



STORMWATER POLLUTION CONTROL PLAN

Hartford Landfill Closure - Lined Ash Area

Prepared for



Hartford, Connecticut

Prepared by



Windsor, Connecticut

May 2007



STORMWATER POLLUTION CONTROL PLAN

Closure - Lined Ash Area Hartford Landfill

Prepared for
Connecticut Resources Recovery Authority
Hartford, Connecticut

Prepared by
TRC
Windsor, Connecticut

TRC Project No. 106811.0170.0000
May 2007

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1.0 INTRODUCTION

1.1 General

Construction activities (including other land-disturbing activities) that disturb one acre or more are regulated under the National Pollutant Discharge Elimination System (NPDES) stormwater program. Under the authority of the Clean Water Act, the State of Connecticut General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (General Permit), dated October 1, 2002 and modified on April 8, 2004, requires such activities to obtain coverage under the General Permit., and as a requirement of coverage under the permit, prepare and implement a Stormwater Pollution Control (SPCP) Plan.

The Connecticut Resources Recovery Authority (CRRA) is performing landfill closure activities for the Phase I Lined Ash Area (LAA) of the Hartford Landfill located at 180 Leibert Road in Hartford, Connecticut. This project meets the definition of a “construction activity” in accordance with the General Permit. A copy of the General Permit and associated General Permit Registration Form are included in Appendix A. This SPCP was prepared in accordance with the requirements of the General Permit. The purpose of this plan is to address pollution caused by soil erosion and sedimentation during and after construction and stormwater pollution caused by use of the site after construction is completed, including, but not limited to, parking lots, roadways and the maintenance of grassed areas. Erosion and sedimentation control requirements are also shown on the Drawings for this project.

During construction, the construction contractor(s) shall be responsible for implementing all elements of the erosion and sedimentation control measures as defined on the Drawings and in this SPCP. After construction, the permittee (CRRA) shall be responsible for maintaining these erosion and sedimentation control measures. Throughout the construction process, CRRA or CRRA’s agent and the Contractor shall periodically inspect all erosion control measures. A copy of the inspection form to be used is provided in Appendix B. This construction project will not be considered complete until all disturbed areas have been satisfactorily stabilized, all erosion has been repaired, and all temporary erosion control measures have been removed.

The general contractor and subcontractor(s) will be required to sign the certification statement provided in Appendix C of this plan.

1.2 Plan Organization

The SPCP is organized into six parts including a summary of the key provisions of the SPCP (Section 1.0); a site description (Section 2.0); a description of the construction sequence (Section 3.0); a description of the stormwater controls to be used to attain SPCP objectives (Section 4.0); inspection procedures (Section 5.0); and contractor requirements (Section 6.0).

1.3 Revisions to the SPCP

In accordance with the requirements of the General Permit, the SPCP will be amended whenever:

- (1) there is a change in contractors or subcontractors at the site; or
- (2) there is a change in design, construction, operation or maintenance at the site which has the potential for the discharge of pollutants to the waters of the State and which has not otherwise been addressed in the SPCP; or
- (3) if the actions required by the SPCP fail to prevent pollution.

The Commissioner of the CTDEP may also require to registrant to revise the SPCP if it does not meet one or more of the minimum requirements of the General Permit.

2.0 SITE DESCRIPTION

2.1 Site Location

The Hartford Landfill is located as indicated on the Site Location Map (Figure 1). The approximate 124-acre parcel is located in the North Meadows section of Hartford, Connecticut. The landfill consists of two distinct disposal areas: a Non-Processible Waste Disposal Area, also referred to as the Municipal Solid Waste (MSW) Area, and a Lined Ash Area (LAA). The MSW area occupies approximately 80 acres while the LAA occupies approximately 16 acres in the northern part of the site. The remaining area is occupied by site facilities located in the southern portion of the parcel and undisturbed land to the north of the LAA. This plan addresses the closure of the LAA. A plan indicating the location of the proposed construction activities relative to the remainder of the site is presented in the Drawings.

Access into the landfill area is via Leibert Road, which intersects Jennings Road south of the site (adjacent to Exit 33 of Interstate 91). The landfill parcel is bounded on the south by the City of Hartford Department of Public Works facility; on the west by Interstate 91; on the north by an undeveloped area, Weston Street and the Army Corps of Engineers (USACE) Flood Control Dike (herein referred to as the "USACE dike"); and on the east by the USACE dike. The Connecticut River is located to the east of the USACE dike.

Buildings and structures located on the site include the scale house, vehicle maintenance facility, leachate pre-treatment facility, vehicle wheel wash facility, ground water pumping system control building, leachate storage tank and landfill gas blower/flare station.

2.2 Description of the Construction Activity

The construction activity will consist of the closure of the LAA through the placement of a low-permeability cap over the disposal area. The closure activities will be conducted in two phases, with the initial phase consisting of closure of the western half of the ash disposal area (referred to as Cells 2 and 4) while filling continues in the eastern half of the area (referred to as Cells 1 and 3). After filling is complete in the eastern half of the disposal area, the final cap will be placed over that area.

The multi-layer cap will include a geomembrane covered by drainage and soil cover layers, with the final surface of the cap to be vegetated. The top surface of the cap will be constructed at a

minimum 4% slope, which will then transition to the steeper 3 horizontal to 1 vertical (3H:1V) side slopes. Erosion and sedimentation control features, as described in more detail later in this document, are incorporated into the final cover design to minimize potential impacts on stormwater quality during and after construction. Capping the LAA in two phases will allow for stormwater management and minimization of leachate generation in the completed western portion of the disposal area while filling continues in the remainder of the disposal area.

The first phase of construction activities (capping of the western area) will be conducted in a single phase to be completed in the 2007 construction season. The second phase of the capping project is estimated to be completed in 2009.

Construction activities associated with the closure of the MSW area of the landfill, which is scheduled to continue through 2007 and into the 2008 construction season, are addressed within a separate SPCP prepared by Fuss and O'Neill and dated January 2007.

Erosion control measures incorporated into the final LAA closure design were designed in accordance with the 2002 edition of the "Connecticut Guidelines for Soil Erosion and Sediment Control" (CT DEP Bulletin 34) as published by The Connecticut Council on Soil and Water Conservation in cooperation with the Connecticut Department of Environmental Protection. Installation details and detailed erosion and sediment control notes are provided in the Drawings. These notes are in accordance with DEP Bulletin 34.

With regard to CTDEP Natural Diversity Database, CRRA was issued a letter from Julie Victoria of the CTDEP on October 11, 2006 regarding threatened and endangered species as it pertains to the closure of the 80 acre mixed waste/interim ash portion of the landfill. The bald eagle and the red bat have been documented in the vicinity of the project. The CTDEP cited that as long as there was no disturbance of shoreline trees along the Connecticut River and no disturbance of large trees around the landfill site, then there would be no negative impact on these species. This project to cap the LAA does not involve any disturbance outside the active area of the LAA site and does not involve the removal of any trees.

2.3 Area of Disturbance

The general intent of the LAA final closure grading plan is to promote rapid runoff of stormwater while simultaneously preventing erosion. Stormwater draining from the top of the

landform to be capped will be allowed to run off as sheet flow. This sheet flow will then be intercepted and channelized at the top of the steeper side slopes in order to minimize erosion. The end result shall be the creation of a stable, mounded landform that will maximize surface water runoff and minimize infiltration.

The total disturbed area within the LAA will be approximately 16 acres, with the disturbance occurring in two separate phases of approximately 8 acres each. The drainage of the area will generally be characterized by sheet flow off the surface of the landfill, with stormwater from the flatter upper surface of the landfill surface intercepted by diversion swales and directed to a grouted riprap downchute. From the base of the landfill slopes, the stormwater from the western phase of the construction area will join with a portion of the drainage from the MSW area and will be conveyed by drainage swales, culverts and pipes to the stormwater detention basin located at the northeast corner of the LAA. Similarly, drainage from the eastern phase of the construction area will be conveyed by drainage swales, culverts and pipes to the stormwater detention basin. From the detention basin, stormwater drains to a swale leading to the northwest side of the Weston Street cul-de-sac, before entering a 24" pipe under the paved road and into Weston Brook. Weston Brook then discharges to the North Meadows Pond and Pumping Station, which discharges to the Connecticut River.

2.4 Landfill Cap Underdrain

The final cover for the LAA has been designed pursuant to State of Connecticut Solid Waste Regulations (RCSA 22a-209-14(i)). The multi-layer cap structure consists of a cap subbase material layer, a geomembrane barrier layer, an overlying geocomposite drainage layer, and a protection layer to be constructed of natural materials. Three alternate designs for the protection layer are proposed, two of which include a sand layer over the geocomposite drainage layer.

The geocomposite drainage layer that will overlay the geomembrane layer will consist of a tri-planar polyethylene drainage net with a non-woven polypropylene geotextile bonded to both sides of the net. The geocomposite drainage layer will serve as the primary drainage medium for water that infiltrates through the overlying layers of the landfill cap and has been designed to adequately convey the entire volume of water estimated to infiltrate the protection layer. If present, the sand layer over the geocomposite drainage layer would provide excess capacity to transport infiltrated precipitation away from the surface of the geomembrane. At the slope diversion swales,

located at the transition from the 4% top slope to the 3H:1V side slopes, the drainage from the geocomposite drainage layer will discharge directly into the half-pipe portion of the drainage swale, while any excess drainage from the overlying cover soil layers (including the sand drainage layer, if present) will discharge via a pea stone drain into the half-pipe slope diversion drainage swale. At the base of the slopes, the drainage layer(s) will discharge via a similar pea stone weep drain and then into the existing perimeter drainage channel.

2.5 Stormwater Discharge Information

Currently, precipitation that falls on the landfill property as a whole flows in one of three general directions. Stormwater falling on the MSW portion of the landfill generally either flows west and then south, discharging to a rectangular concrete channel owned by the Connecticut Department of Transportation (ConnDOT), or it flows east and then toward the southeast corner of the property where it discharges to a vegetated drainage ditch. Both of these drainages ultimately enter the North Meadows Pond, located to the south-southwest of the landfill site.

A very small area (approximately 1.5 acres) in the northwestern portion of the MSW landfill area and the entire LAA ultimately drain to the north, as previously described in Section 2.3. This flow discharges to Weston Brook, and is eventually conveyed to North Meadows Pond.

The proposed final landform of the capped LAA will not substantially alter the existing drainage patterns from that described above. Only slight adjustments to the relative drainage areas will result from the closure activities. As the inactive portions of the LAA are currently covered by a temporary membrane, total runoff volume and peak flow rates are not expected to increase significantly during the construction period. All proposed drainage features have been engineered to safely convey a 100-year storm event. After construction activities are complete within the LAA, the surface of the LAA will be vegetated with a hardy grass mix. For drainage calculations, a cover soil with slow infiltration rates (Hydrologic Group C) was assumed, with the average runoff coefficient for the top surface of the landfill (4% minimum slope) assumed to be 0.185 and the average runoff coefficient for the side slopes of the landfill (maximum 3H:1V slope) assumed to be 0.29.

The stormwater collection and management systems for the LAA were designed and permitted to handle the anticipated runoff from the capped closed landfill facility. These systems including the stormwater detention basin at the north end of the site were sized to handle the design

storm to ensure that the receiving drainage channel and Weston Brook would not be adversely impacted by the LAA facility. The permit for the LAA was issued by the CTDEP in 1997.

2.6 Receiving Waters

As described above, all stormwater runoff from the Hartford Landfill, including drainage from both the MSW area and the LAA, eventually flows into North Meadows Pond. Existing outfall locations are indicated in Figure 2. The North Meadows Pond and Pump Station are part of the Greater Hartford Flood Control System. Under normal conditions, the pond drains by gravity to the Connecticut River. During flood events, the pump station pumps water from the pond into the Connecticut River to prevent flooding inside the USACE dike.

The Connecticut River located to the east of the subject site is classified as SC/SB. The North Meadows Pond that is located south-southwest of the landfill receives drainage from a large watershed area and is classified as B/A. Weston Brook, which transfers the drainage from the LAA to North Meadows Pond, is located north and upgradient of the landfill. Weston Brook classification status is not shown on the maps likely because it is too small to classify. It is therefore assumed to be SA. Meadow Brook, located to the north of the Hartford Landfill drainage area and not impacted by surface water drainage from the landfill, and is classified as SC/SB.

A map of wetlands in the vicinity of the Hartford Landfill, as mapped by the U.S. Fish and Wildlife Service, is provided in Appendix E. These include tidal riverine wetlands along the Connecticut River and palustrine forested wetland along Meadow Brook, the Connecticut River, and in the undeveloped area north of the Phase I Lined Ash Area. It is likely that before the construction of the USACE dike, the wetland areas north of the Phase I Lined Ash Area were connected to the Meadow Brook/Connecticut River riverine wetlands. Currently the USACE dike, along with Interstate 91 to the west and the landfill to the south, isolate the wetlands and prevent floodwaters from either the Connecticut River or Meadow Brook from influencing the water regime of the wetland.

3.0 CONSTRUCTION SEQUENCE

While the western portion of the LAA has reached final elevations and is ready for capping, the eastern half of the LAA will continue to receive ash residue until final grades are achieved. Therefore, the closure will be phased to allow closure of the western half of the LAA while the eastern half continues to be operational. Once the eastern half reaches its final grades, closure activities will begin in the eastern half of the LAA.

The first phase of LAA closure activities will be completed in a single construction season. Access to the construction area will be via a partially paved road current used by disposal vehicles. It is anticipated that the second phase of closure (i.e., closure of the eastern half of the LAA) will also be completed in a single construction season, most likely in 2009.

During construction, three main activities will occur in a sequential fashion:

- rough grading and cap base preparation;
- geomembrane liner installation; and
- cover soil placement and stabilization.

