HISTORIC PRESERVATION COMMISSION

Marc Elrich
County Executive

Karen Burditt
Chair

Date: 5/1/2025

MEMORANDUM

TO: Rabbiah Sabbakhan
Department of Permitting Services
FROM: Dan Bruechert
Historic Preservation Section
Maryland-National Capital Park & Planning Commission
SUBJECT: Historic Area Work Permit #1110102 & #1111619 - Grading and Fenestration Alterations

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The Montgomery County Historic Preservation Commission (HPC) has reviewed the attached application for a Historic Area Work Permit (HAWP). This application was **approved** at the April 23, 2025 HPC meeting.

The HPC staff has reviewed and stamped the attached submission materials.

THE BUILDING PERMIT FOR THIS PROJECT SHALL BE ISSUED CONDITIONAL UPON ADHERENCE TO THE ABOVE APPROVED HAWP CONDITIONS AND MAY REQUIRE APPROVAL BY DPS OR ANOTHER LOCAL OFFICE BEFORE WORK CAN BEGIN.

Applicant: Mike Sherman
Address: 5419 Mohican Rd., Bethesda

This HAWP approval is subject to the general condition that the applicant will obtain all other applicable Montgomery County or local government agency permits. After the issuance of these permits, the applicant must contact this Historic Preservation Office if any changes to the approved plan are made. Once work is complete, the applicant will contact Dan Bruechert at 301-563-3408 or dan.bruechert@montgomeryplanning.org to schedule a follow-up site visit.

1 North Front Elevation
Scale: 1/4" = 1'-0"

2 West Side Elevation (Service Entry)
Scale: 1/4" = 1'-0"

APPROVED
Montgomery County
Historic Preservation Commission

REVIEWED
By Dan Bruechert at 1:12 pm, May 01, 2025

Sherman Residence

5419 Mohican Road
Bethesda, MD 20816

Owner

Michael and Carey Sherman
5419 Mohican Road
Bethesda, MD 20816

April 2, 2025

North and West Elevation

A.100

APPROVED

Montgomery County

Historic Preservation Commission

REVIEWED

By Dan Bruechert at 1:12 pm, May 01, 2025

1 South Rear Elevation
Scale: 1/4" = 1'-0"

2 East Side Elevation (Basement)
Scale: 1/4" = 1'-0"

Sherman Residence

5419 Mohican Road
Bethesda, MD 20816

Owner

Michael and Carey Sherman
5419 Mohican Road
Bethesda, MD 20816

April 2, 2025

South and East Elevation

A.101

STORMWATER MANAGEMENT PLAN & EROSION AND SEDIMENT CONTROL PLAN

5419 MOHICAN RD, BETHESDA, MD 20816

Erosion and Sediment Control Notes

1. The permittee shall notify the Department of Permitting Services (DPS) forty eight (48) hours before commencing any land disturbing activity and, unless waived by the Department, shall be required to hold a pre construction meeting between them or their representative, their engineer and an authorized representative of the Department.
2. The permittee must obtain inspection and approval by DPS at the following points:
   A. At the required pre construction meeting.
   B. Following installation of sediment control measures and prior to any other land disturbing activity.
   C. During the installation of a sediment basin or stormwater management structure at the required inspection points (see Inspection Checklist on plan). Notification prior to commencing construction is mandatory.
   D. Prior to removal or modification of any sediment control structure(s).
   E. Prior to final acceptance.
3. The permittee shall construct all erosion and sediment control measures per the approved plan and construction sequence, shall have them inspected and approved by the Department prior to beginning any other land disturbances, shall ensure that all runoff from disturbed areas is directed to the sediment control devices, and shall not remove any erosion or sediment control measure without prior permission from the Department.
4. The permittee shall protect all points of construction ingress and egress to prevent the deposition of materials onto traversed public thoroughfare(s). All materials deposited onto public thoroughfare(s) shall be removed immediately.
5. The permittee shall inspect periodically and maintain continuously in effective operating condition, all erosion and sediment control measures until such time as they are removed with prior permission from the Department. The permittee is responsible for immediately repairing or replacing any sediment control measures which have been damaged or removed by the permittee or any other person.
6. *Following initial soil disturbance or re disturbance, permanent or temporary stabilization must be completed within:
   a. Three (3) calendar days as to the surface of all perimeter dikes, swales, ditches, perimeter slopes and all slopes steeper than 3 horizontal to 1 vertical (3:1); and
   b. Seven (7) calendar days as to all other disturbed or graded areas on the project site not under active grading.
   All areas disturbed outside of the perimeter sediment control system must be minimized and stabilized immediately. Maintenance must be performed as necessary to ensure continued stabilization.
7. The permittee shall apply *sod, seed, and anchored straw mulch, or other approved stabilization measures to all disturbed areas within seven (7) calendar days after stripping and grading activities have ceased on that area. Maintenance shall be performed as necessary to ensure continued stabilization. Active construction areas such as borrow or stockpile areas, roadway improvements, and areas within fifty (50) feet of a building under construction may be exempt from this requirement, provided that erosion and sediment control measures are installed and maintained to protect those areas.
8. Prior to removal of sediment control measures, the permittee shall stabilize all contributory disturbed areas with required soil amendments and topsoil, using sod or an approved permanent seed mixture and an approved anchored mulch. Wood fiber mulch may only be used in seeding season when the slope does not exceed 10% and grading has been done to promote sheet flow drainage. Areas brought to finished grade during the seeding season shall be permanently stabilized within seven (7) calendar days of establishment. When property is brought to finished grade during the months of November through February, and permanent stabilization is found to be impractical, an approved temporary seed and straw anchored mulch shall be applied to disturbed areas. The final permanent stabilization of such property shall be completed prior to the following April 15.
9. The site permit, work, materials, approved SC/SM plans, and test reports shall be available at the site for inspection by duly authorized officials of Montgomery County.
10. Surface drainage flows over unstabilized cut and fill slopes shall be controlled by either preventing drainage flows from traversing the slopes or by installing mechanical devices to lower the water down slope without causing erosion. Dikes shall be installed and maintained at the top of cut or fill slopes until the slope and drainage area to it carefully stabilized, at which time they must be removed and final grading done to promote sheet flow drainage. Mechanical devices must be provided at points of concentrated flow where erosion is likely to occur.
11. Permanent swales or other points of concentrated water flow shall be stabilized within 3 calendar days of establishment with sod or seed with approved erosion control matting or by other approved stabilization measures.
12. Sediment control devices shall be removed, with permission of the Department, within thirty (30) calendar days following establishment of permanent stabilization in all contributory drainage areas. Stormwater management structures used temporarily for sediment control shall be converted to the permanent configuration within this time period as well.
13. *No permanent cut or fill slope with a gradient steeper than 3:1 will be permitted in lawn maintenance areas or on residential lots. A slope gradient of up to 2:1 will be permitted in non maintenance areas provided that those areas are indicated on the erosion and sediment control plan with a low maintenance ground cover specified for permanent stabilization. Slope gradient steeper than 2:1 will not be permitted with vegetative stabilization.
14. The permittee shall install a splashblock at the bottom of each downspout unless the downspout is connected by a drain line to an acceptable outlet.
15. For finished grading, the permittee shall provide adequate gradients so as to prevent water from standing on the surface of lawns more than twenty four (24) hours after the end of a rainfall, except in designated drainage courses and swale flow areas, which may drain as long as forty eight (48) hours after the end of a rainfall.
16. Sediment traps or basins are not permitted within 20 feet of a building which is existing or under construction. No building may be constructed within 20 feet of a sediment trap or basin.
17. All inlets in non sump areas shall have asphalt berms installed at the time of base paving establishment.
18. The sediment control inspector has the option of requiring additional sediment control measures, as deemed necessary.
19. All trap elevations are relative to the outlet elevation, which must be on existing undisturbed ground.
20. *Vegetative stabilization shall be performed in accordance with the Standards and Specifications for Soil Erosion and Sediment Control.
21. Sediment trap(s)/basin(s) shall be cleaned out and restored to the original dimensions when sediment has accumulated to the point of one half (½) the wet storage depth of the trap/basin (¼) the wet storage depth for ST III) or when required by the sediment control inspector.
22. Sediment removed from traps/basins shall be placed and stabilized in approved areas, but not within a floodplain.
23. All sediment basins and traps must be surrounded with a welded wire safety fence. The fence must be at least 42 inches high, have posts spaced no farther apart than 8 feet, have mesh openings no greater the two inches in width and four inches in height, with a minimum of 14 gauge wire. Safety fence must be maintained in good condition at all times.
24. No excavation in the areas of existing utilities is permitted unless their location has been deter mined. Call "Miss Utility" at 1 800 257 7777, 48 hours prior to the start of work.
25. Off site spoil or borrow areas must have prior approval by DPS.
26. Sediment trap/basin dewatering for cleanout or repair may only be done with the DPS inspector's permission. The inspector must approve the dewatering method for each application. The following methods may be considered:
   A. Pump discharge may be directed to another on site sediment trap or basin, provided it is of sufficient volume and the pump intake is floated to prevent agitation or suction of deposited sediments; or
   B. the pump intake may utilize a Removable Pumping Station and must discharge into an undisturbed area through a non erosive outlet; or
   C. the pump intake may be floated and discharge into a Dirt Bag (12 oz. non woven fabric), or approved equivalent, located in an undisturbed buffer area. Remember: Dewatering operation and method must have prior approval by the DPS inspector.
   Remember: Dewatering operation and method must have prior approval by the DPS inspector.
27. The permittee must notify the Department of all utility construction activities within the permitted limits of disturbance prior to the commencement of those activities.
28. *Topsoil must be applied to all pervious areas within the limits of disturbance prior to permanent stabilization in accordance with MDE "Standards and Specifications for Soil Preparation, Topsoiling, and Soil Amendments".
   * Class of turfgrass sod must be Maryland State Certified. Sod labels must be made available to the job foreman and the Sediment Control Inspector.

SEQUENCE OF CONSTRUCTION

1. Prior to clearing trees, installing sediment control measures, or grading, a preconstruction meeting must be conducted on site with the Montgomery County Department of Permitting Services (MCDPS) Sediment Control inspector (240) 777 0311 (48 hours notice) and the MNCPPC, Planning Department, Plans Enforcement inspector (301)495 4550 (48 hours notice), the Owners representative, and the site Engineer. In order for the meeting to occur, the applicant must provide one paper set of approved sediment control plans to the MCDPS sediment control inspector at the preconstruction meeting. If no plans are provided, the meeting shall not occur and will need to be rescheduled prior to commencing any work. (1 Day)
2. The limits of disturbance must be field marked prior to clearing of trees, installation of sediment control measures, construction, or other land disturbing activities. (1 Day)
3. The permittee must obtain written approval form the MNCPPC inspector, certifying that the limits of disturbance and tree protection measures are correctly marked and installed prior to commencing any clearing. (1 Day)
4. Clear and grade for installation of sediment control devices. (2 Days)
5. Install Stabilized Construction Entrance (SCE), Diversion Fences and Super Silt Fences, as shown on the plan. (3 Days)
6. Once the sediment control devices are installed, the permittee must obtain written approval from the MCDPS inspector before proceeding with any additional clearing, grubbing or grading. (1 Day)
7. Begin installation of water & sewer utilities. (1 Week)
8. Begin installation of roof leaders. Roof leaders, as shown on the plan are to be blocked until Drywells and Rain Barrels are installed. (1 Week)
9. Begin grading and construction of permeable driveway. (2 Weeks)
10. Once completion grading, stabilized all disturbed areas. (1 Day)
11. Stabilize all disturbed areas within the allowed time frame, per the specifications specified on the approved Sediment Control Plans. (1 Day)
12. Once all construction activities related to driveway and utilities completed, install Drywells and Concrete Permeable Pavement. (2 Weeks)
13. Adjustments are allowed in the field to complete this installation, and as allowed by Montgomery County DPS Site inspector. (1 Day)
14. Stabilize all disturbed areas. (1 Day)
15. Once construction completed, with the permission of sediment control inspector, remove all sediment control devices. (1 Day)
16. Submit executed record drawing certification to the sediment control inspector. (1 Day)
17. Submit SWM as built to MCDPS for review and approval as final step. (1 Day)

RECORD DRAWING CERTIFICATION

A record set of approved Sediment Control/Stormwater Management plans must be maintained on-site at all times. In addition to stormwater management items, these plans must include the number and location of all trees proposed to be planted to comply with the Tree Canopy Law. Any approved modifications or deletions of stormwater practices or tree canopy plantings or information must be shown on this record set of plans and on the Tree Canopy Requirements table. Upon completion of the project, this record set of plans, including hereon this signed Record Drawing Certification, must be submitted to the MCDPS inspector. In addition to this Record Drawing Certification, a formal Stormwater Management As-Built submission [ ] is required [x] is not required for this project.
If this project is subject to a Stormwater Management Right of Entry and Maintenance Agreement, that document is recorded in Montgomery County Land Records at:

Liber **66586** Folio **441** . This Record Drawing will serve as referenced in the recorded document.

