

**EROSION AND SEDIMENTATION CONTROL PLAN.**

The cap area includes approximately 11.86 acres. The receiving waters for the site's runoff is the Connecticut River located along the east edge of the site.

The project consists of the closing and capping of the Phase I Ash Area at the Connecticut Resources Recovery Authority (CRRA) Hartford Landfill. In addition the work includes all associated storm drainage and capping design to allow continued landfilling operations on the eastern side of the landfill. Construction is expected to take place in 2009.

**DESIGN CRITERIA:**

- Erosion and sedimentation control measures have been located with consideration given to slopes, wetlands, and watercourses and in accordance with the Connecticut Guidelines for Soil Erosion and Sediment Control (The Guidelines), of the Connecticut Council of Soil and Water Conservation, Latest Edition. The Guidelines shall be considered an integral component of the erosion control design requirements and the minimum standards contained within shall be considered part of the plan and shall be observed during all phases of the construction.
- Temporary sediment traps are located throughout the project site where earth disturbance and ground shaping will be performed. These sediment traps have been sized in accordance with the Guidelines. All sediment traps shall be maintained until final stabilization of the contributing areas.
- Post construction sediment storage is based on 400 ft<sup>3</sup>/impervious acre.

**INSTALLATION AND/OR APPLICATION PROCEDURES:**

- Erosion and sedimentation control devices shall be constructed in accordance with the project plans and specifications.

**OPERATION, MAINTENANCE PROGRAM, AND INSPECTIONS:**

- Prior to any construction, a pre construction conference is to be held among the Design Engineer, the Owners, the Connecticut D.E.P., and the Contractor, to review the erosion and sedimentation control measures to be taken. The contractor shall be responsible for arranging the pre construction conference.
- All erosion control measures associated with the construction are to be installed and maintained in accordance with the schedule and requirements. Additional control measures shall be installed during the construction period as necessary and required. Such additional measures shall be designed in accordance with the Guidelines.
- All soil erosion and sediment control measures within any phase of construction must be installed before any construction within the limits of that phase begins.
- Silt Fence, backed by hay bales, will be installed along the toe of all critical cut and fill slopes, as depicted on the design plans, prior to the commencement of any grading activities.
- Sediment removed from control measures must be disposed of at a location approved by the Design Engineer that will not cause additional sedimentation to the surrounding area.
- Qualified personnel (provided by the contractor) shall inspect disturbed areas of the construction activity that have not been fully stabilized, structure control measures, and locations where vehicles enter or exit the site at least once every seven (7) calendar days within 24 hours of the end of a storm that is 0.1 inches or greater. Where sites have been stabilized, such inspection shall be conducted at least once every month for three (3) months.
- Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off-site sediment loading. Contractor shall remove any sediments tracked onto surrounding roadways immediately and implement measures to prevent further impact to surrounding roadways.
- Based on the results of this inspection, the description of potential sources and pollution prevention measures identified in the plan shall be revised as appropriate or as soon as practicable after such inspection. Such modifications shall provide for timely implementation of any changes to the site within 24 hours and implementation of any changes to the plan within three (3) calendar days following the inspection. The plan shall be revised and the site controls updated in accordance with sound engineering practices, the Guidelines and subsections (4) and (6)(c)(1)(3) of the Stormwater General Permit.
- A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the Stormwater Pollution Control Plan and actions taken shall be made and retained as part of the plan for at least three (3) years after the date of inspection. The report shall be signed by the Contractor, or his authorizing representative.
- Contractor shall maintain adequate water supply to perform dust suppression as conditions require. Alternative dust control methods include application and maintenance of wood chips to Unpaved roadway surfaces. Paved surfaces shall be swept of tracked soil on a regular basis to ensure proper dust control.

