



**SINGLE FAMILY DEVELOPMENT
ENGINEERING PLAN REVIEW CHECKLIST**

September 2020

CITY OF ROCKVILLE

DEPARTMENT OF PUBLIC WORKS (DPW)

111 Maryland Avenue

Rockville, Maryland 20850

240-314-8500

www.rockvillemd.gov

Project Information:

Project Name: _____

Legal Description: Subdivision: _____ Lot(s) and Block(s): _____ Parcel(s): _____

Property Address: _____

Tax Acct. ID(s): _____

Engineering Firm: _____

Contact Person: _____

Phone Number: _____

Email Address: _____

PDS SFD Permit No.: _____ (assigned by PDS)

DPW PWK Permit No.: _____ (assigned by DPW)

DPW SMP Permit No.: _____ (assigned by DPW)

DPW SCP Permit No.: _____ (assigned by DPW)

DPW UTL Permit No.: _____ (assigned by DPW)

How to Use this Checklist:

This checklist has been developed to provide the engineer with guidance in preparing and submitting Public Improvement, Stormwater Management and Sediment Control Plans for a single family development. All items in this checklist must be addressed. The engineer must complete each item in the checklist prior to submittal and indicate the status by completing the left hand column entitled "Initial Submission." Use the legend below to complete this column. Any items that are marked INC (incomplete) must be explained. The engineer must sign this checklist indicating that it has been completed in accordance with this guidance and the Submission Acceptance Policy below.

Legend: = Complete or Provided, N/A = Not Applicable, INC = Incomplete (provide explanation)

Submission Acceptance Policy:

Correctly filling out this checklist will assist in the acceptance, review and approval process. All of the items in SECTION A - APPLICATION SECTION must be provided with the initial submission for the City to accept the package and forward it to the Reviewer. Incomplete submissions may be rejected. Once forwarded to the Reviewer, the Reviewer will have one week to review the package for the items listed in SECTION B - SUBMISSION REQUIRMENTS. Failure to include the required items or to explain items not included may result in the rejection of the submission without review.

Name of Firm

Date

Signature of Responsible Person

Responsible Person's Name

Title

SINGLE FAMILY DEVELOPMENT ENGINEERING PLAN REVIEW CHECKLIST - PAGE 2

Initial Submission	Rockville's Review			
	1st	2nd	3rd	
A) APPLICATION SECTION (Submissions shall be made using the City's Virtual Permit Application portal available at www.rockvillemd.gov)				
1 _____	Completed and signed Public Works Permit (PWK) Application	_____	_____	_____
2 _____	Completed and signed Erosion and Sediment Control Permit (SCP) Application	_____	_____	_____
3 _____	Completed and signed Stormwater Management Permit (SMP) Application	_____	_____	_____
4 _____	Review Fees (Separate checks made out to City of Rockville). Fee amounts per the Public Works Development Fee Schedule. Estimates shall use City Standard Prices for Cost Estimating as may be updated - available at: www.rockvillemd.gov/286/Streets-Driveway-Right-of-Way	_____	_____	_____
5 _____	One digital (PDF) copy of the proposed plans. Plans must be on 24" x 36" sheets and must utilize the standard City base sheet. Vector-Based PDF files are required for all plans, calculations, reports and other supporting documentation. It is recommended that drawings created in AutoCAD are converted to Vector-Based PDF by using the Autodesk Vector Graphic Converter "DWG to PDF.pc3" plotter driver."	_____	_____	_____
B) SUBMISSION REQUIREMENTS				
1 _____	Transmittal explaining purpose of the submission including explanation of any unusual circumstances	_____	_____	_____
2 _____	One digital (PDF) copy of the proposed plan set including: <ul style="list-style-type: none"> • the Public Improvement Plan (Section D below) • the Erosion and Sediment Control Plan (Section E below) • the Stormwater Management Plan (Section F below), Drainage Area Maps and Overbank Flood Protection Calculations (Section G below) and Stormwater Management Report (Section H below) 	_____	_____	_____
3 _____	One digital (PDF) copy of construction easement documents (if necessary) and Declaration of Covenants for Stormwater Management [second submission]. Documents must be recorded prior to permit issuance. Utilize the City's template and sample exhibit for Declaration of SWM Covenants - available at: www.rockvillemd.gov/2147/Trees-Environment	_____	_____	_____
4 _____	Bond estimates for erosion and sediment control, stormwater management, and work within the right-of-way. Estimates shall use City Standard Prices for Cost Estimating as may be updated - available at: www.rockvillemd.gov/286/Streets-Driveway-Right-of-Way	_____	_____	_____
5 _____	Documentation that plans have been sent to utility companies (PEPCO, Verizon, Washington Gas, Comcast, etc.) for coordination	_____	_____	_____
C) BASE SHEET				
1 _____	Scale 1" = 30' or larger with Legend, North arrow and Datum (NAD 83/91, NGVD 88) unless otherwise approved. Provide two benchmarks with location, elevation and description. Provide two graticular tick marks per plan view sheet for georeferencing	_____	_____	_____
2 _____	Vicinity Map (1" = 2000') with site outlined/labeled in upper right hand corner	_____	_____	_____
3 _____	Name, address, telephone number, email of firm or individual that prepared plan	_____	_____	_____
4 _____	Name, address, telephone number, email of Owner/Applicant on first sheet	_____	_____	_____
5 _____	Title block containing project name, plan description, property's legal description (subdivision, lots, parcels and blocks), election district, etc.	_____	_____	_____

