AGENDA ITEM # 5
PGCPB MEETING OF 10/29/15

**The Maryland-National Capital Park and Planning Commission**
**Prince George's County Planning Department**
**Countywide Planning Division**
**301-952-3650**
***Note: Staff reports can be accessed at www.mncppc.org/pgco/planning/plan.htm***

# Mandatory Referral MR-1516F

| Application | General Data | |
|---|---|---|
| **Project Name:**<br>Brandywine Elevated Water Tank Storage Facility (Branch Avenue and Moores Road)<br><br>**Location:**<br>12601 Branch Avenue Brandywine, MD 20613<br><br>**Applicant/Address:**<br>Washington Suburban Sanitary Commission (WSSC)<br>14501 Sweitzer Lane<br>Laurel, MD 20707 | **Planning Board Hearing Date:** | 10/29/15 |
| | **Date Accepted:** | 09/4/15 |
| | **Mandatory Action Timeframe:** | 60-Day Review |
| | **Acreage:** | 10.87 |
| | **Zone:** | R-R |
| | **Planning Area:** | 85A |
| | **General Plan Designation:** | Established Communities |
| | **Council District:** | District 9 |
| | **Adjacent Municipality:** | None |

| Purpose of Application | Notice Date |
|---|---|
| Construction of a water storage facility on a 10.87 acre site located at 12601 Branch Avenue, Brandywine MD, 20613 | **Acceptance Mailing:** September 18, 2015 |

| Staff Recommendation | Staff Reviewer: |
|---|---|
| Transmit Staff Report to:<br>Mr. Benjamin Marks, Project Manager<br>Washington Suburban Sanitary Commission<br>14501 Sweitzer Lane<br>Laurel, MD 20707 | Christine A. Osei, Project Manager |
| | **Phone Number:** 301-952-3313 |
| | **Email:** Christine.Osei@ppd.mncppc.org |

# MR-1516F Staff Report - Brandywine Elevated Water Storage Facility

## PROJECT BACKGROUND

The Land Use Article §20-301 through 305 of the Maryland Annotated Code requires the Planning Board to review public construction projects for all federal, state, county and municipal governments, and publicly and privately owned utilities through the Mandatory Referral (MR) review process. The proposed Brandywine Water Storage Facility project is being reviewed as part of the MR review process pursuant to the Maryland Annotated Code, and Section 27-294 of the Prince George's County Zoning Ordinance. The project meets requirements for a full MR review because it is a new facility.

## PROJECT SUMMARY

The Washington Suburban Sanitary Commission (WSSC) is proposing to construct a 2-million gallon, 156 foot tall composite elevated water storage tank west of Branch Avenue (between Burch Hill Road and Moores Road) in Brandywine, Maryland. The proposed Brandywine Water Storage Facility (south tank) will address the current water demand in the 385B Water Pressure Zone in the immediate term, but the recommended second tank (eastern tank) will not be needed until 2040. (Both tanks would have an overflow at an elevation of 385 feet, consistent with the existing Clinton water tank.) Water service to the proposed Brandywine water tank will require the construction of the proposed 42-inch water main along MD 5 and a proposed 30-inch transmission water main along MD 5 to connect the two ends of the 385B Water Pressure Zone to provide water supply to the proposed Brandywine elevated water storage facility. (The highest point on the proposed water tank will be approximately 175 feet above ground level.) The need for the proposed water tank was identified in the 2012 Clinton Zone Water Storage and Transmission Improvements Study. The study highlighted the need for major water system improvements and recommended the construction of two new 2-million gallon elevated water storage tanks in Clinton Water Pressure Zone- one in the south and the other in the east. The proposed water tanks are in part necessitated by development in the southern portion of Prince George's County and increased bulk water sales (by WSSC) to Charles County. Overall demands have stressed the capacity of the 385B Water Pressure Zone.

## STAFF RECOMMENDATIONS

A staff review of the proposed water tank provides the following recommendations:

- The applicant should submit a Mandatory Referral application to the Prince George's County Planning Department (Administrative Review) to solicit comments for the installation of all future cell carrier pads.

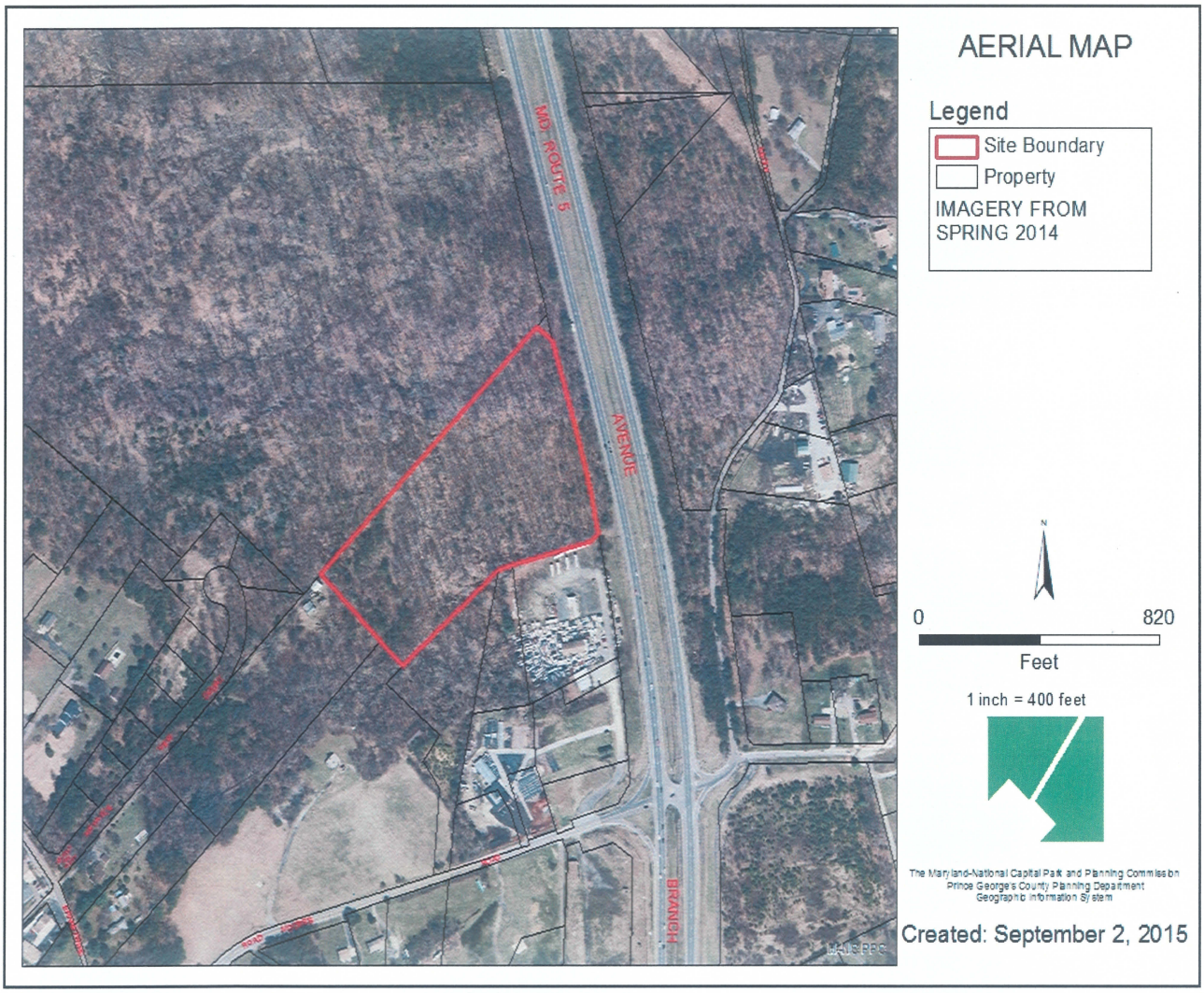
- The proposed design for the access road that enters the property should avoid unnecessary impacts to streams and associated buffers and minimize them where possible. The road should be designed to cross the regulated areas at the narrowest point if the opportunity exists.

- The applicant should work with the State Highway Administration (SHA) since they are currently conducting a study of the MD 5 corridor for priced/managed lanes, interchanges, and expansions. The proposed Brandywine water tank will not affect the work underway along MD 5 between Brandywine and MD 223; however, the proposed 42-inch water main along MD 5 is a critical component of the proposed water tank to connect water from the 42-inch main via a 20-inch water line to the tank.

- The applicant states that there are approximately 150 feet of unimproved right-of-way between the turn-off for the Branch Avenue Auto Auction and the starting point of the proposed gravel access road to the proposed tank site. The new access road extension to the tank site will duplicate the stone fill of the existing access road. WSSC should coordinate with the Department of Permitting, Inspections and Enforcement (DPIE) and the Department of Public Works and Transportation (DPW&T) on the maintenance of the entire length of the access gravel road that will be extended to service the water tank site.

## PROJECT LOCATION AND EXISTING CONDITIONS

The proposed Brandywine water storage facility is located in Councilmanic District 9. The proposed water tank site is located on a 10.87 acre site at 12601 Branch Avenue (MD5) in Brandywine, Maryland. The site is accessed by a gravel road that runs parallel to MD 5 and is currently used by three other businesses. The map below is an aerial view of the proposed tank site.




## Rights-of-Way

There is an existing 25 feet wide (right-of-way) easement held by the State Highway Administration (SHA) since the construction of MD 5. The SHA easement extends from the water tank site to Moores Road; with a gravel access road used by three other property owners. The other property owners include Branch Avenue Auto Auction, Mark 5 Construction, and Plant City Garden Center. The gravel road currently extends from Moores Road to the gate of the Branch Avenue Auto Auction. Details about responsibility for maintenance of the gravel access road, including snow removal, have not been confirmed but are being discussed with the appropriate parties. There are approximately 150 feet of unimproved right-of-way between the turn-off for the Branch Avenue Auto Auction and the start of the tank site. WSSC will construct a 12-foot wide one-lane asphalt road to serve the proposed water tank site and its associated uses. The new access road will be designed to meet the Prince George's County road construction standards.

