AN OUNCE OF PREVENTION IS WORTH A POUND OF CURE!

Silt Fence

Purpose and Benefit

Inhibits the migration of sediment from bare soil off the construction site. Retards the movement of sediment-laden water allowing deposition and retention of sediment.

Proper Installation

- ☐ Silt fence trenched in a minimum of 6 inches
- ☐ Stakes installed on down slope side
- ☐ Post spacing is a maximum of 6.5 feet
- ☐ Silt fence should be installed along same contour line
- ☐ Silt fence ends should be turned up slope where possible

Inspection and Maintenance

- ☐ Inspect every 7 days and within 24 hours after precipitation event
- ☐ Remove all sediment from behind silt fence when it reaches approximately 50% of the fence height
- ☐ Silt fence shall remain in place and properly maintained until the disturbed area is stabilized

Common Mistakes

- ■ Silt fence installed improperly
- ■ Bottom of fence not completely trenched in
- ■ Silt fence installed backwards
- ■ Trenching spoils placed on undisturbed/ protected side of fence

Additional Reference Locations

- ■ *SESC Manual*, Silt Fence
- ■ *2003 Standard Specifications for Construction* subsections 208.03.D.5, 208.04.F, and 916.02

Filter Bag

Purpose and Benefit

Used to filter sediment-laden water pumped from dewatering operations.

Proper Installation

- ☐ Filter bag located on level ground in vegetated area
- ☐ Filter bag located above and no closer than 20 feet from a watercourse
- ☐ Vegetated buffer between filter bag and watercourse improves effectiveness
- ☐ Silt fence, gravel filter berms and sediment traps/ basins used with filter bags for added protection
- ☐ Filter bag to be properly sized based on flow rate, with 250 square feet as minimum
- ☐ Multiple filter bags can be used, if necessary

Inspection and Maintenance

- ☐ Inspect filter bag for wear, holes, or tears during pumping
- ☐ Dispose of filter bag properly when full or no longer needed
- ☐ Verify that filter bag is filtering sediment
- ☐ Add gravel filter berms, silt fence, or sediment traps/basins, as needed

Common Mistakes

- ■ Filter bags placed on slope or too close to watercourse
- ■ Filter bags not placed in vegetated areas
- ■ Filter bags not sized properly
- ■ Using damaged or worn filter bags
- ■ Not using silt fence, gravel filter berms or sediment traps when needed

Additional Reference Locations

- ■ *SESC Manual*, Dewatering with Filter Bag
- ■ *2003 Standard Specifications for Construction* subsections 208.03.D.3 and 208.04.D

Gravel Access Approach

Purpose and Benefit

Minimizes the tracking of loose soil from the construction site onto public roadways.

Proper Installation

- ☐ Geotextile separator is placed on the ground prior to the aggregate
- ☐ Aggregate layer is a minimum of 6 inches thick
- ☐ Gravel access approach should extend at least 50 feet from the edge of the roadway
- ☐ Aggregate size and gradation should be in accordance with the MDOT *Soil Erosion and Sedimentation Control Manual*

Inspection and Maintenance

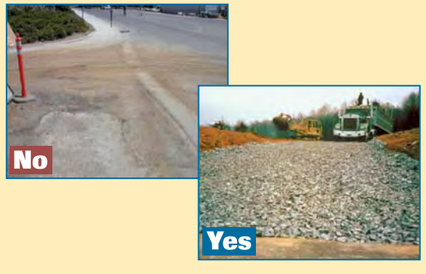
- ☐ Inspect every 7 days and within 24 hours after precipitation event
- ☐ Additional aggregate is placed as needed
- ☐ Roadway sweeping should be used in conjunction with the gravel access approach

Common Mistakes

- ■ Omission of geotextile separator
- ■ Improper gradation size of aggregate
- ■ Additional clean aggregate not placed as needed
- ■ Gravel access approach not extended a minimum of 50 feet off the edge of the public roadway

Additional Reference Locations

- ■ *SESC Manual*, Gravel Access Approach
- ■ *2003 Standard Specifications for Construction* subsections 208.03.D.13, 208.04.L, and 916.01.D.5



Site Overview Checklist

Go the extra mile to protect our waterways!

Silt Fence

- ☐ Upright
- ☐ No breaches

Inlet Protection

- ☐ Secure and intact
- ☐ Not clogged

Vegetative Buffers

- ☐ Clearly delineated
- ☐ Not damaged

Slope Stabilization

- ☐ Slopes and large areas are stabilized
- ☐ Inactive spoil piles are covered or vegetated

Check Dam

- ☐ Located to intercept flow
- ☐ No breaches

Sediment Trap

- ☐ Located to intercept flow
- ☐ Not filled in

Filter Bag

- ☐ Located in flat vegetated area, at least 20 feet from waterway
- ☐ Intact and only partially filled

Gravel Access Approach

- ☐ Gutter pan and street are swept
- ☐ Aggregate not clogged

Administration

- ☐ Complete MDOT Form 1126
- ☐ Promptly complete Corrective Actions
- ☐ Earth Change Plan completed for work between grading limits and ROW

MDOT
Michigan Department of Transportation

Storm Water Management
MDOT
Michigan Department of Transportation

Maintain Your BMPs!

Soil Erosion & Sedimentation Control Tips

Together... Better Roads, Cleaner Streams

Inlet Protection

Purpose and Benefit

Temporary device utilizing geotextile blanket to enable settling and filtration of sediment-laden water prior to entry into drainage system.