As the cap construction will be conducted in two separate phases, with the area to be capped in each phase less than 10 acres, the area of disturbance at any given time will be less than 10 acres. This applies to both rough grading and base preparation prior to the placement of the geomembrane liner and the placement of cover soil prior to the installation of stabilization measures (e.g. erosion control blanket or turf reinforcement).

4.0 CONTROLS

The following sections address the controls and measures to be implemented on this site both during and after construction to minimize stormwater pollution to the waters of the State of Connecticut.

4.1 Erosion and Sediment Controls

The goal of this plan is to control erosion on the site and to control movement of sediment into adjacent wetlands, watercourses or storm sewer systems. Note that erosion and sediment controls shall conform to the requirements of the “Connecticut Guidelines for Soil Erosion and Sediment Control,” dated May 2002, which will hereafter be referred to as the Guidelines.

A stormwater detention basin already exists at the northwest corner of the landfill, with all drainage from the LAA as well as some of the drainage from the MSW area (approximately 1.5 acres upon closure of the MSW area) draining through this basin prior to off-site discharge. This basin will continue to provide stormwater detention during and after construction of the LAA final cover. With an estimated capacity of at least 2,250 cubic yards (27,600 square foot area and depth of at least 2.2 feet, based on existing topography), the basin would support drainage from at least 16.8 acres of disturbed area. Based on the General Permit requirement of providing a minimum of 134 cubic yards of water storage per disturbed acre drained (Section 6(b)(6)(C)(i)(2) of the General Permit, this basin will easily support the detention of stormwater from each of the LAA closure phases (during which approximately 8 acres of area will be disturbed in each phase).

When construction is complete, CRRA will continue to monitor stormwater discharges as required by the “General Permit for the Discharge of Stormwater from Industrial Activities”. If monitoring results indicate additional treatment is required to meet applicable stormwater quality standards, appropriate measures will be taken.

To meet the goals of this plan, stabilization, structural and maintenance practices shall be implemented by the construction contractor/subcontractors (herein after referred to collectively as the Contractor) as outlined below.

4.1.1 Stabilization Practices

Both temporary and permanent stabilization practices shall be implemented to minimize

erosion of soil from the disturbed site areas during and after construction. When construction activities have permanently ceased or if they are temporarily suspended for more than thirty days 30, or when final grades are reached in any portion of the site, stabilization practices shall be implemented within ten days.

The stabilization practices to be implemented during the construction of the proposed development are as follows:

- **Limitation of Disturbance** – Disturbed earth surfaces will be limited to areas of less than 10 acres during all aspects of the LAA closure construction activities.
- **Temporary Vegetative Cover** – Due to the relatively short nature of each phase of the proposed project activities, it is not likely that temporary stabilization will be required. However, if any exposed areas or stockpiles will be inactive for more than 30 days and have not yet reached finished grades, they shall receive a temporary vegetative cover. The temporary vegetative cover shall consist of annual rye grass. The rye grass shall be planted at a rate of not less than 1 pound per 1,000 square feet. Also, fertilizer shall be applied at a rate of 7.5 pounds per 1,000 square feet of 10-10-10 or equivalent and limestone shall be applied at a rate of 90 pounds per 1,000 square feet. Seed bed preparation and seeding shall be conducted as outlined in the Guidelines.
- **Permanent Vegetative Cover** – Permanent vegetation shall be hydroseeded on all exposed areas within ten days of final grading. The final vegetative cover shall consist of a grass seed mix consisting of bentgrass, fescue, trefoil and ryegrass as defined in the project specifications. Acceptable planting periods are from April 1 through June 15 and September 1 through October 15.
- **Flexible growth medium** – A flexible growth medium (FGM) (Flexterra or equivalent), made of long-strand, thermally processed wood fibers, crimped interlocking fibers, and additives, shall be hydraulically applied to all surfaces after placement of final cover and seeding. FGM forms a bond with the soil surface to create a continuous, porous, absorbent and erosion-resistant blanket that allows for rapid germination and accelerated plant growth.

4.1.2 Structural Practices

Structural practices shall be implemented to control the movement of sediment and minimize any discharge of pollutants from the site. The structural practices to be implemented during construction are as follows:

- **Filtration barriers** - Silt fence, backed by hay bales, will be installed along the toe of all critical slopes (e.g., at the toe of the landfill slope and also along the southern edge of the

cap construction area). The silt fence and hay bales will reduce downgradient siltation by acting as sediment filters. These filters will remove sediment transported by sheet flow from stormwater runoff.

- **Half-Pipe Slope Diversion Drainage Swales** – Half-pipe slope diversion swales will be constructed near the transition from the 4% top slopes to the 3 horizontal to 1 vertical (3H:1V) side slopes to intercept sheet flow and direct it to vertical downchutes. Each swale will be fitted with a 36-inch diameter corrugated galvanized coated steel half-pipe to transfer the drainage along the swale without erosion. The swales are graded with a two percent slope. The swales have been sized to maintain freeboard in accordance with the Guidelines while conveying the peak discharge from the design storm.
- **Fiber filtration tubes(with polymer)** – Fiber filtration tubes (FFTs) will be placed horizontally across the 3H:1V slopes at various locations to minimize the migration of soil particles into downgradient drainage control devices. The FFTs shall consist of an engineered composite of wood fibers and performance-enhancing polymers encased within cylindrical tubes of a heavy-duty, knitted, high density polyethylene mesh. The FFTs allow water to flow freely through the tube matrix while providing three-dimensional filtration of soil particles. The FFTs also facilitate the release of flocculants to coagulate and aggregate suspended soil particles. FFTs will be implemented immediately upgradient of critical drainage features (e.g., the half-pipe slope diversion swales and at the base of the 3H:1V side slope, upslope of the cap underdrain's pea stone drainage point) and at vertical intervals of 40 feet or less between the half-pipe diversion swales and the area in which the Green Armor System will be implemented (see below).
- **Erosion control blankets** – Jute netting shall be installed on all final slopes steeper than 3H:1V in grade, including the downhill slope of the diversion drainage swales described above. After placement of final cover on the 3H:1V side slopes, downgradient of the middle row of the final FFT, Green Armor System (Enkamat 7010 Turf Reinforcement Mat (TRM) infilled with Flexterra FGM) or equivalent shall be installed to minimize erosion from the lower portion of the 3H:1V side slope and allow growth of permanent vegetative cover. These controls also retain soil moisture and modify soil temperature to further enhance growth.
- **Grouted Riprap Downchutes** - Downchutes will collect the flow from the half-pipe diversion swales and underdrains and convey it down the side slopes of the landfill and into the existing riprap-lined perimeter drainage swales. Downchutes will be constructed at the northwest corner of the initial western cap construction area and at the northeast corner of the secondary eastern cap construction area. The bottom surface of the downchutes will be lined with a 40-mil textured geomembrane to prevent water from infiltrating to the underlying landfill cap materials.
- **Stone Check Dams** – Stone check dams will be placed in the existing riprap lined perimeter drainage swale to reduce the velocity of concentrated stormwater flows. Check

dams can also trap small amounts of sediment, should any sediment bypass the upgradient sediment control devices.

- **Inlet Sedimentation Control** – Drainage from the existing perimeter drainage swale along the western toe of the landfill slope drains to existing catch basins. During construction, these catch basins will be protected by silt sack inlet sediment control devices. These devices utilize high strength, high flow, woven geotextile filter fabric to prevent silt and sediment from entering the catch basins. The fabric is in the shape of a cone-shaped sack that fits under the storm drain grate.

4.1.3 Maintenance

The erosion and sediment controls must be maintained in a condition that will protect the resource areas from pollution during site construction. The Contractor shall conduct the following maintenance to ensure the proper performance of erosion and sediment control measures during construction.

- **Temporary and Permanent Vegetation:** Any eroded areas shall be repaired by filling to finished grades, replacing vegetative support material, and seeding, fertilizing and liming, as specified for temporary and permanent stabilization.
- **Filtration Barriers, Fiber Filtration Tubes and Inlet Sedimentation Control:** Silt fence, haybales, fiber filtration tubes and silt sacks shall be inspected within 24 hours of the end of any rainfall that is 0.1 inches or greater. Any required repairs and/or cleaning of sediment shall be made within 24 hours. Should any of these features become ineffective while still needed and require replacement, they shall be replaced promptly.

Should sediment deposits reach approximately one-half the height of the silt fence barrier, they shall be removed and disposed of on-site as non-structural fill. Any sediment deposits remaining in place after the barrier is no longer required shall be removed and placed in a stockpile surrounded by silt fence in a location suitable to CRRA.

- **Swales, Downchutes, and Detention Basins:** Accumulated sediment shall be removed from the affected area(s) when sediment reaches a depth of 6 inches. Removed sediment shall be used to complete non-structural fill areas during project. Once the site has been stabilized, sediment removed at the end of construction shall be stockpiled on-site, surrounded by silt fence, in a location approved by CRRA.

4.2 Dewatering Wastewaters

Should excavation dewatering become necessary for this project, there shall be no discharge directly into wetlands, watercourses, or storm sewer structures. Proper methods and devices shall be

utilized to the extent permitted by law, such as pumping water into a temporary sedimentation trap, providing surge protection at the inlet and outlet of pumps, floating the intake of the pump, or other methods to minimize and retain the suspended solids. If a pumping operation causes turbidity problems, the operation shall cease until feasible means of controlling turbidity are determined and implemented.

4.3 Post-Construction Stormwater Management

At the end of construction, all areas disturbed by construction activities shall be stabilized. As a result, the potential for erosion at this site after construction is minimal. Grassed areas will also serve as a filter to remove any sediment from runoff if permanently stabilized areas are properly maintained.

The goal of the post-construction stormwater management is to remove 80% of the total suspended solids from the stormwater runoff.

4.4 Vehicle Tracking and Dust Control

The access roads to be used by construction vehicles when entering and leaving the site are shown on the Drawings. The Contractor is required to immediately remove any material transported outside the contract boundaries and deposited on public roadways. The existing wheel wash facility, which is located along the access road to be used by Contractor vehicles to access the site, will be made available for Contractor use should off-site tracking of materials become an issue. The Contractor shall also provide water or alternate means of dust suppression as necessary to control dust from construction activities.

5.0 INSPECTION

CRRA or CRRA's agent and qualified personnel provided by the Contractor shall inspect disturbed areas of the construction activity that have not been permanently stabilized, structural control measures, and locations where vehicles enter or exit the site at least once every seven calendar days and within 24 hours of the end of a storm that generated 0.1 inches during a twenty-four hour period. Where areas have been temporarily or finally stabilized, inspections shall be conducted at least once every month for three 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 identified in the plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be visually 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 tracking.

Based on the results of the inspections, the description of potential sources and pollution prevention measures identified in this plan shall be revised as appropriate by CRRA or its assigned agent 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 SPCP within 3 calendar days following the inspection.

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 SPCP, and actions taken shall be made and retained as part of the SPCP for at least three years after the date of inspection. The report shall be signed by CRRA or its assigned agent. A blank copy of the inspection report is provided in Appendix B.

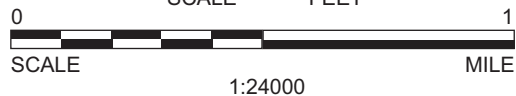
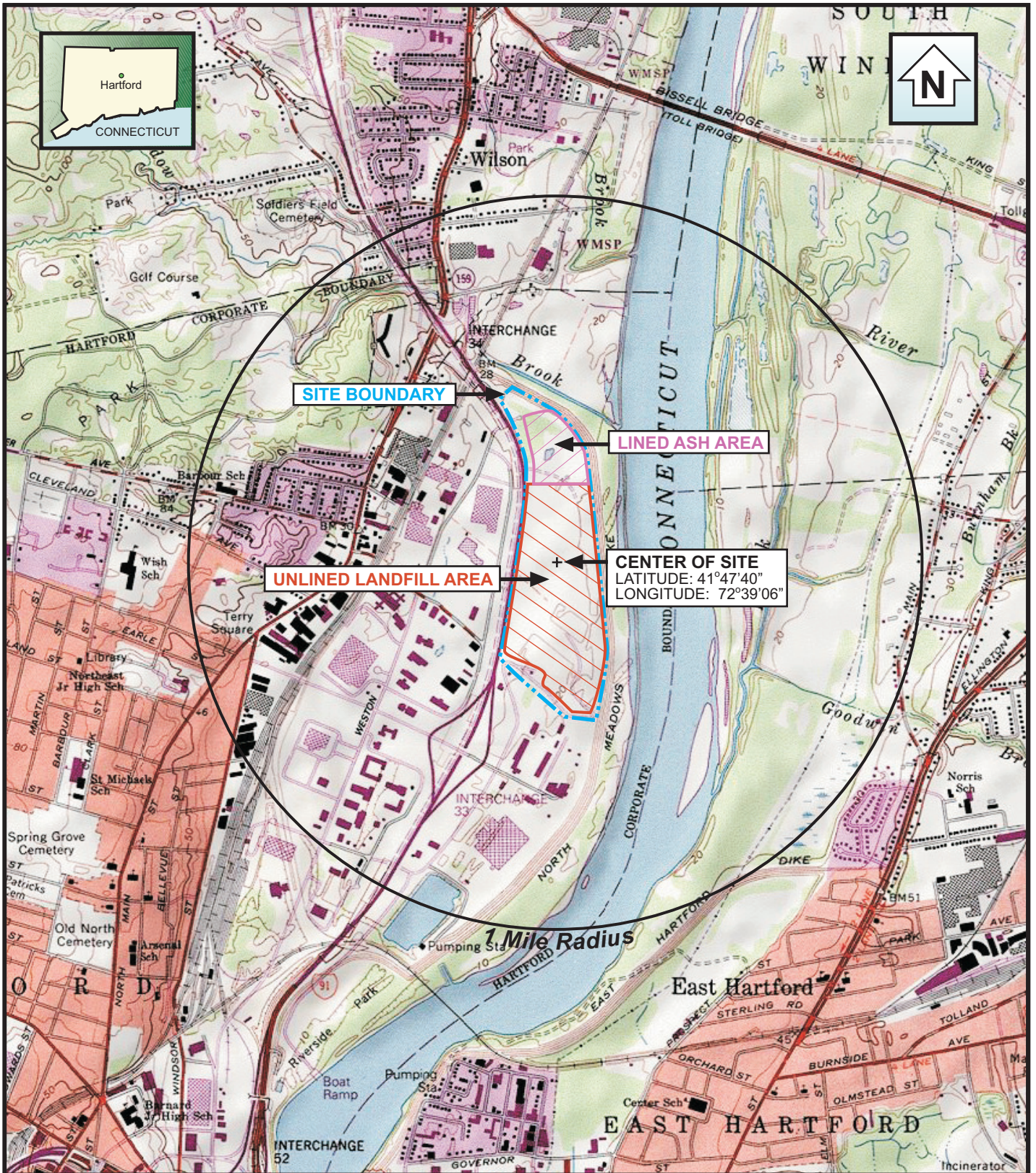
6.0 CONTRACTORS

6.1 General

All contractors and subcontractors who will perform actions on site that may reasonably be expected to cause or have the potential to cause pollution of the waters of the State are identified in Appendix C.

6.2 Certification Statement

All contractors and subcontractors must sign the certification included in Appendix C. All certifications shall be included in this Stormwater Pollution Control Plan.



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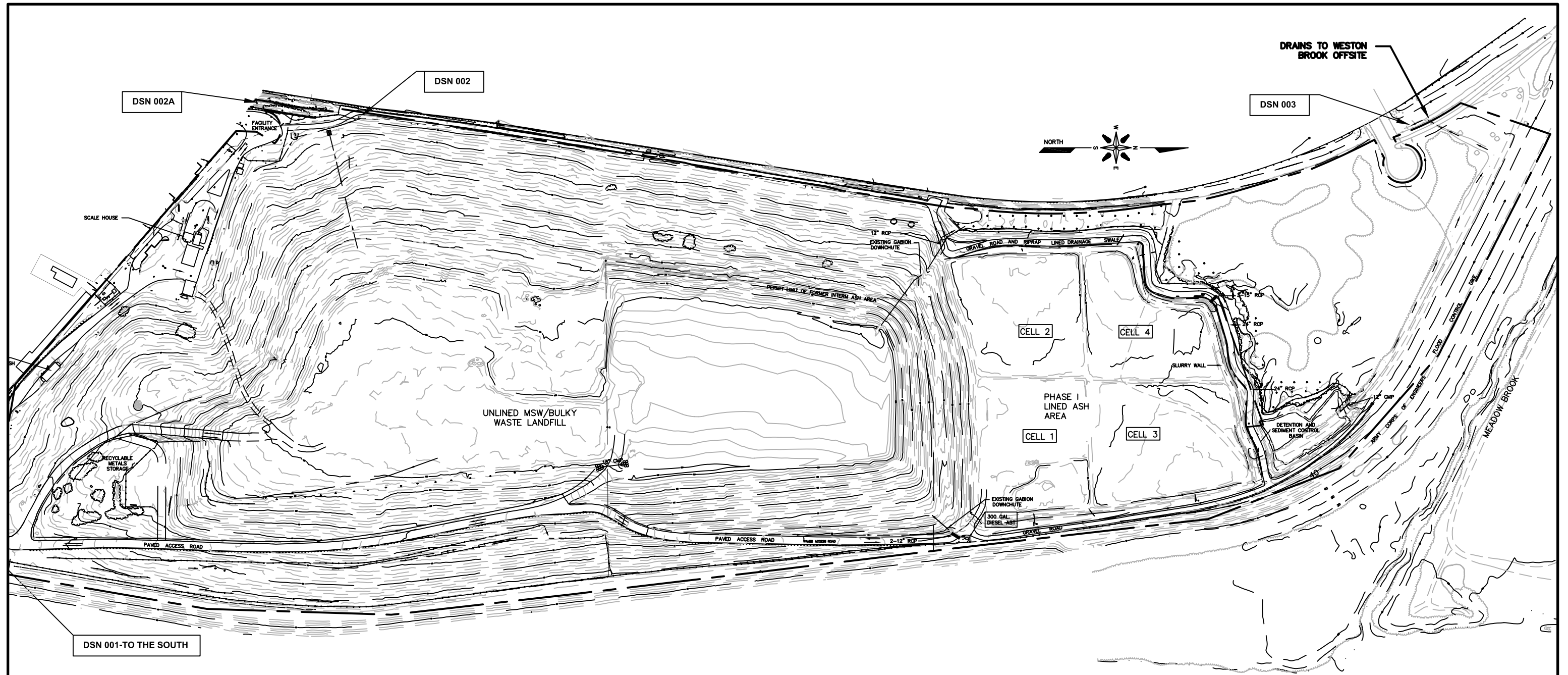
CRRA HARTFORD LANDFILL
HARTFORD, CONNECTICUT

FIGURE 1
SITE LOCATION MAP

Date: 05/07

Project No. 106811.0170.0000

BASE CREATED WITH TOPO™ © 1996 WILDFLOWERS PRODUCTIONS, www.topo.com
7.5' USGS TOPOGRAPHIC MAP OF HARTFORD NORTH QUADRANGLE



MAP REFERENCES

REFERENCE IS MADE TO AERIAL TOPOGRAPHY BY GOLDEN AERIAL SURVEYS, INC. FLOWN ON APRIL 7, 1998 AND SUPPLEMENTED BY FIELD TOPOGRAPHY USING THE GLOBAL POSITIONING SYSTEM BY CONKLIN & SOROKA, INC. ON JULY 6, 1998.

BOUNDARY TAKEN FROM A-2 SURVEY PLAN ENTITLED "SURVEY SHOWING LAND LEASED BY CONNECTICUT RESOURCE RECOVERY AUTHORITY FROM CITY OF HARTFORD IN THE NORTH MEADOWS, EAST SERVICE RD., HARTFORD, CONNECTICUT, SCALE 1" = 100', PROJECT NO. 90-336, SHT. NO. 1 & 2 OF 2" PREPARED BY FUSS & O'NEILL, INC.

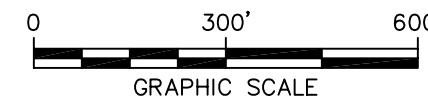
J:\CAD\106811\000170\000006\FIG-2.dwg Layout:FIG 2 May 08, 2007-2:30PM KHOLLENBECK



21 Griffin Road North
Windsor, CT 06095
(860) 298-9692

CONNECTICUT RESOURCES RECOVERY AUTHORITY
HARTFORD LANDFILL

**FIGURE 2
EXISTING STORMWATER
OUTFALL LOCATIONS**



Date: 02/07

Project No. 106811-000170-000006

Appendix A

Stormwater Discharge Registration Form and
General Permit for the Discharge of Stormwater and Dewatering
Wastewaters from Construction Activities

Copy of Signed Stormwater Discharge Registration Form
to Be Inserted Here

Appendix B
Inspection Report Form

INSPECTION REPORT FORM

**CONNECTICUT RESOURCES RECOVERY AUTHORITY
LINED ASH AREA CLOSURE
HARTFORD LANDFILL
HARTFORD, CONNECTICUT**

Date of Inspection _____

Inspector's Name _____

Employed By _____

Circle Type of Inspection: Monthly / Weekly / Within 24 hrs of Storm

Stabilization Practices ⁽¹⁾

Major Observations or Deficiencies	Actions Taken	Date Completed

Structural Practices ⁽²⁾

Major Observations or Deficiencies	Actions Taken	Date Completed

Signature of Inspector

Date

Signature of Owner

Date

⁽¹⁾Stabilization practices to be inspected include: grading, disturbed area, temporary vegetative cover, permanent vegetative cover.

⁽²⁾Structural practices to be inspected include: filtration barriers, half-pipe slope diversion drainage swales, fiber filtration tubes, erosion control blankets, downchutes, check dams, inlet sedimentation controls and detention basin.

Appendix C

Contractor Identification and Certification

**CONNECTICUT RESOURCES RECOVERY AUTHORITY
LINED ASH AREA CLOSURE
HARTFORD LANDFILL
HARTFORD, CONNECTICUT**

GENERAL CONTRACTOR

“I certify under penalty of law that I have read and understand the terms and conditions of the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities. I understand that as a contractor or subcontractor at the site, I am authorized by this general permit, and must comply with the terms and conditions of this general permit, including but not limited to the requirements of the Stormwater Pollution Control Plan prepared for the site.”

Signed: _____

Date: _____

Printed Name: _____

Telephone: _____

Title: _____

Firm: _____

Address: _____

**CONNECTICUT RESOURCES RECOVERY AUTHORITY
LINED ASH AREA CLOSURE
HARTFORD LANDFILL
HARTFORD, CONNECTICUT**

SUBCONTRACTOR

“I certify under penalty of law that I have read and understand the terms and conditions of the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities. I understand that as a contractor or subcontractor at the site, I am authorized by this general permit, and must comply with the terms and conditions of this general permit, including but not limited to the requirements of the Stormwater Pollution Control Plan prepared for the site.”

Signed: _____

Date: _____

Printed Name: _____

Telephone: _____

Title: _____

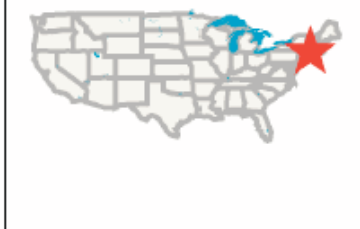
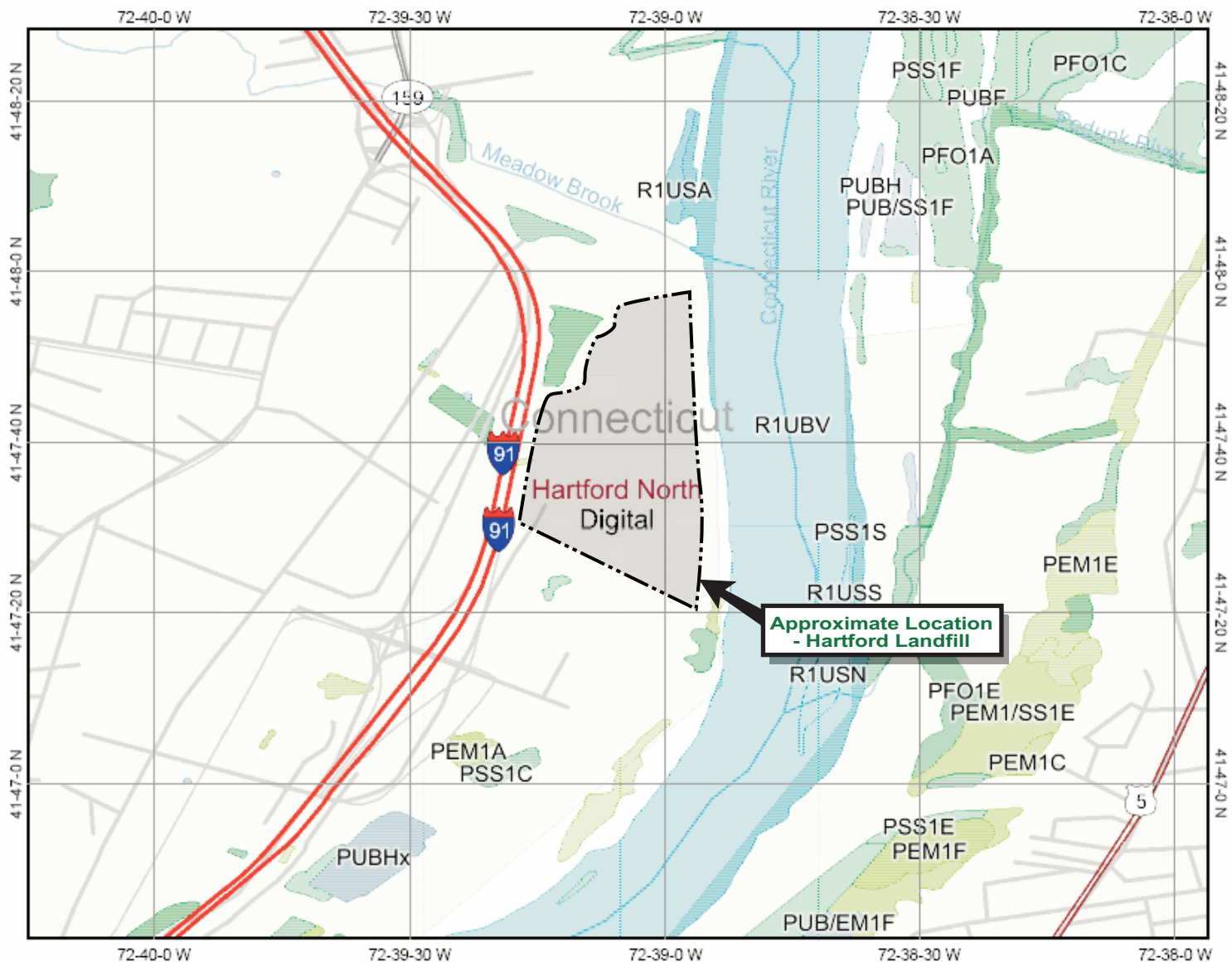
Firm: _____

Address: _____

Appendix D

USFWS Mapped Wetland Locations

Hartford Landfill Area Wetlands



Legend

CONUS_wet_scan

- 0
- 1
- Out of range

Roads

- Interstate
- Major Roads
- Other Road
- Interstate
- State highway
- US highway

Cities

- USGS Quad Index 24K

Lower 48 Wetland Polygons

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

Lower 48 Available Wetland Data

- Non-Digital
- Digital
- No Data
- Scan

NHD Streams

- NHD Streams

Counties 100K

- Counties 100K

Urban Areas 300K

- Urban Areas 300K

States 100K

- States 100K

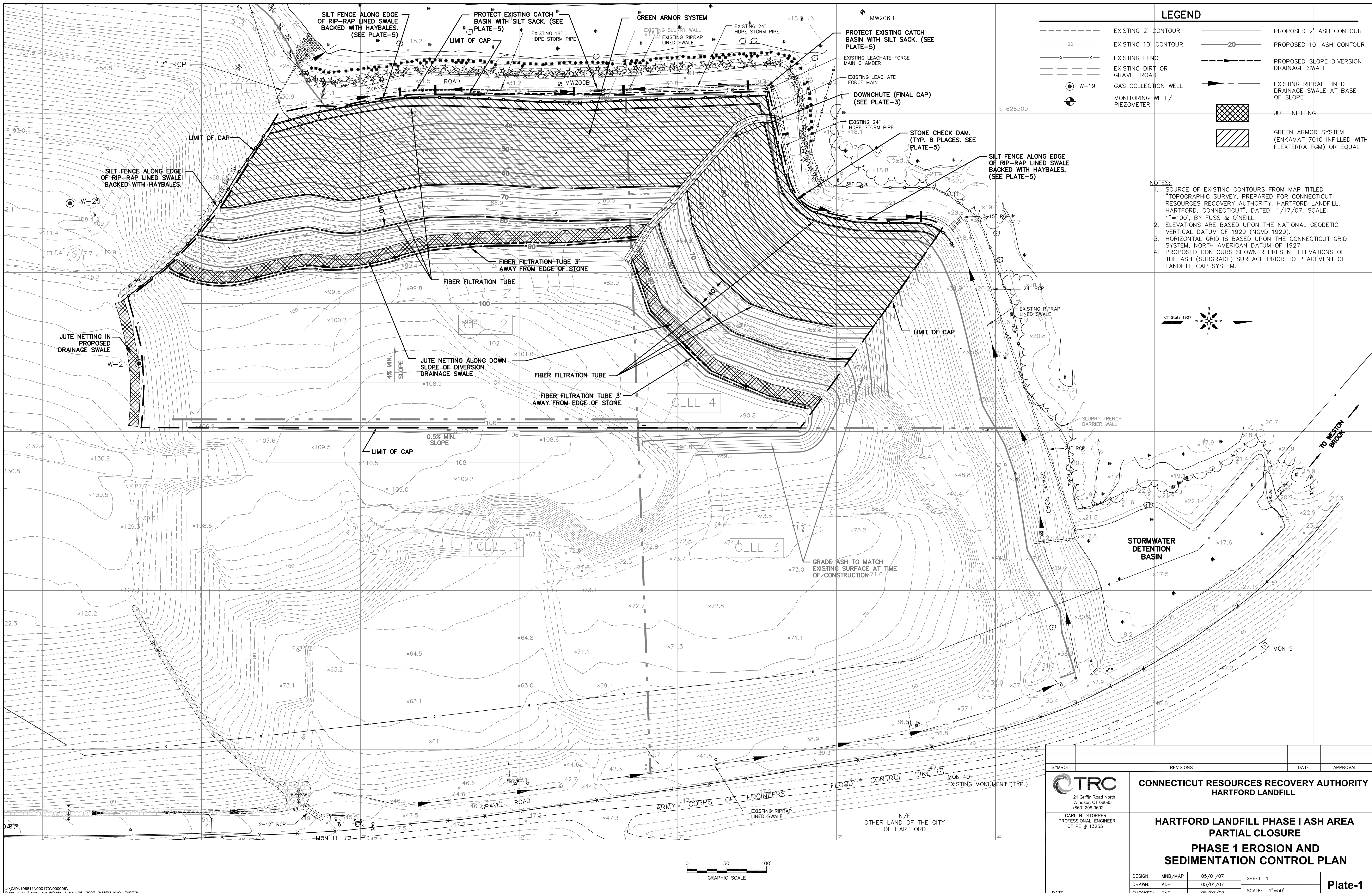
South America

- South America

Scale: 1:30,799

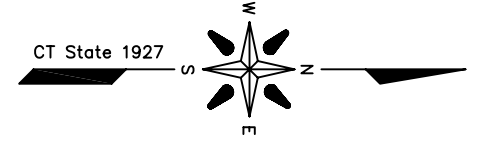
Map center: 41° 47' 35" N, 72° 39' 5" W

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

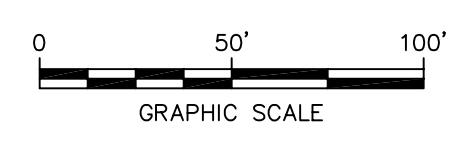


LEGEND			
	EXISTING 2' CONTOUR		PROPOSED 2' ASH CONTOUR
	EXISTING 10' CONTOUR		PROPOSED 10' ASH CONTOUR
	EXISTING FENCE		PROPOSED SLOPE DIVERSION DRAINAGE SWALE
	EXISTING DIRT OR GRAVEL ROAD		EXISTING RIPRAP LINED DRAINAGE SWALE AT BASE OF SLOPE
	GAS COLLECTION WELL		JUTE NETTING
	MONITORING WELL/PIEZOMETER		GREEN ARMOR SYSTEM (ENKAMAT 7010 INFILLED WITH FLEXTERRA FGM) OR EQUAL

- NOTES:
- SOURCE OF EXISTING CONTOURS FROM MAP TITLED "TOPOGRAPHIC SURVEY, PREPARED FOR CONNECTICUT RESOURCES RECOVERY AUTHORITY, HARTFORD LANDFILL, HARTFORD, CONNECTICUT", DATED: 1/17/07, SCALE: 1"=100', BY FUSS & O'NEILL.
 - ELEVATIONS ARE BASED UPON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 1929).
 - HORIZONTAL GRID IS BASED UPON THE CONNECTICUT GRID SYSTEM, NORTH AMERICAN DATUM OF 1927.
 - PROPOSED CONTOURS SHOWN REPRESENT ELEVATIONS OF THE ASH (SUBGRADE) SURFACE PRIOR TO PLACEMENT OF LANDFILL CAP SYSTEM.

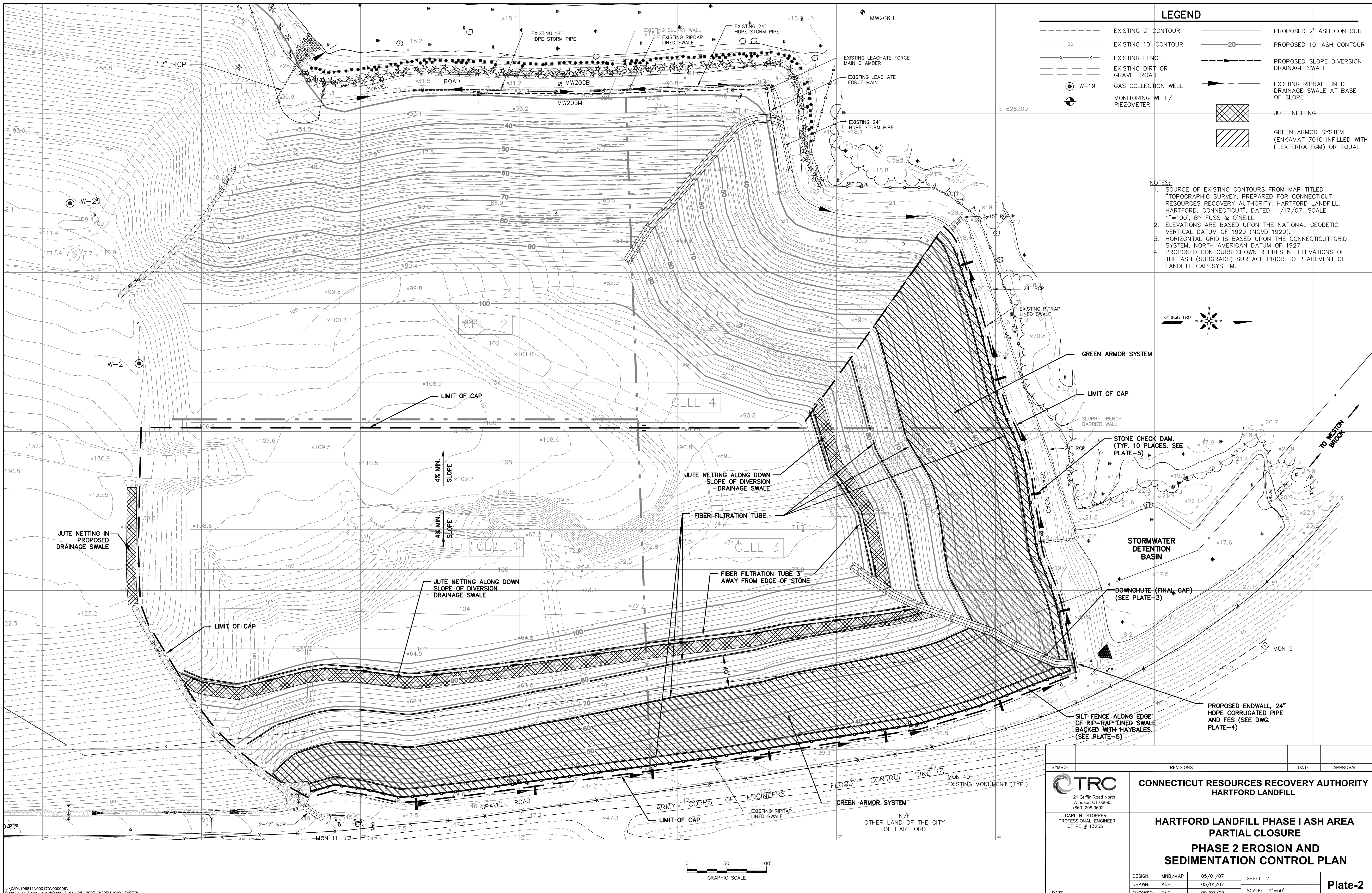


SYMBOL	REVISIONS	DATE	APPROVAL
 CONNECTICUT RESOURCES RECOVERY AUTHORITY HARTFORD LANDFILL			
HARTFORD LANDFILL PHASE I ASH AREA PARTIAL CLOSURE PHASE 1 EROSION AND SEDIMENTATION CONTROL PLAN			
DESIGN: MNB/MAP	05/01/07	SHEET 1	Plate-1
DRAWN: KDH	05/01/07	SCALE: 1"=50'	
CHECKED: CNS	05/07/07		



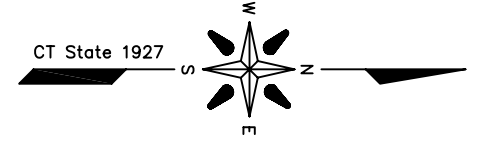
N/F OTHER LAND OF THE CITY OF HARTFORD

TO WESTON BROOK

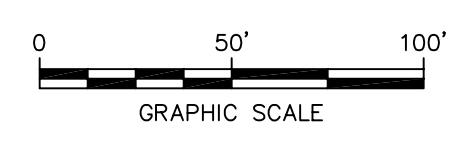


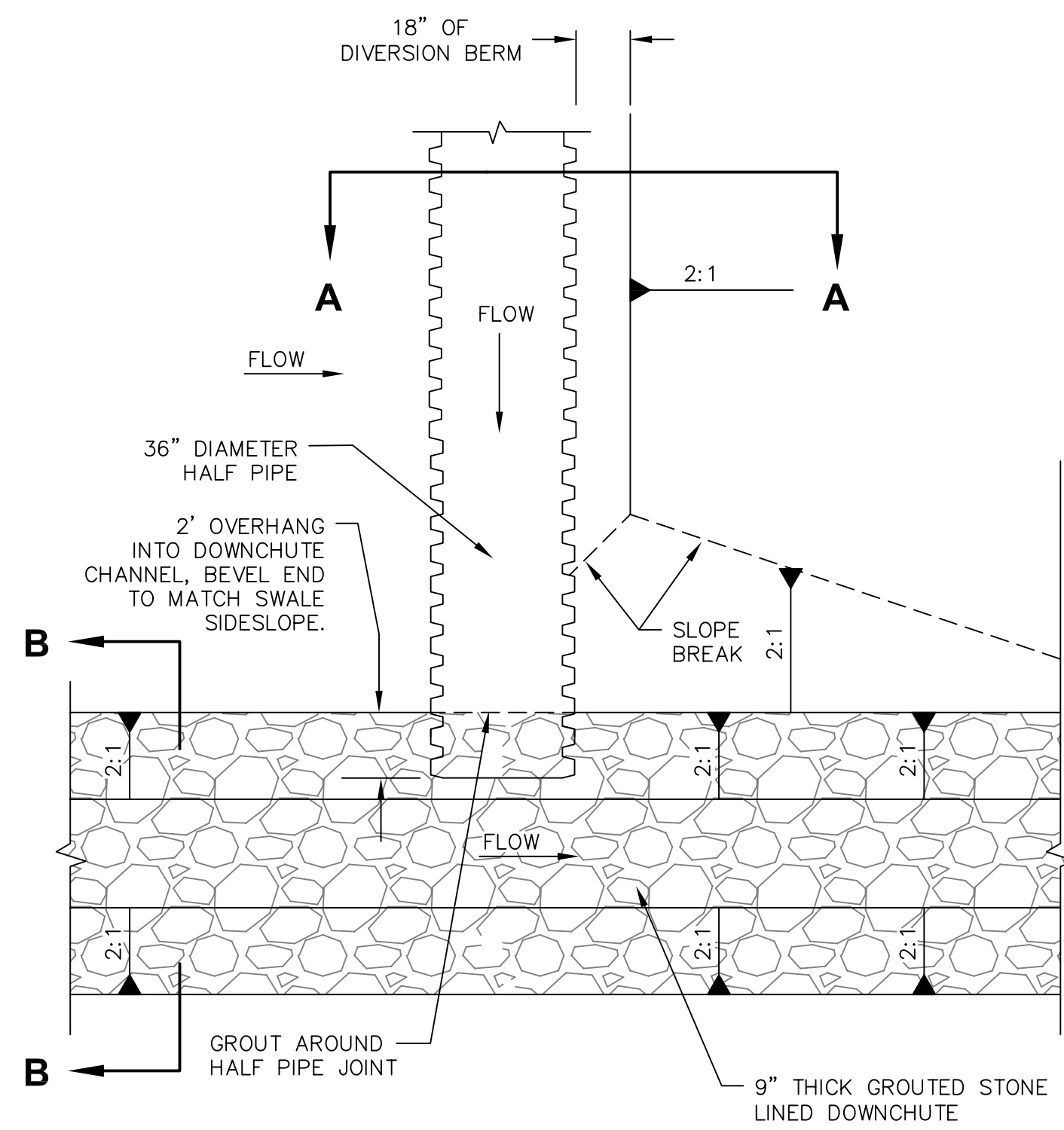
LEGEND			
	EXISTING 2' CONTOUR		PROPOSED 2' ASH CONTOUR
	EXISTING 10' CONTOUR		PROPOSED 10' ASH CONTOUR
	EXISTING FENCE		PROPOSED SLOPE DIVERSION DRAINAGE SWALE
	EXISTING DIRT OR GRAVEL ROAD		EXISTING RIPRAP LINED DRAINAGE SWALE AT BASE OF SLOPE
	W-19 GAS COLLECTION WELL		JUTE NETTING
	MONITORING WELL/PIEZOMETER		GREEN ARMOR SYSTEM (ENKAMAT 7010 INFILLED WITH FLEXITERRA FGM) OR EQUAL

- NOTES:
- SOURCE OF EXISTING CONTOURS FROM MAP TITLED "TOPOGRAPHIC SURVEY, PREPARED FOR CONNECTICUT RESOURCES RECOVERY AUTHORITY, HARTFORD LANDFILL, HARTFORD, CONNECTICUT", DATED: 1/17/07, SCALE: 1"=100', BY FUSS & O'NEILL.
 - ELEVATIONS ARE BASED UPON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 1929).
 - HORIZONTAL GRID IS BASED UPON THE CONNECTICUT GRID SYSTEM, NORTH AMERICAN DATUM OF 1927.
 - PROPOSED CONTOURS SHOWN REPRESENT ELEVATIONS OF THE ASH (SUBGRADE) SURFACE PRIOR TO PLACEMENT OF LANDFILL CAP SYSTEM.



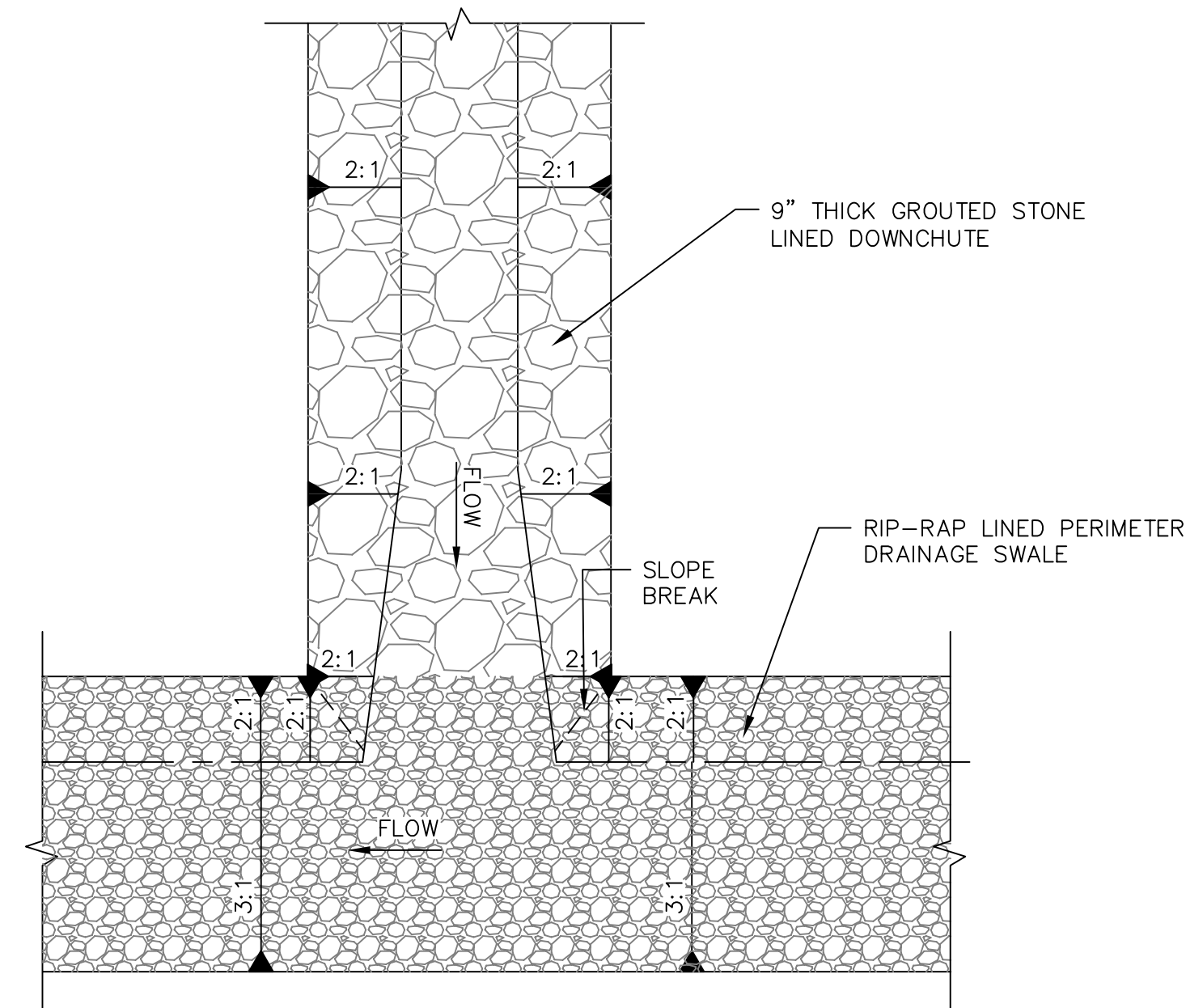
<p>21 Griffin Road North Windsor, CT 06095 (860) 298-9692</p> <p>CARL N. STOPPER PROFESSIONAL ENGINEER CT PE # 13255</p>	<p>REVISIONS</p>		DATE	APPROVAL
	<p>CONNECTICUT RESOURCES RECOVERY AUTHORITY HARTFORD LANDFILL</p>			
<p>HARTFORD LANDFILL PHASE I ASH AREA PARTIAL CLOSURE PHASE 2 EROSION AND SEDIMENTATION CONTROL PLAN</p>				
DESIGN: MNB/MAP	05/01/07	SHEET 2		<p>Plate-2</p>
DRAWN: KDH	05/01/07	SCALE: 1"=50'		
CHECKED: CNS	05/07/07			





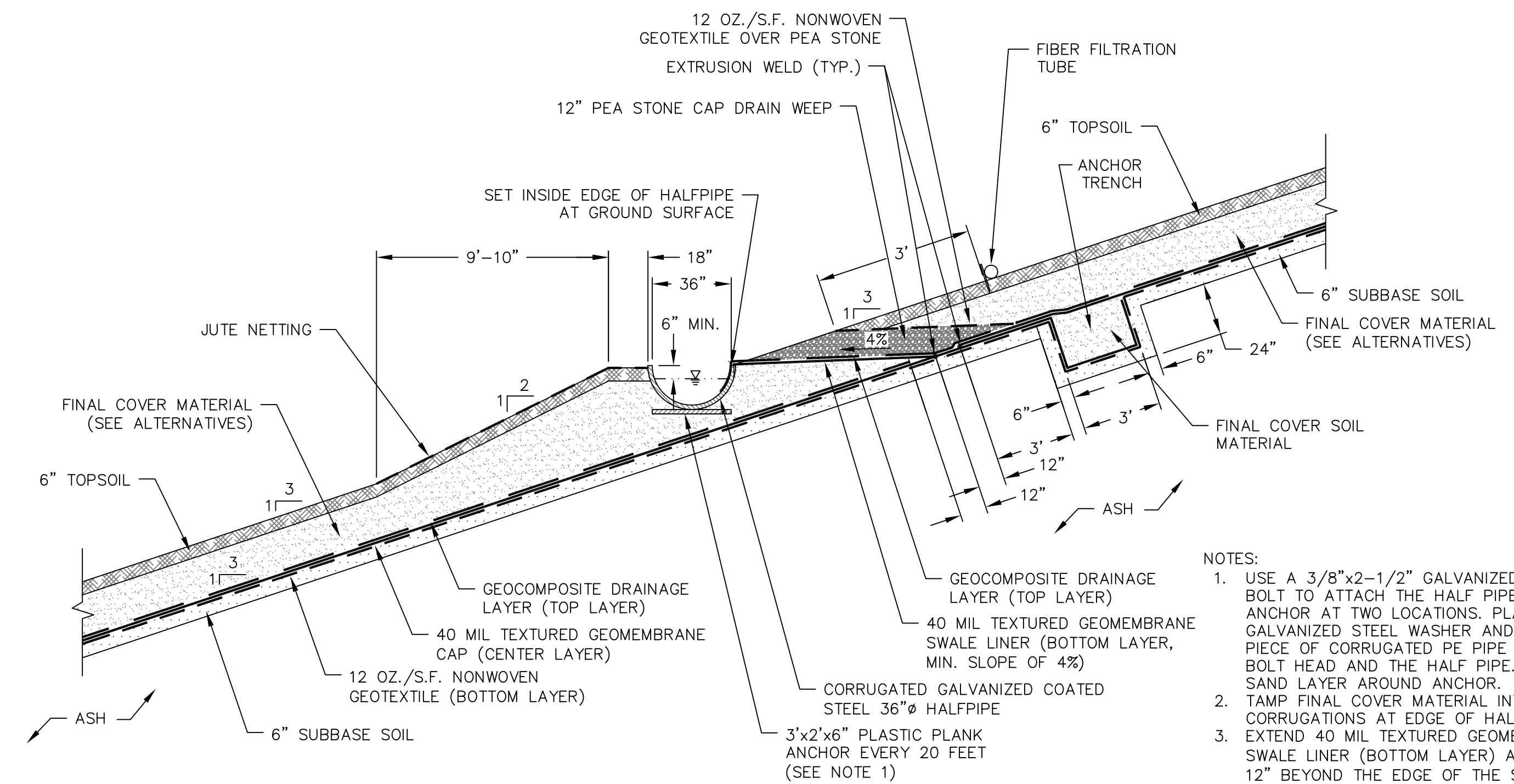
TYPICAL PLAN-HALF PIPE SWALE INTO DOWNCHUTE SWALE

NTS



RIP-RAP LINED - DOWNCHUTE SWALE INTO PERIMETER DRAINAGE SWALE

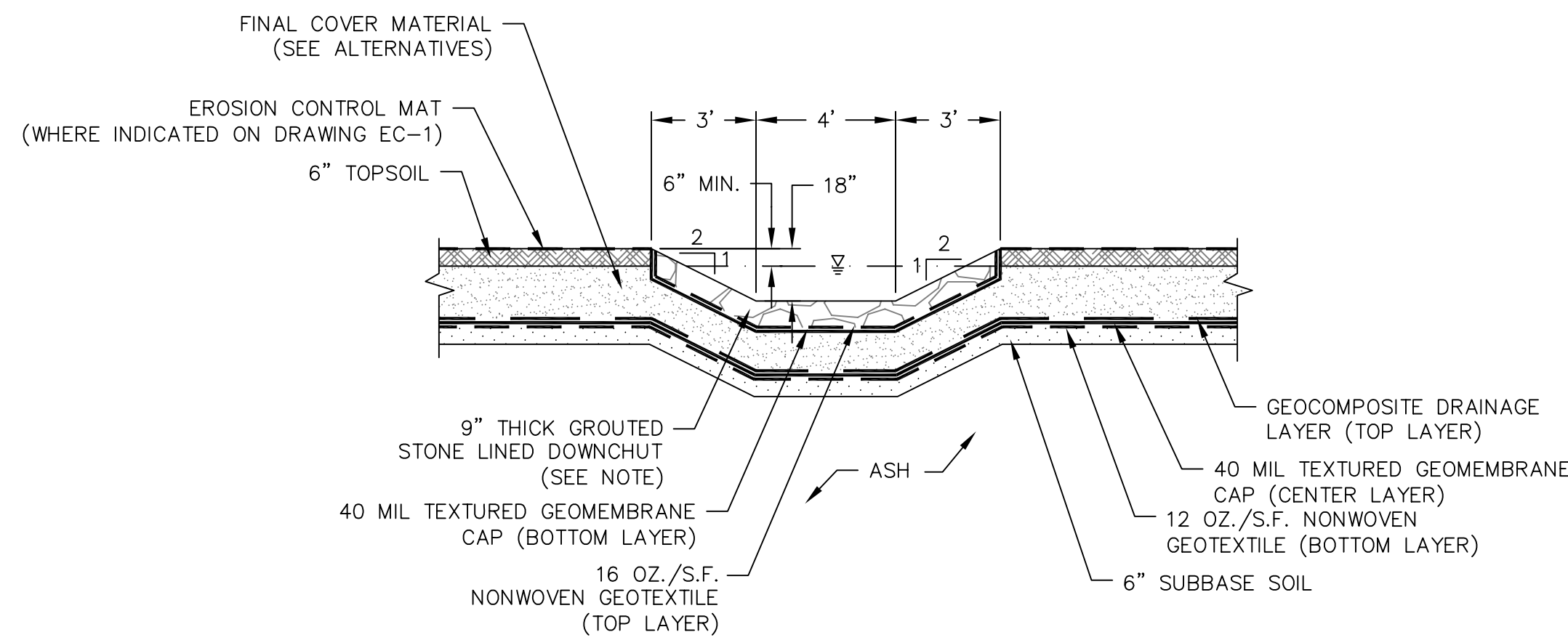
NTS



SECTION A-A HALF PIPE SLOPE DIVERSION SWALE

NTS

- NOTES:
1. USE A 3/8"x2-1/2" GALVANIZED STEEL LAG BOLT TO ATTACH THE HALF PIPE TO THE ANCHOR AT TWO LOCATIONS. PLACE A GALVANIZED STEEL WASHER AND AN EXTRA PIECE OF CORRUGATED PE PIPE BETWEEN THE BOLT HEAD AND THE HALF PIPE. DEPRESS SAND LAYER AROUND ANCHOR.
 2. TAMP FINAL COVER MATERIAL INTO CORRUGATIONS AT EDGE OF HALF PIPE.
 3. EXTEND 40 MIL TEXTURED GEOMEMBRANE SWALE LINER (BOTTOM LAYER) A MINIMUM OF 12" BEYOND THE EDGE OF THE STEEL HALFPIPE.

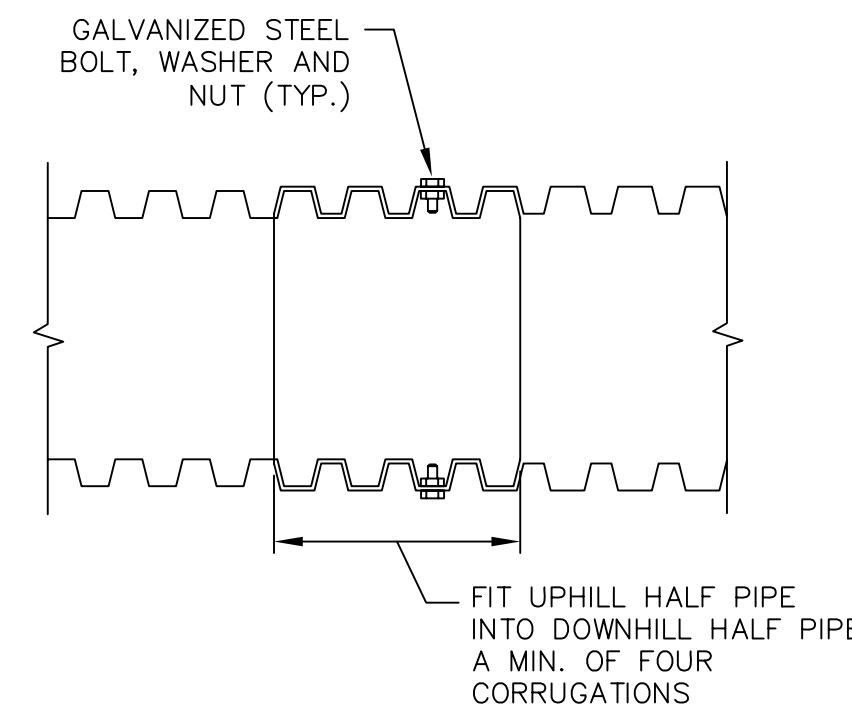


SECTION B-B

TRAPEZOIDAL DOWNCHUTE ON FINAL COVER

NTS

- NOTES:
1. PLACE 9" STONE ON GEOTEXTILE LAYER
 2. FILL VOID SPACES WITH FLOWABLE GROUT SUCH THAT STONE REMAINS EXPOSED AT THE SURFACE



HALF PIPE CONNECTION DETAIL

NTS


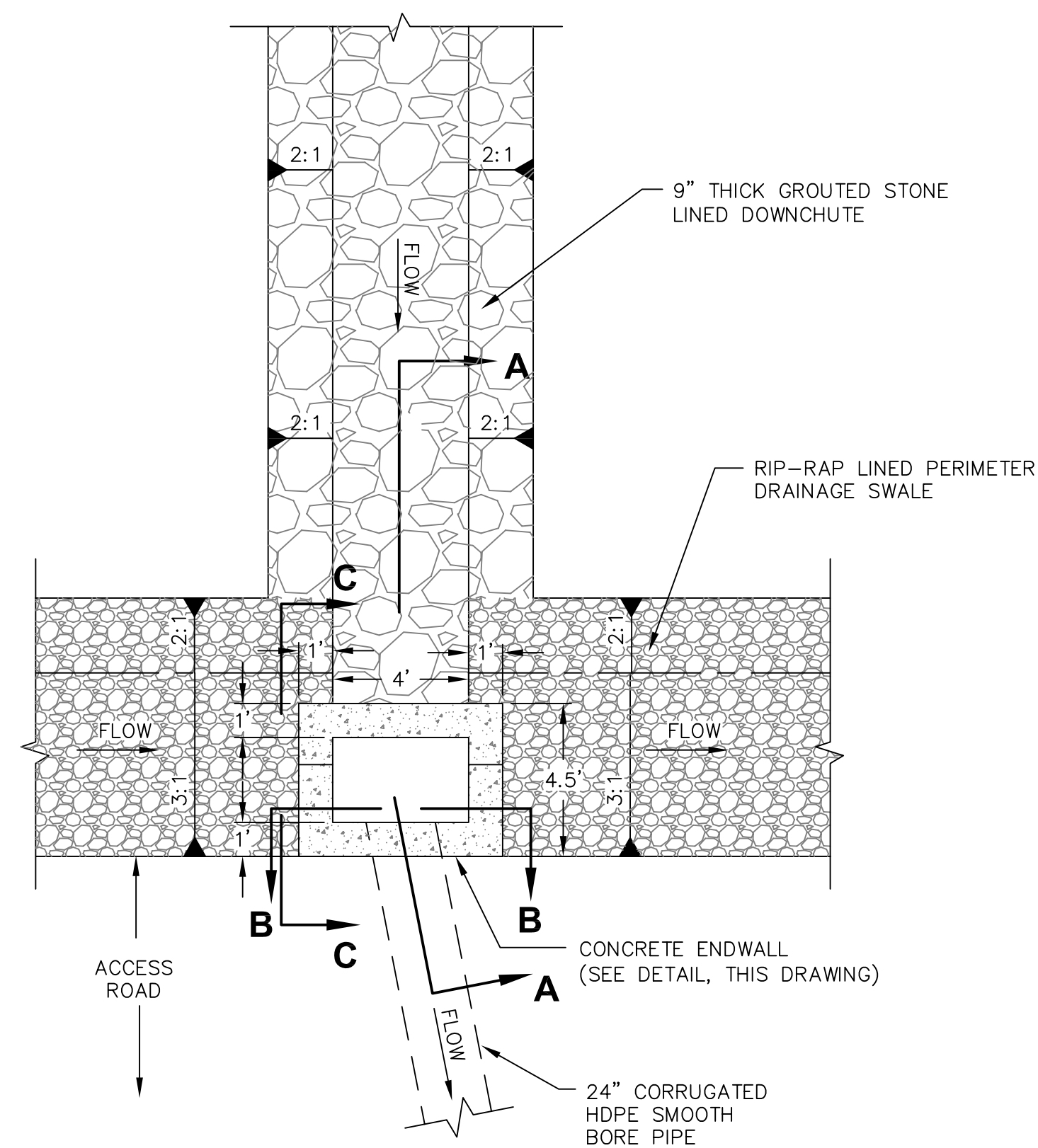
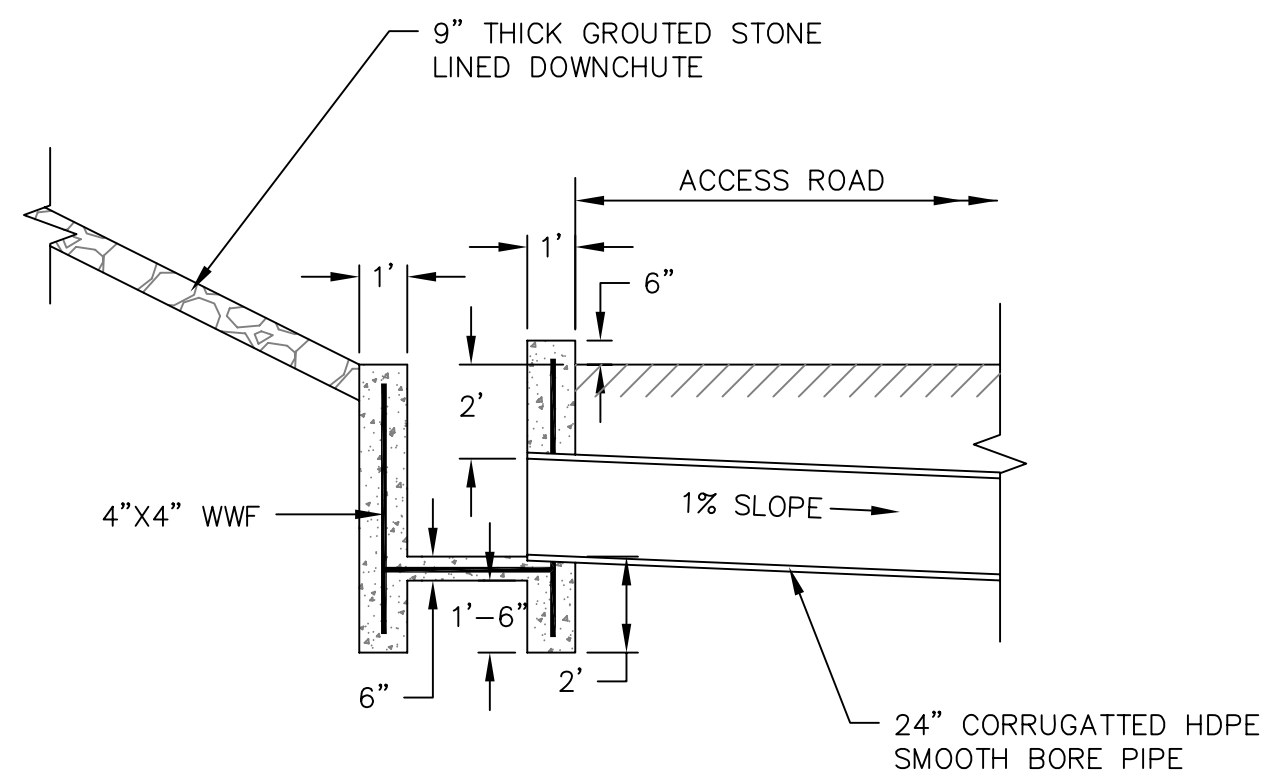
SYMBOL	REVISIONS	DATE	APPROVAL
 CONNECTICUT RESOURCES RECOVERY AUTHORITY HARTFORD LANDFILL			
HARTFORD LANDFILL PHASE I ASH AREA PARTIAL CLOSURE FINAL COVER AND DRAINAGE DETAILS			
DESIGN:	MNB/MAP	05/01/07	SHEET 3
DRAWN:	KDH	05/01/07	SCALE: NONE
CHECKED:	CNS	05/07/07	
DATE:			

Plate-3

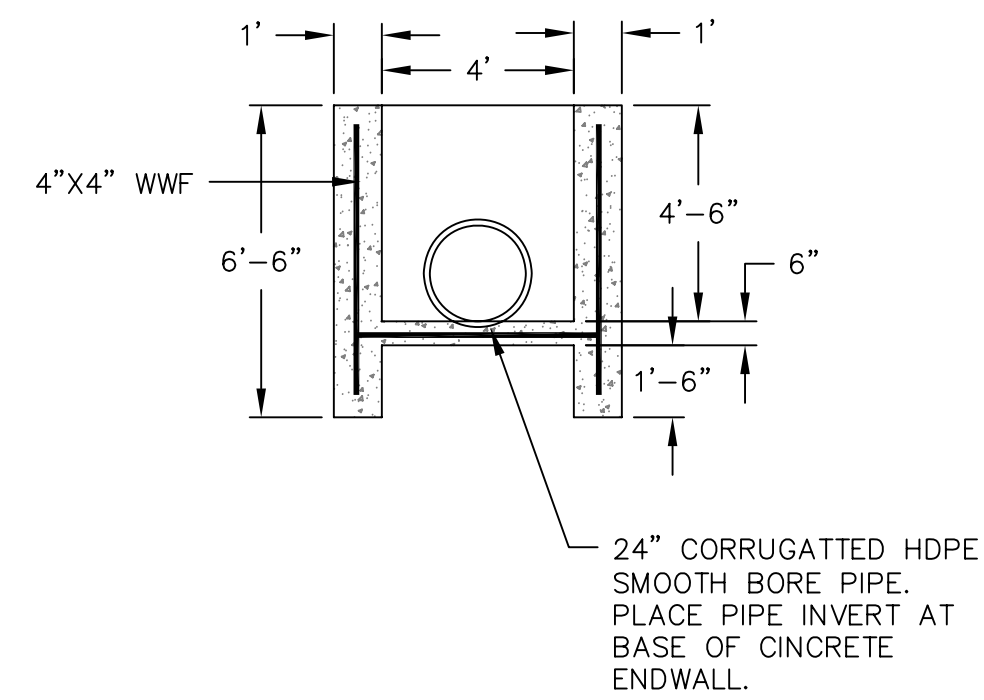


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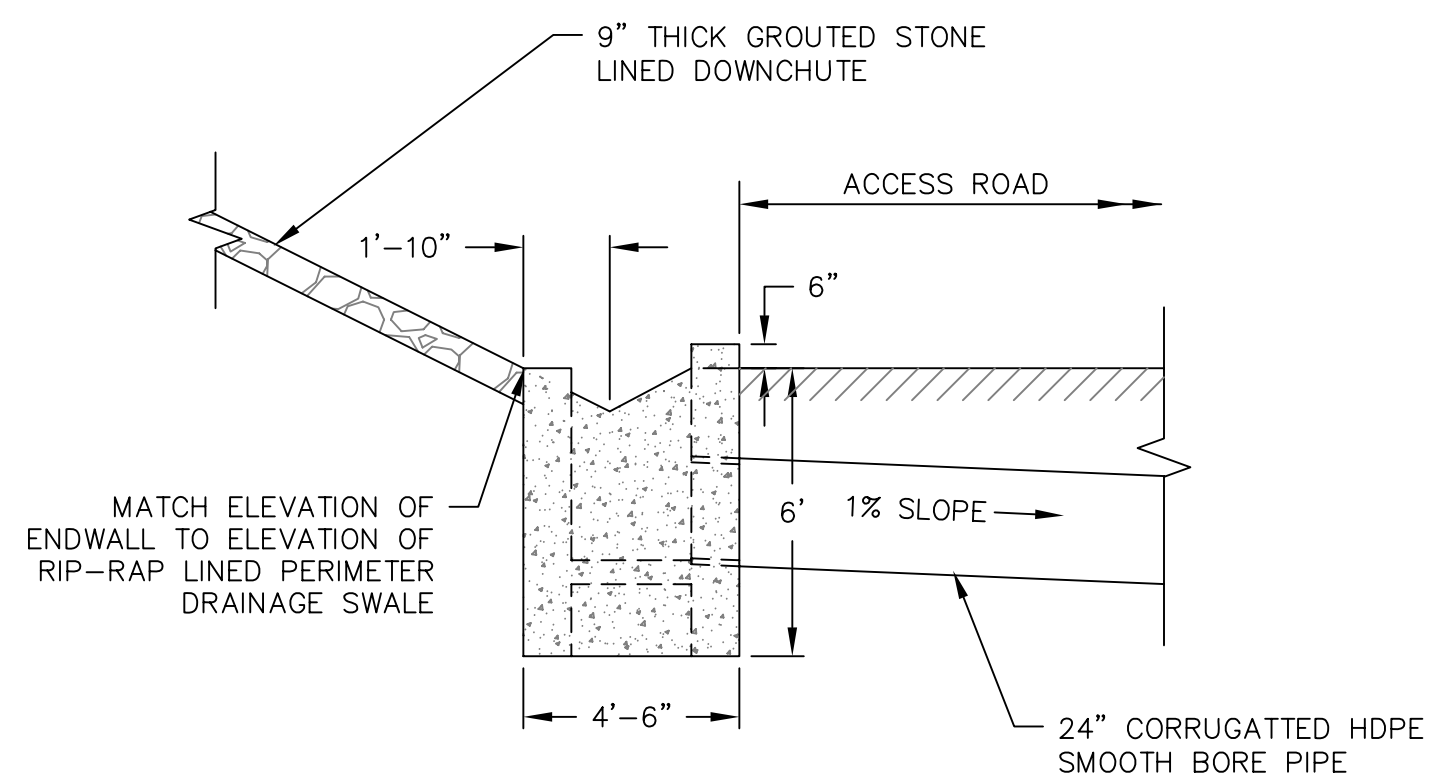
1. ALIGN CENTER LINE OF DOWNCHUTE WITH CENTER LINE OF ENDWALL STRUCTURE.
2. CUT HDPE PIPE SO THAT IT IS FLUSH WITH THE ENDWALL.
3. CONSTRUCT ENDWALL WITH 3,000 PSI CONCRETE (CT DOT CLASS A) REINFORCED WITH WWF.



SECTION A-A



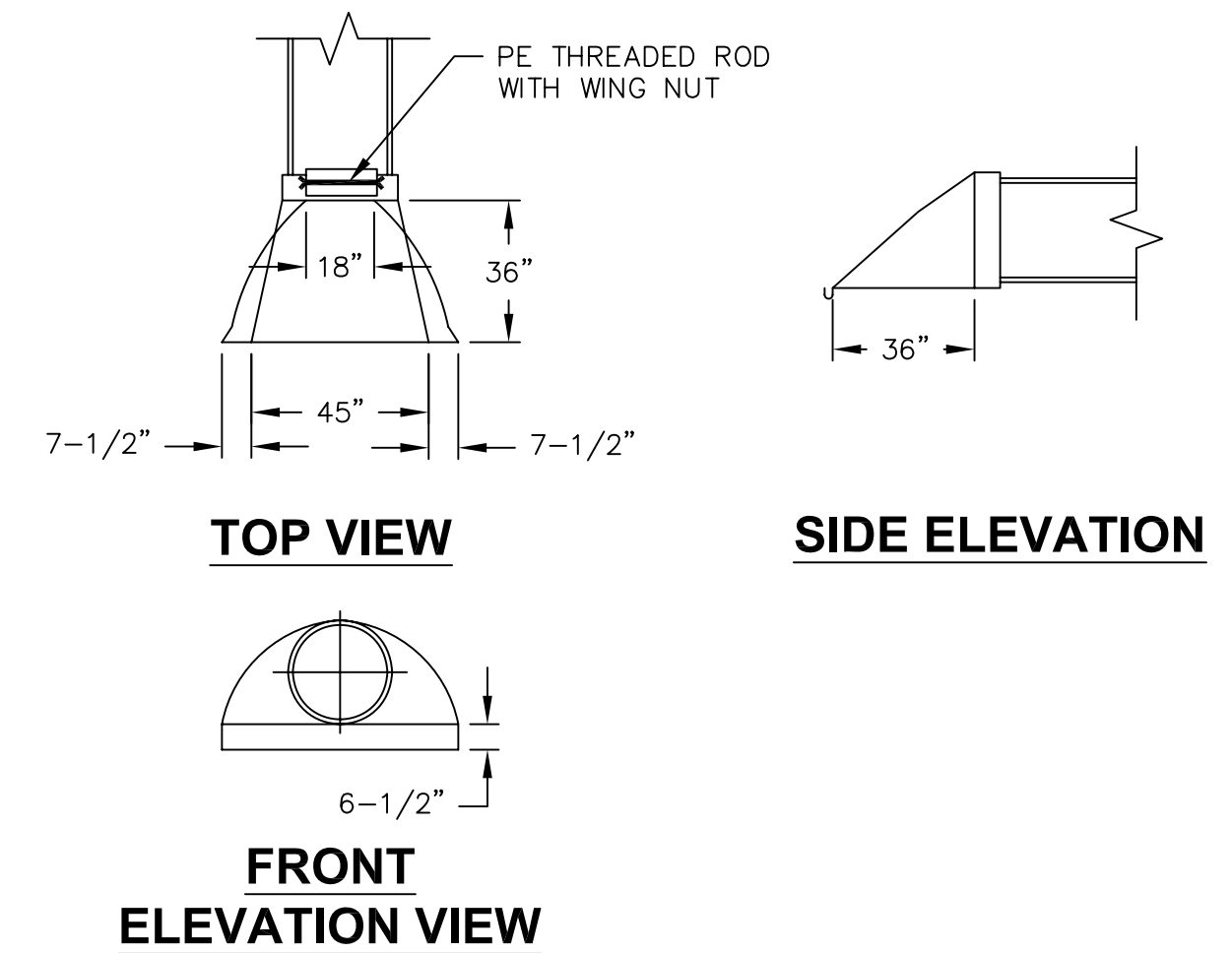
SECTION B-B



SECTION C-C


DOWNCHUTE - PERIMETER SWALE - ENDWALL - DRAINAGE PIPE CONNECTION DETAIL

NTS



FLARED HDPE END SECTIONS

NTS

SYMBOL	REVISIONS	DATE	APPROVAL
 CONNECTICUT RESOURCES RECOVERY AUTHORITY HARTFORD LANDFILL			
HARTFORD LANDFILL PHASE I ASH AREA PARTIAL CLOSURE PHASE 2 SLOPE REVISION DRAINAGE DETAILS			
DESIGN:	MNB/MAP	05/01/07	SHEET 4
DRAWN:	KDH	05/01/07	SCALE: NONE
CHECKED:	CNS	05/07/07	
DATE:			

EROSION AND SEDIMENTATION CONTROL PLAN.

The cap area includes approximately 7.89 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 2007.

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 area.
- Post construction sediment storage is based on 400 R3/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 Contractor, the City Engineer, the Wetlands Enforcement Officer, and the Zoning Enforcement Officer to review the erosion and sedimentation control measures to be taken. The contractor shall be responsible for arranging the pre construction conference.
- All revisions after approval has been granted shall be forwarded to the appropriate commissions and the City Engineer for review and approval.
- The Town Zoning and Wetlands departments shall receive written notification seventy-two hours before the start of any construction.
- 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.
- 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)(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 soil 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.
- Fording 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, said 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.

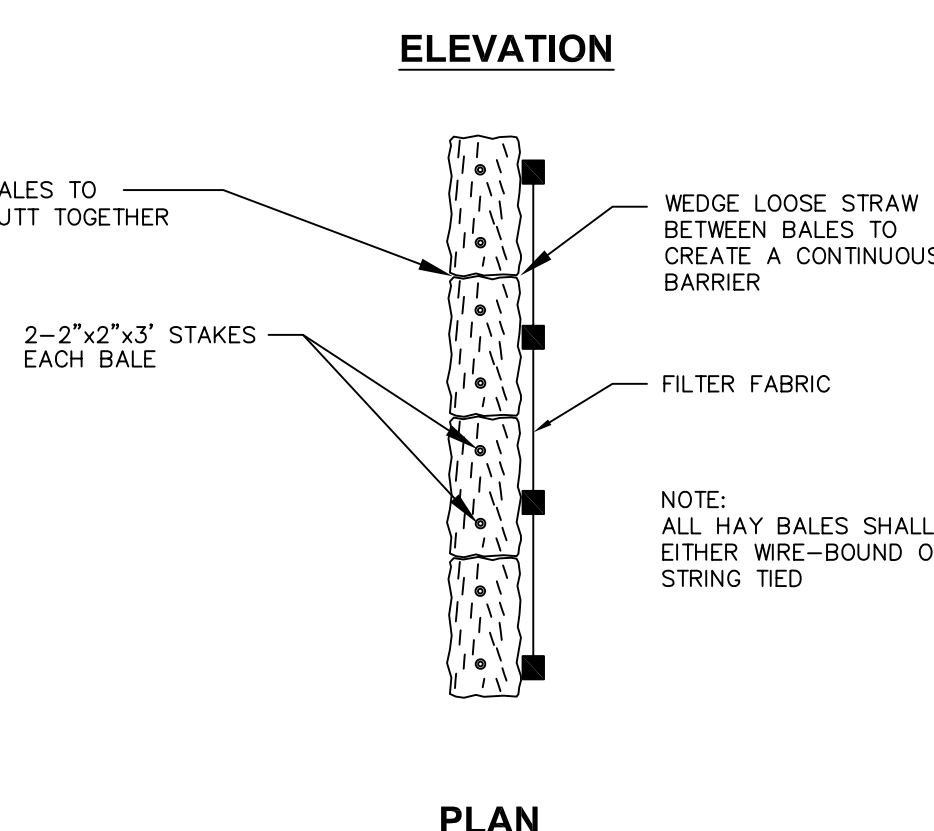
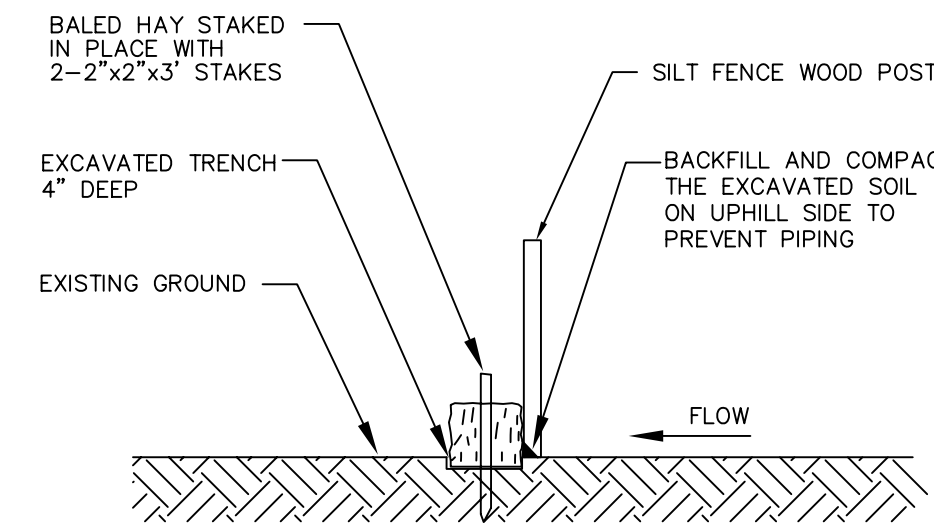
SOIL STABILIZATION MEASURES:

- 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 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 manufacturer's recommendations in areas noted on E-1-1.
- 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 soft hay or small grain straw per 1,000 s.f.
- 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:

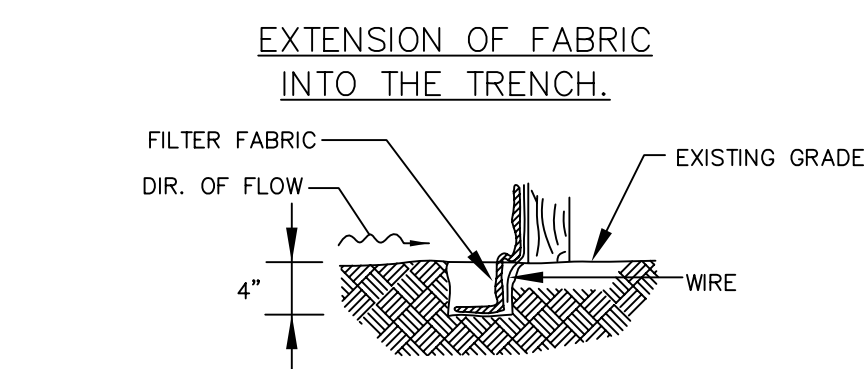
Connecticut Resources Recovery Authority (CRRA)
100 Constitution Plaza, 6th Floor
Hartford, Connecticut 06103
(860) 757-7700

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.



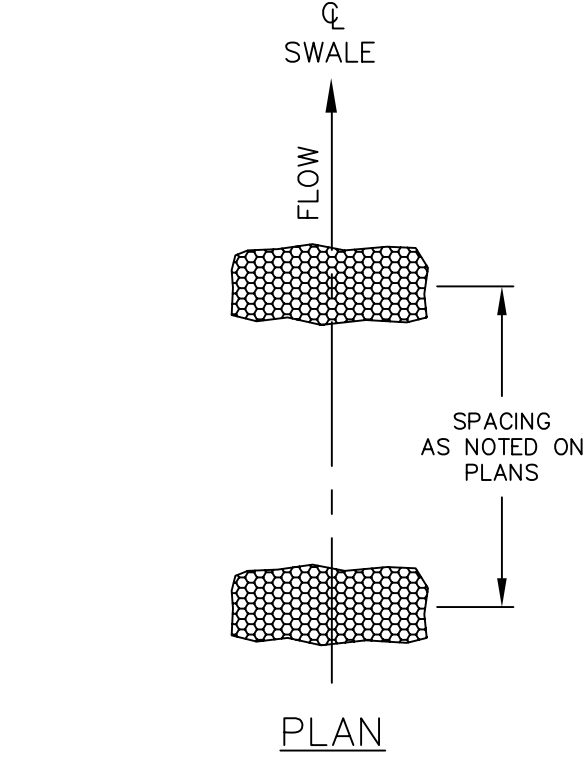
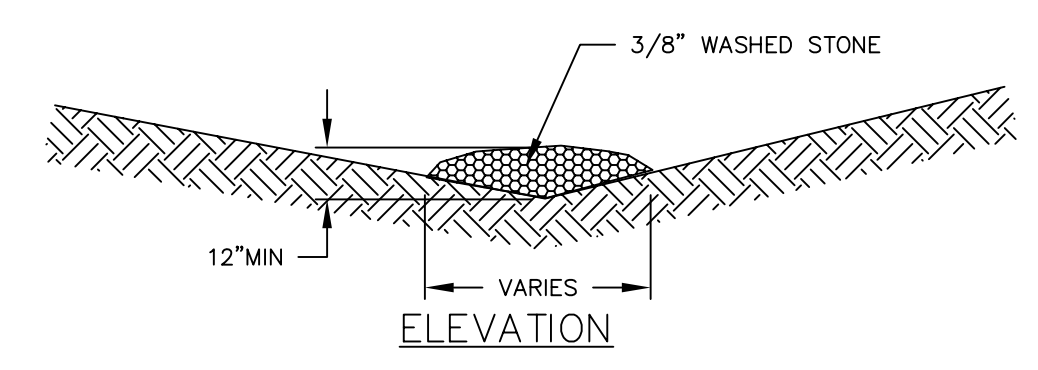
1 TEMPORARY SEDIMENT AND EROSION CONTROL BARRIER SILT FENCE BACKED BY HAY BALES

- SET POSTS AND EXCAVATE A 4" X 4" TRENCH UPSLOPE ALONG THE LINE OF POSTS.
- STAPLE FILTER FABRIC TO THE POSTS AND EXTEND INTO TRENCH.
- BACKFILL AND COMPACT THE EXCAVATED SOIL INTO THE TRENCH.



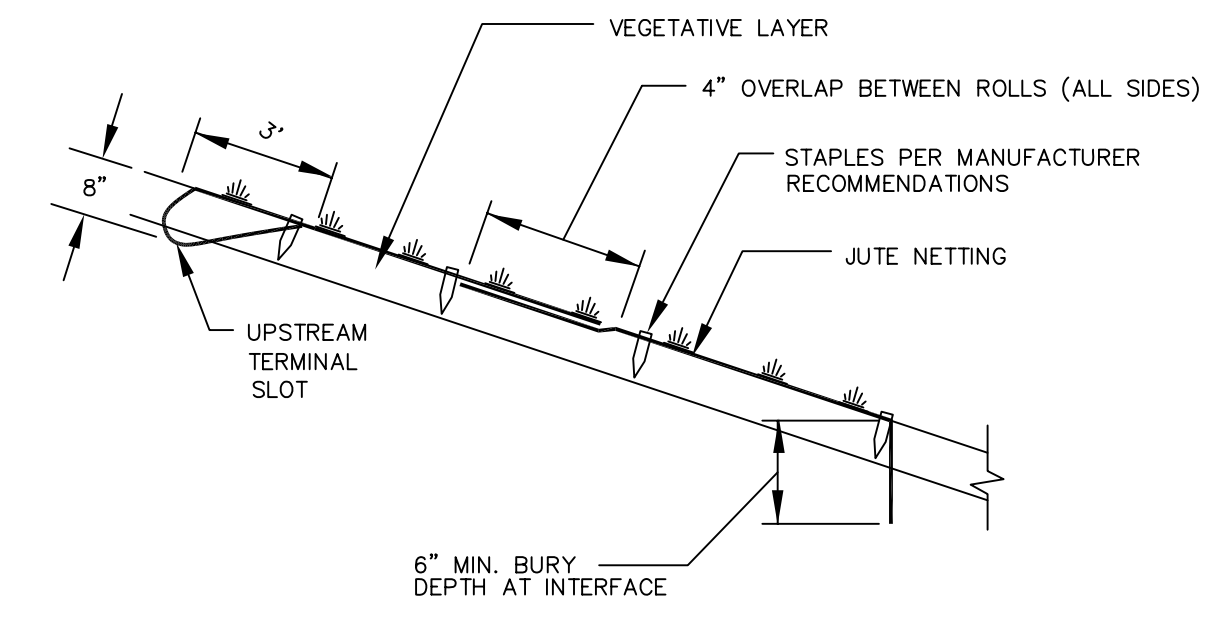
TYPICAL SILT FENCE INSTALLATION

NTS



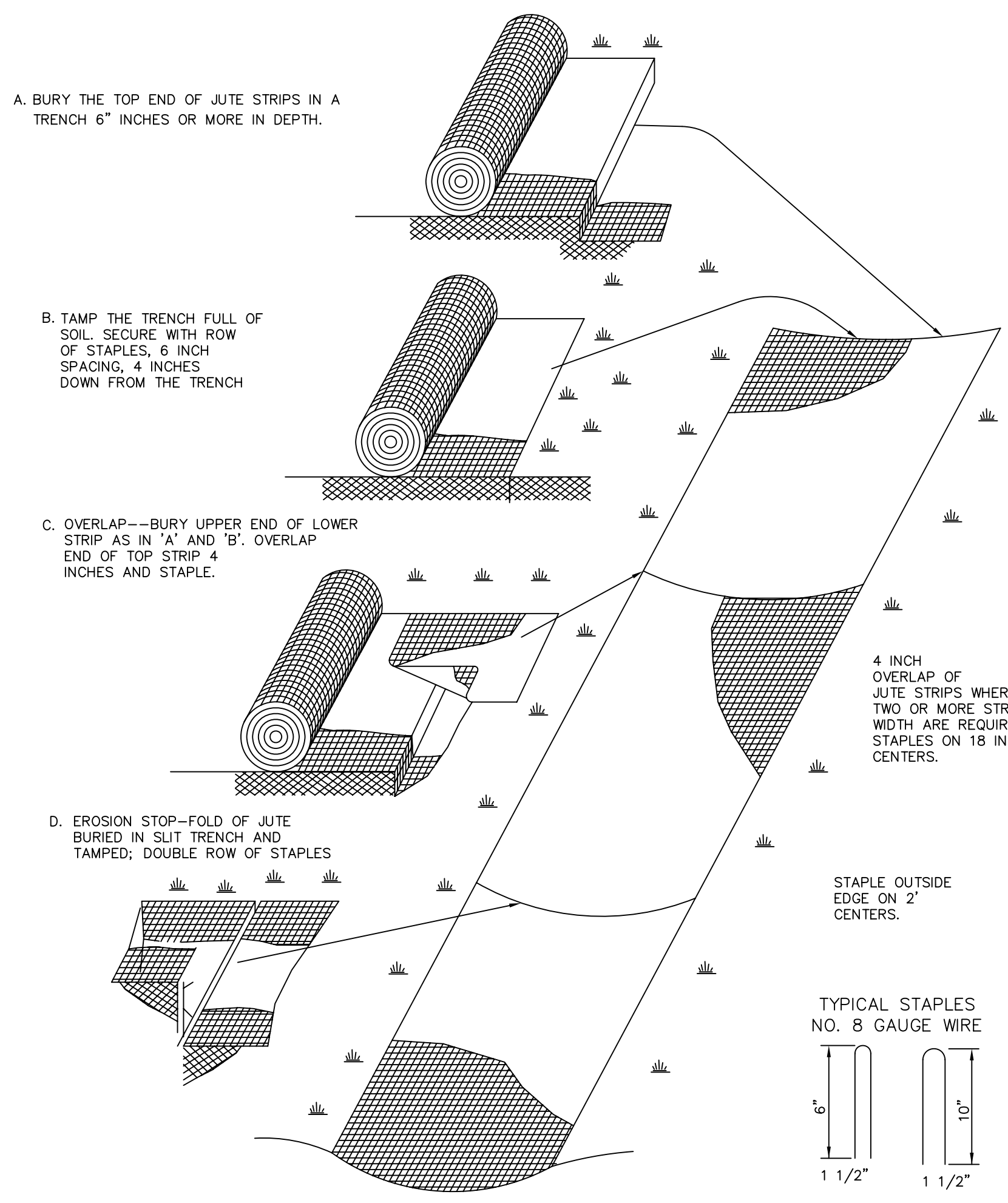
3 STONE CHECK DAM

NTS



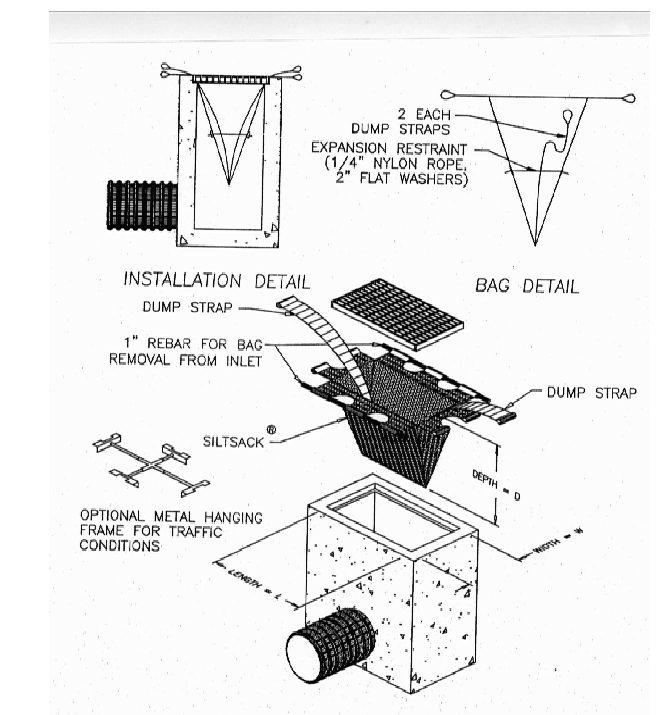
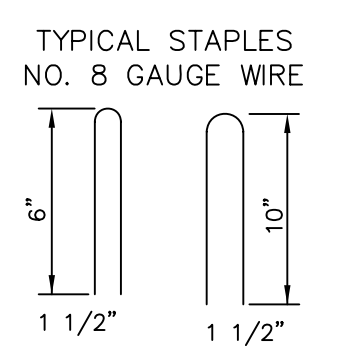
4 INSTALLATION OF JUTE NETTING ON SLOPES

NTS



2 INSTALLATION OF JUTE NETTING IN GRASS SWALES

NTS



5 SILT SACK INLET SEDIMENTATION CONTROL DEVICE

NTS

SYMBOL	REVISIONS	DATE	APPROVAL
<p>CONNECTICUT RESOURCES RECOVERY AUTHORITY HARTFORD LANDFILL</p> <p>21 Griffin Road North Windsor, CT 06095 (860) 298-9692</p> <p>CARL N. STOPPER PROFESSIONAL ENGINEER CT PE # 13255</p>	<p>HARTFORD LANDFILL PHASE I ASH AREA PARTIAL CLOSURE</p> <p>EROSION AND SEDIMENTATION CONTROL NOTES AND DETAILS</p>		
	<p>DESIGN: MNB/WAP 05/01/07 SHEET 5</p> <p>DRAWN: KDH 05/01/07</p> <p>CHECKED: CNS 05/07/07 SCALE: 1"=50'</p>	<p>Plate-5</p>	