## Existing and Proposed Utilities

**Water Main**
WSSC is currently designing a new 42-inch water main running north and south in the State Highway Administration (SHA) MD 5 right-of-way. This main reduces to a 30-inch pipe after the tee (a pipe fitting that splits water flow from one direction to another) for the proposed water tank. The 20-inch segment of the tee will be brought onto the tank site and capped during the transmission main project. Isolation valves will be installed at each end of the tee for improved system operability by allowing the tank to serve the system even if the main to the north or south is out of service.

**Sanitary Sewer/Storm Drain**
There are no sanitary sewers in the vicinity of the project, but sanitary sewer service is not required. The very low flow of buffering agent from the chlorine analyzer will be directed to the bioswale as recommended by the Maryland Department of the Environment (MDE) through previous agreements. Storm flow from MD 5 will be directed through a new culvert under the access road to the existing stream. There are no proposed storm drains or inlets required for this project.

**Electrical Services and Federal Aviation Requirements**
Southern Maryland Electric Cooperative (SMECO), Maryland will provide electrical connections to the water tank site to provide power to the instrumentation, controls, and miscellaneous electric loads related to the Water Storage Tank and Altitude Valve Vault and other uses associated with cellular towers. A primary service will be provided from an existing utility pole and power lines on the east side of the site, and will be routed to an underground conduit to terminate at a pad-mount utility transformer on site. Light-emitting diode (LED) light fixtures with integrated photocell will be mounted on 15-foot poles at strategic locations to provide security lighting at the tank site. In compliance with Federal Aviation Administration (FAA) regulations, all-LED Medium Intensity Lighting System, Unimar Model No. L-864/L-865, designed for obstructions to aerial navigation will be provided on the roof of the tank.

**Cellular Communication Buildings**
It is assumed that there will be four cellular carriers on the site. A concrete pad for four potential enclosures is proposed at the southeastern portion of the site to secure access to prospective carriers. The coaxial cabling to the elevated tank will be installed in concrete walled trenches with grating covers, through pipes in the foundation wall, and up to the tank top.

**Maintenance of Traffic**
Though all of the construction will occur on private roads and properties, a Prince George's County Department of Public Works and Transportation (DPW&T) approved Maintenance of Traffic (MOT) Plan will be required to provide protection for construction workers, safe and efficient access points to and from Moores Road and the existing access roadway, and safety for those using MD 5 or other adjacent roadways.

**Tank Height**
Depending on the type of tank eventually selected, and the tank geometry, the peak of the dome will be set somewhere between 8 to 12 feet above the top capacity level (TCL). Based on this information and the 7-foot height of the overhead support over the Access Tube, the highest point of the structure will be at an elevation of 404 feet. Based on a ground elevation of 229 feet at the location of the new tank, the highest point on the tank will be approximately 175 feet above ground level.

**Tank Lightning Protection**
The water storage tank structure and coating will be provided with lightning protection. Lightning protection will consist of metal air terminals mounted on the top of the tank bowl, bonded to the structure, and interconnected by bare copper grounding conductors. The metal tank structure itself will be utilized as the down conductor, and lightning protection system conductors will connect the bottom portion of the tank to buried copper ground rods. The lightning protection system will be bonded to the ground grid system.

**Safety and Security**
The proposed tank site will be fenced with a black vinyl-coated galvanized chain link fabric with no barbed wires. There will be intrusion alarms on the doors to the pedestal and the hatches to the Altitude Valve Vault. LED light fixtures (with integrated photocell) will be mounted on 15-foot poles on the site. There will also be light switches mounted at the site access gate with close proximity to the doorway for maximum control. In addition to the duckbill valve at the overflow basin, an additional totally enclosed duckbill valve will be installed inside the pedestal to prevent unauthorized tampering.

## REVIEW AND PERMITTING AGENCIES
The proposed water tank construction will require environmental and site construction permits. Potential impacts to streams and wetlands will require a State and Federal Joint Permit Applications (JPA) to the Maryland Department of the Environment (MDE) Wetlands and Waterways Division, and the US Army Corps of Engineers (USACE) review and approval as outlined below:

**Water and Sewerage Construction Permit**
The MDE will require a water and sewerage construction permit, and issue the permit after a review of final drawings and specifications of the proposed water tank.

**State Highway Administration**
There will be a grading permit required to channel the tank drainage coming from the road way. The grading plan and water computations for the site will be reviewed and approved by the Highway Hydraulics Division before the permit will be issued.

**Prince George's County Permits**
Three permits will be required from the Department of Permitting, Inspections and Enforcement (DPIE) for this project:

- A street construction permit is required to extend the existing gravel roadway to the tank site.
- A driveway permit is required to extend the paved access road from the property line into the parcel.
- A utility permit is required for the Maintenance of Traffic (MOT) on Moores Road but a grading permit is not required for this project as WSSC has the authority to self-permit their own facilities.

**Federal Aviation Administration (FAA) and Maryland Aviation Administration (MAA)**
An aeronautical study was performed for this project and a determination of "no hazard to air navigation" was noted. The "no hazard to air navigation" determination is valid for one year and can be extended with an FAA reevaluation. MAA reviewed the project and determined that the proposed water tank will not impact any public-use airports licensed by the agency.

**[The following pages contain**
**The M-NCPPC staff comments on the above project description.]**

# ANALYSIS OF PROJECT IMPACT AREAS

The Maryland-National Capital Park and Planning Commission, Prince George's County Planning Department staff has reviewed the proposed water main transmission pipeline project and provided the following comments:

## 1. ENVIRONMENTAL ASSESSMENT

According to available information, the site contains streams, steep slopes, potential Forest Interior Dwelling Species Habitat and is located within a Tier II watershed. An approved Natural Resources Inventory (NRI) will be required if the site is required to obtain local stormwater management and/or sediment and erosion control Due to the existing conditions of the site and the proposed project, at a minimum, a Government/Linear NRI submission will be required; however a full NRI is optional.

Forest impacts resulting from the proposed activity will be reviewed and approved through the Maryland Department of Natural Resources (DNR) in accordance with the Maryland Forest Conservation Act. If the project is deferred to local review, a Type 2 Tree Conservation Plan accordance with the Woodland and Wildlife Habitat Conservation Ordinance will be required.

The proposed design should avoid unnecessary impacts and minimize impacts where possible. Based on the information submitted it appears one of the impacts to streams and associated buffers is for an access road to enter the property. The access road will be extended from an existing gravel road. This impact appears to be unavoidable. The road should be designed to cross the regulated areas at the narrowest point if the opportunity exists. A non-tidal wetland permit and waterway will be evaluated by the Maryland Department of the Environment (MDE) and the U.S. Army Corps of Engineers (USACE) and mitigation requirements for the project impacts will be determined and implemented as part of the activity.

## 2. TRANSPORTATION ASSESSMENT

The proposal does not conflict with the approved area master plan transportation recommendations.

## 3. HISTORIC PRESERVATION/ARCHEOLOGY

The proposed Brandywine Water Storage Facility (12601 Branch Avenue, Brandywine) will not impact any Prince George's County Historic Sites, Historic Resources, or Archeological Resources.

## 4. CONSISTENCY WITH DEVELOPMENT/REGULATORY STANDARDS

Since the proposal is for construction of a water tower on a larger wooded site that is more than 10 acres in the R-R Zone, the water tower does not have any negative impact on the adjacent residential properties in the R-R, M-X-T Zones because the plan shows extensive setbacks from those adjacent properties.

## 5. CONSISTENCY WITH APPROVED PLANS

The application is consistent with the 2013 *Approved Subregion 5 Master Plan and Proposed Sectional Map Amendment.* The property is located within Planning Area 81A/Clinton and 85A/Brandywine.

## 6. EXISTING PUBLIC FACILITIES

The police services in the project area are provided by the Prince George's County Police Department in Clinton, District V, located at 6707 Groveton Drive (see Map 7, Public Facilities). The proposed project is served by Clinton Fire Station at 9025 Woodyard Road. The *2008 Approved Water and Sewer Plan* placed the proposed water tank site in Water and Sewer Categories 3, Community System; 4, Adequate for Community System; and 5, Future Water and Sewer Service Area (see Map 8, Water and Sewer Categories).

## 7. COMMUNITY OUTREACH

Notification letters were mailed to adjoining property owners and civic associations informing them of the project and Planning Board hearing date. Staff also notified Joint Base Andrews planners on the proposed

project via email. At the time of writing the staff report, no inquiries had been received from any adjoining property owner or civic association.

## 8. STAFF RECOMMENDATIONS

A staff review of the proposed water tank provides the following recommendations:

- The applicant should submit a Mandatory Referral application to the Prince George's County Planning Department (Administrative Review) to solicit comments for the installation of all future cell carrier pads.

- The proposed design for the access road that enters the property should avoid unnecessary impacts to streams and associated buffers and minimize them where possible. The road should be designed to cross the regulated areas at the narrowest point if the opportunity exists.

- The applicant should work with State Highway Administration (SHA) since they are currently conducting a study of the MD 5 corridor for priced/managed lanes, interchanges, and expansions. The proposed Brandywine water tank will not affect the work underway along MD 5 between Brandywine and MD 223; however, the proposed 42-inch water main along MD 5 is a critical component of the proposed water tank to connect water from the 42-inch main via a 20-inch water line to the tank.

- The applicant states that there are approximately 150 feet of unimproved right-of-way between the turn-off for the Branch Avenue Auto Auction and the starting point of the proposed gravel access road to the proposed tank site. The new access road extension to the tank site will duplicate the stone fill of the existing access road. WSSC should coordinate with DPIE and DPW&T on the maintenance of the entire length of the access gravel road that will be extended to service the water tank site.

