

**DESCRIPTION**

This work shall consist of furnishing, installing, maintaining, and removing Temporary Silt Fence with Straw Bales placed at locations shown on the plans or as directed by the Engineer. This work shall consist of temporary control measures during the life of the contract to control soil erosion. The temporary control provisions contained herein shall be coordinated with the permanent erosion control features specified elsewhere in the contract to the extent practical to assure economical, effective and continuous erosion control throughout the construction and post construction period.

**MATERIALS**

The fabricated fence assembly shall consist of Filter Fabric, Posts, Mesh Reinforcement Backing, and Fasteners for attachment.

**Filter Fabric:** Materials shall meet the requirements specified in §737-01G. Silt Fence.

**Posts:** Posts shall be straight, have a minimum length as shown on the plans, and shall be wood or steel, unless otherwise shown on the plans. Softwood posts shall be at least 75 mm in diameter or 38 mm x 89 mm. Hardwood posts shall be a minimum 38 mm x 38 mm. Steel posts shall be "T" or "L" shaped with a minimum weight of 1.5 kg/m.

**Mesh Reinforcement:** Reinforcement shall be poly-propylene with a max. 51 mm x 51 mm opening or a wire diameter of 2.03 mm welded wire mesh with a max. 51 mm x 102 mm opening. Either shall be a minimum 900 mm wide, unless otherwise shown on the plans.

**Fasteners:** Staples used for attachment shall have a 19 mm crown and a minimum 12 mm legs. Wire used for attachment shall be a minimum No. 16 AWG. "T" clips may be used for attachment with steel posts. Locking plastic tie/wraps used for attachment shall be ultraviolet resistant.

**Prefabricated Units:** The following prefabricated units may be used in lieu of the above assembly:

<b><u>Product</u></b>	<b><u>Manufacturer</u></b>	<b><u>Address</u></b>
Envirofence	Mirafi, Nicolon Corp.	Charlotte, N.C.
Econofence	Webtec, Inc.	Charlotte, N.C.
GTF-105	Exxon Chemical Co.	Atlanta, GA

An equal may be substituted for the above prefabricated units with the approval of the Regional Landscape Architect and the Engineer.

Straw bales shall be wire bound, with minimum dimensions of 450 mm square by 900 mm, a minimum weight of 21.7 kg, dry weight, as approved by the Engineer. The bales shall be reasonably clean and free of noxious weeds and deleterious materials.

Stakes shall be untreated wood, with a minimum dimension of 50 mm by 50 mm by 0.9 m, pointed on one end.

**CONSTRUCTION DETAILS**

The temporary silt fence with straw bales shall be installed in accordance with the details shown on the plans.

**Installation of posts:** Posts for the silt fence shall be imbedded 0.45 m (min.), or adequately anchored if in rock, with a maximum spacing of 2 m or as detailed in the plans.

**Fabric Anchoring:** Trenches shall be dug along the uphill side of the fence to anchor the fabric. The trench shall have a minimum cross section of 150 mm x 150 mm. The fabric shall be installed in the trench such that 150 mm is under the grade and 100 mm is across the bottom of the trench. The trench shall then be backfilled and hand tamped.

**Fabric Attachment:** The fabric shall be attached to each post in no less than four locations with approved fasteners. The fabric shall be attached to the top strand of mesh reinforcement at a minimum 0.6 m interval. When two sections of fabric adjoin each other, they shall be overlapped by 0.2 m, folded together, and attached at a post.

**Mesh Reinforcement:** The material is to be attached to each post at the top, bottom and two additional evenly spaced locations. Attachment is to be made with approved fasteners.

When two sections of fence are to adjoin each other, the overlap shall occur at posts and be no less than 0.3 m.

The straw bales shall be installed, including excavation, as shown on the plans and as directed by the Engineer. Two stakes shall be located on the center line of each straw bale, one at each end within 150 mm of the end, and driven firmly into the ground until the top of the stake is flush with the top of the bale. The first stake in each bale shall be driven towards the previously laid bale at an angle to force the bales together. Straw bales shall be oriented so the bindings are around the sides rather than the bottom of the bales. Wire bindings that are placed in contact with the soil soon disintegrate and may allow the bales to fall apart.

The schedule of work shall be as approved by the Engineer as to best insure coordination of this work with the other erosion control work specified elsewhere in the contract.

The silt fence with straw bales shall be maintained, in a good functional condition, by the contractor. All necessary work and materials to maintain the integrity of the installation shall be provided until earthwork construction and permanent erosion control features are in place, and show that they are functioning effectively.

The silt fence shall be inspected, by the contractor, weekly or after each significant rainfall to determine if the structure is functioning as designed. Periodic removal of

**ITEM 209.02      10-    TEMPORARY SILT FENCE WITH STRAW BALES**

sediment and debris buildup shall occur when "Bulges" develop in the fence or more than 150 mm of material has accumulated. Additional maintenance shall be performed as directed by the Engineer.

The Contractor shall immediately repair or replace defective or damaged portions of the fence or straw bales assembly. Torn or punctured fabric shall be repaired by the placement of a patch, on the up slope side, consisting of an additional layer of fabric over the damaged area. The patch shall have a minimum overlap of 0.5 m in all directions and be securely attached to the repaired fabric and reinforcement with approved fasteners.

The straw bales shall be removed and replaced when they have deteriorated beyond their usefulness so as not to block or impede storm drainage flow. The replacement of the straw bales shall be included in the bid price for this item.

The removal of the silt fence, accumulated soils, debris and restoration of the area shall be done at the completion of the contract or as ordered by the Engineer. The fence and associated materials shall become the property of the Contractor and removed from the site.

The straw bales shall also be removed from the site at the completion of the contract unless the Engineer directs that they be left in place.

**METHOD OF MEASUREMENT**

This work will be measured by the number of meters (measured horizontally between the extreme outer limits of the silt fence with straw bales installed in accordance to the plans) which was originally installed as shown on the plans or as ordered by the Engineer. No measurement will be made for maintenance, repairs, or replacement of defective material, seams, overlaps, or removal.

**BASIS OF PAYMENT**

The unit price bid per meter shall include the cost of furnishing all labor, materials, and equipment necessary to complete the work. Excavation shall be included in this item. Any maintenance, repair, or replacement of damaged or defective fence shall be done at no additional cost to the State. The Contractor will be paid 80% of the bid price upon the installation of the silt fence with straw bales and the remaining 20% upon the removal of the silt fence when no longer needed A.O.B.E.