PLAN SUBMITTER'S CHECKLIST

FOR COMMERCIAL AND INDUSTRIAL ESC PLANS

Please fill in all blanks and reference the plan sheets/pages where the information may be found, where appropriate, or write N/A by items that are not applicable.

GENERAL

Plan Submission Date _____

Project Name _____

Site Plan Number _____

Site Address _____

Applicant _____

Applicant Legal Address _____ Phone No. _____

Applicant Email _____

Owner _____

Owner Legal Address _____ Phone No. _____

Owner Email _____

Principal Designer _____ Phone No. _____

Principal Designer Email _____

General Contractor _____

General Contractor Address _____ Phone No. _____

General Contractor Email _____

_____ Complete set of plans- Include all sheets pertaining to the site grading and stormwater and any activities impacting erosion and sediment control and drainage:

- ☐ Existing conditions
- ☐ Demolition
- ☐ Site grading
- ☐ Erosion and sediment control

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☐ Storm sewer systems
☐ Stormwater management facilities
☐ Utility layout
☐ Landscaping
☐ On-site and off-site borrow and disposal areas that do not have separate approved ESC Plans

_____ Professional's seal - The designer's original seal, signature, and date are required on the *cover* sheet of each Narrative and each set of Plan Sheets. A facsimile is acceptable for subsequent Plan Sheets.

_____ Number of plan sets - Two sets of ESC Plans should be submitted. Patrick County's ESC/SWM Office will retain all submitted plans.

_____ Variances - Variances requested at the time of plan submission are governed by Section 9VAC25-840-50 of the *Virginia Erosion and Sediment Control Regulations*.

_____ Certified Responsible Land Disturber (RLD) - A certified RLD is required during all stages of construction, from the initial land disturbance through final site stabilization**. The name of the project RLD must be provided before any land disturbance may begin.** Notify Patrick County ESC/SWM Office in a timely manner if the RLD changes during the course of the project.

_____ Local Consideration – Plans have been provided to the applicable jurisdictions.

☐ Virginia Department of Transportation (VDOT)

CHECKLIST PREPARER

I certify that I am a professional in adherence to all minimum standards and requirements pertaining to the practice of that profession in accordance with Chapter 4 (§ 54.1-400 et seq.) of Title 54.1 of the Code of Virginia and attendant regulations. By signing this checklist I am certifying that this document and all attachments are, to the best of my knowledge and belief, true, accurate, and complete.

SIGNATURE _____

PRINTED NAME _____

QUALIFICATIONS _____

DATE _____

PROJECT NAME: _____ SUBMITTAL#: _____

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NARRATIVE

Please reference plan sheet numbers where the information may be found.

_____ Project description - Briefly describe the nature and purpose of the land-disturbing activity. Provide the area (acres) to be disturbed.

_____ Existing site conditions - A description of the existing topography (% slopes), ground cover, and drainage (on-site and receiving channels).

_____ Adjacent areas - A description of all neighboring areas such as residential developments, agricultural areas, streams, lakes, roads, etc., that might be affected by the land disturbance.

_____ Off-site areas - Describe any off-site land-disturbing activities that may occur (borrow sites, disposal areas, easements, etc.). Identify the Owner of the off-site area and the entity responsible for plan review. Include a statement that any off-site land-disturbing activity associated with the project must have an approved ESC Plan. Submit documentation of the approved ESC Plan for each of these sites.

_____ Soils - Provide a description of the soils on the site, giving such information as soil name, mapping unit, erodibility, permeability, surface runoff, and a *brief* description of depth, texture and soil structure. Show the site location on the Soil Survey, if it is available. Include a plan showing the boundaries of each soil type on the development site.

_____ Critical areas - A description of areas on the site that have potentially serious erosion problems or that are sensitive to sediment impacts (e.g., steep slopes, watercourses, wet weather / underground springs, etc.).

_____ Erosion and sediment control measures - A description of the structural and vegetative methods that will be used to control erosion and sedimentation on the site. Controls should satisfy applicable minimum standards and specifications in Chapter 3 of the 1992 *Virginia Erosion and Sediment Control Handbook* (VESCH) or more stringent local requirements.