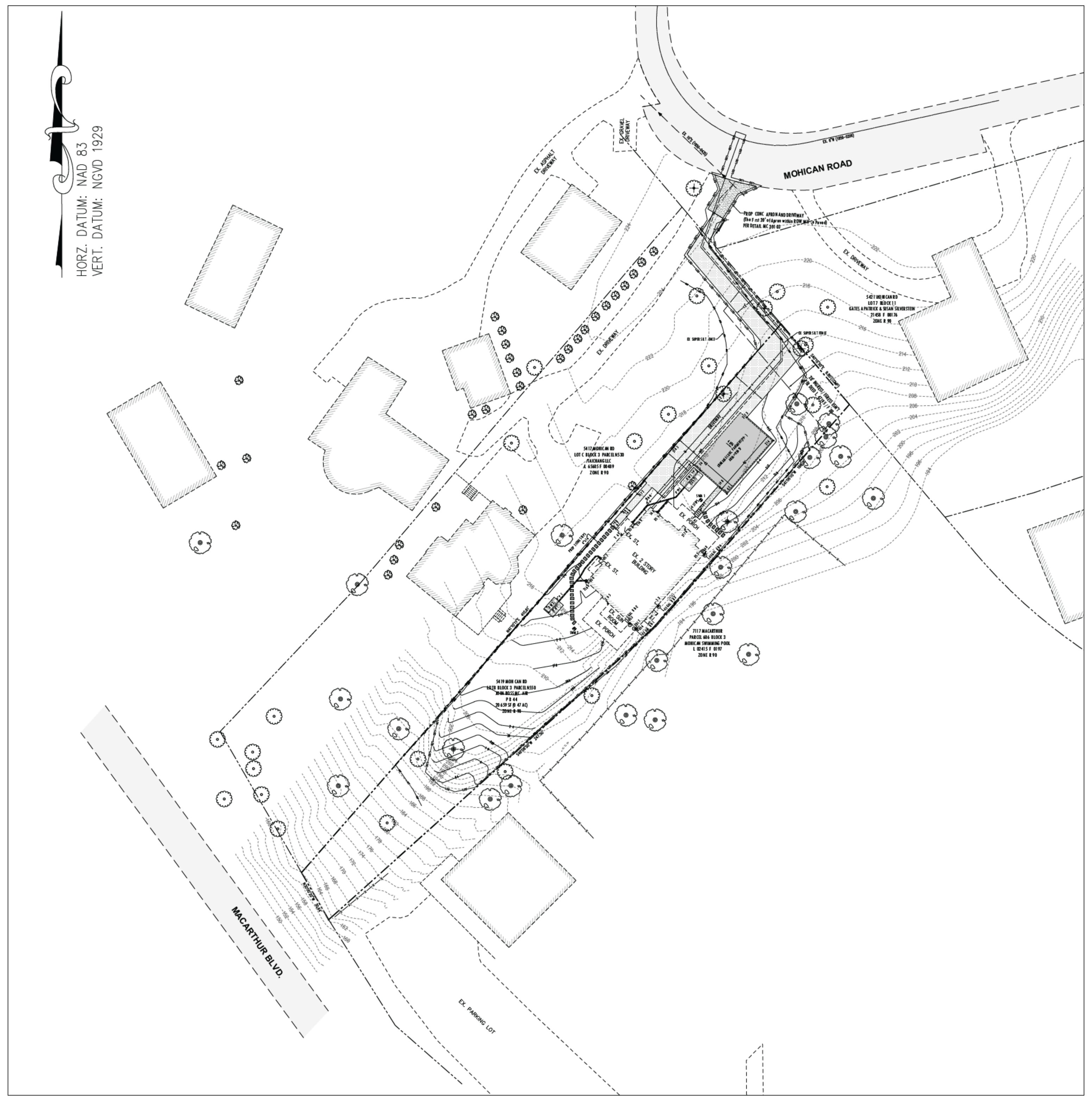
"This record drawing accurately and completely represents the stormwater management practices and tree canopy plantings as they were constructed or planted. All stormwater management practices were constructed per the approved Sediment Control / Stormwater Management plans or subsequent approved revisions."

Owner/ Developer Signature Date

FIELD CHECK OF RECORD DRAWING BY MCDPS INSPECTOR: INITIALS: DATE:

Effective for sediment control permit applications made on or after January 1, 2016.

REV#	DATE	



HORZ. DATUM: NAD 83
VERT. DATUM: NGVD 1929

LOCATION MAP

SCALE: 1"=50'

50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

CONSTRUCTION INSPECTION
CHECK-OFF LIST FOR DRY WELL/RECHARGE CHAMBER

STAGE	MCDPS INSPECTOR	OWNER/ DEVELOPER
MANDATORY NOTIFICATION: Inspection and approval of each practice is required at these points prior to proceeding with construction. The permittee is required to give the MCDPS Inspector twenty-four (24) hours notice (DPS telephone 240-777-0311). The DPS inspector may waive an inspection, and allow the owner/developer to make the required inspection per a prior scheduled arrangement which has been confirmed with the DPS inspector in writing. Work completed without MCDPS approval may result in the permittee having to remove and reconstruct the unapproved work. **Upon completion of the project, a formal Stormwater Management As-Built must be submitted to MCDPS unless a Record Drawing Certification has been allowed instead**. Each of the steps listed below must be verified by either the MCDPS Inspector OR the Owner/Developer.	INITIALS/DATE	INITIALS/DATE
1. Excavation for Dry Well conforms to approved plans		
2. Placement of backfill, perforated inlet pipe and observation well conforms to approved plans		
3. Placement of geotextiles and filter media conforms to approved plans		
4. Connecting pipes, including connection to downspout, constructedper the approved plans		
5. Final grading and permanent stabilization conforms to approved plans		

TOTAL NUMBER OF DRY WELLS INSTALLED PER THIS PERMIT: APPROVED 2
CONSTRUCTED

CONSTRUCTION INSPECTION

RAINWATER HARVESTING (CISTERNS AND RAIN BARRELS)

Upon completion of the project, a formal Stormwater Management As Built must be submitted to MCDPS unless a Record Drawing Certification has been allowed instead.

"The constructed Rainwater Harvesting System meets the conditions specified on the approved plans. Structures required to be water tight were tested after installation and were demonstrated to be water tight."

Owner/Developer Signature Date

CONSTRUCTION INSPECTION
CHECK-OFF LIST FOR PERMEABLE PAVEMENTS

STAGE	MCDPS INSPECTOR	OWNER/ DEVELOPER
MANDATORY NOTIFICATION: Inspection and approval of each practice is required at these points prior to proceeding with construction. The permittee is required to give the MCDPS Inspector twenty-four (24) hours notice (DPS telephone 240-777-0311). The DPS inspector may waive an inspection, and allow the owner/developer to make the required inspection per a prior scheduled arrangement which has been confirmed with the DPS inspector in writing. Work completed without MCDPS approval may result in the permittee having to remove and reconstruct the unapproved work. **Upon completion of the project, a formal Stormwater Management As-Built must be submitted to MCDPS unless a Record Drawing Certification has been allowed instead**. Each of the steps listed below must be verified by either the MCDPS Inspector OR the Owner/Developer.	INITIALS/DATE	INITIALS/DATE
1. Excavation to subgrade conforms to approved plans		
2. Placement of backfill, perforated inlet pipe and observation well conforms to approved plans		
3. Placement of crushed stone subbase conforms to approved plans		
4. Placement of surface material conforms to approved plans		
5. Final grading and permanent stabilization conforms to approved plans		

LEGEND

FEATURE	SYMBOL	FEATURE	SYMBOL
EXISTING STRUCTURES	EX.	EXISTING WATER LINE	
PROPOSED STRUCTURES		EXISTING SEWER LINE	
PROPERTY BOUNDARY LINE		EXISTING SANITARY SEWER MANHOLE	S
EXISTING TOPOGRAPHY	200 192	PROPOSED WATER HOUSE CONNECTION	WHC
PROPOSED GRADING	180	PROPOSED SEWER HOUSE CONNECTION	SHC
PROPOSED SPOT ELEVATION	+200.2	PROPOSED GRAVEL DRYWELL	D.W.1
PROPOSED STORM DRAIN PIPE	4" PVC	PROP. CONCRETE PERMEABLE PAVEMENT	PP-1
EXISTING FENCE	X X X	PROPOSED DOWNSPOUT	
LIMIT OF DISTURBANCE	LOD LOD	SUPER SILT FENCE	SSF
POWER POLE	PP	PROPOSED RETAINING WALL	
PROP. STABILIZED CONSTRUCTION ENTRANCE	SCE	BUILDING RESTRICTION LINE	25' BRLN
GAS LINE	GAS GAS	OBSERVATION WELL	O.W
ROAD CENTERLINE	CL	PROPOSED RAIN BARREL	R.B.-1
DRAINAGE AREA LINE		SOIL BORING- INFILTRATION TEST HOLE	SWM-1
TREE PROTECTION FENCE/ ROOT PRUNING	TPF RP	SOIL BORING- HAND AUGER	HA-1
EXISTING SHRUB		PROPOSED UNDERGROUND ELECTRIC LINE	E E
PROPOSED PERMEABLE DRIVEWAY		EXISTING TREE (TO BE SAVED) CRITICAL ROOT ZONE (C.R.Z.)	
PROPOSED CONCRETE PAVEMENT			
PROPOSED TREE (PLANTING) 400 SF GROWING ZONE		EXISTING TREE (TO BE REMOVED) CRITICAL ROOT ZONE (C.R.Z.)	

SITE DATA

1. Address : 5419 Mohican Road, Bethesda, MD 20816
2. Owner Name: John Ross Mcnair
3. Legal Description: Glen Echo Heights
4. Lot: B
5. Block: 3
6. LIBER / FOLIO: 40953 / 265
7. Existing Use: Vacant
8. Proposed Use: Residential (Single Family)
9. Tax Map: GM53
10. Tax ID No.: 03682311
11. Election District Number: 7
12. Gross Lot Area: 20,659 SF (0.47 Ac.)
13. Dedication ROW Area: 0 SF (0 Ac.)
14. Net Lot Area: 20,659 SF (0.47 Ac.)
15. Zoning: R 90
16. WSSC Grid: 207NE06
17. Water Category: W 1
18. Sewer Category: S 1
19. Historic Site: No
20. Special Protection Area: No
21. Watershed: Lower Rock Creek
22. Zoning Regulations:

	Required/Allowed	Provided
Minimum Lot Area	9,000 SF	20,659 SF (0.47 Ac)
Maximum Lot Coverage	20%	9.70%*
*=(Building Footprint) / Lot Area = (2,003 SF / 20,659 SF) x 100 = 9.70%		
Minimum Front Setback	108.8'	118.1'
Minimum Side Setback	7'	12.0' ,8.4'
Minimum Rear Setback	20'	223.3'
Minimum Lot Frontage (Building Line)	75'	59.39'
Minimum Lot Frontage (Street Line)	25'	60.07'
Parking Space for Single Family Unit	2.00	2
Maximum Building Height	35'	33.48'

OWNER'S/DEVELOPER'S CERTIFICATION

I/We hereby certify that all clearing, grading, construction, and or development will be done pursuant to this plan and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of Natural Resources approved training program for the control of sediment and erosion before beginning the project.

[signature] 10/30/2024
Signature Date

Michael G Sherman, OWNER
Printed Name and Title

DESIGN CERTIFICATION

I hereby certify that this plan has been prepared in accordance with the "2011 Maryland Standards and Specification for Soil Erosion and Sediment Control," Montgomery County Department of Permitting Services Executive Regulations 5 90, 7 02AM and 36 90, and Montgomery County Department of Public Works and Transportation "Storm Drain Design Criteria" dated August 1988.

m Razavi 2/14/2025
Design Engineer Signature Date

Mike Razavi 22742
Printed Name Registration Number

CERTIFICATION OF THE QUANTITIES

I hereby certify that the estimated total amount of excavation and fill as shown on these plans has been computed to 395 cubic yards of excavation, 10 cubic yards of fill and the total area to be disturbed as shown on these plans has been determined to be 12,276 square feet.

m Razavi 2/14/2025
Design Engineer Signature Date

Mike Razavi 22742
Printed Name Registration Number

RUNOFF STATEMENT

I understand that DPS approval of this sediment control/stormwater management plan is for demonstrated compliance with required environmental runoff treatment standards. This DPS sediment control/stormwater management plan approval does not relieve me of professional responsibility. I have analyzed the proposed design for sediment control permit no. 288215 and hereby certify that, based upon my background, training and experience, I have determined that the proposed improvements shown on this plan meet relevant laws and regulations. I further acknowledge that I have analyzed the post development runoff patterns for this project from the standpoint of my responsibilities under current Maryland Law and have determined that if permission is required from adjacent property owners, I have obtained it and have made copies of those permissions available to DPS.

m Razavi 10/30/2024
Engineer's Signature Date

MOHAMMAD RAZAVI
Printed Name

TREE CANOPY REQUIREMENTS TABLE

To be completed by the consultant and placed on the first sheet of the Sediment Control / Stormwater Management plan set for all projects. A fee in lieu of planting will be charged for any required canopy trees that are not planted.

Exempt: Yes ☐ No ☒ If exempt under Section 55-5 of the Code, please check the applicable exemption category below.

Total Property Area	Total Disturbed Area
20,659 square feet	17,856 square feet
Shade Trees Required	**Shade Trees Proposed to be Planted**
15	15

Number of Trees Requiring Payment of Fee in Lieu
(Trees Required - Trees Planted)
0 Trees

Required Number of Shade Trees

Area (sq. ft.) of the Limits of Disturbance FROM	TO	Number of Shade Trees Required
1	6,000	3
6,001	8,000	6
8,001	12,000	9
12,001	14,000	12
14,001	40,000	15

If the square footage of the limits of disturbance is more than 40,000, then the number of shade trees required must be calculated using the following formula

(Number of Square Feet in Limits of Disturbance ÷ 40,000) × 15

EXEMPTION CATEGORIES
CHECK AS APPLICABLE

- ☐ 55 5(a) any activity that is subject to Article II of Chapter 22A;
- ☐ 55 5(b) any commercial logging or timber harvesting operation with an approved exemption from Article II of Chapter 22A;
- ☐ 55 5(f) any activity conducted by the County Parks Department;
- ☐ 55 5(g) routine or emergency maintenance of an existing stormwater management facility, including an existing access road, if the person performing the maintenance has obtained all required permits;
- ☐ 55 5(h) any stream restoration project if the person performing the work has obtained all necessary permits;
- ☐ 55-5(i) cutting or clearing any tree to comply with applicable provisions of any federal, state, or local law governing safety of dams;
- ☐ OTHER: Specify per Section 55 5 of the Code.

