



**MONTGOMERY COUNTY DEPARTMENT OF PARKS**  
MARYLAND-NATIONAL CAPITAL PARK & PLANNING COMMISSION

MCPB Item # 8  
July 23, 2020

June 30, 2020

**MEMORANDUM**

**TO:** Montgomery County Planning Board

**VIA:** Mike Riley, Director of Parks *MR*  
Miti Figueredo, Deputy Director of Parks *MF*  
Jai Cole, Chief, Park Planning and Stewardship Division (PPSD) *J Cole*

**FROM:** Matt Harper, Natural Resources Manager, Park Planning and Stewardship Division (PPSD) *M Harper*

**PROJECT:** WSSC Beach Drive 30" Water Main Replacement

**REVIEW TYPE:** Mandatory Referral No. MR2020003

**APPLICANT:** Washington Suburban Sanitary Commission (WSSC)

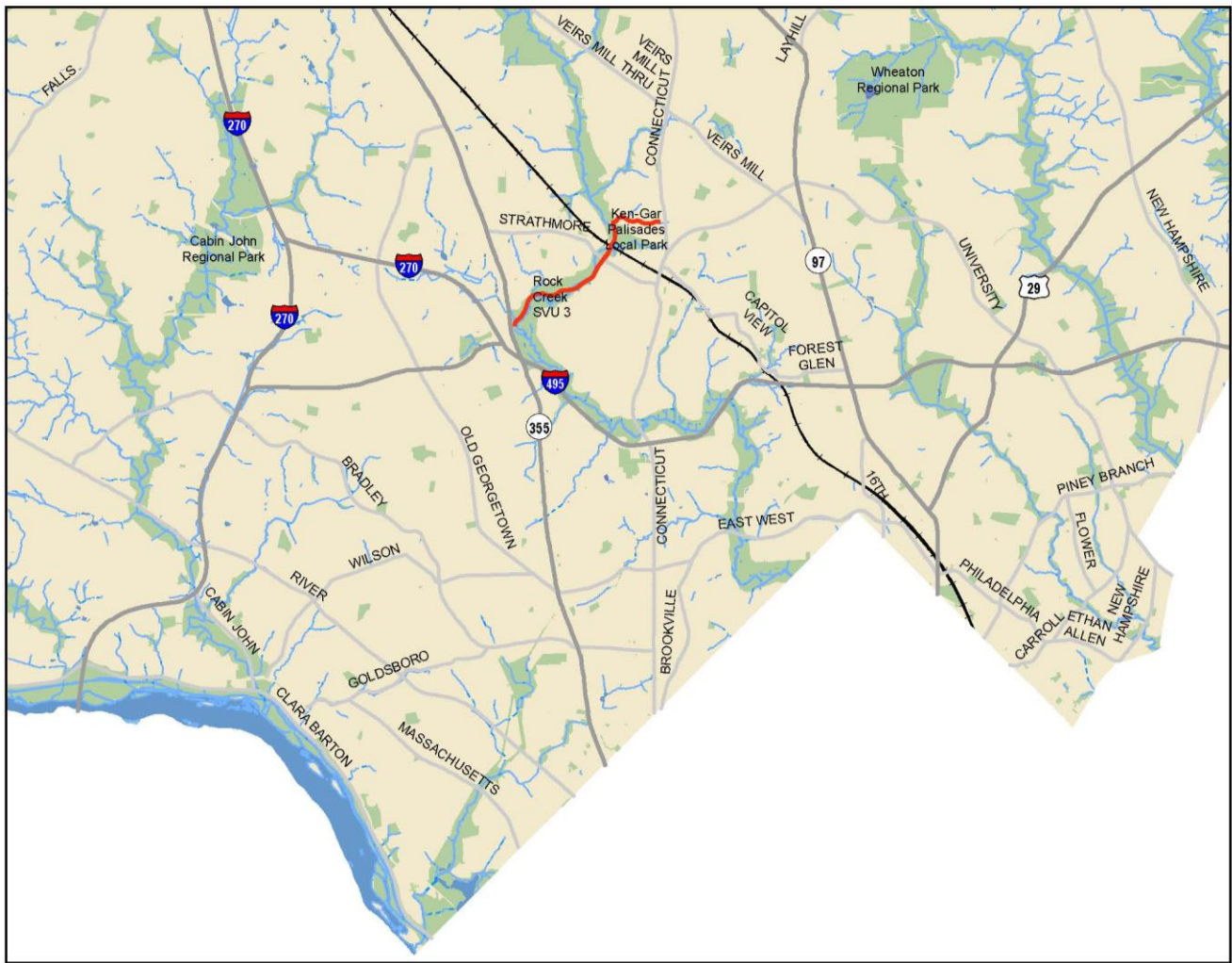
**APPLYING FOR:** Plan Approval with Conditions

