

Howard Soil Conservation District Engineering Newsletter – April 2013



Sequencing of Projects



A project is to be sequenced so that grading activities begin on one grading unit (maximum acreage of 20ac. per grading unit) at a time. Work may proceed to a subsequent grading unit when at least 50 percent of the disturbed area in the preceding grading unit has been stabilized and approved by the enforcement authority. Unless otherwise specified and approved by the approval authority, no more than 30 acres cumulatively may be disturbed at a given time

At a minimum, all perimeter controls (e.g., earth berms, sediment traps) and slopes steeper than 3:1 require stabilization within three (instead of 7) calendar days and all other disturbed areas within seven (instead of 14) calendar days.

Areas of particular environmental concern, such as wetlands, streams, buffers, wooded areas, slopes 15 percent and steeper, and highly erodible soils, need to be identified within both the project site and adjacent areas and shown on the plan. Other considerations include the Chesapeake and Atlantic Coastal Bays Critical Area; National Wetland Inventory; natural heritage areas; rare, threatened, and endangered species habitat; Tier II watersheds (see Tier II buffer recommendations in Table A.2); and impaired stream segments with a TMDL for sediment.

Areas of special concern must be verified with a site visit. Note any erosion, lack of vegetation, drainage problems, and other features that may be pertinent to the design. If an unmapped resource is found, contact the appropriate authority to determine additional regulatory requirements.

Minimum Information Needed in Sequence of Construction



The sequence of construction, at a minimum, must include the following:

- Request for a pre-construction meeting with the appropriate enforcement authority;
- Clearing and grubbing as necessary for the installation of perimeter controls;
- Construction and stabilization of perimeter controls;
- Remaining clearing and grubbing within installed perimeter controls;
- Road grading;
- Grading for the remainder of the site;
- Utility installation and connections to existing structures;
- Construction of buildings, roads, and other construction;
- Final grading, landscaping, and stabilization;
- Installation of stormwater management measures;
- Approval of the appropriate enforcement authority prior to removal of sediment controls; and
- Removal of controls and stabilization of areas that are disturbed by removal of sediment controls.

Note: Any changes or revisions to the sequence of construction must be reviewed and approved by the plan approval authority prior to proceeding with construction.

Needed Computations for velocity checks



Computations verifying non-erodible velocities as shown below are required to be submitted with all plans showing swales, earth dikes or perimeter dikes swales either permanent or temporary (page B.36 and B.37 of the 2011 Standards and Specifications)

- a. Matting is required on permanent channels where the runoff velocity exceeds two and half feet per second (2.5 fps) or the shear stress exceeds two pounds per square foot (2 lbs/ft²).
- b. On temporary channels discharging to a sediment trapping practice, provide matting where the runoff velocity exceeds four feet per second (4 fps).
- c. Temporary soil stabilization matting is made with degradable (lasts 6 months minimum), natural, or

manmade fibers of uniform thickness and distribution of fibers throughout and is smolder resistant.

- d. The maximum permissible velocity for temporary matting is 6 feet per second.
- e. Permanent soil stabilization matting is an open weave, synthetic material consisting of non-degradable fibers or elements of uniform thickness and distribution of weave throughout. The maximum permissible velocity for permanent matting is 8.5 feet per second.

Granting of Variances



Currently MDE Code, Section, 3.403(e)(3) allows for a variance granted by the Soil Conservation District (SCD) when strict adherence to the specifications will result in unnecessary hardship. The applicant submits

a written request to the SCD. The request must state the specific variances sought and the reason for the request.

The standard is whether strict adherence will result in exceptional hardship. The owner/developer submits a request. The SCD cannot grant a variance unless and until all the necessary information to justify the variance is provided.

The standard has changed from “unnecessary hardship” to “exceptional hardship”.



Not Anymore The use of “super” silt fence to intercept concentrated flows or act as a “check dam” can no longer be used. Please see 2011 Standard and Specifications for Soil Erosion and Sediment Control...page E.6 of the new Standards and Specifications.



“Online” Reviews

1. Requests for an “online” review of a proposed project, must have a plan number associated with them.
2. Online reviews will be billed at the same rate as all other review fees, and included in the existing billing process.

ESD vs. MD-378



Since the 5/4/2010 requirement for ESD design on development plans, the design and submission of ponds as defined by the state via MD-378 have intentionally become rare. However, there have been instances where the ESD is large enough to warrant a check against MD-378, to verify if the definition and/or exemption criteria have been met. Therefore, we wish to bring to the attention of the development community the following:

- 1- All ESD designs must have a stable outfall.
- 2- All ESD designs must meet MD-378 if the 100-yr design high water is 3’ or more against an embankment, but may not require SCD approval if all criteria of “Exemptions” section are proven to be met.

