

# ENVIRONMENTAL BULLETIN

A routine publication providing environmental-related guidance to NDOT District Staff and Contractors



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## Hazardous Materials Management – Special Provision 116

The Hazardous Materials Management specification describes the work to minimize exposure of the environment, including waters of the state, to hazardous materials. It also describes the requirements for clean-up of releases of hazardous materials onsite. NDOT defines hazardous materials as any material that poses a potential hazard to human health and safety or to the environment.

### Contractor Requirements:

- Submit a Spill Prevention and Control Plan (SPCP)
  - Clearly states the measures to prevent, contain, clean up, dispose of and properly document/report spills on site
  - Detailed spill plan and training requirements outlined in Special Provision 116
- Provide and maintain a Spill Kit for minor spills (**25 gallons or less**)
  - Must be in close proximity to hazardous materials storage/use areas.
  - Particularly important when working around waterways and discharge points (bridge/culvert sites)
- Contractor shall store petroleum products with containers of 55 gallons or larger in areas with secondary containment.



*Hazardous materials are often used in bridge construction. Spill kits should always be maintained near these areas of the project when applying petroleum products to prevent any exposure of contaminants to waters of the state.*

- Contractors should complete bi-weekly inspections to ensure that all containers are clearly identified and that no leaks are present. When leaks are found, the Contractor shall install secondary containment and repair leaks prior to next use. If noted on an environmental inspection in ECOD, these would be examples of needing immediate corrective actions.
- Maintain copies of Safety Data Sheets (SDS) for all hazardous materials being used or stored for the project.

### Storage Requirements

- Paints, solvents, pesticides, and other hazardous materials shall be stored in dry, weather protected areas off the ground. In no case shall paints, solvents, pesticides, petroleum products, and other hazardous materials be stored in restricted use areas.
- Spill kits shall be maintained near hazardous materials (particularly important around bridge/culvert sites)
- Hazardous materials storage, including portable toilets, shall be restricted to specific areas away from:
  - Vehicular traffic
  - Restricted use and sensitive areas shown on the plans
  - Waters of the state, including wetlands (50 feet minimum distance)
  - Wellhead Protection Areas, unless designated in a Wellhead Protection Plan that has been approved by the local authority

## Silt Fence Specification Update

In 2022, a new specification for silt fence was created and is beginning to show up on projects being constructed this spring. The specification introduces a new philosophy towards silt fence which puts more emphasis on using the product during construction and removing it when construction is complete. Previous specifications identified Temporary Silt Fence for use as additional quantities and for locations not shown in the plans. Low Porosity Silt Fence was intended as more of a “permanent” item that stayed in place until our Construction Stormwater Permit was terminated. Temporary Silt Fence was removed from the new specification because the material requirements and construction methods are the same as other silt fence varieties.

The new specification establishes pay items for the installation and removal of silt fence along with the removal of sediment that accumulates behind the fence. It states that the work related to silt fence consists of installation, maintenance and removal at locations shown in the plans, as approved by the Engineer or as determined by the Engineer. Silt fences are shown in the plans in locations where determined necessary during design and additional quantities are provided in the contract for other unforeseen circumstances.

Silt fence is *required* to be installed prior to the start of grading operations to protect adjacent properties or features from sediment discharges. We recommend not installing all silt fence on the project prior to construction beginning. Instead, install the silt fence only in locations where work is commencing. Silt Fence has an estimated life span of approximately one year. By unnecessarily installing the fence, we risk having to re-install it multiple times. Some key information regarding measurements and payments include:

- Silt fence installation is measured in linear feet
- Silt fence removal is measured in linear feet
- Sediment removal is measured in linear feet of silt fence and includes hand work
- Repairs to the fence are subsidiary to the silt fence item
- If silt fence has exceeded its life and needs to be replaced to protect resources, payment is made to install new material.

See the included specification for additional information and reference.

Section 816 in the Standard Specifications for Highway Construction is void and superseded by the following.

## SECTION 816 -- SILT FENCE

### 816.01 -- Description

This work consists of installing, maintaining and removing the silt fence at locations shown in the contract and at locations as approved or determined by the Engineer. The installation, maintenance and removal shall be in accordance with these Specifications, the special provisions, and the contract.

### 816.02 -- Material Requirements

1. All silt fence material shall be selected from the Department's Approved Products List.
2. Silt Fence Posts
  - a. The silt fence posts shall be studded "T" steel posts with a minimum weight of 1.25 lbs./foot (37 Kg/m), except as stated below. Previously used studded "T" steel posts are acceptable. Posts shall be visually inspected for acceptance by the Engineer.
  - b. Wooden posts shall be used for Coir Silt Fence. The wooden posts shall be derived from hardwood tree species. Posts shall be visually inspected for acceptance by the Engineer.
3. Zip ties shall be UV stabilized, black with a 50 lb. (22 Kg) minimum tensile strength. Zip ties shall be visually inspected for acceptance by the Engineer.