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**RECOMMENDATION:** Approve with conditions the construction of WSSC Beach Drive 30" water main replacement project located on M-NCPPC Parkland and Montgomery County Property.

**Background**

WSSC is proposing to replace an aging 30-inch diameter water main with approximately two miles of new pipe along Beach Drive and Wexford Drive in Kensington, Maryland. The 30" transmission water main delivers treated, potable water from WSSC's Water Filtration Facilities to a series of water storage tanks and towers that then distribute water to homes and businesses in the region. The existing water main in the project area, originally constructed in 1952, bisects Rock Creek Stream Valley Unit 3 and Ken-Gar Palisades Local Park before running beneath Wexford Drive towards Connecticut Avenue. WSSC is proposing a new alignment within the Beach Drive and Wexford Drive rights-of-way (ROW). This approach will avoid impacts to Parks' most critical natural resources and park amenities along the existing alignment and will reduce impacts associated with WSSC's future maintenance requirements. WSSC has designed the project in close coordination with the Maryland-National Capital Park and Planning Commission (M-NCPPC) to avoid impacts to forest, trees, and other sensitive stream valley resources to the maximum extent practicable while still achieving their project goals. See *Figure 1* for the location of this project.



**Figure 1. Beach Drive Water Main Replacement Location**

## Recommendation

Staff recommends that the Board approve this project with the following conditions transmitted to the WSSC:

1. Water main replacement construction plans and site restoration plans must be reviewed and approved by the M-NCPPC Department of Parks through the Park Construction Permit Process prior to any work being performed on M-NCPPC Parkland.
2. A mitigation package for impacts associated with the construction and installation of the new 30" water main on parkland will include:
  - Relocation of Puller Playlot Parking area across Beach Drive to include ADA trail upgrades and concrete pads for trash cans and a portable restroom;
  - Intersection improvements at Beach Drive and Grosvenor Lane to include pedestrian safety upgrades and excess impervious removal;
  - Intersection improvements at Beach Drive and Knowles Avenue to include excess impervious removal.



## Design

The majority of the existing water main will be abandoned in place, while one 380-foot section beneath the CSX railroad bridge over Rock Creek will be rehabilitated using cured-in-place-pipe (CIPP) lining. New water main sections totaling 10,615.5 linear feet of 30" Ductile Iron Pipe will be installed using an open cut trench method within a single lane of Beach Drive and the Wexford Drive ROW, and 86.5 linear feet will be installed using a jack-and-bore method to cross under the mainstem of Rock Creek (*Figure 2*). Due to designed redundancies in WSSC's system, there will be no service disruption to WSSC customers while this main is replaced.



