



*A cooperative effort
between the North Carolina
Sedimentation Control
Commission, the North
Carolina Department of
Environmental Quality, and
the North Carolina
Agricultural Extension
Service.*

A large decorative graphic on the left side of the page, consisting of numerous overlapping squares of various sizes, creating a stepped, staircase-like effect that ascends from the bottom left towards the top right.

***Erosion and
Sediment Control
Planning and
Design Manual***

Disclaimer

The contents of this publication were prepared by the authors and should not be interpreted as necessarily representing the policies or recommendations of other referenced agencies or organizations. Additional information from professionals, agencies, organizations and institutions with expertise in a particular area may be useful in selecting, designing, and installing certain practices.

The mention of trade names, products or companies does not constitute an endorsement.

This manual is intended for periodic update. Therefore sections of the manual may be changed as practices for erosion and sedimentation control evolve.

Preface

Thousands of acres of land are exposed each year in North Carolina for the construction of subdivisions, shopping centers, office centers, highways and other developments. Without protective measures these exposed areas are vulnerable to accelerated erosion and sedimentation that damages adjoining properties, streams and other water resources of the state.

The North Carolina Sedimentation Pollution Control Act of 1973 established a statewide program to control soil erosion and sedimentation. The law covers all land-disturbing activities in North Carolina, except those involving agriculture, forestry and mining.

The Act sets basic performance standards backed by rules and regulations. The law and the rules do not specify a rigid set of practices. Rather, they require the land developer to prepare an erosion and sedimentation control plan and employ appropriate measures to meet the performance standards. As part of the educational requirements of the Act, the Commission is pleased to have sponsored the development of this manual. The manual is a basic reference for the preparation of a comprehensive erosion and sedimentation control plan and for the design construction and maintenance of individual practices. It is intended to help land developers comply with the Act.

This manual is the “state of the art” and provides useful information for the implementation of a sound erosion control program that can be tailored to specific site conditions. The Commission will continue to support education and training to ensure sound and economical sedimentation control procedures to protect the streams, lakes, and estuaries of the state.

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Table of Contents

1 North Carolina Sedimentation Control Law	1.1
2 Processes and Principles of Erosion and Sedimentation	2.1
The Erosion and Sedimentation Process	2.1
Principles of Erosion and Sedimentation Control.....	2.5
3 Vegetative Considerations	3.1
Effects of Vegetation on Erosion, Sedimentation, and Property Value	3.1
Site Considerations	3.2
Seasonal Considerations	3.7
Selection of Vegetation.....	3.7
Establishing Vegetation	3.16
Maintenance.....	3.20
4 Preparing the Erosion and Sedimentation Control Plan.....	4.1
General Considerations.....	4.1
Writing the Plan	4.4
5 Overview of Erosion and Sedimentation Control Practices.....	5.1
Recommended Symbols for Erosion and Sediment Control Practices	5.6
6 Practice Standards and Specifications	6.1
Site Preparation	
Construction Sequence Schedule	6.01
Land Grading	6.02
Surface Roughening	6.03
Topsoiling	6.04
Tree Preservation and Protection	6.05
Temporary Construction Entrance/Exit	6.06
Surface Stabilization	
Temporary Seeding.....	6.10

Permanent Seeding.....	6.11
Sodding	6.12
Topsoiling Trees, Shrubs, Vines, and Ground Covers.....	6.13
Mulching.....	6.14
Riprap.....	6.15
Vegetative Dune Stabilization	6.16
Rolled Erosion Controlled Products	6.17
Compost Blankets.....	6.18
Runoff Control Measures	
Temporary Diversions	6.20
Permanent Diversions	6.21
Diversion Dike (Perimeter Protection)	6.22
Right-of-Way Diversions (Water Bars).....	6.23
Riparian Area Seeding.....	6.24
Runoff Conveyance Measures	
Grass-Lined Channels.....	6.30
Riprap and Paved Channels	6.31
Temporary Slope Drains	6.32
Paved Flume (Chutes).....	6.33
Outlet Protection	
Level Spreader	6.40
Outlet Stabilization Structure.....	6.41
Inlet Protection	
Excavated Drop Inlet Protection (Temporary).....	6.50
Hardware Cloth and Gravel Inlet Protection (Temporary)	6.51
Block and Gravel Inlet Protection (Temporary)	6.52
Sod Drop Inlet Protection	6.53
Rock Doughnut Inlet Protection	6.54
Rock Pipe Inlet Protection	6.55
Sediment Traps and Barriers	
Temporary Sediment Trap	6.60
Sediment Basin	6.61
Sediment Fence (Silt Fence)	6.62
Rock Dam	6.63
Skimmer Sediment Basin.....	6.64

Porous Baffles	6.65
Compost Sock	6.66
Stream Protection	
Temporary Stream Crossing	6.70
Permanent Stream Crossing.....	6.71
Vegetative Streambank Stabilization	6.72
Structural Streambank Stabilization	6.73
Buffer Zones	6.74
Other Related Practices	
Construction Road Stabilization	6.80
Subsurface Drain.....	6.81
Grade Stabilization Structure	6.82
Check Dam	6.83
Dust Control.....	6.84
Sand Fence (Wind Fence).....	6.85
Flocculants	6.86
Check Dam with Weir	6.87
7 Sample Erosion and Sedimentation Control Plan.....	7.1
8 Appendices	8.1
Soils Information	8.01
Vegetation Tables	8.02
Estimating Runoff.....	8.03
Estimating Roughness Coefficients	8.04
Design of Stable Channels and Diversions	8.05
Design of Riprap Outlet Protection	8.06
Sediment Basin Design	8.07
The Sedimentation Control Law	8.08
North Carolina Administrative Code	8.09
Glossary	8.10
Where to Go for Help	8.11
References.....	8.12

6.11m	Seeding No. 3P for: Gentle Slopes, Soils with Average or Better Moisture Retention, Cooler Sites; High Maintenance	6.11.21
6.11n	Seeding No. 4P for: Gentle Slopes, Soils Somewhat Warmer or Drier than 3P, or with Physical Limitations; High Maintenance	6.11.22
6.11o	Seeding No. 5P for: Grass-lined Channels	6.11.23
6.11p	Seeding No. 1CP for: Well- to Poorly Drained Soils with Good Moisture Retention; Low Maintenance	6.11.24
6.11q	Seeding No. 2CP for: Well- to Poorly Drained Soils with Good Moisture Retention; High Maintenance.....	6.11.25
6.11r	Seeding No. 3CP for: Dry Sands to Sandy Loams; High Maintenance, Fine Turf	6.11.26
6.11s	Seeding No. 4CP for: Well-Drained Sandy Loams to Dry Sands, Coastal Plain and Eastern Edge of Piedmont; Low- to Medium-Care Lawns.....	6.11.27
6.11t	Seeding No. 5CP for: Well-Drained Sandy Loams to Dry Sands; Low Maintenance	6.11.28
6.11u	Seeding No. 6CP for: Intertidal Zones of Estuarine Shorelines, Dredged Material, and Graded Areas in Salt Water	6.11.29-30
6.11v	Seeding No. 7CP for: Grass-lined Channels; Coastal Plain, Lower Piedmont, and Dry Soils in the Central Piedmont	6.11.31
6.12a	Types of Sod Available in North Carolina	6.12.2
6.12b	Characteristics of the Principle Lawn Grasses Grown as Sod in North Carolina ...	6.12.6
6.14a	Mulching Materials and Application Rates	6.14.2
6.15a	Size for Riprap	6.15.2
6.15b	Maximum AOS for Geotextile Filters	6.15.5
6.16a	Planting Specifications for: Coastal Sands Exposed to Salt Spray and/or Wind Erosion	6.16.3
6.16b	Dune Fertilization Schedule for Maintenance (Rates are pounds per 1,000 Square Feet)	6.16.4
6.17a	C-Factor for Various Slope Treatments	6.17.3
6.17b	Permissible Shear Stress of Various RECP's	6.17.3
6.17c	Grass Retardance Categories	6.17.5
6.18a	Compost Blanket Parameters.....	6.18.3
6.18b	Compost Blanket Application Rates.....	6.18.5
Runoff Control Measures		
6.21a	Minimum Design Storm for Degrees of Hazard.....	6.21.2
6.23a	Spacing of Water Bars on Right-of-Way Less than 100 ft Wide.....	6.23.1
6.24b	Permanent Seeding Recommendations -- Mountain Region	6.24.5
6.24c	Permanent Seeding Recommendations -- Piedmont Region	6.24.6