APPROVED
Montgomery County
Historic Preservation Commission
[signature]

REVIEWED
By Dan Bruechert at 1:12 pm, May 01, 2025

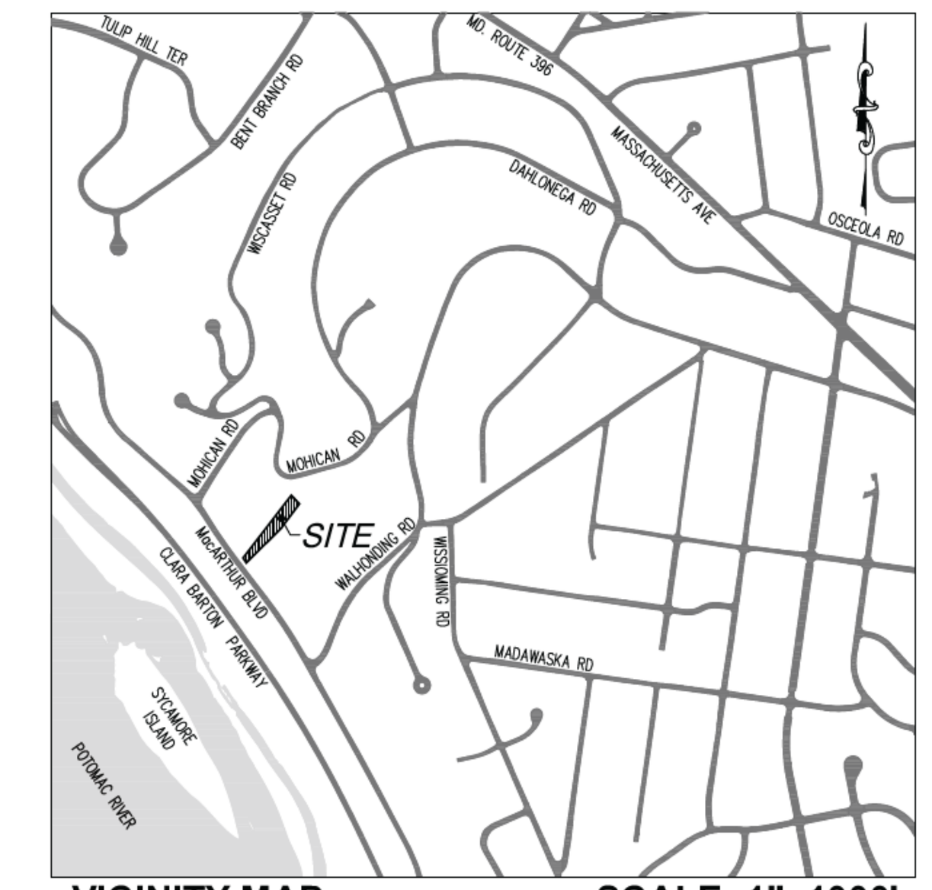
RELATED REQUIRED PERMITS

To be completed by the consultant and placed on the first sheet of the Sediment Control / Stormwater Management plan set for all projects

IT IS THE RESPONSIBILITY OF PERMITTEE/OWNER OF THIS SITE TO OBTAIN ALL REQUIRED PERMITS PRIOR TO ISSUANCE OF THE APPROVED SEDIMENT CONTROL PERMIT

TYPE OF PERMIT	REQD	NOT REQ	PERMIT #	EXPIRATION DATE	WORK RESTRICTION DATE
MCDPS Floodplain District		X			
WATERWAYS/WETLAND(S):					
a. Corps of Engineers		X			
b. MDE		X			
c. MDE Water Quality Certification		X			
MDE Dam Safety		X			
* DPS Roadside Trees Protection Plan	X		387168	Approval Date 2/10/2023	
** N.P.D.E.S. NOTICE OF INTENT		X			
FEMA LOMR (Required Post Construction)		X			
OTHERS (Please List):					

* A copy of the approved Roadside Trees Protection Plan must be delivered to the sediment control inspector at the preconstruction meeting.
** When a Notice of Intent is required, the sediment control permit may not be issued until confirmation of authorization under the MDE's 20-CP permit has been submitted to DPS.



VICINITY MAP SCALE: 1"=1000'

SHEET INDEX :

CALL "MISS UTILITIES" AT #811 OR LOG ON TO WWW.MISSUTILITIES.NET
48 Hours Before Start Of Construction

The excavator must notify all public utility companies with underground facilities in the area of proposed excavation and have those facilities located by the utility companies prior to commencing excavation. The excavator is responsible for compliance with requirements of Chapter 36A of the Montgomery County Code.

PLAN REVISION NARRATIVE :

THE APPROVED PLAN FOR THIS SITE IS BEING REVISED TO COMPLY WITH SITE CONDITIONS. THE FOLLOWING REVISIONS ARE BEING MADE BY THIS PLAN:
1. Correct site grading problems in the rear of the house, which resulted from field deviations from the approved plans.
2. Show additional parking space in the front of the house.
3. Adjust proposed stormwater management practices to comply with proposed revisions.

Revision #1 Approved by DPS
Patrick Fitzgerald
02/14/2025

Revision is in response to Notice of Violation to correct issues described in narrative above.

Mohammad Razavi — Digitally signed by Mohammad Razavi Date: 2025.02.14 10:03:51 -05'00'

TECHNICAL REVIEW OF SEDIMENT CONTROL	
Jean Kapusnick	2/25/2023
REVIEWED	DATE
TECHNICAL REVIEW OF STORMWATER MANAGEMENT	
Jean Kapusnick	2/25/2023
REVIEWED	DATE
ADMINISTRATIVE REVIEW	
Jean Kapusnick	2/25/2023
REVIEWED	DATE
SMALL LOT DRAINAGE APPROVAL	
N/A: ☒ OR	
REVIEWED	DATE

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED.

DPS approval of a sediment control or stormwater management plan is for demonstrated compliance with minimum environmental runoff treatment standards and does not create or imply any right to divert or concentrate runoff onto any adjacent property without that property owner's permission. It does not relieve the design engineer or other responsible person of professional liability or ethical responsibility for the adequacy of the drainage design as it affects uphill or downhill properties.

SEDIMENT CONTROL PERMIT NO. 288215

SM. FILE NO.
STORMWATER MANAGEMENT:
ESD to MEP - On Waiver
Three (3) Drywells

COVER SHEET

5419 MOHICAN ROAD

PROJECT ADDRESS
5419 MOHICAN RD, BETHESDA, MD 20816

ZONE: R-90 WSSC GRID: 207NE06
TAX ACC.: 03682311 BLOCK: 3
TAX MAP: GM53 LOT: B

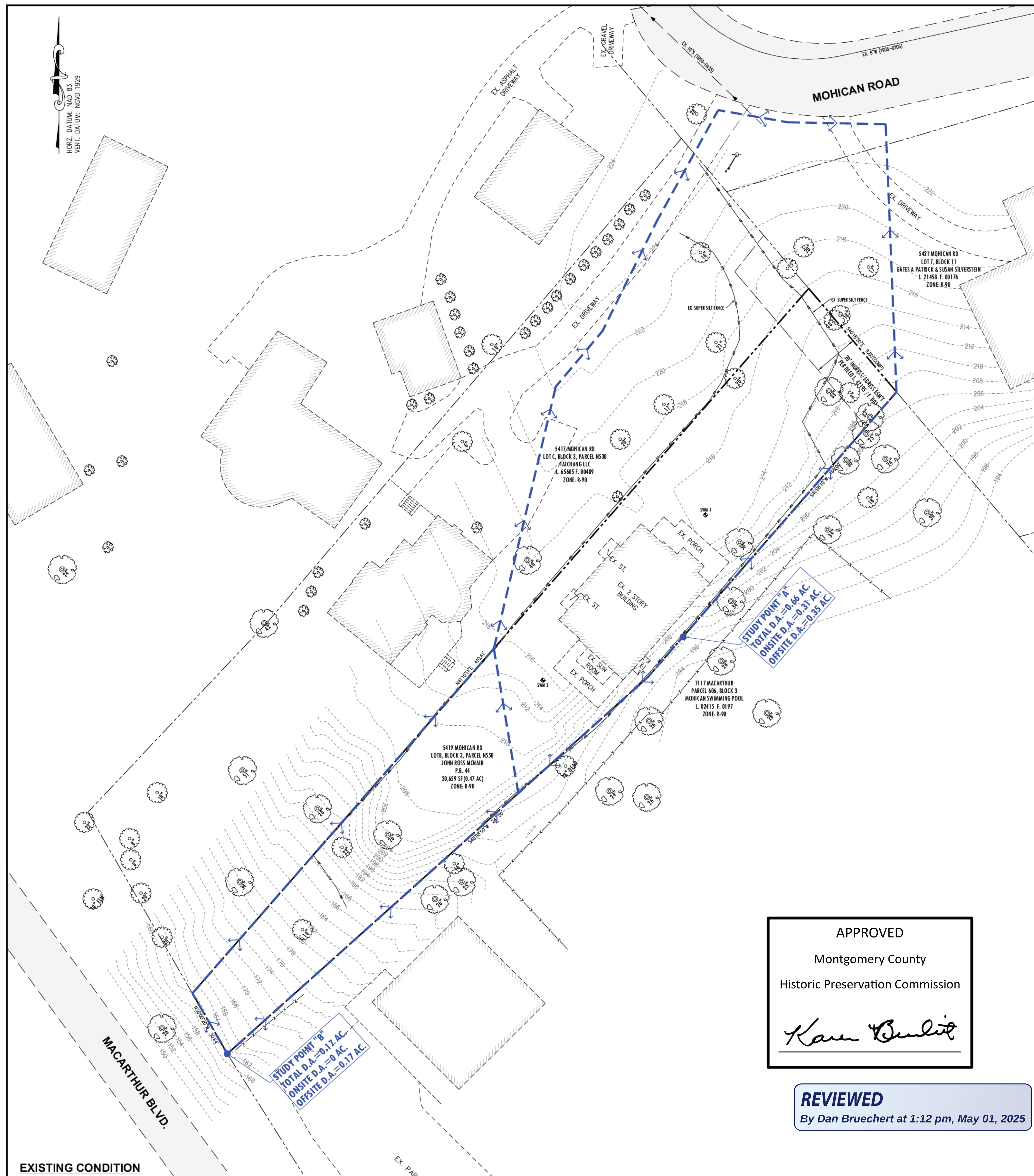
OWNER/ APPLICANT INFO
MICHAEL GREGORY SHERMAN & CAREY NICOLE SHERMAN
5417 MOHICAN RD, BETHESDA, MD 20816
Email: mikesherman7@gmail.com
Phone: (504) 250 2257
DISTRICT 7
MONTGOMERY COUNTY, MARYLAND

STATE OF MARYLAND — MOHAMMAD MOUSAVI RAZAVI — 22742 — PROFESSIONAL ENGINEER

RAZTEC ASSOCIATES, INC.
civil engineers & planners
3451 Emys Place, Monrovia, Maryland 21770
Tel: (301) 775 4394
Email: raztecengr@comcast.net

PROFESSIONALS' REVIEW STATEMENT:
I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME , AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NUMBER: 22742 EXPIRES: JUNE 15, 2026

DRAWN BY: PG CHECKED BY: MR	DATE FEB, 2025	SCALE 1"=50'	SHEET NUMBER SCSF001



EXISTING CONDITION
SCALE: 1"=30'

APPROVED
Montgomery County
Historic Preservation Commission

REVIEWED
By Dan Bruechert at 1:12 pm, May 01, 2025

Project: 5419 MOHICAN ROAD, BETHESDA, MD 20816
Condition: Existing
Study Point: A

Runoff Calculation:
Based on table 3-2 [1] total drainage area is less than 40 acres so hydrological method for analysis is Rational Method.
Use Rational Formula: $Q = C_f \times C \times i \times A / K$
Given:
Q = Peak Discharge (cfs)
C_f = Correction Factor for storm events greater than 10 - year (See Table 3-7 [1])
C = Dimensionless Runoff Coefficient (See Table 3-5 [1])
i = Rainfall Intensity (in/hr)
A = Contributing Drainage Area (acres)
K = Unit Conversion factor 1 English (360 SI)

Contributing Drainage Area (A):

On-site Drainage Area =	13250 sf	>>	0.30 ac
Off-site Drainage Area =	15444 sf	>>	0.35 ac
Total Drainage Area (A) =	28694 sf	>>	0.66 ac
Impervious Area =	1320	>>	0.03 ac
Pervious Area =	27374 sf	>>	0.63 ac

C Computation:

Impervious Area:	C =0.9	Area =	1320 sf
Open space, lawns, etc ...(HSG=B, S>7%)	C =0.21	Area =	27374 sf
Weighted C =	**C =0.24**	Area =	28694 sf

Tc Computation:
Total drainage area is 0.66 ac that is less than 2 ac so based on table 3-3 with C =0.24
Tc = 15 min.

