



STAFF ONLY

Permit No. _____

Revision No. _____

Date _____

Stormwater Management Checklist

Instructions: All stormwater management plan submissions shall contain the following information. Any submissions brought to the County with missing or incomplete plans, may be rejected and not reviewed until all necessary information has been provided. It should be noted that not all items contained below will, necessarily, be required for every project.

Consulting Engineer shall place one of the following marks (as appropriate) on each line (engineering reviewer shall verify each mark).

N/A - not applicable Y- provided

Note: The following checklist is provided to assist the design professional in developing a complete stormwater management plan set to expedite review by the Department. All final stormwater management plans submitted for review are to include a copy of the checklist(s) signed by a registered design professional in responsible charge with the firm. Submittals made that do not include the checklist will be returned without review, comments, or approval. Compliance with the checklist, however, in no way is meant to relieve the design professional of responsibility for project design.

1. Stormwater Management Report

2. Geotechnical Report

3. Downstream Investigation Analysis

4. Cover Sheet

- a) Title block (Anne Arundel County Department of Inspection and Permits title block required on all sheets) shall include:
 - 1) Project Name,
 - 2) Project Title
 - 3) Project Type,
 - 4) Scale,
 - 5) Date,
 - 6) Tax Map, Block, and Parcel,
 - 7) Subdivision name and lot number,
 - 8) Assessment District,
 - 9) Site Zoning,
 - 10) Zip Code, and
 - 11) Signature and seal of a design professional registered in the State of Maryland (Article 21, Section 2-201).
 - 12) Professional Design Certification "I hereby Certify....."
- b) *Vicinity Map* (minimum 4" x 4")
 - 1) Vicinity map shall be located in upper right hand corner.
 - 2) Vicinity map shall be oriented with north to the top.
 - 3) Scale is shown (generally: 2000' = 1").
 - 4) State and county roads are shown and labeled.
 - 5) Site is shown, shaded, and labeled.
 - 6) North arrow shown.
- c) *Location Plan* (show limits of project area or limits of proposed subdivision)
 - 1) Scale shall be 1-inch to 200 feet (*note: consultant must get county staff approval for use of a smaller scale*)
 - 2) North arrow shown.
 - 3) Existing and proposed sewer and water lines, valves, and appurtenances are located and labeled.
 - 4) Existing and proposed manholes are located and labeled.
 - 5) Existing and proposed fire hydrants and coverages (radii, as appropriate) are located and labeled.
 - 6) All flood plain limits have been shown.
 - 7) Coverage of individual plan sheet is delineated.

- 8) All road names are shown.
- 9) Three grid ticks
- d) *Index of Drawings Table*
 - 1) All drawing titles are shown in table and labeled accordingly.
- e) *General Notes*
 - 1) Appropriate general notes have been added (*note: see SWM General Notes List*).
 - 2) Project specific notes added.
 - 3) A note specifying the watershed in which the project is located.
 - 4) Phone number and agency titles correct.
 - 5) Pipe material and material class correct.
 - 6) Maintenance and inspection notes are correct.
- f) *Legend*
- 5. **Plan Sheets**
 - a) *General Information*
 - 1) Recorded plat reference.
 - 2) Zoning
 - 3) North arrow shown with appropriate NAD reference
 - 4) Three (3) coordinate ticks shown.
 - 5) SCS soil types
 - 6) Contours
 - (a) existing - dashed or screened and labeled
 - (b) proposed - solid and labeled
 - 7) Critical area boundary, if applicable.
 - 8) Street names and alignment.
 - 9) Property lines with bearings and distances
 - 10) Lot dimensions, lot numbers, and street address numbers.
 - 11) Owners and tax account numbers in all areas up to 200 feet beyond property boundaries.
 - 12) State road labeled on plan, where such roads are shown.
 - 13) Dimensions between street lines and curb lines.
 - 14) Drawing numbers of all proposed adjoining stormwater management plans shown.
 - 15) Right-of-way reference.
 - 16) Scales shown in proper location.
 - 17) Two (2) Benchmarks shown using proper symbol.
 - (a) Benchmark labeled with number,
 - (b) description,
 - (c) Elevation, and.
 - (d) datum
 - 18) Soil boring (shown at the foot of each proposed SW practice) and water table data shown. Information required for the Concept/Preliminary and SDP/Final review and approval stages.
 - 19) Existing structures are shown, labeled and using the proper symbol, including
 - (a) curb and gutter,
 - (b) utilities, (including As-Built/approved record drawing numbers)
 - (c) road,
 - (d) buildings, and
 - (e) drainage facilities.
 - 20) Proposed improvements are shown, labeled and using the proper symbol, including
 - (a) buildings,
 - (b) roads,
 - (c) structures,
 - (d) drainage facilities,
 - (e) utilities, and
 - (f) curb and gutter.
 - 21) Right-of-way or easement for public facilities
 - (a) is provided
 - (b) right-of-way or easement size is shown correctly based on depth of facility and buffer width requirements.
 - (c) to be indicated on plan and clearly labeled as to existing or proposed.
 - 22) Engineer's seal and signature.
 - b) *Environmental Conservation Plan*

