



Construction Stormwater Management Plan

Denova Project

Washington County, Colorado

February 2022, Revised October 2022

PRESENTED TO

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TETRA TECH

TABLE OF CONTENTS

1.0 INTRODUCTION..... 1

2.0 CONSTRUCTION ACTIVITY INFORMATION 2

 2.1 Project Description and Location 2

 2.2 Earth Disturbance..... 2

 2.3 Construction Dates..... 3

3.0 CONTACT INFORMATION 4

4.0 GENERAL CONSTRUCTION PROJECT INFORMATION..... 5

 4.1 Nature of Construction Activity 5

 4.2 Construction Sequence..... 5

 4.3 Soils..... 5

5.0 RECEIVING WATERS 6

 5.1 Vegetation..... 6

6.0 EROSION PREVENTION AND SEDIMENT CONTROL PRACTICES 7

 6.1 Best Management Practices..... 7

 6.2 Structural Controls..... 7

 6.2.1 Silt Fence 7

 6.2.2 Filter Logs/Wattles 9

 6.2.3 Mulch 10

 6.2.4 Erosion Control Blankets 10

 6.2.5 Access Pads 11

 6.3 Non-Structural Practices..... 12

 6.3.1 Vegetation Buffer 12

 6.3.2 Street Sweeping..... 12

 6.3.3 Stabilization Practices 12

 6.3.4 Topsoil Segregation and Replacement..... 13

7.0 CONSTRUCTION DEWATERING 14

8.0 POLLUTION PREVENTION MANAGEMENT MEASURES 15

 8.1 Identification of Potential Stormwater Contaminants 15

8.2 Solid Waste Disposal15

8.3 Hazardous Materials Handling.....15

8.4 Contaminated Soils or Groundwater.....16

8.5 Spill Prevention16

8.6 Concrete Waste Area16

9.0 INSPECTIONS AND MAINTENANCE 17

9.1 Inspection Procedures17

9.2 Inspection Reports17

9.3 Record Retention.....18

9.4 Keeping Plans Current.....19

10.0 FINAL SITE STABILIZATION 20

LIST OF TABLES

Table 1. Project Legal Description2

Table 2. Project Disturbance Areas2

Table 3. Soil Types5

LIST OF FIGURES

- Figure 1: Site Location Map
- Figure 2: Site Plan Maps
- Figure 3: Soils Map
- Figure 4: Topsoil Stockpile Area

APPENDICES

- Appendix A: Typical Details
- Appendix B: Dewatering Log
- Appendix C: Inspection and Maintenance Forms

ACRONYMS/ABBREVIATIONS

Acronyms/Abbreviations	Definition
BMP	Best Management Practice
CO ₂	carbon dioxide
CDPS	Colorado Discharge Permit System
COGCC	Colorado Oil and Gas Conservation Commission
HUC	Hydrologic Unit Code
SDS	Safety Data Sheets
NOI	Notice of Intent
NOT	Notice of Termination
Project	Denova Project
SWMP	Stormwater Management Plan

1.0 INTRODUCTION

This is a Stormwater Management Plan (SWMP) for the Denova Project (Project) being conducted by Carbon America. This document has been developed as construction activities that result in a total land disturbance of one acre or greater or if a project is less than an acre but part of a larger common plan of development. This SWMP was also developed to meet Colorado Oil and Gas Conservation Commission (COGCC) requirements where applicable.

The SWMP includes, by reference, additional environmental permits, plans, and protocols Carbon America developed to minimize and/or mitigate the potential impacts of construction of the Project on the environment, and specifically, waters of the state of Colorado.

2.0 CONSTRUCTION ACTIVITY INFORMATION

2.1 PROJECT DESCRIPTION AND LOCATION

Carbon America wishes to locate and drill a stratigraphic test well to obtain geologic samples to evaluate the suitability of deep formations for injection and sequestration of carbon dioxide. The well location is anticipated to be located approximately 9 miles southwest of Yuma, Colorado, in Washington County. The Project Area is in rural, grazing lands on vegetated sand dunes. This SWMP will be updated to reflect the most current information on the Project details.

See the attached figures for maps and additional location detail. Legal location descriptions crossed by the project detailed below in Table 1.

Table 1. Project Legal Description

Project Location	Section	Township	Range
40.027439, -102.851636	27, 28	1N	49W

2.2 EARTH DISTURBANCE

Ground disturbance associated with the Project will largely consist of temporary access roadbed preparation and construction, temporary workspace for well pad construction, and staging/laydown areas. Estimated ground disturbances are located in Table 2 below.

Table 2. Project Disturbance Areas

Project Component	Disturbance Area (Acres)
Existing Road	4.63
New Road	3.43
Well Pad	2.57
TOTAL	10.63

Construction will require the use of many different types of construction equipment including cranes, backhoes, drill rigs, dump trucks, front-end loaders, bucket trucks, bulldozers, flatbed tractor-trailers, flatbed trucks, pickup trucks, concrete trucks, and various trailers or other hauling equipment. Excavation equipment is often set on wheeled or track-driven vehicles. Construction crews will attempt to use equipment, when opportunities are available, that minimize impacts to lands.

Construction staging areas may be established for the Project. Staging involves delivering the equipment and materials necessary to construct the new facilities. At the time of SWMP preparation, final staging areas had not been selected. See Figure 2 for site plan and layout details.

2.3 CONSTRUCTION DATES

The road and pad construction and subsequent stratigraphy well activities are anticipated to take approximately 6 weeks. Construction will begin after regulatory approvals are obtained and necessary property easements are acquired. The precise timing of construction will be dictated by agency permit conditions, environmental restrictions, and available workforce and materials.

3.0 CONTACT INFORMATION

The applicant must identify the person(s) or entity that will have responsibility for maintenance of erosion and sediment control structures and measures pre- and post-construction. The Contractor is responsible for the implementation of this SWMP. Carbon America's designated Stormwater Inspector will be responsible for the inspection of the construction site, evaluation of best management practices (BMPs), and implementation of the state-required stormwater inspections. Each individual working on a Carbon America project is responsible for complying with environmental stipulations. If site conditions or engineering constraints make any of these requirements unworkable, or when questions arise concerning environmental requirements, a representative of Carbon America will interpret compliance requirements and offer recommendations.

The Project contacts for SWMP-related matters are listed below:

Carbon America Environmental Contact

Name	Telephone	Email
Jessica Gregg, Carbon America	720-838-5458	Jessica.Gregg@carbonamerica.com

Contractor Superintendent

Name	Telephone	Email
When a contractor is identified this plan will be updated		

Qualified Stormwater Manager

Name	Telephone	Email
When a contractor is identified this plan will be updated		

Stormwater Inspector

Name	Telephone	Email
When a contractor is identified this plan will be updated		

SWMP Author

Name	Telephone	Email
Luke Schwitzer, Tetra Tech	612-924-3989	luke.schwitzer@tetrattech.com

4.0 GENERAL CONSTRUCTION PROJECT INFORMATION

4.1 NATURE OF CONSTRUCTION ACTIVITY

Construction activities such as clearing, grading, excavation, and backfilling, as well as the movement of construction equipment along the easement, will result in ground disturbances. Much of the earth disturbing construction activity will be limited to the specific location of the well pad.

4.2 CONSTRUCTION SEQUENCE

Construction will follow Carbon America’s construction standards developed to minimize temporary and permanent impacts on land and the environment. Construction typically progresses as follows:

1. Survey and staking of the right-of-way.
2. Installation of perimeter sediment controls and equivalent BMPs.
3. Right-of-way clearing and access preparation.
4. Well pad grading, construction, and component installation.
5. As-built survey.
6. Pack, back-fill, rough grade.
7. Topsoil replacement, final grade and cleanup, restoration, revegetation.
8. Removal of temporary sediment control BMPs.

4.3 SOILS

Detailed soil characteristics were identified and assessed using the National Resource Conservation Service’s Web Soil Survey (<http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>; accessed January 26, 2021). Soil types and their locations onsite are identified in Figure 3.

Project Area soils and their characteristics are detailed below in Table 3.

Table 3. Soil Types

Map Unit Name	K Factor	Erosion Hazard ²	Rutting Hazard ³	Hydrologic Group ⁴
Valent sand, rolling	.02	Severe	Moderate	A
Valent sand, 3-9% slopes	.02	Moderate	Moderate	A
Haxtun loamy sand, 0-3%	.15	Slight	Moderate	C

¹ K Factor indicates the susceptibility of a soil to sheet and rill erosion by water. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptibility there is to erosion.

² Slight = erosion is unlikely under ordinary climatic conditions; Moderate = some erosion is likely and that erosion-control measures may be needed; Severe = erosion is very likely; and Very Severe = significant erosion is expected.

³ Soil rutting interpretation indicates the hazard of surface rut formation through the operation of overland equipment and machinery. The hazard is described as slight, moderate, or severe, with “slight” indicating little to no threat of rutting and “severe,” indicating that ruts may form readily.

⁴ Hydrologic Soil Groups are used to estimate runoff from precipitation: A = high infiltration rate, low runoff potential; B = moderate infiltration rate; C = slow infiltration rate; D = very slow infiltration rate, high runoff potential.

5.0 RECEIVING WATERS

The Project is in the following 12-digit hydrologic unit code (HUC) watershed:

Watershed Name	HUC Number
North Fork Republican	10 25 00 02 06 08

Due to the soil conditions and the fact that there are no mapped wetlands or waterbodies within the 12-digit HUC watershed, it is assumed most stormwater runoff infiltrates into the sandy soil base. Stormwater that does not infiltrate may be conveyed from the Project Area via overland flow and roadside conveyances. The nearest named waterbody is Ditch COSPRE06_2300, located approximately 5.25 miles west of the Project.

5.1 VEGETATION

Tetra Tech performed a site visit on January 6, 2022, and confirmed that vegetation within the Project Area consists primarily of upland rangeland vegetation including alkali sacaton (*Sporobolus airoides*), rubber rabbitbrush (*Ericameria nauseosa*), silver sagebrush (*Artemisia cana*), and soapweed yucca (*Yucca glauca*). Protective fencing shall be installed to indicate any do-not-disturb areas within the Project temporary workspace.

6.0 EROSION PREVENTION AND SEDIMENT CONTROL PRACTICES

6.1 BEST MANAGEMENT PRACTICES

Carbon America has identified temporary and permanent BMPs to be implemented during and after construction (Appendix A). Erosion and sediment control BMPs have been designed to minimize erosion and prevent sediment from leaving the Project Area. Specific BMPs to be implemented are discussed in the following sections under structural and stabilization practices.

Carbon America will monitor the effectiveness of all controls. Inadequate controls will be replaced before the next anticipated storm event or as soon as field conditions allow access and the SWMP will be revised to reflect this change. BMPs will be designed to divert flows from exposed soils, filter runoff, or otherwise reduce sediment-laden runoff from entering surface waters or stormwater conveyance systems (e.g., ditches, storm sewer management system). Material storage should not impede any existing drainage.

Erosion Controls

The most effective erosion control is the minimization of soil disturbance. Therefore, whenever possible, existing vegetation within travel lanes and spoil storage areas will not be removed but mowed and existing woody vegetation will be retained in-place. Where possible, Carbon America's Contractor will maintain a vegetative buffer between any existing roads and excavation activities. Exposed soils with a positive slope within 200 feet of any surface water will have erosion protection and/or cover.

Sediment Controls

Sediment controls are designed to keep sediment from flowing off the right-of-way and into places where it may harm the environment. BMPs to be used as sediment controls include silt fence, mulch, Curlex erosion control blanket, and filter logs/rolls or straw bales. The sediment barriers will typically be installed at the base of slopes adjacent to ditches, drainage channels, and other excavated material must be placed in such a manner that if a storm event was to occur, the sediment would flow into the excavation. BMPs will be installed on the downslope side of the excavations to contain the sediment within the Project Area.

6.2 STRUCTURAL CONTROLS

Perimeter controls such as silt fence or filter log will be installed down-gradient of exposed soils during construction to capture suspended sediment particles and keep the particles onsite to the extent possible. Straw bales alone are no longer considered an adequate or effective sediment control device and should only be used in conjunction with silt fence or in wetland areas where silt fence installation would cause unnecessary environmental impact.

6.2.1 Silt Fence

Silt fence is a temporary barrier used to remove sediment from construction runoff. Perimeter controls such as silt fence will be installed immediately after clearing activities and prior to initial grading activities and will remain in-place until final site stabilization has occurred. Silt fence will be located such that vehicle or

equipment access will not destroy the silt fences. Silt fence will be installed, as necessary, along the downslope perimeter of the Project. Any soil stockpiles will have a perimeter control installed and/or covered with tarp. Soil stockpiles will not be placed within a wetland or waterbody. Once construction has begun, the site will be analyzed to determine whether additional silt fencing is required. Silt fence will be maintained as necessary (i.e., where sediment has reached one-half of the height of the silt fence, sediment will be removed). Silt fences must be constructed properly to ensure efficacy.

Installation Method

- Silt fence consists of a geotextile fabric that is trenched or sliced into the ground using hand or mechanical means. The trench should be a minimum of 6 inches deep. Most geotextile materials have a line imprinted on the edge that indicates the minimum burial depth of the fabric.
- The bottom of the fence is anchored into the ground by compacting the disturbed soil along both sides of the trench. You should not be able to pull the material from the trench easily.
- No gaps should be present between the ground surface and the bottom of the silt fence.

The top of the fence is attached to steel or wood posts for support.

- The posts should always be located on the downslope side of the fence.
- The posts should be installed with a spacing of 5 feet or less and installed perpendicular to the slope.
- Section breaks located the silt fence should be wrapped around the adjacent stake to prevent the fence from gapping between sections.
- The ends of the silt fence should be turned uphill.

Placement

- Silt fence should be installed along the contour of the slope where possible.
- Silt fence should be installed along the perimeter of the wetlands.
- Silt fence may also be used as a perimeter control around spoil piles and along the perimeter of the site where ground-disturbing activities have occurred and where stormwater may flow offsite.
- Silt fence placement should be avoided across areas of concentrated flow.
- Where the proposed access road intersects with the public road, silt fence may be used in any road ditch, provided the ditch does not have a concentrated flow.

Maintenance

Silt fence will be inspected during regular stormwater inspections. Typical maintenance items associated with silt fence include:

- Sediment buildup has reached one-half the height of the silt fence. Sediment will be removed and returned to the right-of-way.
- Gaps are present between fence sections and/or under the silt fence are present.
- The silt fence is no longer attached to stakes.

- A section of silt fence is consistently requiring regular repairs. In this case, the site inspector will observe the construction area to determine whether additional measures (e.g., slope breaker) upslope of the discharge location are necessary.

Maintenance of the silt fence will continue until the site has achieved final stabilization. Refer to Section 10 for the definition of final stabilization. Once the site has reached final stabilization, the barriers will be removed and disposed of properly.

6.2.2 Filter Logs/Wattles

Filter logs are used as a sediment and stormwater velocity control device. They are tubes of plastic netting or biodegradable burlap material filled with straw, wood fiber, or coconut fiber. If straw is used it should be Certified Weed Free Forage. Filter logs come in a variety of sizes from 6 to 20 inches in diameter and in different lengths. Filter logs will be installed immediately after clearing activities and prior to initial grading activities and will remain in-place until final site stabilization has occurred.

Installation Method

- Filter logs should be installed in a shallow trench (2 to 4 inches deep), following the contour of the slope to allow for good contact between the filter log and the soil.
- The excavated material should be packed along the base of the log on the uphill side.
- The filter log is secured in-place with wooden stakes, typically 1-inch-by-1-inch.
- The stakes should be installed with 4-foot spacing and installed perpendicular to the slope through the back one-third of the filter log.
- The last 6 inches of the filter log should be turned uphill to keep runoff from going around the edge of the wattle.

