



Beach Drive Water Main Replacement, Preliminary Forest Conservation Plan No. MR2020003



Amy Lindsey, Planner Coordinator, Area 2 Division, Amy.Lindsey@montgomeryplanning.org, 301-495-2189



Jessica McVary, Supervisor, Area 2 Division, Jessica.McVary@montgomeryplanning.org, 301.495.4723



Carrie Sanders, Chief, Area 2 Division, Carrie.Sanders@montgomeryplanning.org, 301.495.4653

Completed: 7/13/2020

Description

Preliminary Forest Conservation Plan associated with the Mandatory Referral for the replacement of a 30" water main.

Location: Linear project adjacent to Beach Drive.

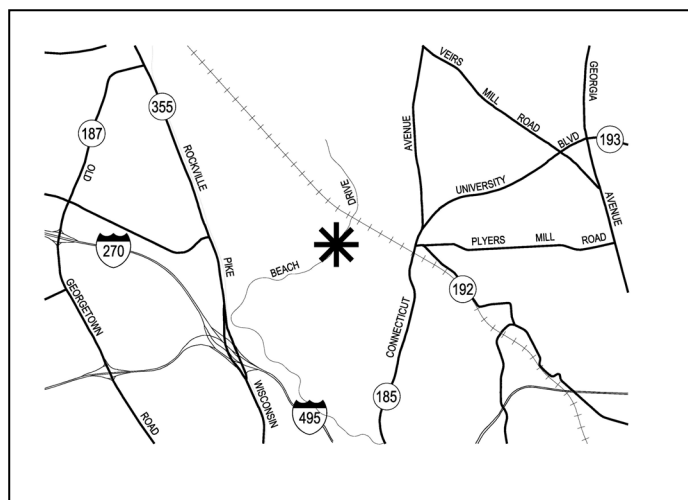
Master Plan: 1990 *Kensington-Wheaton Master Plan*.

Property Size: 7.89 acres.

Applicant: Washington Suburban Sanitary Commission.

Acceptance Date: October 31, 2019.

Review Basis: Chapter 22A, Forest Conservation Law.



Summary

- Staff recommends approval with conditions.
- The Applicant proposes to:
 - Clear 0.84 acres of forest, and plant 4.25 acres of forest on Park property.
 - Remove six (6) trees and impact 22 trees that require a variance, per Section 22A-12(b)(3).
- Pursuant to Chapter 22A of the County Code, the Board's actions on Forest Conservation Plans are regulatory and binding.
- No community correspondence has been received as of the date of this Staff Report.

RECOMMENDATION AND CONDITIONS

Pursuant to Chapter 22A of the County Code, the Board's actions on Forest Conservation Plans are regulatory and binding. Staff recommends approval of the Final Forest Conservation Plan, subject to the following conditions:

1. Prior to issuance of a Sediment Control Permit from the Department of Permitting Services, the Applicant must obtain approval of a Final Forest Conservation Plan from the Planning Department. The Final Forest Conservation Plan must be consistent with the approved Preliminary Forest Conservation Plan.
2. The Limits of Disturbance (LOD) on the Final Forest Conservation Plan must be consistent with the LOD on the Sediment and Erosion Control Plan.
3. No clearing, grading, or any demolition may occur prior to receiving approval of the Sediment and Erosion Control Plan.
4. The Applicant must plant 4.25 acres of forest as shown on the PFCP within six months of forest conservation inspector approval of the removal of the tree protection fencing.
5. The Applicant must plant mitigations for the removal of four (4) trees subject to the variance provision, in the form of planting native canopy trees totaling 135 caliper inches, with a minimum planting stock size of three (3) caliper inches. Adjustments to the planting locations of these trees is permitted with the approval of the M-NCPPC forest conservation inspector. The trees must be planted within six months of forest conservation inspector approval of the removal of tree protection fencing.

PROJECT DESCRIPTION AND BACKGROUND

Project Description

Washington Suburban Sanitary Commission (WSSC) proposes to replace a 30" water main with approximately two miles of new pipe along Beach Drive and Wexford Drive in Kensington. As discussed in greater detail in the Mandatory Referral No. 2020003 Memorandum from Montgomery Parks Director Riley, the existing water main runs through the Rock Creek Regional Park in several areas. WSSC is proposing a new alignment within the Beach Drive and Wexford Drive rights-of-way. The water line does not follow Beach Drive directly because the water line was initially installed prior to the development of Beach Drive. The Applicant worked closely with the Montgomery County Parks Department (MCPD) and the Montgomery County Planning Department to minimize disturbance while still achieving the project goals.