Peak Discharge:

Return Period	i (in/hr)	A (ac)	C	C_f	$Q = C_f . C . i . A$
2 Year Storm	3.54	0.66	0.24	1	0.56 cfs
5 Year Storm	4.36	0.66	0.24	1	0.69 cfs
10 Year Storm	5.00	0.66	0.24	1	0.79 cfs
25 Year Storm	5.84	0.66	0.24	1.1	1.02 cfs
50 Year Storm	6.50	0.66	0.24	1.2	1.24 cfs
100 Year Storm	7.20	0.66	0.24	1.25	1.43 cfs

Note:
[1] Draiange Design Criteria, Department of Transportation, Montgomery County Government, 2014

Project: 5419 MOHICAN ROAD, BETHESDA, MD 20816
Condition: Proposed
Study Point: A

Runoff Calculation:
Based on table 3-2 [1] total drainage area is less than 40 acres so hydrological method for analysis is Rational Method.
Use Rational Formula: $Q = C_f \times C \times i \times A / K$
Given:
Q = Peak Discharge (cfs)
C_f = Correction Factor for storm events greater than 10 - year (See Table 3-7 [1])
C = Dimensionless Runoff Coefficient (See Table 3-5 [1])
i = Rainfall Intensity (in/hr)
A = Contributing Drainage Area (acres)
K = Unit Conversion factor 1 English (360 SI)

Contributing Drainage Area (A):

On-site Drainage Area =	13250 sf	>>	0.31 ac
Off-site Drainage Area =	15444 sf	>>	0.35 ac
Total Drainage Area (A) =	28694 sf	>>	0.66 ac
Impervious Area =	6567	>>	0.15 ac
Pervious Area =	22127 sf	>>	0.51 ac

C Computation:

Impervious Area:	C =0.9	Area =	6567 sf
Open space, lawns, etc ...(HSG=B, S>7%)	C =0.21	Area =	22127 sf
Weighted C =	**C =0.37**	Area =	28694 sf

Tc Computation:
Total drainage area is 0.66 ac that is less than 2 ac so based on table 3-3 with C =0.37
Tc = 15 min.

Peak Discharge:

Return Period	i (in/hr)	A (ac)	C	C_f	$Q = C_f . C . i . A$
2 Year Storm	3.54	0.66	0.37	1	0.86 cfs
5 Year Storm	4.36	0.66	0.37	1	1.06 cfs
10 Year Storm	5.00	0.66	0.37	1	1.22 cfs
25 Year Storm	5.84	0.66	0.37	1.1	1.57 cfs
50 Year Storm	6.50	0.66	0.37	1.2	1.90 cfs
100 Year Storm	7.20	0.66	0.37	1.25	2.20 cfs

Note:
[1] Draiange Design Criteria, Department of Transportation, Montgomery County Government, 2014

Project: 5419 MOHICAN ROAD, BETHESDA, MD 20816
Condition: Existing
Study Point: B

Runoff Calculation:
Based on table 3-2 [1] total drainage area is less than 40 acres so hydrological method for analysis is Rational Method.
Use Rational Formula: $Q = C_f \times C \times i \times A / K$
Given:
Q = Peak Discharge (cfs)
C_f = Correction Factor for storm events greater than 10 - year (See Table 3-7 [1])
C = Dimensionless Runoff Coefficient (See Table 3-5 [1])
i = Rainfall Intensity (in/hr)
A = Contributing Drainage Area (acres)
K = Unit Conversion factor 1 English (360 SI)

Contributing Drainage Area (A):

On-site Drainage Area =	7603 sf	>>	0.17 ac
Off-site Drainage Area =	0 sf	>>	0.00 ac
Total Drainage Area (A) =	7603 sf	>>	0.17 ac
Impervious Area =	0	>>	0.00 ac
Pervious Area =	7603 sf	>>	0.17 ac

C Computation:

Open space, lawns, etc ...(HSG=B, S>7%)	C =0.21	Area =	7603 sf
Weighted C =	**C =0.21**	Area =	7603 sf

Tc Computation:
Total drainage area is 0.17 ac that is less than 2 ac so based on table 3-3 with C =0.21
Tc = 15 min.

Peak Discharge:

Return Period	I (in/hr)	A (ac)	C	C_f	$Q = C_f . C . i . A$
2 Year Storm	3.54	0.17	0.21	1	0.13 cfs
5 Year Storm	4.36	0.17	0.21	1	0.16 cfs
10 Year Storm	5.00	0.17	0.21	1	0.18 cfs
25 Year Storm	5.84	0.17	0.21	1.1	0.23 cfs
50 Year Storm	6.50	0.17	0.21	1.2	0.28 cfs
100 Year Storm	7.20	0.17	0.21	1.25	0.32 cfs

Note:
[1] Draiange Design Criteria, Department of Transportation, Montgomery County Government, 2014

Project: 5419 MOHICAN ROAD, BETHESDA, MD 20816
Condition: Proposed
Study Point: B

Runoff Calculation:
Based on table 3-2 [1] total drainage area is less than 40 acres so hydrological method for analysis is Rational Method.
Use Rational Formula: $Q = C_f \times C \times i \times A / K$
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Pervious Area =	7603 sf	>>	0.17 ac

C Computation:

Open space, lawns, etc ...(HSG=B, S>7%)	C =0.21	Area =	7603 sf
Weighted C =	**C =0.21**	Area =	7603 sf

Tc Computation:
Total drainage area is 0.17 ac that is less than 2 ac so based on table 3-3 with C =0.21
Tc = 15 min.

Peak Discharge:

Return Period	i (in/hr)	A (ac)	C	C_f	$Q = C_f . C . i . A$
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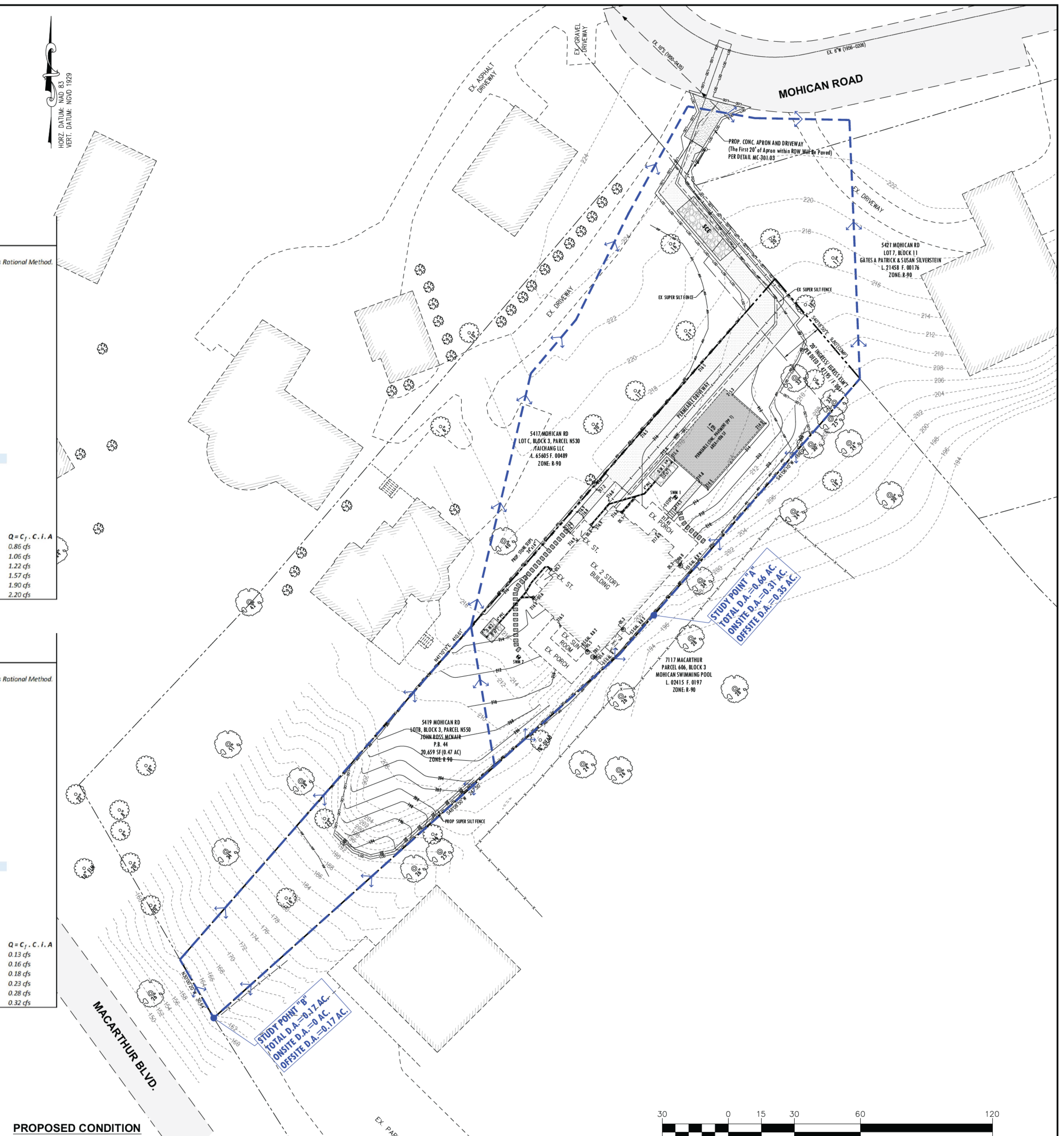
10 Year Storm	5.00	0.17	0.21	1	0.18 cfs
25 Year Storm	5.84	0.17	0.21	1.1	0.23 cfs
50 Year Storm	6.50	0.17	0.21	1.2	0.28 cfs
100 Year Storm	7.20	0.17	0.21	1.25	0.32 cfs

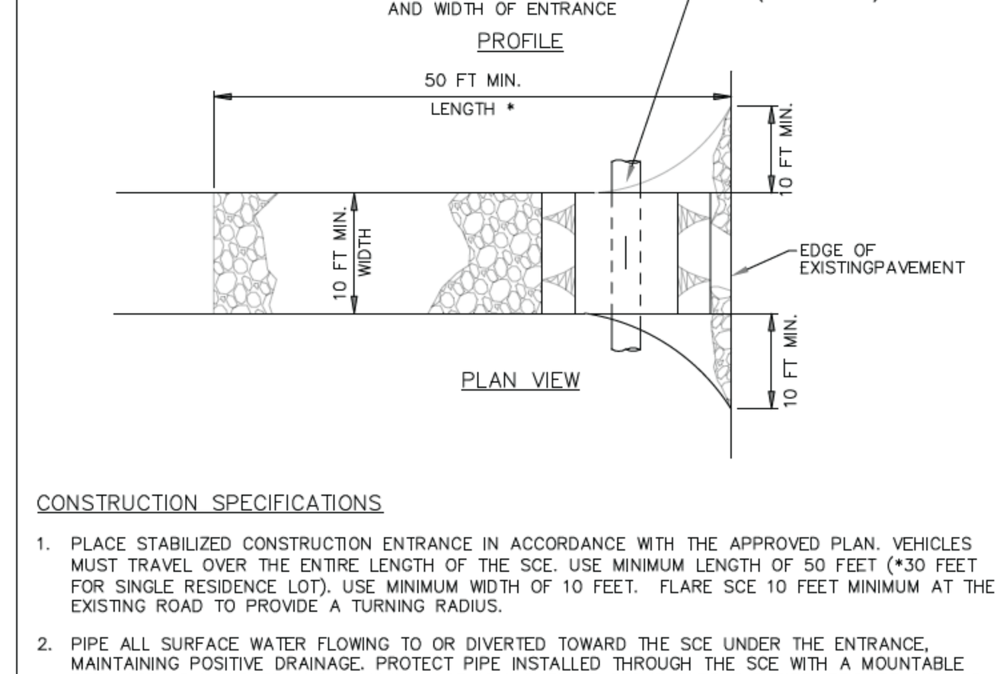
Note:
[1] Draiange Design Criteria, Department of Transportation, Montgomery County Government, 2014



PROPOSED CONDITION
SCALE: 1"=30'

30 0 15 30 60 120
(IN FEET)
1 inch =30 ft

DETAIL B 1 — STABILIZED CONSTRUCTION ENTRANCE — STANDARD SYMBOL: SCE

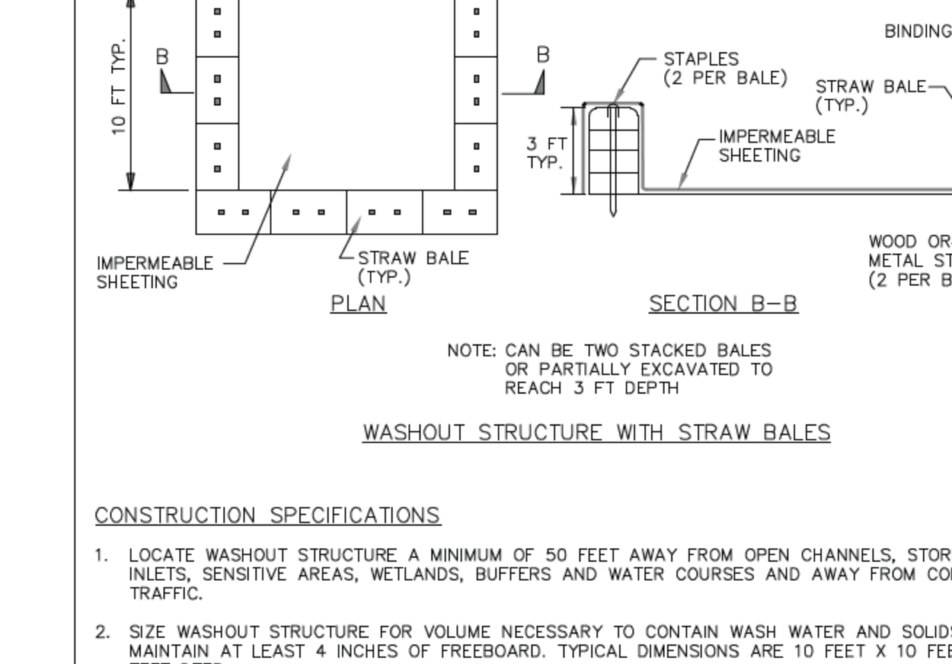


CONSTRUCTION SPECIFICATIONS

1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL H 6 — ONSITE CONCRETE WASHOUT STRUCTURE — STANDARD SYMBOL: CWS



CONSTRUCTION SPECIFICATIONS

1. LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
2. SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
3. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
4. PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
5. KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED). EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL, AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET-VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