Placement

- Filter logs should be installed along the contour of the slope where possible.
- Filter logs may be installed as inlet protection at culverts but should not be used as inlet protection at storm sewers.
- Filter logs should be used as a ditch check along the ditch. Ditch checks should be spaced appropriately.

Maintenance

Filter logs will be inspected during regular stormwater inspections. Typical maintenance items associated with filter logs include:

- Sediment buildup has reached one-half the height of the filter log. Sediment will be removed and returned to the right-of-way.
- Gaps are present between bottom of the log and the ground.
- The filter log is saturated and no longer effectively capturing sediment (filter log should be replaced).

- A section of filter log is consistently requiring regular repairs. In this case, the site inspector will observe the construction area to determine whether additional measures (e.g., slope breaker) upslope of the discharge location are necessary.

Maintenance of the filter log will continue until the site has achieved final stabilization. A filter log may be left in-place permanently to biodegrade unless they are located within cultivated agricultural areas or made of non-biodegradable material in which case they should be removed.

6.2.3 Mulch

Mulch such as wood chips, straw, or compost can be used independently as a temporary soil stabilization practice or in conjunction with seeding activities. Mulch acts as a soil surface protection while vegetation is being established. Corn stalks may also be used as mulch.

Installation Method

- Mulch may be applied to any surface regardless of the grading condition; however, it has better adherence with the soil if no soil clods greater than 3 inches in size are present and no ruts deeper than 3 inches are present.
- Mulch is typically installed at 2 tons per acre; however, the ground should have 90 percent coverage and depending on the material. A heavier or lighter application rate may be required.
- Once applied, the mulch should be crimped in using either a till or using a tracked vehicle to ensure good soil contact.

Placement

- Mulch should be applied to disturbed areas in conjunction with temporary or permanent seeding.
- Mulch may also be used as temporary stabilization for spoil piles.

Maintenance

Mulch will be inspected during regular stormwater inspections. Typical maintenance items associated with mulch include:

- Proper application rate – too light, and it will not protect the soil adequately, and too heavy, it will not be conducive to seed germination.
- Mulch not crimped in.

6.2.4 Erosion Control Blankets

Erosion control blankets are available in a variety of natural and synthetic materials (i.e., coconut fiber, jute, nylon, straw, hay, or wood excelsior) and may be used in combination or individually to form blankets. Netting or mesh materials come in biodegradable; however, products that require ultraviolet light to biodegrade (photodegradable) should be avoided as they do not biodegrade properly when shaded by vegetation or other obstructions. Netting should be a rectangular mesh with flexible non-welded mesh to minimize potential wildlife entanglement.

Blankets are typically used as part of temporary or final stabilization on slopes or in channels.

Installation Method

- Prior to blanket installation the slope should be graded so no soil clods greater than 3 inches in size are present and no ruts deeper than 3 inches are present. This will allow the blanket to have better contact with the soil.
- Erosion control blankets should be laid in-line with the direction of the water flow.
- At the top of the slope, the lead edge of the blanket should be trenched into the ground, approximately 6 inches, anchored in-place with stakes or staples, and backfilled.
- The remaining blanket should be anchored in-place with stakes or staples, spaced per the manufacturer's specifications for the blanket materials and slope.
- In stream blankets should be trenched in at the bottom.
- Blanket sections should overlap a minimum of 2 inches.
- Seeding may occur as part of the blanket installation.

Placement

- Erosion control blankets should be used on slopes and along the drainage channel where construction disturbance has occurred.
- For blanket installation where active mowing is anticipated, net-less blankets are recommended.

Maintenance

Erosion control blankets will be inspected during regular stormwater inspections. Typical maintenance items associated with erosion control blankets include:

- Blanket not trenched in properly;
- Blanket not installed parallel to water flow;
- Blanket not stapled properly; or
- Blanket does not have good soil contact and water flow occurs under the blanket.

Maintenance of the blanket will continue until the site has achieved final stabilization. Biodegradable blankets may be left in-place.

6.2.5 Access Pads

If necessary, a temporary rock construction exit pad should be installed at the end of the access road before a public road to minimize the tracking of mud onto public roads. The rocks will jar the tires of construction vehicles causing dirt and mud to become dislodged before the vehicle reaches the public road. Two inch or greater diameter rock in a layer at least 6 inches thick across the entire width of the entrance should be used. The rock entrance should extend at least 50 feet into the construction zone using a geo-textile fabric beneath the aggregate to prevent migration of soil into the rock from below. If sediment is tracked onto a road, it must be shoveled or swept off the road as soon as possible, but no later than the end of the day.

6.3 NON-STRUCTURAL PRACTICES

Non-structural practices include minimizing areas of disturbance and maintaining buffer zones. Provided below are optional non-structural BMPs to be implemented during construction:

- Existing vegetation should be preserved where attainable.
- Herbaceous vegetation cut during construction may remain in the approved work area and thinly spread over the project area upon restoration. Alternatively, the vegetation may be removed from the construction area and disposed properly at a licensed disposal facility.
- Woody vegetation may be chipped or tub ground and used as mulch for restoration purposes.
- Areas used for parking heavy construction equipment should be designated away from the canopy circumference of trees to protect their root zones from soil compaction and water table changes.

6.3.1 Vegetation Buffer

Due to the isolated location of the Project, there are not any areas of vegetation buffers identified at the Project are at the time of SWMP preparation. If that changes, a 50-foot undisturbed buffer zone will be maintained at all surface waters and through final restoration. Once the Project encroaches or is within the buffer, redundant controls will be installed. Undisturbed buffers may not always be maintained adjacent to road ditches, judicial ditches, county ditches, stormwater conveyance channels, and sediment basins.

6.3.2 Street Sweeping

Street scraping and street sweeping includes activities intended to clean paved, concrete, or otherwise impervious surfaces that may receive tracked sediment from vehicles accessing disturbed soil areas. Tracked sediment must be swept from paved streets within 24-hours of discovery, although a more frequent sweeping schedule may be required in areas of active work to maintain public safety and/or to prevent washing from forecasted rain events. There are no areas of paved or concrete surfaces expected to be impacted by construction vehicle or equipment access.

6.3.3 Stabilization Practices

Stabilization practices include establishment of temporary or permanent vegetation, mulching, sod stabilization, vegetative buffer strips, protection of trees, and preservation of mature vegetation. Stabilization measures will be initiated immediately at areas where construction activities have temporarily or permanently ceased.

The site is considered stabilized when the site has achieved a uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 70 percent of the native background vegetation cover for the area has been established on all unpaved areas. Mulch can be applied in conjunction with seeding at 2 tons per acre. All temporary synthetic, structural, and non-biodegradable erosion and sediment control measures will be removed after restoration is considered complete and final stabilization has been achieved.

6.3.4 Topsoil Segregation and Replacement

Topsoil will be segregated in non-impervious areas or where the Contractor deems appropriate. Upon completion of excavation activities, the area will be backfilled and a minimum of 6 inches of topsoil will be replaced, or added if deemed necessary, prior to final stabilization. Topsoil segregation and replacement does not apply to the work within the roadways or impervious areas because the ground disturbing activities within these areas will be resurfaced to pre-existing conditions. The anticipated topsoil stockpile area is located in Figure 4.

7.0 CONSTRUCTION DEWATERING

Construction dewatering is not expected during construction activities. If dewatering is necessary, the intake hose will be suspended above the bottom of the excavation or dewatered source to the extent practicable to minimize capture of sediments from the ditch or trench bottom. Where feasible, the water will be discharged to a well-vegetated area using a geotextile filter bag or a dewatering structure to prevent silt-laden waters from impacting natural resources to the maximum extent practicable. Dewatering logs are attached in Appendix B.

If surface water or groundwater is encountered and shows signs of contamination which include unnatural odor, oily sheen, and discoloration, the water must remain in the trench or held in a lined container while obtaining the proper permit for discharge or disposal. Sampling, analysis, and possible treatment are expected conditions of any discharge permit. If the Contractor encounters what may be contaminated groundwater, the Carbon America environmental contact will be notified immediately.

8.0 POLLUTION PREVENTION MANAGEMENT MEASURES

8.1 IDENTIFICATION OF POTENTIAL STORMWATER CONTAMINANTS

The primary pollutant sources are disturbed soils and subsequent potential surface water runoff from within the construction right-of-way. Other potential pollutant sources include debris from the clearing operations and petroleum products (see below) required for the operation of construction equipment. Construction materials, waste, debris, etc. will be routinely removed from the site and not allowed to accumulate to prevent solid materials from entering surface waters. The following practices will be followed during the Project for spill prevention.

Fuels and Hazardous Materials Handling

- No refueling or hazardous material transfer will occur within 100 feet of a wetland, waterbody, spring, or well unless approved by Carbon America’s designated environmental representative.
- Where conditions require that construction equipment (e.g., pumps used in trench dewatering) be refueled within 100 feet of wetlands or water bodies, sufficient oil and fuel containment booms and absorbent materials will be on-hand to allow for rapid containment and recovery if a spill occurs.
- Pumps will be placed within an appropriate containment structure (e.g., lined pit, plastic containment structure, or plastic pool).

8.2 SOLID WASTE DISPOSAL

Non-hazardous construction wastes generated will be containerized and properly disposed of offsite in compliance with applicable state and/or local waste disposal regulations. Stormwater contact with wastes will be minimized. Litter, construction debris, and construction chemicals exposed to stormwater will be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls and trash to be picked up daily). Wash waters must be treated prior to discharge or contained and properly disposed of offsite. There will be no engine degreasing allowed onsite. All wastes not native to the construction site will be disposed offsite. Inspections will include surveying the site for refuse, which will be disposed of as soon as possible.

8.3 HAZARDOUS MATERIALS HANDLING

Secondary containment will be provided for any hazardous materials, including oil, gasoline and paint. Safety Data Sheets (SDSs) for all hazardous materials will be maintained onsite. All employees dealing with hazardous materials will be informed of proper handling procedures. Any hazardous materials stored onsite will be housed in a locked storage area to prevent possible vandalism. No hazardous waste is expected to be generated during construction of the facility. In the event that hazardous waste is generated, it will be stored and disposed of in compliance with state and federal regulations.

Spills contributing to a “hazardous condition” must be documented within the SWMP within 14 days of an occurrence. The release and its circumstances must be described, as well as prevention measures, to prevent

a reoccurrence of a spill. In the event that a hazardous substance is discharged and causes an emergency condition, the site inspector or Contractor will immediately call the incident reporting hotline at 1-877-518-5608.

8.4 CONTAMINATED SOILS OR GROUNDWATER

If any soils or groundwater is encountered that have a sheen, oily runoff, or odor, Carbon America's project manager or environmental contact will be contacted, and necessary protocols will be followed for the management of the contaminated material. Carbon America and its Contractor(s) will follow standard state and federal regulation practices to deal with contaminated soils if encountered during construction activities.

8.5 SPILL PREVENTION

Stormwater that collects in secondary containment for hazardous wastes will be visually inspected for signs of contamination or visible sheen prior to drainage. If contamination is suspected, the stormwater will be contained and disposed of at an appropriate offsite facility. Other potential pollutant sources include debris from the clearing operations and petroleum products needed for the construction equipment.

8.6 CONCRETE WASTE AREA

The Contractor(s) will contain all concrete washout and make sure that any equipment that has made contact with concrete will be washed off and the wash water contained. All concrete wash water will be hauled offsite and disposed of at a licensed facility. Specifically, if concrete is to be poured onsite, the wash water generated from cleaning any equipment that comes in contact with concrete pours must be contained in a leak-proof container or impervious liner (for example, a compacted clay liner that does not allow washout to enter groundwater) and the liquid allowed to evaporate or be disposed of at an approved location. A concrete washout area should be clearly identified with appropriate signs. Under no circumstance may washout water drain offsite or into any public or private conveyance.

9.0 INSPECTIONS AND MAINTENANCE

Visual inspections of the construction site will include the inspection of work areas for evidence of pollutants exiting the site. The inspection will verify that the structural BMPs are in good condition and are minimizing erosion and sediment migration. Construction entrances and exits will be inspected for evidence of sediment being tracked offsite. The inspection will also verify that the procedures used to prevent stormwater contamination from construction activities are effective. Inspections will continue until the site has reached final stabilization and a Notice of Termination (NOT) has been submitted.

9.1 INSPECTION PROCEDURES

A qualified person will inspect disturbed areas of the construction site in accordance with the following minimum frequencies:

- At least one inspection every seven calendar days.
- At least one inspection every 14 calendar days if post-storm event inspections are conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosion. Post-storm inspections may be used to fulfill the 14-day routine inspection requirement.
- When site conditions make the schedule required in this section impractical, an alternate inspection schedule can be followed. The alternative inspection schedule must not be implemented prior to written approval by the division and incorporation into the SWMP.

Inspections will continue until the site has reached final stabilization and the NOT has been submitted. The following will be inspected:

- Disturbed areas and areas used for storage of materials that are exposed to precipitation should be inspected for evidence of pollutants or sediment running offsite.
- Erosion and sediment control measures should be inspected to make sure they are working effectively or if they are damaged.
- Discharge locations should be inspected for offsite accumulations of sediment and any offsite accumulations should be removed.
- Site entrances and exits for evidence of offsite sediment tracking.

The site description based on the results of the inspection will be revised as appropriate but in no case later than 24 hours following the inspection. The site inspector will also record the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated and attach the record to this SWMP.

9.2 INSPECTION REPORTS

An inspection report (refer to Appendix C) will be prepared after each inspection and will be maintained during the entire construction project. Records of each inspection and of maintenance activities will include:

- I. The inspection date.
- II. Name(s) and title(s) of personnel conducting the inspection.
- III. Weather conditions at the time of inspection.
- IV. Phase of construction at the time of inspection.
- V. Estimated acreage of disturbance at the time of inspection.
- VI. Location(s) and identification of control measures requiring routine maintenance.
- VII. Location(s) and identification of discharges of sediment or other pollutants from the site.
- VIII. Location(s) and identification of inadequate control measures.
- IX. Location(s) and identification of additional control measures needed that were not in place at the time of inspection.
- X. Description of corrective action(s) for items vii, viii, ix, above, dates corrective action(s) were completed, including requisite changes to the SWMP, as necessary.
- XI. Description of the minimum inspection frequency utilized when conducting each inspection.
- XII. Deviations from the minimum inspection schedule. This would include documentation of division approval for an alternate inspection schedule.
- XIII. After adequate corrective action(s) have been taken, or where a report does not identify any incidents requiring corrective action, the report shall contain a statement.

9.3 RECORD RETENTION

The following records will be maintained for three (3) years:

- SWMP, Notice of Intent (NOI), and NOT;
- Inspection records; and
- Operation and maintenance agreements (e.g., rights-of-way contracts, covenants, or other requirements for maintenance).