6.24d	Permanent Seeding Recommendations -- Coastal Plains Region	6.24.7
Runoff Conveyance Measures		
6.31a	Guide for Selecting Manning n Values.....	6.31.2
6.31b	Guide for Selecting Channel Side Slopes	6.31.4
6.31c	Channel Lining Thickness	6.31.4
6.32a	Size of Slope Drain	6.32.1
6.33a	Flume Dimensions	6.33.3
Outlet Protection		
6.40a	Minimum Dimensions for Level Spreader	6.40.1
Sediment Traps and Barriers		
6.60a	Design of Spillways	6.60.3
6.61a	Acceptable Dimensions for Basin Embankment	6.61.5
6.62a	Maximum Slope Length and Slope for which Sediment Fence is Applicable	6.62.2
6.62b	Specifications for Sediment Fence Fabric	6.62.3
6.65a	Specifications for Porous Baffle Material.....	6.65.5
6.66a	Compost Sock BMPs as Replacement for Current Erosion Control Practices	6.66.3
6.66b	Compost Sock Spacing versus Channel Slope.....	6.66.5
6.66c	Compost Sock Initial Flow Rates	6.66.6
Stream Protection		
6.72a	Conditions Where Vegetative Streambank Stabilization is Acceptable	6.72.3
6.72b	Seed Mixture for Streambank Stabilization.....	6.72.5
Other Related Practices		
6.81a	Design Flow Rates for Interceptor Drains in Sloping Land.....	6.81.4
6.84a	Spray-on Adhesive for Dust Control on Mineral Soil	6.84.1
6.86a	Volume of Concentrated PAM Solution.....	6.86.4
8	Appendices	8.1
Soils Information		
8.01a	Size Limits of Soil Particles.....	8.01.4
8.01b	AASHTO Classification of Soils and Soil-Aggregate Mixtures	8.01.10
8.01c	Classification of Materials for the Unified System.....	8.01.11
8.01d	Soil Characteristics for Common Soils in North Carolina.....	8.01.11
Vegetation Tables		
8.02a	Grasses and Legumes for Use in Stabilization of Disturbed Soils in North Carolina	8.02.2

8.02b	Guide to the Selection of Woody Plants and Ground Covers for Soil Stabilization	8.02.9
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Estimating Runoff

8.03a	Enter the Rainfall Intensity Values for the Corresponding Times of Duration from the Intensity Duration Frequency Tables.....	8.03.3
8.03b	Value of Runoff Coefficient (C) for Rational Formula	8.03.6
8.03c	Intensity Duration Frequency	8.03.8
8.03d	Runoff Depth for Selected CN's and Rainfall Amounts.....	8.03.13
8.03e	Runoff Curve Numbers of Urban Areas	8.03.15
8.03f	Runoff Curve Numbers for Cultivated Agriculture Lands	8.03.16
8.03g	Runoff Curve Numbers for Other Agriculture Lands	8.03.17
8.03h	Roughness Coefficients (Manning's n) for Sheet Flow	8.03.27
8.03i	I_a Values for Runoff Curve Number	8.03.33
8.03j	Precipitation Frequency Estimate	8.03.34

Estimating Roughness Coefficients

8.04a	Basic Value of Roughness Coefficient for Channel Materials	8.04.1
8.04b	Modifying Value for Roughness Coefficient Due to Surface Irregularity of Channels	8.04.2
8.04c	Modifying Value for Roughness Coefficient Due to Variations of Channel Cross Section	8.04.2
8.04d	Modifying Value for Roughness Coefficient Due to Obstructions in the Channel	8.04.3
8.04e	Modifying Value for Roughness Coefficient Due to Vegetation in the Channel	8.04.4
8.04f	Modifying Value for Roughness Coefficient Due to Meander of the Channel	8.04.5

Design of Stable Channels and Diversions

8.05a	Maximum Allowable Design Velocities for Vegetated Channels	8.05.4
8.05b	Manning's n for Structural Channel Linings	8.05.6
8.05c	Retardance Classification for Vegetal Covers	8.05.8
8.05d	Maximum Permissible Velocities for Unprotected Soils in Existing Channels	8.05.9
8.05e	Manning's Roughness Coefficient for Temporary Lining Materials.....	8.05.10
8.05f	Manning's Roughness Coefficient for Riprap and Gravel.....	8.05.12
8.05g	Permissible Shear Stresses for Riprap and Temporary Liners.....	8.05.13
8.05h	Values of A_3/A_z for Selected Side Slopes and Depth-to-Bottom Width Ratios.....	8.05.24
8.05i	Parabolic Waterway Design (Retardance "D" and "C", Grade 0.25%).....	8.05.29
8.05j	Parabolic Waterway Design (Retardance "D" and "C", Grade 0.5%).....	8.05.30
8.05k	Parabolic Waterway Design (Retardance "D" and "C", Grade 1.0%).....	8.05.31
8.05l	Parabolic Waterway Design (Retardance "D" and "C", Grade 2.0%).....	8.05.32

8.05m	Parabolic Waterway Design (Retardance “D” and “C”, Grade 3.0%).....	8.05.33
8.05n	Parabolic Waterway Design (Retardance “D” and “C”, Grade 4.0%).....	8.05.34
8.05o	Parabolic Waterway Design (Retardance “D” and “C”, Grade 5.0%).....	8.05.35
8.05p	Parabolic Diversion Design (Retardance “D” and “B”, Grade 0.25%)	8.05.36
8.05q	Parabolic Diversion Design (Retardance “D” and “B”, Grade 0.5%)	8.05.37
8.05r	Parabolic Diversion Design (Retardance “D” and “B”, Grade 1.0%)	8.05.38
8.05s	Parabolic Diversion Design (Retardance “D” and “B”, Grade 1.5%)	8.05.39
8.05t	Parabolic Diversion Design (Retardance “D” and “B”, Grade 2.0%)	8.05.40
8.05u	Parabolic Diversion Design (Retardance “D” and “C”, Grade 0.25%)	8.05.41
8.05v	Parabolic Diversion Design (Retardance “D” and “C”, Grade 0.5%)	8.05.42
8.05w	Parabolic Diversion Design (Retardance “D” and “C”, Grade 1.0%)	8.05.43
8.05x	Parabolic Diversion Design (Retardance “D” and “C”, Grade 1.5%)	8.05.44
8.05y	Parabolic Diversion Design (Retardance “D” and “C”, Grade 2.0%)	8.05.45

Sediment Basin Design

8.07a	K _p Values for Common Sizes of Pipe.....	8.07.6
8.07b	Design Chart for Riser	8.07.7
8.07c	Design Table for Vegetated Spillways Excavated in Erosion Resistant Soils (side slopes- 3 horizontal: 1 vertical).....	8.07.8
8.05d	Design Table for Vegetated Spillways Excavated in Very Erodible Soils (side slopes- 3 horizontal: 1 vertical).....	8.07.9

List of Figures

2 Processes and Principles of Erosion and Sedimentation	2.1
2.1 The four types of soil erosion on an exposed slope	2.2
2.2 Soil structure influences the infiltration rate and movement of water in a soil	2.4
2.3 Comparison of runoff in natural and urbanized drainage areas	2.5
3 Vegetative Considerations	3.1
3.1 Vegetation effects on erosion.....	3.2
3.2 South- and west-facing slopes are hot and dry	3.3
3.3 Major physiographic regions of North Carolina differ in relief, geology, climate, elevation, and major soil systems	3.4
3.4 Construction decreases soil fertility	3.6
3.5 Nurse crops promote the establishment of permanent species	3.8
3.6 Annual ryegrass is recognized by flowers directly attached to a central stem and claw- like auricles at the leaf attachment.....	3.10
3.7 Tall fescue is a common perennial easily confused with ryegrass. Seedhead is branched, loose and open. Auricles are absent in young plants (compare with Figure 3.6)	3.11
3.8 Common Bermudagrass.....	3.12
3.9 Sea oats	3.14
3.10 3.10 Maintenance of vegetative cover	3.20
4 Preparing the Erosion and Sedimentation Control Plan.....	4.1
4.1 Site elevation.....	4.3
4.2 Landscape evaluation.....	4.5
4.3 Wooded buffer zone.....	4.10
6 Practice Standards and Specifications	6.1
Site Preparation	
6.03a Bulldozer treads create grooves perpendicular to the slope. The slope face should not be back-bladed during the final grading operation	6.03.1
6.03b Stair stepping cut slopes	6.03.3
6.03c Grooving slopes	6.03.3
6.05a Barrier should be installed at the drip line of tree branches.....	6.05.3

6.05b	Trim bark wounds with a tapered cut, then apply tree paint.....	6.05.4
6.05c	Prune damaged branches with three cuts to avoid peeling bark from the tree trunk when limb falls	6.05.4
6.06a	Typical stone entrance/exit pad	6.06.3
6.06b	Stone Entrance/Exit keeps sediment from leaving the construction site	6.06.3