### 816.03 -- Construction Methods

1. The silt fence shall be installed and in good working condition prior to any grading or excavation operations and as needed throughout the construction process. The silt fence installation shall not exceed the amount required for the current construction season.
2. Silt Fence may be installed in the ground by either of the two methods listed below.
  - a. Trenching Method
    - (1) The Contractor shall excavate a trench to the depth, width, and length shown in the contract.
    - (2) The Contractor shall place the silt fence in the trench and pin it as shown in the contract.
    - (3) Wire staples shall be used for anchoring the silt fence.
    - (4) The Contractor shall backfill the trench, compact the soil, and attach the fabric to the posts as shown in the contract. The posts shall be driven until firm.
  - b. Slicing Method
    - (1) The Contractor shall install silt fence by mechanically slicing the material into the soil.
    - (2) The Contractor shall compact the soil and attach the fabric to the posts as shown in the contract. The posts shall be driven until firm.
3. Silt Fence installed in below water conditions.
  - a. Trenching is not required.
  - b. Fold a 6 inch (150 mm) flap toward the sediment source and pin as shown in the contract. Install the stakes as for a dry installation. Attach the fabric to the posts with zip ties or other approved methods and secure it from slipping down the post.
4. All silt fence splice joints shall be overlapped a minimum of 6 feet (1.8 m).
5. The Contractor shall remove sediment that accumulates near the silt fence during construction and disposed of as waste excavation, used as salvaged topsoil, or placed in an on-project upland location.
  - a. Sediment removal shall be initiated when sediment depth has reached one-half the height of the above ground portion of the silt fence or as directed by the Engineer in conjunction with silt fence repairs.
  - b. Sediment shall be removed to approximately 6 inches (150 mm) from the face of the silt fence.
  - c. Each time sediment is removed, the silt fence shall be repaired to a good working condition. Good working condition includes fabric repair, retrenching, post repair, tie replacement, and any associated handwork.
6. The Contractor shall maintain the silt fence in good working condition throughout the life of the construction project. Upon completion of the project silt fence shall be removed from locations as specified by the Engineer, or as described in the Contract.
  - a. During construction, Silt Fence that becomes weathered and brittle shall be replaced as determined by the Engineer.
  - b. Silt fence that is subject to removal shall be cut off at ground level and shall remain the property of the Contractor for disposal.

- c. Silt fence posts from removed fence shall remain the property of the Contractor and may be reused on other installations.
- d. Any accumulated sediment shall be removed and disposed of as waste excavation, used as salvaged topsoil, or placed at an on-project upland location.
- e. Locations where sediment has been removed shall be seeded and mulched or covered with erosion control as defined elsewhere in the Standard Specifications and as specified by the Engineer.
- f. Any permanent seeding or erosion control measures damaged during the removal of the silt fence shall be restored.

**816.04 -- Method of Measurement**

- 1. Silt fence will be measured by the length of the silt fence in linear feet (meter).
- 2. Removal of sediment from the silt fence and all associated hand work will be measured based on linear feet of silt fence.
- 3. Silt fence removal will be measured by the length of the silt fence removed in linear feet (meter).

**816.05 -- Basis of Payment**

- | <b>1. Pay Item</b>                | <b>Pay Unit</b>               |
|-----------------------------------|-------------------------------|
| Fabric Silt Fence "Low Porosity"  | Linear Foot (LF)/ [Meter (m)] |
| Fabric Silt Fence "High Porosity" | Linear Foot (LF)/ [Meter (m)] |
| Fabric Silt Fence "Low Profile"   | Linear Foot (LF)/ [Meter (m)] |
| Fabric Silt Fence "Coir Fiber"    | Linear Foot (LF)/ [Meter (m)] |
| Remove Silt Fence                 | Linear Foot (LF)/[Meter (m)]  |
| Silt Fence Cleanout               | Linear Foot (LF)/ [Meter (m)] |
- 2. All silt fence repairs, such as fabric repair, tie replacement, retrenching, splicing, and associated handwork are subsidiary to the appropriate silt fence item.
  - 3. Payment will be made for silt fence that is required to replace material that has exceeded its useful life and is determined by the Engineer to be necessary in a location.
  - 4. Payment is full compensation for all work described in this Section.

## NDOT Erosion and Sediment Control Training Course Guidance

### NDOT Erosion and Sediment Control **INSPECTOR CERTIFICATION**

The NDOT Erosion and Sediment Control Inspector Certification is currently being offered in an online format only. To obtain your new inspector certification please complete both the “Inspector Re-Certification” and “Installer Certification” courses described below.

Participants who successfully complete these courses are awarded a five-year inspector certification and can conduct construction stormwater site inspections on NDOT projects.

### NDOT Erosion and Sediment Control **INSPECTOR RE-CERTIFICATION Course**

Inspector re-certification can be obtained online by accessing the UNL-LTAP training website. This online course provides previously certified and new inspectors (new inspectors must also complete the installer course) a convenient way to re-certify for five years. The course is designed for NDOT construction site operations, supervisors, and managers who will be conducting or assisting with construction stormwater site inspections. Learning objectives include: stormwater permit requirements; erosion and BMPs; good housekeeping and pollution prevention BMPs; inspection and maintenance procedures; and SWPPP management.

Course Link: <https://www.ltap.unl.edu/assnfe/searchcourses.asp?csKeyword=erosion>

### NDOT Erosion and Sediment Control **INSTALLER CERTIFICATION Course**

This online course is designed for NDOT construction site operators, supervisors, and technicians who will be installing or maintaining erosion and sediment control best management practices (BMPs) on NDOT construction sites.

Learning objectives include: an overview of NDOT’s construction stormwater program, NDOT erosion control plan reading, the process of accelerated soil erosion, the distinction between erosion control and sediment control, installation and maintenance requirements for erosion and sediment control BMPs and good housekeeping BMPs.

Participants who successfully complete this course are awarded a five-year installer certification and can install and/or maintain erosion and sediment control BMPs on NDOT projects.

Course Link: <https://www.ltap.unl.edu/assnfe/searchcourses.asp?csKeyword=erosion>



#### FOR MORE INFORMATION

Contact Roadside Development and Compliance Unit at 402-479-4499