9.4 KEEPING PLANS CURRENT

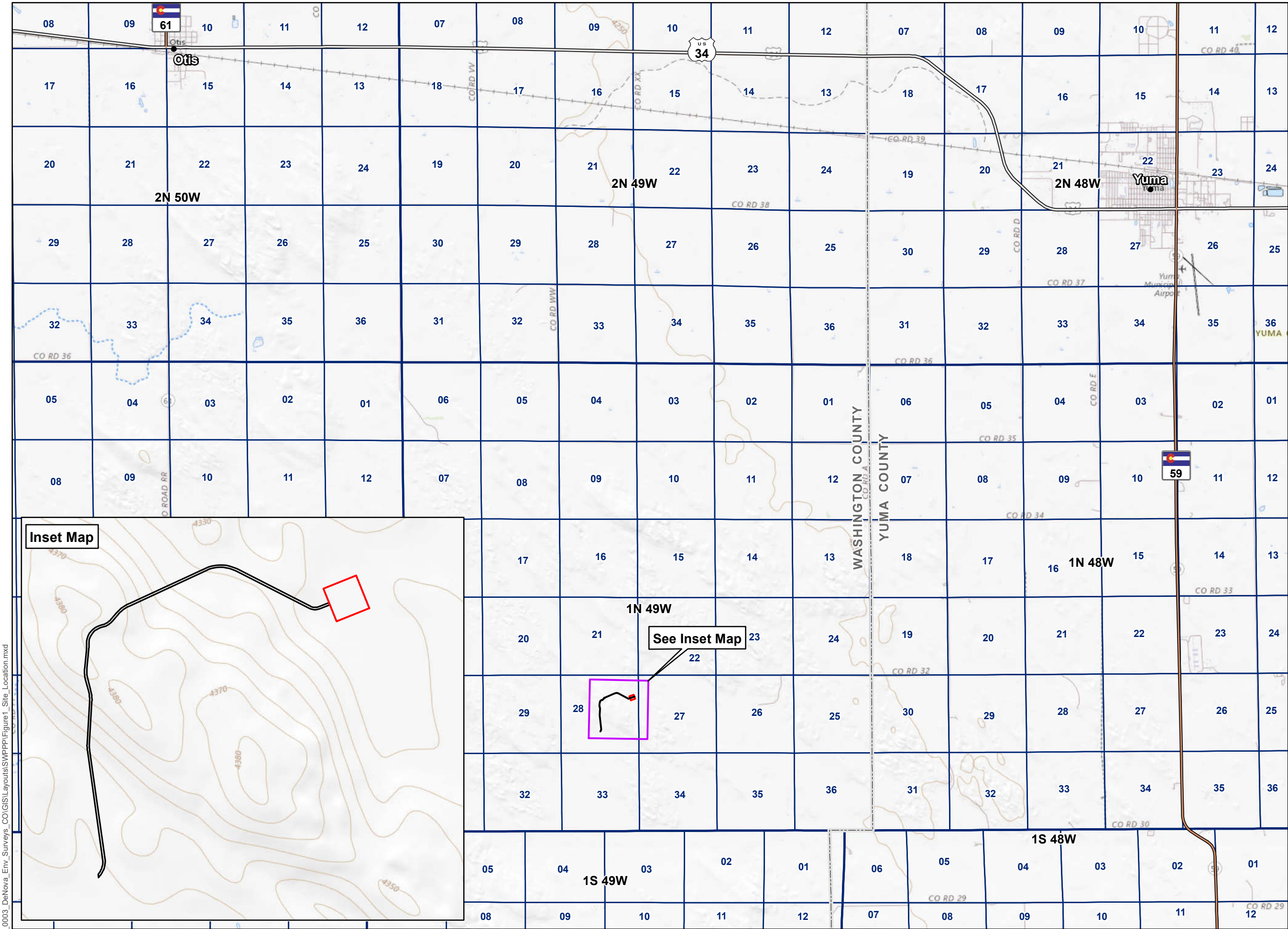
Carbon America will amend the SWMP whenever there is a change in design, construction, operation, or maintenance that has a significant effect on the potential for the discharge of pollutants to the waters of the state. The SWMP will also be amended to improve observed deficiencies associated with treatment of stormwater discharges.

10.0 FINAL SITE STABILIZATION

Final site stabilization will be considered complete when the following conditions have been met:

- All soil-disturbing activities are complete, and all soils must be stabilized with a uniform perennial vegetative cover with a density of at least 70 percent of the site's pre-existing conditions.
- All sediment will be removed from conveyance systems, such as ditches, and will be stabilized with a permanent cover with a density of 70 percent of the site's pre-existing conditions; and
- All temporary synthetic and temporary structural erosion control devices, such as silt fences, fiber logs, and staking have been removed.

FIGURES



Carbon America
Denova Project

Figure 1
Site Location

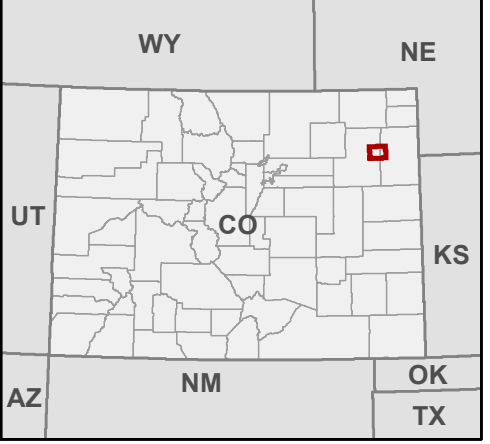
SW4NW4 SEC 27; NE4, SE4NW4, NE4SW4,
NW4SE4 SEC 28; T1N R49W of the 6th PM,
Washington County, CO

- Project Features**
- Pad Site
 - Access Road 15-foot Corridor
- Transportation**
- US Highway
 - State Highway
- Boundaries**
- County Boundary
 - PLSS Township
 - PLSS Section

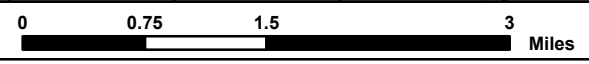


NOT FOR CONSTRUCTION

Reference Map



1:75,000 NAD 1983 StatePlane Colorado North FIPS 0501 Feet



Source: ESRI, USGS US TOPO MAPS, BTS, US CENSUS, BLM PLSS

P:\0204_0003_Denova_Env_Surveys_CO\GIS\Layouts\SWPPP\Figure1_Site_Location.mxd

P:\0204_0003_Denova_Env_Surveys_CO\GIS\Layouts\SWPPP\Figure2_Site_Plan.mxd





- Soil stabilization will be initiated wherever grading activity permanently or temporarily ceases and in no case later than 14 days
- Perimeter sediment controls (silt fence, biologs, or equivalent) will be installed downgradient of all areas of soil disturbance -- including temporary stockpiles.
- ROW access from roads/driveways will not track sediment or dirt onto paved public roads
- Erosion control blanket stabilization and a culvert to maintain ditch flows will be installed at the access road entrance if widening or access improvements take place. Downstream ditch checks (biologs, rock checks or equivalent) will be installed in ditch line as needed to prevent downstream impacts.
- Staging/laydown areas TBD at the time of plan preparation.
- Plan will be updated to reflect latest project details, layout, and BMPs

**Carbon America
Denova Project**


**Figure 2
Site Plan**

SW4NW4 SEC 27; NE4, SE4NW4, NE4SW4,
NW4SE4 SEC 28; T1N R49W of the 6th PM,
Washington County, CO

Project Features

-  Pad Site
-  Access Road 15-foot Corridor

Transportation

-  Existing Two-Track Path



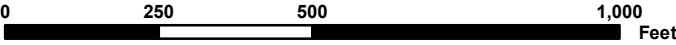
NOT FOR CONSTRUCTION

Reference Map



1:3,750

NAD 1983 StatePlane Colorado North FIPS 0501 Feet



Source: ESRI, USDA NAIP, BTS, US CENSUS

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


**Carbon America
Denova Project**




**Figure 3
Natural Resources Conservation
Service (NRCS) Soils**

SW4NW4 SEC 27; NE4, SE4NW4, NE4SW4,
NW4SE4 SEC 28; T1N R49W of the 6th PM,
Washington County, CO

Project Features

-  Pad Site
-  Access Road 15-foot Corridor

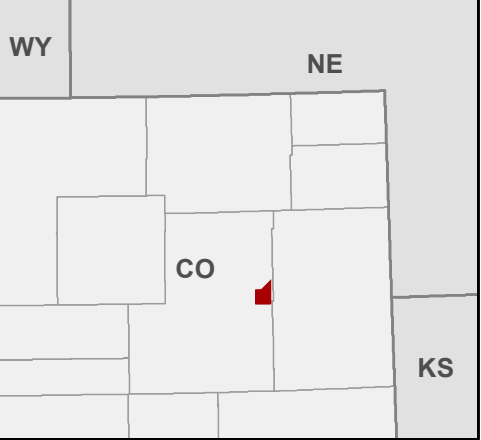
Soil Types

-  Valent sand, rolling
-  Valent sand, 3-9% slopes
-  Haxtun loamy sand, 0-3% slopes



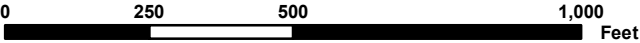
NOT FOR CONSTRUCTION

Reference Map



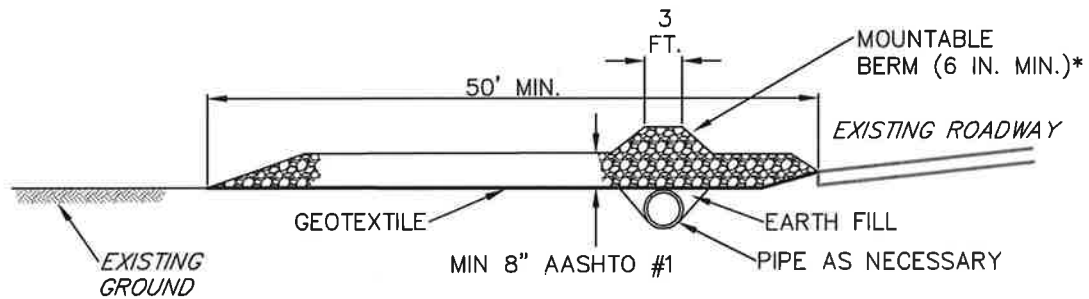
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NAD 1983 StatePlane Colorado North FIPS 0501 Feet

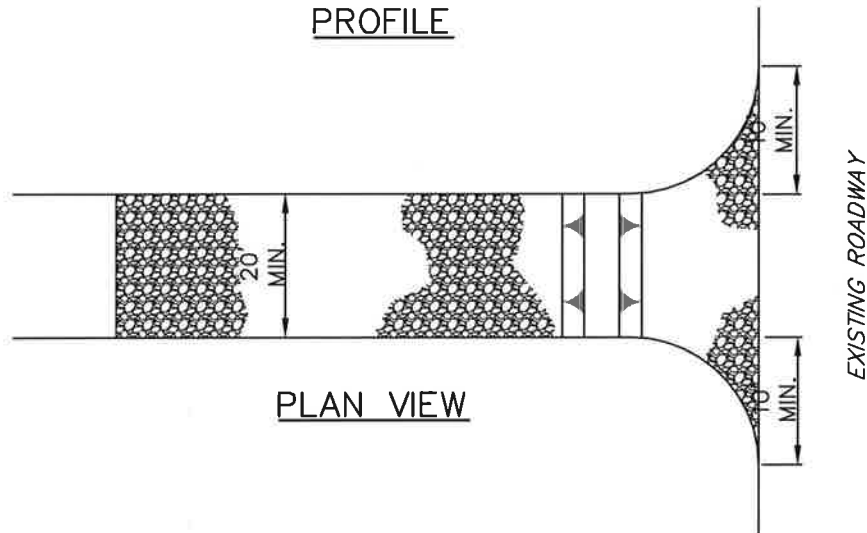


Source: ESRI, USDA NAIP, NRCS

APPENDIX A: TYPICAL DETAILS



PROFILE



PLAN VIEW

* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

NOTES:

REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.

RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.

MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.

MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

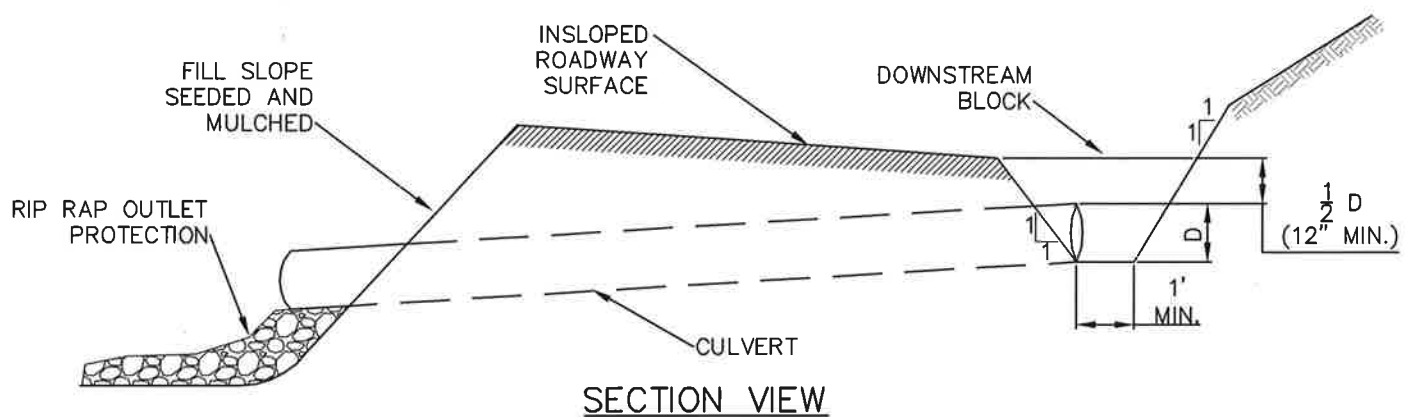
STANDARD CONSTRUCTION DETAIL #3-1
ROCK CONSTRUCTION ENTRANCE

NOT TO SCALE



ROADWAY SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED ROADWAYS, DITCHES, OR CROSS DRAINS SHALL BE REPAIRED IMMEDIATELY.

NOT TO SCALE



NOTES:

CUT AND FILL SLOPES SHALL BE STABILIZED IMMEDIATELY UPON COMPLETION OF ROADWAY GRADING. THESE AREAS SHALL BE BLANKETED WHEREVER THEY ARE LOCATED WITHIN 50 FEET OF A SURFACE WATER OR WITHIN 100 FEET OF AN HQ OR EV SURFACE WATER OR WHERE A SUITABLE VEGETATIVE FILTER STRIP DOES NOT EXIST.

A TOP DRESSING COMPOSED OF HARD, DURABLE STONE SHALL BE PROVIDED FOR SOILS HAVING LOW STRENGTH.

ROADSIDE DITCHES SHALL BE PROVIDED WITH ADEQUATE PROTECTIVE LINING.

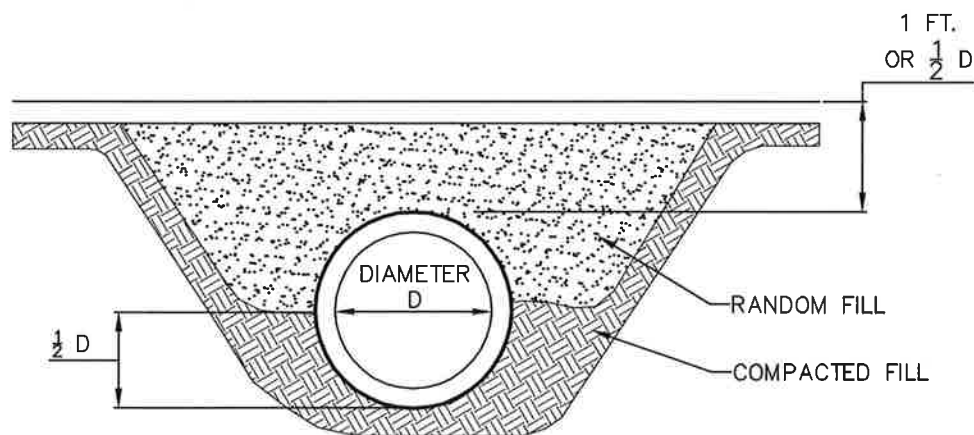
ADEQUATELY SIZED CULVERTS OR OTHER SUITABLE CROSS DRAINS SHALL BE PROVIDED AT ALL SEEPS, SPRINGS, AND DRAINAGE COURSES. DITCH RELIEF CULVERTS SHALL BE PROVIDED AT THE INTERVALS INDICATED ON TABLE 3.3 OR TABLE 3.4 OF THE PA DEP EROSION CONTROL MANUAL. RIPRAP OUTLET PROTECTION TO BE SIZED ACCORDING TO ANTICIPATED DISCHARGE VELOCITY.