Proper Installation

- ☐ Geotextile blanket is installed between cover and frame of drainage structure casting
- ☐ Geotextile is secured by trenching in behind curb or with sand/stone bags
- ☐ Silt fence installed and trenched in around perimeter of drainage structures in unpaved areas

Inspection and Maintenance

- ☐ Inspect every 7 days and within 24 hours after precipitation event
- ☐ Trapped sediment is removed from geotextile blanket and silt fence, as needed
- ☐ Maintain silt fence per MDOT Soil Erosion and Sedimentation Control Manual

Common Mistakes

- ■ Opening in back of catch basin not covered with geotextile blanket
- ■ Geotextile blanket not secured behind curb
- ■ Improper maintenance and/or replacement of geotextiles, as needed

Additional Reference Locations

- ■ *SESC Manual*, Inlet Protection Fabric Drop
- ■ *2003 Standard Specifications for Construction* subsections 208.03.D.7, 208.04.H.1, and 916.04

Vegetative Buffer

Purpose and Benefit

Protect waterways from sedimentation by providing a vegetative buffer adjacent to a water body.

Proper Installation

- ☐ Buffer width (distance from edge of disturbed ground to edge of watercourse) is at least 50 feet
- ☐ Stabilize disturbed up slope area prior to removing vegetative buffer
- ☐ Silt fence (optional) is placed between construction site and vegetative buffer

Inspection and Maintenance

- ☐ Inspect every 7 days and within 24 hours after precipitation event
- ☐ Remove deposited sediment, as needed

Common Mistakes

- ■ The upper slope is not stabilized prior to clearing adjacent to watercourse
- ■ Silt fence is not properly installed or maintained along vegetative buffer

Additional Reference Locations

- ■ *SESC Manual*, Vegetated Buffer at Watercourse
- ■ *2003 Standard Specifications for Construction* subsections 208.03.D.7, 208.04.H.1, and 916.04

Slope Stabilization

Purpose and Benefit

Prevents erosion on slopes and ditches and promotes growth of vegetation by providing immediate cover for bare soil.

Proper Installation

- ☐ Mulch blankets (netting on one side) used on slopes flatter than 1 on 2, adjacent to shoulders, behind curbs and in ditch bottoms up to 1.5%
- ☐ High velocity mulch blanket (netting on both sides) used on 1 on 2 slopes and in ditch or channel bottoms
- ☐ On fore slopes, lay the first strip adjacent and parallel to road, remainder perpendicular to road
- ☐ Mulch blanket anchored in accordance with standard specifications and manufacturer's published guidelines
- ☐ No steel pins or staples used in areas to be mowed

Inspection and Maintenance

- ☐ Inspect every 7 days and within 24 hours after precipitation event
- ☐ Blanket is re-anchored as necessary

Common Mistakes

- ■ High velocity mulch blanket not used as required
- ■ Mulch blanket placed in the wrong direction
- ■ Mulch blanket not anchored or placed in accordance with specified guidelines

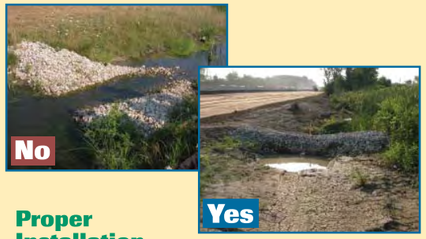
Additional Reference Locations

- ■ *SESC Manual*, Mulch Blankets and High Velocity Mulch Blankets
- ■ *2003 Standard Specifications for Construction* subsections 816.03 and 917.15.B
- ■ MDOT Standard Plan R-100 series

Check Dam

Purpose and Benefit

Reduces the velocity of concentrated flows in ditches to minimize erosion and promote sediment deposition.



Proper Installation

- ☐ Check dam spillway width should be approximately the same width as ditch bottom
- ☐ Stones placed up the sides of the ditch above the elevation of the spillway to prevent washouts
- ☐ Stone size should be 2 to 4 inches for ditch grades less than 2% and 3 to 12 inches for ditch grades 2% and greater
- ☐ Check dams should be installed downstream of sediment traps
- ☐ When multiple check dams are used, the crest of the downstream dam should be at the same elevation as the toe of the upstream dam

Inspection and Maintenance

- ☐ Inspect every 7 days and within 24 hours after precipitation event
- ☐ Maintain check dams as field conditions dictate

Common Mistakes

- ■ Improper stone size
- ■ Spillway not notched in the center
- ■ Check dam placed on wrong side of sediment trap
- ■ Sediment not removed as necessary
- ■ Check dam not removed once ditch vegetation is established

Additional Reference Locations

- ■ *SESC Manual*, Check Dam
- ■ *2003 Standard Specifications for Construction* subsections 208.03.D.1, 208.04.A, and 916.01.D.1

Sediment Trap

Purpose and Benefit

Used to intercept concentrated flows and prevent sediment from being transported off site or into a watercourse or wetland.

Proper Installation

- ☐ Sediment trap volume is 5 cubic yards or less
- ☐ Trap length should be approximately 4 times its width
- ☐ Trap width should be sufficient to capture all flow
- ☐ Sediment traps are used in conjunction with check dams

Inspection and Maintenance

- ☐ Inspect every 7 days and within 24 hours after precipitation event
- ☐ Deposited sediment should be removed when it reaches 50% of capacity
- ☐ Trap is removed when area is permanently stabilized

Common Mistakes

- ■ Sediment trap is not maintained as necessary
- ■ Sediment trap installed on downstream side of check dam

Additional Reference Locations

- ■ *SESC Manual*, Sediment Trap
- ■ *2003 Standard Specifications for Construction* subsections 208.03.D.2 and 208.04.B.1