Surface Stabilization

6.11a	Major physiographic regions of North Carolina differing in climate, soils and topography	6.11.2
6.11b	Label displayed on all North Carolina certified seed.....	6.11.6
6.11c	Suggested pattern for broadcasting seed and fertilizer	6.11.7
6.11d	Proper placement of grass sprigs. Each sprig should have at least one node.....	6.11.8
6.12a	Proper installation of grass sod	6.12.4
6.12b	Installation of sod in waterways	6.12.5
6.13a	Plant hardiness zones for woody plants and ground covers in North Carolina	6.13.2
6.13b	Planting bare-root seedlings.....	6.13.4
6.13c	Planting balled-and-burlapped and container-grown trees	6.13.6
6.14a	Installation of netting and matting	6.14.6
6.15a	Angle of repose of riprap in terms of mean size and shape of stone	6.15.4
6.15b	Riprap slope protection.....	6.15.7
6.17a	Hydraulic Roughness of Grass.....	6.17.6
6.17b	Limiting Values for Bare and TRM Protected Soils.....	6.17.6
6.17c	Limiting Values for Plain and TRM Reinforced Grass	6.17.6
6.17d	Temporary Channel Liners	6.17.10
6.17e	Channel Installation and Slope Installation	6.17.11
6.18a	Compost Blanket Installation.....	6.18.2

Runoff Control Measures

6.20a	Temporary earthen diversion dike	6.20.1
6.20b	Temporary gravel diversion dike for vehicle crossing.....	6.20.2
6.21a	Use of diversions to protect cut or fill slopes, protect structures or off-site property, or break long slopes	6.21.1
6.21b	Permanent diversion located above a slope	6.21.3
6.22a	Perimeter dikes prevent surface runoff from entering construction sites	6.22.1
6.23a	Water bars to protect utility right-of-way	6.23.2
6.23b	Section view of a water bar.....	6.23.3

Runoff Conveyance Measures

6.30a	Cross section geometry of triangular, parabolic, and trapezoidal channels.....	6.30.3
6.31a	Construction detail of riprap channel cross sections.....	6.31.3
6.32a	Cross section of temporary slope drain.....	6.32.2
6.33a	Paved flume requires a stable outlet	6.33.2
Outlet Protection		
6.40a	Level spreader is designed to disperse small volumes of concentrated flow across stable slopes	6.40.2
6.40b	Detail of level spreader cross section.....	6.40.3
6.41a	Alternative structures for energy dissipation at an outlet	6.41.2
6.41b	Stage showing maximum and minimum tailwater condition.....	6.41.3
6.41c	Riprap outlet protection	6.41.4
Inlet Protection		
6.50a	Excavated drop inlet protection	6.50.1
6.51a	Hardware Cloth and Gravel Inlet Protection	6.51.2
6.52a	Block and gravel drop inlet protection.....	6.52.2
6.52b	Gravel drop inlet protection (gravel donut)	6.52.3
6.53a	Sod Strips Protect Inlet from Erosion	6.53.2
6.53b	Sod Drop Inlet Sediment Filter	6.53.2
6.54a	Rock Doughnut Inlet Protection Plan View and Cross-Section View	6.54.2
6.55a	Rock Pipe Inlet Protection Installation Specifications.....	6.55.2
Sediment Traps and Barriers		
6.60a	Temporary sediment trap	6.60.3
6.61a	Graph showing the relationship between the ratio of surface area to peak inflow rate and trap efficiency.....	6.61.2
6.61b	Sediment basin with skimmer attached to riser for dewatering.....	6.61.4
6.61c	Installation example of a flashboard riser	6.61.5
6.61d	Installation detail of a sediment basin (with riser barrel pipe).....	6.61.9
6.62a	Installation detail of a Sediment Fence	6.62.5
6.62b	Installation detail of the Slicing Method for a Silt Fence	6.62.6
6.63a	Cross-Section view of Installation Specifications for a Rock Dam.....	6.63.3
6.63b	Plan View and Spillway View of a Rock Dam.....	6.63.4
6.64a	Schematic of a Skimmer Dewatering Device	6.64.2
6.64b	Skimmer Orifice Diameter as a Function of the Basin Volume and Dewatering Time	6.64.3
6.64c	Sediment Basin with a Skimmer Outlet and Emergency Spillway.....	6.64.6

6.65a	Porous baffles in a sediment basin.....	6.65.3
6.65b	Porous Baffle detail and cross-section of a porous baffle in a sediment basin	6.65.4
6.65c	Example of porous baffles installed in a skimmer basin	6.65.4
6.66a	Compost sock.....	6.66.1
6.66b	Schematic of compost sock installation	6.66.8

Stream Protection

6.70a	A well constructed ford offers little obstruction to flow while safely handling heavy loadings.....	6.70.3
6.70b	Temporary Culvert backfilled with Stone.....	6.70.4
6.71a	Permanent stream crossing with culverts designed to prevent overtopping	6.71.1
6.72a	Typical variation in water level correlated with vegetative zones.....	6.72.2
6.72b	Methods of establishing reed-bank vegetation.....	6.72.4
6.72c	Methods of planting shrub zone vegetation	6.72.7
6.73a	Gabions may be stacked to protect steep streambanks	6.73.2
6.73b	Voids in grid pavers may be filled with sand or gravel and established in vegetation	6.73.3
6.73c	Gabion revetment.....	6.73.4
6.74a	Example of a Buffer Zone near a Land Disturbing Activity.....	6.74.2

Other Related Practices

6.81a	Subsurface relief drain layouts.....	6.81.2
6.81b	Interceptor drain to control seepage.....	6.81.3
6.81c	Drainage envelopes and filters.....	6.81.5
6.82a	Reinforced concrete drop spillway for grade stabilization with emergency bypass and downstream protection.....	6.82.3
6.83a	Space check dams in a channel so that the crest of downstream dam is at elevation of the toe of upstream dam.....	6.83.2
6.83b	Stone check dam—stone should be placed over the channel banks to keep water from cutting around the dam.....	6.83.3
6.85a	Sand fences trap blowing sand to rebuild frontal dune.....	6.85.1
6.86a	Example of PAM’s Settling Sediment Out of a Glass of Muddy Water	6.86.2

8 Appendices8.1

Soils Information

8.01a	Major soil regions of North Carolina.....	8.01.1
8.01b	Detail of soil survey map of Craven County	8.01.2
8.01c	Typical soil interpretation sheet describing soil properties and suitability for various uses.....	8.01.3

8.01d	Guide for USDA Textural Classification and symbols.....	8.01.5
8.01e	Soil-erodibility nomograph.....	8.01.7

Estimating Runoff

8.03a	Solution of Runoff Equation.....	8.03.12
8.03b	Flow Chart for Selecting the Appropriate Figure of Table for Determining Runoff Curve Numbers	8.03.14
8.03c	Composite CN with Connected Impervious Area.....	8.03.19
8.03d	Composite CN with Unconnected Impervious Areas and Total Impervious are Less Than 30%.....	8.03.19
8.03e	Worksheet 1 for Example 8.03a.....	8.03.22
8.03f	Average Velocities for Estimating Travel Time for Shallow Concentrated Flow.....	8.03.26
8.03g	Example Watershed for Example 8.03b	8.03.29
8.03h	Worksheet 2 for Example 8.03b	8.03.30
8.03i	Variation of I_a/P for P and CN	8.03.33
8.03j	Worksheet 3 for Example 8.03c.....	8.03.37
8.03k	Unit Peak Discharge for NRCS (SCS) type II Rainfall Distribution - All but Eastern North Carolina	8.03.39
8.03l	Unit Peak Discharge for NRCS (SCS) type III Rainfall Distribution for Lower Coastal Plain of North Carolina.....	8.03.40

Design of Stable Channels and Diversions

8.05a	Nomograph for solution of Manning Equation.....	8.05.3
8.05b	Channel geometries for v-shaped, parabolic and trapezoidal channels	8.05.5
8.05c	Manning's n related to velocity, hydraulic radius, and vegetal retardance.....	8.05.7
8.05d	Solution of Manning's equation for trapezoidal channels of various side slopes..	8.05.11
8.05e	K_b factor for maximum shear stress on channel bends	8.05.15
8.05f	Protection length, L_p , downstream from a channel bend	8.05.16
8.05g	Angle of repose for different rock shapes and sizes	8.05.17
8.05h	Ratio of side shear stress to bottom shear stress, k_1	8.05.19
8.05i	Tractive force ratio, k_2	8.05.20
8.05j	Steep slope riprap design, $B = 2$, $Z = 3$	8.05.22
8.05k	Steep slope riprap design, $B = 4$, $Z = 3$	8.05.23
8.05l	Steep slope riprap design, $B = 6$, $Z = 3$	8.05.23

Design of Riprap Outlet Protection

8.06a	Design of outlet protection from a round pipe flowing full, minimum tailwater condition ($T_w < 0.5$ diameter)	8.06.3
-------	---	--------

