

**Item No. 628S  
Sediment Containment Dikes**

**628S.1 Description**

This item shall govern the provision and placement of temporary filtration dikes along or across such areas as indicated on the Drawings. This method shall be used during construction only and its purpose shall be to temporarily control erosion by intercepting and retaining sediment.

This specification is applicable for projects or work involving either inch-pound or SI units. Within the text, the inch-pound units are given preference followed by SI units shown within parentheses.

**628S.2 Submittals**

The submittal requirements for this specification item shall include:

- A. Locations and Types of containment dikes (hay Bales, Triangular Sediment Filter Dike or Filter Curb Inlet Protection).
- B. Seeding
  - 1. Identification of the type, source, mixture, pure live seed (PLS) and rate of application of the seeding.
  - 2. Type of mulch.
  - 3. Type of tacking agent.
  - 4. Type and rate of application of fertilizer.

**628S.3 Materials**

**A. Hay Bales**

"Hay Bales" shall be free of Johnson Grass or other noxious weeds. The bales shall consist of either hay or straw in good condition and be securely tied with wire. Stakes for anchoring bales shall be #4 (10M) reinforcing bars, 1/2 inch (12.5 mm) steel pickets, or 2 x 2 inch (50 x 50 mm) wooden stakes. Hay bales shall be limited to drainage areas less than 2,500 square feet (0.02 hectares).

**B. Filter Dike**

"Filter Dike" shall be prefabricated from 6x6-D2.9xD2.9 (150x150-MW19xMW19) WWF and 4.5 oz. (127 grams) non-woven polyester filter fabric securely fastened to WWF with galvanized shoat rings or j-clips. A 12-inch (300-mm) skirt shall be a continuous extension of the filter fabric on the upstream face.

The filter fabric shall extend beyond the dike joints to provide a 3-inch (75-mm) overlap. Ends of dike not lapped with filter fabric shall be plugged with filter fabric.

**C. Filter Curb Inlet Protection**

The fabric must correspond to the following requirements:

ASTM

Property Requirements	Test method		
Fabric Weight yard	D 3776	≥3.0	ounces/square
Ultraviolet (UV) Radiation Stability retained min., after 500 hours in xenon arc device	D 4355	70%	strength
Mullen Burst Strength square inch	D 3786	≥120	pound per
Water Flow Rate gallons/minute/square feet	D 4491	≥275	

#### 628S.4 Construction Methods

The Contractor may select the material for the dikes, unless otherwise indicated, conforming to the details on the Drawings and Standard Detail Numbers 628S, 628S-1 and 628S-2.

Bales shall be placed with ends tightly abutting the adjacent bales. Each bale shall be embedded in the soil a minimum of 4 inches (100 mm) and a maximum of 6 inches (150 mm). Bales shall be securely anchored in place by a minimum of 2 stakes per bale. The first stake in each bale shall be angled toward the previously placed bale to force the bales together. Stakes shall be embedded in the soil a minimum of 1 1/2 feet (0.45 meters). Bales that are not able to be imbedded and are place on impervious cover should be placed level with the concrete and have all bales butted end to end with no voids or gaps between them. Bales shall be bound by either wire or nylon string. Bales shall be replaced every 2 months or more often during wet periods.

For filter dikes, the filters shall be placed with ends tightly abutting the adjacent filter. Each filter and skirt shall be securely anchored in place using 6 inch (150 mm) staples at a maximum spacing of 12 inches (300 mm) on center. Anchoring on impervious areas shall be accomplished with gravel bags placed at 18 inches (450 mm) on center or with a nominal 1 inch by 4 inch (25 mm by 100 mm) board nailed at 18 inches (450 mm) on center.

For curb inlet protection, the fabric/wire should completely cover the opening of the inlet and devices should be installed without protruding parts that could be a traffic, worker, or pedestrian hazard. Where sections of the fabric overlap, they shall overlap at least three (3) inches. The inlet filter shall be attached in a way that they can easily be removed and are not secured or attached by the use of sand bags.