ROADWAY SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED ROADWAYS, DITCHES, OR CROSS DRAINS SHALL BE REPAIRED IMMEDIATELY.

STANDARD CONSTRUCTION DETAIL #3-4

INSLOPED ROADWAY

NOT TO SCALE



SECTION VIEW

NOTES:

MINIMUM DIAMETER FOR ANY CULVERT IS 12"; OTHERWISE CULVERT SHALL BE SIZED FOR ANTICIPATED PEAK FLOW. PLACE CULVERT SO BOTTOM IS AT SAME LEVEL AS BOTTOM OF DITCH OR ADJOINING SLOPE. CULVERTS SHALL BE PLACED WITH A SLOPE OF 2 TO 4%. LOWER END SHALL BE AT LEAST 2" BELOW UPPER END.

EXTEND CULVERT 12" BEYOND BASE OF ROAD FILL ON BOTH SIDES. FIRMLY PACK FILL AROUND CULVERT, ESPECIALLY THE BOTTOM HALF.

PROVIDE SUITABLE OUTLET PROTECTION* AND, WHERE APPROPRIATE, INLET PROTECTION.

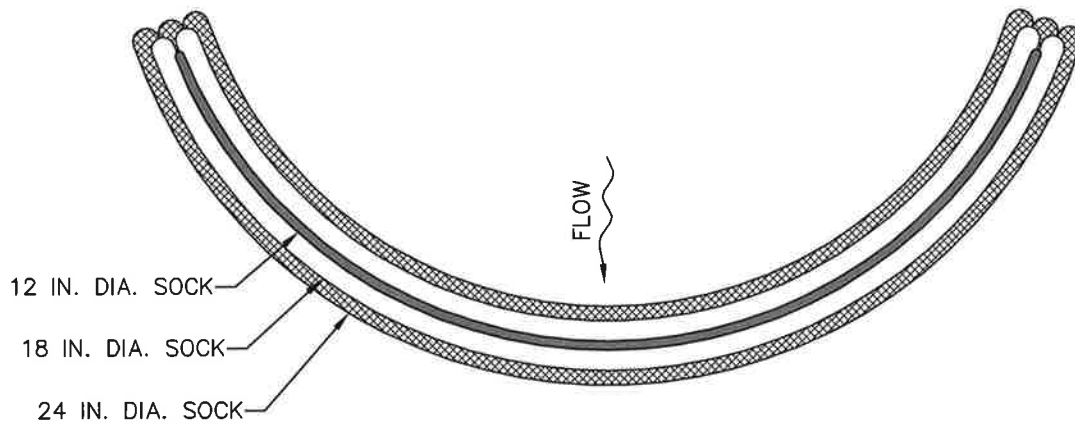
INSPECT CULVERT WEEKLY: REMOVE ANY FLOW OBSTRUCTIONS AND MAKE NECESSARY REPAIRS IMMEDIATELY.

THIS DETAIL MAY BE USED FOR DITCH RELIEF CULVERTS AND FOR CROSSINGS OF ROADSIDE DITCHES. IT IS NOT APPROPRIATE FOR STREAM CROSSINGS.

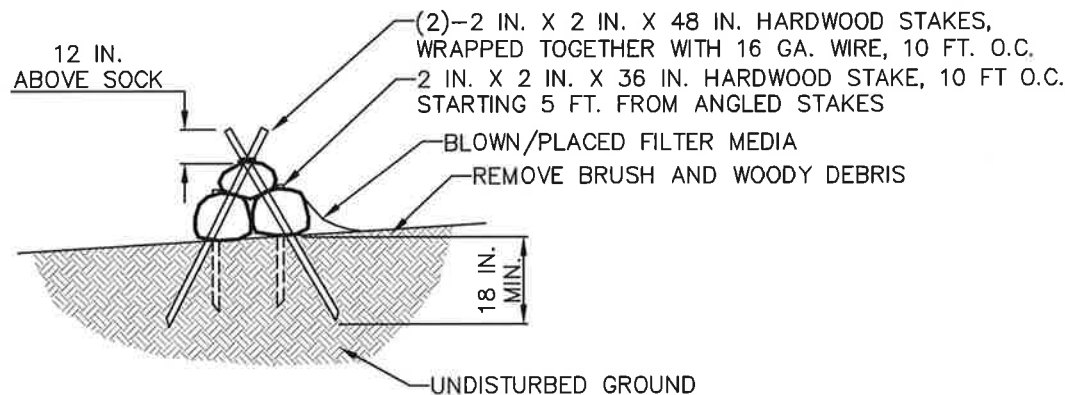
* FOR STEEP SLOPE (>2H:1V) OUTFALLS, A MINIMUM 20 FOOT LONG R-5 APRON IS RECOMMENDED FOR TEMPORARY ACCESS ROADS WHERE THE RECOMMENDED CULVERT SPACING IS USED. FOR PERMANENT ACCESS ROADS, A MINIMUM R-6 ROCK SIZE IS RECOMMENDED.

STANDARD CONSTRUCTION DETAIL #3-10
DITCH RELIEF CULVERT

NOT TO SCALE



PLAN VIEW



STAKING DETAIL

DESIGN NOTES:

1. COMPOST SOCK SEDIMENT TRAP SHALL BE SIZED TO PROVIDE 2000 CUBIC FEET OF STORAGE CAPACITY FOR EACH ACRE TRIBUTARY TO THE TRAP.
2. MINIMUM BASE WIDTH IS EQUAL TO THE HEIGHT.
3. SEDIMENT ACCUMULATION SHALL NOT EXCEED $\frac{1}{3}$ THE TOTAL HEIGHT OF THE TRAP.
4. SOCKS SHALL BE OF LARGER DIAMETER AT THE BASE OF THE TRAP AND DECREASE IN DIAMETER FOR SUCCESSIVE LAYERS AS SHOWN ON THE PLAN VIEW.
5. ENDS OF THE TRAP SHALL BE A MINIMUM OF 1 FOOT HIGHER IN ELEVATION THAN THE MID-SECTION, WHICH SHALL BE LOCATED AT THE POINT OF DISCHARGE.

NOTES:

SOCK MATERIAL SHALL MEET THE STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

COMPOST SOCK SEDIMENT TRAPS SHALL NOT EXCEED THREE SOCKS IN HEIGHT AND SHALL BE STACKED IN PYRAMIDAL FORM AS SHOWN ABOVE. MINIMUM TRAP HEIGHT IS ONE 24" DIAMETER SOCK. ADDITIONAL STORAGE MAY BE PROVIDED BY MEANS OF AN EXCAVATED SUMP 12" DEEP EXTENDING 1 TO 3 FEET UPSLOPE OF THE SOCKS ALONG THE LOWER SIDE OF THE TRAP.

COMPOST SOCK SEDIMENT TRAPS SHALL PROVIDE 2,000 CUBIC FEET STORAGE CAPACITY WITH 12" FREEBOARD FOR EACH TRIBUTARY DRAINAGE ACRE. (SEE MANUFACTURER FOR ANTICIPATED SETTLEMENT.)

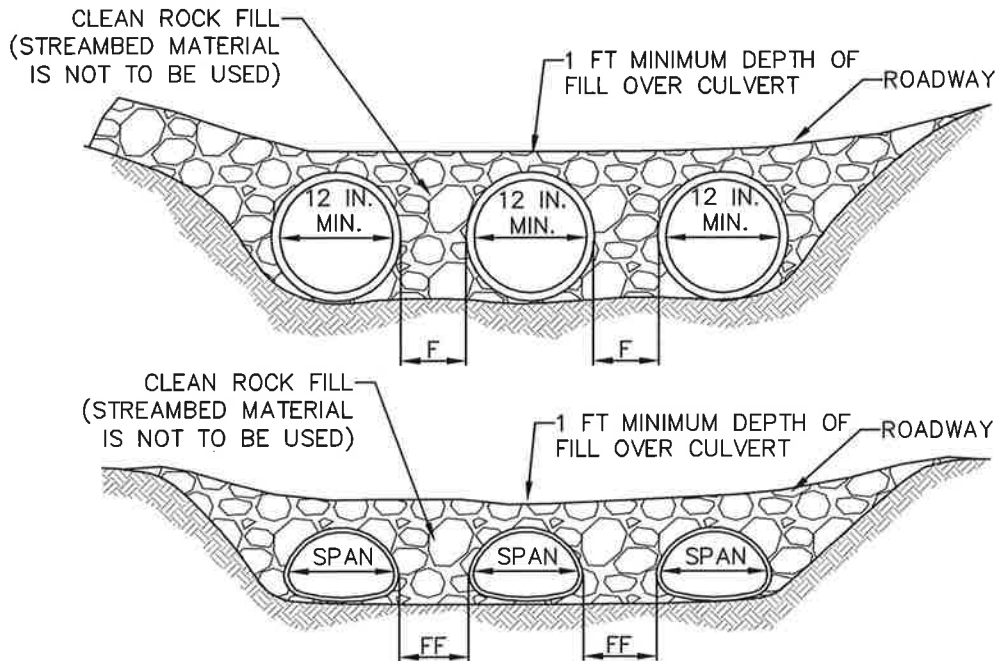
THE MAXIMUM TRIBUTARY DRAINAGE AREA IS 5.0 ACRES. SINCE COMPOST SOCKS ARE "FLOW-THROUGH," NO SPILLWAY IS REQUIRED.

COMPOST SOCK SEDIMENT TRAPS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. SEDIMENT SHALL BE REMOVED WHEN IT REACHES $\frac{1}{3}$ THE HEIGHT OF THE SOCKS.

PHOTODEGRADABLE AND BIODEGRADABLE SOCKS SHALL NOT BE USED FOR MORE THAN 1 YEAR.

STANDARD CONSTRUCTION DETAIL #3-11
COMPOST SOCK SEDIMENT TRAP

NOT TO SCALE



CROSS-SECTIONS

NOTES:

MULTIPLE PIPES AND MULTIPLE SPAN BRIDGES AND CULVERTS WHICH MAY TEND TO COLLECT DEBRIS, CONTRIBUTE TO THE FORMATION OF ICE JAMS AND INCREASE HEAD LOSSES SHALL BE AVOIDED TO THE MAXIMUM EXTENT PRACTICABLE. CROSSINGS OF LESS THAN 15 FEET SHALL BE BY ONE SPAN, EXCEPT WHERE CONDITIONS MAKE IT IMPRACTICAL TO AFFECT THE CROSSING WITHOUT MULTIPLE SPANS (SECTION 105.162).

SEE TABLE 3.5 OF THE PA DEP EROSION CONTROL MANUAL FOR DISTANCE VALUES 'F' AND 'FF'. FOR ARCH PIPES, USE CLOSEST AVAILABLE STANDARD SIZES THAT PROVIDE THE SAME WATERWAY OPENING AREA SHOULD SIZES WITHIN THE TABLE BE UNAVAILABLE.

PROVIDE 50' STABILIZED ACCESS TO CROSSING ON BOTH SIDES OF STREAM CHANNEL (SEE STANDARD CONSTRUCTION DETAIL #3-12).

PIPES SHALL EXTEND BEYOND THE TOE OF THE ROADWAY.

RUNOFF FROM THE ROADWAY SHALL BE DIVERTED OFF THE ROADWAY AND INTO A SEDIMENT REMOVAL BMP BEFORE IT REACHES THE ROCK APPROACH TO THE CROSSING.

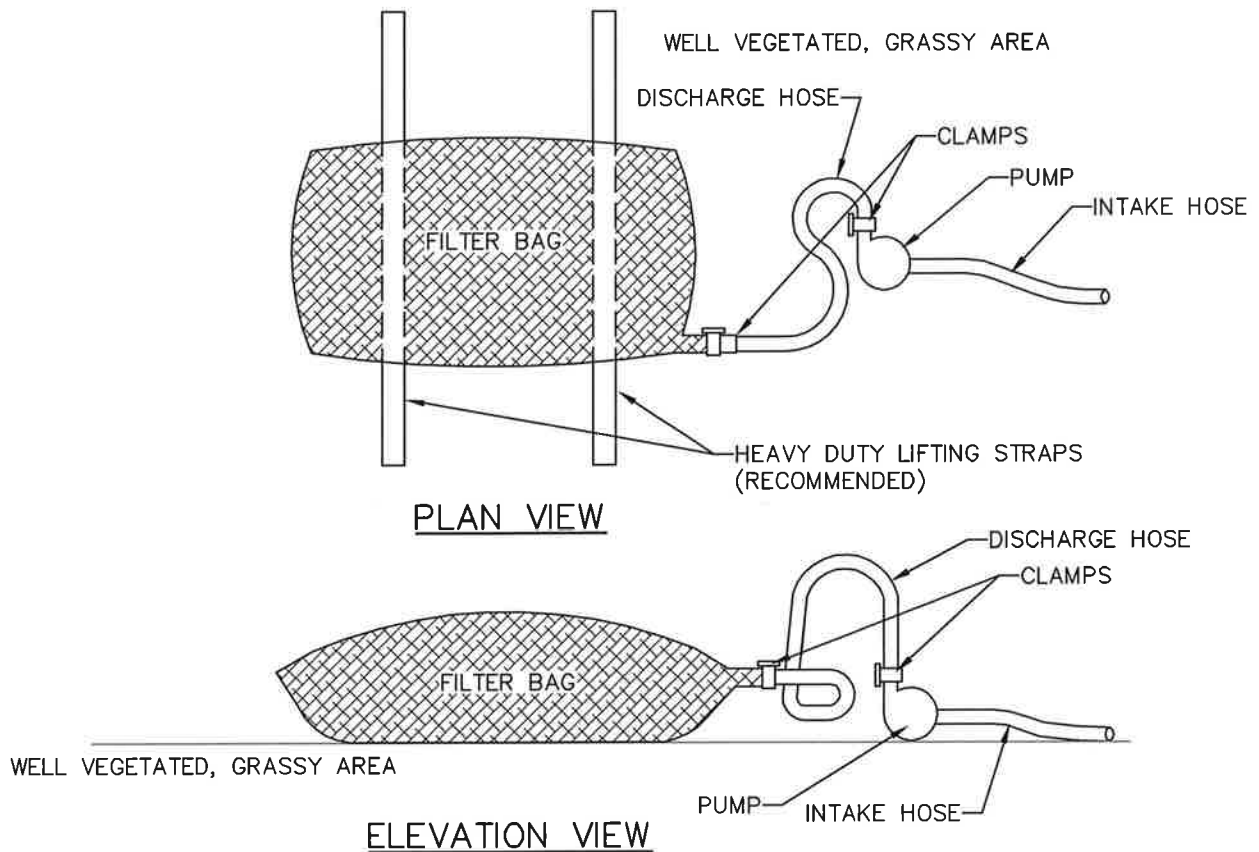
MAINTENANCE

1. TEMPORARY STREAM CROSSINGS SHALL BE INSPECTED ON A DAILY BASIS.
2. DAMAGED CROSSINGS SHALL BE REPAIRED WITHIN 24 HOURS OF THE INSPECTION AND BEFORE ANY SUBSEQUENT USE.
3. SEDIMENT DEPOSITS ON THE CROSSING OR ITS APPROACHES SHALL BE REMOVED WITHIN 24 HOURS OF THE INSPECTION.

AS SOON AS THE TEMPORARY CROSSING IS NO LONGER NEEDED, IT SHALL BE REMOVED. ALL MATERIALS SHALL BE DISPOSED OF PROPERLY AND DISTURBED AREAS STABILIZED.

STANDARD CONSTRUCTION DETAIL #3-14 **TEMPORARY STREAM CROSSING - MULTIPLE PIPES**

NOT TO SCALE



NOTES:

LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 LB/IN
GRAB TENSILE	ASTM D-4632	205 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3786	350 PSI
UV RESISTANCE	ASTM D-4355	70%
AOS % RETAINED	ASTM D-4751	80 SIEVE

A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED.

BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%. FOR SLOPES EXCEEDING 5%, CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.

NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.

THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.

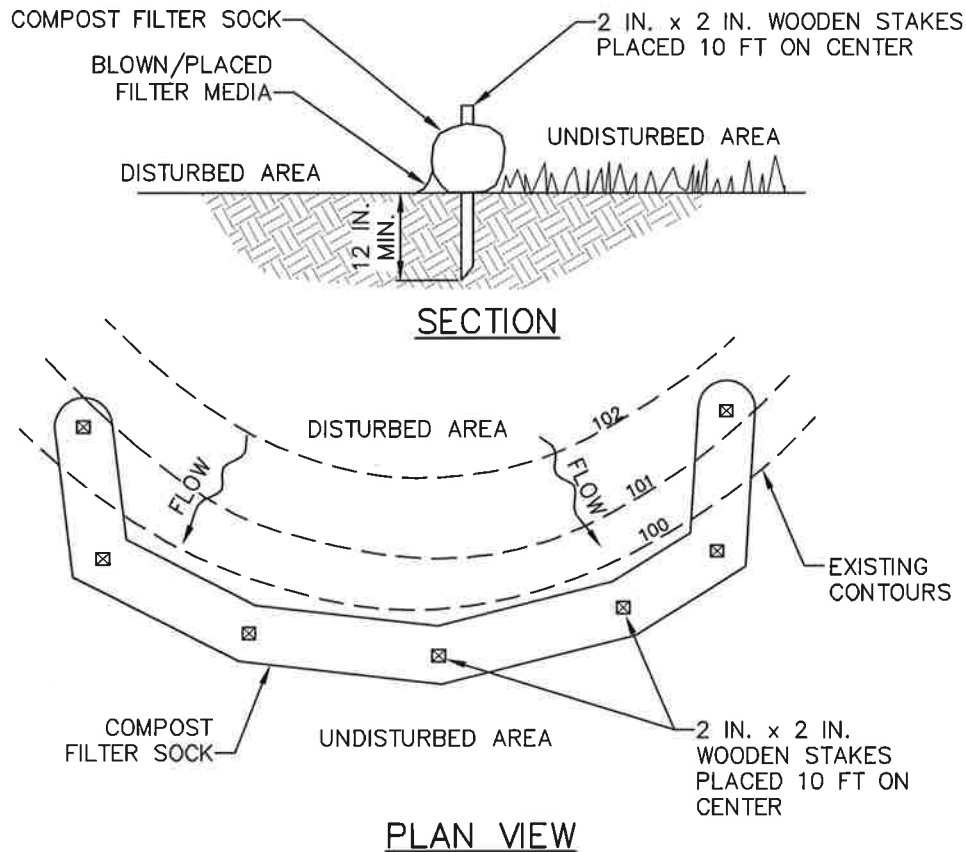
THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.

FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

STANDARD CONSTRUCTION DETAIL #3-16

PUMPED WATER FILTER BAG

NOT TO SCALE



NOTES:

SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA.

TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.

ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.

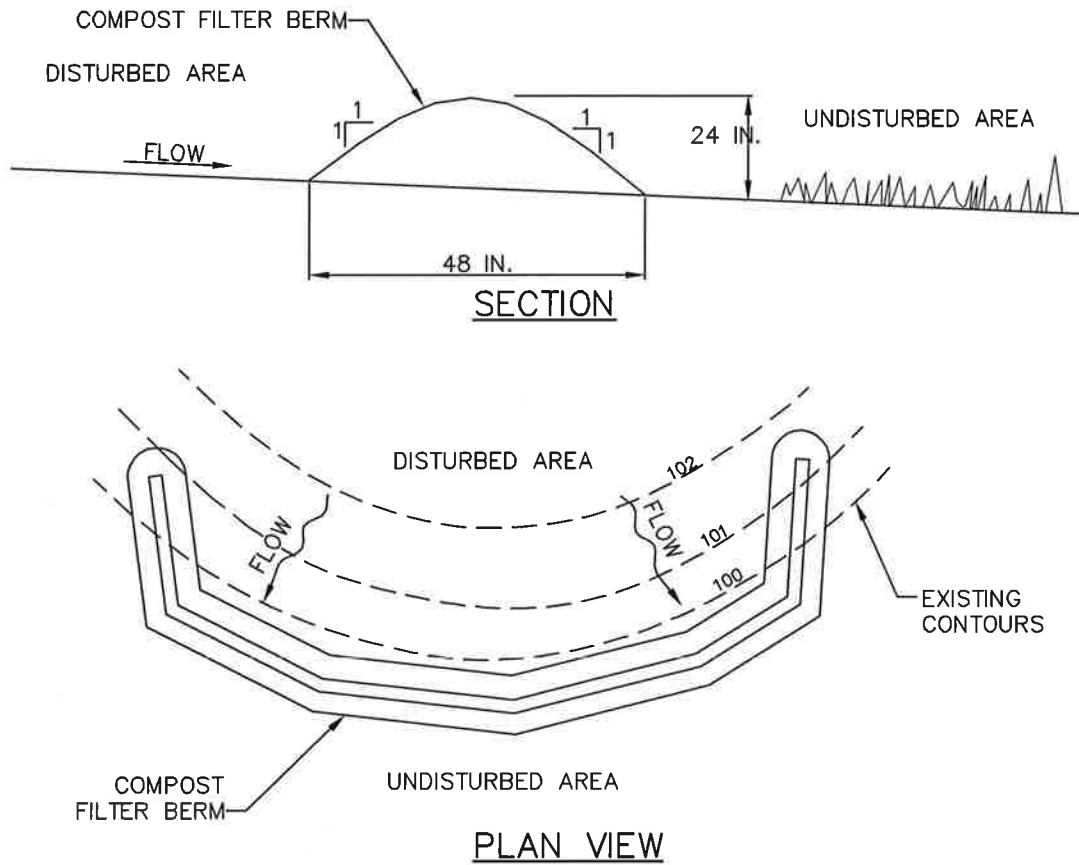
COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

STANDARD CONSTRUCTION DETAIL #4-1
COMPOST FILTER SOCK

NOT TO SCALE



NOTES:

COMPOST SHALL MEET STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

COMPOST FILTER BERMS SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BERM SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BERM ALIGNMENT.

THE MAXIMUM SLOPE LENGTH ABOVE A COMPOST FILTER BERM SHALL NOT EXCEED THAT SHOWN IN TABLE 4.4 OF THE PA DEP EROSION CONTROL MANUAL FOR THE STANDARD SILT FENCE (18 IN. HIGH FENCE).

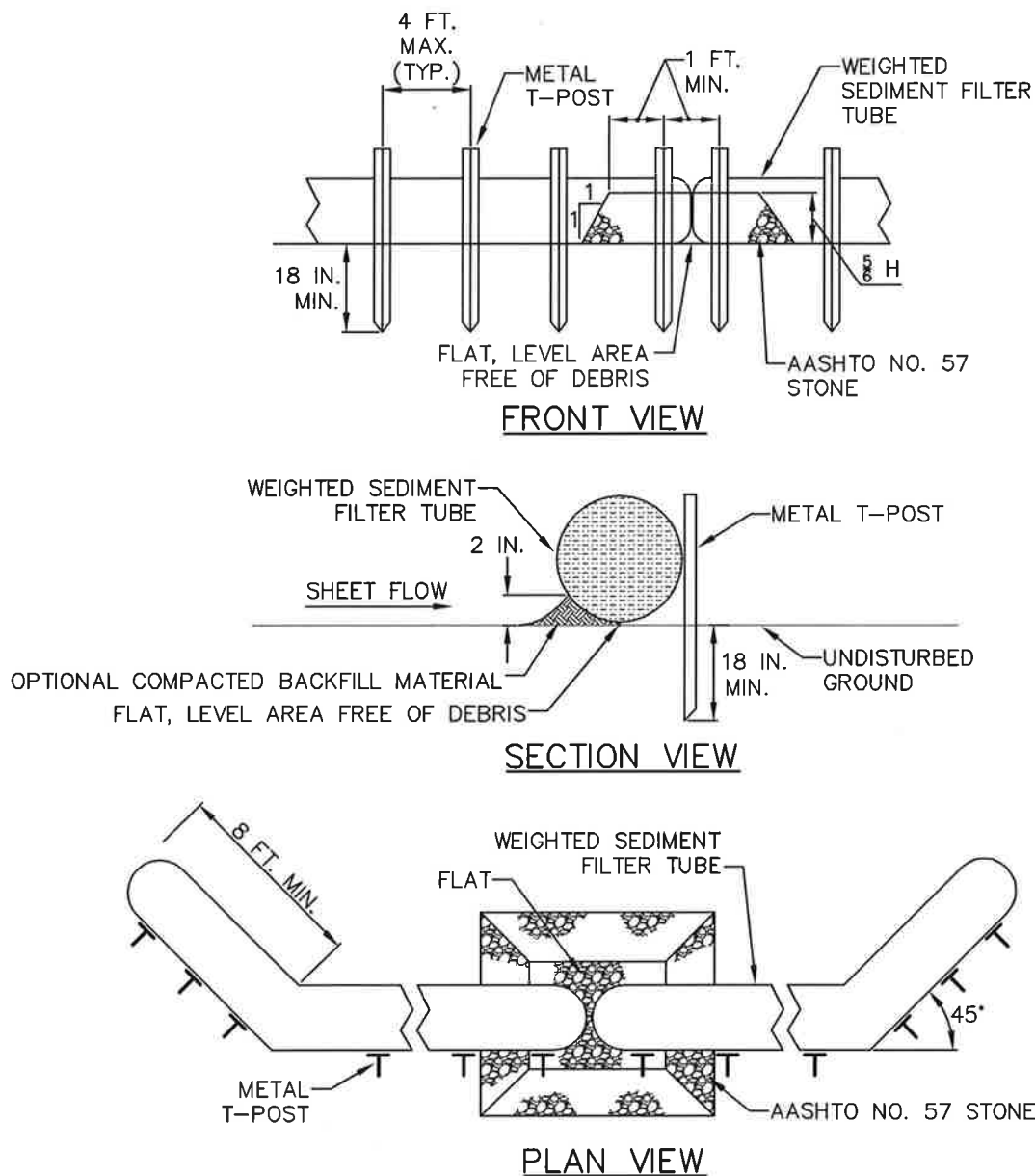
TALL GRASS SHALL BE CUT PRIOR TO INSTALLATION TO MINIMIZE POTENTIAL FOR UNDERCUTTING. BERM SHALL BE NETTED OR OTHERWISE ANCHORED AFTER INSTALLATION.

SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH $\frac{1}{3}$ THE ABOVE GROUND HEIGHT OF THE BERM.

ANY SECTION COMPOST FILTER BERM WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED. CONCENTRATED FLOWS SHALL NOT BE DIRECTED TOWARD ANY COMPOST FILTER BERM.

STANDARD CONSTRUCTION DETAIL #4-2 **COMPOST FILTER BERM**

NOT TO SCALE



NOTES:

A SEDIMENT TUBE PLACEMENT AREA SHALL BE PREPARED SO THAT IT IS FREE OF ALL DEBRIS, INCLUDING ROCKS, STICKS, ROOTS, ETC. A 2" LAYER OF AASHTO #57 STONE SHALL BE PLACED WHERE THE LOGS COME TOGETHER. ENDS OF TUBES MAY BE OVERLAPPED ACCORDING TO MANUFACTURER'S SPECIFICATIONS INSTEAD OF THE AASHTO #57 STONE.

SEDIMENT TUBES SHALL BE PLACED AT EXISTING LEVEL GRADE. ENDS SHALL BE EXTENDED UPSLOPE AT 45 DEGREES TO THE MAIN FILTER LOG ALIGNMENT FOR A MINIMUM OF 8 FEET.

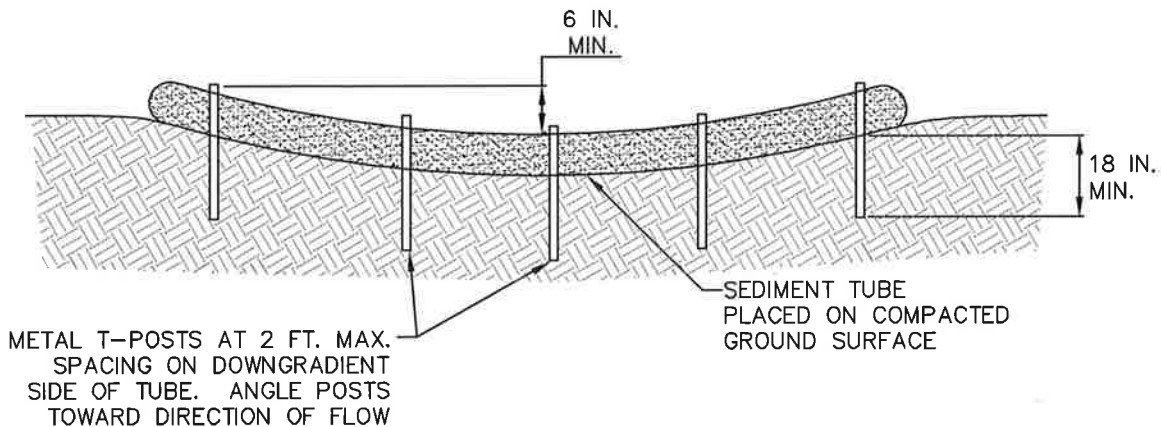
SEDIMENT TUBES SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT.

SEDIMENT DEPOSITS SHALL BE CLEANED FROM THE LOG WHEN IT REACHES HALF THE HEIGHT OF THE TUBE.

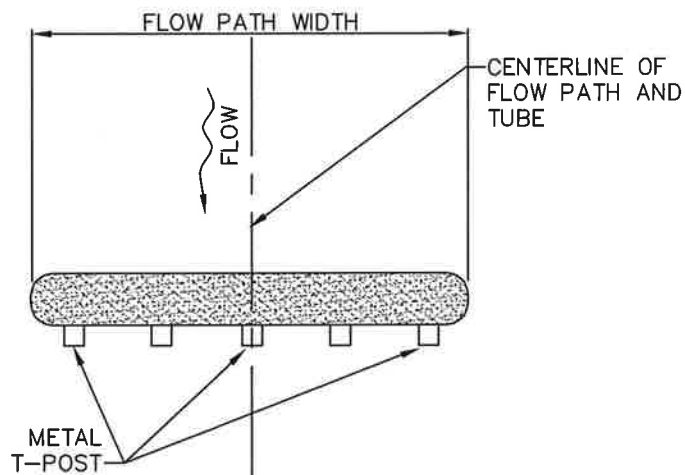
DAMAGED TUBES SHALL BE REPLACED WITHIN 24 HOURS OF INSPECTION. A SUPPLY OF TUBES SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE.

STANDARD CONSTRUCTION DETAIL #4-3
WEIGHTED SEDIMENT FILTER TUBE INSTALLATION

NOT TO SCALE



FRONT VIEW



PLAN VIEW

NOTES:

THIS DETAIL APPLICABLE TO FLOW PATHS WITH WIDTHS LESS THAN OR EQUAL TO ONE TUBE LENGTH.

METAL T-POSTS SHALL BE INSTALLED AT THE CENTER AND AT EACH END OF THE TUBE. ADDITIONAL T-POSTS SHALL BE INSTALLED AS NEEDED TO MEET THE MAXIMUM 2-FOOT SPACING.