8.06b	Design of outlet protection from a round pipe flowing full, maximum tailwater ($T_w \geq 0.5$ diameter).....	8.06.4
8.06c	Chart Estimating Stone Size and Dimensions for Culvert Aprons	8.06.5
8.06d	Apron Material and Length.....	8.06.6
8.06e	Maximum Stone Size for Riprap	8.06.7
8.06f	Gradation of Riprap	8.06.7
8.06g	Dimensions for Plunge Pools.....	8.06.11
8.06h	Plunge Pool Design.....	8.06.14

Sediment Basin Design

8.07a	Design of excavated earthen spillway.....	8.07.4
-------	---	--------

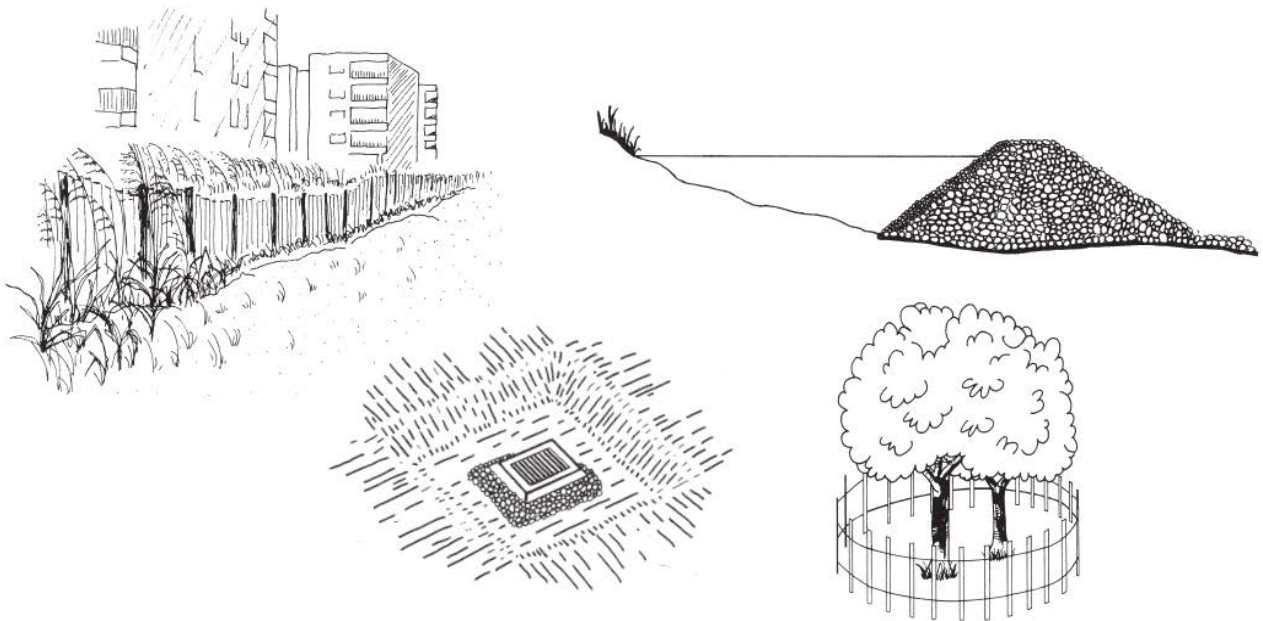
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Practice Standards and Specifications

Practice Standards and Specifications

Chapter 6 contains Standards and Specifications for structural and vegetative erosion and sediment control practices. **Specifications given in this section are guidelines, and are intended to minimize the time required to design practices for use under typical site conditions. Unusual conditions may dictate that specifications be modified and practices specially designed. Exceptions to these guidelines may be made based on best professional judgement.** Additional guidelines on the design and use of practices are contained in the appendices.

The vegetative and structural measures described in this chapter are not intended to stand alone. Rather, they should be employed as a system, sequenced and sited to control erosion and sedimentation during development, and to stabilize disturbed land as development is completed. On most sites successful erosion and sedimentation control requires combining structural and vegetative practices into a comprehensive plan. Design professionals should consider the changing requirements of their site when determining the sequence in which practices are to be implemented and should recognize the importance of vegetative and other groundcover for stabilizing disturbed areas.



Practice Standards and Specifications

Index

Site Preparation

Construction Sequence Schedule	6.01
Land Grading	6.02
Surface Roughening	6.03
Topsoiling	6.04
Tree Preservation and Protection	6.05
Temporary Construction Entrance/Exit	6.06

Surface Stabilization

Temporary Seeding.....	6.10
Permanent Seeding.....	6.11
Sodding	6.12
Topsoiling Trees, Shrubs, Vines, and Ground Covers.....	6.13
Mulching.....	6.14
Riprap.....	6.15
Vegetative Dune Stabilization	6.16
Rolled Erosion Controlled Products	6.17
Compost Blankets.....	6.18

Runoff Control Measures

Temporary Diversions	6.20
Permanent Diversions	6.21
Diversion Dike (Perimeter Protection)	6.22
Right-of-Way Diversions (Water Bars).....	6.23
Riparian Area Seeding.....	6.24

Runoff Conveyance Measures

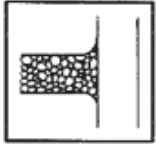
Grass-Lined Channels.....	6.30
Riprap and Paved Channels	6.31

Temporary Slope Drains	6.32
Paved Flume (Chutes).....	6.33
Outlet Protection	
Level Spreader	6.40
Outlet Stabilization Structure.....	6.41
Inlet Protection	
Excavated Drop Inlet Protection (Temporary).....	6.50
Hardware Cloth and Gravel Inlet Protection (Temporary)	6.51
Block and Gravel Inlet Protection (Temporary)	6.52
Sod Drop Inlet Protection	6.53
Rock Doughnut Inlet Protection	6.54
Rock Pipe Inlet Protection	6.55
Sediment Traps and Barriers	
Temporary Sediment Trap	6.60
Sediment Basin	6.61
Sediment Fence (Silt Fence)	6.62
Rock Dam	6.63
Skimmer Sediment Basin.....	6.64
Porous Baffles	6.65
Compost Sock	6.66
Stream Protection	
Temporary Stream Crossing	6.70
Permanent Stream Crossing.....	6.71
Vegetative Streambank Stabilization	6.72
Structural Streambank Stabilization	6.73
Buffer Zones	6.74
Other Related Practices	
Construction Road Stabilization	6.80
Subsurface Drain.....	6.81
Grade Stabilization Structure	6.82
Check Dam	6.83
Dust Control.....	6.84
Sand Fence (Wind Fence).....	6.85
Flocculants	6.86
Check Dam with Weir	6.87

Index

Site Preparation

Construction Sequence Schedule	6.01
Land Grading	6.02
Surface Roughening	6.03
Topsoiling	6.04
Tree Preservation and Protection	6.05
Temporary Construction Entrance/Exit	6.06



6.06 Temporary Construction Entrance/Exit

Definition

An area or pad located at points where vehicles enter and leave a construction site typically surfaced with stone, riprap, coarse ground wood mulch, wooden logging mats, synthetic/composite products, or other ground stabilizing materials.

Purpose

To provide an area where mud, soil, and debris can be removed from equipment and vehicle tires to avoid deposition on the public road, where it can be a safety hazard and create muddy runoff and dust. Except for wheel washes, the removal of mud, soil, and debris occurs as a result of abrasion and wheel shaking as the vehicles drive over the right surfaces.

Conditions Where Practice Applies

Wherever vehicles and equipment will be entering and leaving a construction site and moving directly onto a public road or other paved off-site area. Construction plans should limit traffic to properly constructed entrances and exits.

Design Criteria

Construction entrances should be 12-ft minimum per lane of traffic. Non-synthetic construction entrance/exits should have geotextile underlayment.

Aggregate or mulch thickness should be a minimum of 6-in. A dedicated stockpile of clean material should be available on-site for immediate use to maintain the measure.

Location – Locate construction entrances and exits to limit sediment from leaving the site and to provide for maximum utility by all construction vehicles. Avoid steep grades and entrances at curves in public roads.

Dimensions of Entrance/Exit Pad -

Width – A 12ft-minimum or full width at all points of the vehicular entrance and exit area, whichever is greater.

Length – Apply stabilization techniques at lengths necessary to keep mud and debris from entering the paved roadway (Figure 6.06a). Lengths of stabilized roadway entrances and exits may vary by size of the construction site, percent

cover applied to the site access roadway, stabilization material selected, weight and frequency of traffic, and soil types.

Riprap and Stone Pads, Wood Fiber, Wooden Mats, and Synthetic Mats - Each option should achieve the purpose of this standard. Some standard starting points include:

Riprap Pads:

Aggregate Size – Use 2 - 3 inch stone. NCDOT Class A may be suitable for finer textured soils

Length – 50-ft minimum. More stone may be required to minimize trackout on paved surfaces.