**Figure 2. Existing and Proposed Alignment of WSSC 30" Water Main**

An analysis was performed to evaluate what the proposed impacts would be replacing the water main in its existing location, along with other pipe rehabilitation techniques. Replacing the water main in its existing location would result in approximately 62 acres of impacts to the exceptional natural resources that exist within Rock Creek SVU 3 and the Pooks Hill Biodiversity Area. In addition, maintenance would require regular access to the pipe through the forest. As a result, the WSSC made the commitment to advance a new pipeline alignment design along the roadway which results in a reduced parkland impact and the water main to be more accessible for maintenance in the future. Once the new section of pipeline is made operational, the existing water line will be abandoned in place with flowable concrete fill along the entire length. Aboveground infrastructure



associated with this pipeline section (i.e. valves and vaults used for draining water at low points and releasing air at high points in the line) will be demolished to 2 feet below grade, backfilled, and stabilized wherever possible. The project's limit of disturbance (LOD) includes the roadways and areas adjacent to the roadways to accommodate stream crossings and areas for stockpiling and staging. Several aging culverts that run underneath Beach Drive within the project area will also be replaced or abandoned in the process of excavating an open cut trench for the new water line.

## Construction

Construction is anticipated to begin in Spring of 2022 and be complete within 18 months. This project consists primarily of separate trench replacement of the 30" water main within one of the travel lanes of Beach Drive (*Figure 3*). The trench width for a 30" water main will be 4-5' wide. Typical separate trench water main construction procedures include trench excavation, water main installation, backfill of the trench, temporary pavement installation, water main testing and cleaning, connecting the newly installed water main to existing water mains, and finally permanent pavement installation. Short (approximately 100') single lane closures during off-peak traffic times (9 am – 3 pm) will accommodate the construction of the water main while still retaining one lane of active traffic with the use of a flagger.



**Figure 3. Rendering of WSSC 30" Water Main Installation Along Beach Drive**

Temporary construction lay-down and stockpiling areas have been identified at the intersections of Beach Drive and Grosvenor Lane, Beach Drive and Wexford Drive, and within informal gravel pull-offs that exist along the length of Beach Drive between these two intersections. Following construction, two of the gravel pull-offs will be formalized for park maintenance activities, the remaining gravel areas will be removed, and the areas restored with native plantings to natural forested floodplain conditions, and the intersections will be returned to their pre-construction conditions.

During construction, the WSSC contractor will temporarily pave all sections of roadway disturbed by trenching as construction proceeds in a linear fashion. Wexford Drive is a pair of one-way roads, divided by a tributary to Rock Creek, and the new water main will be located in the east-bound segment's ROW. Following completion and acceptance of all underground utility work, WSSC will be responsible for a 2-inch mill and overlay of both lanes of Beach Drive and the impacted lane of Wexford Drive within the project limits.

## **Traffic Control**

A review of different construction alternatives for this project was conducted that included full road closure (detour), nighttime construction, and single lane closures over different periods of the day. The alternative with the least amount of impact to the nearby communities and commuters was a short (approximately 100') single lane closures during off-peak traffic times (9 am – 3 pm). While the construction timeline was slightly longer than some of the other alternatives analyzed, it was not significant enough (2-3 months) to outweigh the community impacts and increased costs that came with full road closure and single lane closures at night and during peak commuting hours.

Since there are no permanent traffic pattern changes proposed (the utility will be installed underground and the roadway surface will be restored to its initial state) a transportation study was not warranted. The temporary traffic plan during construction will consist of a partial one lane of shutdown which moves along with the water main construction (approximately 100' sections at a time).

All proposed lane closures will occur weekdays between the off-peak hours of 9 AM and 3 PM, excluding holidays. Traffic control devices will be installed daily and remain in place in area of active construction until the end of the workday. During any single lane closure, a minimum 10' lane must be maintained for public traffic and a two-way flagging operation will be required to maintain traffic flow in both directions. The daily length of work is anticipated to be approximately 60-80' per day with the roadway being fully restored at the end of each workday. Access to all residential driveways and park entrances must be maintained and the WSSC contractor will be required to notify residents about any temporary parking restrictions at least 48 hours prior to any work that would impact this use. A short-term (1-2 day) detour of Decatur Ave at the Wexford Drive roundabout will be necessary during installation of water line through this intersection. Residents at the end of Decatur Ave will still have access/egress from the east.

