

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 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

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

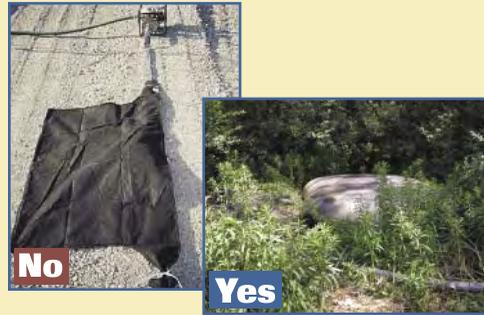
Filter Bag

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

- MDOT 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

- MDOT 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

Silt Fence:

- Upright
- No breaches



Inlet Protection:

- Secure and Intact
- Not clogged

Vegetative Buffers:

- Clearly delineated
- Not damaged

Go the extra mile to protect our waterways!

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:

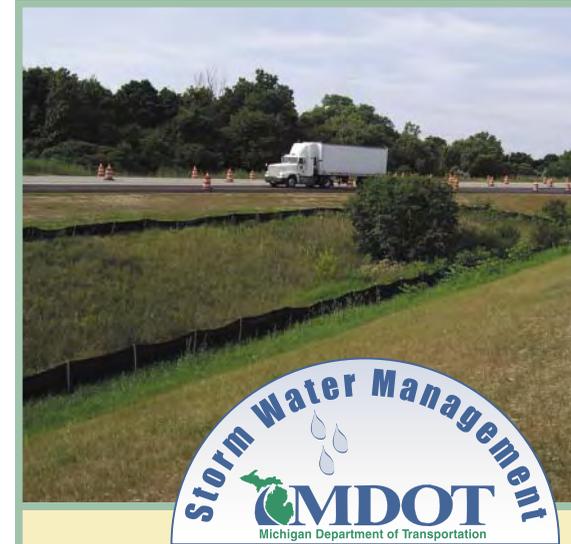
- Gutter pan and street are swept
- Aggregate not clogged

Administration:

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



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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

- MDOT 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 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

- MDOT 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 to 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

- MDOT 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

- MDOT 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

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