SINGLE FAMILY DEVELOPMENT ENGINEERING PLAN REVIEW CHECKLIST - PAGE 3

Initial Submission	Rockville's Review			
	1st	2nd	3rd	
C) BASE SHEET (continued)				
6 _____	Number sheets consecutively and provide match lines if needed	_____	_____	_____
7 _____	Miss Utility Note on first sheet	_____	_____	_____
8 _____	Property outlined with bearings and distances. Label area of lot or parcel and all setbacks (front, side and rear)	_____	_____	_____
9 _____	Label public and private streets and right-of-way widths within the project limits	_____	_____	_____
10 _____	Adjacent property information with owner name, property addresses and legal description (i.e., subdivision, lot and block). If adjacent property is part of the proposed subdivision, only lot and block is required	_____	_____	_____
11 _____	Existing easements shown and labeled with limits, use and Liber/Folio or plat reference. Include P.U.E.s. Any proposed easements will require submittal of a separate plat and/or metes and bounds description for approval	_____	_____	_____
12 _____	Existing topography and proposed grading at minimum two (2) foot contour interval with spot elevations to support existing drainage patterns and at all four corners of the proposed building(s)	_____	_____	_____
13 _____	Location of the following environmental features (as depicted on the NRI/FSD, if applicable): Significant trees, street trees, ephemeral, perennial and intermittent streams, with associated stream valley buffers, 100 year floodplain with 25 foot building restriction line, wetlands, wetlands buffers, park buffers, soils, hydric soils, seeps, springs, steep slopes and highly erodible soils	_____	_____	_____
14 _____	Identify individual trees with a Diameter Breast Height (DBH) of six inches or greater on-site within 20 feet of the Limits of Disturbance and individual trees with a DBH of 12 inches or greater off-site within 10 feet of the property line	_____	_____	_____
15 _____	Existing features within the project limits (buildings, paving, curb and gutter, sidewalk, etc.) shown and labeled to remain, to be removed, to be abandoned, to be relocated, etc. Layers to be lighter or screened for clarity	_____	_____	_____
16 _____	Overhead utilities including utility poles, streetlights, traffic signal poles and equipment. Underground utilities including location, type, material and sizes. Crossings with existing utilities will require test pits to verify horizontal and vertical information	_____	_____	_____
17 _____	All proposed work and features shown clearly with adequate construction details, including curbs and gutters, paving and sidewalks	_____	_____	_____
18 _____	Basement (BFE) and first floor (FFE) elevations for each structure and proposed use	_____	_____	_____
19 _____	Limits of Disturbance (LOD) delineated and labeled	_____	_____	_____
20 _____	Seal, signature, license number of a Maryland Professional Engineer, Architect, or Surveyor on all sheets [mylar submission]	_____	_____	_____
D) PUBLIC IMPROVEMENT PLAN				
1 _____	City of Rockville General Notes and Water and Sewer Notes (available at www.rockvillemd.gov)	_____	_____	_____
2 _____	All aspects of water and sewer designed in accordance with WSSC and all other aspects of public infrastructure designed in accordance with City of Rockville, Montgomery County, or MDSHA standards, specifications and details unless otherwise indicated or directed	_____	_____	_____
3 _____	All crossings with existing utilities will require test pits to confirm adequate clearance prior to plan approval, unless otherwise allowed by DPW	_____	_____	_____
4 _____	Existing and proposed dry utility connections (cable, electric, gas, telephone, etc.). Plans must be submitted to affected utility companies for coordination	_____	_____	_____
5 _____	Existing and proposed water and sewer house connections including locations and details of sanitary sewer cleanout and water meter. Label material, size, and slope	_____	_____	_____