**BEST MANAGEMENT PRACTICES**

- Construction shall proceed in accordance with the requirements of the general sequence of grading and construction activities, application of erosion and sediment control measures, and final stabilization of site as indicated on the plans.
- Refueling of equipment or machinery within seventy-five (75) feet of any wetland or watercourse shall be prohibited.
- No materials resulting from construction activities shall be placed in or contribute to the degradation of an adjacent wetland or watercourse. Disposal of any material shall be in accordance with Connecticut General Statutes including but not limited to Sections 22A-207 through 22A-209.
- Forcing of streams with equipment shall be prohibited, except where approved by the Town Engineer. Such equipment travel shall be minimized. Where frequent equipment travel on stream banks and beds is necessary, washed stone shall be placed to minimize erosion, scour and turbidity provided no significant grade change will occur and no significant environmental impact will result. Approval will be required for any haul road or temporary structure placed in wetlands or watercourses.
- A construction sequencing plan and a water handling plan, including a contingency plan for flood events, must be submitted in writing to the Engineer and approved by the Engineer prior to the commencement of any construction in a waterway.
- When dewatering is necessary, pumps shall not discharge directly into the wetlands or watercourse. Prior to dewatering the contractor must submit to the Engineer a written proposal for specific methods and devices to be used, and obtain the Engineer's approval of such method and devices to be used for dewatering activities including, but not limited to, pumping the water into a temporary sedimentation trap, providing surge protection at the inlet and outlet of pumps, or floating the intake of the pump, or other methods to minimize and retain the suspended solids. If the Engineer determines that the pump operation is causing turbidity problems, solid operation shall cease until such time as means of controlling turbidity is submitted by the contractor and approved by the Engineer and implemented by the contractor.
- Work within and adjacent to watercourses shall be conducted during periods of low flow, whenever possible. The Engineer shall remain aware of flow conditions during the work, and shall cause such activity to cease should flow conditions threaten to cause excessive erosion, siltation or turbidity. The contractor shall revoke every effort to secure the work site before predicted major storms. A major storm shall be defined as a storm predicted by the NOAA Weather Service with warnings of flooding, severe thunderstorms, or similarly severe weather conditions or effects.
- Dumping of oil, chemicals or other deleterious materials on the ground is forbidden. The contractor shall provide a means of catching, retaining and properly disposing of drained oil, removed oil filters, and other deleterious material. All spills of such materials shall be reported immediately to the contractor to the DEP.
- Applications of fertilizers, herbicides or pesticides must be done by a Connecticut licensed applicator. The Contractor shall submit to the Engineer the proposed Applicator's name and license number, and must receive the Engineer's approval of the proposed applicator before such application is carried out.
- During spawning seasons, discharges and construction activities in spawning area of the State waters shall be restricted so as not to disturb or inhibit aquatic species which are indigenous to the waters.