Stone Pads:

Aggregate Size – Use NCDOT #5 or #57 stone.

Length – 25-ft minimum for residential or small linear utility sites.

Wood chips:

Material sizes may vary, but 3-inches or larger is preferred.

Wood Mats:

A minimum of ¼ inch construction, but various thicknesses may be appropriate.

Synthetic Mats:

Various thicknesses may be appropriate.

Wash Racks and Wheel Washes - If two instances of debris deposited onto the roadway are cited as a safety concern, a wash rack or wheel wash may be required. Otherwise, if conditions at the site are such that soil and other debris are not removed from exiting vehicles, the vehicles should be washed prior to accessing the public roadway. Soil and debris removal by washing should be conducted in a stabilized area that drains into a sediment trap or other suitable collection area or self-contained to filter water for reuse. A pressure washer and wash rack may be used to make washing more convenient and effective. A manufactured wheel wash installed and operated according to manufacturer's specifications is also an acceptable alternative. The roadway leading to and from wash racks or wheel washes shall be stabilized with appropriate materials. Drain space under wash rack shall be kept open. Damage to wash racks or wheel washes shall be repaired prior to further use.

Prefabricated Pad - Prefabricated pads may be used instead of or in conjunction with stone construction entrances provided they are installed according to manufacturer's recommendations and a sufficient number of pads or stone are installed to provide for a minimum of four tire revolutions while on the pad. More pads may be needed depending

on site conditions. Accumulated materials should be cleaned from the pads daily (more often if necessary) and disposed in the manner specified by the erosion and sediment control plan.

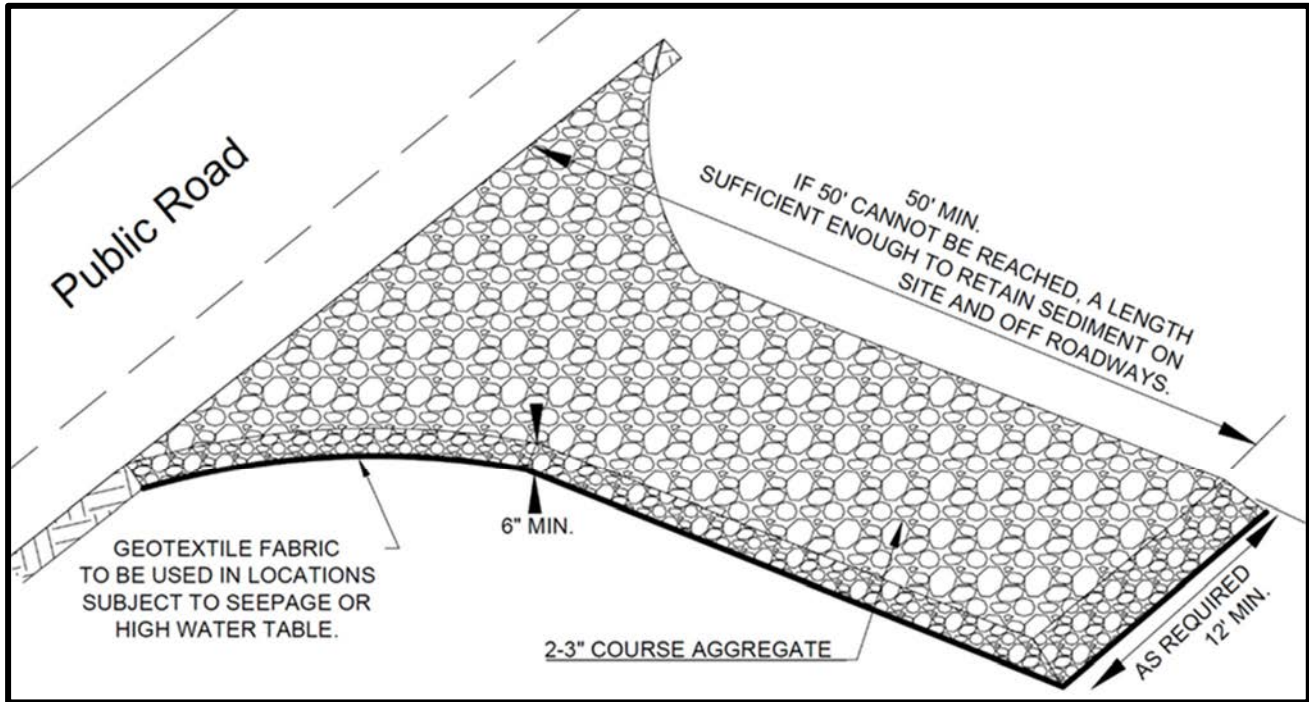


Figure 6.06a, Typical stone entrance/exit pad (modified from VA SWCC)



Figure 6.06b, Stone Entrance/Exit keeps sediment from leaving the construction site

Construction Specifications

1. Clear the entrance and exit area of all vegetation, roots, and other objectionable material and properly grade it.

2. Place the stone or other stabilizing material to the specific grade and dimensions shown on the plans, and smooth it.
3. Provide drainage from construction entrance area to carry runoff to a sediment trap or other suitable collection area.
4. Divert construction site runoff away from the construction entrance area to nearby erosion and sediment control measures. Do not allow construction sites to outlet runoff through entrances/exits.
5. When appropriate to do so, use geotextile fabrics underneath construction entrance material to improve stability of the foundation, especially in locations subject to seepage or a high-water table.

Maintenance

Maintain the pad or entrance in a condition to prevent mud or sediment from leaving the construction site. If any objectionable material—including sediment—is deposited onto paved roadways from the construction site, remove by manual or mechanical means and return the deposits back to the construction site immediately. Periodic topdressing with stone or coarse ground wood mulch may be needed to prevent debris deposits onto the road, a stockpile shall be maintained on site to quickly address compromised entrances/exits. After each rainfall, inspect any structure used to trap sediment and clean it out as necessary. In circumstances of high-traffic and/or wet conditions, routinely inspect the entrance/exit for sediment and debris removal effectiveness as needed.

References

Runoff Conveyance Measures

6.30, Grass-lined Channels

Sediment Traps and Barriers

6.60, Temporary Sediment Trap

Pennsylvania Erosion and Sediment Pollution Control Program Manual. March 2012.

Technical Guidance Number 363-2134-008. pp.13-18



6.15 Riprap

Definition

A permanently placed layer of large irregular-shaped stone with an underlining geotextile or granular filter blanket.

Purpose

To protect the soil surface from erosive forces and/or improve stability of soil slopes that are subject to seepage or have poor soil structure.

Conditions Where Practice Applies

Riprap is used for the following applications:

- cut-and-fill slopes subject to seepage or weathering, particularly where conditions prohibit establishment of vegetation,
- channel side slopes and bottoms,
- inlets and outlets for culverts, bridges, slope drains, grade stabilization structures, and storm drains
- streambanks and streambeds,
- shorelines subject to wave action.

Planning Considerations

Riprap is a versatile, highly erosion-resistant material that can be used effectively in many locations and in a variety of ways to control erosion on construction sites.

Graded Versus Uniform Riprap

Riprap is classed as either graded or uniform. Graded riprap includes a wide mixture of stone sizes. Uniform riprap consists of stones nearly all the same size.

Graded riprap is preferred to uniform riprap in most applications because the variation in size allows for settling and forms a dense, flexible cover. Uniform riprap creates more open voids, and cannot adjust as effectively to movement of the stones. Graded riprap is also cheaper to install requiring less hand work for installation than uniform riprap, which must be placed in a uniform pattern. Uniform riprap may give a more pleasing appearance.

Riprap sizes are designated by either the mean diameter or the weight of the stones. The diameter specification is often misleading since the stones are usually angular. However, common practice is to specify stone size by the diameter of an equivalent size of spherical stone.

A method commonly used for specifying the range of stone sizes in graded riprap is to designate a diameter for which some percentage, by weight, will be smaller. For example, “d85” specifies a mixture of stones in which 85% of the stone by weight would be smaller than the diameter specified. Most designs are based on “d50”, or median size stones. Table 6.15a lists some commonly referenced mean diameter stone sizes available within North Carolina.

Table 6.15a Sizes for Riprap (Source: NCDOT)

Acceptance Criteria for Rip Rap and Stone for Erosion Control

Class	Minimum Required Stone Sizes, inches	Midrange Required Stone Sizes, inches	Maximum Required Stone Sizes, inches
A	2	4	6
B	5	8	12
1	5	10	17
2	9	14	23

No more than 5.0% of the material furnished can be less than the minimum size specified nor more than 10.0% of the material can exceed the maximum size specified.

When considering riprap for surface stabilization, it is important to anticipate visual impacts, including weed control, hazards from snakes and other animals, danger of slides and hazards to areas below steep riprap slopes, damage and possible slides from children moving stones, and general safety.

