



CITY OF ROCKVILLE
DEPARTMENT OF PUBLIC WORKS (DPW)
 111 Maryland Avenue, Rockville, Maryland 20850, 240-314-8500
CHECKLIST FOR STORMWATER MANAGEMENT CONCEPT

Type of Concept: Pre-Application: (Check one) or Development: , or if application is for one Single Family Lot check both

Project Name: _____ Engineering Firm: _____

Legal Description of Property: _____ Phone No.: _____

Address(s) (if available): _____ Contact: _____

Tax Acct. ID(s): _____ E-mail: _____

Type of Plan submitted to CPDS: (Check only one) PAM Plan for PJT , PAM Plan for SPX , PAM Plan for STP .
 PJT , SPX , STP

CPDS Case No. (if available): _____

CITY USE ONLY:				
Associated City Permits:		Summary of Reviews:		
		Received	Completed	Initials
PWK Permit No.:	Submitted/Accepted:	_____	_____	_____
SCP Permit No.:	Accepted for Review:	_____	_____	_____
SMP Permit No.:	1st Review:	_____	_____	_____
FTP Permit No.:	2nd Review:	_____	_____	_____
BLD Permit No.:	Concept Approved:	_____	_____	_____

How to use and complete the checklist:

This Checklist has been developed to provide guidance to the Engineer in preparing and submitting concepts. Refer to Chapter 19, Stormwater Management and Sediment Control, as may be amended, for Ordinance and Regulations governing stormwater management in the City. All items in this checklist must be addressed. The Engineer shall review the entire document prior to submittal and indicate the submission status by completing the left-hand column entitled "Engineer's Initial Submission." The legend below shall be used to complete the column. Items that do not apply shall be marked N/A and items marked "INC" must be explained by the Engineer. The Engineer must sign the last page of the checklist. Some checklist items included an * . In these cases, the Engineer is only required to provide a level of detail commensurate with the level of detail required for the related CPDS stage. For instance a SWM Concept submitted with a PAM Plan for a Site Plan may have less detail than a SWM Concept submitted with a Site Plan.

Checklist Legend: X = Complete/Provided. INC = Incomplete, N/A = Not Applicable

Concept acceptance procedure:

Correctly and completely filling out the checklist will assist in the acceptance, review and approval process. DPW has established the following procedure regarding the submission and acceptance of concepts. In order for a SWM Concept Application to be considered to be complete and acceptable to be forwarded to the Plan Reviewer, all items listed in **Section A) APPLICATION SECTION** of the checklist must be provided with the initial submission. DPW's administrative staff will conduct a review at the time of submission and incomplete applications will not be accepted. Once deemed completed and forwarded, the Plan Reviewer will have one week to review the package for the items listed in **Section B) SUBMISSION REQUIREMENTS**. **Failure to address all of these items as applicable, will result in the rejection of the SWM Concept Application/Package by the Plan Reviewer.** When that is the case, the Engineer will be required to start the submission and acceptance process again.