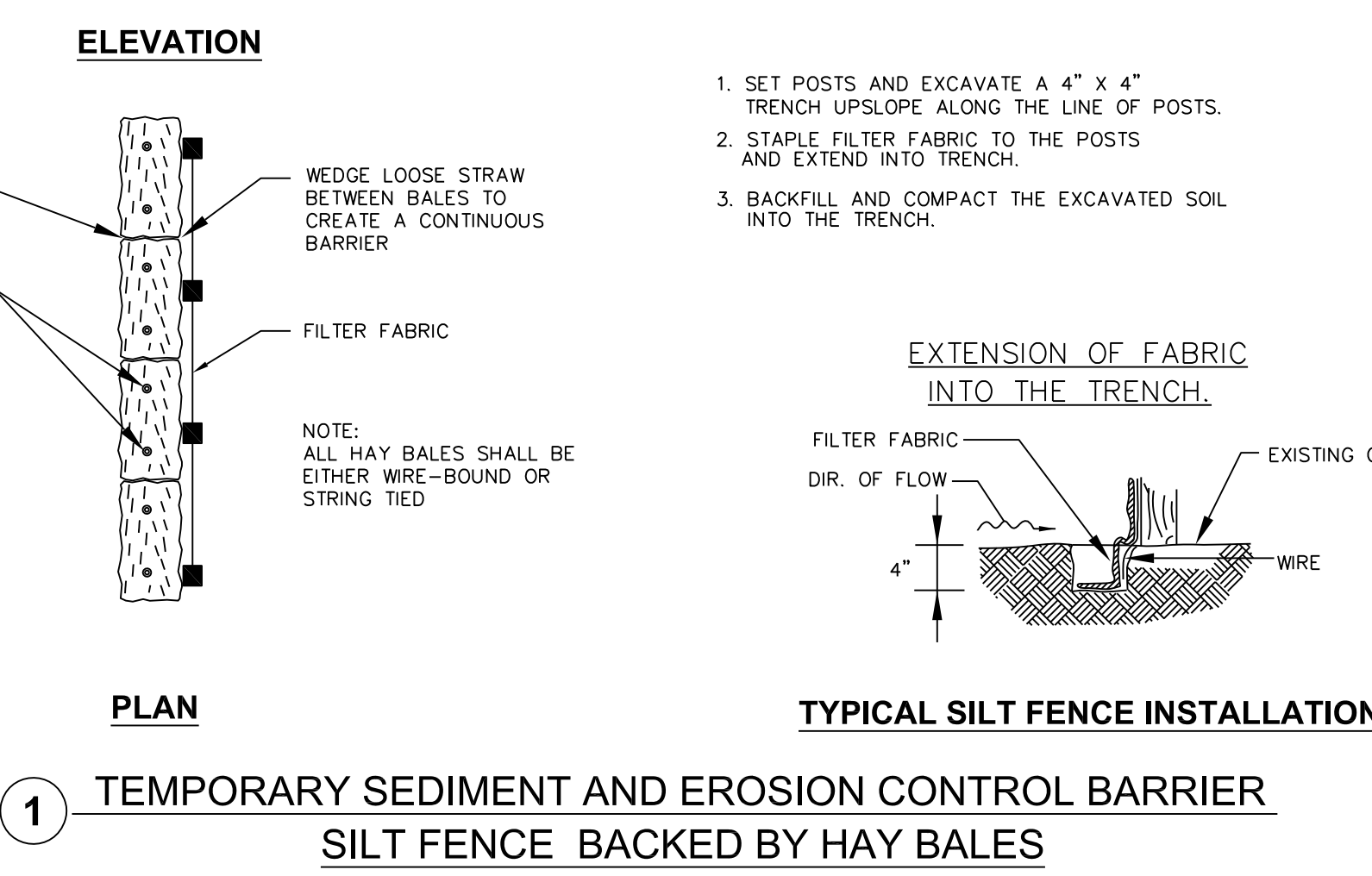
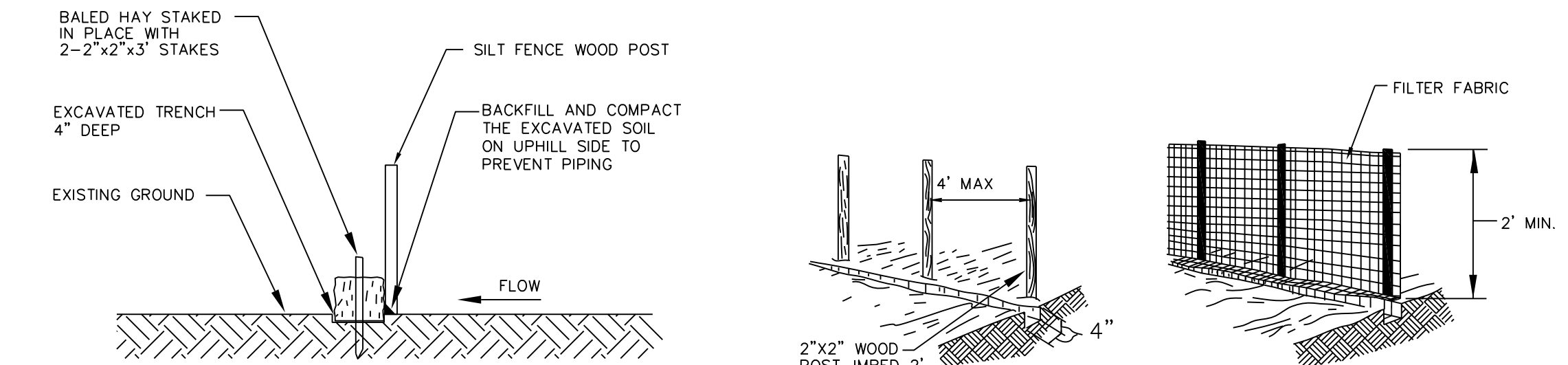
**SOIL STABILIZATION MEASURES**