- 1) Drawing size shall be 24" x 30"
 - 2) Existing topography including;
 - (a) roads,
 - (b) utilities,
 - (c) buildings, and
 - (d) other structures.
 - 3) The following Primary Environmental Features must be shown on the plan;
 - (a) Streams and Stream Buffers
 - (1) Type or Use of stream is clearly labeled.
 - (2) Buffer is computed and clearly labeled.
 - (b) Wetland and Wetland buffers.
 - (c) 100 year Floodplains (see Floodplains checklist FP - 1).
 - (1) cross-sections (including WSE's) shown and labeled.
 - (2) floodplain easement line shown including bearings and distances.
 - (3) floodplain limit shown (on both sides) parallel to contours.
 - 4) The following Secondary Environmental Features must be shown on the plan;
 - (a) Critical Area boundaries, buffer modification areas, and expanded buffers, if any
 - (b) Soil types, HSG and erodeability
 - (c) Steep slopes and their buffers,
 - (d) Forests,
 - (e) Cultural resources, and
 - (f) Other existing topographic features.
- c) *Drainage Area Maps*
- 1) Scale shall be no smaller than 1" = 200' except where this scale would require extra drawings, then it shall be no smaller than 1" = 500'.
 - 2) Entire drainage area (including off-site areas drain thru the site) must be shown and acreage provided.
 - 3) Entire proposed drainage system must be shown schematically, complete with manhole, inlets, structures (including structure numbers) and stormwater BMP's. All contours numbered.
 - 4) All inlets, manholes, structures, and stormwater Best Management Practices (BMP's) must be labeled and numbered.
 - 5) Each tributary area shall be lettered or numbered.
 - 6) Drainage area labels, total tributary area, time of concentration to discharge points, site outfalls, and points of investigation, rainfall intensity, and runoff curve numbers shall be shown.
 - 7) The Stormwater Credit Features must be identified and delineated.
 - 8) The discharge points are identified and labeled. (Discharge points are located at the proposed onsite outfalls after treatment is addressed).
 - 9) The site outfalls are identified and labeled. (Site outfalls are located at the property line)
 - 10) The site tributaries are identified and labeled.
 - 11) The Points of Investigations are identified, labeled and is acceptable.
 - 12) Right-to discharge (RTG), private to private, public to private shown.
 - 13) Three gird tics.
- d) *Stormwater Management Plans*
- 1) plan of each Stormwater Management BMP showing (as required);
 - (a) scale shall be 1" = 40' minimum,
 - (b) each facility labeled in accordance with the 2000 Maryland Stormwater Design Manual (P-1, Micropool Extended Detention Pond, P-2, Wet Pond, W-4, Pocket Wetland, etc.),
 - (c) one 'BMP Group Checklist' sheet per BMP (BMP Group 1, BMP Group 2, etc.),
 - (d) contours spaced as required to clearly illustrate required grading and drainage divides,
 - (e) spot elevations shown as required to clearly illustrate required grading,
 - (f) the ten year storm water surface elevation shown in plan as a contour (if applicable),
 - (g) the one hundred year storm water surface elevation shown in plan as a contour (if applicable),
 - (h) profile along centerline of structure/embankment,
 - (i) Code 378 criteria parameters and determination if the structure needs to meet Code 378
 - (j) profile of centerline of principal spillway, showing;
 - (1) riser structure with inverts,
 - (2) barrel with inlet and outlet inverts,
 - (3) anti-seep collars located, dimensioned and labeled,
 - (4) phreatic line,
 - (5) water surface elevations for water quality, channel protection volume, flood protection volume,

- and extreme flood volume, as required,
- (6) top of constructed dam elevation labeled,
- (7) top of settled dam elevation labeled, and
- (8) embankment side slopes.
- (k) profile along centerline of emergency spillway,
- (l) soil borings,
 - (1) shown and labeled at the appropriate locations/foot print of each proposed SW practice,
 - (2) the appropriate number of borings are shown, and
 - (3) the logs and notes are shown/provide on the plan.
- (m) cross-section of the emergency spillway at the control section,
- (n) Riser structure detail, including
 - (1) type,
 - (2) size and dimensions,
 - (3) reinforcing,
 - (4) all orifice(s) dimensioned and labeled,
 - (5) top elevation,
 - (6) water surface elevations for water quality, channel protection volume, flood protection volume, and extreme flood volume, as required,
 - (7) anti-flotation footing dimensioned and labeled
 - (8) all inlet and outlet pipes with inverts, and
 - (9) trash racks.
- (o) Trash rack details including;
 - (1) type of material, and
 - (2) dimensions.
- (p) Note describing that muskrat barriers will be installed at the time of conversion to stormwater management is included.
- (q) Access ramp meets the minimum requirements.
- (r) Fencing, if required, meets the standards in the Design Manual.
- e) Temporary stormwater management TSWM shown on the SDP/Final and Grading permit plans
- f) SWM exhibit for inclusion with SWM maintenance agreement submitted with Grading permit plans.

Applicant's Certification

I, the undersigned, hereby certify that the attached Stormwater Management Plans submittal includes all items required by Article 21 of the Anne Arundel County Code. I understand that if any of the items required are found to be missing from the submittal, the Stormwater Management Plan will not be acceptable for review and will be returned as incomplete. The applicant is aware of this criteria and will accept all responsibility for delays due to incomplete submittals. I am enclosing an explanation for each item which I feel is not required and, therefore, has not been included in this submittal package.

Design Professional's signature

Date

NOTE: DESIGN PROFESSIONAL MUST SIGN AND SEAL THIS CHECKLIST

SEAL

Review Engineer's signature

Date