SINGLE FAMILY DEVELOPMENT ENGINEERING PLAN REVIEW CHECKLIST - PAGE 4

Initial Submission		Rockville's Review		
		1st	2nd	3rd
D) PUBLIC IMPROVEMENT PLAN (continued)				
6	Existing sanitary sewer manholes immediately upstream and downstream of the proposed sewer house connections with field verified invert elevations	_____	_____	_____
7	All abandonments of existing water and sewer connections to be labeled on the plans. Abandonments shall be in accordance with City policy and standard practice as detailed in the standard notes	_____	_____	_____
8	WSSC approval in Commission service areas	_____	_____	_____
9	Driveway entrance details onto roadways including reference to City of Rockville standard details, etc.	_____	_____	_____
10	Proper tie in or transition to existing features (field verify existing)	_____	_____	_____
11	Limits of street repair (Pipe Trench Detail 60, milling and overlay, etc.)	_____	_____	_____
12	Location and details of proposed fencing and accessory structures	_____	_____	_____
13	Add note to all sheets: This Plan Is For Public Improvements Only	_____	_____	_____
E) SEDIMENT CONTROL PLAN				
1	City of Rockville Erosion and Sediment Control Notes and Geotechnical Notes (available at www.rockvillemd.gov) and Maryland Department of the Environment (MDE) Topsoiling Notes	_____	_____	_____
2	City of Rockville Design and Quantities Certification and Owner/Developer Certification. Plan revisions that increase the disturbed area must include a revised Design and Quantities Certification and revised Application	_____	_____	_____
3	MDE standard details for all ESC measures to be used with dimensions, elevations, sizes and/or materials shown where required. If modifications are proposed, label the measures and include a modified detail	_____	_____	_____
4	All sediment control measures labeled to match details and legend. Note types and/or size if applicable	_____	_____	_____
5	Existing and proposed drainage divides shown. Label offsite drainage area amounts (acres) that are conveyed onsite	_____	_____	_____
6	Existing and proposed trees/tree lines. Identify trees to be removed and add a symbol to the legend	_____	_____	_____
7	USDA Soil Types and Hydrologic Soil Groups delineated and labeled	_____	_____	_____
8	Location of On-site Concrete Washout Structure labeled and detail provided	_____	_____	_____
9	Proposed 2:1 or 3:1 slopes labeled. 2:1 slopes require DPW permission	_____	_____	_____
10	LOD must incorporate realistic and sufficient area for operation of equipment for all construction activities including construction and removal of sediment control measures	_____	_____	_____
11	Protection of properties adjacent to any on-site disturbance and/or excavation must be incorporated into the design	_____	_____	_____
12	Letters of permission shown on plan or recorded grading easement submitted prior to plan approval for any off-site disturbance	_____	_____	_____
13	Diversion of off-site runoff must, at a minimum, incorporate an A-2 conveyance channel	_____	_____	_____
14	Areas to be dewatered shall be directed to an approved filtering device and stable discharge area (provide detail)	_____	_____	_____
15	Temporary storm drain diversion must include: a profile with inverts, slopes, pipe material, and length; and temporary connections to other pipes or structures, if applicable	_____	_____	_____