Sections of the existing water main will be abandoned in place, one 380-foot section will be rehabilitated using cured-in-place-pipe (CIPP) lining, 10,615.5 linear feet of the new water main will be installed using an open cut trench method, and 86.5 linear feet of new water main will be installed using a jack-and-bore method. The Project's limit of disturbance (LOD) includes the roadways and areas adjacent to the roadways. Several culverts that run underneath Beach Drive and Wexford Drive in the LOD will also be replaced in the process, at the request of MCPD. A total of 76 linear feet of culvert replacements will be installed using an open cut trench method.



Figure 1: Vicinity Map (approximate disturbance in red)

Site Description

The 7.89-acre property (Subject Property or Property) is defined by the LOD, as this is a linear project. The entire Property is located in the stream valley buffer associated with Rock Creek and associated tributaries. Most of the disturbance takes place in the large floodplain associated with Rock Creek. The water main replacement begins at Brandywine Street, adjacent to single-family houses. The disturbance follows the existing ROW to Wexford Drive. Wexford Drive is a pair of one-way roads, divided by a tributary to Rock Creek, and the disturbance is located in the east-bound segment's ROW. At the intersection of Wexford Drive and Beach Drive, the water main replacement turns to the south along Beach Drive. The disturbance generally follows Beach Drive to the southwest, with staging areas located in previously disturbed areas.

ANALYSIS

Environmental Guidelines

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.

Forest Conservation

The Property is subject to the Montgomery County Forest Conservation Law (Chapter 22A of the County Code) and the Applicant has submitted a Preliminary Forest Conservation Plan (PFCP) in conjunction with the Mandatory Referral (Attachment 1). The Applicant proposes to clear 0.84 acres of forest and plant 4.25 acres of forest on adjacent parkland. The forest planting includes invasive removal and management and will help fill recently created voids in the Rock Creek canopy caused by Emerald Ash Borer Ash tree dieback. Filling in the gaps in the existing forest will also reduce opportunities for invasives to gain footholds in the forest.

Forest Conservation Variance

Section 22A-12(b) (3) of Forest Conservation Law provides criteria that identify certain individual trees as high priority for retention and protection. The law requires a variance to impact trees that: measure 30 inches or greater diameter at breast height (DBH); are part of a historic site or designated with a historic structure; are designated as national, State, or County champion trees; are at least 75 percent of the diameter of the current State champion tree of that species; or trees, shrubs, or plants that are designated as Federal or State rare, threatened, or endangered species. Any impact to these trees, including removal or disturbance within the tree's critical root zone (CRZ), requires a variance. An applicant for a variance must provide certain written information in support of the required findings in accordance with Section 22A-21 of the County Forest Conservation Law.

The Applicant 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 (Attachment 2). The Applicant will plant 12 3-inch caliper native shade trees to replace the form and function of the variance trees proposed for removal.

Unwarranted Hardship for Variance Tree Impacts

Per Section 22A-21, a variance may only be granted if the Planning Board finds that leaving the requested trees in an undisturbed state will result in unwarranted hardship. The requested variance is necessary due to the need to provide access and stabilize the drainage outfall.

Leaving the requested trees in an undisturbed state would result in an unwarranted hardship because the Applicant would not be able to replace the 30" water main. The water main has been located as close to Beach Drive as possible, to minimize forest and tree loss.

Variance Tree Tables

Removals

ID	Species	Size	Condition
73	Quercus rubra	30.6"	Fair
570	Platanus occidentalis	40.0"	Fair
595	Acer negundo	33.2"	Poor
695	Ulmus americana	41.2"	Poor
704	Fraxinus pennsylvanica	42.2"	Poor
793	Acer negundo	31.2"	Fair

Impacts

ID	Species	Size	Condition	CRZ Impacts
1	Quercus rubra	30.6"	Very good	3%
27	Platanus occidentalis	30.6"	Fair	9%
67	Quercus coccinea	30.1"	Good	1%
134	Platanus occidentalis	30.1"	Good	4%
145	Liriodendron tulipifera	30.0"	Very Good	1%
148	Liriodendron tulipifera	31.0"	Good	10%
170	Platanus occidentalis	31.4"	Very Good	6%
174	Platanus occidentalis	31.0"	Very Good	23%

ID	Species	Size	Condition	CRZ Impacts
183	Quercus imbricaria	30.3"	Fair	44%
202	Platanus occidentalis	32.7"	Good	21%
216	Acer negundo	31.6"	Poor	27%
240	Acer negundo	30.0"	Good	4%
255	Liriodendron tulipifera	30.8"	Good	8%
272	Quercus alba	31.7"	Good	5%
382	Platanus occidentalis	39.1"	Very Good	9%
386	Platanus occidentalis	34.7"	Very Good	15%
393	Platanus occidentalis	33.7"	Good	19%
396	Platanus occidentalis	34.6"	Good	13%
400	Platanus occidentalis	30.9"	Good	25%
401	Platanus occidentalis	35.3"	Very Good	1%
488	Liriodendron tulipifera	32.0"	Good	0.005%
498	Acer saccharinum	42.1"	Good	5%

Variance Findings - Based on the review of the variance request and the proposed Preliminary Forest Conservation Plan, staff makes the following findings:

1. *Granting the variance will not confer on the applicant a special privilege that would be denied to other applicants.*

Granting this variance will not confer a special privilege on the Applicant as disturbance of the specified trees is a result of the need to install a replacement 30" water mains. The water main disturbance has been located to minimize environmental impacts and to retain trees where possible.

2. *The need for the variance is not based on conditions or circumstances which are the result of the actions by the applicant.*

The requested variance is not based on conditions or circumstances that are the result of actions by the Applicant. The variance is necessary due to the need to replace the existing water main with a new 30" water main.

3. *The need for the variance is not based on a condition relating to land or building use, either permitted or non-conforming, on a neighboring property.*

The requested variance is a result of the location of trees and the location of the necessary disturbance to replace the water main. The variance is not based on any conditions on neighboring properties.

4. *Granting the variance will not violate State water quality standards or cause measurable degradation in water quality.*

The Applicant will plant 12 3-inch caliper native shade trees to replace the form and function of the variance trees proposed for removal. The replacement of aging infrastructure will positively impact water quality in the long term.

Mitigation for Trees Subject to the Variance Provisions

The Applicant is requesting a variance to remove six (6) trees. Four (4) of the six (6) trees are outside of forest that is being cleared and will be mitigated at a rate of 1" caliper per 4" DBH removed, using a minimum 3" caliper native shade tree. The Applicant is mitigating for the loss of 135.0" DBH of trees and will plant 12 3-inch caliper native shade trees as mitigation, as shown on the PFCP.

County Arborist's Recommendation on the Variance

In accordance with Montgomery County Code Section 22A-21(c), the Planning Department is required to refer a copy of the variance request to the County Arborist in the Montgomery County Department of Environmental Protection for a recommendation prior to acting on the request. No response was received so the response is considered to be favorable.

Variance Recommendation - Staff recommends that the variance be granted.

CONCLUSION

Staff concludes that the proposed Preliminary Forest Conservation Plan meets the requirements of Chapter 22A Forest Conservation Law. Staff therefore recommends that the Planning Board approve the Preliminary Forest Conservation Plan and associated variance, with the above conditions.

Attachments:

1. Preliminary Forest Conservation Plan
2. Variance request

FOREST CONSERVATION PLAN
PLAN NO. MR2020003

30-INCH DIAMETER WATER MAIN
REPLACEMENT ON BEACH DRIVE

KENSINGTON, MONTGOMERY COUNTY, MARYLAND

FEBRUARY 2020

FOREST CONSERVATION WORKSHEET
30-In. Diameter Water Main Replacement on Beach Drive

NET TRACT AREA:

A. Total tract area ... 7.89
B. Land dedication acres (parks, county facility, etc.) ... 0.00
C. Land dedication for roads or utilities (not being constructed by this plan) ... 0.00
D. Area to remain in commercial agricultural production/use ... 0.00
E. Other deductions (specify) ... 0.00
F. Net Tract Area ... 7.89

LAND USE CATEGORY: (from *Trees Technical Manual*)
Input the number "1" under the appropriate land use, limit to only one entry.

	ARA	MDR	IDA	HDR	MPD	CIA
	0	0	1	0	0	0

G. Afforestation Threshold ... 15% x F = 1.18
H. Conservation Threshold ... 20% x F = 1.58

EXISTING FOREST COVER:

I. Existing forest cover ... 0.84
J. Area of forest above afforestation threshold ... 0.00
K. Area of forest above conservation threshold ... 0.00

BREAK EVEN POINT:

L. Forest retention above threshold with no mitigation ... 0.00
M. Clearing permitted without mitigation ... 0.00

PROPOSED FOREST CLEARING:

N. Total area of forest to be cleared ... 0.84
O. Total area of forest to be retained ... 0.00

PLANTING REQUIREMENTS:

P. Reforestation for clearing above conservation threshold ... 0.00
Q. Reforestation for clearing below conservation threshold ... 1.68
R. Credit for retention above conservation threshold ... 0.00
S. Total reforestation required ... 1.68
T. Total afforestation required ... 0.34
U. Credit for landscaping (may not exceed 20% of "S") ... 0.00
V. Total reforestation and afforestation required ... 2.03

worksheet updated 8/5/2002

Forest Conservation Data Table

	Number of Acres	
Tract	7.89	
Remaining in Agricultural Use	0.00	
Road & Utility ROWs ¹	0.00	
Total Existing Forest	0.84	
Forest Retention	0.00	
Forest Cleared	0.84	

Land Use & Thresholds²

Land Use Category	IDA	ARA, MDR, IDA, HDR, MDP, or CIA
Conservation Threshold	20%	percent
Afforestation Threshold	15%	percent

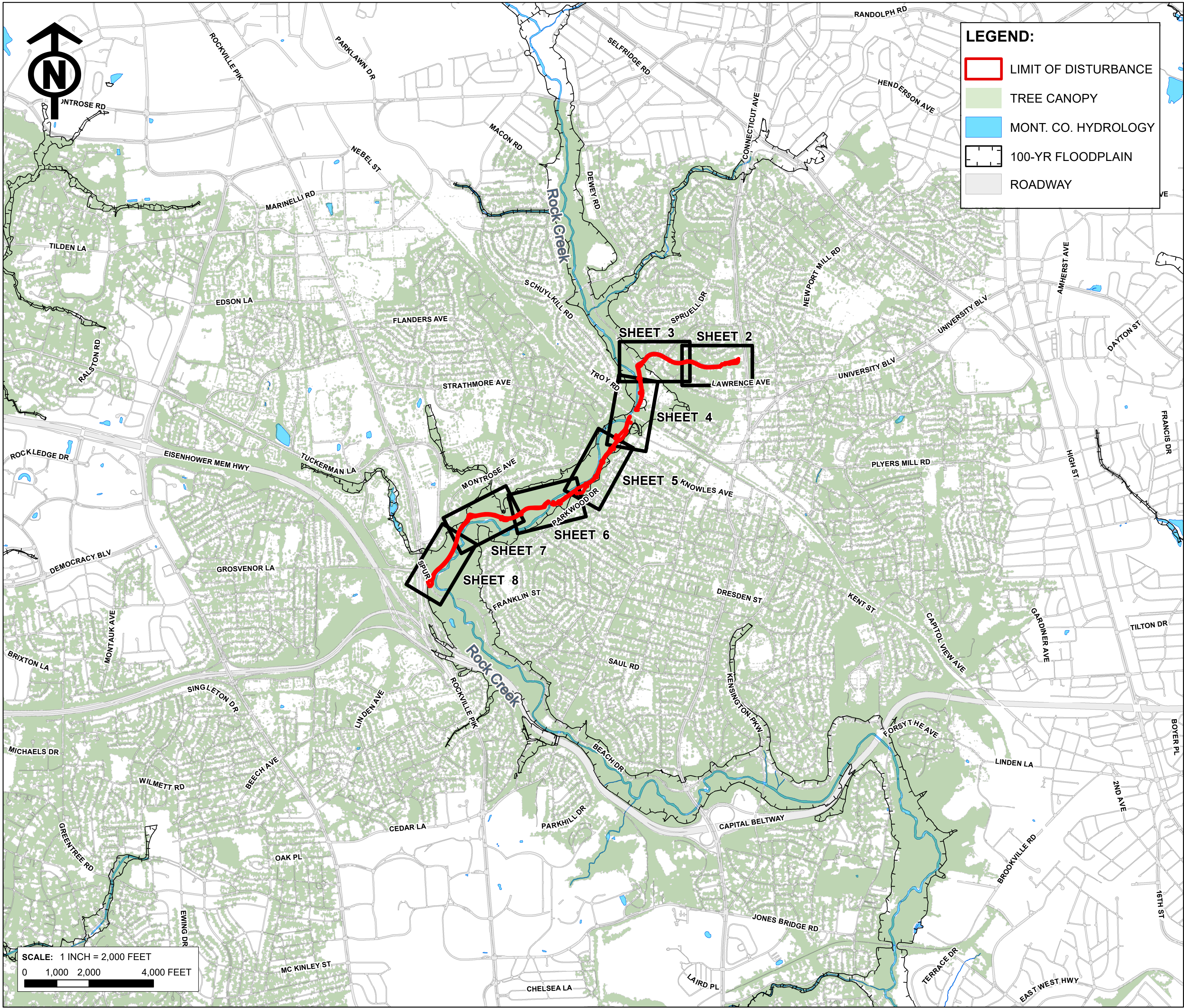
	Total Channel Length (ft.) ³	Average Buffer Width (ft.) ³
Stream(s)	641	825

Acres of Forest in	Retained	Cleared	Planted
Wetlands	-	0.02	-
100-Year Floodplain	-	0.70	4.25
Stream Buffers	-	0.84	4.25
Priority Areas	-	-	-

¹ Only Road or Utility ROWs not to be improved as part of development application.
² Information from FCI Land Use Categories & Thresholds document.
³ Measured from stream edge to buffer edge.

Forest Impacts Summary	
Forest Stand	Impact (acres)
1	0.005
2	0.007
3	0.033
4	0.003
5	0.006
6	0.01
7	0.004
8	0.309
9	0.001
10	0.002
11	0.228
12	0.076
13	-
14	-
15	0.158
Total	0.842

FCP Index	
Sheet No.	Description
1	Cover Sheet
2	FCP Drawing
3	FCP Drawing
4	FCP Drawing
5	FCP Drawing
6	FCP Drawing
7	FCP Drawing
8	FCP Drawing
9	FCP Notes & Details
10	Specimen & Significant Tree Tables
11	Specimen & Significant Tree Tables
12	Planting Plan Notes & Details



PLAN NO. MR2020003	
DATE	REVISIONS

DEVELOPER'S CERTIFICATE

The undersigned agrees to execute all of the features of Approved Final Forest Conservation Plan No. MR2020003, including financial bonding, forest planting, maintenance, and all other applicable agreements.

Developer's Name: Washington Suburban Sanitary Commission

Contact Person or Owner: Matthew Brew

Address: 14501 Sweitzer Lane, Laurel, MD, 20707

Phone and Email: (301) 206-8820 Matthew.Brew@wsscwater.com

Signature: _____

FOREST CONSERVATION PLAN NOTES:	
1. THE LOD IS LOCATED IN A RESIDENTIAL ZONE (R-60).	
2. THE LOD IS LOCATED WITHIN THE LOWER ROCK CREEK WATERSHED (HUC# 02070010).	
3. THE LOD IS NOT LOCATED WITHIN A SPECIAL PROTECTION AREA OR A PRIMARY MANAGEMENT AREA.	
4. THE LOD IS NOT LOCATED WITHIN THE CHESAPEAKE BAY CRITICAL AREA.	
5. THE TREE PROTECTION FENCE LINE IS OFFSET FROM THE LOD FOR VISUAL PURPOSES ONLY. IT SHOULD COINCIDE WITH THE LOD WHEN INSTALLED.	
6. WHERE SUPER SILT FENCE IS PROPOSED, NO TREE PROTECTION FENCE IS PROPOSED AND ROOT PRUNING IS NOT PROPOSED.	

WSSC Map Grid Within Study Area	
Grid #	Tax Map #
214NW04	HQ341
213NW05	HP123
213NW04	HP343
212NW05	HP122

THIS PLAN WAS PREPARED BY:

TOM HAY
MARYLAND DEPARTMENT OF NATURAL RESOURCES
QUALIFIED PROFESSIONAL STATUS (JUNE 2002)

TOM HAY
(443) 539-2545
STRAUGHAN ENVIRONMENTAL
10245 OLD COLUMBIA ROAD, COLUMBIA, MD 21046

FOREST CONSERVATION PLAN
PLAN NO. MR2020003
FEBRUARY 2020

30-IN. DIAMETER WATER MAIN
REPLACEMENT ON BEACH DRIVE

APPLICANT:
WASHINGTON SUBURBAN SANITARY COMMISSION

SHEET 1 OF 12



**Justification for Tree Variance
in Accordance with Section 22A-21 of the Montgomery County Code**

**30-Inch Water Main Replacement on Beach Drive
MR-2020003**

I. BACKGROUND INFORMATION

On behalf of the Washington Suburban Sanitary Commission (WSSC), Straughan Environmental, Inc. (Straughan) is submitting this written request for a variance from Chapter 22A, subsection 12(b)(3)(C)(i) of the Montgomery County Forest Conservation Law (Chapter 22A of the Montgomery County Code; hereby referred to as “the Law”) for the proposed project entitled 30-Inch Diameter Water Main Replacement on Beach Drive. Per subsection 22A-12(b)(3)(C)(i) of the Law, trees with a diameter of 30 inches or more, measured at 4.5 feet above the ground (i.e. specimen trees), are a priority for retention and protection and must be left in an undisturbed condition unless the Planning Board or Planning Director, as appropriate, finds that the applicant qualifies for a variance under Section 22A-21.

WSSC is proposing to replace an aging 30-inch diameter force water main with approximately two miles of new pipe along Beach Drive and Wexford Drive in Kensington, Maryland. The existing water main runs through the Rock Creek Regional Park in several areas. WSSC is proposing a new alignment within the Beach Drive and Wexford Drive rights-of-way. This will avoid impacts to the park’s natural resources associated with a replacement along the existing alignment and will reduce impacts to the park associated with future maintenance of the water main. The project’s limit of disturbance (LOD) includes the roadways primarily and areas adjacent to the roadways. WSSC has designed the project in coordination with the Maryland-National Capital Park and Planning Commission (M-NCPPC) to avoid impacts to forest, trees, and other natural resources to the maximum extent practicable while still achieving project goals.

A copy of the Forest Conservation Plan (FCP) for the proposed project is attached. A Natural Resources Inventory/Forest Stand Delineation (NRI/FSD) was approved for this site on July 19, 2019 (NRI/FSD No. 420190470). 168 specimen trees lie in the immediate vicinity of the LOD along Beach Drive within Rock Creek Regional Park and along Wexford Drive within a residential neighborhood. The critical root zone (CRZ) of many of these specimen trees are assumed to extend under Beach Drive and Wexford Drive. Despite efforts to avoid impacts to specimen trees by keeping the LOD within the roadway as much as possible, six specimen trees would be removed and 69 specimen trees would be impacted as a result of the construction of the project.

II. EXPLANATION FOR NEED TO REMOVE AND/OR IMPACT TREES THAT ARE IDENTIFIED IN STATE LAW FOR PROTECTION

As indicated on the FCP, 168 specimen trees have been identified on or immediately adjacent to the LOD. Of these 168 trees, WSSC proposes to remove six specimen trees and to impact 69 specimen trees.

Specific trees to be removed:

Condition and descriptions are per NRI/FSD #420190470 approved July 19, 2019

Tree ID	DBH (in)	Scientific Name	Condition	Forest Stand	FCP Sheet Number
73	30.6	<i>Quercus rubra</i>	Fair	-	4
570	40.0	<i>Platanus occidentalis</i>	Fair	11	7
595	33.2	<i>Acer negundo</i>	Poor	12	7
695	41.2	<i>Ulmus Americana</i>	Poor	15	2
704	42.2	<i>Fraxinus pennsylvanica</i>	Poor	15	2
793	31.2	<i>Acer negundo</i>	Fair	-	5

Specimen tree 73 needs to be removed near Station 77+100, where the new water main will be installed and an 18-inch culvert will be replaced. M-NCPPC specifically requested the replacement of this culvert concurrent with the water main installation. The tree is within 10 feet of the LOD and more than a third of its CRZ would be impacted by the project. The proposed alignment of the new water main follows the roadway and is already located to avoid impacts. The LOD cannot be adjusted at the culvert because the culvert exists and is being replaced in place. The tree is in fair condition.

Specimen tree 570 needs to be removed near Station 20+00, where the new water main will be diverted away from Beach Drive and into Forest Stand 11 because there is not enough clearance to install the new watermain above an existing trapezoidal culvert under Beach Drive in that location. WSSC coordinated with M-NCPPC to best locate this section of the new watermain. The tree is in fair condition.

Specimen tree 595 needs to be removed near Station 17+00, where the new water main will be installed and an equipment laydown area will be located. M-NCPPC specifically chose this laydown area. The tree is within 10 feet of the LOD and more than a third of its CRZ would be impacted by the project. The proposed alignment of the new water main follows the roadway and is already located to avoid impacts. The tree is in poor condition.

Specimen trees 695 and 704 need to be removed within the LOD near Station 107+00, where the new water main extends beyond the end of Wexford Drive and into Forest Stand 15 where it will tie back into the existing water main. In the proposed design, the water main follows a straight

path through Forest Stand 15 from the end of Wexford Drive to the tie-in point. It would be difficult and expensive to re-route the pipe around these trees. If the path were not straight, more ground and forest would be disturbed to get the pipe from point to point. Re-routing to the north is not an option because there is an existing utility easement for a sewer line. Re-routing to the south is not advisable as there are significant trees, steeper slopes and an intermittent waterway. The trees are in poor condition.

Specimen tree 793 needs to be removed near Station 50+00, where the new water main will be installed and an equipment laydown area will be located. M-NCPPC specifically chose this laydown area. The tree is within 10 feet of the LOD and more than a third of its CRZ would be impacted by the project. The proposed alignment of the new water main follows the roadway and is already located to avoid impacts. The tree is in fair condition.

Specific trees to be impacted:

Condition and descriptions are per NRI/FSD #420190470 approved July 19, 2019. Impact numbers and tree protection measures are per the attached FCP.

Tree ID	DBH (in)	Scientific Name	Condition	CRZ Impacts (%)	Tree Protection Measures	Forest Stand	FCP Sheet Number
1	30.6	<i>Quercus rubra</i>	Very Good	3	None	-	4
27	30.6	<i>Platanus occidentalis</i>	Fair	9	Root pruning	1	4
67	30.1	<i>Quercus coccinea</i>	Good	1	None	2	4
134	30.1	<i>Platanus occidentalis</i>	Good	4	None	5	5
145	30.0	<i>Liriodendron tulipifera</i>	Very Good	1	None	5	5
148	31.0	<i>Liriodendron tulipifera</i>	Good	10	None	5	5
170	31.4	<i>Platanus occidentalis</i>	Very Good	6	None	8	5
174	31.0	<i>Platanus occidentalis</i>	Very Good	23	Root pruning	8	5
183	30.3	<i>Quercus imbricaria</i>	Fair	44	Root pruning, Tree Planking, Consult arborist during construction	8	5
202	32.7	<i>Platanus occidentalis</i>	Good	21	Root pruning, Tree Planking	7	6
216	31.6	<i>Acer negundo</i>	Poor	27	Root pruning	8	6
240	30.0	<i>Acer negundo</i>	Good	4	None	8	6
255	30.8	<i>Liriodendron tulipifera</i>	Good	8	None	7	6
272	31.7	<i>Quercus alba</i>	Good	5	Root pruning	7	6
382	39.1	<i>Platanus occidentalis</i>	Very Good	9	None	10	7
386	34.7	<i>Platanus occidentalis</i>	Very Good	15	Root pruning	10	7
393	33.7	<i>Platanus occidentalis</i>	Good	19	Root pruning	11	6
396	34.6	<i>Platanus occidentalis</i>	Good	13	Root pruning	11	6
400	30.9	<i>Platanus occidentalis</i>	Good	25	Root pruning	11	7
401	35.3	<i>Platanus occidentalis</i>	Very Good	1	None	11	7
488	32.0	<i>Liriodendron tulipifera</i>	Good	0.005	None	12	7
498	42.1	<i>Acer saccharinum</i>	Good	5	Root pruning	12	7