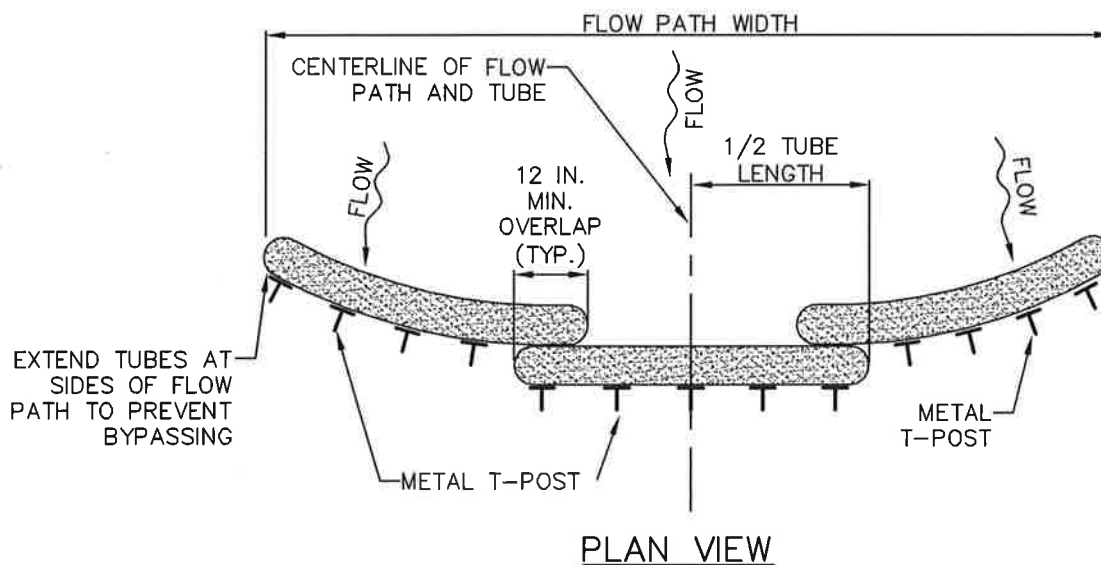
SEDIMENT TUBES SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT.

ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE TUBE AND DISPOSED AS DIRECTED ELSEWHERE IN THE E&S PLAN.

DAMAGED TUBES SHALL BE REPAIRED OR REPLACED WITHIN 24 HOURS OF INSPECTION. A SUPPLY OF TUBES SHALL BE KEPT ON SITE FOR THIS PURPOSE.

STANDARD CONSTRUCTION DETAIL #4-4
WEIGHTED SEDIMENT FILTER TUBE INSTALLATION
CONCENTRATED FLOW AREA

NOT TO SCALE



NOTES:

METAL T-POSTS SHALL BE INSTALLED AT THE CENTER AND AT EACH END OF THE TUBE. ADDITIONAL T-POSTS SHALL BE INSTALLED AS NEEDED TO MEET THE MAXIMUM 2-FOOT SPACING. SLIGHTLY ANGLE STAKES WITH TOP FACING TOWARDS DIRECTION OF FLOW.

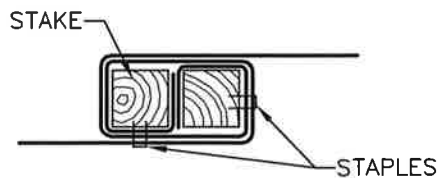
SEDIMENT TUBES SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT.

ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE TUBE AND DISPOSED AS DIRECTED ELSEWHERE IN THE E&S PLAN.

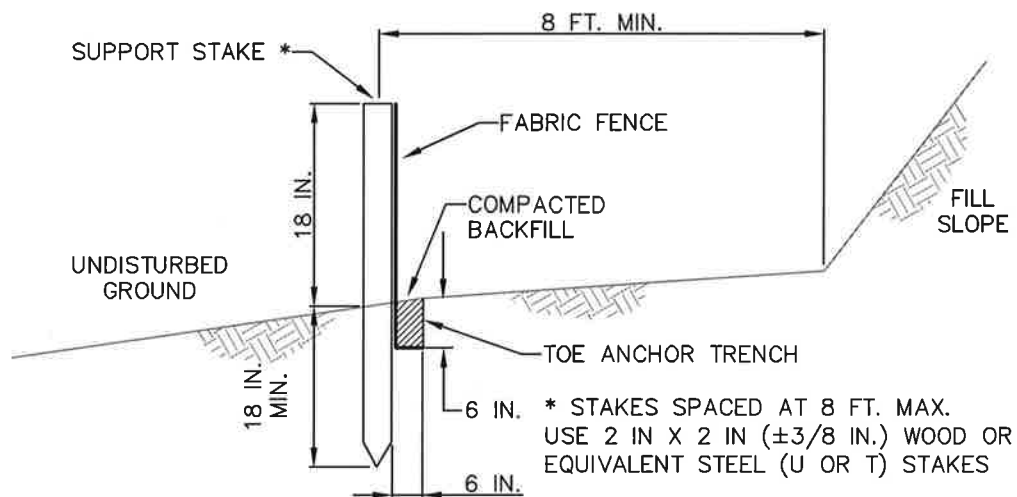
DAMAGED TUBES SHALL BE REPAIRED OR REPLACED WITHIN 24 HOURS OF INSPECTION. A SUPPLY OF TUBES SHALL BE KEPT ON SITE FOR THIS PURPOSE.

STANDARD CONSTRUCTION DETAIL #4-5
WEIGHTED SEDIMENT FILTER TUBE INSTALLATION
ACROSS A WIDE FLOW PATH

NOT TO SCALE



JOINING FENCE SECTIONS



SECTION VIEW

NOTES:

FABRIC SHALL HAVE THE MINIMUM PROPERTIES AS SHOWN IN TABLE 4.3 OF THE PA DEP EROSION CONTROL MANUAL.

FABRIC WIDTH SHALL BE 30 IN. MINIMUM. STAKES SHALL BE HARDWOOD OR EQUIVALENT STEEL (U OR T) STAKES.

SILT FENCE SHALL BE PLACED AT LEVEL EXISTING GRADE. BOTH ENDS OF THE FENCE SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT.

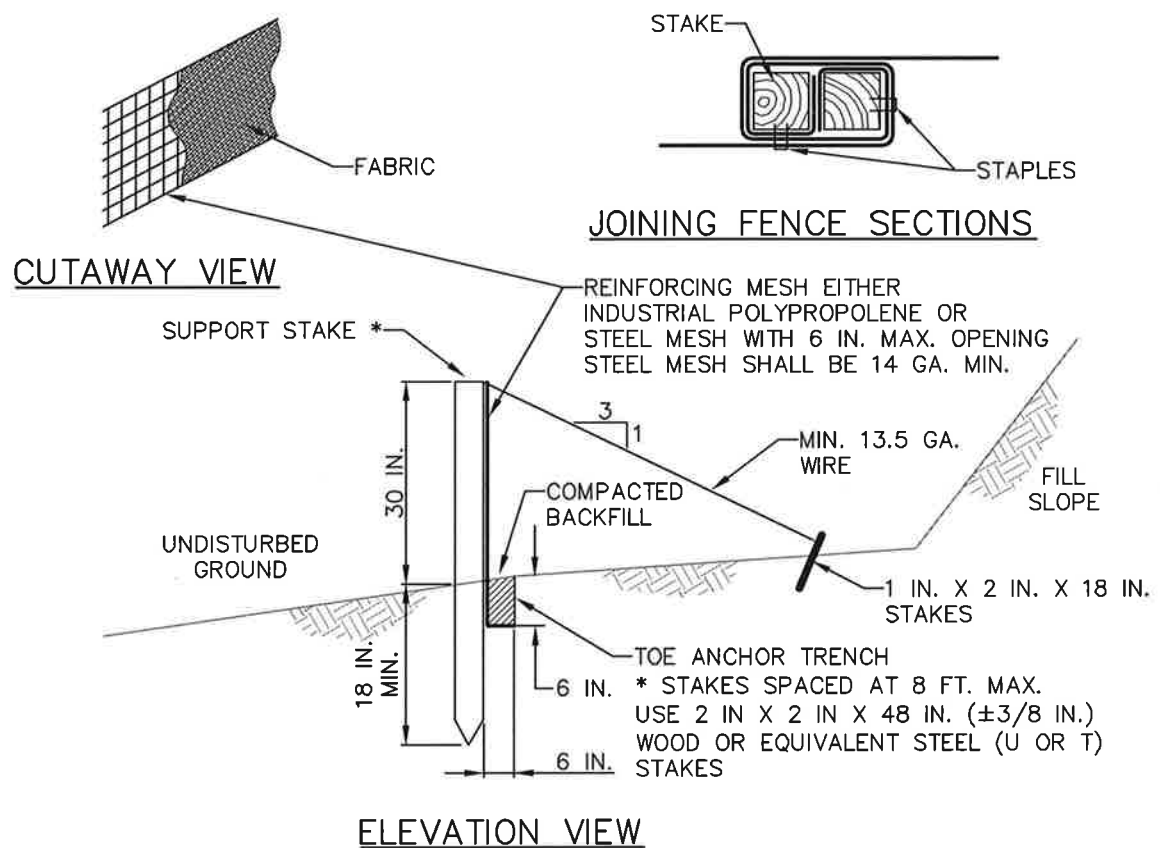
SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH HALF THE ABOVE GROUND HEIGHT OF THE FENCE.

ANY SECTION OF SILT FENCE WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET (STANDARD CONSTRUCTION DETAIL # 4-6).

FENCE SHALL BE REMOVED AND PROPERLY DISPOSED OF WHEN TRIBUTARY AREA IS PERMANENTLY STABILIZED.

STANDARD CONSTRUCTION DETAIL #4-7 **STANDARD SILT FENCE (18" HIGH)**

NOT TO SCALE



NOTES:

FABRIC SHALL HAVE THE MINIMUM PROPERTIES AS SHOWN IN TABLE 4.3 OF THE PA DEP EROSION CONTROL MANUAL.

FABRIC WIDTH SHALL BE 42 IN. MINIMUM. STAKES SHALL BE HARDWOOD OR EQUIVALENT STEEL (U OR T) STAKES. AN 18 IN. SUPPORT STAKE SHALL BE DRIVEN 12 IN. MINIMUM INTO UNDISTURBED GROUND.

SILT FENCE SHALL BE PLACED AT LEVEL EXISTING GRADE. BOTH ENDS OF THE FENCE SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT.

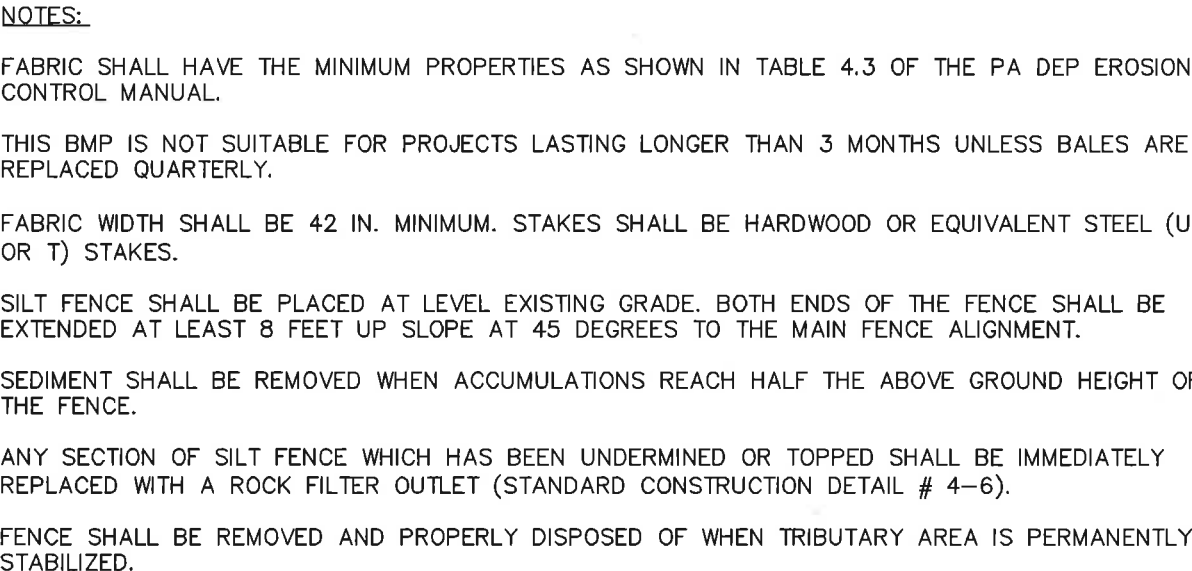
SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH HALF THE ABOVE GROUND HEIGHT OF THE FENCE.

ANY SECTION OF SILT FENCE WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET (STANDARD CONSTRUCTION DETAIL # 4-6).

FENCE SHALL BE REMOVED AND PROPERLY DISPOSED OF WHEN TRIBUTARY AREA IS PERMANENTLY STABILIZED.

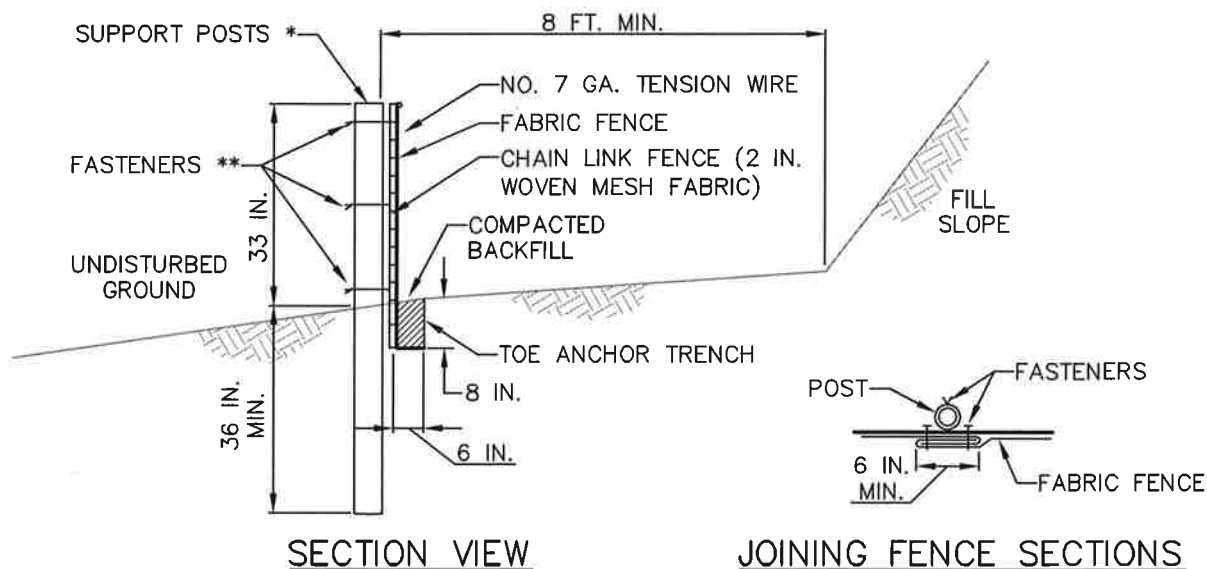
STANDARD CONSTRUCTION DETAIL #4-8
REINFORCED SILT FENCE (30" HIGH)

NOT TO SCALE



STANDARD CONSTRUCTION DETAIL #4-9
SILT FENCE REINFORCED BY STAKED STRAW BALES

NOT TO SCALE



* POSTS SPACED AT 10 FT. MAX. USE 2-1/2 IN. DIA HEAVY DUTY GALVANIZED OR ALUMINUM POSTS.

** CHAIN LINK TO POST FASTENERS SPACED AT 14 IN. MAX. USE NO. 9 GA. ALUMINUM WIRE OR NO. 9 GALVANIZED STEEL WIRE. FABRIC TO SHAIN FASTENERS SPACED AT 24 IN. MAX. ON CENTER.

NOTES:

FABRIC SHALL HAVE THE MINIMUM PROPERTIES AS SHOWN IN TABLE 4.3 OF THE PA DEP EROSION CONTROL MANUAL.