Proper stone size selection and surface preparation are essential for successful long-term functioning of riprap. Adequate compaction of fill areas and proper use of filter blankets are necessary.

Sequence of construction—Schedule disturbance of areas that require riprap protection so that the placement of riprap can follow immediately after grading. When riprap is used for outlet protection, place the riprap before or in conjunction with the installation of the structure so that it is in place before the first runoff event.

Design Criteria

Gradation—Riprap should be a well-graded mixture with 50% by weight larger than the specified design size. The diameter of the largest stone size in such a mixture should be 1.5 times the d50 size with smaller sizes grading down to 1 inch.

The designer should determine the riprap size that will be stable for design conditions. Having determined the design stone size, the designer should select the size or sizes that equal or exceed that minimum size based on riprap gradations commercially available in the area.

Thickness—Construction techniques, dimensions of the area to be protected, size and gradation of the riprap, the frequency and duration of flow, difficulty and cost of maintenance, and consequences of failure should be considered when determining the thickness of riprap linings. The minimum thickness should be 1.5 times the maximum stone diameter, but in no case less than 6 inches.

Quality of stone—Stone for riprap may consist of field stone or quarry stone. The stone should be hard, angular, of such quality that it will not break down on exposure to water or weathering, and suitable in all other respects for the purpose intended. The specific gravity of the individual stones should be at least 2.5.

Size of stone—The sizes of stones used for riprap protection are determined by purpose and specific site conditions.

- **Slope stabilization**—Riprap stone for slope stabilization, not subject to flowing water or wave action, should be sized for stability for the proposed grade. The gradient of the slope to be stabilized should be less than the natural angle of repose of the stone selected. Angle of repose of riprap stones may be estimated from Figure 6.15a

Riprap used for surface stabilization of slopes does not add significant resistance to sliding or slope failure and should not be considered a retaining wall. The inherent stability of the soil must be satisfactory before riprap is used for surface stabilization. Slopes approaching 1.5:1 may require special stability analysis.

- **Outlet protection**—Design criteria for sizing stone and determining the dimensions of riprap pads at channel or conduit outlets are presented in Practice 6.41, Outlet Stabilization Structure.
- **Channel stabilization and streambank protection**—Design criteria for sizing stone for stability of channels are contained in *Appendix 8.05*.

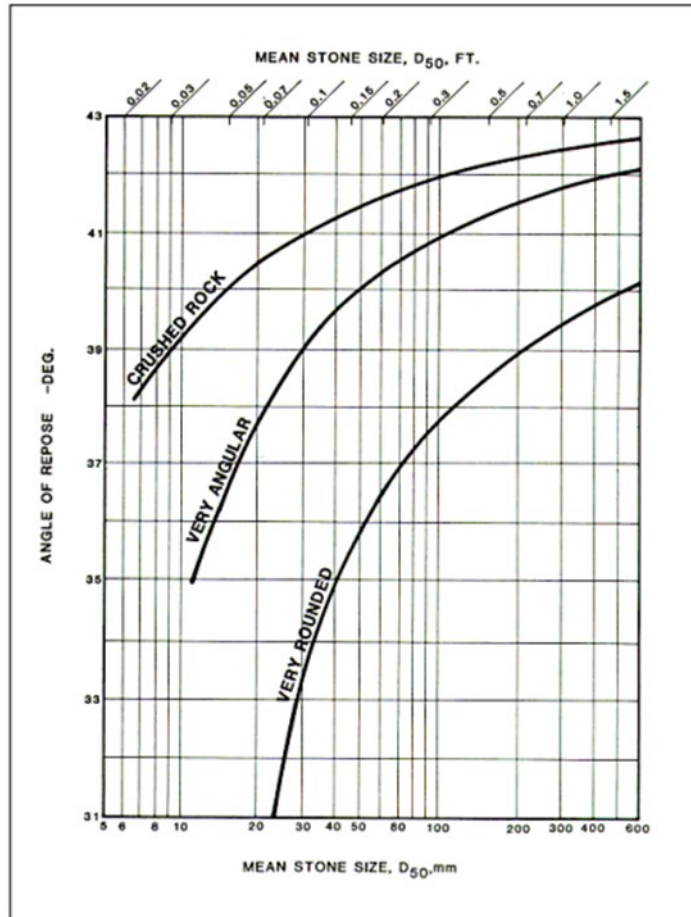


Figure 6.15a Angle of repose of riprap in terms of mean size and shape of stone (Adapted from FHWA HEC-15, 2005)

Filter blanket—A filter blanket is a layer of material placed between the riprap and the underlying soil to prevent soil movement into or through the riprap.

A suitable filter may consist of a well-graded gravel or sand-gravel layer or a synthetic geotextile manufactured for this express purpose. The design of a gravel filter blanket is based on the ratio of particle size in the overlying filter material to that of the base material in accordance with the criteria below. The designed gravel filter blanket may consist of several layers of increasingly large particles from sand to erosion control stone.

A gravel filter blanket should have the following filter-to-base or filter-to-riprap relationship for a stable design:

$$\frac{d_{15}^{upper}}{d_{85}^{lower}} \leq 5$$

$$5 \leq \frac{d_{15}^{upper}}{d_{15}^{lower}} \leq 40$$

$$\frac{d_{50}^{upper}}{d_{50}^{lower}} \leq 40$$

In the above relationships, "upper" refers to the overlying material and "lower" refers to the underlying material. The relationships must hold between the filter blanket and base material and between the riprap and filter blanket. More than one layer of filter material may be needed. Each layer of filter material should be at least 6 inches thick.

A geotextile may be used with or in place of gravel filters. Selection of geotextile should consider factors such as soil retention, permeability, clogging and survivability. With the exception of problematic soils or high velocity conditions associated with steep channels, geotextile filters may usually be selected based on the apparent opening size (AOS) of the geotextile and the soil type as shown in Table 6.15b.

Detailed design guidance for selecting geotextiles as a riprap filter material in situations where problematic soil environments exist, severe environmental conditions are expected, and/or for critical installations may be found in *Federal Highway Administration, 1998. "Geosynthetic Design and Construction Guidelines," FHWA-HI-95-038*.

Table 6.15b Maximum AOS for Geotextile Filters (FHWA, 1998)

Soil Type	Maximum AOS (mm)
Non cohesive, less than 15 percent passing the 0.075 mm (US #200) sieve	0.43
Non cohesive, 15 to 50 percent passing the 0.075 mm (US #200) sieve	0.25
Non cohesive, more than 50 percent passing the 0.075 mm (US #200) sieve	0.22
Cohesive, plasticity index greater than 7	0.30

Filter blankets should always be provided where seepage is significant, or where flow velocity and duration of flow or turbulence may cause the underlying soil particles to move through the riprap.

Construction Specifications

Subgrade preparation—Prepare the subgrade for riprap and filter to the required lines and grades shown on the plans. Compact any fill required in the subgrade to a density approximating that of the surrounding undisturbed material or overfill depressions with riprap. Remove brush, trees, stumps, and other objectionable material. Cut the subgrade sufficiently deep that the finished grade of the riprap will be at the elevation of the surrounding area. Channels should be excavated sufficiently to allow placement of the riprap in a manner such that the finished inside dimensions and grade of the riprap meet design specifications.

Sand and gravel filter blanket—Place the filter blanket immediately after the ground foundation is prepared. For gravel, spread filter stone in a uniform layer to the specified depth. Where more than one layer of filter material is used, spread the layers with minimal mixing.

Geotextile—Place and secure the geotextile directly on the prepared soil foundation in accordance with the manufacturer's installation guidelines. Typically, overlap the edges by at least 12 inches, and space anchors every 3 ft along the overlap. Bury the upstream end of the geotextile a minimum of 12 inches below ground and where necessary, bury the lower end of the geotextile or overlap with the next section as required. See Figure 6.14a, Page 6.14.6.

Take care not to damage the geotextile when placing riprap. If damage occurs remove the riprap and repair the sheet by adding another layer of geotextile with a minimum overlap of 12 inches around the damaged area. If extensive damage is suspected, remove and replace the entire section.

Where large stones are used or machine placement is difficult, a 4-inch layer of fine gravel or sand may be needed to protect the geotextile.

Stone placement—Placement of riprap should follow immediately after placement of the filter. Place riprap so that it forms a dense, well-graded mass of stone with a minimum of voids. The desired distribution of stones throughout the mass may be obtained by selective loading at the quarry, and controlled dumping during final placement. Place riprap to its full thickness in one operation. Do not place riprap by dumping through chutes or other methods that cause segregation of stone sizes. Take care not to dislodge the underlying base or filter when placing the stones.

The toe of the riprap slope should be keyed to a stable foundation at its base as shown in Figure 6.15b. The toe should be excavated to a depth about 1.5 times the design thickness of the riprap and should extend horizontally from the slope.