Engineer's Initial Submission	Rockville's Review	
	1st	2nd
A) Application Section (submission to be reviewed by DPW's administrative staff. Incomplete submissions will be rejected.)		
1) _____	Completed and signed Stormwater Management Concept Application and Checklist	_____
2) _____	Stormwater Management Concept Fee (Checks made payable to: City of Rockville)	_____
3) _____	Proposed Stormwater Management Concept submission package (to be transmitted to the Plan Reviewer)	_____
B) Submission Requirements (Package will be reviewed by Plan Reviewer within one week of acceptance of the Application. The submission package will be rejected if not all of the items in this section are addressed.)		
1) _____	Transmittal explaining purpose of submission	_____
2) _____	One copy of the NRI/FSD (An unapproved copy can be submitted however a copy of the approved NRI/FSD must be provided prior to the approval of the SWM Concept.)	_____
3) _____	One copy of the Plan submitted to CPDS associated with this Concept (PJT, STP, etc.) N/A for Single Family Lots	_____
4) _____	Two copies of the SWM Concept Plan (see Section C below)	_____
5) _____	One copy of the Forestry - SWM Overlay Plan (see Section D below)	_____
6) _____	One copy of the Preliminary Erosion and Sediment Control Plan (see Section E below) - Only required if application is for Development SWM Concept	_____
7) _____	Two copies of the On-Site Drainage Area Map (see Section F below)	_____
8) _____	Two copies of the Off-Site Drainage Area/Safe Conveyance Map and Adjacent and Downstream Notification List (See Section G below)	_____
9) _____	Two copies of the SWM Concept Report (see Section H below)	_____
10) _____	One copy of the Geotechnical Report (see Section I below)	_____
C) SWM Concept Plan		
1) _____	Scale of 1" = 30' (unless otherwise approved)	_____
2) _____	Legend, north arrow, datum, scale on all sheets where applicable. The horizontal datum shall be based on grid north, Maryland Plan Coordinate System North American Datum 1983/1991. The vertical datum shall be based on North American Vertical Datum, 1988 adjustment (NAVD1988.)	_____
3) _____	Vicinity map with site outlined (1" = 2000') on first sheet	_____
4) _____	Engineering firm's name, address, and telephone number	_____
5) _____	Owner/Applicant's name, contact, address, telephone number and e-mail on first sheet	_____
6) _____	Title block - all sheets: Plan name, project name, legal description of property, proposed lots numbers (if available), election district	_____
7) _____	Field verified existing topography and features and improvements including roads (label public or private), buildings, parking, sidewalks, outbuildings, sheds, utilities, SWM measures, etc.* The information is to be in the datum as noted in 2) above unless otherwise approved.	_____
8) _____	Location of all existing underground and overhead utilities*	_____
10) _____	Location of the following environmental features as depicted on the NRI/FSD: Significant trees, street trees, ephemeral, perennial and intermittent streams, with associated stream valley buffers, 100-YR floodplain with 25 foot building restriction line, wetlands, wetlands buffers, park buffers, soils, hydric soils, seeps, springs and steep slopes.	_____
11) _____	Proposed improvements including roads, buildings, parking, sidewalks, etc.*	_____
12) _____	Proposed utilities including water, sewer, storm drain and appurtenances*	_____
13) _____	Proposed grading and spot elevations to support drainage areas to each SWM measure and conveyance of runoff within and away from the site*	_____
14) _____	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*	_____
15) _____	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.	_____
16) _____	Proposed limits of disturbance*	_____
17) _____	Location and dimensions of all proposed easements (including P.U.E.'s)*	_____
18) _____	Location and dimensions of proposed SWM easements where required by Chapter 19*	_____
19) _____	Proposed maintenance and inspection access routes to SWM measures from public rights-of-way*	_____

Section C is continued on the next page

Engineer's Initial Submission	Rockville's Review			
	1st	2nd		
C) SWM Concept Plan (continued)				
20)	_____	Sufficient information to support the vertical aspects of the SWM System. These may include existing and proposed inverts at critical locations and/or schematic profiles based on field verified information utilizing the datum in 2) above.	_____	_____
21)	_____	SWM System Summary Table - The table should be organized by drainage area, study point, and/or SWM measure, as applicable. At a minimum the drainage area (ac), the impervious area (ac), the type of measure, the target, required and provided ESDv, PE, WQv, Rev, Cpv, and Qp10 as applicable shall be included in the table. A comments column can be added if it assists in explaining what is being proposed.	_____	_____
D) Forestry - SWM Overlay Plan (This plan will assist City staff in assessing the level of Environmental Site Design (ESD) proposed for the site including the application of planning techniques, Applicable SWM measures and preservation of environmental features.)				
Note: The Forestry - SWM Overlay Plan must also be submitted to the City Forester at the time of submission of any SWM Concept to DPW or of any Forest Conservation Plan to Forestry, whichever occurs first.				
1)	_____	Items as listed in Section C, item 10 above.	_____	_____
2)	_____	The SWM System Summary Table as detailed in Section C, item 21 above. However, the Forestry - SWM Overlay Plan DOES NOT need to include the Tree Summary Table, non-native and invasive information, and SWM measure access for maintenance. The Summary Table shall be placed on the plan.	_____	_____
3)	_____	Preliminary delineation of existing forest, forest to be cleared, forest to be saved, and reforestation areas*	_____	_____
4)	_____	Preliminary Forest Conservation Worksheet (This can be a separate piece of paper and does not need to be on the plan)	_____	_____
E) Preliminary Erosion and Sediment Control Plan (This plan is only required to be provided with Development SWM Concept submissions. This plan can be conceptual and will not be the plan that will be reviewed and approved by DPW for permitting or construction.)				
1)	_____	Preliminary Erosion and Sediment Control Plan showing existing environmentally features as shown on the NRI/FSD, proposed project improvements (including buildings, roads, parking, sidewalks, utilities, etc.), existing and proposed SWM measures, existing topography and proposed grading, preliminary sequence of construction, phasing if applicable, and proposed stabilization techniques.*	_____	_____
F) On-Site Drainage Area Map				
1)	_____	Soil delineation from USDA soil surveys, include identification of unsuitable soils as applicable	_____	_____
2)	_____	Location of borings and/or infiltrations tests (for ESD practices, infiltration, bioretention, etc.) Information, including the boring number or designation (i.e. boring I-1) must match the Geotechnical Report (Section I below)	_____	_____
3)	_____	Pre- and post-development time of concentration flow paths with lengths and type of flow labeled and matching information in the SWM Concept Report*	_____	_____
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.	_____	_____
G) Off-Site Drainage Area/Safe Conveyance Map and Notification Requirement				
1)	_____	Scale of map and topography shall be of sufficient level of detail to support the Engineer's analysis. Minimum scale shall be 1" = 200'. Minimum existing topography shall be 5 foot contours.	_____	_____
2)	_____	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.	_____	_____
3)	_____	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 nearest stream or pond outfall or to a distance of 500 feet of conveyance whichever occurs first.	_____	_____
4)	_____	Provide the list of adjacent and downstream owners to be notified in accordance with Chapter 19 and other guidance as may be issued by DPW. DPW may require evidence of the notification after submission of a SWM Concept.	_____	_____
Section G is continued on the next page				