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MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
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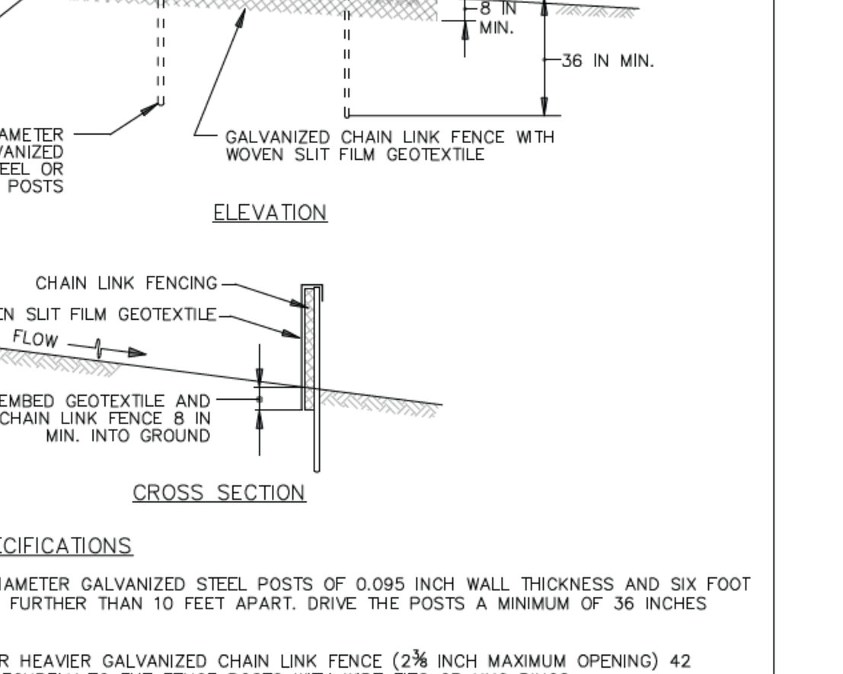
DETAIL E 3 — SUPER SILT FENCE — STANDARD SYMBOL: SSF



CONSTRUCTION SPECIFICATIONS

1. INSTALL 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2⅜ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
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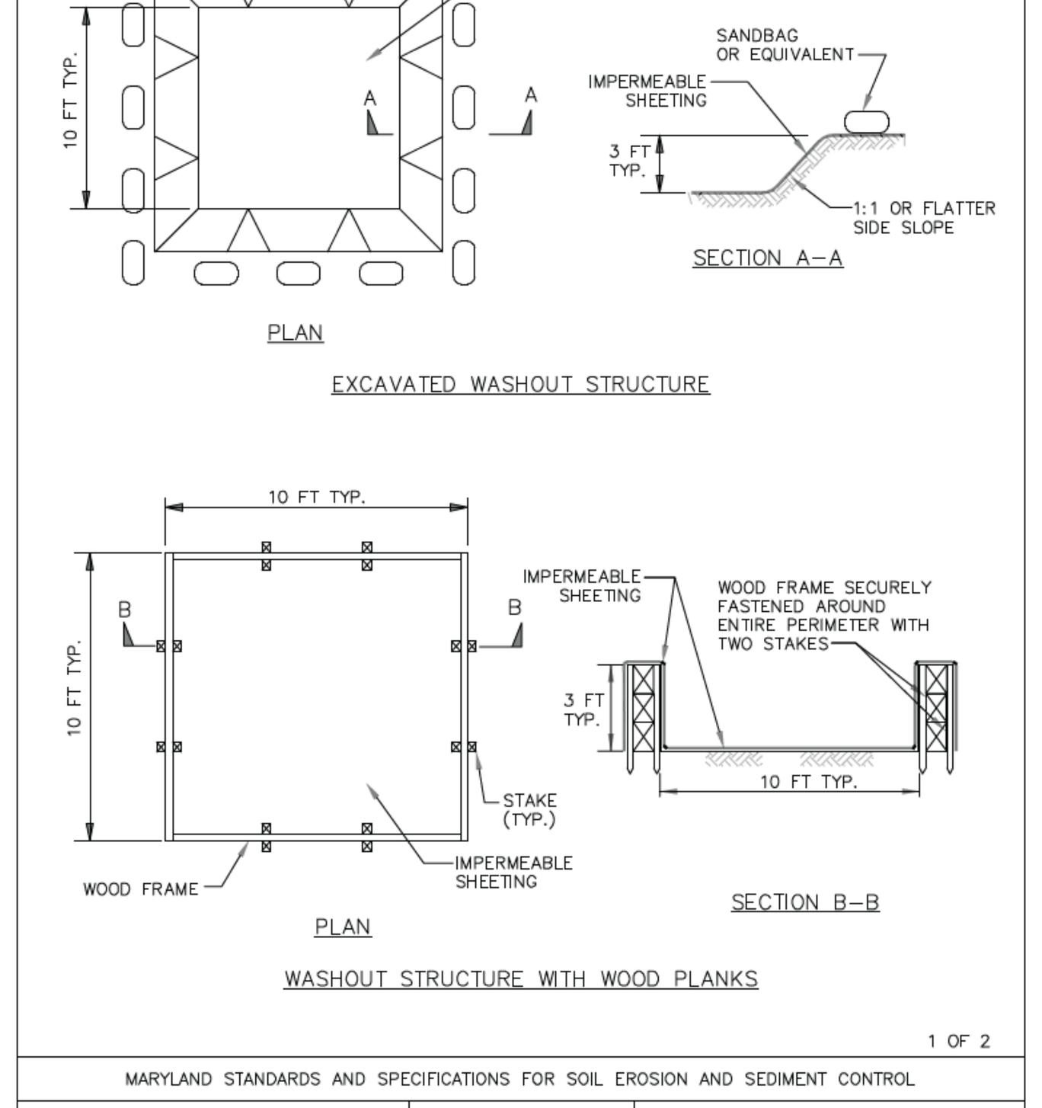
DETAIL H 6 — ONSITE CONCRETE WASHOUT STRUCTURE — STANDARD SYMBOL: CWS

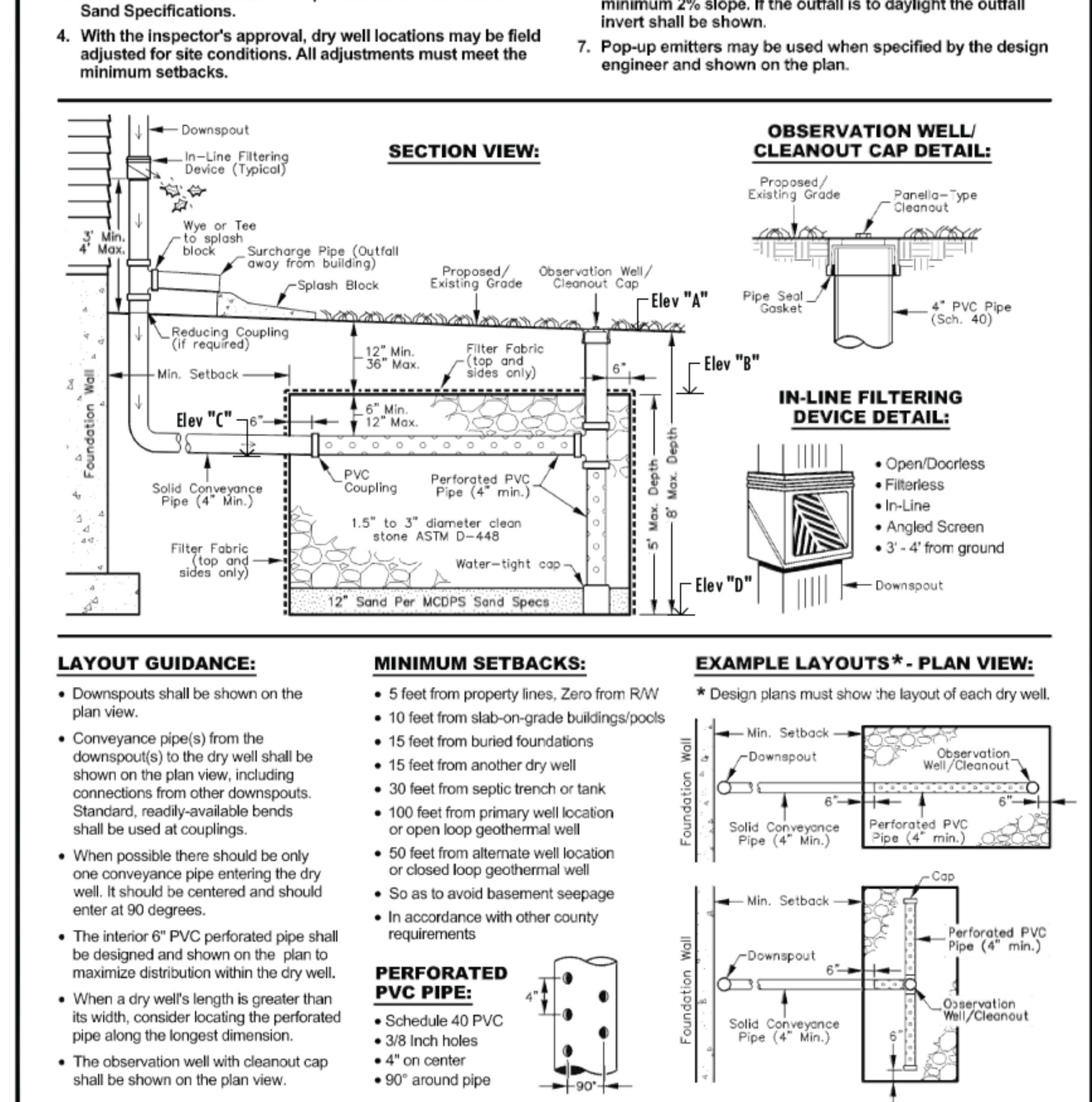


1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

GENERAL NOTES:

1. Dry wells may receive water from roof downspouts only.
2. Length, width, and depth of each dry well is to be as specified by the design engineer on the approved plan.
3. Manufactured sand is not acceptable. Refer to the MCDPS Sand Specifications.
4. With the inspector's approval, dry well locations may be field adjusted for site conditions. All adjustments must meet the minimum setbacks.
5. Impermeable liners may be used when specified by the design engineer and shown on the plan.
6. Overflow pipes may be used when specified by the design engineer and shown on the plan. They shall be set at a minimum 2% slope. If the outfall is to daylight the outfall invert shall be shown.
7. Pop-up emitters may be used when specified by the design engineer and shown on the plan.



LAYOUT GUIDANCE:
- Downspouts shall be shown on the plan view.
- Conveyance pipe(s) from the downspout(s) to the dry well shall be shown on the plan view, including connections from other downspouts. Standard, readily-available bends shall be used at couplings.
- When possible there should be only one conveyance pipe entering the dry well. It should be centered and should enter at 90 degrees.
- The interior 6" PVC perforated pipe shall be designed and shown on the plan to maximize distribution within the dry well.
- When a dry well's length is greater than its width, consider locating the perforated pipe along the longest dimension.
- The observation well with cleanout cap shall be shown on the plan view.

MINIMUM SETBACKS:
- 5 feet from property lines, Zero from R/W
- 10 feet from slab-on-grade buildings/pools
- 15 feet from buried foundations
- 15 feet from another dry well
- 30 feet from septic trench or tank
- 100 feet from primary well location or open loop geothermal well
- 50 feet from alternate well location or closed loop geothermal well
- So as to avoid basement seepage
- In accordance with other county requirements

PERFORATED PVC PIPE:
- Schedule 40 PVC
- 3/8 Inch holes
- 4" on center
- 90° around pipe

EXAMPLE LAYOUTS* - PLAN VIEW:
* Design plans must show the layout of each dry well.

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES — WATER RESOURCES SECTION | DRY WELL FOR ROOF RUNOFF DETAIL | DATE: SEPTEMBER 2021 — SCALE: NONE

Linda Kobylski, Land Development Division Chief — September 1, 2021

REV#	DATE	

DRY-WELL SPECIFICATIONS

1. **Stone -** Dry Wells shall be filled with clean 1.5 3.0 inch diameter clean stone meeting ASTM D448. Mirafi 140N or DPS approved equivalent filter fabric shall be placed on the top and sides of the facility as shown on the Dry Well Detail. Under no circumstances shall geotextile or filter fabric be allowed to be placed on the bottom of the facility or in any other location other than those specifically approved on the plan.
2. **Sand Bed -** A 12 inch layer of fine aggregate sand shall be provided at the bottom of the excavation. Clean ASTM C33 or AASHTO M6 Fine Aggregate Concrete Sand is required per DPS "Sand Specifications" which must be included on the plan.
3. **Observation Well/Clean Out -** The Dry Well must incorporate an Observation Well/Clean Out in accordance with the Dry Well Detail and the location must be as specified by the designer and shown on the plans.

SAND SPECIFICATIONS:

Washed ASTM C33 Fine Aggregate Concrete Sand is utilized for stormwater management applications in Montgomery County. In addition to the ASTM C33 specification, sand must meet ALL of the following conditions:

1. Sand must meet gradation requirements for ASTM C 33 Fine Aggregate Concrete Sand. AASHTO M 6 gradation is also acceptable.
2. Sand must be silica based … no limestone based products may be used. If the material is white or gray in color, it is probably not acceptable.
3. Sand must be clean. Natural, unwashed sand deposits may not be used. Likewise, sand that has become contaminated by improper storage or installation practices will be rejected.
4. Manufactured sand or stone dust is not acceptable under any circumstance.