The finished slope should be free of pockets of small stone or clusters of large stones. Hand placing may be necessary to achieve the proper distribution of stone sizes to produce a relatively smooth, uniform surface. Excavate embankment or channel to accommodate the depth of stone such that the riprap is uniform and level with the finished grade.

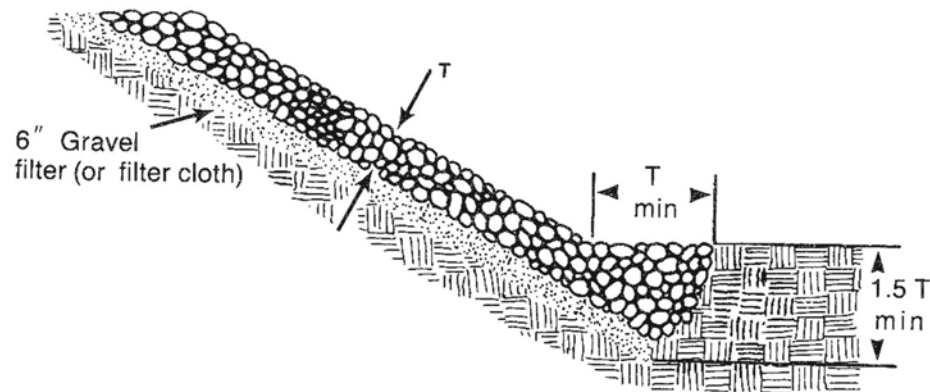


Figure 6.15b Riprap slope protection (modified from VDH&T)

Maintenance

In general, once a riprap installation has been properly designed and installed it requires very little maintenance. Riprap should be inspected periodically for scour or dislodged stones. Control of weed and brush growth may be needed in some locations.

References

Runoff Conveyance Measures

6.31, Riprap-lined and Paved Channels

Outlet Protection

6.41, Outlet Stabilization Structure

Appendices

8.05, Design of Stable Channels and Diversions

8.06, Design of Riprap Outlet Protection



6.65 Porous Baffles

Definition

Porous barrier constructed of coir fiber material or equal installed within a temporary sediment trap, skimmer basin, or sediment basin to distribute flow of construction runoff across the full cross section so the velocity and energy of construction runoff can be dissipated to enhance the settling of sediment prior to discharge.

Purpose

Sediment traps and basins are designed to temporarily impound construction stormwater runoff and allow sediment to settle before the stormwater is discharged. Unfortunately, they are not very efficient due to high turbulence and “short-circuiting” flows which allows stormwater to flow to the outlet with little interaction or obstruction. Porous baffles improve the rate of sediment retention within the basin or trap by distributing the flow and reducing energy.

Conditions Where Practice Applies

The practice of using porous baffles should be used in any temporary sediment trap, skimmer basin, or temporary sediment basin.

Planning Considerations

Porous baffles effectively spread the flow across the entire width of a sediment basin or trap. Water flows through the porous baffle material, but energy is dissipated sufficiently to reduce velocity, as it spreads across the entire width of the basin. (Figure 6.65a). This reduction in energy allows for an increase in sediment deposition and retention.

The baffle material should be 700 g/m² coir erosion mat (Figure 6.65d) or a material with similar porosity. Attaching the material to a 9-gauge high tension wire connecting the steel support posts prevents sagging of the material.

Porous Baffles need to be installed correctly to ensure reduction in stormwater energy flowing through the basin. Refer to Figure 6.65b and the following key points:

- The Porous Baffle material does not require trenching or burying but does need to be secured at the bottom and sides using wire staples.
- Most of the sediment will accumulate in the first bay, so this should be readily accessible for maintenance.

- The ends of the Porous Baffle should extend to the basin interior side slopes in a level or slightly elevated manner to avoid allowing pooled or impounded water to flow around.

Design Criteria

The *Temporary Sediment Trap* or *Temporary Sediment Basin* should be sized using the appropriate design criteria. Three Porous Baffles should be placed in Sediment Basins or Skimmer Basins that are 20 feet or greater in length. Basins less than 20 feet in length should utilize two Porous Baffles.

When three Porous Baffles are utilized, the percent of surface area for each section of the baffles is as follows:

- Inlet Zone: $\frac{1}{4}$ length of basin or trap
- First Cell: $\frac{1}{4}$ length of basin or trap
- Second Cell: $\frac{1}{4}$ length of basin or trap
- Outlet Zone: $\frac{1}{4}$ length of basin or trap

Construct Porous Baffles up the sides of the trap or basin interior side slopes so water does not flow around the baffle. Most of the sediment will be captured in the first section. Smaller particle size sediment are often captured in the latter sections. Be sure to maintain access to the trap or basin for maintenance and sediment removal. The orientation of the Porous Baffles can be adjusted to meet the shape of the basin or trap. The intent is for construction stormwater runoff to enter the basin or trap as far away from the spillway or weir section as possible and flow through three porous baffles prior to discharge through the spillway or skimmer apparatus (unless basin length is 20 feet or less). Placing porous baffles in a chevron or arc pattern is allowable as long as proper spacing between each baffle is maintained. The top of the baffles should be higher than the outlet to ensure that flow passes through the baffles as intended.

The design life of porous baffle material is typically 6-12 months but may be limited if material becomes damaged or clogged.

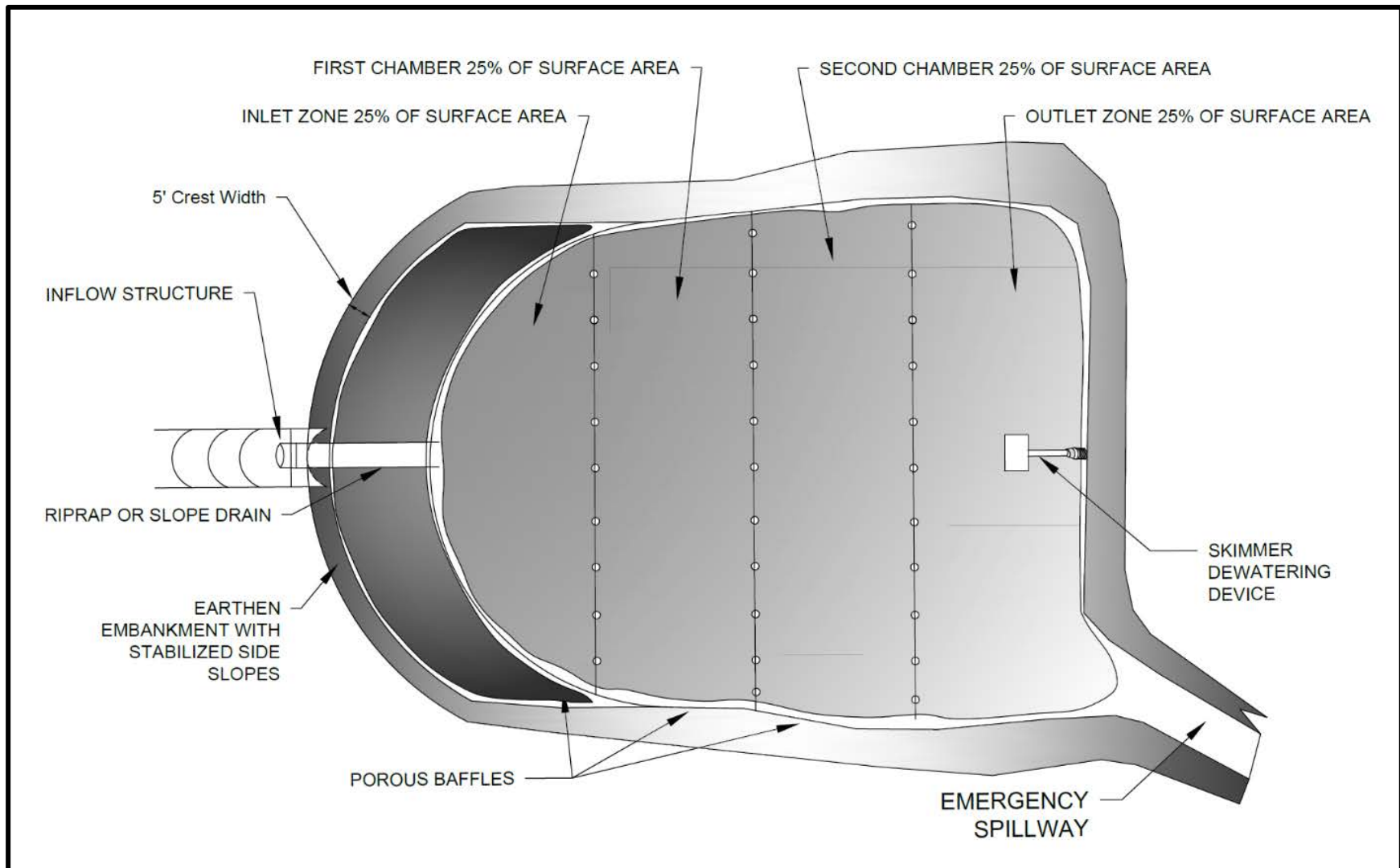
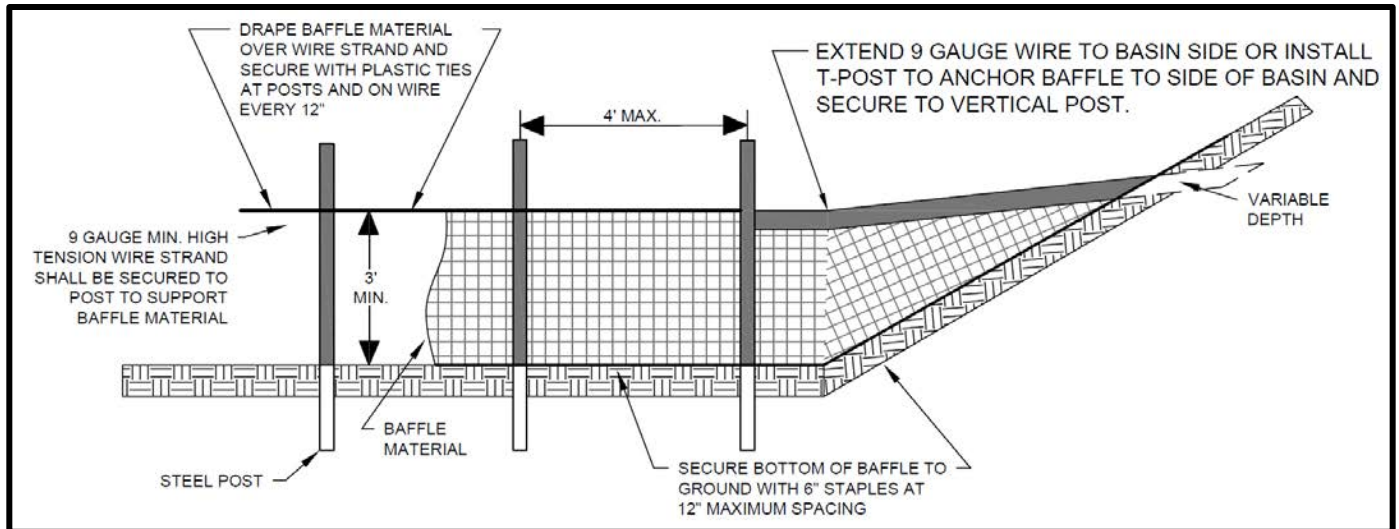