_____ Management strategies / Sequence of construction - Address management strategies, the sequence of construction, and any phasing of installation of ESC measures.

_____ Permanent stabilization - A brief description, including specifications, of how the site will be stabilized after construction is completed.

_____ Maintenance of ESC measures - A schedule of regular inspections, maintenance, and repair of erosion and sediment control structures should be set forth.

_____ Calculations for temporary erosion and sediment control measures - For each temporary ESC measure, provide the calculations required by the standards and specifications.

_____ Stormwater management considerations - Will the development of the site cause an increase in peak runoff rates? Will the increase in runoff cause flooding or channel degradation downstream?

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Describe the strategy to control stormwater runoff, including during construction.

_____ Specifications / Detail Drawings for erosion and sediment control measures - For each erosion and sediment control measure employed in the plan, include, at a minimum, the detail from the standard and specification in the VESCH or more stringent local requirements. Include any approved variances or revisions to the standards and specifications.

_____ Specifications for stormwater and stormwater management structures - Provide specifications for stormwater and stormwater management structures, i.e., pipe materials, pipe bedding, stormwater structures.

SITE PLAN

Please reference plan sheet numbers where the information may be found.

_____ Vicinity map - A small map locating the site in relation to the surrounding area. Include any landmarks that might assist in locating the site.

_____ Indicate north - The direction of north in relation to the site.

_____ Off-site areas - Include any off-site land-disturbing activities (e.g., borrow sites, disposal areas, etc.) not covered by a separate approved ESC Plan.

_____ Legend - Provide a complete listing of all ESC measures used, including the VESCH uniform code symbol and the standard and specification number. Include any other items necessary to identify pertinent features in the plan.

_____ Property lines and easements - Show all property and easement lines. For each adjacent property, list the deed book and page number and the property owner's name and address.

_____ Existing vegetation – Show the existing tree lines, grassed areas, or unique vegetation.

_____ Limits of clearing and grading – Delineate all areas that are to be cleared and graded.

_____ Protection of areas not being cleared - Fencing or other measures to protect areas that are not to be disturbed on the site.

_____ Critical areas – Note all critical areas on the plan.

_____ Existing contours – Show the existing contours of the site.

_____ Final contours and elevations – Show changes to the existing contours, including final drainage patterns.

_____ Site development – Show all improvements such as buildings, parking lots, access roads, utility construction, etc. Show all physical items that could affect or be affected by erosion, sediment, and drainage.

_____ Location of practices - The locations of erosion and sediment control and stormwater management practices used on the site. Use the standard symbols and abbreviations in Chapter 3 of the VESCH.

_____ Adequate Conveyances – Ensure that stormwater conveyances with adequate capacity and adequate erosion resistance have been provided for all on-site concentrated stormwater runoff. Off-site channels that receive runoff from the site, including those receiving runoff from stormwater management facilities, must be adequate. Increased volumes of sheet flows must be diverted to a stable outlet, adequate channel, pipe or pipe system, or a stormwater management facility.

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☐ Provide exhibits showing the drainage divides, the direction of flow, and the size (acreage) of each of the site drainage areas that discharge runoff off-site, both existing and proposed.
☐ Provide calculations for pre- and post-development runoff from these drainage areas.
☐ Ensure that Minimum Standard 19 is satisfied for each off-site receiving channel, including those that receive runoff from stormwater management facilities.
☐ Provide calculations for the design of each permanent stormwater management facility.
☐ Ensure that increased volumes of sheet flows are diverted to a stable outlet, to an adequate channel, pipe or pipe system, or to a stormwater management facility.
☐ Provide adequacy calculations for all on-site stormwater conveyances.

_____ Calculations for permanent stormwater conveyances - For each permanent stormwater conveyance or structure, provide the following design calculations, as applicable:

☐ Drainage area map with time of concentration (T_C) path shown
☐ T_C calculation/nomograph
☐ Locality IDF curve
☐ Composite runoff coefficient or RCN calculation
☐ Peak runoff calculations
☐ Stormwater conveyance channel design calculations
☐ Storm drain and storm sewer system design calculations
☐ Hydraulic Grade Line if any pipe in the system is more than 90% full for a 10-year storm
☐ Culvert design calculations
☐ Drop inlet backwater calculations
☐ Curb inlet length calculations

_____ Direction of Flow for Conveyances - Indicate the direction of flow for all stormwater conveyances (storm drains, stormwater conveyance channels).

