

Section 01577

PROTECTING INLETS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Installation of erosion and sediment control inlet protection barriers, drop inlet baskets and storm inlet sediment traps used during construction and prior to final development of site.

1.02 UNIT PRICES

- A. Measure and pay for inlet protection barriers by linear foot along outside face of completed and accepted inlet protection barrier.
- B. Measure and pay for drop inlet baskets is on a unit price basis for each completed and accepted drop inlet basket.
- C. Measure and pay for storm inlet sediment traps is on a unit price basis for each completed and accepted storm inlet sediment trap.

1.03 SUBMITTALS

- A. Manufacturer's catalog sheets and other product data on filter fabric.

1.04 REFERENCES

- A. ASTM A 36 - Standard Specification for Carbon Structural Steel.
- B. ASTM D4632 - Standard Test Method for Grab Breaking Load and Elongation of Geotextiles.
- C. Storm Water Quality Management Guidance Manual prepared by City of Tomball and Montgomery County.

PART 2 PRODUCTS

2.01 FILTER FABRIC

- A. Provide woven or nonwoven geotextile filter fabric made of either polypropylene, polyethylene, ethylene, or polyamide material.

- B. Geotextile fabric shall have a grab strength of 100 psi in any principal direction (ASTM D4632), Mullen burst strength exceeding 200 psi (ASTM D-3786) and equivalent opening size as shown on Drawings.
- C. Filter fabric material shall contain ultraviolet inhibitors and stabilizers to provide expected usable life comparable to anticipated construction period. Ultraviolet stability shall exceed 70% after 500 hours of exposure (ASTM D4355).
- D. Representative Manufacturers: Mirafi, Inc., or equal.

2.02 METALS

- A. Provide steel frame members in accordance with ASTM A36.

PART 3 EXECUTION

3.01 PREPARATION AND INSTALLATION

- A. Provide erosion and sediment control systems at locations shown on Drawings. Construct in accordance with requirements shown on Drawings and of type indicated as specified in this Section.
- B. No clearing, grubbing or rough cutting permitted until erosion and sediment control systems are in place, other than site work specifically directed by City Engineer to allow soil testing and surveying.
- C. Maintain existing erosion and sediment control systems located within project site until acceptance of Project or until directed by City Engineer to remove and discard existing system.
- D. Regularly inspect and repair or replace damaged components of erosion and sediment control systems as specified in this Section. Unless otherwise directed, maintain erosion and sediment control systems until project area stabilization is accepted by City. Remove erosion and sediment control systems promptly when directed by City Engineer. Discard removed materials off site.
- E. Remove and dispose sediment deposits at designated spoil site for Project. If a project spoil site is not designated on Drawings, dispose of sediment off site at location not in or adjacent to stream or floodplain. Assume responsibility for off-site disposal. Spread sediment evenly throughout site, compacted and stabilized. Prevent sediment from flushing into a stream or drainage way. If sediment has been contaminated, dispose of in accordance with existing federal, state, and local rules and regulations.

- F. Prohibit equipment and vehicles from maneuvering on areas outside of dedicated rights-of-way and easements for construction. Immediately repair damage caused by construction traffic to erosion and sediment control.
- G. Conduct all construction operations under this Contract in conformance with erosion control practices described in Section 01572- Source Controls for Erosion and Sedimentation.

3.02 GENERAL CONSTRUCTION METHODS

- A. Provide erosion and sedimentation control systems in accordance with Drawing details.
- B. Inspect erosion and sedimentation control systems after each rainfall, daily during periods of prolonged rainfall, and at minimum once each week. Repair or replace damaged components immediately. Remove sediment deposits when sediment has accumulated to one-half height of barrier.

3.03 DROP INLET BASKET CONSTRUCTION METHODS

- A. Fit inlet insert basket into inlet without gaps around insert as shown on Drawings.
- B. Support for inlet insert basket shall consist of fabricated metal as shown on Drawings.
- C. Construct top frame of basket with two short sides of 2-inch by 2-inch and single long side of 1-inch by 1-inch, 1/8-inch angle iron. Construct basket hangers of 2-inch by 1/4-inch iron bars. Construct bottom frame of 1-inch by 1/4-inch iron bar or 1/4-inch plate with center 3-inches removed. Use minimum 1/4-inch diameter iron rods or equivalent for sides of inlet basket. Weld minimum of 14 rods in place between top frame/basket hanger and bottom frame. Exact dimensions for top frame and insert basket will be determined based on dimensions of type of inlet being protected.
- D. Push down and form filter fabric to shape of basket. Use sheet of fabric large enough to be supported by basket frame when holding sediment and extend at least 6-inches past frame. Place inlet grates over basket/frame to serve as fabric anchor.

- E. Remove sediment deposit after each storm event.

3.04 STORM INLET SEDIMENT TRAP CONSTRUCTION METHODS

- A. Limit of excavation and outlet length and height shall be as shown on Drawings. Side slopes shall be 2:1 or flatter.
- B. Remove sediment deposit and restore traps to original dimensions when sediment has accumulated to one-half design depth of trap or one foot, whichever is less.

END OF SECTION