Figure 6.65a, Porous baffles in a sediment basin. The flow is distributed evenly across the basin to reduce flow rates and energy, resulting in greater sediment retention



*If the temporary sediment basin will be converted to a permanent stormwater basin of greater depth, the baffle height should be based on the pool depth during use as a temporary sediment basin.

Note: Install all three (3) coir fiber baffles in basins at drainage outlets with a spacing of $1/4$ the basin length. Two (2) coir fiber baffles can be installed in the basins less than 20 ft. in length with a spacing of $1/3$ the basin length.

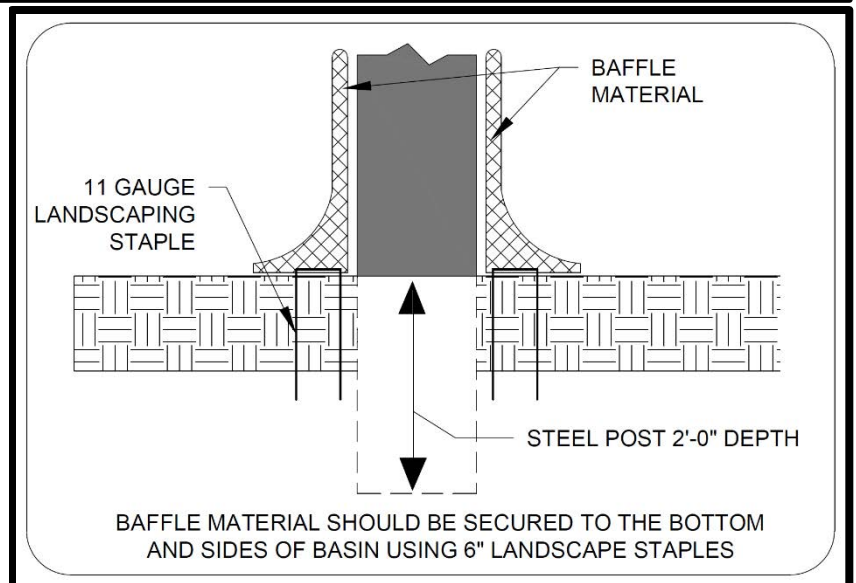


Figure 6.65b, Porous Baffle detail and cross section of a porous baffle in a sediment basin



Figure 6.65c, Example of porous baffles installed in skimmer basins



Figure 6.65d, Close-up of a porous baffle made of 700 g/m² coir erosion blanket

Coir Fiber Baffle Material Property Requirements

Property	Specification
Thickness	0.30 in. minimum
Tensile Strength (Wet)	900 x 680 lb/ft minimum
Elongation (Wet)	69% x 34% maximum
Flow Velocity	10-12 ft/sec
Weight	20 oz/SY (680 g/m ²) minimum
Minimum Width	6.5 feet
Open Area	50% maximum

Table 6.65a, Specifications for Porous Baffle Material

Construction Specifications

Materials

1. Use matting made of 100% coconut fiber (coir) twine woven into high strength matrix with the properties shown in Table 6.65a.
2. Staples should be made of 0.125 inch diameter new steel wire formed into a 'U' shape not less than 6 inches in length with a throat of 1 inch in width. The staples anchor the porous baffles into the sides and bottom of the trap or basin.
3. Ensure that steel posts for porous baffles are of a sufficient height to support baffles at desired height. Posts should be approximately 1-3/8" wide measured parallel to the fence, and have a minimum weight of 1.25

lb./linear ft. The posts must be equipped with an anchor plate having a minimum area of 14.0 square inches and be of the self-fastener angle steel type to have a means of retaining wire and porous baffle material in the desired position without displacement.

4. Use 9-gauge high tension wire for supporting porous baffle material.
5. Alternative porous baffle material may be allowed if circumstances dictate. The Designer will be required to provide supporting specifications for approval prior to installation.

Construction

1. Install the basin or trap so the bottom is level front to back and side to side.
2. Install the porous baffle immediately upon excavation of the basin or trap.
3. Install steel posts to a depth of 24 inches and spaced a maximum of 4 feet apart.
4. Install three rows of porous baffles between the inlet and outlet discharge point. Basins less than 20 feet in length may use 2 porous baffles.
5. Attach a 9-gauge high tension wire strand to the steel posts at a maximum height of 6 inches above the basin spillway elevation and a minimum of 2 inches below the surrounding embankment with plastic ties or wire fasteners to prevent sagging. If the temporary sediment basin or trap will be converted to a permanent stormwater basin of a greater depth, the baffle height should be based on the pool depth during use as a temporary sediment basin or trap.
6. Extend porous baffle to the side of the basin using steel T-posts or similar to anchor baffle to the side slope of the basin or trap and secure as shown in Figure 6.65b.
7. Drape the porous baffle material over the wire strand and anchor the material to the sides and floor of the basin or trap with 6-inch wire staples, approximately 1 foot apart, along the bottom and side slopes.
8. Do not splice the porous baffle material but use a continuous piece across the basin.
9. Adjustments may be required in the stapling requirements to fit individual site conditions.

Maintenance

Inspect porous baffles at least once a week and after each rainfall. Make any required repairs immediately as efficiency of basin or trap is reduced if porous baffles are not functioning as intended.

Be sure to maintain access to the porous baffles. Should the porous baffle material collapse, tear, decompose, or become ineffective, replace it promptly.

Remove sediment deposits when it reaches half full, to provide adequate storage volume for the next rain and to reduce pressure on the porous baffles.

Take care to avoid damaging the porous baffles during cleanout and replace if damaged during cleanout operations. Sediment depth should never exceed half the designed storage depth. Utilizing an indicator stake within the basin or trap is a good aid in determining when a basin or trap is half full.

After the contributing drainage area has been properly stabilized, remove all porous baffle materials and sediment deposits, bring the area to grade, and stabilize it.

References

Sediment Traps and Barriers

- 6.60, Temporary Sediment Trap
- 6.61, Sediment Basins
- 6.62, Sediment Fence
- 6.64, Skimmer Sediment Basin

McLaughlin, Richard, "Soil Facts: Baffles to Improve Sediment Basins."

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