SINGLE FAMILY DEVELOPMENT ENGINEERING PLAN REVIEW CHECKLIST - PAGE 5

Initial Submission		Rockville's Review			
		1st	2nd	3rd	
E) SEDIMENT CONTROL PLAN (continued)					
16	_____	Sequence of Construction on first sheet if possible. Refer to City's Standard Wording for Initial Steps of Sequence of Construction for Private Development Projects. Sequence must include a preconstruction meeting with the City's Sediment Control Inspector, Construction Management Project Inspector and Forestry Inspector with a minimum of 48 hours notice. Include a note that all other agencies issuing permits must be present at the preconstruction meeting. Include a note that the LOD must be marked in the field PRIOR to the preconstruction meeting. Detail all measures that must be relocated, adjusted, removed or incorporated as construction progresses. Include major components of construction such as sediment control installation, clearing and grubbing, grading, utility construction, temporary diversions, curb and gutter and paving, building construction, SWM construction, stabilization and sediment control removal. Note if any construction must occur in a certain order or must be delayed. Sediment control must be provided during the entire construction operation. Measures to be relocated, adjusted or removed must be clearly shown and explained in the Sequence of Construction	_____	_____	_____
F) STORMWATER MANAGEMENT PLAN					
1	_____	All aspects of stormwater management designed in accordance with City of Rockville, Montgomery County, or MDE standards, specifications and details unless otherwise indicated or directed	_____	_____	_____
2	_____	Proposed grading and spot elevations to support drainage areas to each SWM measure and conveyance of runoff within and away from the site	_____	_____	_____
3	_____	USDA Soil Types and Hydrologic Soil Groups delineated and labeled	_____	_____	_____
4	_____	Type, location, identifying label (i.e. SWM -1) and size (if applicable) of each SWM measure proposed to be part of the Stormwater Management System	_____	_____	_____
5	_____	Drainage areas to each SWM measure delineated and drainage areas labeled in acres. The information for the labeled areas must match the SWM System Summary Table and the information provided in the SWM Concept Report	_____	_____	_____
6	_____	Sufficient information to support the vertical aspects of the SWM System. This may include existing and proposed inverts at critical locations and/or schematic profiles based on field verified information	_____	_____	_____
7	_____	Table of estimates for Total Area, Disturbed Area, new Impervious Area, replacement Impervious Area, and total Impervious Area for the Site and the Rights-of-Way separately	_____	_____	_____
8	_____	SWM System Summary Table - Organized by drainage area, study point, and/or SWM measure, as applicable. At a minimum, the drainage area (ac), impervious area (ac), type of measure, the target, required and provided ESD _v , PE, WQ _v , Rev, C _{pv} , and Q _{p10} as applicable shall be included in the table. A comments column can be added if it assists in explaining what is being proposed	_____	_____	_____
9	_____	Landscaping details including a list of plant species, sizes, planting details, quantities and their locations to be used for stormwater management	_____	_____	_____
10	_____	Construction inspection check-off table for each stormwater management system	_____	_____	_____
11	_____	Add note to all sheets: This Plan Is For Stormwater Management Only	_____	_____	_____

SINGLE FAMILY DEVELOPMENT ENGINEERING PLAN REVIEW CHECKLIST - PAGE 6

Initial Submission	Rockville's Review			
	<table border="0"> <tr> <td style="padding-right: 20px;">1st</td> <td>2nd</td> <td>3rd</td> </tr> </table>	1st	2nd	3rd
1st	2nd	3rd		

G) DRAINAGE AREA MAPS AND OVERBANK FLOOD PROTECTION CALCULATIONS

(Items may be included with the Stormwater Management Plans)

