

Erosion and Sediment Control Notes

DEPARTMENT OF PUBLIC WORKS
ENGINEERING
APPROVED

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MDE Standard Notes

- 1) The contractor shall notify the Administration (WMA) at (410)537-3510 seven (7) days before commencing any land disturbing activity and, unless waived by the Administration, shall be required to hold a preconstruction meeting between project representatives and a representative of WMA (Some counties policies may differ from State guidelines).
- 2) The contractor must notify WMA in writing and by telephone at the following points:
 - A.) The required preconstruction meeting.
 - B.) Following installation of sediment control measures.
 - C.) During the installation of sediment basins (to be converted into permanent stormwater management structures) at the required inspection points (see Inspection Checklist on plan). Notification prior to commencing construction of each step is mandatory.
 - D.) Prior to removal or modification of any erosion or sediment control structure(s).
 - E.) Prior to removal of all sediment control devices.
 - F.) Prior to final acceptance.
- 3) The contractor shall construct all erosion and sediment control measures per the approved plan and construction sequence and shall have them inspected and approved by the agency inspector or WMA Inspector prior to the beginning of any other land disturbing activity. Minor sediment control device location adjustments may be made in the field with the approval of the WMA Inspector. The contractor shall ensure that all runoff from disturbed areas is directed to the sediment control devices and shall not remove any erosion or sediment control measure without prior permission from WMA Inspector and agency inspector. The contractor must obtain prior agency and WMA approval for changes to the Sediment Control Plan and/or Sequence of Construction.
- 4) The contractor shall protect all points of construction ingress and egress to prevent the deposition of materials onto public roads. All materials deposited onto public roads shall be removed immediately.
- 5) The contractor shall inspect daily and maintain continuously in an effective operating condition all erosion and sediment control measures until such times as they are removed with prior permission from WMA Inspector and agency inspector.
- 6) All sediment basins, trap embankments and slopes, perimeter dikes, swales and all disturbed slopes steeper or equal to 3:1 shall be stabilized with sod or seed and anchored straw mulch, or other approved stabilization measures, as soon as possible but no later than seven (7) calendar days after establishment. All areas disturbed outside of the perimeter sediment control system must be minimized. Maintenance must be performed as necessary to ensure continued stabilization. (Requirement for stabilization may be reduced to three (3) days for sensitive areas.)
- 7) The contractor shall apply sod or seed and anchored straw mulch, or other approved stabilization measures to all disturbed areas and stockpiles within Seven (7) calendar days after stripping and grading activities have ceased in the area. Maintenance shall be performed as necessary to ensure continued stabilization. (Requirement may be reduced to Three (3) days for sensitive areas.)
- 8) Prior to removal of sediment control measures, the contractor shall stabilize and have established permanent stabilization for all contributory disturbed areas using sod or an approved permanent seed mixture with required soil amendments and an approved anchored mulch. Wood fiber mulch may only be used in seeding season soil amendments and an approved anchored mulch. Wood fiber mulch may only be used to promote sheet flow drainage. Areas where the slope does not exceed 10% and grading has been done to promote sheet flow drainage. Areas not later than finished grade during the seeding season shall be permanently stabilized as soon as possible, but not later than fourteen (14) calendar days after establishment. When property is brought to finished grade during the seeding season, temporary stabilization shall be applied to disturbed areas. The final permanent stabilization of such property and anchored straw mulch shall be applied to disturbed areas. The final permanent stabilization of such property shall be applied by March 15 or earlier if ground and weather conditions allow.
- 9) The site's approval letter, approved Erosion and Sediment Control Plans, daily log books, and test reports shall be available at the site for inspection by duly authorized officials of WMA and the agency responsible for project.
- 10) Surface drainage flows over unstabilized cut and fill slopes shall be controlled by either preventing drainage flows from traversing the slopes or by installing protective devices to lower the water downslope without causing erosion. Dikes shall be installed and maintained at the top of a cut or fill slope until the slope and drainage area to erosion are fully stabilized, at which time they must be removed and final grading done to promote sheet flow drainage. Protective methods must be provided at points of concentrated flow where erosion is likely to occur.
- 11) Permanent swales or other points of concentrated water flow shall be stabilized with sod or seed with an approved erosion control matting, riprap, or by other approved stabilization measures.
- 12) Temporary sediment control devices may be removed, with permission of WMA Inspector and agency inspectors, within thirty (30) calendar days following establishment of permanent stabilization in all contributory drainage areas. Stormwater management structures used temporarily for sediment control shall be converted to the permanent configuration within this time period as well.
- 13) No permanent cut or fill slope with a gradient steeper than 3:1 will be permitted in lawn maintenance areas. A slope gradient of up to 2:1 will be permitted in non-maintenance areas provided that those areas are indicated on the erosion and sediment control plan with a low-maintenance ground cover specified for permanent stabilization. Slope gradient steeper than 2:1 will not be permitted with vegetative stabilization.
- 14) For finished grading, the contractor shall provide adequate gradients to prevent water from ponding for more than twenty four (24) hours after the end of a rainfall event. Drainage courses and swale flow areas may take as long as forty-eight (48) hours after the end of a rainfall event to drain. Areas designed to have standing water shall not be required to meet this requirement.
- 15) Sediment traps or basins are not permitted within 20 feet of a foundation that exists or is under construction. No structure may be constructed within 20 feet of an active sediment trap or basin.
- 16) The WMA Inspector has the option of requiring additional safety or sediment control measures, if deemed necessary.
- 17) All trap depth dimensions are relative to the outlet elevation. All traps must have a stable outfall. All traps and basins shall have stable inflow points.
- 18) Vegetative stabilization shall be performed in accordance with the Standards and Specifications for Soil Erosion and Sediment Control. Refer to appropriate specifications for temporary seeding, permanent seeding, mulching, sodding, and ground covers.
- 19) Sediment shall be removed and the trap or basin restored to its original dimensions when the sediment has accumulated to one quarter of the total depth of the trap or basin. Total depth shall be measured from the trap or basin bottom to the crest of the outlet.