FABRIC WIDTH SHALL BE 42 IN. MINIMUM.

POSTS SHALL BE INSTALLED USING A POSTHOLE DRILL.

CHAIN LINK SHALL BE GALVANIZED NO. 11.5 GA. STEEL WIRE WITH 2-1/4 IN. OPENING, NO. 11 GA. ALUMINUM COATED STEEL WIRE IN ACCORDANCE WITH ASTM-A-491, OR GALVANIZED NO. 9 GA. STEEL WIRE TOP AND BOTTOM WITH GALVANIZED NO. 11 GA. STEEL INTERMEDIATE WIRES. NO. 7 GAGE TENSION WIRE TO BE INSTALLED HORIZONTALLY THROUGH HOLES AT TOP AND BOTTOM OF CHAIN-LINK FENCE OR ATTACHED WITH HOG RINGS AT 5 FT MAX. CENTERS.

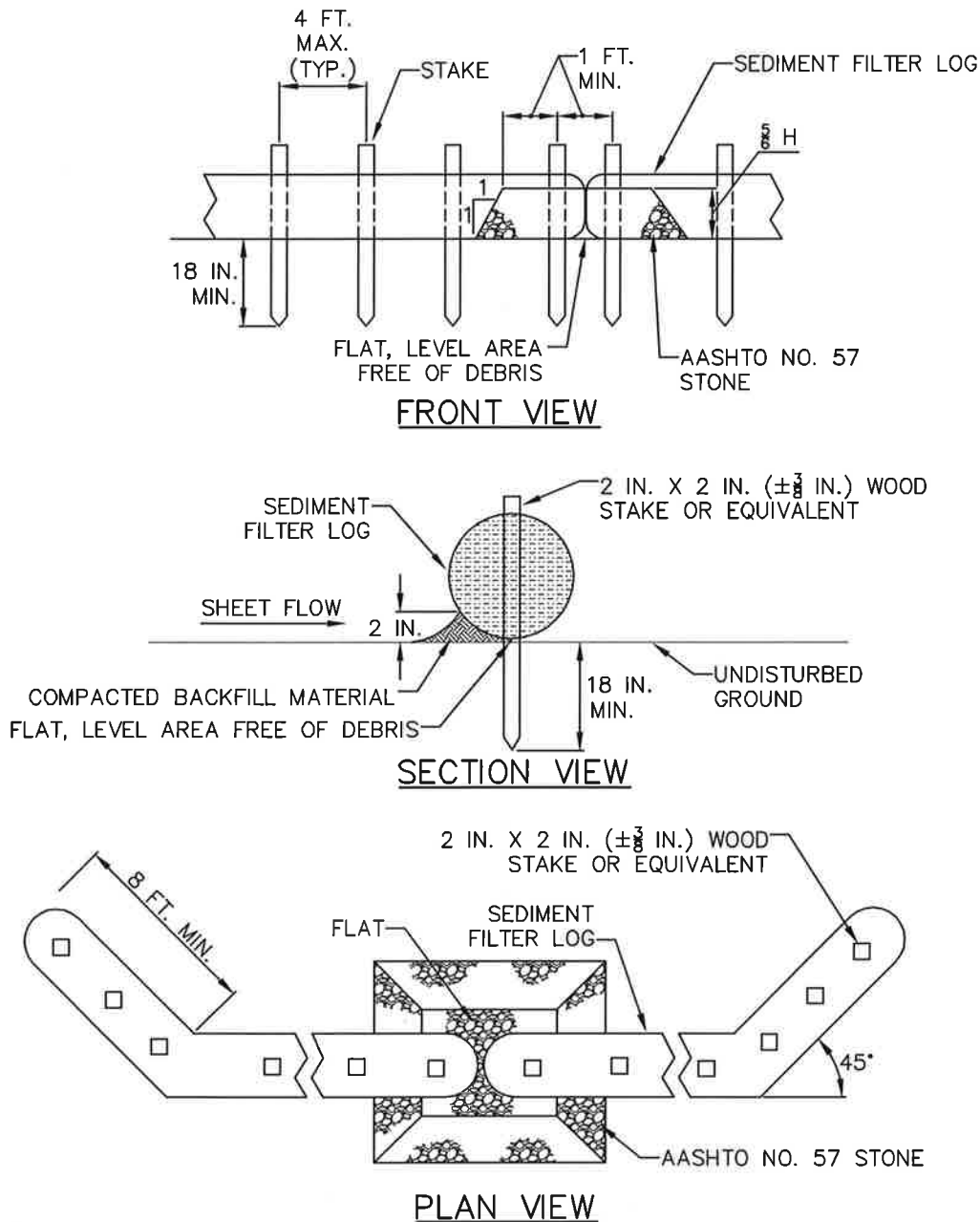
SILT FENCE SHALL BE PLACED AT LEVEL EXISTING GRADE. BOTH ENDS OF THE FENCE SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT.

SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH HALF THE ABOVE GROUND HEIGHT OF THE FENCE.

FENCE SHALL BE REMOVED AND PROPERLY DISPOSED OF WHEN TRIBUTARY AREA IS PERMANENTLY STABILIZED.

STANDARD CONSTRUCTION DETAIL #4-10 **SUPER SILT FENCE**

NOT TO SCALE



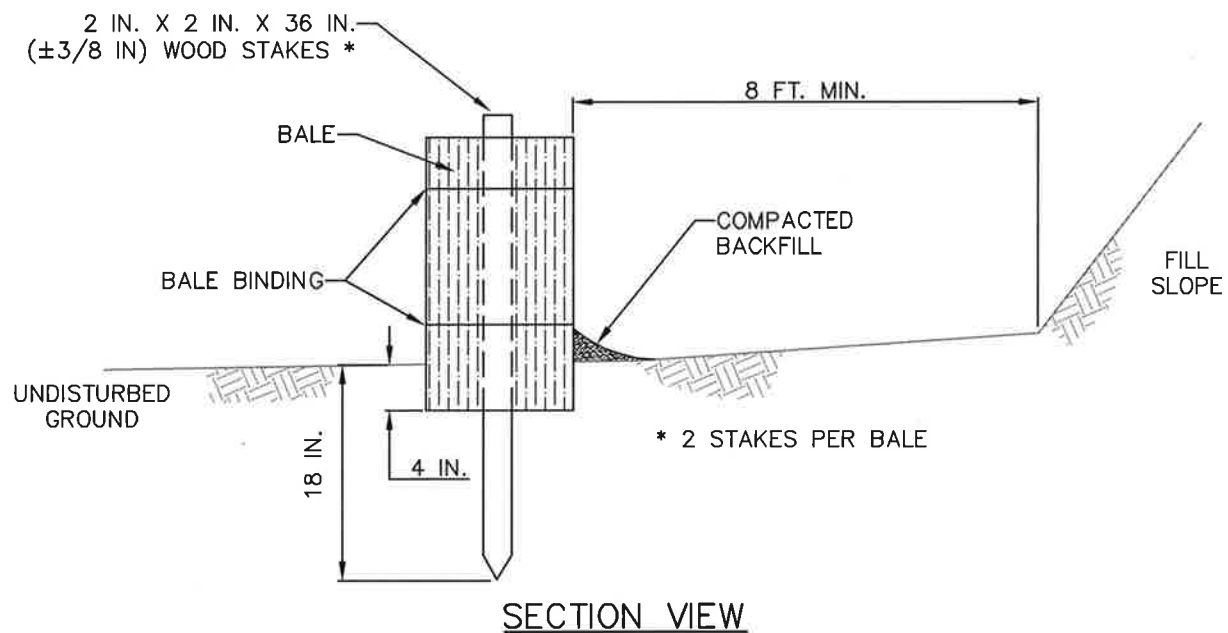
NOTES:

SEDIMENT LOG PLACEMENT AREA SHALL BE PREPARED SO THAT IT IS FREE OF ALL DEBRIS, INCLUDING ROCKS, STICKS, ROOTS, ETC. A 2 IN. LAYER OF COMPACTED FILL MATERIAL SHALL BE PLACED ON THE UPSLOPE SIDE OF THE LOG TO PREVENT UNDERCUTTING. WHERE MORE THAN ONE LOG IS REQUIRED TO OBTAIN SPECIFIED LENGTH, LOGS SHALL BE TIGHTLY ABUTTED AND SECURELY STAKED (OR OVERLAPPED BY 12 IN. MIN.). A LAYER OF AASHTO NO. 57 STONE SHALL BE PLACED WHERE ABUTTING LOGS COME TOGETHER (EXTENDING 2 FT. ON BOTH SIDES OF THE LOG). A 6 IN. THICK LAYER OF COMPOST ON THE UPSLOPE SIDE MAY BE SUBSTITUTED FOR THE STONE. SEDIMENT FILTER LOGS SHALL BE PLACED AT EXISTING LEVEL GRADE. ENDS SHALL BE EXTENDED UPSLOPE AT 45 DEG. TO THE MAIN FILTER LOG ALIGNMENT FOR A MINIMUM OF 8 FEET.

SEDIMENT FILTER LOGS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. SEDIMENT DEPOSITS SHALL BE CLEANED FROM THE LOG WHEN IT REACHES HALF THE HEIGHT OF THE LOG. DAMAGED FILTER LOGS SHALL BE REPLACED WITHIN 24 HOURS OF INSPECTION. A SUPPLY OF FILTER LOGS SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE.

STANDARD CONSTRUCTION DETAIL #4-11
SEDIMENT FILTER LOG (FIBER LOG)

NOT TO SCALE



NOTES:

STRAW BALE BARRIERS SHALL NOT BE USED FOR PROJECTS EXTENDING MORE THAN 3 MONTHS.

STRAW BALE BARRIERS SHALL BE PLACED AT EXISTING LEVEL GRADE WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES. FIRST STAKE OF EACH BALE SHALL BE ANGLED TOWARD ADJACENT BALE TO DRAW BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE TOP OF THE BALE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT.

COMPACTED BACKFILL SHALL EXTEND APPROXIMATELY 4 IN. ABOVE GROUND LEVEL.

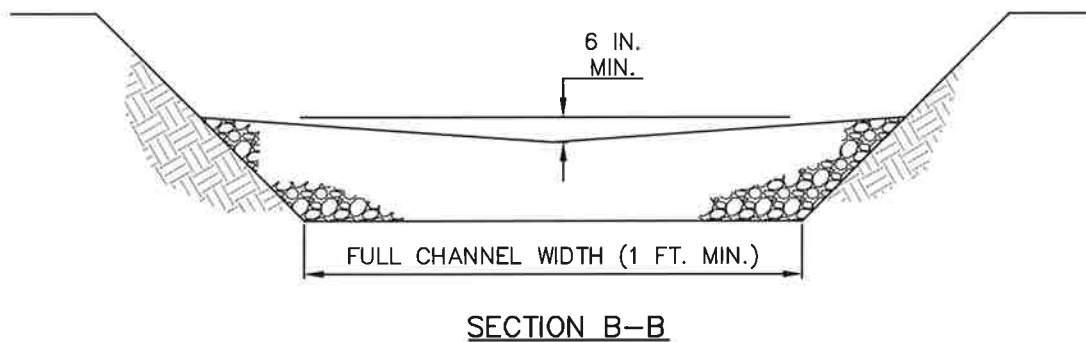
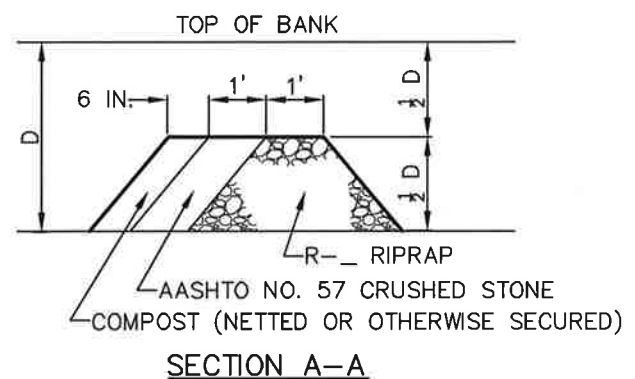
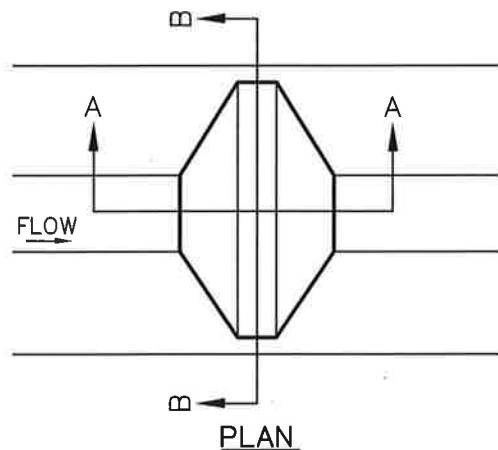
SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE ABOVE GROUND HEIGHT OF THE BARRIER. DAMAGED OR DETERIORATED BALES SHALL BE REPLACED IMMEDIATELY UPON INSPECTION.

ANY SECTION OF STRAW BALE BARRIER WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET (STANDARD CONSTRUCTION DETAIL #4-6).

BALES SHALL BE REMOVED WHEN THE TRIBUTARY AREA HAS BEEN PERMANENTLY STABILIZED.

STANDARD CONSTRUCTION DETAIL #4-13
STRAW BALE BARRIER

NOT TO SCALE



ROCK FILTER NO.	LOCATION	D (FT)	RIPRAP SIZE (R-)
88	1234567890	88	8

FOR $D \geq 3$ FT. — USE R-4
 FOR $D \geq 2$ FT. TO $D < 3$ FT. — USE R-3
 NOT APPLICABLE FOR $D < 2$ FT.