# STAFF COMMENTS

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

**Prince George's County Planning Department** **(301) 952-3650**
**Countywide Planning Division** **www.mncppc.org**

September 1, 2015

**MEMORANDUM**

TO: Christine Osei, Planner Coordinator, Countywide Planning Division

VIA: Maria Martin, Planning Supervisor, Countywide Planning Division

FROM: Jay Mangalvedhe, Senior Planner, Countywide Planning Division

SUBJECT: **MR-1516F WSSC Proposed Brandywine Water Storage Facility**

**Project Description**

The Washington Suburban Sanitary Commission (WSSC) is proposing to install two new water storage tanks and to increase water transmission capacity within the Clinton Pressure Zone which serves southern Prince George's County. These new storage tanks will have the capacity for 2 million gallons each. The improvements will enhance the operation and reliability of the system to provide drinking water as well as increase capacity and pressure for fire suppression efforts.

In this mandatory referral, WSSC is proposing to build the first tank to cover the southern portion of the 385B Pressure Zone. It will be constructed at 12601 Branch Avenue in Brandywine, near the intersection of MD 5 and Moores Road, on 10.87 acres. The second tank for the eastern region is projected for construction in 2040.

The Brandywine site is located in Councilmanic District 9 and is inside the growth boundary as classified in the 2014 *Plan Prince George's 2035 Approved General Plan.*

**Evaluation of Existing Public Facilities**

The proposed project is served by Brandywine Fire/EMS Co. 40, a first due response station (a maximum of seven minutes travel time), and is located at 14201 Brandywine Road.

The station is equipped with two engines, one ambulance, one medic and one rescue squad. The station is staffed by both volunteer and career personnel.

The proposed project is located in Police District V, which is headquartered at 6707 Groveton Drive in Clinton. District V, and covers the southeastern portion of the County, from Charles County in the south to Calvert County in the east and MD 4 in the north.

The 2008 *Approved Water and Sewer Plan*, places this property in Water and Sewer Category 5, Future Community System.

**THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION**

**Prince George's County Planning Department** **(301) 952-3680**
**Countywide Planning Division, Transportation Planning Section** **www.mncppc.org**

September 17, 2015

# MEMORANDUM

TO: Christine Osei, Special Projects Section, Countywide Planning Division

FROM: Daniel Janousek, Planner Coordinator, Transportation Planning Section, Countywide Planning Division

SUBJECT: MR-1516F Brandywine Water Storage Facility

**Overview**
The Transportation Planning Section has reviewed the subject application for a Brandywine Water Storage facility project. A traffic impact study will not be requested for this application.

In examining the proposal, it does not appear that it would add additional traffic to the area in any substantial way during the peak hour traffic periods. Most of the traffic and pedestrian/bicycle impacts will occur during construction and will be managed by the state and local transportation agencies. The site currently has access from Moores Road via an existing easement. The proposed access road to the WSSC site appears to be adequate for the proposed use, and it does not conflict with the recommendations of the 2009 *Approved Countywide Master Plan of Transportation*, which recommends a 300-foot-wide right-of-way for MD 5 at this location.

The project does not conflict with current Maryland State Highway Administration (SHA) projects or studies, nor does it conflict with the Maryland Department of Transportation (MTA) study for transit improvements along Branch Avenue MD 5.

**Site Access Road & On-Site Road**
The applicant's proposed site access is from an existing 25-foot-wide access right-of-way that was granted by SHA south side of the site when the original parcel was subdivided for the construction of MD 5. A gravel road currently extends from Moores Road to the gate of the adjacent property (Auto Auction). This existing access road appears to be adequate for the proposed use, with a very limited amount of traffic being expected to utilize the road.

**Off-Site Access Road & Maintenance Thereof**
According to WSSC, details about the responsibility for maintenance of the gravel access road, including snow removal, have not been confirmed at the time of the report, but are being researched by WSSC. WSSC states that there is approximately 150-foot of unimproved right-of-way between the turn-off for the Auto Auction and the starting point of the proposed gravel access road to the proposed tank site. The new access road extension to the tank site will duplicate the stone fill of the existing access road. It is recommended that WSSC coordinate with DPIE and DPW&T on this maintenance issue for the entire length of the access road.

**On-Site Road Standard**
The on-site access road will be designed as an Urban Secondary Residential Road, as defined by the County road standards. It will be constructed as a 12-foot-wide one-lane asphalt road. This road will pass by the communication equipment pad and loop around the tank pedestal for an easy exit. This configuration appears to be adequate for the proposed use.

**Maryland Department of Transportation (MDOT) Projects**
SHA is currently studying the MD 5 corridor for priced/managed lanes, interchanges, and widening. It is recommended that WSSC coordinate with SHA regarding the MD 5 corridor study. The SHA studies do not indicate at this time that additional right-of-way will be needed for their future project.

In addition, MTA is studying the MD 5 corridor for a possible bus rapid transit or light rail transit system between Branch Avenue Metrorail Station and communities in Charles County. The project is named the "Southern Maryland Rapid Transit Study". The proposed WSSC project does not conflict with the MTA's proposed alignments, which are along the east side of MD 5.

**Conclusion**
The Transportation Planning Section has reviewed the referral, and it determines that the proposed Brandywine Water Storage Facility will not increase overall traffic in the immediate area or have a negative impact on transportation. The proposal does not conflict with the 2009 *Approved Countywide Master Plan of Transportation* recommendations, and it does not appear to conflict with SHA or MTA plans or studies. WSSC should continue to work with DPIE and DPW&T regarding the details of the access improvements to the project, and the maintenance responsibilities for the gravel road.

**From:** Krause, Robert
**Sent:** Tuesday, September 01, 2015 10:55 AM
**To:** Osei, Christine
**Cc:** Berger, Howard
**Subject:** RE: RE: Proposed Brandywine Water Storage Facility - MR-1516F

The proposed Brandywine Water Storage Facility (12601 Branch Avenue, Brandywine) will not impact any Prince George's County Historic Sites, Historic Resources, or Archeological Resources.

Please let me know if you need further information.

Best regards,

Robert

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

Countywide Planning Division
Environmental Planning Section

14741 Governor Oden Bowie Drive
Upper Marlboro, Maryland 20772
TTY: (301) 952-4366
www.mncppc.org/pgco

September 22, 2015

TO: Christine Osei, Planner Coordinator, Special Projects Section

VIA: Katina Shoulars, Planning Supervisor, Environmental Planning Section

FROM: Chuck Schneider, Senior Planner, Environmental Planning Section

SUBJECT: MR-1516F WSSC-Proposed Brandywine Water Storage Facility

The Environmental Planning Section has reviewed the Application for Mandatory Review dated September 4, 2015 for the Washington Suburban Sanitary Commission (WSSC) - Proposed Brandywine Water Storage Facility Project. The following comments, based on a review of the submitted application and other available information, are provided for your consideration.

**Background**

The Environmental Planning Section has not reviewed any previous development applications for the subject site.

**Proposed Activity**

The WSSC is proposing to construct two storage tanks that will have a capacity of two-million gallons each, located off Branch Avenue (Maryland Route 5) in the Brandywine area. One tank is proposed to be constructed in the near future and the other tank is proposed to be constructed in 2040. These tanks will help supply water to nearby fire/EMS stations and will help enhance and serve the Brandywine and southern Prince George's County area.

**Site Description**

The subject 8.25-acre site is located at 12601 Branch Avenue (Maryland Route 5). A review of the available information indicates that streams and steep slopes are found to occur on the site. The predominant soils found to occur according to the USDA NRCS Web Soil Survey are Beltsville silt loam, Croom-Marr Complex, and the Widewater and Issue soils series. According to PGAtlas.com, Prince George's County GIS database, Marlboro clay does not occur on or in the vicinity of this site. According to the Sensitive Species Project Review Area (SSSPRA) map received from the Maryland Department of Natural Resources Natural Heritage Program, there are no rare, threatened, or endangered species found to occur on or near this property. The on-site stream system is within the Piscataway Creek watershed, which drains to the Potomac River. According to PGAtlas.com, this site contains Regulated and Evaluation Areas of the designated network of the Approved Countywide Green Infrastructure Plan. The site has frontage on Branch Avenue, a master planned freeway, which is regulated for traffic-generated noise when residential uses are proposed. Branch Avenue is not a designated scenic road.

The property is located in Environmental Strategy Area 2 as designated by 2014 *Plan Prince George's 2035 Approved General Plan*.

**Environmental Review**

**Existing Conditions/Natural Resources Inventory**
According to available information, the site contains streams, steep slopes, potential Forest Interior Dwelling Species Habitat and is located within a Tier II watershed. An approved Natural Resources Inventory (NRI) will be required if the site is required to obtain local stormwater management and/or sediment and erosion control approval. Due to the existing conditions of the site and the proposed project, at a minimum, a Government/Linear NRI submission will be required, though a full NRI is optional.

The applicant should contact the Environmental Planning sections for instructions for the preparation and submission of a Government/Linear NRI, which can be found in the Prince George's County Environmental Technical Manual (ETM).

**Comment:** No additional information with regard to existing conditions is required at this time.

**Forest Conservation**
Forest impacts resulting from the proposed activity will be reviewed and approved through the Maryland Department of Natural Resources (DNR) in accordance with the Maryland Forest Conservation Act. If the project is deferred to local review, a Type 2 Tree Conservation Plan accordance with the Woodland and Wildlife Habitat Conservation Ordinance will be required.

Based on the proposed activity, a Roadside Tree Permit and an approved Forest Conservation Plan (FCP) will be required.