The 3’ depth of water currently is interpreted to apply only to the free-standing portion of water depth, not including the underlying saturated soil/stone media. Note that MD-378 and the above interpretation does not indemnify the designer from exercising sound engineering judgment. All potential hazards (e.g. breach, erosion, redirection, saturation, exfiltration, etc.) resulting from the design are the responsibility of the engineer, regardless of SCD approval.

Minimum Sections to be Included on Plans for Seeding and Stabilization



Sections B-4-2 (topsoil) and B-4-3 (seeding & mulching) should be in plans, with just customized seeding tables of B-4-4 and B-4-5 (temporary & permanent) added. Incremental stabilization (B-4-1) spec should always be on road jobs with $\geq 15'$ of cut/fill.

The following standard note is to be provided on all plans submitted...Page A.15 of New Specs.



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.

Definition of Steep Slopes, Highly Erodible Soils



For the purposes of erosion and sediment control, steep slopes are defined as those with gradients of 20 percent or more USDA NRCS Soil Survey Manual, October, 1993). Highly erodible soils are those soils with a slope greater than 15 percent or those soils with a soil erodibility factor K greater than 0.35 and with a slope greater than 5 percent. Certain projects (e.g. those located in the Chesapeake and Atlantic Coastal Bays Critical Area) may be subject to a more restrictive definition for steep slopes or highly erodible soils.

Temporary Stormwater Management



Please be reminded that all drainage areas of two acres or more (point discharge) are required to address temporary stormwater management. The one year storm is to be routed ensuring runoff during the grading operations does not exceed that before grading. A justifiable waiver

to the temporary stormwater management needs to be provided if the applicant chooses to ask for relief from the temporary stormwater management requirement. Please note; storage of the one year storm to achieve temporary stormwater management is allowable for drainage areas up to five (5) acres.

Soil Information



Most soil information needed for plan submittal such as, K values, Hydric Soil Groupings, current soil symbol, etc. can be found on the Howard Soil Conservation District's website..www.howardscd.org;

then click on urban erosion and sediment control then on documents. Scroll down until you see the info you're looking. Please feel free to call with questions so we can tell you we don't know either.

Sediment Control Plans Prior to January 9th, 2013



Designers, consultants, engineers, etc. are reminded that regardless of the original review date or letter of approval for any sediment control plans, if a plan does not have Howard SCD signature approval prior to the above date, the plan is considered null and void and must meet the requirements of the 2011 Standards and Specifications for Soil Erosion and Sediment Control. Plans having signature approval prior to the above date but resubmitted for signature update, plan revisions, etc must have the 2011 Standards and Specifications for Soil Erosion and Sediment Control for seeding and stabilization.

Minimum Information to Be Provided on Erosion and Sediment Control Plans



Please be sure all erosion and sediment control plans submitted to the Howard Soil Conservation District for review and approval contain the minimum information as shown on pages A.14 through A.16 of the 2011 Standards and Specifications for Soil Erosion and Sediment Control.

Suspension or Revocation of an Approved Plan



Any erosion and sediment control approval issued may be suspended or revoked after written notice is given for any of the following reasons or as determined by the appropriate approval authority;

1. Terms or conditions of the approved erosion and sediment control plans were violated;
2. Violation notice(s) or stop work order(s) were ignored;
3. Site characteristics upon which plan approval was based were changed; or
4. Construction standards as required by the approved plan were disregarded.
5. Modification of Approved Erosion and Sediment Control Plans. Modifications of an approved erosion and sediment control plan must be made in accordance with the erosion and sediment control criteria contained in these Standards and/or as directed by the enforcement authority. A written statement explaining the change(s), all revised plan sheets, and any necessary revisions to the report must be provided.

Information to be Included for the Phasing of Projects Where the Limit of Disturbance is Greater Than 20

Acres



Show an "inset" or a "blow up" of the first phase of construction clearly delineating the limit of disturbance, proposed contours, and sediment controls. Inset should show that all proposed contours and controls can be achieved and the controls function.

Provide same information on an "inset" for the remaining areas of construction.

Note: Under no circumstance is there to be more than twenty acres of land "open" at any one time. Please see page A.5 of the 2011 Standards and Specifications For Soil Erosion and Sediment Control