HYDROLOGY ANALYSIS NOTES:

1. There are two study points "A" & "B" drainage area on the site.
2. For study point "B" drainage area, there is no impervious area for both conditions. So, weighted C and Q_{10} for pre development condition is equal with post development condition (Q_{10}=0.18 cfs).
3. For study point "A" drainage area, there is a increase in impervious area after development (0.12 Ac.). So, weighted C will be increased from C=0.24 to C=0.34. Due to these changes, Q_{10} will be increased from Q_{10}=0.79 cfs (pre development condition) to Q_{10}=1.22 cfs (post development condition)

DRAINAGE NARRATIVE:

The drainage conditions on this site are divided into two separate study points. The runoff to study point A is impacted, since there is an increase of 0.43 cfs for the 10 year storm. However, this increase in runoff has no effect on any residential properties, because the flow path travels through the Mohican Swimming Pool Club to the easterly boundary of the subject property, where runoff is collected in a natural channel, and conveyed through an existing culvert. The runoff to study point B is not impacted, since the runoff for both the existing condition and proposed condition are the same with no increase in runoff, draining to right of way of McArthur Boulevard.

LEGEND

FEATURE	SYMBOL	FEATURE	SYMBOL
EXISTING STRUCTURES	EX.	EXISTING WATER LINE	
PROPOSED STRUCTURES		EXISTING SEWER LINE	
PROPERTY BOUNDARY LINE		EXISTING SANITARY SEWER MANHOLE	S
EXISTING TOPOGRAPHY	200 192	PROPOSED WATER HOUSE CONNECTION	WHC
PROPOSED GRADING	180	PROPOSED SEWER HOUSE CONNECTION	SHC
PROPOSED SPOT ELEVATION	+200.2	PROPOSED GRAVEL DRYWELL	D.W.1
PROPOSED STORM DRAIN PIPE	4" PVC	PROP. CONCRETE PERMEABLE PAVEMENT	PP-1
EXISTING FENCE	X X X	PROPOSED DOWNSPOUT	
LIMIT OF DISTURBANCE	LOD LOD	SUPER SILT FENCE	SSF
POWER POLE	PP	PROPOSED RETAINING WALL	
PROP. STABILIZED CONSTRUCTION ENTRANCE	SCE	BUILDING RESTRICTION LINE	25' BRLN
GAS LINE	GAS GAS	OBSERVATION WELL	O.W
ROAD CENTERLINE	CL	PROPOSED RAIN BARREL	R.B.-1
DRAINAGE AREA LINE		SOIL BORING- INFILTRATION TEST HOLE	SWM-1
TREE PROTECTION FENCE/ ROOT PRUNING	TPF RP	SOIL BORING- HAND AUGER	HA-1
PROPOSED PERMEABLE DRIVEWAY		PROPOSED UNDERGROUND ELECTRIC LINE	E E
PROPOSED CONCRETE PAVEMENT		EXISTING SHRUB	
EXISTING TREE (TO BE REMOVED) CRITICAL ROOT ZONE (C.R.Z.)		EXISTING TREE (TO BE SAVED) CRITICAL ROOT ZONE (C.R.Z.)	

DRAINAGE AREAS / NOTES & DETAILS

5419 MOHICAN ROAD

PROJECT ADDRESS
5419 MOHICAN RD, BETHESDA, MD 20816

ZONE:	R-90	WSSC GRID:	207NE06
TAX ACC.:	03682311	BLOCK:	3
TAX MAP:	GM53	LOT:	B

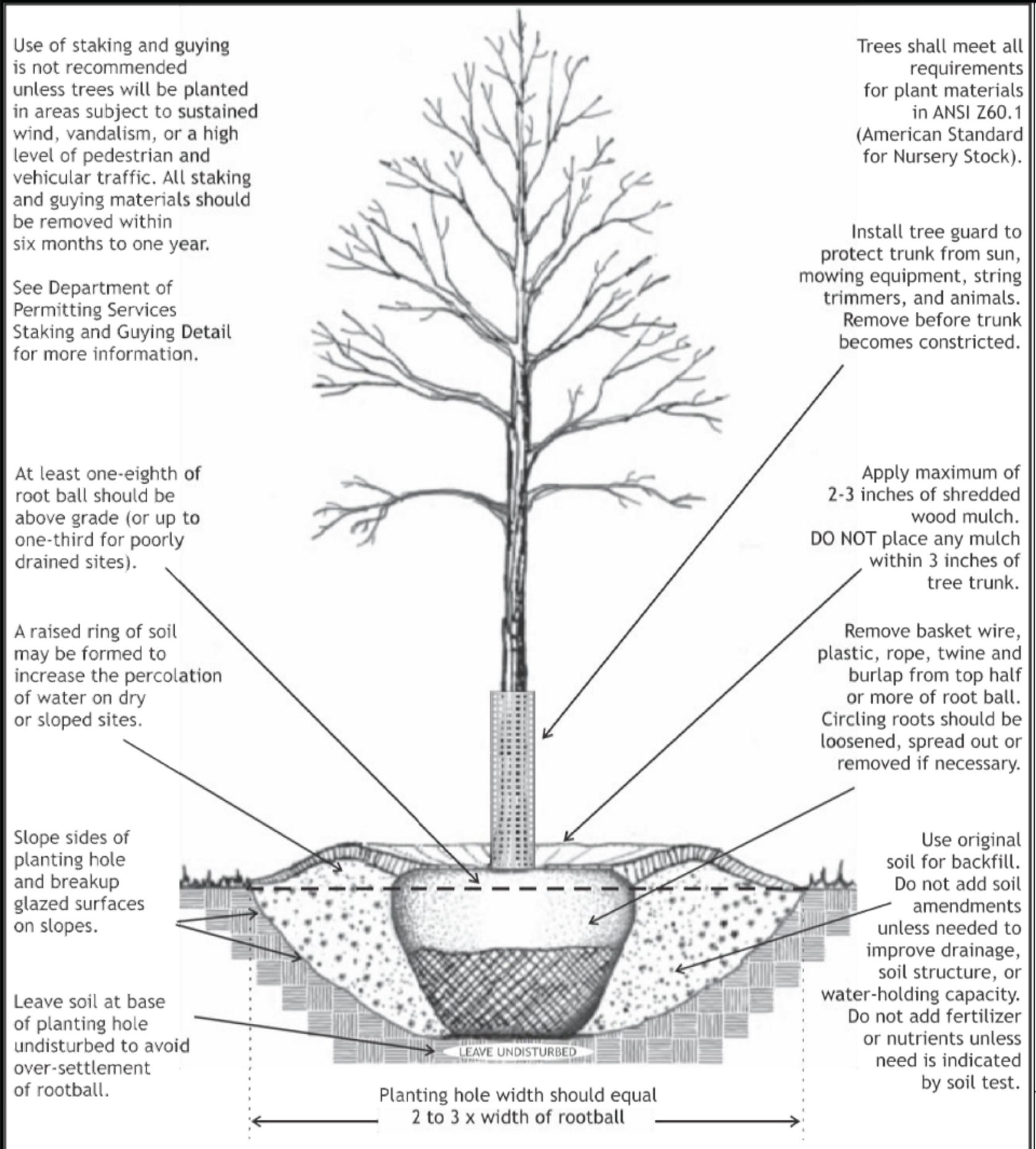
OWNER/ APPLICANT INFO
MICHAEL GREGORY SHERMAN & CAREY NICOLE SHERMAN
5417 MOHICAN RD, BETHESDA, MD 20816
Email: mikesherman7@gmail.com
Phone: (504) 250 2257
DISTRICT 7
MONTGOMERY COUNTY, MARYLAND

STATE OF MARYLAND — MOHAMMAD MOUSAVI RAZI — 22742 — PROFESSIONAL ENGINEER

RAZTEC ASSOCIATES, INC.
civil engineers & planners
3451 Emys Place, Monrovia, Maryland 21770
Tel: (301) 775 4394
Email: raztecengr@comcast.net

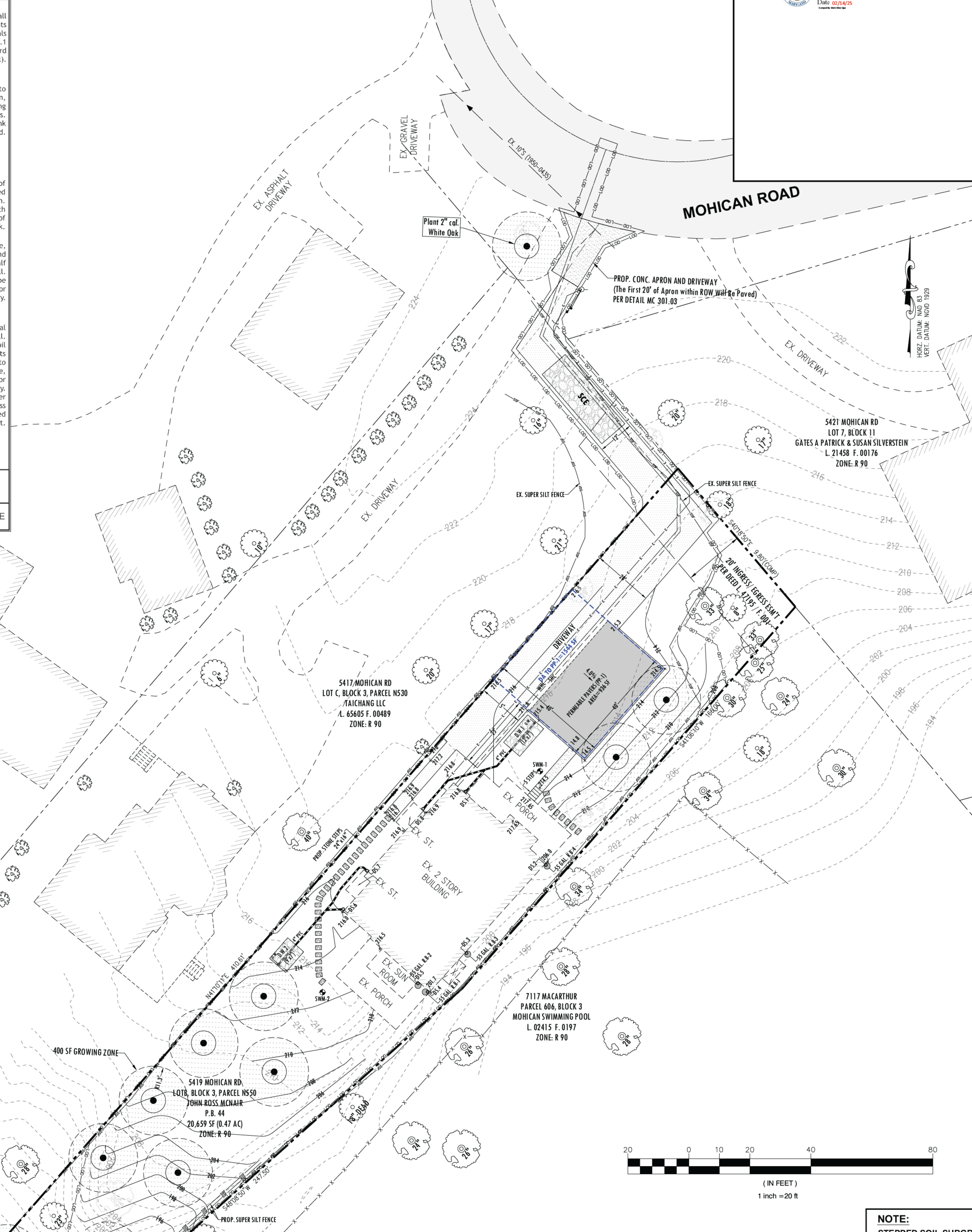
PROFESSIONALS' REVIEW STATEMENT:
I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME , AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NUMBER: 22742 EXPIRES: JUNE 15, 2026

DRAWN BY: PG / CHECKED BY: MR	DATE	SCALE	SHEET NUMBER
	DEC, 2024	1"=30'	SCSF003



This detail is based on *ANSI A300 (Part 6) 2012 Planting and Transplanting*, and its companion publication, *Best Management Practices: Tree Planting*, copyright 2005 by *the International Society of Arboriculture*

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES	TREE PLANTING DETAIL FOR BALLED AND BURLAP NURSERY STOCK	DATE: 5 /16
		SCALE: NONE



20 0 10 20 40 80
(IN FEET)
1 inch =20 ft

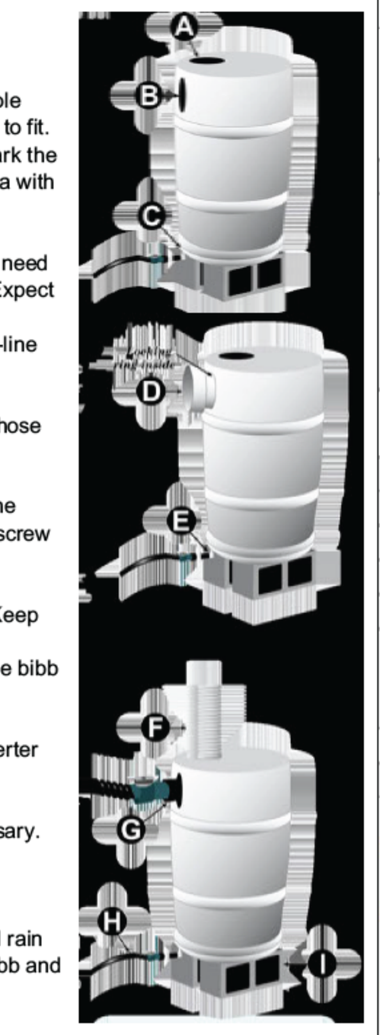
SOIL SUMMARY TABLE

Map unit symbol	Map unit name	HSG	K Factor	Hydric Rating	Draiange Class	Acres in AOI	Percent of AOI
Montgomery County, Maryland (MD031)							
2UC	Glenelg-Urban land complex, 8 to 15 percent slopes	B	0.28	0	Well drained	0.42	87.50%
16D	Brinklow-Blocktown channery silt loams, 15 to 25 percent slopes	C	0.24	5	Well drained	0.06	12.50%
Total for Area of Interest						0.48	87.50%

https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

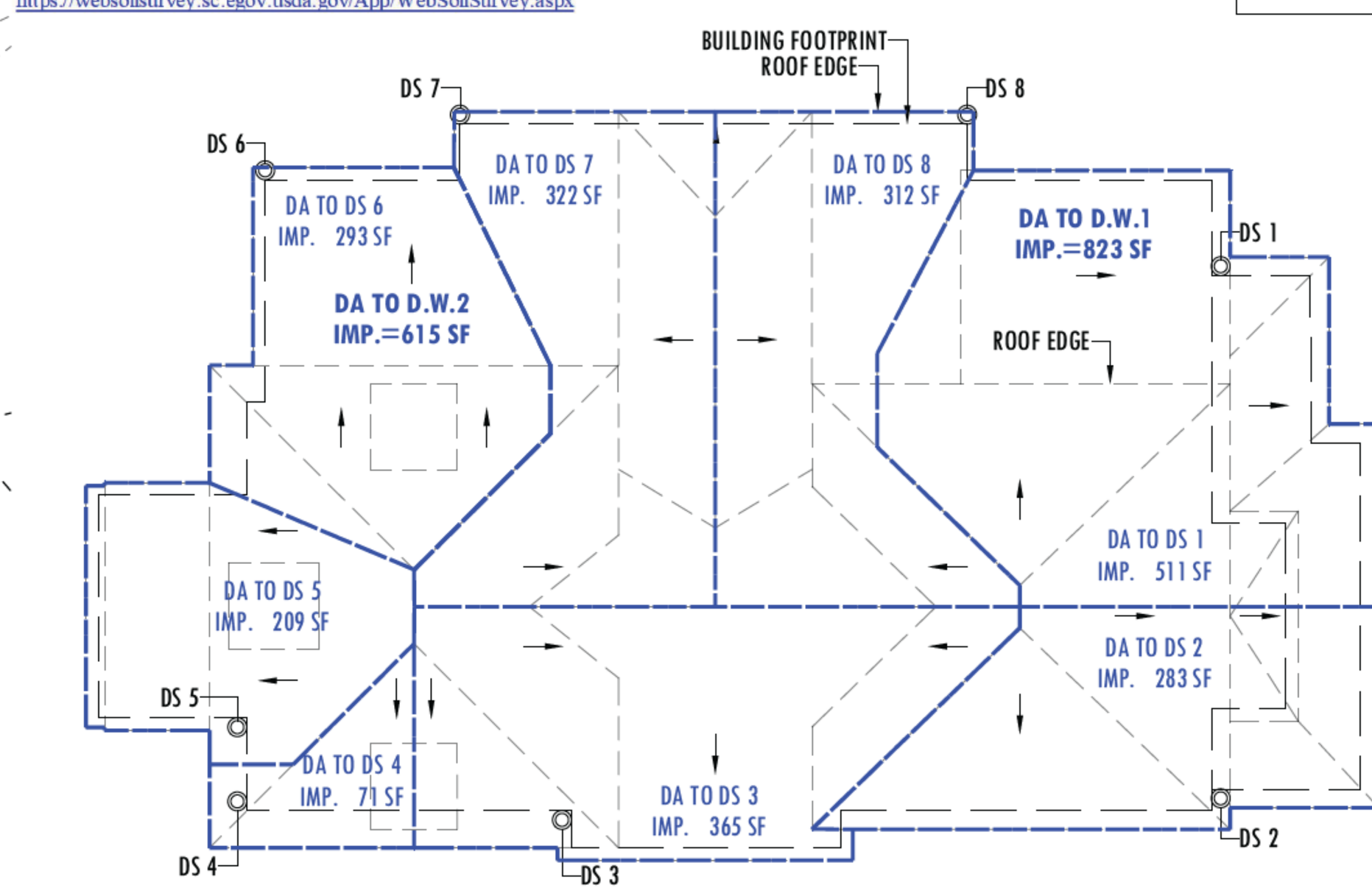
Rain Barrel Building Instructions

Step A
Cut a hole in the top of your barrel for the inlet drain. The hole should only be large enough to allow the diverter connector to fit. Cut the hole using either a drill or carefully measure and mark the area to be cut, start a pilot hole, and cut out the marked area with a jigsaw.
Step B
Cut a hole to accommodate the overflow adapter. You may need to sand the hole somewhat larger to screw in the adapter. Expect a snug fit. The diameter of the hole will vary based on your overflow pipe size. This hole is not needed if you use the in-line diverter option.
Step C
Use a 15/ 16-inch drill bit to cut a hole for the ¾-inch brass hose bibb.
Step D
Insert the threaded end of the overflow adapter insert into the overflow hole. Keep the adapter straight as you prepare to screw it into the locking ring, inside the barrel/fullflow valve.
Step E
Insert the threaded hose bibb into the already drilled hole. Keep the hose bibb straight as you screw it into the barrel.
Apply a bead of silicone caulk or wrap teflon tape around the bibb before inserting it to ensure a tight, drip-free connection.
Step F
If you are using a filter on the inlet, insert it between the diverter pipe and the barrel.
Step G
Attach the overflow pipe to the adapter and caulk as necessary.
Step H
Attach a garden hose or soaker hose to your hose bibb.
Step I
Use cinderblocks or similar pavers to elevate the completed rain barrel off the ground to ensure easier access to the hose bibb and facilitate gravity-fed drainage.



RAIN BARREL DETAIL

Manufacturer: FCMP OUTDOOR RAINCATCHER
rain barrels are repurposed or "upcycled" high quality food-grade drums that were destined for a landfill. We re-purpose these drums into rain barrels using socially and environmentally conscious labor and manufacturing processes.
Specifications:
Black color
50 gallon capacity
Polyethylene
Locking cap
Overflow/linking ports
Also available in Terra-cotta



ROOF DRAINAGE PLAN
SCALE: 1"=10'
10 0 5 10 20 40
(IN FEET)
1 inch =10 ft

Address:	5419 Mohican Road, Bethesda, MD 20816		
Lot #:	B		
Lot Area:	20659 S.F.		
Limit of Disturbed (LOD) Area:	17856 S.F.	(A)	

Impervious Area

Based On Lot Area		Based On LOD	
Building(Roof):	2366 S.F.	Building(Roof):	2366 S.F.
Sidewalk & Walkway:	187 S.F.	Sidewalk & Walkway:	187 S.F.
Porch & Stoop:	343 S.F.	Porch & Stoop:	343 S.F.
Driveway:	2930 S.F.	Driveway:	4104 S.F.
Total Impervious Area (Site Area) :	5826 S.F.	Total Impervious Area (LOD) :	7000 S.F.
Percent Total Impervious Area:	28.20%	(I)	Based on entire lot
Percent Impervious Area (Based on LOD):	39.20%	(II)	Based on LOD

Calculation

Hydrologic Soil Group:	A	B	C	D
Soil Type:	---	2UC	16D	---
Percentage:	0.00%	87.50%	12.50%	0.00%

Target PE: 1.60 inch — Based on entire lot
Rv=0.05+0.009(II)= 0.403 — Based on LOD
ESDv=(PE)(Rv)(A)/12= 959 C.F. — Required ESDv

Provide Practices to Attenuate Roof Runoff

Gravel Drywell- 1
DA To Practice= 823 S.F.
Provide maximum volume equal to 2.6" of rainfall therefore volume allowed is:
V=(2.6")(.95)(823 S.F.)/12= 169 C.F.
Provide Gravel Drywell System
Void Ratio: 0.40
Size Drywell;
Depth= 5.00 Feet
Length= 12.00 Feet
Width= 7.00 Feet
Drywell Area= 84 S.F.
Volume Provided=(0.4)(Area)(Depth)= 168 C.F.
Rainfall Attenuated by this System is ESDv=(PE)(Rv)(A)/12
Re-Arranging; PE=12ESDv/(Rv)(A)= 2.58 in <2.6 inch-OK

Gravel Drywell- 2
DA To Practice= 615 S.F.
Provide maximum volume equal to 2.6" of rainfall therefore volume allowed is:
V=(2.6")(.95)(615 S.F.)/12= 127 C.F.
Provide Gravel Drywell System
Void Ratio: 0.40
Size Drywell;
Depth= 5.00 Feet
Length= 9.00 Feet
Width= 7.00 Feet
Drywell Area= 63 S.F.
Volume Provided=(0.4)(Area)(Depth)= 126 C.F.
Rainfall Attenuated by this System is ESDv=(PE)(Rv)(A)/12
Re-Arranging; PE=12ESDv/(Rv)(A)= 2.59 in <2.6 inch-OK

Rain Barrel- 1
DA To Practice= 71 S.F.
from DS- 4
Provide minimum volume equal to 0.2" of rainfall therefore volume allowed is:
Req. ESDv=(0.2")(.90)(71 S.F.)/12= 1.07 C.F. 8 Gal
Provide Rain Barrel
Volume Provided= 7 C.F. 55 Gal
Rainfall Attenuated by this System is ESDv=(PE)(Rv)(A)/12
Re-Arranging; PE=12ESDv/(Rv)(A)= 1.31 in <2.6 inch-OK

Rain Barrel- 2
DA To Practice= 209 S.F.
from DS- 5
Provide minimum volume equal to 0.2" of rainfall therefore volume allowed is:
Req. ESDv=(0.2")(.90)(209 S.F.)/12= 3.14 C.F. 23 Gal
Provide Rain Barrel
Volume Provided= 7 C.F. 55 Gal
Rainfall Attenuated by this System is ESDv=(PE)(Rv)(A)/12
Re-Arranging; PE=12ESDv/(Rv)(A)= 0.45 in <2.6 inch-OK

Rain Barrel- 3
DA To Practice= 365 S.F.
from DS- 3
Provide minimum volume equal to 0.2" of rainfall therefore volume allowed is:
Req. ESDv=(0.2")(.90)(365 S.F.)/12= 5.48 C.F. 41 Gal
Provide Rain Barrel
Volume Provided= 7 C.F. 55 Gal
Rainfall Attenuated by this System is ESDv=(PE)(Rv)(A)/12
Re-Arranging; PE=12ESDv/(Rv)(A)= 0.26 in <2.6 inch-OK

Rain Barrel- 4
DA To Practice= 283 S.F.
from DS- 2
Provide minimum volume equal to 0.2" of rainfall therefore volume allowed is:
Req. ESDv=(0.2")(.90)(283 S.F.)/12= 4.25 C.F. 32 Gal
Provide Rain Barrel
Volume Provided= 7 C.F. 55 Gal
Rainfall Attenuated by this System is ESDv=(PE)(Rv)(A)/12
Re-Arranging; PE=12ESDv/(Rv)(A)= 0.33 in <2.6 inch-OK

Permeable (Porous Concrete) Pavement PP-1
Impervious Drainage Area (Ai)= 608 S.F.
Permeable Paving Area (A_f)= 936 S.F.
DA ratio (Ai/Ap)= 0.65 DA<=1 OK
Stone Sub-base Depth= 6 "
Sand Depth= 6 "
Total Depth of Storage (d_f)= 12 " d_f=Stone Sub-base Depth + Sand Depth
Void Ratio= 0.30
Constructed Treatment Volume (ESDv)= 281 C.F. ESDv=(A_f)(d_f)(Void Ratio)
Provide maximum volume equal to 2.6" of rainfall therefore volume allowed is:
ESDv(max)=(2.6")(.95)(608+936)/12= 318 C.F. ESDv(max.)=(PE)(Rv)(A_f+A_i)/12
ESDv < ESDv(max) OK
Rainfall Attenuated by this System is ESDv=(PE)(Rv)(A)/12
Re-Arranging; PE=12ESDv/(Rv)(A)= 2.30 inch <2.6 inch-OK

SUMMARY FOR LOT B
Gravel Drywell- 1: Size= 5'x 12'x7' and device Volume= 168 C.F.
Gravel Drywell- 2: Size= 5'x 9'x7' and device Volume= 126 C.F.
Rain Barrel- 1: Size= 7 C.F.
Rain Barrel- 2: Size= 7 C.F.
Rain Barrel- 3: Size= 7 C.F.
Rain Barrel- 4: Size= 7 C.F.
Permeable (Porous Concrete) Pavement PP-1: Size= 936 SF' and device Volume= 281 C.F.
Total Volume Provided=603 C.F.

Total volume provided in proposed systems is 603 C.F. which is less than the required target volume of 959 C.F.. Therefore, the required ESDv to MEP has not been satisfied.

Re-Arranging; $PE_{(achieved)}$=12ESDv/(Rv)(A)= 1.01 inch <2.6 inch-OK

PROPOSED TREE TABLE

QTY.	COMMON NAME	BOTANICAL NAME	MAIN HEIGHT	CALIPER	REMARKS
1	White Oak	*Quercus alba*	15' 20'	2"	ROW
15	White Oak	*Quercus alba*	15' 20'	2"	Onsite

STANDARD TREE CANOPY NOTE
Any shade tree planted to comply with Chapter 55 of the County Code must conform to the following:
1. Each shade tree must meet the requirements for plant material in ANSI Z60.1;
2. Each shade tree must be a minimum of 2" caliper;
3. Installation of each shade tree must meet all requirements of ANSI A300;
4. At the time of planting:
   a. Tree guards to protect trees from deer rubbing, mowers, weed eaters, other equipment and large rodents must be installed on all shade trees;
   b. Mulch must be applied;
   c. Sufficient water must be applied to aid in proper planting.
5. Shade trees must be installed between October 15th and May 15th as long as the ground is not frozen, saturated, or covered with snow such that a suitable hole cannot be dug;
6. Shade trees must not be installed between May 16th and October 14th of each year. If installation cannot occur between October 15th and May 15th for any reason, or if proposed trees are not planted for any other reason, the permittee must pay the required fee in lieu.
7. If shade trees are installed prior to final stabilization of the land disturbing activity then no additional disturbance must occur within five feet of the stem of the tree. Protective fencing must be installed at the edge of this area at the same time the tree is installed and must remain in place until final stabilization occurs.
8. The location of growing zones and planting areas must be clearly marked in the field prior to installation of any shade tree.
9. A copy of the approved sediment control plan showing all approved growing zones and planting areas must be available on the site at all times.
10. At least one inspection must occur after all construction activities are completed to determine the level of compliance with shade tree planting requirements.