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G) Off-Site Drainage Area/Safe Conveyance Map and Notification Requirement (Continued)		
1)	Downstream Safe Conveyance Study - This study will only be required at Development SWM Concept stage unless otherwise directed by DPW. The limits of the study will be established by DPW at the Pre-Application SWM Concept stage. An analysis of potential downstream impacts/effects of the project on the receiving drainage system or watercourse.	
H) SWM Concept Report		
1)	An 8 1/2" x 11" or 11" x 17" version of the final SWM Concept Plan will be required prior to approval. This will be attached to the SWM Concept approval letter when issued.	
2)	One copy of each previously issued SWM Concept Approval Letter	
3)	A narrative to include the following sections: 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 down stream ponds that may pose a dam breach hazard.	
4)		
5)	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 section should include, at a minimum the following information:	
6)	A narrative that supports the Concept and the use of SWM as prioritized in Section 19-51 of Chapter 19 and explains:	
7)	How the Concept incorporates the protection and enhancement of natural resources	
8)	How efforts that have been made to maintain the existing drainage patterns and drainage areas	
9)	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. An explanation of which measures were contemplated and rejected and why should also be provided (can be a narrative, table, etc.). This information will assist in DPW's determination of whether the concept incorporates ESDs to the Maximum Extent Practicable (MEP.)	
10)	How infiltration areas have been protected from compaction and sediment	
11)	Integration of erosion and sediment controls into the stormwater system/strategy	
12)	Computation Section - 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.	
13)	The SWM System Summary Tables as described in Section C above	
14)	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.	
15)	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.	
16)	Preliminary sizing calculations for stormwater treatment practices including contributing drainage area, storage, and outlet configuration*	
17)	Seal, signature, and license number of a Maryland Professional Engineer on the cover of the report.	

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I) Geotechnical Report			
1)	_____	<p>Geotechnical report for the site signed, sealed and certified by the preparing engineering who must be registered in the state of Maryland. The testing must be performed at all locations where infiltration is feasible and shall generally be performed in a grid pattern with a minimum of five infiltration tests per acre according to MDE procedures. Any borings within the Critical Root Zone (CRZ) as defined by the Environmental Guidelines or the City Forester shall be completed with a hand auger only so as not to disturb the tree and root system. Infiltration tests must also be performed at the actual location of any proposed facilities if the grid layout does not already have a test within 20 feet of the proposed facility however, these tests (at the proposed facility locations) are only required with Development SWM Concepts. Infiltration testing is not required to be performed in areas where development is prohibited, such as stream valley buffers, wetlands, forest to be protected, etc. Infiltration testing is also not required in soil type D if the Geotechnical Engineer verifies the soil type through on-site investigation.</p>	_____
2)	_____	<p>At a minimum the report must include a map with the boring locations and designations that match the SWM Concept Plan, the boring logs, infiltration rates and the seasonal high water level determinations. The report must also address the feasibility of infiltration measures and make recommendations as appropriate.</p>	_____

Additional Requirements

Comments

Date

Name of Engineering Firm

Signature of Professional Engineer

Print Name

Title