## **Parkland Impacts and Mitigation**

An approved Park Construction Permit is required to perform any work on Montgomery County parkland. At the time of Park Construction Permit review, the final design of all aspects of the project affecting parkland including, but not limited to, park amenities, encroachments, easements, grading, maintenance access, trails, limits of disturbance, tree removals, and plantings, must be approved by Department of Parks staff to ensure that all work is performed in accordance with M-NCPPC standard details, specifications, and policies.

The proposed alignment of the water line and associated culvert replacements cannot be reasonably altered to avoid the proposed tree loss associated with the new pipe installation. The alignment follows within roadways wherever possible in order to minimize these impacts. Short deviations from the roadway are necessary for stream crossings at Rock Creek and the Stonybrook tributary of Rock Creek and where the water main extends beyond the dead end of Wexford Drive. Where the water main crosses the Stonybrook tributary, natural channel stream stabilization techniques will be required within the areas of the channel that are disturbed to

ensure a stable condition that ties into the downstream culvert and a proposed stream restoration project anticipated to be constructed by the Parks Department in winter 2020. Areas of forest impacted for boring under Rock Creek will be restored and replanted with native plantings.

Forest restoration work to satisfy Forest Conservation requirements and offset unavoidable tree loss will include 4.25 acres of invasive species treatment and reforestation plantings at a density of 100, 1.5"-2" caliper trees per acre with understory shrubs. Forest restoration will occur within Rock Creek Stream Valley Park at proximate locations designated by M-NCPPC Parks.

During construction, an area between the Puller Playlot and Beach Drive will be utilized by the WSSC contractor for staging and stockpiling of construction materials and the Rock Creek Trail temporarily realigned closer to the playground to accommodate. The existing parking area for the Puller Playlot (located on the southeast edge of Rock Creek SVU 3 between the Beach Drive bridge over Rock Creek and Knowles Avenue), is on the opposite side of Beach Drive to the Rock Creek Trail and playground. A pedestrian crosswalk on Beach Drive currently serves to get park users from the parking area across Beach Drive to the park amenities. In an effort to eliminate the need for this potentially dangerous crossing and to provide additional buffer to the left bank of Rock Creek, the project will include relocation of the existing parking area to the opposite side of Beach Drive. One half of the existing parking area must remain open and accessible to the public at all times during construction. The Rock Creek Trail, Puller Drive connector trail, and the Puller Playlot will all remain open throughout construction. Once the staging area is no longer needed, a paved parking area will be constructed (to include an ADA space and concrete pads for trash cans and a portable restroom) on the southeast side of Beach Drive and include realignment, stormwater management treatment, and ADA upgrades to the adjacent segments of the Rock Creek Trail and Puller Drive connector trail. The existing gravel parking area will be removed and the floodplain area restored and replanted with native plantings.

Intersection improvements will also be made where Beach Drive intersects Grosvenor Lane and Knowles Avenue. The Grosvenor Lane improvements will realign the existing crosswalk on Beach Drive, providing a safer route between both sidewalks along Grosvenor Lane to the extended protected shoulder along Beach Drive that connects trail users to the Rock Creek Trail. This reconfiguration will allow for removal of unnecessary impervious and an opportunity to improve the vegetated buffer along a section of Rock Creek that is currently very close to the existing roadway. The Knowles Avenue improvements will include removal of approximately 70' of excess pavement associated with the southbound Beach Drive turning lane. Areas of pavement removal will be stabilized and vegetated to improve the natural floodplain buffer along Rock Creek in this area. Any construction activity that may be occurring at the time of the annual Parks Half Marathon event in September will need to be coordinated with Montgomery County Parks to ensure that the race route is open and safe for runners.