- 20) Sediment removed from traps (and basins) shall be placed and stabilized in approved areas, but not within a floodplain, wetland or tree-save area. When pumping sediment laden water, the discharge must be directed to a sediment trapping device prior to release from the site. A sump pit may be used if sediment traps themselves are being pumped out.
- 21) All water removed from excavated areas shall be passed through a WMA approved dewatering practice or pumped to a sediment trap or basin prior to discharge to a functional storm drain system or to stable ground surface.
- 22) Sediment control for utility construction for areas outside of designed controls or as directed by engineer or WMA Inspector:
 - A.) Call "Miss Utility" at 1-800-257-7777 48 hours prior to the start of work.
 - B.) Excavated trench material shall be placed on the high side of the trench.
 - C.) Trenches for utility installation shall be backfilled, compacted, and stabilized at the end of each working day. No more trench shall be opened than can be completed the same day, unless:
 - No more trench shall be opened than can be completed the same day, unless;
 - Temporary silt fence shall be placed immediately downstream of any disturbed area intended to remain disturbed for more than one day.
- 23) Where deemed appropriate by the engineer or inspector, sediment basins and traps may need to be surrounded with an approved safety fence. The fence must conform to local ordinances and regulations. The developer or owner shall check with local building officials on applicable safety requirements. Where safety fence is deemed appropriate and local ordinances do not specify fencing sizes and types, the following shall be used as a minimum standard: The safety fence must be made of welded wire and at least 42 inches high, have posts spaced no farther apart than 8 feet, have mesh openings no greater than 2 inches in width and 4 inches in height with a minimum of 14 gauge wire. Safety fence must be maintained and in good condition at all times.
- 24) Off-site spoil or borrow areas on State or federal property must have prior approval by WMA and other applicable State, federal, and local agencies; otherwise approval must be granted by the local authorities. All waste and borrow areas off-site must be protected by sediment control measures and stabilized.
- 25) Sites where infiltration devices are used for the control of stormwater, extreme care must be taken to prevent runoff from unstabilized areas from entering the structure during construction. Sediment control devices placed in infiltration areas must have bottom elevations at least two (2) feet higher than the finish grade bottom elevation of the infiltration practice. When converting a sediment trap to an infiltration device, all accumulated sediment must be removed and disposed of prior to final grading of infiltration device.
- 26) When a storm drain system outfall is directed to a sediment trap or sediment basin and the system is to be used for temporarily conveying sediment laden water, all storm drain inlets in non-sump areas shall have temporary asphalt berms constructed at the time of base paving to direct gutter flow into the inlets to avoid surcharging and overflow of inlets in sump areas.
- 27) Site Information Block

a. Total area of Facility (base, campus, park, etc.)	16.16	Acres
b. Area Disturbed	2.14	Acres
c. Area to be Roofed or Paved	-0-	Acres
d. Total Cut	27,300	Cubic Yards
e. Total Fill		Cubic Yards
f. Off-Site Waste / Borrow Area Location	N/A	