- All topsoil not to be used for final grading/landscaped areas shall be removed from the site immediately, in accordance with applicable State and Local laws. All topsoil to be used in landscaped areas shall be stored/stockpiled in accordance with applicable State and Local laws.
- Jute Netting shall be installed on all final grassed slopes steeper than 3:1 in grade. Green Armor System (Enkamat 7010 Turf Reinforcement Mat (TRM) infilled with Flexterra FGM) or approved equal shall be installed in accordance with manufacturers recommendations in areas noted on EC-1. All other areas receiving topsoil shall have Flexterra FGM applied.
- The contractor shall not be permitted to have more than two (2) acres of the area receiving topsoil to be unprotected at any one time, with the soil stabilization measures described in note 2 above.
- Sediment disposal areas and, topsoil stockpiles not scheduled for construction activities within thirty (30) days shall be stabilized as follows:
  - Ground limestone at a rate of 90 lbs per 1,000 sf
  - Fertilizer at a rate of 75 lbs per 1,000 sf using a 10-10-10 analysis or an equivalent.
  - Annual Rye grass seeding applied at a rate of not less than 1 pound per 1,000 sf
  - Mulch all newly seeded areas with 80 lbs of salt hay or small grain straw per 1,000 sf.
- All disturbed areas are to be provided with at least 4" of topsoil before final seeding.
- Permanent vegetation is to be hydroseeded on all exposed areas within ten (10) days after final grading.
- Permanent vegetation: See Landscaping Plans