**Comment:** No additional information with regard to forest conservation is required at this time.

**Preservation and/or Restoration of Regulated Environmental Features**
The site contain regulated environmental features that are required to be preserved and/or restored to the fullest extent possible. The presence and extent of regulated environmental features will be determined during the review and approval of an NRI if required.

The proposed design should avoid unnecessary impacts and minimize impacts where possible. Based on the information submitted it appears one of the impacts to streams and associated buffers is for an access road to enter the property. The access road will be extended from an existing gravel road. This impact appears to be unavoidable. The road should be designed to cross the regulated areas at the narrowest point if the opportunity exists. A non-tidal wetland permit and waterway will be evaluated by the Maryland Department of the Environment (MDE) and the U.S. Army Corps of Engineers (USACE) and mitigation requirements for the project impacts will be determined and implemented as part of the activity.

**Comment:** No additional information with regard to impacts is required at this time.

**Noise**
This property is located on the west side of Branch Avenue (Maryland Route 5), which is identified as a master planned freeway. Branch Avenue has been identified as a transportation-related noise generator; however, this application does not propose residential or residential-type uses at this time.

**Comment:** No additional information regarding noise is required.

**Stormwater Management**
A stormwater management concept letter and plan were not included with the application. At this time it appears that the site will be subject to state review for stormwater management. The project will be required to conform to the current requirement to use environmental site design to the maximum extent practicable under state law.

**Comment:** No additional information with regard to stormwater management is required at this time.

Thank you for the opportunity to comment on the WSSC - Proposed Brandywine Water Storage Facility. If you have questions regarding these comments, please contact the Environmental Planning Section at 301-952-3650.

**From:** Zhang, Henry
**Sent:** Thursday, September 17, 2015 5:05 PM
**To:** Osei, Christine
**Cc:** Lareuse, Susan
**Subject:** RE: Proposed Brandywine Water Transmission Facility - MR-1516F

Christine,

The Urban Design Section has reviewed this MR application.

Since the proposal is for construction of a water tower on a larger wooded site that is more than 10-acres in the R-R Zone, the water tower does not have any negative impact on the adjacent residential properties in the R-R, M-X-T Zones because the plan shows extensive setbacks from those adjacent properties.

The proposal is subject to the requirements of Section 4.2 Landscaping strips, Section 4.7 buffering incompatible uses, and Section 4.9 Sustainable Landscaping and is due to the proposed water tower being a "Medium-Impact use" and being adjacent to a residential zone. Since only a limited portion of the site fronting Route 5 will be developed, those landscape manual requirements can be easily satisfied by the existing woodland on the site.

The proposal is also subject to the requirements of Tree Canopy Coverage (TCC) Ordinance. In the R-R zone, the required TCC is 15 percent of the site. Since most of the site is wooded, this requirement can also be easily met.

If the proposed development results in any removal of the existing specimen trees, in accordance with Subtitle 25, a relief needs to be requested and approved.

The Urban Design Section has no additional comments on the design of the proposed water tower.

Thanks for the opportunity to comment on this MR application.