Soil Conservation District Standard Notes

- 28) All erosion and sediment control measures, including practice application, installation, maintenance, and plan approvals, modifications, and project termination shall be in accordance with the following regulations, ordinances, and guidelines.
 - COMAR 26.17 and all other current, approved, or additional Maryland Regulations pertaining to erosion and sediment control.
 - "2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control," including all addendums, updates, and revisions.
 - Current "Calvert County Erosion and Sediment Control Ordinance," including all addendums, updates, and revisions.
 - Current "Guidelines used by Calvert Soil Conservation District for erosion and sediment control plan reviews," including all addendums, updates, and revisions.
 - In addition, all site work shall comply with the Maryland Stormwater Management Act of 2007, including compliance with Environmental Site Design (ESD) criteria.
- 29) The scope of work shall consist of installing measures or performing work to control erosion and minimize the production of sediment and other pollutants to water and air during construction operations.
- 30) All materials furnished shall meet the requirements of the Material Specifications.
- 31) The measures and works shall include, but are not limited to the following:
 - a. The excavation and moving of soil materials shall be scheduled so that the smallest possible areas will be unprotected from erosion for the shortest time feasible.
 - b. Seeding to protect disturbed areas.

- c. Mulching to provide temporary protection of soil surfaces from erosion.
- d. Diversions to divert water away from work areas and to collect runoff from work areas for treatment and safe disposition. These works are temporary and shall be removed and the area restored to its original state when they are no longer needed or permanent measures are installed.
- e. There shall be culverts or bridges where equipment must cross streams. These works are temporary and shall be removed and the area restored to its original state when they are no longer needed or permanent measures are installed.
- f. Sediment traps shall be used to settle and filter out sediment from eroding areas to protect properties and streams below the construction site. These works are temporary and shall be removed and the area restored to its original state when they are no longer needed or permanent measures are installed.
- g. Geotextile Silt Fences shall be used to trap sediment from areas of limited runoff. Sediment filters shall be properly keyed in to prevent erosion under them. These works are temporary and shall be removed and the area restored to its original state when they are no longer needed or permanent measures are installed.
- h. Waterways shall be used for the safe disposal of runoff from fields, diversions, and other structures or measures. These works are temporary and shall be removed and the area restored to its original state when they are no longer needed or permanent measures are installed.
- 32) To dispose of chemical pollutants such as drained lubricating or transmission oils, greases, soaps, concrete mixer wash water, asphalt, etc., produced as a by-product of the construction work, the Contractor shall provide watertight tanks or barrels or construct a sump sealed with plastic sheets to be used. At the completion of the construction work, sumps shall be voided without causing pollution as specified.
- 33) Sanitary facilities such as chemical toilets, or septic tanks shall not be placed adjacent to live streams, wells, or springs. They shall be located at a distance sufficient to prevent contamination of any water sources. At the completion of construction work, facilities shall be disposed of without causing pollution.
- 34) The burning of brush or slash or disposal of other materials shall adhere to local and state regulations.
 - a. Fire prevention measures shall be taken to prevent the start or the spreading of wild fires, which result from project work. Firebreaks or guards shall be constructed at locations shown on the drawings.
 - b. All public access or haul roads used by the contractor during construction of the project shall be sprinkled or otherwise treated to fully suppress dust. All dust control methods shall ensure safe operations at all times. If chemical dust suppressants are used, the material shall be a commercially available product specifically designed for dust suppression and the application shall follow the manufacturer's requirements and recommendations. A copy of the product data sheet and manufacturer's recommended application procedures shall be provided to the Engineer five working days before use.
- 35) All pollution control measures and works shall be adequately maintained in a functional condition as long as needed during the construction operation. All temporary measures shall be removed and the site restored to as nearly original conditions as practicable.
- 36) Temporary Seeding and Mulching Specifications:
 - a. All temporary seeding and mulching shall comply with 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control, standards and specifications for vegetative stabilization. Seeding shall conform to the "Temporary Seeding For Site Stabilization, depths, and dates" - Table B.1. This includes the planting of Barley, Oats, Rye, Foxtail Millet, Wheat, and Annual Rye Grass in rates as prescribed.
- 37) Permanent Seeding Specifications:
 - a. Seedbed Preparation: Apply 90 lbs. per 1,000 sq. ft. of pulverized dolomitic limestone and 12 lbs. per 1,000 sq. ft. of 10-10-10 equivalent fertilizer. Harrow or disc on the contour into the soil to a depth of 3 to 4 inches. Continue tillage until a reasonably fine seedbed has been prepared. Slope areas (greater than 3:1) should be raked, leaving the surface in an irregular condition with ridges running parallel to the contours.
 - b. Seeding: Use Kentucky 31 tall fescue at the rate of 5 to 7 lbs. per 1,000 sq. ft. on a moist seedbed with a minimum coverage of 1/4 inch. Stabilize by mulching with unweathered, unchopped, small grain straw spread at the rate of 2 tons per acre. Mulch to be anchored by asphalt tie-down method. Seeding to be done on completion of construction.
 - c. Sodding: Use rooted Kentucky 31 tall fescue. Sod shall be transplanted within 36 hours of harvesting. Each strip of sod is to be placed with long edges parallel to contours and staked with at least 2 stakes spaced not more than 2 feet apart.
 - d. Application for Approval of Erosion and Sediment Control Plans require the applicant to submit details of temporary and permanent stabilization measures including placement of the following statement on the plan:

Following initial soil disturbance or re-disturbance, permanent or temporarily stabilization shall be completed within:

 - (aa) Three (3) calendar days as to the surface of all perimeter control dikes, swales, ditches, perimeter slopes and all slopes greater than 3 horizontal to 1 vertical (3:1) and;
 - (bb) Seven (7) days as to all other disturbed or graded areas on the project site.