NOTES:

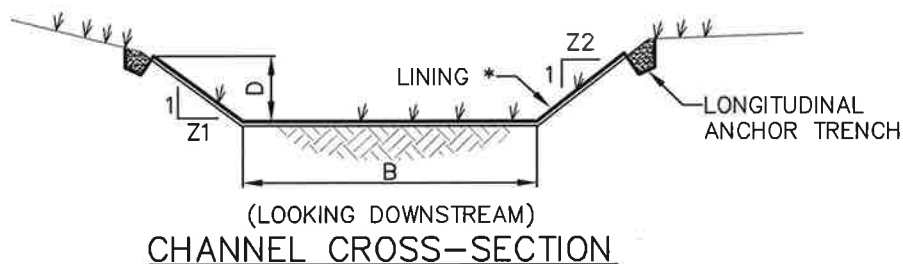
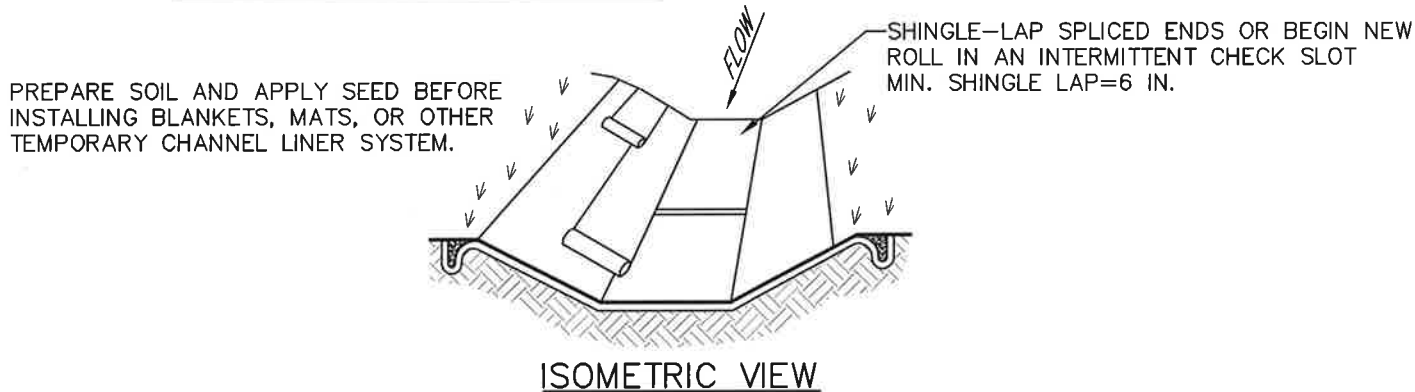
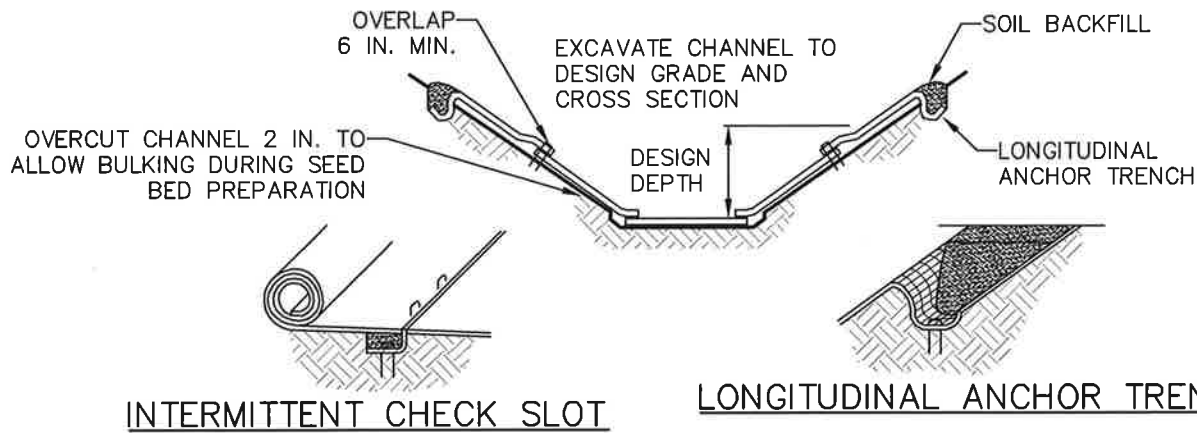
SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH $1/2$ THE HEIGHT OF THE FILTERS.

IMMEDIATELY UPON STABILIZATION OF EACH CHANNEL, REMOVE ACCUMULATED SEDIMENT,
 REMOVE ROCK FILTER, AND STABILIZE DISTURBED AREAS.

STANDARD CONSTRUCTION DETAIL #4-14

ROCK FILTER

NOT TO SCALE



* SEE MANUFACTURER'S LINING INSTALLATION DETAIL FOR STAPLE PATTERNS, VEGETATIVE STABILIZATION FOR SOIL AMENDMENTS, SEED MIXTURES AND MULCHING INFORMATION

CHANNEL NO.	STATIONS	BOTTOM WIDTH B (FT)	DEPTH D (FT)	TOP WIDTH W (FT)	Z1 (FT)	Z2 (FT)	LINING *
88	888+88 - 888+88	88	88	88	88	88	12345678901234567890

NOTES:

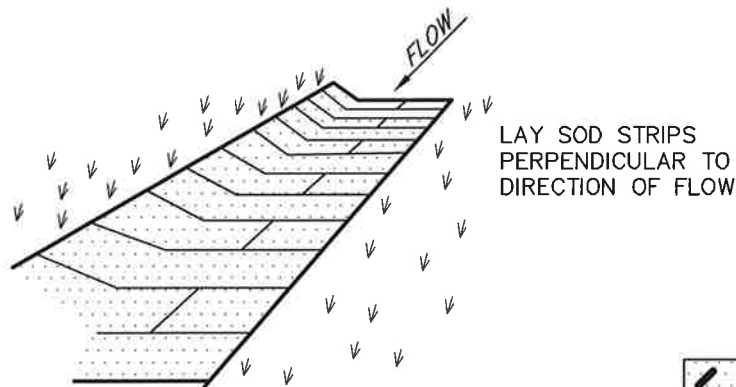
ANCHOR TRENCHES SHALL BE INSTALLED AT BEGINNING AND END OF CHANNEL IN THE SAME MANNER AS LONGITUDINAL ANCHOR TRENCHES.

CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION. SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE. DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.

NO MORE THAN ONE THIRD OF THE SHOOT (GRASS LEAF) SHALL BE REMOVED IN ANY MOWING. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED. EXCESS VEGETATION SHALL BE REMOVED FROM PERMANENT CHANNELS TO ENSURE SUFFICIENT CHANNEL CAPACITY.

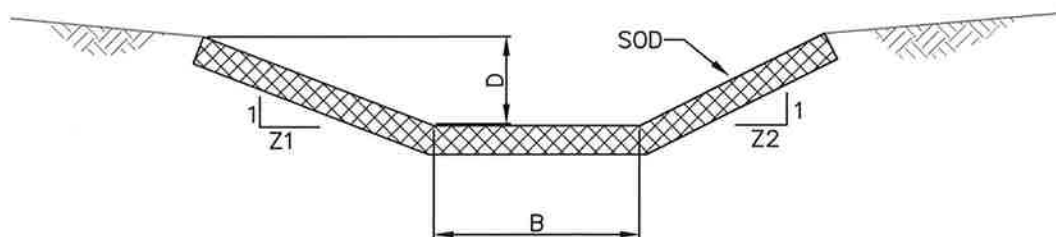
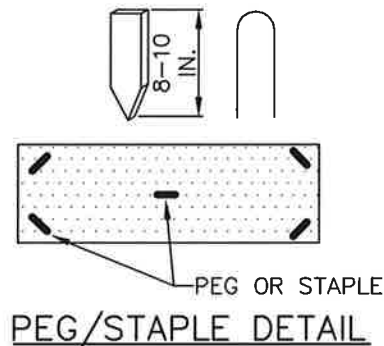
STANDARD CONSTRUCTION DETAIL #6-1
VEGETATED CHANNEL

NOT TO SCALE



SOD NOTES:

1. USE PEGS OR STAPLES TO FASTEN SOD FIRMLY AT THE END OF STRIPS AND IN THE CENTER, OR EVERY 3-4 FT IF THE STRIPS ARE LONG. WHEN READY TO MOW, DRIVE PEGS OR STAPLES FLUSH WITH THE GROUND.
2. IN CRITICAL AREAS, SECURE SOD WITH STAPLED NETTING.



CHANNEL CROSS-SECTION

CHANNEL NO.	STATIONS	BOTTOM WIDTH B (FT)	DEPTH D (FT)	TOP WIDTH W (FT)	Z1 (FT)	Z2 (FT)
888	888+88 - 888+88	88	88	88	8	8

NOTES:

CARE SHALL BE TAKEN TO PREPARE THE SOIL ADEQUATELY PRIOR TO SOD PLACEMENT. PLANT SPECIES SHALL BE SUITABLE FOR THE ANTICIPATED PEAK FLOW VELOCITY.

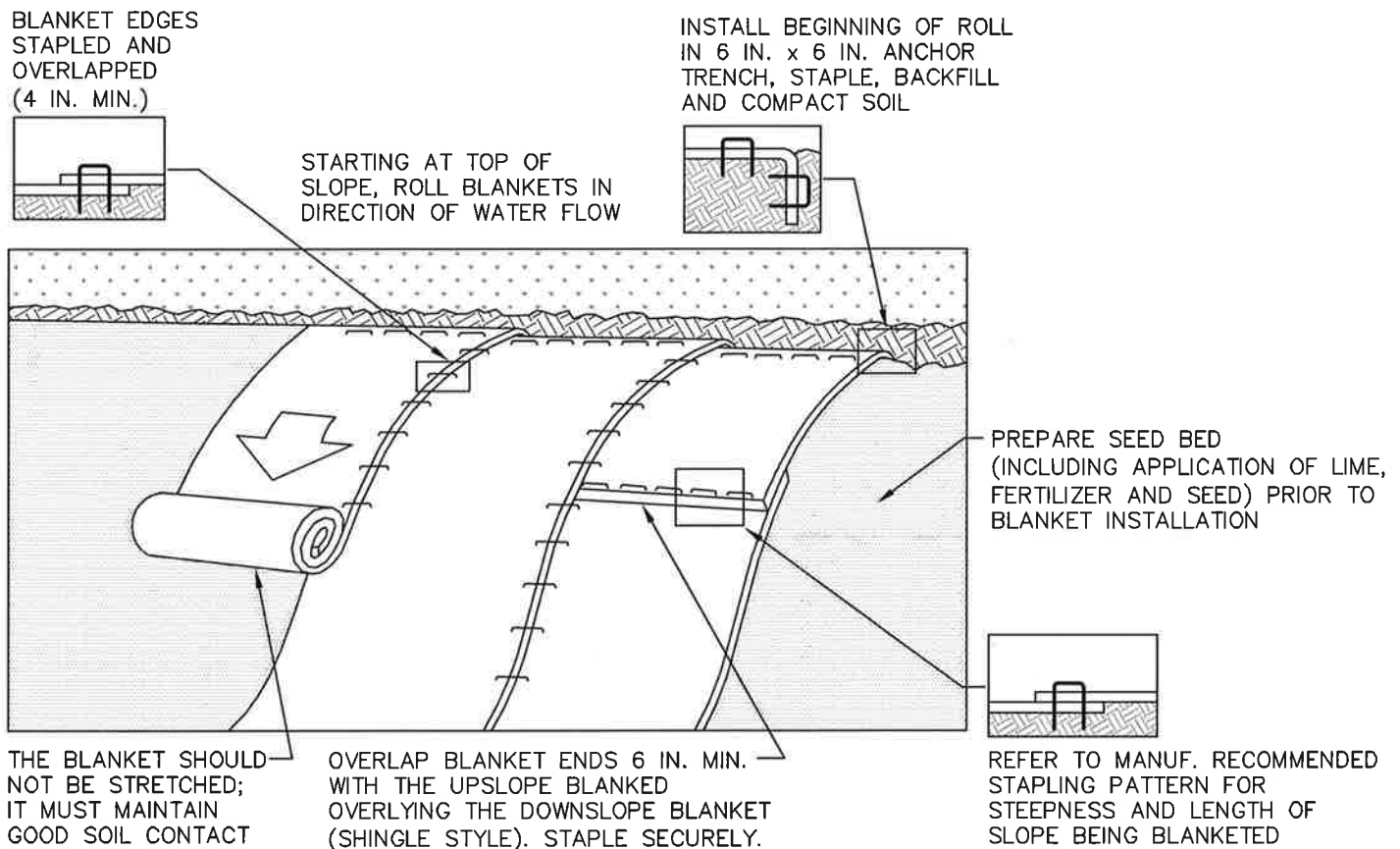
DURING 2 TO 3 WEEK ESTABLISHMENT STAGE, SOD SHALL BE WATERED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE IN THE ROOT ZONE AND PREVENT DORMANCY OF SOD.

CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION. SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE. DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.

NO MORE THAN ONE THIRD OF THE SHOOT (GRASS LEAF) SHALL BE REMOVED IN ANY MOWING. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED. EXCESS VEGETATION SHALL BE REMOVED FROM PERMANENT CHANNELS TO ENSURE SUFFICIENT CHANNEL CAPACITY.

STANDARD CONSTRUCTION DETAIL #6-2
SODDED CHANNEL

NOT TO SCALE



NOTES:

SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS PRIOR TO INSTALLING THE BLANKET.

PROVIDE ANCHOR TRENCH AT TOE OF SLOPE IN SIMILAR FASHION AS AT TOP OF SLOPE.

SLOPE SURFACE SHALL BE FREE OF ROCKS, CLOUDS, STICKS, AND GRASS.

BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH BLANKET.

THE BLANKET SHALL BE STAPLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 70% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 4 CALENDAR DAYS.

STANDARD CONSTRUCTION DETAIL #11-1
EROSION CONTROL BLANKET INSTALLATION

NOT TO SCALE


APPENDIX B: DEWATERING LOG

Carbon America – Denova Project Dewatering Log

(Please provide a completed copy to Jessica Gregg, Jessica.Gregg@CarbonAmerica.com)

[illegible]

APPENDIX C: INSPECTION AND MAINTENANCE FORMS

 TETRA TECH	TITLE:		Construction Stormwater Inspection Report	
	Project	Denova Project		
	Owner/Operator:	Carbon America	PAGE:	1 of 4

Facility information

Site name: _____

Site address: _____ Permit number: _____

City: _____ State: _____ Zip code: _____

Inspection information

Inspector name: _____ Phone number: _____

Organization/Company name: _____

Date (mm/dd/yyyy): _____ Time: _____ ☐ am ☐ pm

Inspection type: ☐ Routine ☐ Rain event ☐ Winter/frozen conditions

Rainfall amount (if applicable): _____


Erosion prevention requirements

	Yes	No	NA
1. Are soils stabilized where no construction activity has occurred for 14 days?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Has the need to disturb steep slopes been minimized?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. If steep slopes are disturbed, are stabilization practices designed for steep slopes used?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. All ditches/swales stabilized 200' back from point of discharge or property edge within 24 hours? (Mulch, hydromulch, tackifier, or similar best management practices [BMPs] are not acceptable in ditches/swales if the slope is greater than 2%)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is construction phasing being followed in accordance with the SWMP?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

Sediment control requirements

	Yes	No	NA
1. Are perimeter sediment controls installed properly on all down gradient perimeters?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Are appropriate BMPs installed protecting inlets, catch basins, and culvert inlets?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Is a 50 foot natural buffer preserved around all surface waters during construction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If No, have redundant sediment controls been installed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Do all erodible stockpiles have perimeter control in place?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is soil compaction being minimized where not designed for compaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Is topsoil being preserved unless infeasible?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

 TETRA TECH	TITLE:			Construction Stormwater Inspection Report		
	Project		Denova Project			
	Owner/Operator:		Carbon America		PAGE:	2 of 4

Comments:

Maintenance and inspections (Section 11)


	Yes	No	NA
1. Are all previously stabilized areas maintaining ground cover?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Are perimeter controls maintained and functioning properly, sediment removed when one-half full?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Are vehicle tracking BMPs at site exits in place and maintained and functioning properly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Is all tracked sediment being removed within 24 hours?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Have all surface waters, ditches, conveyances, and discharge points been inspected?	<input type="checkbox"/>	<input type="checkbox"/>	
6. Were any discharges seen during this inspection (i.e., sediment, turbid water, or otherwise)?	<input type="checkbox"/>	<input type="checkbox"/>	

Comments:

Pollution prevention

	Yes	No	NA
1. Are all construction materials that can leach pollutants under cover or protected?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Are hazardous materials being properly stored?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Are appropriate BMPs being used to prevent discharges associated with fueling and maintenance of equipment or vehicles?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Are all solid wastes being properly contained and disposed of?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is there a concrete/other material washout area on site and is it being used?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Is the concrete washout area marked with a sign?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Are the concrete/other material washout areas properly maintained?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

 TETRA TECH	TITLE:		Construction Stormwater Inspection Report	
	Project	Denova Project		
	Owner/Operator:	Carbon America	PAGE:	3 of 4

Other


	Yes	No	NA
1. Is a copy of the SWMP, inspection records, and training documentation located on the construction site, or can it be made available within 72 hours?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Has the SWMP been followed and implemented on site, and amended as needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Is any dewatering occurring on site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, what BMPs are being used to ensure that clean water is leaving the site and the discharge is not causing erosion or scour?			

4. Description of areas of non-compliance noted during the inspection, required corrective actions, and recommended date of completion of corrective actions:

5. Proposed amendments to the SWMP:

6. Potential areas of future concern:

7. Additional comments:

 TETRA TECH	TITLE: Construction Stormwater Inspection Report	
	Project	Denova Project
	Owner/Operator:	Carbon America
	PAGE:	4 of 4

Include photo log