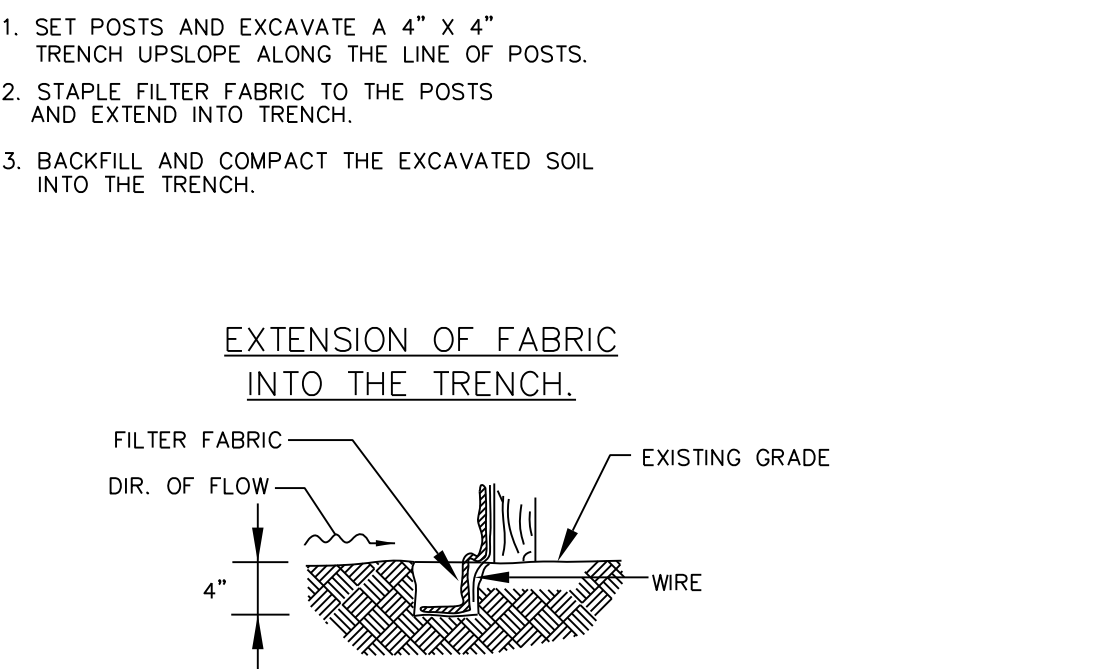
**RESPONSIBLE PARTIES**

Connecticut Resources Recovery Authority (CRRA)  
100 Constitution Plaza, 6th Floor  
Hartford, Connecticut 06103  
(860) 757-7700

is assigned the responsibility for implementing the control measures of this plan. This responsibility includes the installation and maintenance of control measures, informing all parties engaged on the construction site of the requirements and objectives of this plan, and notifying the Planning and Zoning Commission of the transfer of responsibility, and for conveying a copy of this plan if title to the property is transferred.



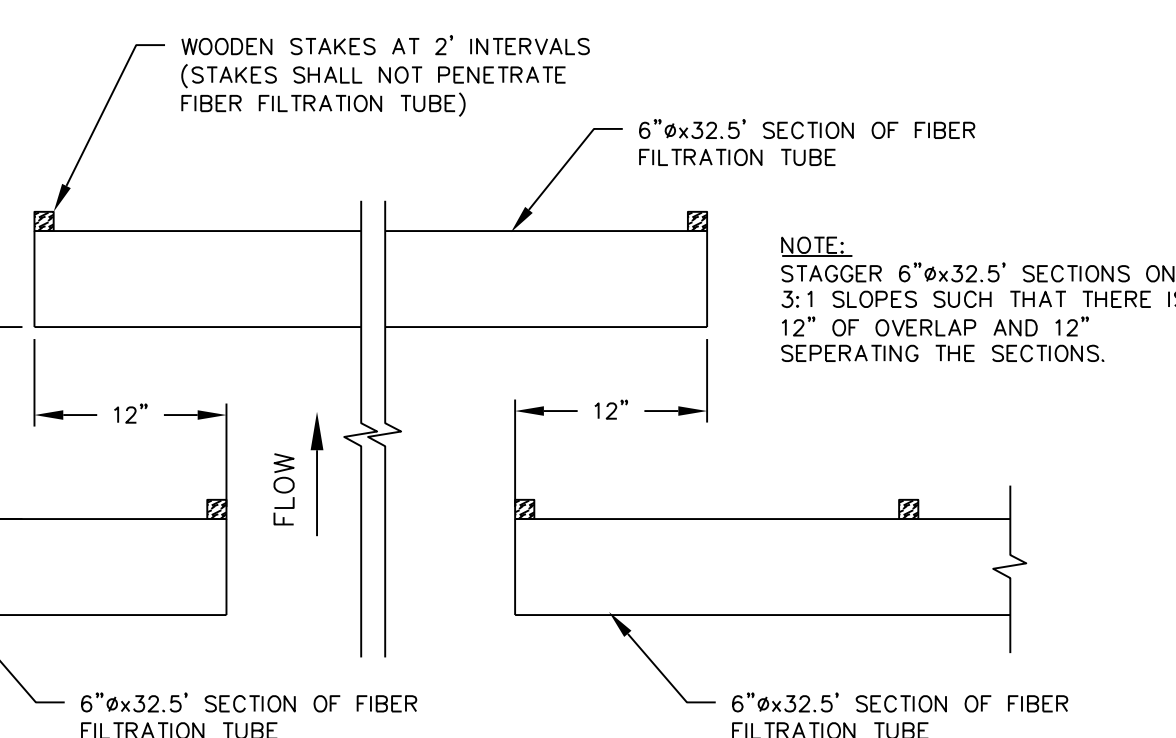
**1 TEMPORARY SEDIMENT AND EROSION CONTROL BARRIER SILT FENCE BACKED BY HAY BALES**