- | | | | | |
|---------|--|-------|-------|-------|
| 1 _____ | Scale of map and topography shall be of sufficient level of detail to support the Engineer's analysis. Minimum scale shall be 1" = 30'. Minimum existing topography shall be 2-foot contours | _____ | _____ | _____ |
| 2 _____ | Soil delineation from USDA soil surveys, include identification of unsuitable soils as applicable | _____ | _____ | _____ |
| 3 _____ | Location of soil typing samples (for ESD practices, infiltration, bioretention, etc.) Information, including the sample number or designation (i.e. test pit TP-1) must match the Stormwater Report (Section H below) | _____ | _____ | _____ |
| 4 _____ | Pre- and post-development drainage area boundaries to each measure. Include off-site areas draining into the property if applicable. SWM for off-site areas must be provided when required by Ordinance or State Law | _____ | _____ | _____ |
| 5 _____ | Pre- and post-development runoff computations including time of concentration, rainfall intensities, c factors and peak discharge for 2 and 10-year design storms | _____ | _____ | _____ |
| 6 _____ | Upstream Areas and Conveyance - The map must illustrate upstream areas draining into the site including areas (ac), and drainage divides and must include information regarding the upstream conveyance system(s) i.e. overland flow, schematic pipe locations and sizes, existing channels and other drainage ways. This information must be of sufficient detail to illustrate the off-site areas that drain to the site and how the conveyance occurs | _____ | _____ | _____ |
| 7 _____ | Downstream Conveyance - The map must illustrate how runoff will leave the site including information regarding the downstream conveyance system(s) such as schematic pipe location and sizes, existing channels and other drainage ways. The limits of the downstream conveyance must be shown to the property line at a minimum | _____ | _____ | _____ |

H) SWM CONCEPT REPORT (Items may be included on the Stormwater Management Plans)

- | | | | | |
|---------|---|-------|-------|-------|
| 1 _____ | A narrative to include the following sections: | | | |
| 2 _____ | An <u>Overview Section</u> which includes important information about the project including the size of the property (ac), existing features found on the site, zoning, proposed development, impervious area proposed to be created (ac), a statement about whether the site qualifies as a "redevelopment" according to Chapter 19 with sufficient information to support the findings, the soil found on the site, the watershed the site is located in and the location of any upstream or downstream ponds that may pose a dam breach hazard | _____ | _____ | _____ |
| 3 _____ | A <u>Proposed SWM Section</u> explaining how stormwater measures, consistent with the City's SWM requirements and the MDE Manual, will be provided for the project. This must include a narrative and computations as described below. | _____ | _____ | _____ |

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Initial Submission		Rockville's Review			
		1st	2nd	3rd	
H) SWM CONCEPT REPORT (continued)					
4	_____	A narrative that supports the Concept and the use of SWM as prioritized in Section 19-51 of Chapter 19 and explains:	_____	_____	_____
5	_____	• How the Concept incorporates the protection and enhancement of natural resources	_____	_____	_____
6	_____	• How efforts have been made to maintain existing drainage areas and	_____	_____	_____
7	_____	• The ESD techniques, for instance better site planning, minimization of impervious surfaces, slowing down of runoff, and the use of nonstructural and approved innovative technologies that have been contemplated and why they have been selected. Provide an explanation of which measures were considered and rejected and why (can be a narrative, table, etc.). This information will assist in DPW's determination of whether the design incorporates ESD to the Maximum Extent Practicable (MEP)	_____	_____	_____
8	_____	• How infiltration areas have been protected from compaction and sediment	_____	_____	_____
9	_____	• Integration of erosion and sediment controls into the stormwater system/strategy	_____	_____	_____
10	_____	<u>Computation Section</u> - All computations as required to support the use of ESDs to the MEP, structural measures and/or alternatives (such as a monetary contribution in lieu of on-site managed) must be included in the report. Supporting computations shall utilize TR-55 and the MDE Manual, including Chapter 5, as applicable and as may be supplemented by future documents	_____	_____	_____
11	_____	SWM System Summary Tables as described in Section F above	_____	_____	_____
12	_____	If requesting use of SWM alternatives, the report shall include descriptions of the proposed alternatives and written justification for the alternative that addresses the requirement of the Stormwater Management Regulations. Describe and document all site constraints that restrict providing full SWM controls	_____	_____	_____
13	_____	If proposing a SWM monetary contribution, a plan indicating sub-drainage area affected and a table listing the impervious acreage for each area and what type of alternative is proposed (i.e., contribution for components of WQv, Cpv and/or Qp10). Monetary Contribution requests for right-of-way areas must be broken out and reported separately from request for on-site areas	_____	_____	_____
14	_____	Sizing calculations for stormwater treatment practices including contributing drainage area, storage, and outlet configuration	_____	_____	_____
15	_____	Seal, signature, and license number of a MD Professional Engineer, Architect or Surveyor on the cover of the report	_____	_____	_____

COMMENTS:
