

**NOTICE OF PUBLIC HEARING  
SUDBURY CONSERVATION COMMISSION**

**Monday, July 25, 2022 at 6:45 PM  
Virtual Meeting**

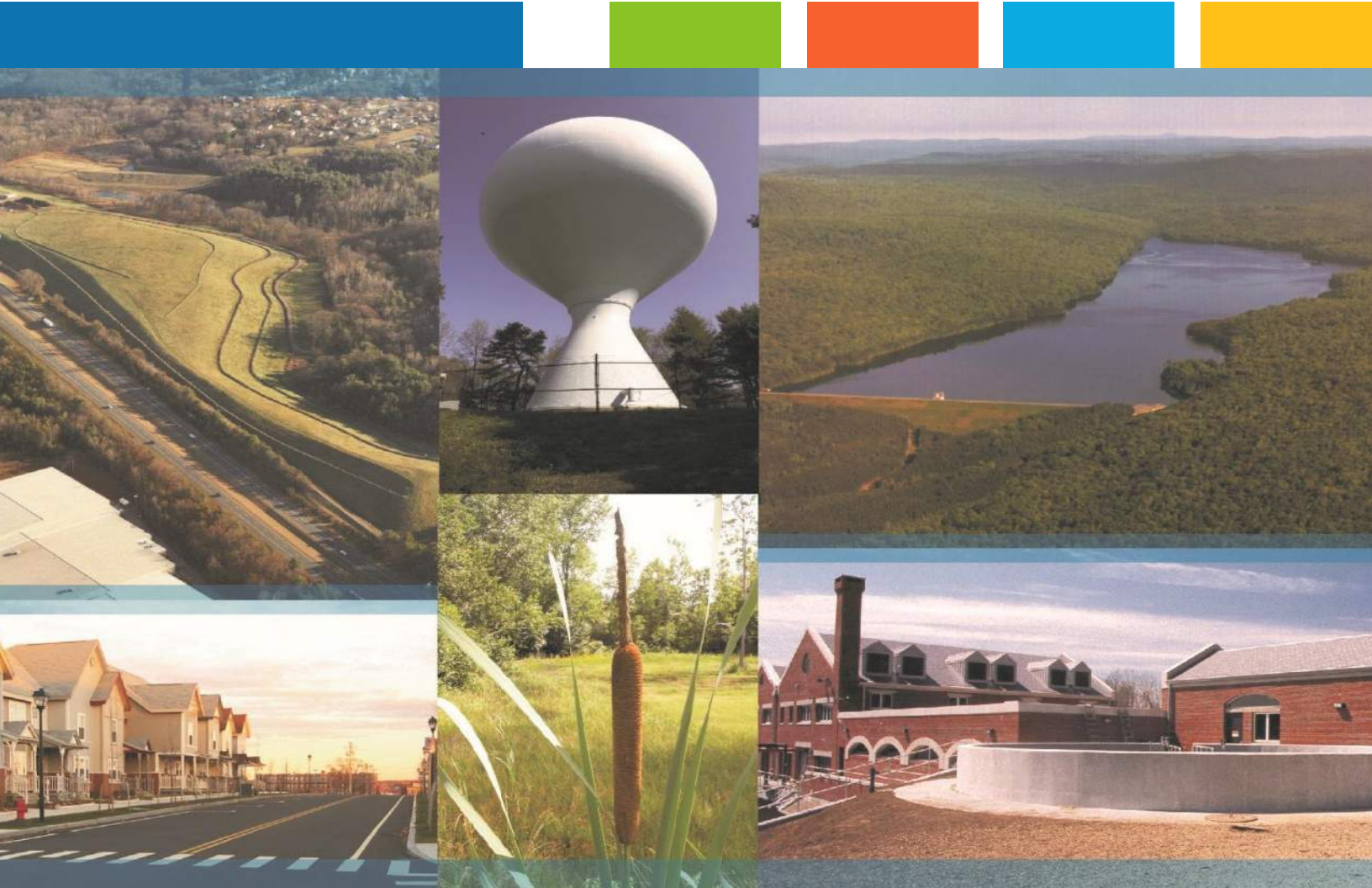
The Sudbury Conservation Commission will hold a public meeting to review the Request for Determination of Applicability filing under the Wetlands Protection Act and the Sudbury Wetlands Administration Bylaw to install a gas main within the 100-foot Buffer Zone at Lincoln Road and Lincoln Lane, in Sudbury, MA. Boston Gas Company c/o Jaime Walker, Applicant. The meeting will be held on Monday, July 25, 2022 at 6:45 pm, via Zoom.

Copies of the application may be reviewed on the Conservation Department web page at:

<https://sudbury.ma.us/conservationcommission/meeting/conservation-commission-meeting-monday-july-25-2022/>

Please contact the Conservation Office with any questions at 978-440-5470.

SUDBURY CONSERVATION COMMISSION  
7/13/2022



Gas Main Installation Project  
Lincoln Road, Sudbury, Massachusetts

## **REQUEST FOR DETERMINATION OF APPLICABILITY**

Boston Gas Company  
July 2022

**Tighe&Bond**

N5068-208  
July 8, 2022

Sudbury Conservation Commission  
Attention: David Henkels, Conservation Chair  
275 Old Lancaster Road  
Sudbury, Massachusetts 01776

Re: **Request for Determination of Applicability  
Gas Main Installation Project  
Lincoln Road, Sudbury, Massachusetts**

Dear Chairperson Henkels and Members of the Commission:

On behalf of the Boston Gas Company, Tighe & Bond respectfully submits this Request for Determination of Applicability (RDA) for a proposed gas main installation project within the footprint of Lincoln Road in Sudbury, Massachusetts. The entirety of this project will be conducted within the existing paved roadway and there will be no encroachments onto any abutting land.

The RDA is being filed because portions of the proposed work will occur within the 100-foot Buffer Zone to inland Bank and Bordering Vegetated Wetlands (BVW). These areas are regulated under the Massachusetts Wetlands Protection Act (MAWPA, M.G.L. c. 131 § 40) and the Sudbury Wetlands Administration Bylaw (Article XXII), and their respective implementing regulations. The project will be constructed without direct impacts to wetland resource areas.

Please note, the proposed work qualifies as an exempt Minor Activity in Buffer Zone per 310 CMR 10.02(2)(b)(2)(i), as it consists of the *"installation of underground utilities (e.g., electric, gas, water) within existing paved or unpaved roadways and private roadways/driveways, provided that all work is conducted within the roadway or driveway and that all trenches are closed at the completion of each workday."* This project is being filed as an RDA as the Sudbury Wetlands Administration Bylaw and implementing regulations do not recognize this exemption for Minor Activities in Buffer Zones.

Tighe & Bond respectfully requests that the Conservation Commission issue a Negative Determination confirming that the proposed work does not require the filing of a Notice of Intent.

This RDA application includes the following items:

- Attachment A – WPA Form 1
- Attachment B – Figures
- Attachment C – Site Photographs
- Attachment D – Best Management Practices

The following sections discuss the MAWPA resource areas, proposed activities, and proposed protective measures.

## MAWPA Resource Areas

Site reconnaissance and wetland resource area investigations of the project area was conducted by a Tighe & Bond wetland scientist (PWS) on July 6, 2022, in accordance with the Massachusetts Department of Environmental Protection (MassDEP) guidelines, 310 CMR 10.00, and the Town of Sudbury Wetlands Administration Bylaw. Please refer to Figure 4 in Attachment B for the locations of the jurisdictional MAWPA resource areas and Buffer Zones.

### Inland Bank

One area of inland Bank was identified and delineated along an unnamed ephemeral stream located to the southeast of the intersection of Lincoln Road and Concord Road at the western terminus of the project (Photograph No. 5, Attachment C). The stream is not shown on the most recent USGS topographic map (Maynard, Mass. quadrangle, revised 1987) and the centerline is not digitized in USGS StreamStats. The stream channel was approximately two to three feet wide, and the banks were approximately two feet high. The streambed was primarily composed of cobble and leaf litter. No areas of BVW were observed along either side of the inland Bank at this location, nor are there any mapped upgradient resource areas. This feature lies approximately 33 feet from the edge of the roadway, and approximately 10 feet from the edge of the sidewalk. For the purposes of this delineation and application, this stream is presumed to be jurisdictional under both the MAWPA and Bylaw.

### Bordering Vegetated Wetland

A total of four (4) areas of Bordering Vegetated Wetlands (BVW) were observed and field delineated along the project route. These wetlands are shown on Figure 4 in Attachment B.

#### Wetland 1

Wetland 1 (Photograph No. 6) is located to the northeast of the intersection of Lincoln Road and Fern Trail, approximately 25 feet from the edge of roadway. This system drains to the north towards Pantry Brook, a stream shown as perennial on the most recent USGS topographic map, but located more than 200 feet from the limits of work. Limited data was collected about this wetland as it was located beyond the roadway right-of-way, however the location was collected with GPS via offset for the purposes of including the 100-foot Buffer Zone to define the extent of areas subject to the Conservation Commission's jurisdiction.

The portion of the wetland nearest Lincoln Road is dominated by cinnamon fern (*Osmunda cinnamomea*, FACW), ostrich fern (*Matteuccia struthiopteris*, FAC), Massachusetts fern (*Thelypteris simulata*, FACW), American elm (*Ulmus americana*, FACW), red maple (*Acer rubrum*, FAC), jewelweed (*Impatiens capensis*, FACW), poison ivy (*Toxicodendron radicans*, FAC), and Japanese knotweed (*Reynoutria japonica*, FACU). The soils are mapped as Birdsall mucky silt loam (44A). This wetland is best classified as palustrine forested, broad-leaved deciduous, with a seasonally flooded/saturated hydroperiod (PFO1E).

#### Wetland 2

Wetland 2 (Photographs No. 7 and 8) is a larger wetland system located to the south of Lincoln Road, between the residence at 273 Lincoln Road and the intersection with Water Row. This wetland is immediately adjacent to the edge of roadway at several locations but will not be impacted by the proposed project. This system drains to the south towards Bridge Brook, a stream shown as perennial on the most recent USGS topographic map, but located more than 200 feet from the limits of work. Limited data was collected about this wetland as it is located beyond the roadway right-of-way, however the location was collected with GPS via offset for the purposes of including the 100-foot Buffer Zone to define the extent of areas subject to the Conservation Commission's jurisdiction.



The portion of the wetland nearest Lincoln Road is dominated by narrowleaf cattail (*Typha angustifolia*, OBL), green bulrush (*Scirpus atrovirens*, OBL), roughstem goldenrod (*Solidago rugosa*, FAC), American elm, swamp white oak (*Quercus bicolor*, FACW), red maple, sensitive fern (*Onoclea sensibilis*, FACW), purple loosestrife (*Lythrum salicaria*, OBL), arrowleaf tearthumb (*Persicaria sagittata*, OBL), deertongue (*Dichanthelium clandestinum*, FACW), and Japanese knotweed. The soils are mapped as Sudbury fine sandy loam (260B). This wetland is best classified as a mix of palustrine emergent, persistent, and palustrine forested, broad-leaved deciduous, with a seasonally flooded/saturated hydroperiod (PEM1/PFO1E).

### **Wetland 3**

Wetland 3 (Photograph No. 9) is located to the north of the project area between the residences at 128 and 97 Lincoln Road, approximately 10 feet from the edge of roadway at the nearest point. This system drains to the north towards the Sudbury River, which is located more than 200 feet from the limits of work. Limited data was collected about this wetland as it was located beyond the roadway right-of-way, however the location was collected with GPS via offset for the purposes of including the 100-foot Buffer Zone to define the extent of areas subject to the Conservation Commission's jurisdiction.

The portion of the wetland nearest Lincoln Road is dominated by sensitive fern, cinnamon fern, ostrich fern, royal fern (*Osmunda regalis*, OBL), poison ivy, glossy buckthorn (*Frangula alnus*, FAC), highbush blueberry (*Vaccinium corymbosum*, FACW), red maple, winterberry (*Ilex verticillata*, FACW), and multiflora rose (*Rosa multiflora*, FAC). The soils are mapped as Wareham loamy fine sand (32B). This wetland is best classified as palustrine forested, broad-leaved deciduous, with a seasonally flooded/saturated hydroperiod (PFO1E).

### **Wetland 4**

Wetland 4 (Photograph No. 10) is located to the southwest of the limits of work within Lincoln Lane, approximately 100 feet from the edge of roadway. This system drains to the south towards the Sudbury River, which is located more than 200 feet from the limits of work. Limited data was collected about this wetland as it was located beyond the roadway right-of-way, however the location was collected with GPS via offset for the purposes of including the 100-foot Buffer Zone to define the extent of areas subject to the Conservation Commission's jurisdiction.

The vegetation appeared to be dominated by red maple, American elm, and white pine (*Pinus strobus*, FACU). The soils are mapped as Birdsall mucky silt loam (44A). This wetland is best classified as a mix of palustrine forested, broad-leaved deciduous and needle-leaved evergreen, with a seasonally flooded/saturated hydroperiod (PFO1/4E).

## **Bordering Land Subject to Flooding**

The Federal Emergency Management Agency (FEMA) flood map (Panel Nos. 25017C0369F and 25017C0388F, both effective July 7, 2014) and Flood Insurance Study (FIS; No. 25017CV001C, effective July 6, 2016) were consulted to evaluate the presence of jurisdictional Bordering Land Subject to Flooding (BLSF) within the project area. Although land subject to flooding and/or inundation by a 100-year flood is present in several areas approaching the footprint of Lincoln Road and Lincoln Lane, no portion encroaches upon the roadways, as seen on Figure 4 in Attachment B. As such, no portion of the project area is regulated as BLSF.

## **100-Foot Buffer Zone**

Both inland Bank and BVW are afforded a 100-foot Buffer Zone under the MAWPA and the Bylaw. Within the limits of work and surrounding area, the Buffer Zone consists of the

footprint of paved public roads, forested land, residential properties, and farmland. While portions of the project lie within different Buffer Zones, no direct impacts to any resource areas are anticipated as part of this project.

## Rare Species

Based on a review of the Massachusetts Natural Heritage and Endangered Species Program (NHESP) Atlas (15th edition; August 1, 2021) and NHESP data available on MassGIS online, several segments of the proposed project fall within *Priority Habitats of Rare Species* (PH 1395) as shown on Figure 2 in Attachment B. No portion of the project falls within any *Estimated Habitats of Rare Wildlife*. Though work is proposed within Priority Habitat, the activities are exempt from review under the Massachusetts Endangered Species Act (MESA) regulations per 321 CMR 10.14(10).

## Proposed Activities

The proposed project involves the installation of approximately 9,086 linear feet (lf) of four-inch gas main within Lincoln Road, between the intersection with Concord Road at the western terminus (Photograph No. 1, Attachment C), and with the intersection with River Ridge at the eastern terminus (Photograph No. 2). In addition, an approximately 1,430 lf spur of four-inch gas main will also be constructed within the roadway of Lincoln Lane, between the intersection of Lincoln Road and Lincoln Lane at the northern spur terminus (Photograph No. 3) and the residence located at 80 Lincoln Lane at the southern terminus of this extension (Photograph No. 4). The project will be conducted entirely within the footprint of the existing paved roadways.

## Work Methodology

In general, construction will require the excavation of an approximately two-foot-wide trench for safe installation. The trench bottoms will be excavated and graded so that the main will be supported for its entire length on undisturbed bottom at a depth of approximately three feet below surface grade. Upon completion of construction each day, the trench will be backfilled and restored in kind or covered with steel plates.

## Work Within Resource Areas

In total, the proposed work will result in approximately 3,228 square feet (sf) of temporary impacts to the 100-foot Buffer Zone. The areas where the gas main replacement work is proposed consist entirely of existing paved roadways. The proposed work will not change the general characteristics of the area, as the entire project is contained within previously disturbed and developed areas. All areas will be returned to the existing grades with no overall changes to the preexisting state.

## Protective Measures

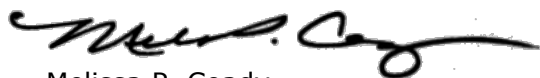
Work will be conducted in accordance with National Grid's EG-303NE Best Management Practices document. Please refer to Attachment D for further details. During construction, erosion control measures (e.g., straw bales, silt fence, straw wattles, catch basin silt sack inserts) will be installed between proposed areas of disturbance and wetland resource areas as deemed necessary.

## Summary

We look forward to having the opportunity to discuss this project with the Sudbury Conservation Commission during the public meeting on July 25, 2022. We anticipate these materials are sufficient for the Committee to issue a Negative Determination, confirming that a Notice of Intent (NOI) will not be required for the proposed work to proceed. Should you have any questions regarding this application or require any additional information, please do not hesitate to contact Jeremy Degler at (603) 732-7906 or JDegler@tighebond.com, or me at (413) 572-3224 or MPCoady@tighebond.com.

Sincerely,

**TIGHE & BOND, INC.**



Melissa P. Coady  
Project Manager

Enclosures

Copy: MassDEP NERO Division of Wetlands and Waterways  
Jaime Walker, National Grid

**ATTACHMENT A**

WPA FORM 1





# Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

Sudbury

City/Town

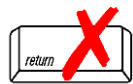
## WPA Form 1- Request for Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

### A. General Information

#### Important:

When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



1. Applicant:

Boston Gas Company (c/o Jaime Walker)

jaime.walker@nationalgrid.com

Name

E-Mail Address

40 Sylvan Road

Mailing Address

Waltham

MA

02451

City/Town

State

Zip Code

978.551.1156

N/A

Phone Number

Fax Number (if applicable)

2. Representative (if any):

Tighe & Bond, Inc.

Firm

Melissa Coady, Project Manager

mpcoady@tighebond.com

Contact Name

E-Mail Address

53 Southampton Road

Mailing Address

Westfield

MA

01085

City/Town

State

Zip Code

413.572.3224

N/A

Phone Number

Fax Number (if applicable)

### B. Determinations

1. I request the Sudbury Conservation Commission make the following determination(s). Check any that apply:

- ☐ a. whether the **area** depicted on plan(s) and/or map(s) referenced below is an area subject to jurisdiction of the Wetlands Protection Act.
- ☐ b. whether the **boundaries** of resource area(s) depicted on plan(s) and/or map(s) referenced below are accurately delineated.
- ☒ c. whether the **work** depicted on plan(s) referenced below is subject to the Wetlands Protection Act.
- ☒ d. whether the area and/or work depicted on plan(s) referenced below is subject to the jurisdiction of any **municipal wetlands ordinance** or **bylaw** of:

Sudbury

Name of Municipality

- ☐ e. whether the following **scope of alternatives** is adequate for work in the Riverfront Area as depicted on referenced plan(s).



**Massachusetts Department of Environmental Protection**

Bureau of Resource Protection - Wetlands

Sudbury

City/Town

**WPA Form 1- Request for Determination of Applicability**

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

**C. Project Description**

1. a. Project Location (use maps and plans to identify the location of the area subject to this request):

Lincoln Road, Lincoln Lane

Street Address

Sudbury

City/Town

Maps F10 through F14

Assessors Map/Plat Number

N/A - Multiple Public Roadway ROWs

Parcel/Lot Number

- b. Area Description (use additional paper, if necessary):

Lincoln Road and Lincoln Lane are paved roadways serving residential and agricultural properties - please refer to attached cover letter for more details.

- c. Plan and/or Map Reference(s):

Site Location, Priority Resources, Orthophoto (Figures 1-3, Attachment B)

Title

July 2022

Date

Site Plan (Figure 4, Attachment B)

Title

July 2022

Date

Title

Date

2. a. Work Description (use additional paper and/or provide plan(s) of work, if necessary):

Proposed gas main installation project - please refer to attached cover letter for more details.



**Massachusetts Department of Environmental Protection**

Bureau of Resource Protection - Wetlands

Sudbury

City/Town

**WPA Form 1- Request for Determination of Applicability**

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

**C. Project Description (cont.)**

b. Identify provisions of the Wetlands Protection Act or regulations which may exempt the applicant from having to file a Notice of Intent for all or part of the described work (use additional paper, if necessary).

310 CMR 10.02(2)(b)(2)(i)

3. a. If this application is a Request for Determination of Scope of Alternatives for work in the Riverfront Area, indicate the one classification below that best describes the project.

- ☐ Single family house on a lot recorded on or before 8/1/96
- ☐ Single family house on a lot recorded after 8/1/96
- ☐ Expansion of an existing structure on a lot recorded after 8/1/96
- ☐ Project, other than a single family house or public project, where the applicant owned the lot before 8/7/96
- ☐ New agriculture or aquaculture project
- ☐ Public project where funds were appropriated prior to 8/7/96
- ☐ Project on a lot shown on an approved, definitive subdivision plan where there is a recorded deed restriction limiting total alteration of the Riverfront Area for the entire subdivision
- ☐ Residential subdivision; institutional, industrial, or commercial project
- ☐ Municipal project
- ☐ District, county, state, or federal government project
- ☐ Project required to evaluate off-site alternatives in more than one municipality in an Environmental Impact Report under MEPA or in an alternatives analysis pursuant to an application for a 404 permit from the U.S. Army Corps of Engineers or 401 Water Quality Certification from the Department of Environmental Protection.

b. Provide evidence (e.g., record of date subdivision lot was recorded) supporting the classification above (use additional paper and/or attach appropriate documents, if necessary.)



**Massachusetts Department of Environmental Protection**

Bureau of Resource Protection - Wetlands

Sudbury

City/Town

**WPA Form 1- Request for Determination of Applicability**

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

**D. Signatures and Submittal Requirements**

I hereby certify under the penalties of perjury that the foregoing Request for Determination of Applicability and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge.

I further certify that the property owner, if different from the applicant, and the appropriate DEP Regional Office were sent a complete copy of this Request (including all appropriate documentation) simultaneously with the submittal of this Request to the Conservation Commission.

Failure by the applicant to send copies in a timely manner may result in dismissal of the Request for Determination of Applicability.

Name and address of the property owner:

Town of Sudbury

Name

275 Old Lancaster Road

Mailing Address

Sudbury

City/Town

MA

State

01776

Zip Code

Signatures:

I also understand that notification of this Request will be placed in a local newspaper at my expense in accordance with Section 10.05(3)(b)(1) of the Wetlands Protection Act regulations.

*Quinn Walker*

Signature of Applicant

07/08/2022

Date

*Mark C. Coy*

Signature of Representative (if any)

07/08/2022

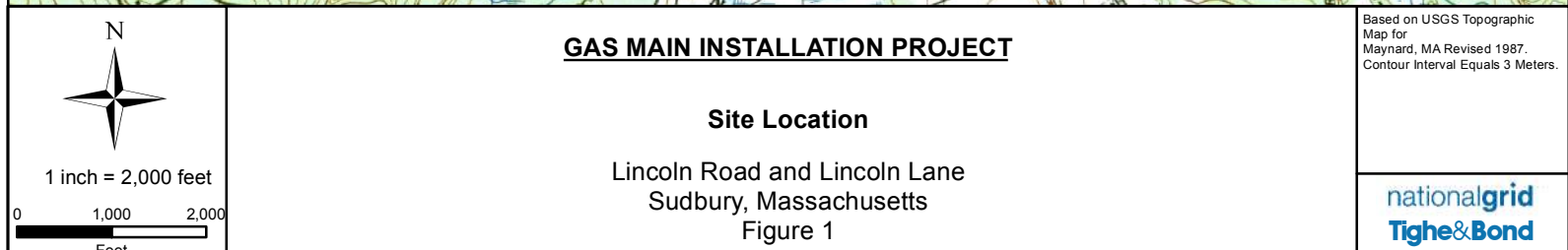
Date



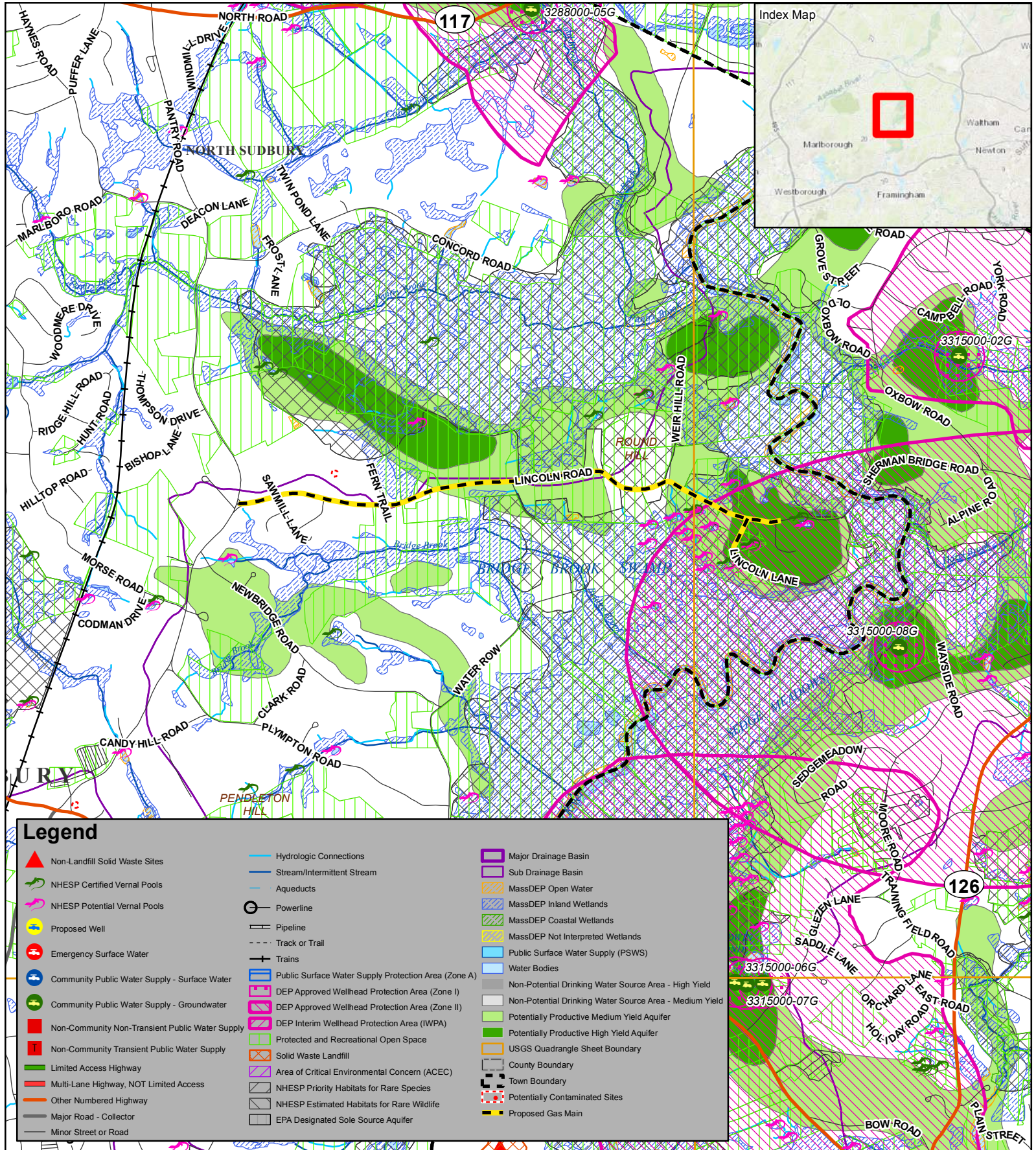
## **ATTACHMENT B**

### FIGURES









**Legend**

Non-Landfill Solid Waste Sites

NHESP Certified Vernal Pools

NHESP Potential Vernal Pools

Proposed Well

Emergency Surface Water

Community Public Water Supply - Surface Water

Community Public Water Supply - Groundwater

Non-Community Non-Transient Public Water Supply

Non-Community Transient Public Water Supply

Limited Access Highway

Multi-Lane Highway, NOT Limited Access

Other Numbered Highway

Major Road - Collector

Minor Street or Road

Hydrologic Connections

Stream/Intermittent Stream

Aqueducts

Powerline

Pipeline

Track or Trail

Trains

Public Surface Water Supply Protection Area (Zone A)

DEP Approved Wellhead Protection Area (Zone I)

DEP Approved Wellhead Protection Area (Zone II)

DEP Interim Wellhead Protection Area (IWPA)

Protected and Recreational Open Space

Solid Waste Landfill

Area of Critical Environmental Concern (ACEC)

NHESP Priority Habitats for Rare Species

NHESP Estimated Habitats for Rare Wildlife

EPA Designated Sole Source Aquifer

Major Drainage Basin

Sub Drainage Basin

MassDEP Open Water

MassDEP Inland Wetlands

MassDEP Coastal Wetlands

MassDEP Not Interpreted Wetlands

Public Surface Water Supply (PSWS)

Water Bodies

Non-Potential Drinking Water Source Area - High Yield

Non-Potential Drinking Water Source Area - Medium Yield

Potentially Productive Medium Yield Aquifer

Potentially Productive High Yield Aquifer

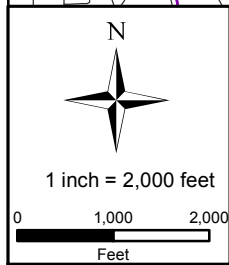
USGS Quadrangle Sheet Boundary

County Boundary

Town Boundary

Potentially Contaminated Sites

Proposed Gas Main



**GAS MAIN INSTALLATION PROJECT**

**Priority Resources**

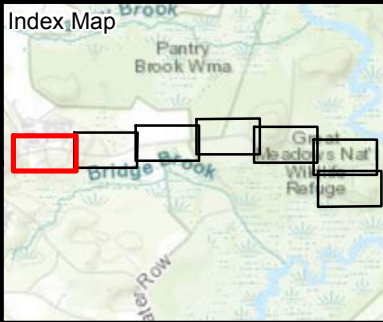
Lincoln Road and Lincoln Lane  
Sudbury, Massachusetts

Figure 2

Data source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology  
Circles indicate 500-foot and half-mile radii.  
Data valid as of July 2022.

**nationalgrid**  
**Tighe&Bond**





**Legend**

Proposed Gas Main	Delineated Wetland Area
100 ft Wetland Buffer	FEMA - 100yr Floodplain
Delineated Intermittent Stream	Parcel Boundary
Delineated Wetland Boundary	Town Boundary

N

1 inch = 100 feet

0 50 100

Feet

*\*Indicates Layers Set to Transparency*

**GAS MAIN INSTALLATION PROJECT**

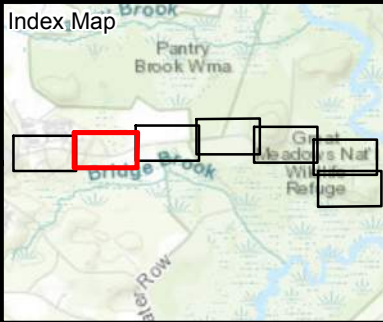
**Orthophotograph**

Lincoln Road  
Sudbury, Massachusetts  
Figure 3

Map Sheet 1 of 7

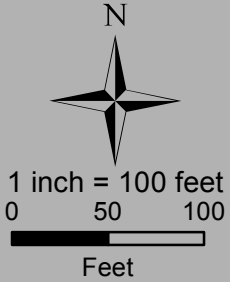
Based on MassGIS Color  
Orthophotography (2021).





**Legend**

- |                                |                         |
|--------------------------------|-------------------------|
| Proposed Gas Main              | Delineated Wetland Area |
| 100 ft Wetland Buffer          | FEMA - 100yr Floodplain |
| Delineated Intermittent Stream | Parcel Boundary         |
| Delineated Wetland Boundary    | Town Boundary           |



*\*Indicates Layers Set to Transparency*

**GAS MAIN INSTALLATION PROJECT**

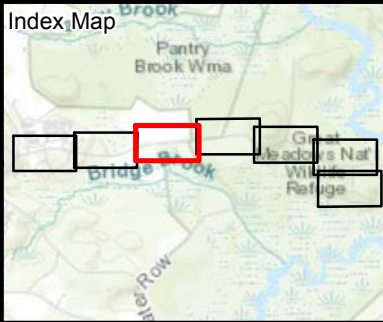
**Orthophotograph**

Lincoln Road  
Sudbury, Massachusetts  
Figure 3

Map Sheet 2 of 7

Based on MassGIS Color  
Orthophotography (2021).





**Legend**

	Proposed Gas Main		Delineated Wetland Area
	100 ft Wetland Buffer		FEMA - 100yr Floodplain
	Delineated Intermittent Stream		Parcel Boundary
	Delineated Wetland Boundary		Town Boundary

1 inch = 100 feet  
0 50 100  
Feet

*\*Indicates Layers Set to Transparency*

**GAS MAIN INSTALLATION PROJECT**

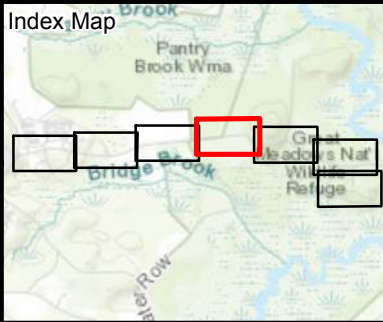
**Orthophotograph**

Lincoln Road  
Sudbury, Massachusetts  
Figure 3

Map Sheet 3 of 7

Based on MassGIS Color  
Orthophotography (2021).





**Legend**

Proposed Gas Main	Delineated Wetland Area
100 ft Wetland Buffer	FEMA - 100yr Floodplain
Delineated Intermittent Stream	Parcel Boundary
Delineated Wetland Boundary	Town Boundary

1 inch = 100 feet

0 50 100

Feet

*\*Indicates Layers Set to Transparency*

**GAS MAIN INSTALLATION PROJECT**

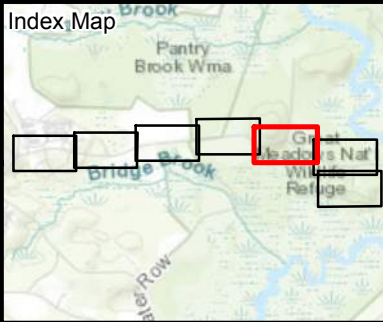
**Orthophotograph**

Lincoln Road  
Sudbury, Massachusetts  
Figure 3

Map Sheet 4 of 7

Based on MassGIS Color Orthophotography (2021).





**Legend**

	Proposed Gas Main		Delineated Wetland Area
	100 ft Wetland Buffer		FEMA - 100yr Floodplain
	Delineated Intermittent Stream		Parcel Boundary
	Delineated Wetland Boundary		Town Boundary

1 inch = 100 feet

0 50 100

Feet

*\*Indicates Layers Set to Transparency*

**GAS MAIN INSTALLATION PROJECT**

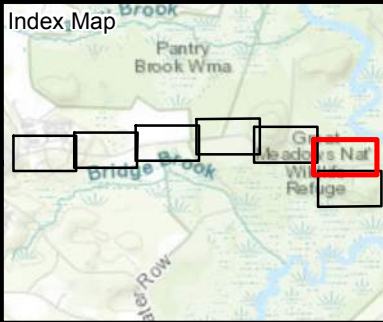
**Orthophotograph**

Lincoln Road  
Sudbury, Massachusetts  
Figure 3

Map Sheet 5 of 7

Based on MassGIS Color  
Orthophotography (2021).





**Legend**

Proposed Gas Main	Delineated Wetland Area
100 ft Wetland Buffer	FEMA - 100yr Floodplain
Delineated Intermittent Stream	Parcel Boundary
Delineated Wetland Boundary	Town Boundary

1 inch = 100 feet

0 50 100

Feet

*\*Indicates Layers Set to Transparency*

**GAS MAIN INSTALLATION PROJECT**

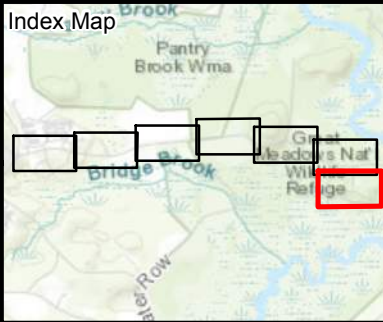
**Orthophotograph**

Lincoln Road and Lincoln Lane  
Sudbury, Massachusetts  
Figure 3

Map Sheet 6 of 7

Based on MassGIS Color  
Orthophotography (2021).





**Legend**

Proposed Gas Main	Delineated Wetland Area
100 ft Wetland Buffer	FEMA - 100yr Floodplain
Delineated Intermittent Stream	Parcel Boundary
Delineated Wetland Boundary	Town Boundary

1 inch = 100 feet

0 50 100

Feet

*\*Indicates Layers Set to Transparency*

**GAS MAIN INSTALLATION PROJECT**

**Orthophotograph**

Lincoln Lane  
Sudbury, Massachusetts  
Figure 3

Map Sheet 7 of 7

Based on MassGIS Color Orthophotography (2021).



**ATTACHMENT C**  
SITE PHOTOGRAPHS

# Photographic Log

**Client:** Boston Gas Company

**Job Number:** N5068-208

**Site:** Gas Main Installation Project, Lincoln Road, Sudbury, Massachusetts





# Photographic Log

**Client:** Boston Gas Company

**Job Number:** N5068-208

**Site:** Gas Main Installation Project, Lincoln Road, Sudbury, Massachusetts





# Photographic Log

**Client:** Boston Gas Company

**Job Number:** N5068-208

**Site:** Gas Main Installation Project, Lincoln Road, Sudbury, Massachusetts

<b>Photograph No.:</b> 5	<b>Date:</b> 07/06/2022	<b>Direction Taken:</b> Southeast
<b>Description:</b> Overview of the unnamed ephemeral stream located to the southeast of the intersection of Lincoln and Concord Roads, approximately 33 feet from the edge of the roadway.		
		

<b>Photograph No.:</b> 6	<b>Date:</b> 07/06/2022	<b>Direction Taken:</b> North
<b>Description:</b> Overview of Wetland 1 (PFO1E), located to the northeast of the intersection of Lincoln Road and Fern Trail, approximately 25 feet from the edge of the roadway.		
		



# Photographic Log

**Client:** Boston Gas Company

**Job Number:** N5068-208

**Site:** Gas Main Installation Project, Lincoln Road, Sudbury, Massachusetts






# Photographic Log

**Client:** Boston Gas Company

**Job Number:** N5068-208

**Site:** Gas Main Installation Project, Lincoln Road, Sudbury, Massachusetts

<b>Photograph No.: 9</b>	<b>Date:</b> 07/06/2022	<b>Direction Taken:</b> Northeast
<b>Description:</b> Overview of Wetland 3 (PFO1E), located approximately 10 feet from the edge of the roadway and to the north of the project area between 128 and 97 Lincoln Road.		
		

<b>Photograph No.: 10</b>	<b>Date:</b> 07/06/2022	<b>Direction Taken:</b> South-southwest
<b>Description:</b> Wetland 4 (PFO1/4E) lies within a larger upland forest complex located approximately 100 feet from the edge of the Lincoln Lane spur project area.		
		



## **ATTACHMENT D**

### **BEST MANAGEMENT PRACTICES**

## SUBJECT

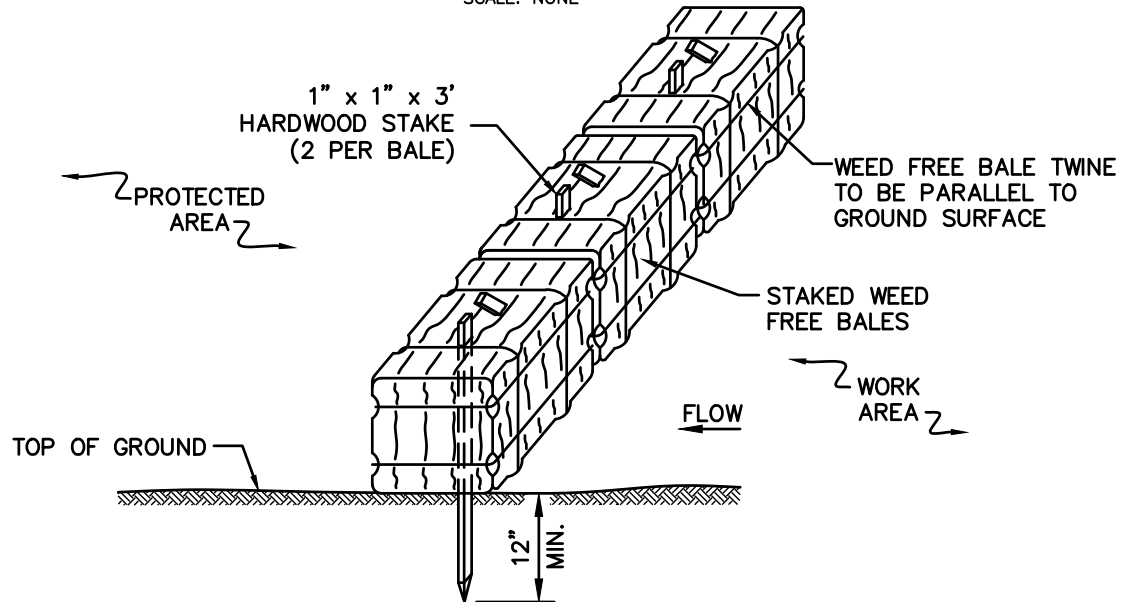
Access, Maintenance and Construction  
Best Management Practices

## Reference

EP No. 3 - Natural Resource  
Protection (Chapter 6)

**BMP DETAIL**

SCALE: NONE

**NOTES:**

1. THE GROUND SHALL BE PREPARED TO PROVIDE COMPLETE CONTACT WITH THE BALES.

**BMP PICTURE****APPROVED BY: VICE PRESIDENT, ENVIRONMENTAL SERVICES**

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SEC-1

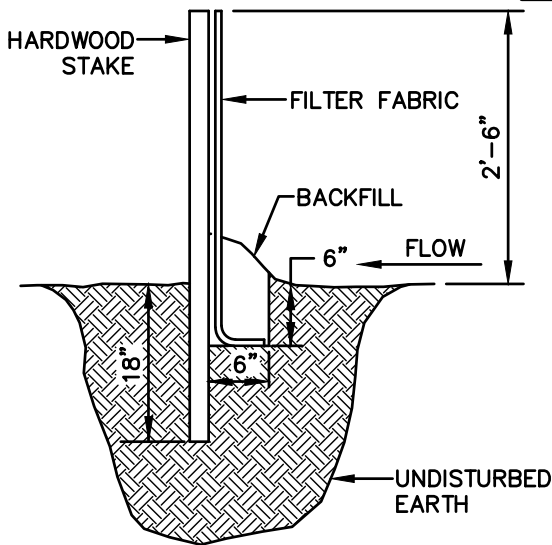
WEED FREE BALE BARRIER

SUBJECT  
Access, Maintenance and Construction  
Best Management Practices

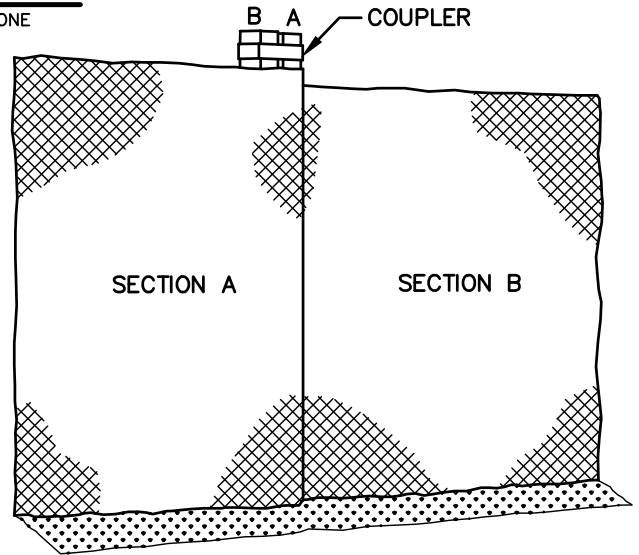
Reference  
EP No. 3 - Natural Resource  
Protection (Chapter 6)

### BMP DETAIL

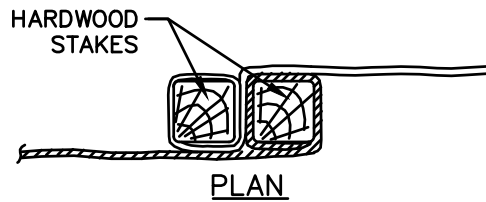
SCALE: NONE



PROFILE



SECTION



PLAN

### BMP PICTURE



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SEC-2  
**SEDIMENT CONTROL FENCE**

## SUBJECT

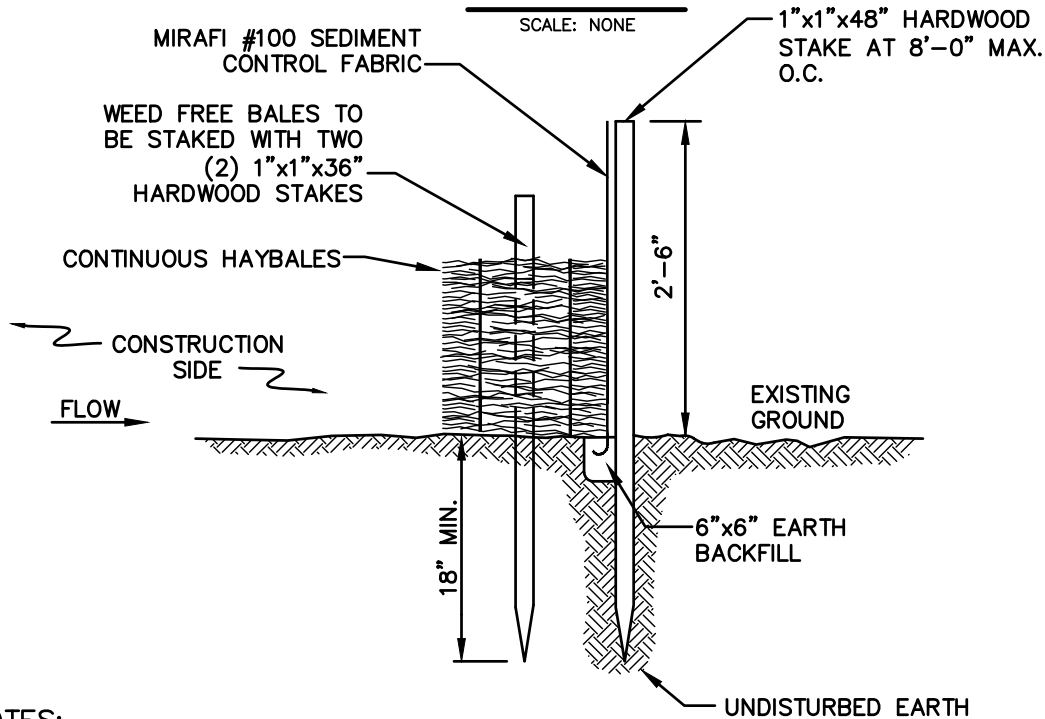
Access, Maintenance and Construction  
Best Management Practices

## Reference

EP No. 3 - Natural Resource  
Protection (Chapter 6)

**BMP DETAIL**

SCALE: NONE

**NOTES:**

1. BALES SHALL BE PLACED IN A ROW WITH THE ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. BALES SHALL BE SECURELY ANCHORED IN PLACE BY TWO (2) 1"x1"x36" HARDWOOD STAKES DRIVEN THROUGH THE BALES. THE FIRST STAKE IN EACH BALE SHALL BE ANGLED TOWARD PREVIOUSLY LAID BALE TO FORCE BALES TOGETHER.
3. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
4. BALES SHALL BE REMOVED AND REPLACED WHEN THEY BECOME FILLED WITH SEDIMENT AND BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
5. BALES SHALL BE REMOVED WHEN THE EMBANKMENTS STABILIZE.
6. BALES TO BE TWINE BOUND.

**BMP PICTURE**

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**SEC-3**  
**SILT FENCE /**  
**WEED FREE BARRIER**

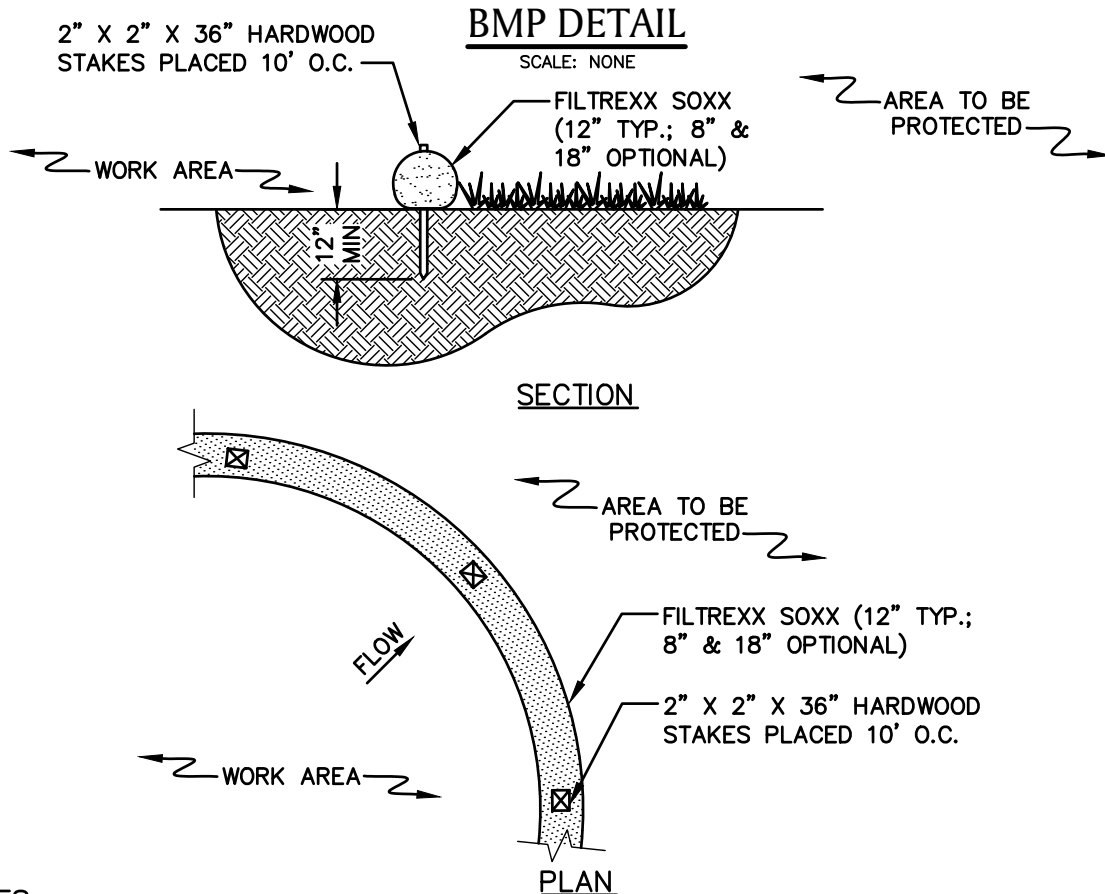


## SUBJECT

Access, Maintenance and Construction  
Best Management Practices

## Reference

EP No. 3 - Natural Resource  
Protection (Chapter 6)

NOTES

1. PRODUCT TO BE FILTREXX SILT SOXX OR APPROVED EQUAL BY NATIONAL GRID ENVIRONMENTAL SCIENTIST.
2. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS.
3. FILTER MEDIA FILL TO MEET APPLICATION REQUIREMENTS.
4. MESH CONTAINMENT MATERIAL SHOULD BE KNITTED PHOTODEGRADABLE OR BIODEGRADABLE MATERIAL, WITH OPENING SIZES BETWEEN 1/8" – 3/8".
5. COMPOST MEDIA SHOULD HAVE PARTICLE SIZE WHERE 99% < 2", 50% > 1/2".
6. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY NATIONAL GRID ENVIRONMENTAL SCIENTIST.

BMP PICTURE

\* PICTURE AND DETAIL PROVIDED BY FILTREXX LAND IMPROVEMENT SYSTEMS  
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SEC-4  
SILT SOXX \*

## SUBJECT

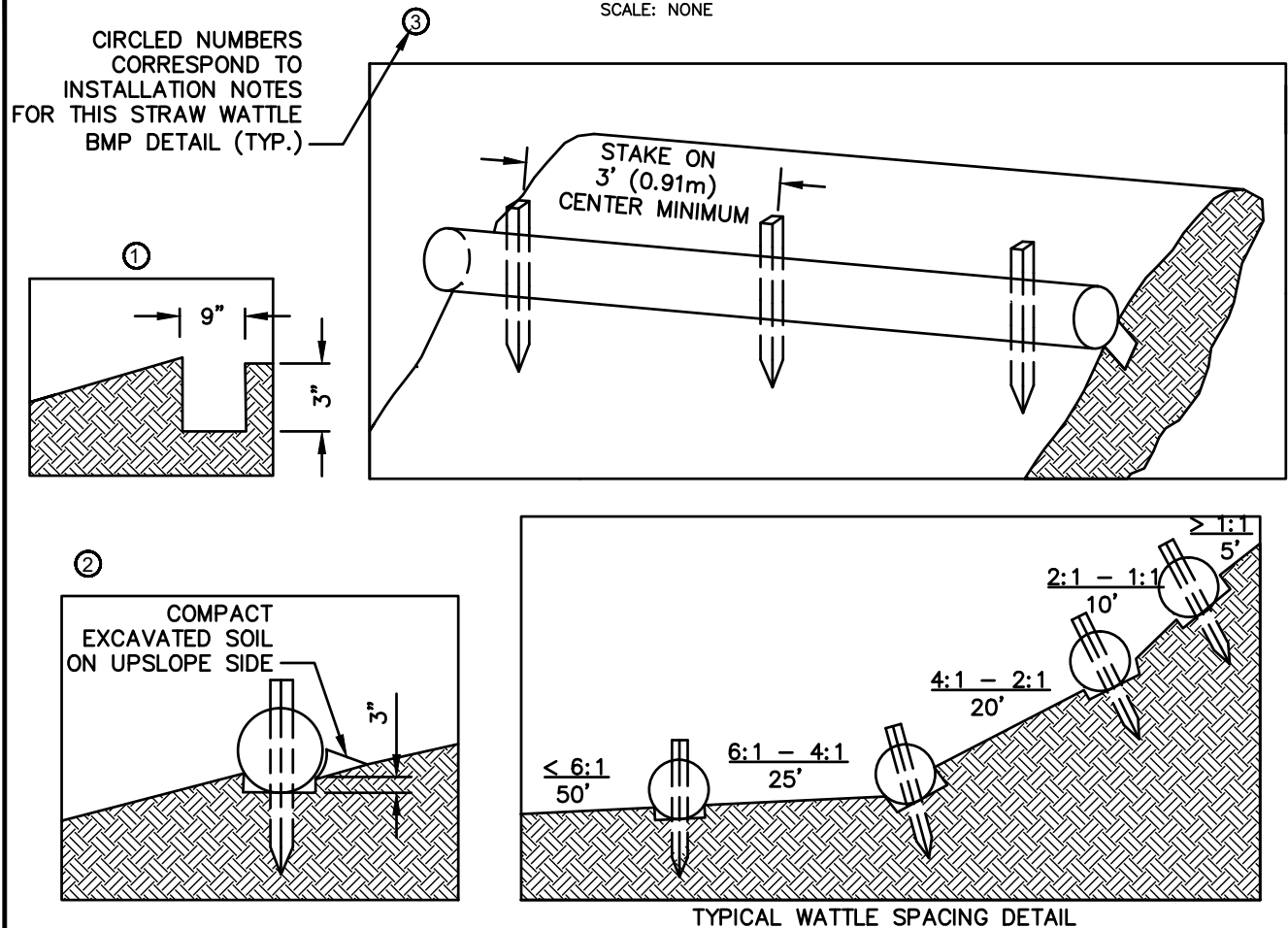
Access, Maintenance and Construction  
Best Management Practices

## Reference

EP No. 3 - Natural Resource  
Protection (Chapter 6)

**BMP DETAIL**

SCALE: NONE

**NOTES:**

1. PRODUCT TO BE TENSAR NORTH AMERICAN GREEN STRAW WATTLE OR APPROVED EQUAL BY NATIONAL GRID ENVIRONMENTAL SCIENTIST.
2. TYPICAL WATTLE SPACING BASED ON SLOPE GRADIENT. COORDINATE SPACING AND LOCATION WITH NATIONAL GRID ENVIRONMENTAL SCIENTIST.
3. MINIMUM 12" DIAMETER WATTLES SHOULD BE USED FOR HIGHLY DISTURBED AREAS (I.E., HEAVILY USED ACCESS ROAD WITH ADJACENT WETLAND) AND MINIMUM 9-10" WATTLES SHOULD BE USED FOR LESS DISTURBED SOILS.

**INSTALLATION NOTES:**

1. BEGIN AT THE LOCATION WHERE THE WATTLE IS TO BE INSTALLED BY EXCAVATING A 2-3" DEEP X 9" WIDE TRENCH ALONG THE CONTOUR OF THE SLOPE. EXCAVATED SOIL SHOULD BE PLACED UPSLOPE FROM THE ANCHOR TRENCH.
2. PLACE THE WATTLE IN THE TRENCH SO THAT IT CONTOURS TO THE SOIL SURFACE. COMPACT SOIL FROM THE EXCAVATED TRENCH AGAINST THE WATTLE ON THE UPHILL SIDE. ADJACENT WATTLES SHOULD TIGHTLY ABUT.
3. SECURE THE WATTLE WITH 18-24" HARDWOOD STAKES EVERY 3-4' AND WITH A STAKE ON EACH END. STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE WATTLE LEAVING AT LEAST 2-3" OF STAKE EXTENDING ABOVE THE WATTLE. STAKES SHOULD BE DRIVEN PERPENDICULAR TO THE SLOPE FACE.

\* DETAIL AND PICTURE PROVIDED BY TENSAR NORTH AMERICAN GREEN  
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SEC-5  
STRAW WATTLE \* (1 OF 2)

## SUBJECT

Access, Maintenance and Construction  
Best Management Practices

## Reference

EP No. 3 - Natural Resource  
Protection (Chapter 6)

BMP PICTURE

STRAW WATTLE – SHALLOW SLOPE ( $\leq 4:1$ )  
(ALTERNATE STAKING)

ALTERNATE STAKING INSTALLATION NOTES:

1. ON SHALLOW SLOPES ( $\leq 4:1$ ), STRAW WATTLE MAY BE SECURED WITH 18–24" HARDWOOD STAKES DRIVEN AGAINST THE SIDES OF THE WATTLE INSTEAD OF THROUGH. STAKES SHALL ALTERNATE SIDES, AND BE SPACED 3–4' MAX.
2. TWINE SHALL BE TIED FROM STAKE TO STAKE, CRISS-CROSSING THE STRAW WATTLE. TIE TWINE TO STAKES BELOW THE HEIGHT OF THE WATTLE.

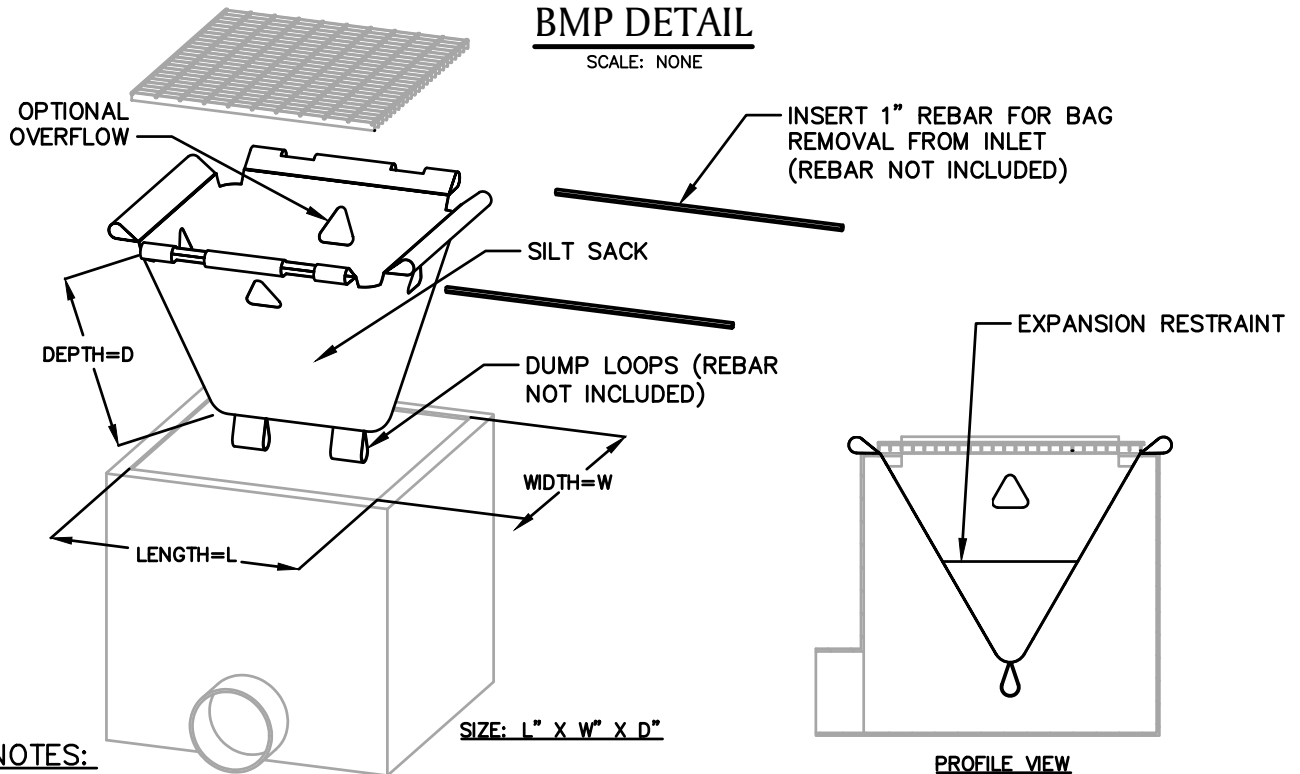


SUBJECT  
Access, Maintenance and Construction  
Best Management Practices

Reference  
EP No. 3 - Natural Resource  
Protection (Chapter 6)

## BMP DETAIL

SCALE: NONE



### NOTES:

1. PRODUCT TO BE SILT SACK OR APPROVED EQUAL BY NATIONAL GRID ENVIRONMENTAL SCIENTIST.
2. THE USE OF A SILT SACK OPTIONAL OVERFLOW AND OVERALL DIMENSIONS ARE TO BE COORDINATED WITH A NATIONAL GRID ENVIRONMENTAL SCIENTIST.

## BMP PICTURE



\* DETAIL PROVIDED BY ACF ENVIRONMENTAL  
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AA-20  
SILT SACK \*



## SUBJECT

Access, Maintenance and Construction  
Best Management Practices

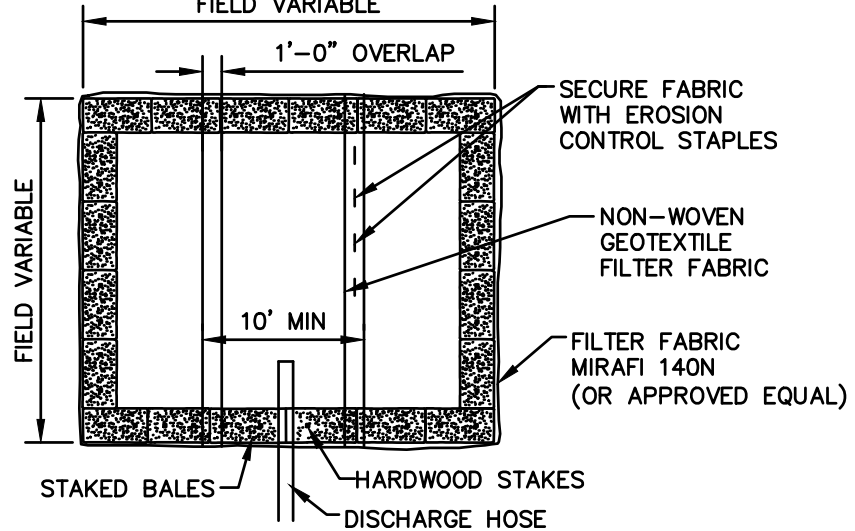
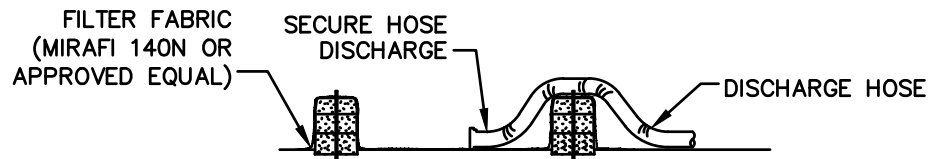
## Reference

EP No. 3 - Natural Resource  
Protection (Chapter 6)

**BMP DETAIL**

SCALE: NONE

FIELD VARIABLE

PLAN VIEWCROSS-SECTIONNOTES:

1. NUMBER OF BALES MAY VARY DEPENDING ON SITE CONDITIONS,
2. THE BASIN TO BE SIZED TO PREVENT DISCHARGE WATER FROM OVERTOPPING BASIN.
3. KEEP AS FAR FROM WETLANDS AS PRACTICAL.
4. CLEAN AND REMOVE AS SOON AS DEWATERING IS COMPLETE.

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**AA-10**  
**DEWATERING BASIN**  
**(SMALL SCALE)**

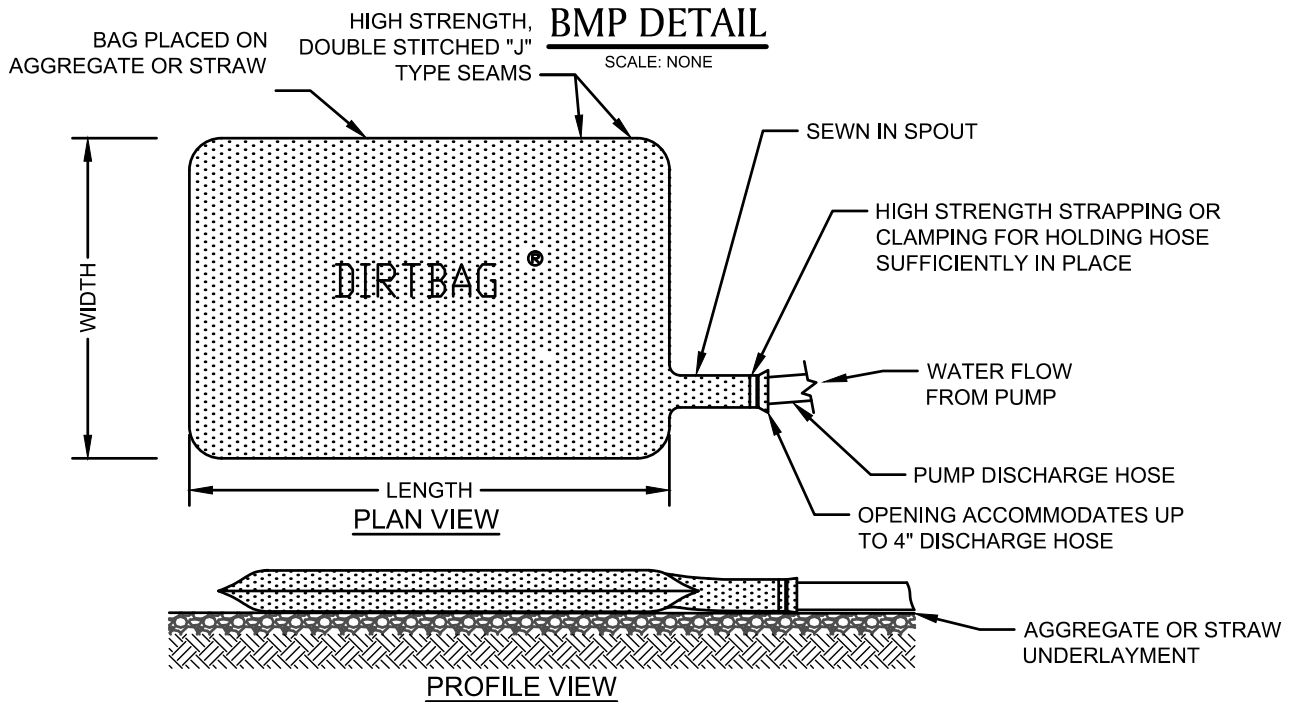


## SUBJECT

Access, Maintenance and Construction  
Best Management Practices

## Reference

EP No. 3 - Natural Resource  
Protection (Chapter 6)

**NOTE:**

ONCE PUMPING COMMENCES, THE DIRT BAG SHALL BE MONITORED FREQUENTLY TO ASSURE THAT THE CONNECTIONS ARE SECURELY FASTENED AND THE RATE OF WATER DELIVERY TO THE STRUCTURE IS LOW ENOUGH TO PREVENT UNFILTERED WATER FROM FLOWING FROM THE HOSE CONNECTIONS OR BAG.

**BMP PICTURE**

\* PICTURE AND DETAIL PROVIDED BY ACF ENVIRONMENTAL

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AA-12  
DIRTBAG \*