Tree ID	DBH (in)	Scientific Name	Condition	CRZ Impacts (%)	Tree Protection Measures	Forest Stand	FCP Sheet Number
528	37.2	<i>Ulmus rubra</i>	Fair	0.3	None	11	7
537	38.4	<i>Fraxinus pennsylvanica</i>	Poor	1	None	11	7
552	41.3	<i>Platanus occidentalis</i>	Fair	3	None	11	7
555	33.2	<i>Platanus occidentalis</i>	Good	1	None	11	7
637	53.4	<i>Platanus occidentalis</i>	Good	28	Root pruning	12	8
639	30.5	<i>Juglans nigra</i>	Good	36	Root pruning, Tree Planking	12	8
645	40.0	<i>Ulmus rubra</i>	Poor	26	Root pruning	12	8
653	31.5	<i>Liriodendron tulipifera</i>	Good	12	Root pruning	12	8
654	44.7	<i>Liriodendron tulipifera</i>	Good	9	Root pruning	12	8
665	30.0	<i>Liriodendron tulipifera</i>	Poor	21	Root pruning	12	8
679	37.3	<i>Liriodendron tulipifera</i>	Good	2	None	15	2
681	43.3	<i>Liriodendron tulipifera</i>	Good	11	Root pruning	15	2
682	41.9	<i>Liriodendron tulipifera</i>	Good	36	Root pruning, Mulch matting	15	2
684	33.0	<i>Liriodendron tulipifera</i>	Good	16	None	15	2
688	31.0	<i>Robinia pseudoacacia</i>	Fair	11	None	15	2
693	39.5	<i>Liriodendron tulipifera</i>	Fair	15	Root pruning	15	2
696	36.0	<i>Platanus occidentalis</i>	Fair	31	Root pruning	15	2
697	49.3	<i>Liriodendron tulipifera</i>	Poor	9	Root pruning	15	2
701	46.6	<i>Quercus alba</i>	Fair	0.4	None	15	2
750	36.1	<i>Liriodendron tulipifera</i>	Very Good	3	None	5	5
751	44.3	<i>Liriodendron tulipifera</i>	Very Good	17	Root pruning	5	5
758	34.8	<i>Liriodendron tulipifera</i>	Very Good	7	Root pruning	5	5
760	43.8	<i>Quercus alba</i>	Very Good	7	Root pruning	5	5
766	35.2	<i>Liriodendron tulipifera</i>	Very Good	9	None	5	5
770	38.8	<i>Liriodendron tulipifera</i>	Fair	0.2	None	4	5
778	34.5	<i>Platanus occidentalis</i>	Very Good	16	Root pruning	8	5
792	44.4	<i>Platanus occidentalis</i>	Fair	26	Root pruning	8	5
826	36.2	<i>Liriodendron tulipifera</i>	Good	14	Root pruning	-	3
827	31.4	<i>Liriodendron tulipifera</i>	Good	15	Root pruning	-	3
828	31.7	<i>Liriodendron tulipifera</i>	Good	15	Root pruning	-	3
829	37.6	<i>Liriodendron tulipifera</i>	Good	9	Root pruning	-	3
832	41.1	<i>Liriodendron tulipifera</i>	Good	3	None	-	3
834	30.2	<i>Quercus alba</i>	Good	7	None	-	3
836	31.3	<i>Liriodendron tulipifera</i>	Good	0.1	None	-	3
839	34.8	<i>Quercus rubra</i>	Good	20	Root pruning	-	3
841	33.0	<i>Quercus rubra</i>	Good	7	None	-	3
843	39.2	<i>Quercus velutina</i>	Good	45	Root pruning, Tree planking	-	2
844	37.0	<i>Quercus palustris</i>	Good	34	Root pruning	-	2
845	38.4	<i>Liriodendron tulipifera</i>	Good	25	Root pruning	-	2
848	58.5	<i>Liriodendron tulipifera</i>	Fair	4	Root pruning	-	4
851	39.5	<i>Platanus occidentalis</i>	Good	5	None	3	4
860	32.1	<i>Liriodendron tulipifera</i>	Good	20	None	-	5