Henry

# MANDATORY REFERRAL REVIEW

## PROPOSED BRANDYWINE ELEVATED WATER TANK
## WASHINGTON SUBURBAN SANITARY COMMISSION
## (BRANCH AVENUE/MOORES ROAD)

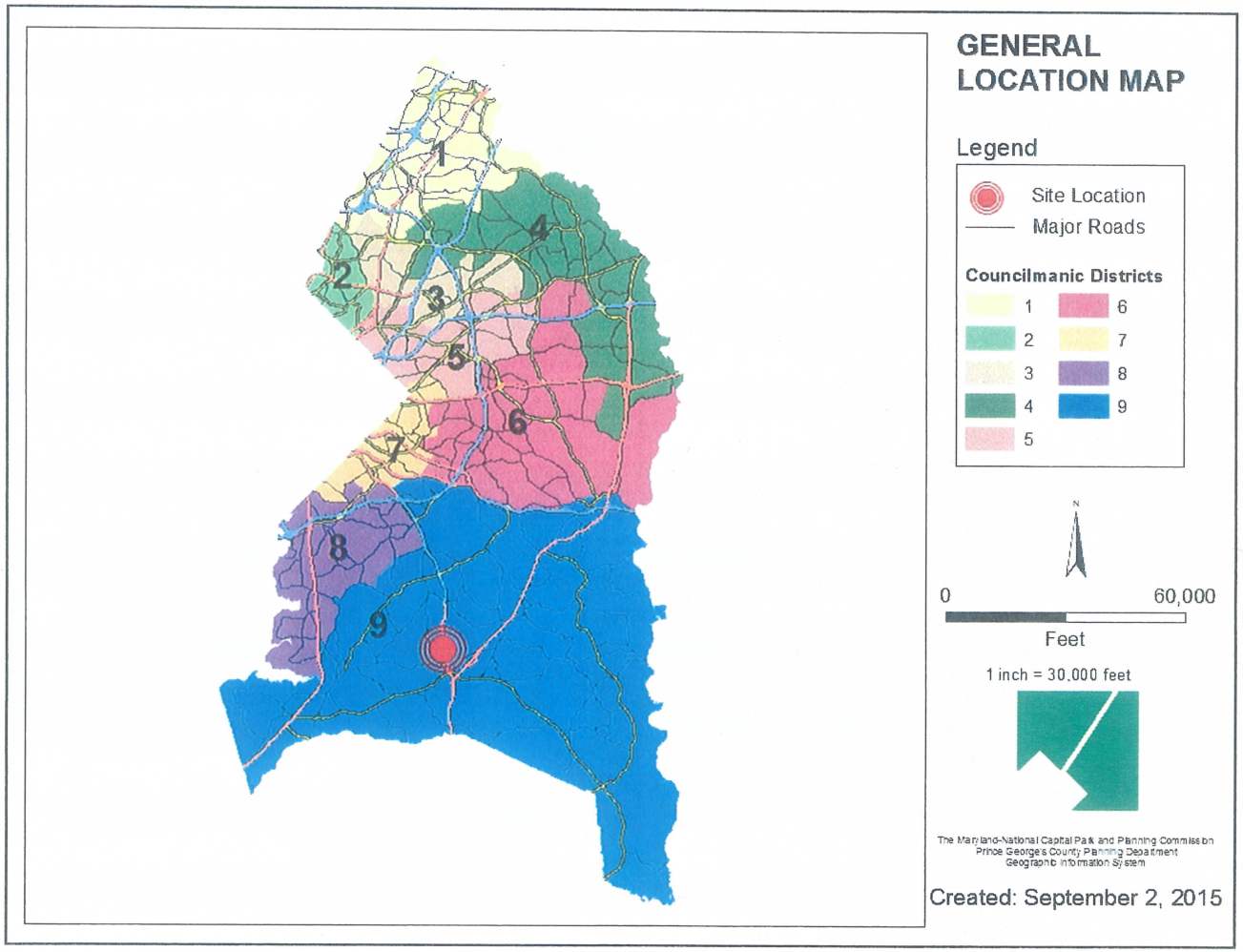
for review by

PRINCE GEORGE'S COUNTY PLANNING BOARD

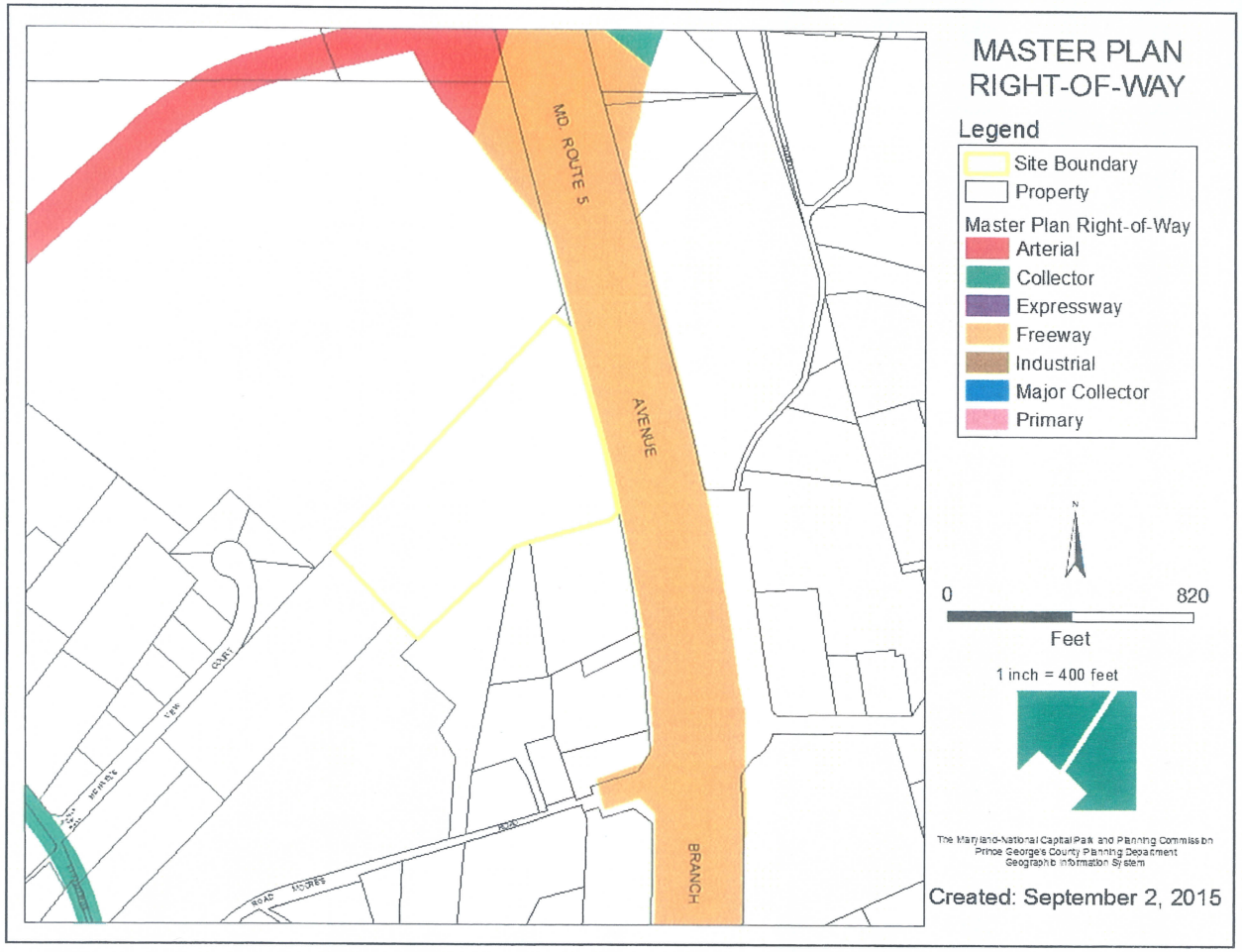
October 29, 2015

AGENDA ITEM: #5
APPLICATION No: MR-1516F

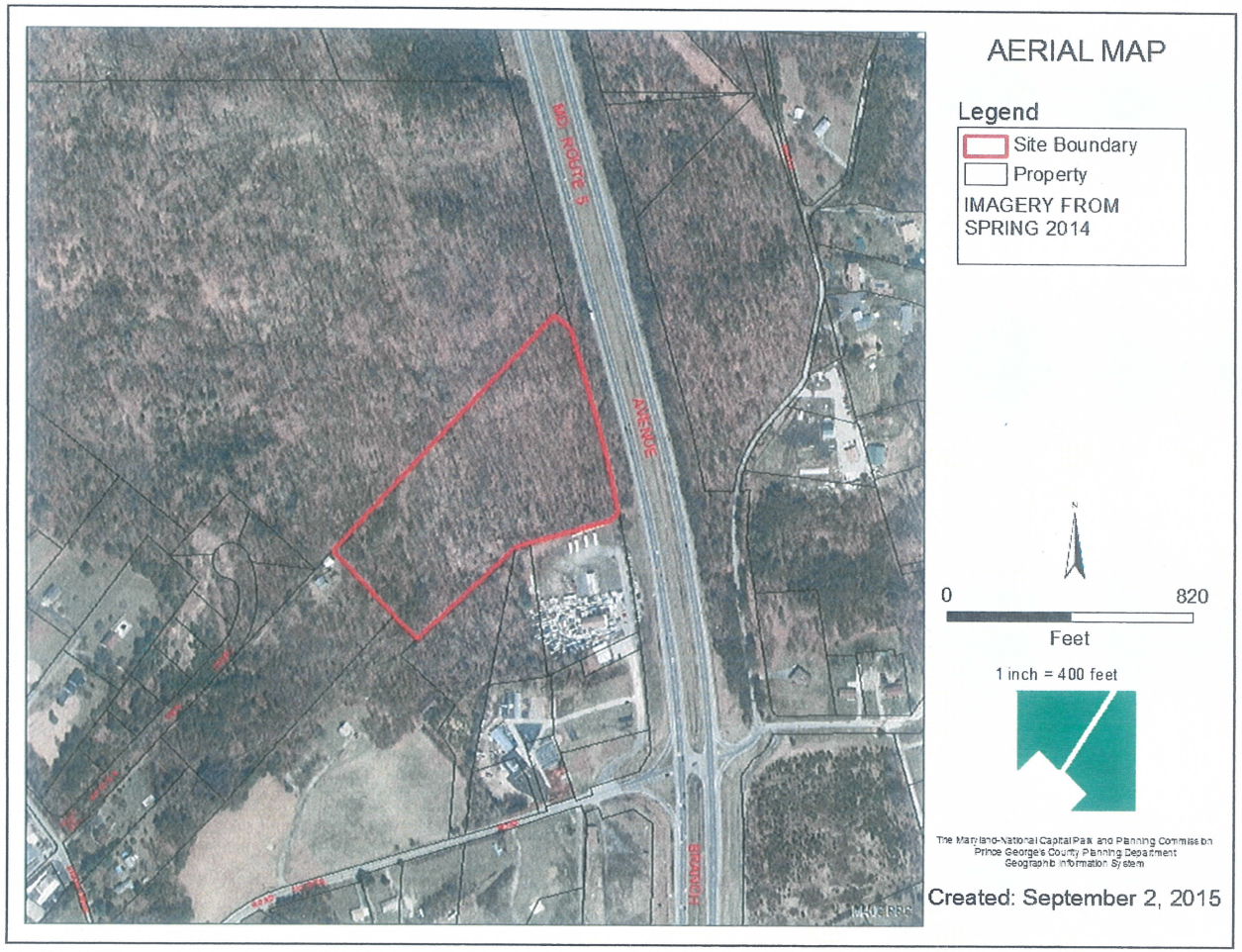
# GENERAL PROJECT LOCATION



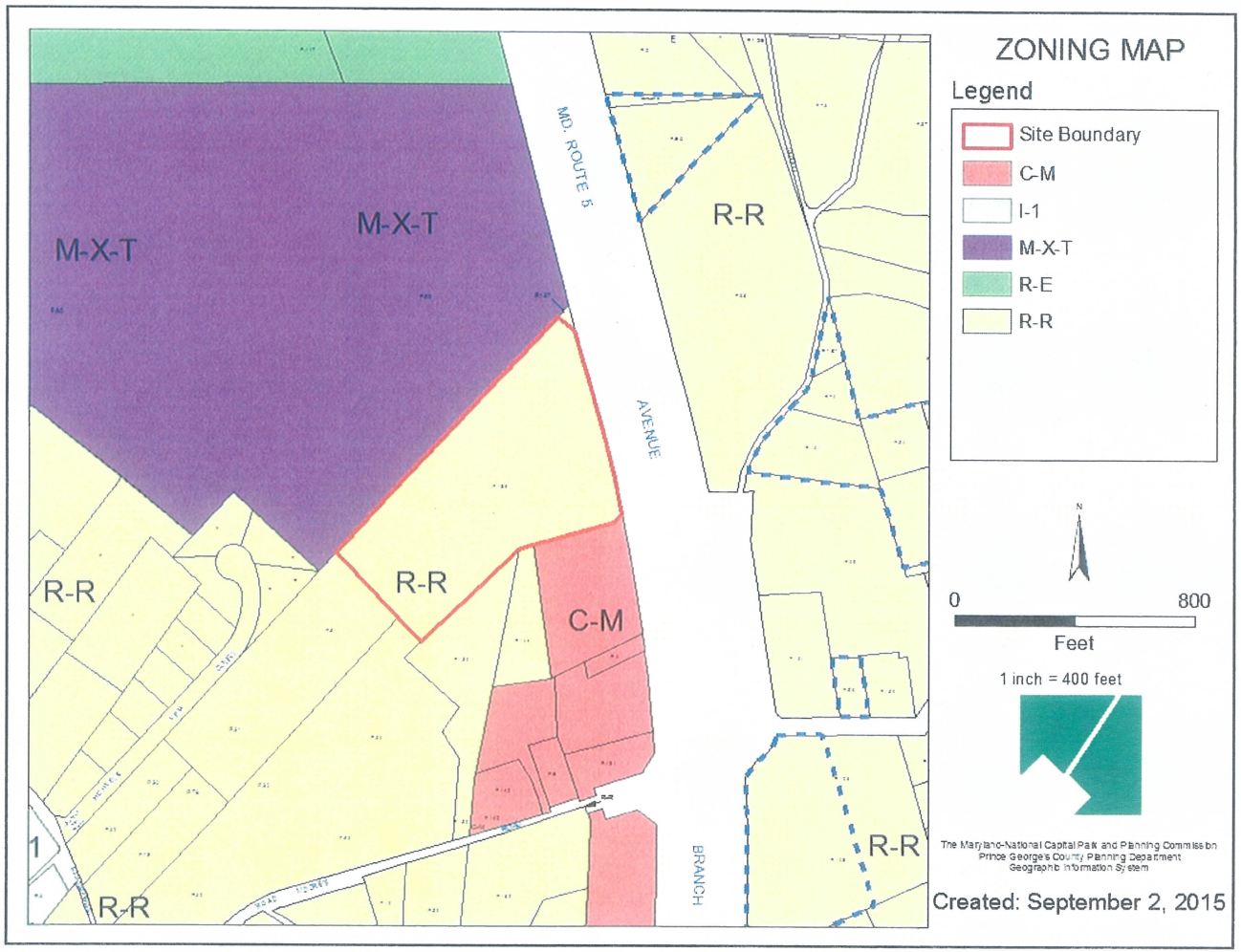
# EXISTING TRANSPORTATION NETWORK



# AERIAL VIEW OF PROJECT AREA

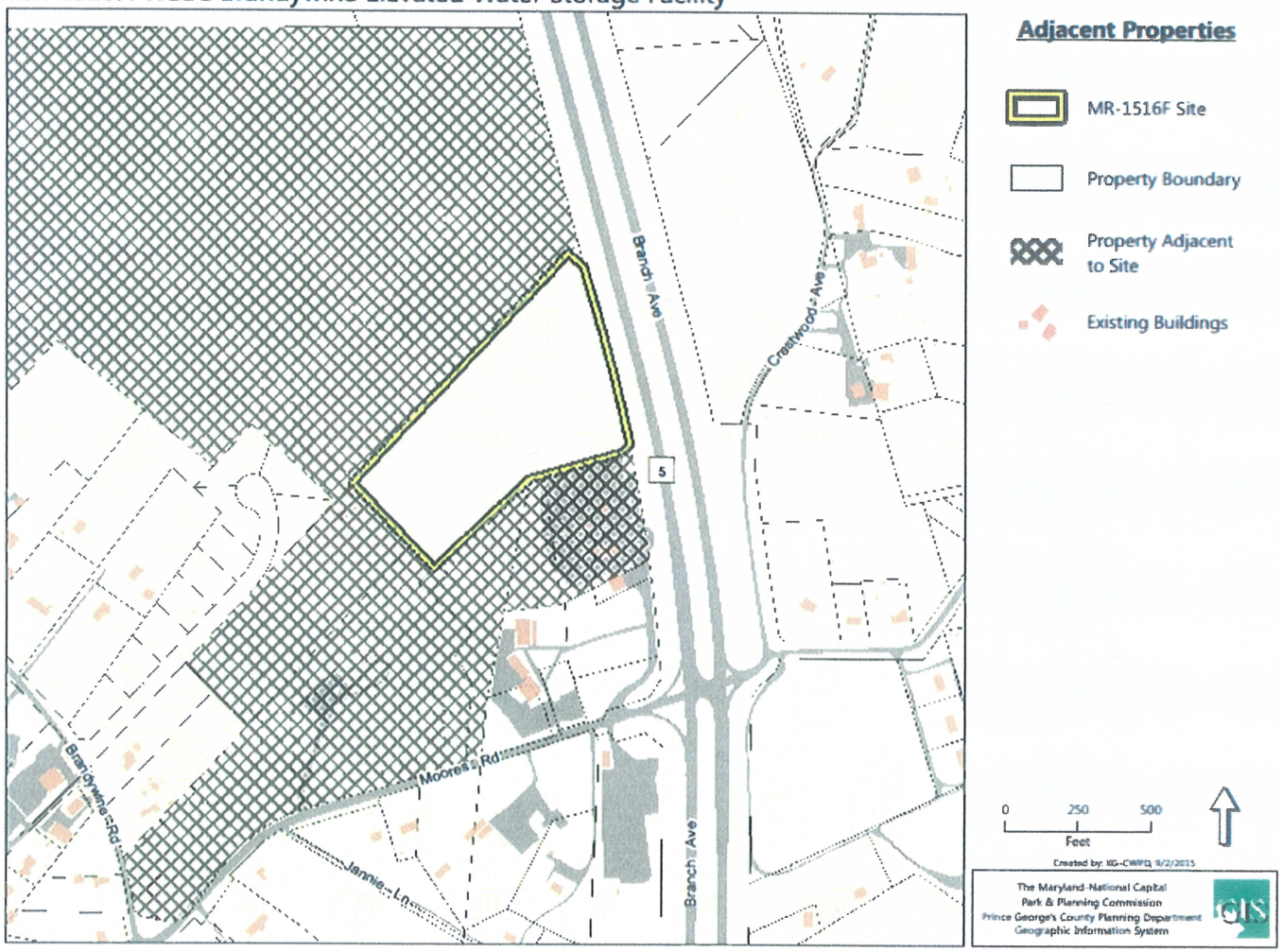


# EXISTING ZONING



# ADJACENT OWNER NOTIFICATION

MR-1516F: WSSC Brandywine Elevated Water Storage Facility



# CLINTON ZONE WATER STORAGE AND TRANSMISSION IMPROVEMENTS STUDY

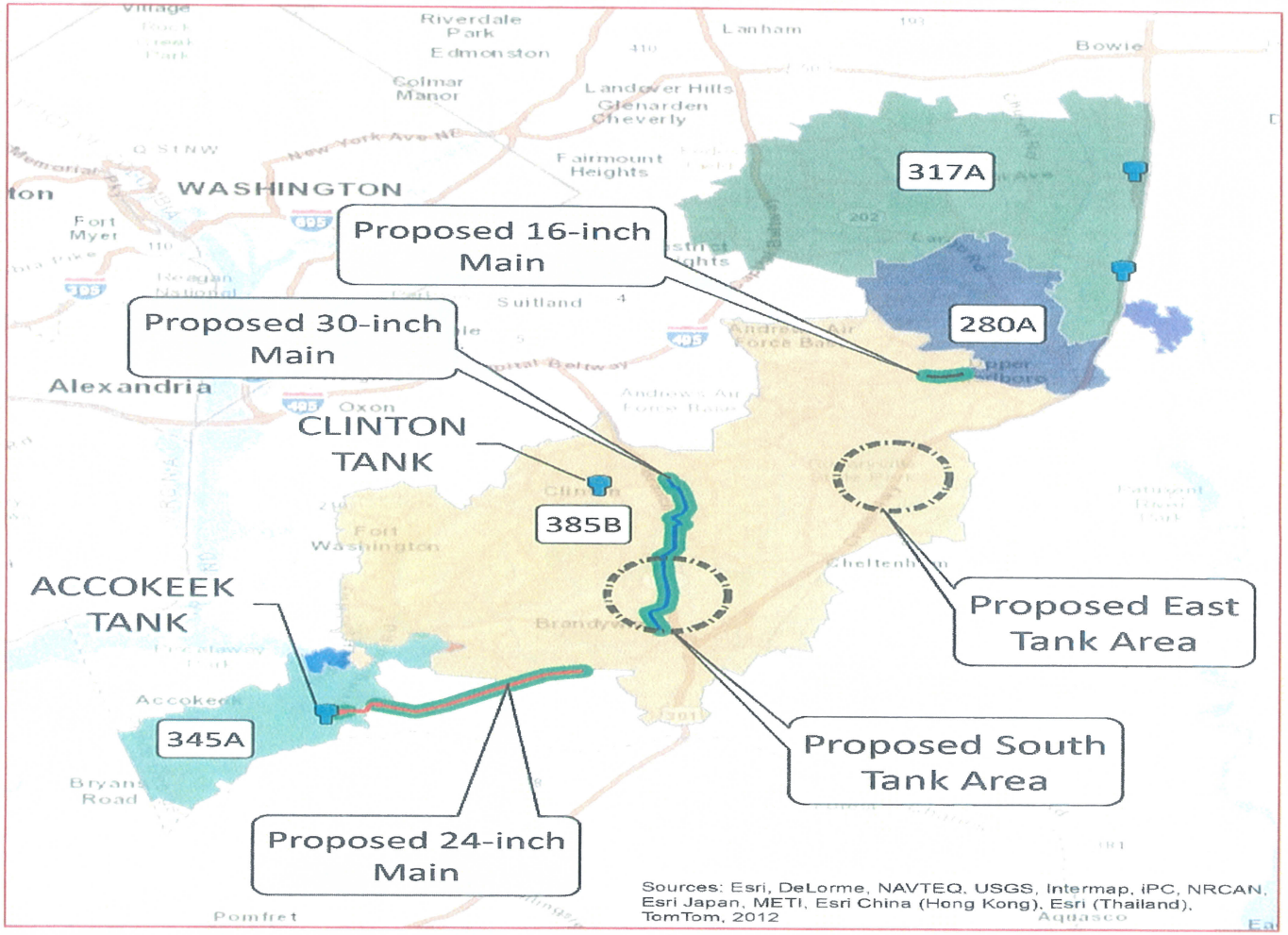
## Background:

- Recent development and increased demand in the southern portion of the County, and increased bulk water sales to Charles County have stressed the capacity of the 385B Pressure Zone.
- WSSC has had difficulty maintaining a desired water level in the Accokeek Tank in 345A Pressure Zone, which is supplied by the 385B Pressure Zone.
- Increasing water demand from anticipated growth/other operational issues in the area will become more frequent and severe.