### **Natural Resource Inventory/Forest Stand Delineation (NRI/FSD)**

WSSC and the Department of Parks have coordinated efforts to ensure that natural resources impacts are avoided or minimized to every extent possible while still meeting the requirements of the project. Numerous field reviews and in-person meetings have taken place to ensure that access, stream work, staging and stockpiling, and excavation do not unduly impact natural resources.

Montgomery County Planning staff approved a Natural Resource Inventory/Forest Stand Delineation (NRI/FSD No. 420190470) for the water main replacement site on July 19, 2019. A study area was defined, to allow for changes of the LOD as the project moved forward. Within the study area, there are 5.3 acres of forest, 0.24 acres of wetlands, 16.5 acres of floodplain, and 20.4 acres of stream valley buffer. While all disturbance takes place within the stream valley buffers, the proposed project is in compliance with the Environmental Guidelines, as the proposed disturbance is necessary for a utility replacement.

## **Cultural Resources**

The Cultural Resources investigations found that there were two historic properties and one archaeological site within the project area. These include the Linden Oak (M:30-14), the B+O Viaduct (M:31-5) and the White Flint archaeological site (18MO40). Since the proposed work largely entails placement of a buried utility within exiting road and utility corridor, the project will not affect these properties. The proposed work taking place outside of the existing corridor is within areas that have low potential to contain archaeological resources. As such, no impacts to properties eligible for the National Register of Historic Places or to cultural resources significant to and/or designated in Montgomery County are anticipated.

## **Forest Conservation**

The affected property is subject to the Montgomery County Forest Conservation Law (Chapter 22A of the County Code) and the WSSC has submitted a Preliminary Forest Conservation Plan (FFCP) in conjunction with the Mandatory Referral. The WSSC proposes to clear 0.84 acres of forest and plant 4.25 acres of forest on adjacent parkland. The forest planting will help fill recently created voids in the Rock Creek canopy caused by Emerald Ash Borer Ash tree dieback.

The WSSC submitted a variance request to remove six (6) trees and to impact, but not remove, 22 trees that are considered high priority for retention under Section 22A-12 (b) (3) of the County Forest Conservation Law. The WSSC will plant 12 3-inch caliper native shade trees to replace the form and function of the variance trees proposed for removal.

## **Noise**

WSSC will abide by the Montgomery County Noise Ordinance for daytime weekday work. If it becomes necessary to deviate from that ordinance, WSSC will notify the M-NCPPC, Montgomery County, and the public of the proposed new work schedule prior to making any changes.

## **Public Meetings**

Representatives from the Department of Parks and WSSC met with local residents in the project area for a public meeting on December 11, 2018 at Garrett Park Elementary School to provide impacted communities an opportunity to review and comment on plans for the project. Invited parties included adjacent property owners and Homeowners Associations, as well as special interest groups and government agencies. No major concerns were expressed at this forum and positive acknowledgement of WSSC's efforts to accommodate a new alignment beneath Beach Drive was expressed by those in attendance.

M-NCPPC Parks and Planning will work with WSSC to perform targeted notification of surrounding neighborhoods and the drivers that regularly utilize Beach Drive ahead of the start of construction. Additional signage about the project will be placed along the construction corridor during active construction.

## **Funding**

The project will be funded through WSSC's Capital Improvement budget. No county, state, or federal funds will be required.

## **Maintenance**

Following construction, the maintenance of the new water line will be undertaken by WSSC. WSSC will be responsible for monitoring the reforestation areas on Parkland for a period of two years after they are planted. Survivorship should be 100% or 100 trees per acre at the end of the 2nd growing season.

PC:

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Gary Burnett, Acting Chief, Southern Region, Department of Parks  
Sean Harbaugh, Regional Operations Manager, Southern Region, Department of Parks  
Dean Turnbull, Regional Operations Manager, Southern Region, Department of Parks  
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# MCPB - WSSC Beach Drive Water Main\_Mandatory Referral 7.23.2020

Final Audit Report

2020-07-15

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