Tree ID	DBH (in)	Scientific Name	Condition	CRZ Impacts (%)	Tree Protection Measures	Forest Stand	FCP Sheet Number
871	41.1	<i>Liriodendron tulipifera</i>	Good	0.4	None	7	5
877	35.8	<i>Liriodendron tulipifera</i>	Good	6	Root pruning	7	6
880	32.0	<i>Liriodendron tulipifera</i>	Fair	2	None	7	6
882	51.6	<i>Liriodendron tulipifera</i>	Fair	1	None	7	6
901	53.5	<i>Fraxinus pennsylvanica</i>	Dead	35	Root pruning, Tree is dead but should remain as habitat	11	7

Much of the new watermain is proposed within the Beach Drive and Wexford Drive rights-of-way to avoid impacts to natural resources. WSSC has designed the project in coordination with M-NCPPC to avoid impacts to forest, trees, and other natural resources to the maximum extent practicable while still achieving project goals. Adjusting the project plans to avoid impact to these trees would result in unwarranted hardship.

III. SATISFACTION OF THE APPLICATION REQUIREMENTS LISTED IN SECTION 22A-21(b) OF THE MONTGOMERY COUNTY CODE

Section 22A-21(b) lists the criteria for the granting of the variance requested herein. The following narrative explains how the requested variance is justified under the set of circumstances described above.

- “(1) describe the special conditions peculiar to the property which would cause the unwarranted hardship;”*

As described above, the proposed plan design was determined by existing environmental features and constraints. Much of the LOD has been constrained to the Beach Drive and Wexford Drive rights-of-way to avoid impacts to natural resources. Tree and forest resources are located in such close proximity to the existing Beach Drive and Wexford Drive rights-of-way, that impacts are unavoidable. Further measures to avoid impacts would cause unwarranted hardship and/or prevent the water main replacement from occurring. Given the environmentally sensitive nature of Rock Creek Regional Park, WSSC, with guidance from M-NCPPC, has taken precaution to preserve as much existing forest as possible and still meet the project goals.

- “(2) describe how enforcement of this Chapter will deprive the landowner of rights commonly enjoyed by others in similar areas;”*

The applicant’s goal is to replace an aging water main, a necessary utility for the residents of the area. There is a need to replace the water main, and the proposed replacement should improve the quality of life for the surrounding community. The elimination of the project would deprive WSSC and local residents of much-needed improvements.

- “(3) verify that State water quality standards will not be violated and that a measurable degradation in water quality will not occur as a result of granting the variance;”*

State water quality standards will not be violated or a measurable degradation in water quality will not occur as a result of the granting of the variance. The controlled removal of these trees, replacement with stable ground cover, and sediment control measures will ensure no loss of soil or water quality degradation within nearby waterways. Additionally, 1.31 acres of forestation restoration is proposed on-site within the floodplain of Rock Creek, improving water quality.

- “(4) provide any other information appropriate to support the request.”*

The applicant believes that the information set forth above is adequate to justify the requested variance.

IV. MITIGATION REQUIREMENTS FOR SPECIMEN TREE REMOVAL

In addition to the afforestation/reforestation requirement for the proposed work, four of the six specimen trees to be removed will require additional mitigation. The other two trees are located within an area of forest removal already accounted for in the afforestation/reforestation requirement as determined by the Forest Conservation Worksheet. Mitigation trees must be planted at a rate of 1-inch caliper per 4-inch DBH removed, using a minimum of 3-inch caliper trees. Therefore, 12 3-inch caliper trees will need to be planted to mitigate for the four specimen trees removed. See the table below for details.

Tree ID	DBH (in)	Scientific Name	Forest Stand	Requires mitigation?	Reason	Total DBH requiring mitigation (in)	Mitigation Requirement* (total caliper)	Mitigation Requirement* (# of 3-inch caliper trees)
73	30.6	<i>Quercus rubra</i>	-	Yes	The tree is not in a forest stand.	30.6		
570	40.0	<i>Platanus occidentalis</i>	11	Yes	The tree is NOT located within an area of forest removal already accounted for in the Forest Conservation Worksheet.	40.0		
595	33.2	<i>Acer negundo</i>	12	Yes	The tree is NOT located within an area of forest removal already accounted for in the Forest Conservation Worksheet.	33.2		
695	41.2	<i>Ulmus Americana</i>	15	No	The tree is located within an area of forest removal already accounted for in the Forest Conservation Worksheet.	0.0		
704	42.2	<i>Fraxinus pennsylvanica</i>	15	No	The tree is located within an area of forest removal already accounted for in the Forest Conservation Worksheet.	0.0		
793	31.2	<i>Acer negundo</i>	-	Yes	The tree is not in a forest stand.	31.2		
*Mitigation trees are planted at a rate of 1-inch caliper per 4-inch DBH removed, using a minimum of 3-inch caliper trees.					TOTALS	135.0	33.75	12