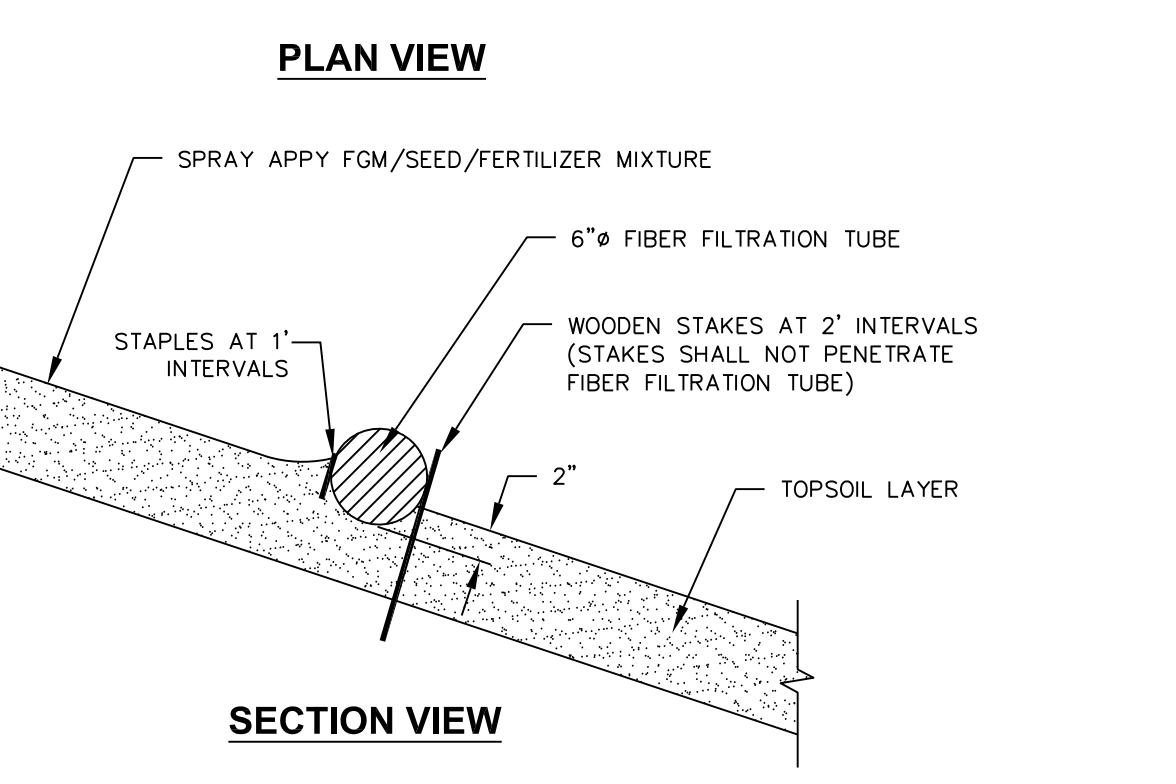
**3 STONE CHECK DAM**



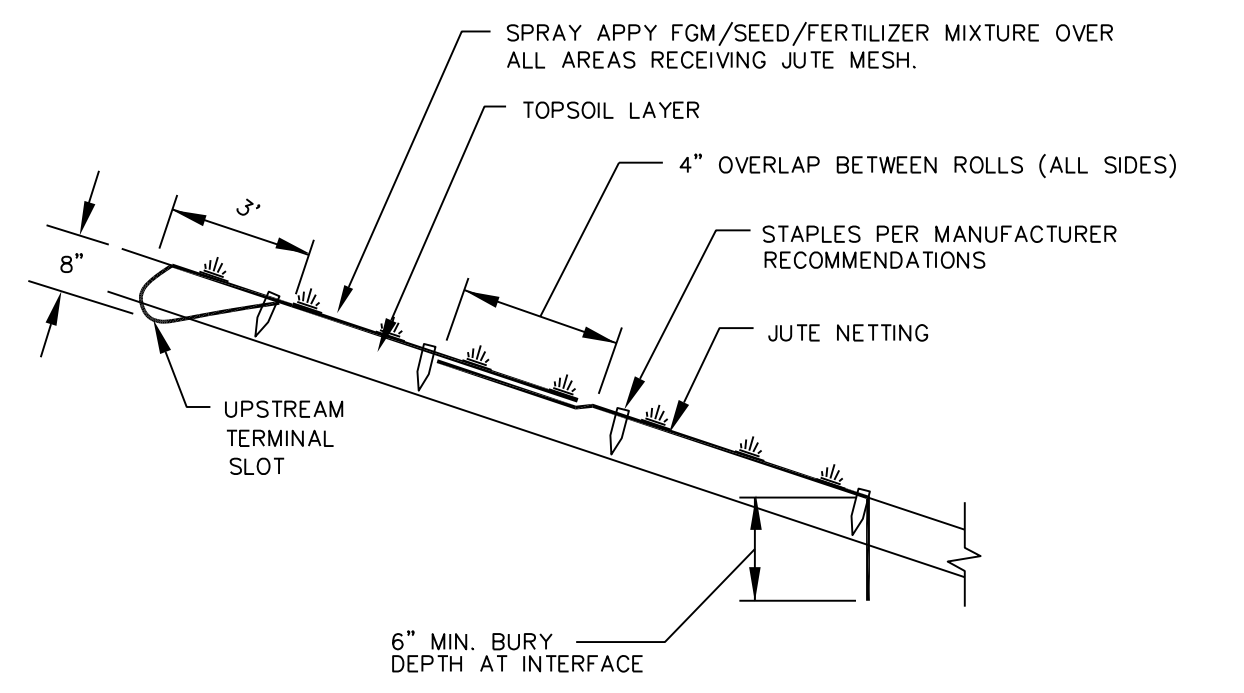
**TYPICAL SILT FENCE INSTALLATION**



**5 SILT SACK INLET SEDIMENTATION CONTROL DEVICE**

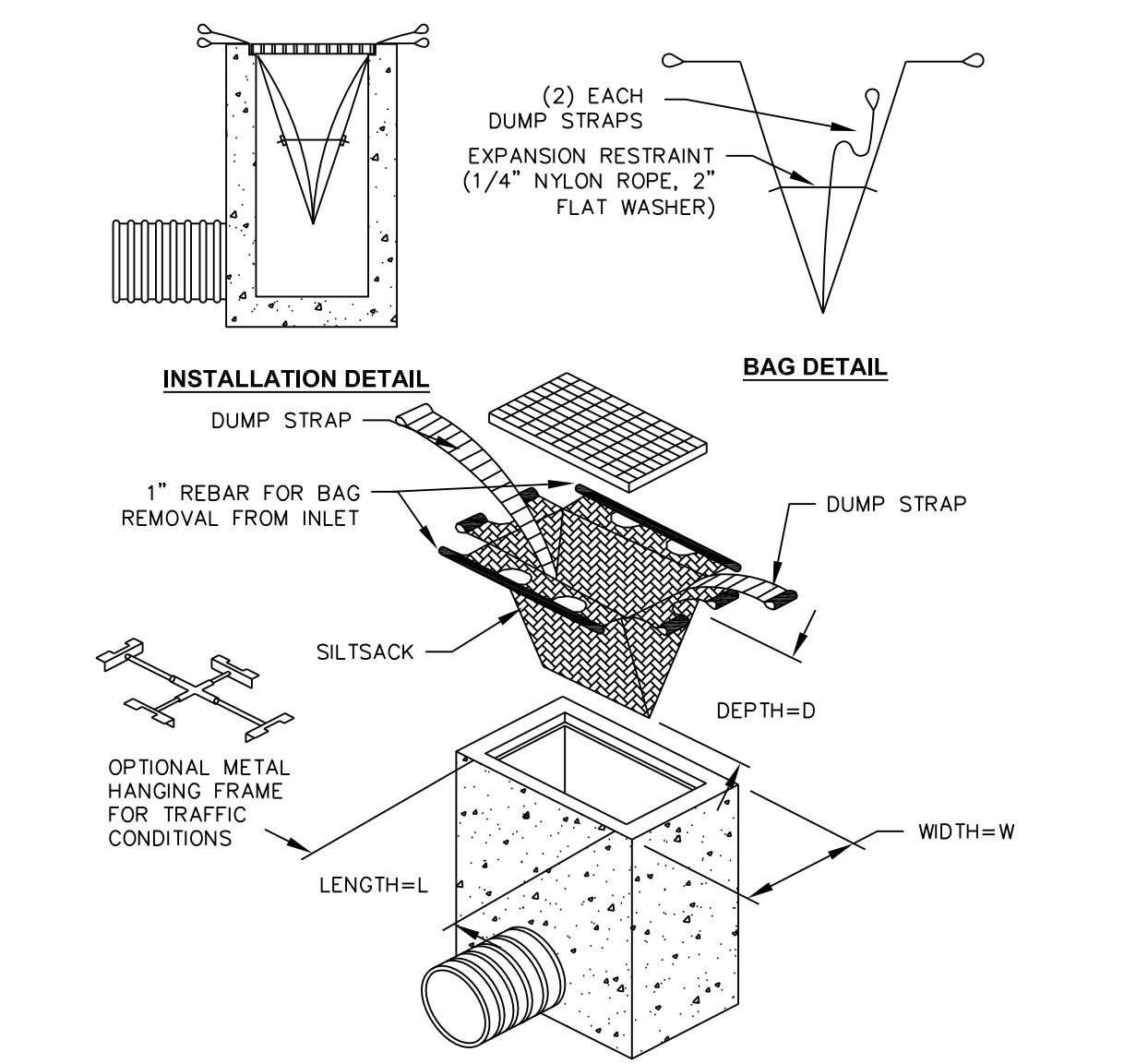


**6 INSTALLATION OF FIBER FILTRATION TUBES ON SLOPES**



**4 INSTALLATION OF JUTE NETTING ON SLOPES**

NOTE: IN AREAS ADJACENT TO PROPERTY LINE AND WITHIN 100' OF WETLAND BOUNDARY, ENKAMAT 7010 OR APPROVED EQUAL SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.



**5 SILT SACK INLET SEDIMENTATION CONTROL DEVICE**

**2 INSTALLATION OF JUTE NETTING IN GRASS SWALES**

| NO. | REVISIONS | DATE | APPROVAL |
|-----|-----------|------|----------|
|     |           |      |          |
|     |           |      |          |

DATE: \_\_\_\_\_

CARL N. STOPPER  
PROFESSIONAL ENGINEER  
CT PE # 13255

**CONNECTICUT RESOURCES RECOVERY AUTHORITY**  
HARTFORD LANDFILL  
HARTFORD, CONNECTICUT

**HARTFORD LANDFILL PHASE I ASH AREA FINAL CLOSURE**

**EROSION AND SEDIMENTATION CONTROL NOTES AND DETAILS**

DESIGN: MAB 03/02/09  
DRAWN: KDH 03/02/09  
CHECKED: CNS 03/02/09  
SCALE: NTS  
PROJECT: 153306-000260-000006  
DRAWING: EC-2