DRYWELL SCHEDULE

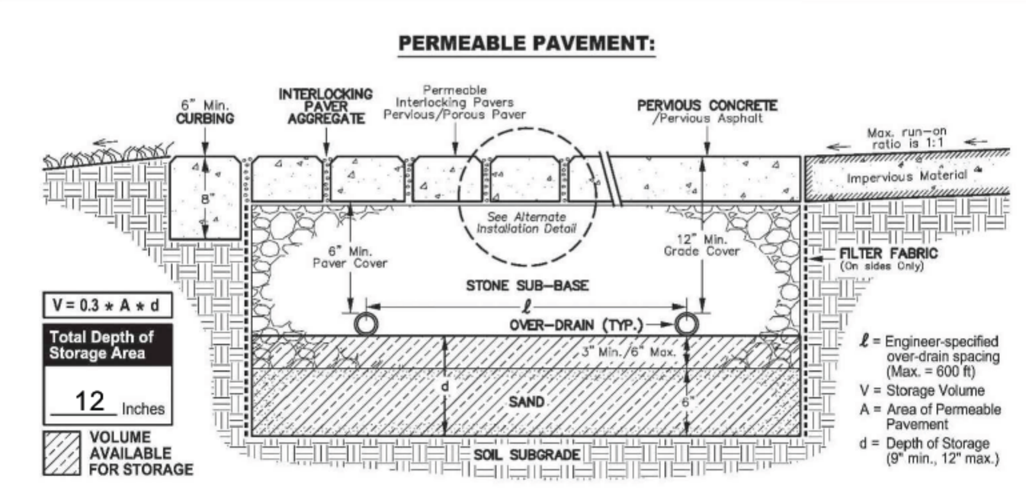
DRYWELL	ELEV. A	ELEV. B	ELEV. D	DIMENSIONS (DxLxW) (ft)	CONTRIBUTING IMPERVIOUS AREA (sf)	STORAGE CAPACITY (cf)
D.W.1	215.60	214.10	209.10	5' x 12' x 7'	823	168
D.W.2	214.50	212.50	207.50	5' x 9' x7'	615	126

PIPE SCHEDULE

FROM	TO	LENGTH (ft)	INVERT OUT	INVERT IN ELEV. C	SLOPE (%)
DS-8	D.W.1	36	215.57	213.27	6.39%
DS-7	D.W.2	35	214.17	211.67	7.14%

NOTE:
STEPPED SOIL SUBGRAGE WILL BE USED FOR PERMEABLE PAVEMENT (PP-1).

PERMEABLE PAVEMENT:



GENERAL REQUIREMENTS:
Within three (3) days of installation, contractor must perform single ring infiltration tests. Poured-in-place concrete must remain free from all light vehicular traffic for a minimum of seven (7) days. Heavy vehicular traffic must be restricted for at least ten (10) days after placement.
Post construction of infiltration rates required for all surfaces must conform to ASTM C1701 for poured-in-place permeable concrete, or ASTM C1781 for permeable pavers.

SETBACKS:
Pervious Pavements require MC DOT prior written approval before being designed within public rights of way.
The storage volume for any pervious surface shall be located down gradient of building structures and be setback a minimum of:
- 100 feet from primary potable water supply or open loop geothermal wells (10' for SF Residential)
- 50 feet from alternate potable water supply or closed loop geothermal wells (No Setback for S.F. Residential)
- 25 feet from septic systems (10' for S.F. Residential)
- 10 feet from any other Infiltrating ESD Practice
- 10 feet from buildings
- Raised mulch/planting beds shall not be placed adjacent to Permeable Pavement

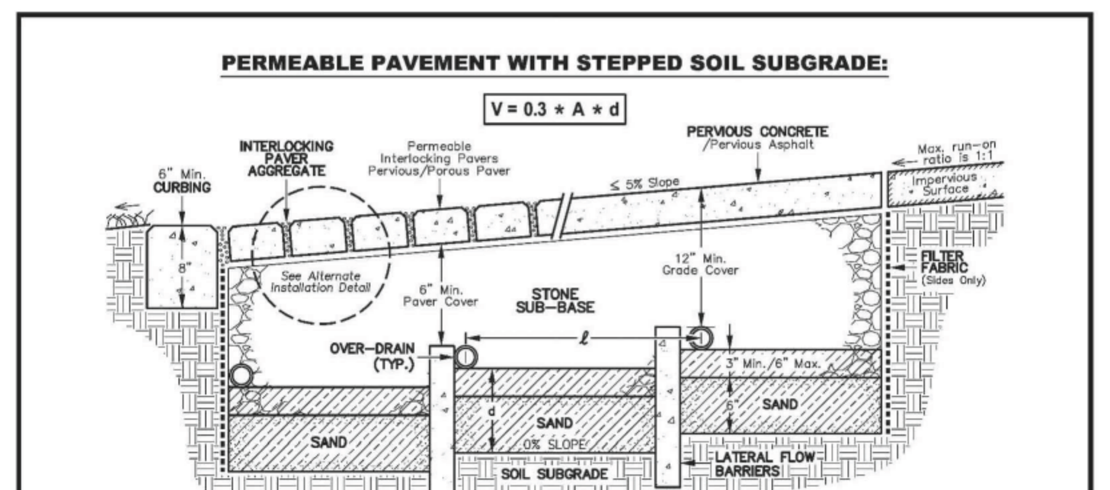
ALTERNATE INSTALLATION DETAIL:
Optional engineer-approved installation as per manufacturers recommendations. *

LEGEND:

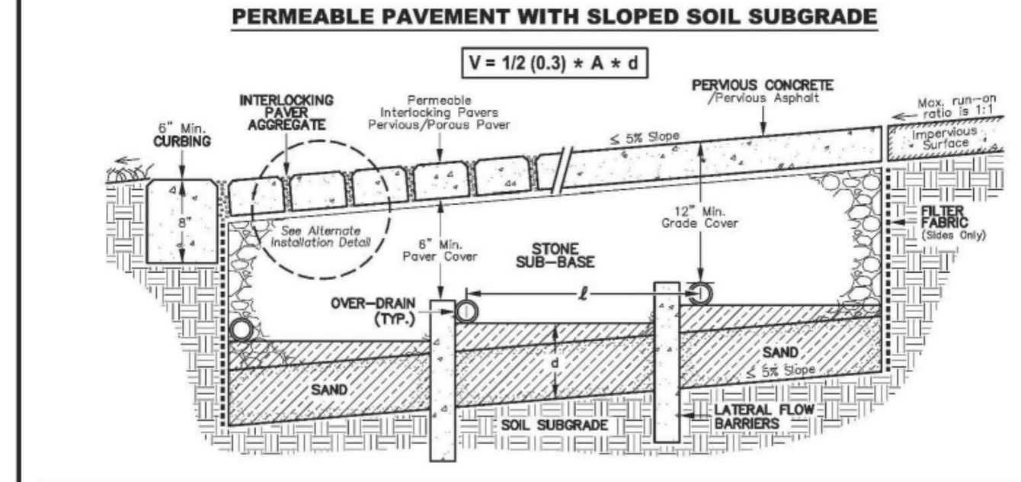
CURBING	6" minimum width. Curbing is not required for sidewalk applications.
INTERLOCKING PAVER AGGREGATE	Paver gap aggregate shall be a silica-based stone per manufacturer's recommendations or meeting ASTM D448 size criteria of No. 8, 89, or 9 stone.
FILTER FABRIC	Engineer-approved, permeable, non-woven geotextile fabric. On sides only.
OVER-DRAIN	4" Schedule 40 PVC or HDPE N-12 installed perpendicular to grade. One foot of over-drain is required for every 600 sq. ft. Over-drain may not connect to drywells or any other SWM. Over-drain discharge point must be shown on the plan view.
OVER-DRAIN PERFORATION	• 3/8 Inch Holes • 4 Inches on center • 90° around pipe
STONE SUB-BASE	Clean open graded, washed silica stone meeting MD SHA Course Aggregate 57 grading requirements. Filter cloth shall not be used horizontally between the sub-base material and the soil sub-grade.
SAND	See Montgomery County Sand Specifications.
SOIL SUBGRADE	Site geotechnical engineer-approved subgrade shall be proof rolled and scarified. Bottom shall be flat or per Stepped/Sloped Permeable Pavement Detail.
PERVIOUS CONCRETE	Pervious concrete construction must be performed by National Ready Mixed Association Certified Pervious Concrete Installer. All construction must be done per ACI 522.13.

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES WATER RESOURCES DIVISION	PERMEABLE PAVEMENT DETAIL	DATE: MAY 1, 2017
		SCALE: NONE

PERMEABLE PAVEMENT WITH STEPPED SOIL SUBGRADE:



PERMEABLE PAVEMENT WITH SLOPED SOIL SUBGRADE



ALTERNATE INSTALLATION DETAIL:
Optional engineer-approved installation as per manufacturers recommendations. *

OVER-DRAIN PERFORATION:
- 3/8 Inch Holes
- 4 Inches on center
- 90° around pipe

▨ VOLUME AVAILABLE FOR STORAGE
ℓ = Engineer-specified over-drain spacing (Max. = 600 ft)
V = Storage Volume
A = Area of Permeable Pavement
d = Depth of Storage (12" maximum average)

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES WATER RESOURCES DIVISION	PERMEABLE PAVEMENT DETAIL	DATE: MAY 1, 2017
		SCALE: NONE

LEGEND

FEATURE	SYMBOL	FEATURE	SYMBOL
EXISTING STRUCTURES	EX.	EXISTING WATER LINE	—·—·—
PROPOSED STRUCTURES	▭	EXISTING SEWER LINE	— — ▶ — —
PROPERTY BOUNDARY LINE	—··—··—	EXISTING SANITARY SEWER MANHOLE	Ⓢ
EXISTING TOPOGRAPHY	—200— ---192---	PROPOSED WATER HOUSE CONNECTION	—WHC—
PROPOSED GRADING	—180—	PROPOSED SEWER HOUSE CONNECTION	—SHC—
PROPOSED SPOT ELEVATION	+200.2	PROPOSED GRAVEL DRYWELL	D.W.1
PROPOSED STORM DRAIN PIPE	4" PVC	PROP. CONCRETE PERMEABLE PAVEMENT	PP-1
EXISTING FENCE	—x—x—x—	PROPOSED DOWNSPOUT	○
LIMIT OF DISTURBANCE	—LOD—LOD—	SUPER SILT FENCE	—SSF—
POWER POLE	—○—PP	PROPOSED RETAINING WALL	▭
PROP. STABILIZED CONSTRUCTION ENTRANCE	SCE	BUILDING RESTRICTION LINE	25' BRLN
GAS LINE	—GAS—GAS—	OBSERVATION WELL	○O.W
ROAD CENTERLINE	— — CL — —	PROPOSED RAIN BARREL	● R.B.-1
DRAINAGE AREA LINE	—<—<—<	SOIL BORING- INFILTRATION TEST HOLE	◐ SWM-1
TREE PROTECTION FENCE/ ROOT PRUNING	—TPF—RP—	SOIL BORING- HAND AUGER	◐ HA-1
EXISTING SHRUB	✿	PROPOSED UNDERGROUND ELECTRIC LINE	—E—E—
PROPOSED PERMEABLE DRIVEWAY	▭	EXISTING TREE (TO BE SAVED) CRITICAL ROOT ZONE (C.R.Z.)	◎
PROPOSED CONCRETE PAVEMENT	▭		
PROPOSED TREE (PLANTING) 400 SF GROWING ZONE	◉	EXISTING TREE (TO BE REMOVED) CRITICAL ROOT ZONE (C.R.Z.)	⊗

APPROVED
Montgomery County
Historic Preservation Commission
[illegible]

REVIEWED
By Dan Bruechert at 1:12 pm, May 01, 2025

REV#	DATE	

EROSION AND SEDIMENT CONTROL & STORMWATER MANAGEMENT PLAN

5419 MOHICAN ROAD

PROJECT ADDRESS
5419 MOHICAN RD, BETHESDA, MD 20816

ZONE:	R-90	WSSC GRID:	207NE06
TAX ACC.:	03682311	BLOCK:	3
TAX MAP:	GM53	LOT:	B

OWNER/ APPLICANT INFO
MICHAEL GREGORY SHERMAN & CAREY NICOLE SHERMAN
5417 MOHICAN RD, BETHESDA, MD 20816
Email: mikesherman7@gmail.com
Phone: (504) 250 2257
DISTRICT 7
MONTGOMERY COUNTY, MARYLAND

STATE OF MARYLAND
MOHAMMAD MOUSAVI RAZI
22742
PROFESSIONAL ENGINEER

RAZTEC ASSOCIATES, INC.
civil engineers & planners
3451 Emys Place, Monrovia, Maryland 21770
Tel: (301) 775 4394
Email: raztecengr@comcast.net

PROFESSIONALS' REVIEW STATEMENT:
I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME , AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NUMBER: 22742 EXPIRES: JUNE 15, 2026

DRAWN BY: PG CHECKED BY: MR	DATE FEB, 2025	SCALE 1"=20'	SHEET NUMBER SCSF002