_____ Storm Drain Profiles - Provide profiles of all storm drains except roof drains. If the type of pipe (RCP, CMP, HDPE, etc.) is not called out on the profiles, then the most conservative pipe material that may be specified for the project must be used in the adequacy calculations.

MINIMUM STANDARDS
Plan Sheet #

_____ **Minimum Standards - All Minimum Standards must be addressed.**

Yes	No	NA		
[]	[]	[]	MS-1	Have temporary and permanent stabilization been addressed in the narrative?
[]	[]	[]		Are practices shown on the plan?
[]	[]	[]		Temporary and permanent seed specifications?
[]	[]	[]		Lime and fertilizer?
[]	[]	[]		Mulching?
[]	[]	[]		Blankets/Matting?
[]	[]	[]		Pavement/Construction Road Stabilization?
[]	[]	[]	MS-2	Has stabilization of soil stockpiles, borrow areas, and disposal areas been addressed in the narrative and on the plan?
[]	[]	[]		Have sediment trapping measures been provided?
[]	[]	[]	MS-3	Has the establishment and maintenance of permanent vegetative stabilization been addressed?
[]	[]	[]	MS-4	Does the plan specifically state that sediment-trapping facilities shall be constructed as a first step in land-disturbing activities?
[]	[]	[]	MS-5	Does the plan specifically state that stabilization of earthen structures is required immediately after installation? Is this noted for each measure on the plan?
[]	[]	[]	MS-6	Are sediment traps and sediment basins specified where needed and designed to the standard and specification?
[]	[]	[]	MS-7	Have the design and temporary/permanent stabilization of cut and fill slopes been adequately addressed? Is Surface Roughening provided for slopes steeper than 3:1?
[]	[]	[]	MS-8	Have adequate temporary or permanent conveyances (paved flumes, channels, slope drains) been provided for concentrated stormwater runoff on cut and fill slopes?
[]	[]	[]	MS-9	Has water seeping from a slope face been addressed (e.g., subsurface drains)?
[]	[]	[]	MS-10	Is adequate inlet protection provided for all operational storm drain and culvert inlets?

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Yes	No	NA		
[]	[]	[]	MS-11	Are adequate outlet protection and/or channel linings provided for all stormwater conveyance channels and receiving channels? Is there a schedule indicating:
[]	[]	[]		Dimensions of the outlet protection? Lining? Size of riprap?
[]	[]	[]		Cross section and slope of the channels? Type of lining? Size of riprap, if used?
[]	[]	[]	MS-12	Are in-stream protection measures required so that channel impacts are minimized?
[]	[]	[]	MS-13	Are temporary stream crossings of non-erodible material required where applicable?
[]	[]	[]	MS-14	Are all applicable federal, state and local regulations pertaining to working in or crossing live watercourses being followed?
[]	[]	[]	MS-15	Has immediate restabilization of areas subject to in-stream construction (bed and banks) been adequately addressed?
[]	[]	[]	MS-16	Have disturbances from underground utility line installations been addressed?
[]	[]	[]		No more than 500 linear feet of trench open at one time?
[]	[]	[]		Effluent from dewatering filtered or passed through a sediment-trapping device?
[]	[]	[]		Proper backfill, compaction, and restabilization?
[]	[]	[]	MS-17	Is the transport of soil and mud onto public roadways properly controlled? (i.e., Construction Entrances, wash racks, transport of sediment to a trapping facility, cleaning of roadways at the end of each day, no washing before sweeping and shoveling)
[]	[]	[]	MS-18	Has the removal of temporary practices been addressed?
[]	[]	[]		Have the removal of accumulated sediment and the final stabilization of the resulting disturbed areas been addressed?
[]	[]	[]	MS-19	Are properties and waterways downstream from development adequately protected from sediment deposition, erosion, and damage due to increases in volume, velocity and peak flow rate of stormwater runoff? Have adequate channels been provided on-site?

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