

**Supplemental Specification
2005 Standard Specification Book**

SECTION 01571

TEMPORARY ENVIRONMENTAL CONTROLS

Delete Section 01571 and replace with the following:

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Requirements for controlling erosion on the construction site and diminish the amount of sediment leaving the site, and related areas under the Contractor's control.
- B. Requirements for installing, maintaining, and removing temporary erosion control measures.

1.2 RELATED SECTIONS

- A. Section 01574: Environmental Control Supervisor
- B. Section 02373: Riprap
- C. Section 02610: Pipe Culverts
- D. Section 02613: Culvert End Sections
- E. Section 02922: Seed, Turf Seed, and Turf Sod

1.3 REFERENCES

- A. AASHTO M 288: Geotextile Specifications for Highway Applications.
- B. Storm Water Pollution Prevention Plan (SWPPP)

1.4 TYPES

Refer to EN series Standard Drawings for all types.

- A. Check Dam:
 - 1. A temporary fiber roll or stone structure that is placed across a ditch to intercept and pond sediment-laden runoff, thereby reducing the water velocity and allowing suspended sediment to settle. Constructed so water will flow over a low point in the middle of the dam and not around the sides.

- B. Silt Fence:
 - 1. A geotextile fabric fence installed to intercept and pond sediment-laden sheet flow runoff allowing suspended sediment to settle.

- C. Slope Drain:
 - 1. A polyethylene pipe placed on a slope that collects and transports storm runoff down the face of a slope and is used until permanent drainage facilities are installed or vegetation growth is adequate.

- D. Temporary Berm:
 - 1. A ridge of compacted soil, with or without a shallow ditch that diverts storm runoff from a recently constructed slope to a controlled release point.

- E. Drop-Inlet Barrier:
 - 1. A fiber roll, silt fence, or stone barrier placed around a drop-inlet that intercepts and ponds sediment-laden runoff allowing suspended sediment to settle. If the pond height reaches the top of the barrier, water flows over the barrier and into the drop-inlet.

- F. Pipe Inlet Barrier:
 - 1. Consists of a horseshoe-shaped barrier protecting a pipe inlet that intercepts and ponds sediment-laden runoff before it enters a pipe allowing suspended sediment to settle.

- G. Curb Inlet Barrier:
 - 1. A protective barrier placed across a curb inlet that intercepts and ponds sediment-laden runoff before it enters a curb inlet.

- H. Sediment Trap:
 - 1. An excavated basin, usually installed at low points on a construction site, that intercepts and ponds sediment-laden concentrated flows allowing suspended sediment to settle.

- I. Stabilized Construction Entrance:
 - 1. A layer of rock placed at a construction site entrance that removes mud from vehicle tires before they leave the construction site and drive onto a paved road.

- J. Straw Bale Barrier:
 - 1. Consists of straw bales butted end to end and used in active construction areas where a silt fence would fail. Installed to intercept and pond sediment-laden sheet flow runoff allowing suspended sediment to settle.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Check dams:
 - 1. Fiber Roll:
 - a. Fiber Roll: Contact Engineer for Approved Products List of Fiber Roll Products. Approved list is updated annually.
 - b. Wood stakes: commercial quality lumber 2-inch square (nominal) by 3 feet.
 - c. Channel Liner: Contact Engineer for Approved Products List of Channel Liners. Approved list is updated annually.
 - 2. Stone: Well-graded within 2 to 6 inches in diameter.

- B. Silt Fence:
 - 1. Silt Fence Fabric: See AASHTO M 288 (Table 6 – Temporary Silt Fence Property Requirements).
 - 2. Wood Post: commercial quality lumber, 2-inch square (nominal) by 4 feet in length.
 - 3. Fasteners: Staples, wire, zip ties, or nails sufficient to maintain the fabric's attachment to post.

- C. Slope Drain:
 - 1. Pipe Culverts: Refer to Section 02610.
 - 2. End Section: Refer to Section 02613.
 - 3. 9-inch Loose Riprap: Refer to Section 02373.
 - 4. Wooden stakes: commercial quality lumber 2-inch square (nominal) by 3 feet.

- D. Temporary Berm:
 - 1. Existing Soil.

- E. Drop-Inlet Barriers:
 - 1. Fiber Roll: Refer to this Section.
 - 2. Stone: Well-graded within 2 to 6 inches diameter.
 - 3. Silt-Fence: Refer to this Section.
 - a. Wood stud: 2 inches x 4 inches (nominal).
- F. Pipe Inlet Barrier:
 - 1. Stone: Well-graded within 2 to 6 inches in diameter.
- G. Curb Inlet Barrier:
 - 1. Concrete Building Blocks.
 - 2. Stone: Well-graded within 2 to 6 inches diameter
 - 3. Wire Mesh: 0.5 inch by 0.5 inch openings.
 - 4. Wood stud: 2 inches x 4 inches (nominal).
- H. Sediment Trap:
 - 1. 9-inch Loose Riprap: Refer to Section 02373.
- I. Stabilized Construction Entrance:
 - 1. Stone: Well-graded within 2 to 3 inches in diameter.
- J. Straw Bale Barrier:
 - 1. Standard Straw Bales: Obtained from weed free fields that have been certified by the Utah Department of Agriculture.

PART 3 EXECUTION

3.1 PREPARATION

- A. Follow the Storm Water Pollution Prevention Plan (SWPPP) in the plan set.
 - 1. Address in the SWPPP all disturbed areas on a project including staging areas, haul roads, borrow sites, stockpiles, and disposal areas.
 - 2. If SWPPP is not provided in the plans, create and submit a plan to the Engineer for approval.
 - 3. Obtain written approval from the Engineer to change the SWPPP.
- B. Designate an Environmental Control Supervisor (ECS) who will:
 - 1. Work directly with the Department SWPPP coordinator designated by the Engineer.
 - 2. Be available as needed to coordinate the SWPPP, inspect and maintain sediment control devices, and resolve other issues.

- C. Do not start earth-disturbing work until SWPPP is approved, and appropriate temporary erosion and sediment control measures are in place.
- D. Use the most restrictive requirement if a conflict occurs between erosion and sediment control specifications and federal, state, or local agency's laws, rules, or regulations.

3.2 INSTALLATION

- A. Provide or construct measures such as check dams, silt fence, slope drains, drop-in inlet barriers, sediment traps, and other erosion control devices or methods to reduce erosion and sedimentation during construction or shutdown periods.
- B. Follow installation procedures outlined in the EN Series Standard Drawings.

3.3 INSPECTIONS

- A. Inspect all denuded areas during construction to determine potential erosion problems. Pro-actively apply corrective measures in a timely manner as required.
- B. Inspect all sediment retention structures. Refer to Section 01574.

3.4 MAINTENANCE

- A. Maintain temporary sediment control devices to ensure they function properly until all disturbed areas draining to them are stabilized.
- B. Remove and properly dispose of sediment when it has accumulated half way up the overall structure height or it interferes with the performance of the structure.
- C. Dispose of sediment removed from erosion control structures in a manner acceptable to the Engineer.

3.5 REMOVAL

- A. All costs associated with Removal are incidental to other items of work and no separate measurement or payment will be made.
- B. After all seeding and mulching has been placed and just before final closeout of the project, remove any remaining sediment from behind and around erosion control features and remove all temporary erosion control features unless directed differently by the Engineer.
- C. Seed areas where the sediment was removed following Section 02922.

END OF SECTION