(v) The requirements do not apply to those areas that are shown on the plan and are currently being used for material storage, or for those areas where construction activities are currently being performed or to interior areas of a surface mine site where the stabilization material would contaminate the recoverable resource. Maintenance shall be performed as necessary to ensure that stabilized areas continuously meet the appropriate requirements of the 2011 Standards and Specifications for Erosion and Sediment Control, or the latest revision, which is incorporated by reference in Regulation.

As construction proceeds, additional measures may be employed with the Engineer's approval, if conditions warrant, to ensure effective erosion and sediment control on site.

38) Utility Installation: All trenches or holes created for utility installation shall be backfilled, compacted, and stabilized at the end of each working day. Excavated trench material shall be placed on the high side of the trench or hole. No more trench/holes shall be opened than can be stabilized the same day. If an area must be left unstabilized

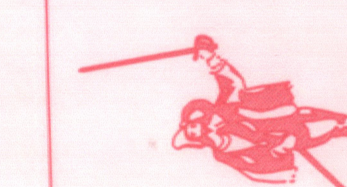
- 39) Utility Notification: Calvert Soil Conservation District makes no representation as to the existence or nonexistence of any utilities at the construction site. Shown on these construction drawings are those utilities that have been identified. It is the responsibility of the landowners or operators and contractors to assure themselves that no hazard exists or damage will occur to utilities. It is suggested that Miss Utility be contacted at 1-800-257-7777.
- 40) Best Management Practices for working in nontidal wetlands, wetland buffers, waterways, and 100-year flood plain:
 - a. No excess fill, construction material, or debris shall be stockpiled or stored in the wetlands buffer.
 - b. Place materials in a location and manner that does not adversely impact surface or subsurface water flow into or out of the nontidal wetland.
 - c. Do not use the excavated material as backfill if it contains waste metal products, unsightly debris, toxic material, or any other deleterious substance. If additional backfill is required, use clean material free of waste metal products, unsightly debris, toxic material, or any other deleterious substance.
 - d. Place heavy equipment on mats or suitably operate the equipment to prevent damage to the nontidal wetlands or buffer.
 - e. Repair and maintain any serviceable structure or fill so there is no permanent loss of nontidal wetlands in excess of nontidal wetlands lost under the original structure or fill.
 - f. Rectify any nontidal wetlands temporarily impacted by any construction.
 - g. All stabilization in the wetland and buffer shall be of the following recommended species: Annual Rye Grass (*Lolium multiflorum*), Millet (*Setaria italica*), Barley (*Hordeum sp.*), Oats (*Avena sp.*), and/or Rye (*Secale cereale*). These species will allow for the stabilization of the site while also allowing for the voluntary revegetation of natural wetland species. Other non-persistent vegetation may be acceptable, but must be approved by the District. Kentucky 31 fescue shall not be utilized in the wetland or buffer areas. The area should be seeded and mulched to reduce erosion after construction activities have been completed.
 - h. After installation has been completed, make postconstruction grades and elevations of nontidal wetlands the same as the original grades and elevations in temporarily impacted areas.
 - i. To protect aquatic species, in-stream work is prohibited as determined by the classification of the stream. Class I Waters: in-stream work shall not be conducted during the period March 1 through June 15, inclusive, during any year.
 - j. Stormwater runoff from impervious surfaces shall be controlled to prevent the washing of debris into the waterway.
 - k. Culverts shall be constructed and any riprap placed so as not to obstruct the movement of aquatic species, unless that purpose of the activity is to impound water.

Approved by G. Gass
District Engineer
Title _____
Title _____

DATE 6/19
Designed G. Gass
Drawn G. Westbrook
Revised _____
Checked B. Clark



BREEZY POINT PARK
Erosion and Sediment Control Notes
Shoreline Re-Establishment Project
Calvert County, Maryland



Professional Certification:
I hereby certify that these documents were prepared and approved by me, and that I am a duly licensed Professional Engineer under the laws of the State of Maryland, License No. 14544.
Glenn G. Gass, P.E.
Expiration Date: August 16, 2021

CAD FILE
LAYOUT NO. 8
NO. 8 OF 8