## Recommendations:

- Two new 2-million gallon elevated water storage tanks in the 385B Pressure Zone, one in the southern region and one in the eastern region are being proposed.
- A new 42-inch/30-inch transmission main along Route 5 (Branch Avenue) connecting the two ends of the 385B Pressure Zone is being proposed to supply the proposed southern tank.

# CLINTON ZONE WATER STORAGE AND TRANSMISSION IMPROVEMENTS STUDY AREA



# WATER DEMAND BY PRESSURE ZONE (MILLION GALLON)

| PRESSURE ZONE | Existing Average Daily Demand (ADD) | Existing Average Maximum Daily Demand (MDD) | Year 2030 ADD | Year 2030 MDD |
|---|---|---|---|---|
| 385B | 7.22 | 10.53 | 9.92 | 14.46 |
| 317A | 6.97 | 8.34 | 7.23 | 10.55 |
| 345A | 1.03 | 1.23 | 2.88 | 3.38 |
| 280A | 1.72 | 2.06 | 1.67 | 2.44 |

WSSC 2015 Brandywine Elevated Water Storage Facility
Contract No. BE4507A06

# PROPOSED BRANDYWINE ELAVATED WATER STORAGE FACILITY

**PROJECT OBJECTIVES:**

- ❑ Provide the necessary water supply/pressure to protect homes and businesses for the foreseeable future.
- ❑ Support additional development (economic growth) in this part of the County/Southern Maryland.
- ❑ Enhance the reliability of the water system/increase water pressure for fire suppression in the Zone.

