted to do a site visit, but never contacted them about setting a date for the visit.

The 2018 Countywide Bicycle Master Plan does not call for any facilities along Brookville Road.

## **FOREST CONSERVATION**

The Application meets the requirements of Chapter 22A of the Montgomery County Forest Conservation Law. See Forest Conservation Plan staff report (Item A) for a complete analysis.

### **IMPACTS TO PARKLAND**

The proposal will have no impact M-NCPPC Department of Parks property.

### **COMMUNITY OUTREACH AND NOTIFICATION**

This Application was noticed in accordance with the Uniform Standards for Mandatory Referral Review. The adjoining property owners and a civic association were notified.

The Applicant held a Community Meeting on March 18, 2019 about 20 people attended and the general objections were related to the visual impacts of the tower.

### **CONCLUSION**

Staff recommends that the Planning Board approve the Mandatory Referral and transmit to the Department of Technological Services the comments and recommendations of this report.

The current first responders radio system fails to provide adequate radio coverage in several areas in the County, including the Brookville area. The manufacturer's support for the existing voice radio system began being phased out at the end of 2009. The proposed PSSM tower will fill in the coverage gap in the Damascus area and will provide greater reliability, allowing police, fire, medical, and other first responders to react more quickly and efficiently in an emergency. The Applicant has demonstrated that the proposed location is well suited to cover the part of the County surrounding Brookville. The Class III structural standards provide an extremely safe facility.

As a Public Use, the proposed tower is not required to meet the standards of a Telecommunications Tower. However, Staff applied Telecommunications Tower review criteria to this project and finds that it meets most of these standards; Staff has recommended that many of these standards be applied to this project.

Attachment A – Mandatory Referral Package  
Attachment B – Council Resolution