Silt accumulation behind hay bales and triangular sediment filter dikes shall be removed at a maximum depth of 6 inches (150 mm) or when, in the opinion of the Engineer or designated representative, the structure ceases to function as intended. Silt accumulation behind filter dikes for curb inlet protection shall be removed at a maximum depth of 2 inches (50 mm).

All dikes shall be inspected by the Contractor at least monthly and after each rainfall. Dikes shall be repaired or replaced when necessary or as directed by the Engineer or designated representative.

After completion of construction or when directed by the Engineer or designated representative the dike shall be removed and the site re-graded to the final grades. Any depression shall be filled and any accumulations of silt shall be spread or removed to a permitted disposal area. After removal of the dike the area shall be graded and seeded conforming to Item No. 604S, "Seeding for Erosion Control".

#### 628S.5 Measurement

The work performed and the materials furnished as prescribed by this item will be measured by the lineal foot (lineal meter: 1 lineal meter equals 3.281 lineal feet) of "Sediment Containment Dikes", complete in place.

The work and materials prescribed for curb Inlet protection (Standard Detail 628S-2, "Filter Curb Inlet Protection") shall be included in the unit price bid for the item of construction in which this activity is used, unless Pay Item No. 628S-C is indicated on the Drawings and identified in Standard Contract Bid Form 00300U.

#### 628S.6 Payment

The work performed and materials furnished and measured as provided under "Measurement" will be paid for at the unit bid price per lineal foot of "Sediment Containment Dikes" indicated on the Drawings. The Unit bid price shall include full compensation for: (a) furnishing, hauling and placing all materials including all labor, tools, equipment and incidentals needed to complete the work, (b) the repair and/or replacement of materials, (c) the removal and disposal of all silt and debris and (d) the removal of all dikes, silt and debris after completion of construction or when directed by the Engineer or designated representative.

When indicated on the Drawings, payment for sediment containment will be made under:

<b>Pay Item No. 628S-A:</b>	Sediment Containment Dikes with hay bales	Per Lineal Foot.
<b>Pay Item No. 628S-B:</b>	Sediment Containment Dikes with filter fabric	Per Lineal Foot.
<b>Pay Item No. 628S-C:</b>	Filter Curb Inlet Protection (New Inlet)	Per each.
<b>Pay Item No. 628S-D:</b>	Filter Curb Inlet Protection (Existing Inlet)	Per each.

End

<b><u>SPECIFIC</u> CROSS REFERENCE MATERIALS</b>
Specification 628S, "Sediment Containment Dike"

#### City of Austin Standard Details

Designation	Description
Number 628S	Triangular Sediment Filter Dike
Number 628S-1	Hay Bale Dike
Number 628S-2	Filter Curb Inlet Protection

#### City of Austin Standard Specifications

Designation	Description
Item No. 604S	Seeding for Erosion Control

#### City of Austin Standard Contract

Section	Description
00300U	Bid Form (Unit Prices)

<b><i>RELATED</i></b> CROSS REFERENCE MATERIALS
Specification 628S, "Sediment Containment Dike"

City of Austin Standard Specifications

Designation	Description
Item No. 101S	Preparing Right of Way
Item No. 102S	Clearing and Grubbing
Item No. 111S	Excavation
<i>Item No. 120S</i>	<i>Channel Excavation</i>
Item No. 401S	Structural Excavation and Backfill
Item No. 406S	Reinforcing Steel
Item No. 602S	Sodding for Erosion Control
Item No. 605S	Soil Retention Blanket
Item No. 606S	Fertilizer
Item No. 608S	Planting
Item No. 610S	Preservation of Trees and Other Vegetation
Item No. 620S	Filter Fabric

<b><i>RELATED</i></b> CROSS REFERENCE MATERIALS (Continued)
Specification 628S, "Sediment Containment Dike"

Texas Department of Transportation: Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges

<u>Designation</u>	<u>Description</u>
Item No. 100	Preparing Right of Way
Item No. 110	Excavation
Item No. 132	Embankment
Item No. 158	Specialized Excavation Work
Item No. 166	Fertilizer
Item No. 168	Vegetative Watering
Item No. 169	Soil Retention Blanket
Item No. 204	Sprinkling