# PROJECT SUMMARY

- 2-Million gallon, 156 feet tall composite elevated water storage facility
- Construction of a new access road
- Creation of storm water management
- Tank Components:
  - Supply line
  - Overflow line
  - Drain line
  - Electrical connections
- Other Proposed Uses:
  - Four communication cell tower pads (see site layout map)

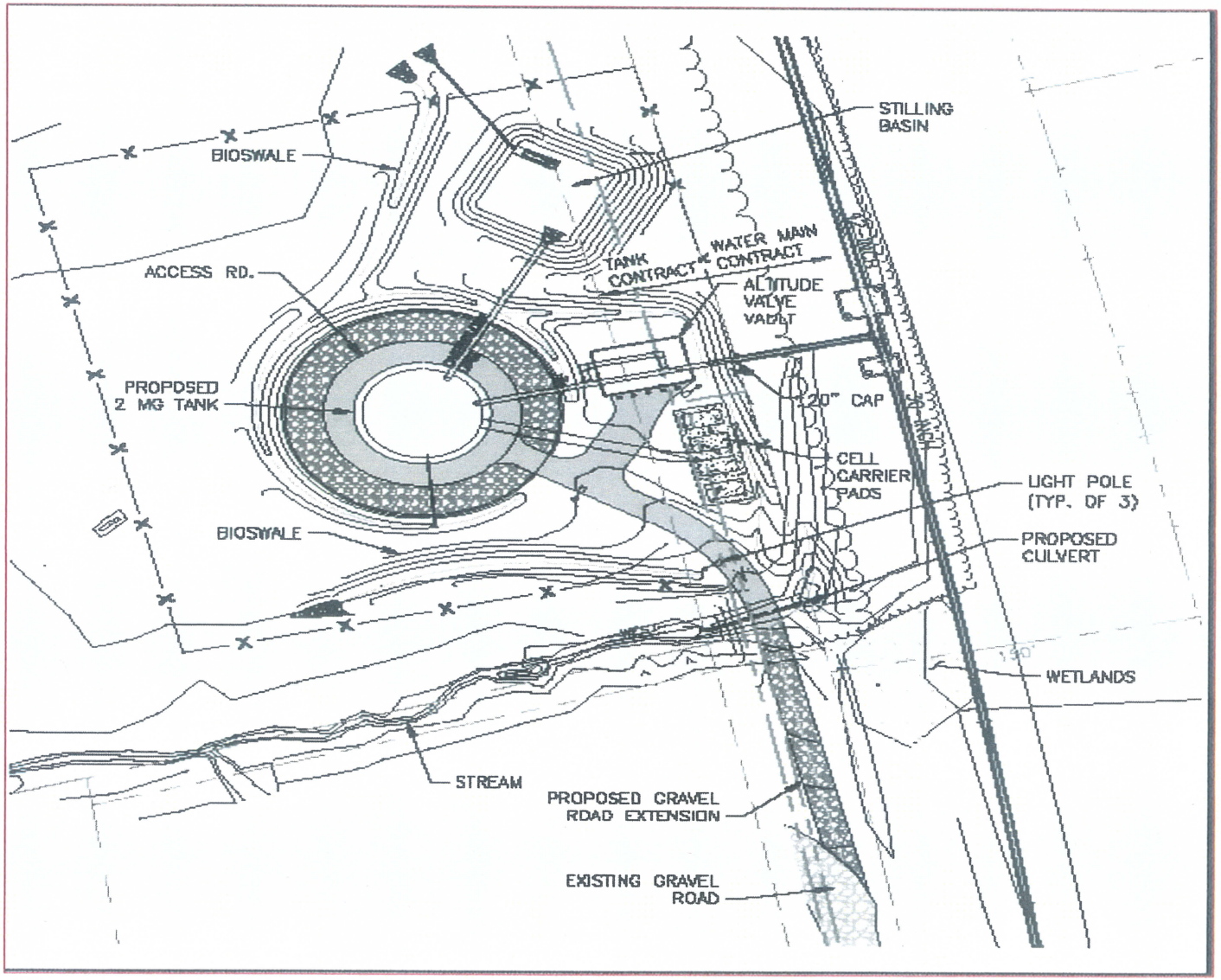
# SITE SELECTION CRITERIA

- Water pressure (hydraulics) is required.
- High elevation areas need to provide water pressure to allow water to flow by gravity across the service zone. Design and location would minimize the tank height and possible impact on the viewshed of the existing development. Areas with the higher ground elevations were considered most favorable.
- Add hydraulic analysis and physical connections to the existing water main.

# EXISTING USES - PROPOSED WATER TANK SITE

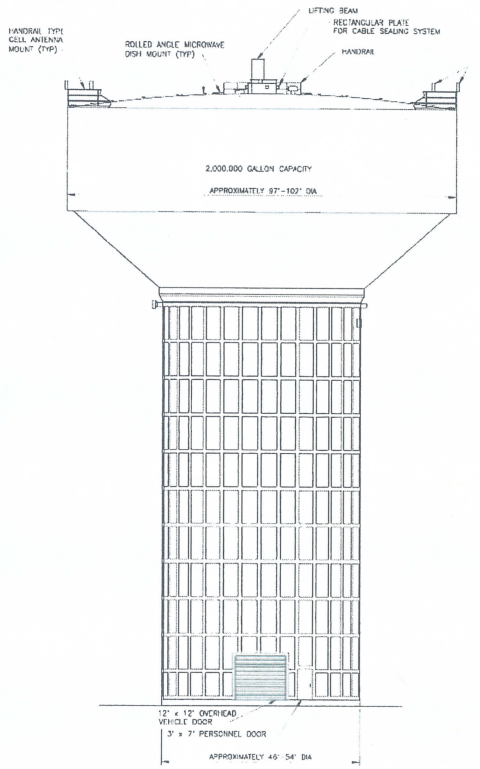
# ELECTRICAL CONNECTION/SITE ACCESS ROAD

# PROPOSED WATER TANK SITE LAYOUT

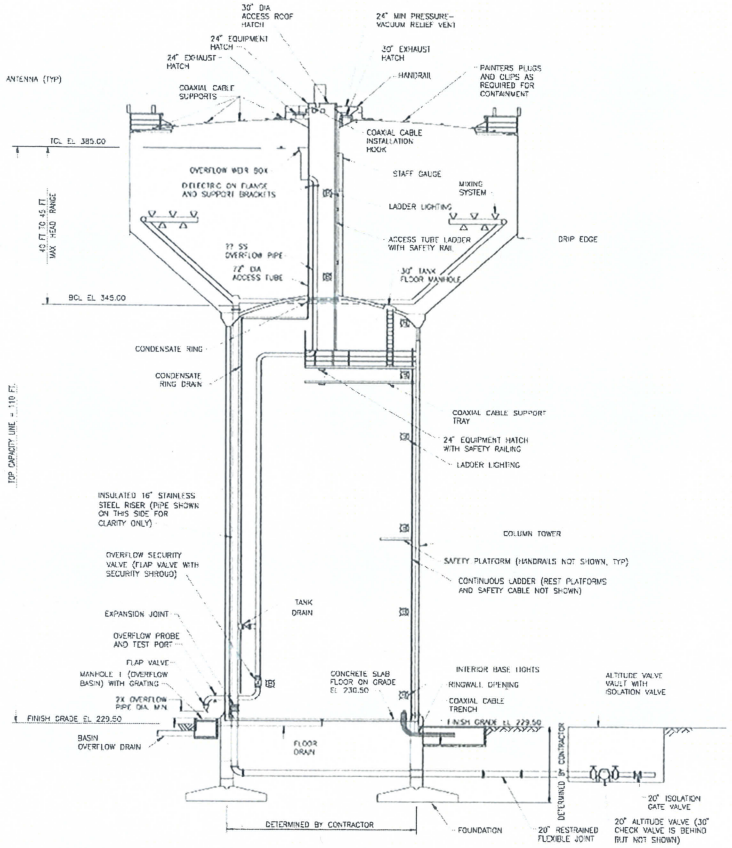


# FUTURE CELL CARRIER EQUIPMENT/PADS

# PROPOSED WATER TANK DESIGN




ELEVATION
SCALE: N.T.S.




SECTION
SCALE: N.T.S.

## NOTES

GENERAL:

1. SEE CONTRACT DOCUMENTS FOR DESIGN CRITERIA AND DETAILS. APPLICABLE ELEVATED TANK SPECIFICATIONS ARE AWWA D107-10 AND ACI 318-95 INCLUDING APPENDICES.
2. ACTUAL TANK DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR IN ACCORDANCE WITH INDICATED MEASUREMENTS AND CONTRACT DOCUMENTS.
3. PROVIDE ADEQUATE FREEBOARD TO ENSURE ROOF SUPPORTS AND ATTACHMENTS REMAIN ABOVE THE HIGH WATER LEVEL.
4. SEE CONTRACT DOCUMENTS FOR STEEL TANK COATING REQUIREMENTS.
5. TANK PIPING, APPURTENANCES, AND EQUIPMENT ARE ROTATED FOR CLARITY ON DRAWING.
6. TANK SHALL BE EQUIPPED WITH SUPPORTS AND ASSOCIATED FACILITIES AND EQUIPMENT TO ROUTE A MINIMUM OF ?? 2-INCH DIAMETER COAXIAL CABLES TO THE DOME OF THE TANK.
7. ADDITIONAL DETAILS AND DESIGN INFORMATION SHALL BE PROVIDED BY THE TANK MANUFACTURER FOR A COMPLETE DESIGN. THE DESIGN SHOWN IS SCHEMATIC IN NATURE, BUT DISPLAYS THE ELEMENTS AND STANDARD OF DESIGN THAT IS EXPECTED.

PIPING, VALVES, FITTINGS:

1. ALL PIPING SHALL BE PRESSURE TESTED.
2. THE HYDRAULIC TEST PRESSURE SHALL BE AS DETERMINED IN SECTION 02510 3.15.
3. ALL PIPE, VALVES, AND FITTINGS SHALL HAVE MINIMUM PRESSURE RATINGS THAT EXCEED THE HYDRAULIC TEST PRESSURE DETERMINED IN NOTE 2.

FOUNDATION:

1. REFER TO THE GEOTECHNICAL REPORT FOR RECOMMENDATIONS REGARDING ALLOWABLE BEARING CAPACITY.
2. DESIGN FOUNDATION SYSTEM PER GEOTECHNICAL REPORT RECOMMENDATIONS AND MAXIMUM APPLICABLE DESIGN LOADS IN ACCORDANCE WITH AWWA D107-10 AND APPENDICES.
3. DESIGN FOUNDATION IN ACCORDANCE WITH ACI 318.
4. FOUNDATION AND CONCRETE PEDESTAL DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR.

MECHANICAL:

1. OVERFLOW PIPING BELOW DIELECTRIC FLANGE SHALL BE FABRICATED OF SCH 10 316L STAINLESS STEEL.
2. PROVIDE HANGERS, BRACKETS, AND THRUST RESTRAINT AS REQUIRED.
3. OVERFLOW SYSTEM SHALL BE DESIGNED TO ACCOMMODATE MAXIMUM FILL RATE AS NOTED IN SPECIFICATION.
4. TANK DRAIN PIPING SHALL BE SLOPED AND INSULATED.

MISCELLANEOUS STEEL:

1. ALL LADDERS NOT SUBMERGED IN WATER AND SAFETY PLATFORMS SHALL BE GALVANIZED STEEL. SUBMERGED LADDERS SHALL BE CARBON STEEL AND PAINTED WITH SAME COATING AS REST OF TANK.
2. PROVIDE HINGED HATCH IN WALKWAY DIRECTLY BELOW EQUIPMENT HATCH.
3. PROVIDE NOTCHED ALUMINUM SAFETY RAILS ON ALL LADDERS.
4. ROOF ACCESS TUBE HATCH SHALL BE 36-INCHES IN DIAMETER AND EQUIPMENT HATCH SHALL BE 24-INCHES IN DIAMETER. TANK BOWL ACCESS HATCHES SHALL BE A MINIMUM OF 30-INCHES IN DIAMETER.

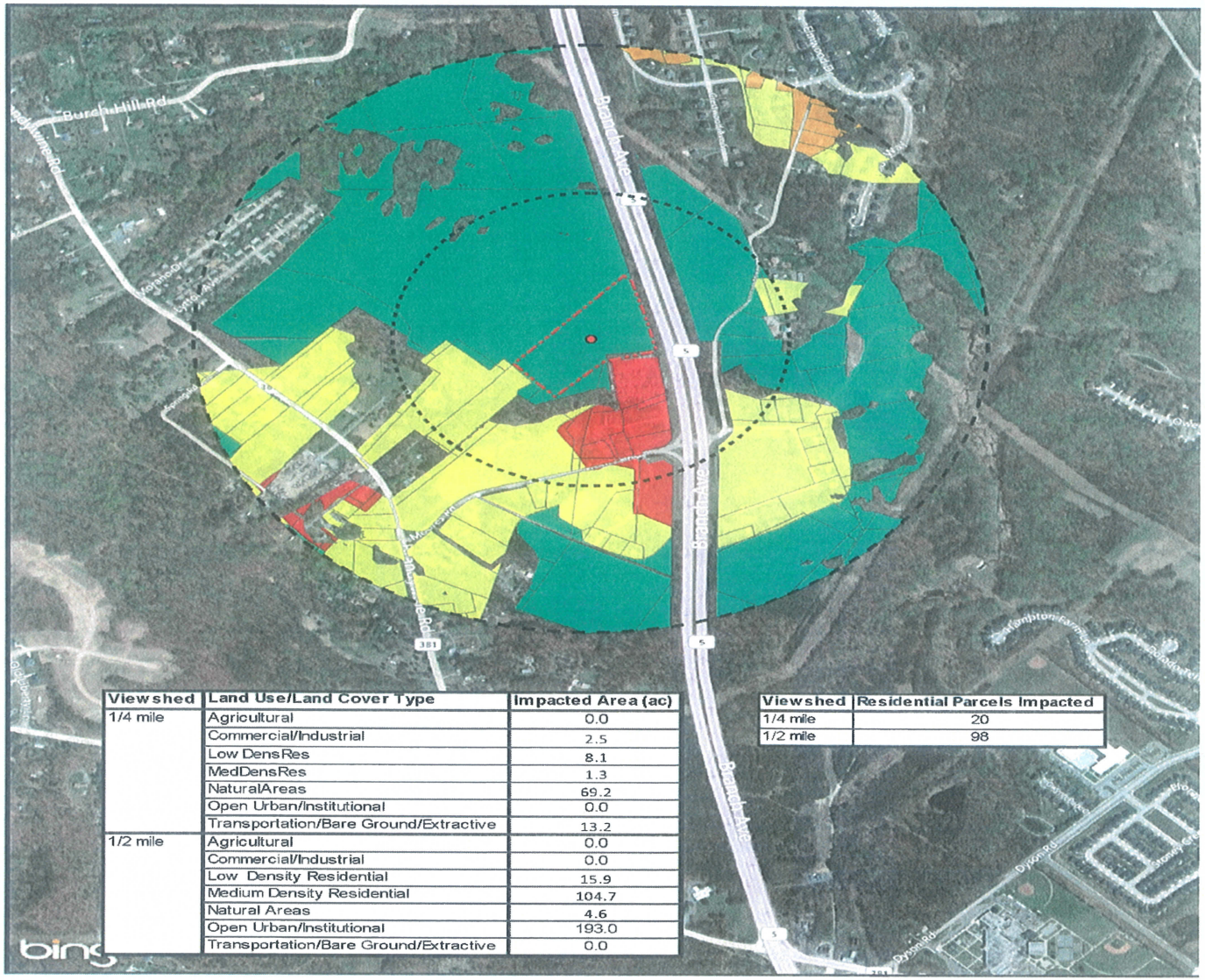
ANTENNAE:

1. THERE WILL BE APPROXIMATELY ?? ANTENNAE THAT WILL BE MOUNTED ON THE HANDRAIL TYPE CELL ANTENNA MOUNT.
2. EACH ANTENNA WOULD BE APPROXIMATELY 40-LBS AND MEASURES APPROXIMATELY 60" TALL BY 12" WIDE BY 7" DEEP.

## LEGEND

BCL BOTTOM CAPACITY LEVEL
TCL TOP CAPACITY LEVEL

# VIEWSHED OF PROJECT AREA




| Viewshed | Land Use/Land Cover Type | Impacted Area (ac) |
|---|---|---|
| 1/4 mile | Agricultural | 0.0 |
| | Commercial/Industrial | 2.5 |
| | Low DensRes | 8.1 |
| | MedDensRes | 1.3 |
| | NaturalAreas | 69.2 |
| | Open Urban/Institutional | 0.0 |
| | Transportation/Bare Ground/Extractive | 13.2 |
| 1/2 mile | Agricultural | 0.0 |
| | Commercial/Industrial | 0.0 |
| | Low Density Residential | 15.9 |
| | Medium Density Residential | 104.7 |
| | Natural Areas | 4.6 |
| | Open Urban/Institutional | 193.0 |
| | Transportation/Bare Ground/Extractive | 0.0 |

| Viewshed | Residential Parcels Impacted |
|---|---|
| 1/4 mile | 20 |
| 1/2 mile | 98 |

# WATER TANK VIEW FROM 1/4 MILE

# WATER TANK VIEW FROM 1/2 MILE

# REVIEW/PERMITING AGENCIES

**IMPACTS ON NATURAL RESOURCES:**
There are two types of permits to be evaluated; environmental permits and site construction permits:

- **State/Federal Joint Permit Application (JPA):** Impact to streams, wetlands or associated buffers as a result of the proposed project will require the submittal of a State/Federal Joint Permit Application (JPA) to the Maryland Department of the Environment (MDE) Wetlands and Waterways Division and the US Army Corps of Engineers (USACE) for approval. Due to the wetland impact, a JPA will be required for this project.
- **Water and Sewerage Construction Permit:** The MDE requires that a water and sewerage construction permit be obtained for any project that will be constructed to provide water to the public. MDE requires final signed drawings and specifications before releasing the permit.

# REVIEW/PERMITING AGENCIES (Continued)

- **State Highway Administration (SHA):** The tank site is adjacent to the Route 5 right-of-way. Because of the drainage coming from the road onto the site, there will be grading required to channel this flow to the proposed culvert. In accordance with discussions with SHA, a utility permit will have to be obtained to allow the grading in the right-of-way. The grading plan and water computations for the area would have to be reviewed and approved by the Highway Hydraulics Division before the permit can be issued.

- **Prince George's County Permits**: There are three permits that have to be obtained from Prince George's County for this project. A street construction permit is required in order to extend the existing gravel roadway to the tank site. A driveway permit is required to extend the paved access road from the property line into the parcel. A utility permit is required for Moores Road but a grading permit is not required for this project as WSSC has the authority to permit their own facilities.

# STAFF RECOMMENDATIONS

- The applicant should submit a Mandatory Referral application to the Prince George's County Planning Department (Administrative Review) to solicit comments for the installation of all future cell carrier pads.

- The proposed design for the access road that enters the property should avoid unnecessary impacts to streams and associated buffers and minimize them where possible. The road should be designed to cross the regulated areas at the narrowest point if the opportunity exists.

- The applicant should work with State Highway Administration (SHA) since they are currently conducting a study of the MD 5 corridor for priced/managed lanes, interchanges, and expansions. The proposed Brandywine water tank will not affect the work underway along MD 5 between Brandywine and MD 223; however, the proposed 42-inch water main along MD 5 is a critical component of the proposed water tank to connect water from the 42-inch main via a 20-inch water line to the tank.

- The applicant states that there are approximately 150-feet of unimproved right-of-way between the turn-off for the Auto Auction and the starting point of the proposed gravel access road to the proposed tank site. The new access road extension to the tank site will duplicate the stone fill of the existing access road. The applicant should coordinate with DPIE and DPW&T on the maintenance on the entire length of the access gravel road that will be extended to service the water tank site.

# MANDATORY REFERRAL REVIEW

## PROPOSED BRANDYWINE ELEVATED WATER TANK (BRANCH AVENUE/MOORES ROAD)

## THIS CONCLUDES STAFF PRESENTATION

## QUESTIONS?/CLARIFICATIONS?

AGENDA ITEM: #5
APPLICATION No: MR-1516F