



ENVIRONMENTAL
ECOLOGICAL
ENERGY
SURVEY
CIVIL

January 21, 2016
Coneco Project No. 9042

Mr. Ross Povenmire – Director of Conservation
Boxford Conservation Commission
7A Spofford Road
Boxford, Massachusetts 01921

Re: Request for Determination of Applicability under the Massachusetts Wetlands Protection Act and the Town of Boxford Wetlands Protection Bylaw for a new natural gas service connection to 52 Herrick Road.

Dear Mr. Povenmire and Commissioners:

On behalf of Boston Gas Company d/b/a National Grid (BGC), Coneco Engineers & Scientists, Incorporated is filing the attached Request for Determination of Applicability (RDA) for the proposed natural gas main service connection at 52 Herrick Road in Boxford, Massachusetts. The proposed project is located within the 25-foot, 75-foot, and 100-Foot Buffer Zones associated with vegetated wetlands. Construction will occur within previously disturbed areas. Therefore the Applicant is requesting a waiver from the requirements of the 25 and 75-foot offsets.

Enclosed please find the original and seven (7) copies of the RDA submittal. An electronic copy has also been emailed to you and we have filed the RDA with the Northeast Region of the Department of Environmental Protection (MassDEP NERO). We respectfully request that you place this matter on your agenda for the **February 4, 2016** public hearing.

If you have any questions or need additional copies of the documents please feel free to contact the undersigned at 508-962-7423 or jaevazelis@coneco.com.

Respectfully Submitted,

A handwritten signature in cursive script that reads "Amanda E. Neville".

Amanda E. Neville
Environmental Scientist

A handwritten signature in cursive script that reads "John D. Aevazelis".

John D. Aevazelis
Principal Environmental Scientist

cc: Boston Gas Company d/b/a National Grid
MassDEP NERO



ENVIRONMENTAL
ECOLOGICAL
ENERGY
SURVEY
CIVIL

REQUEST FOR DETERMINATION OF APPLICABILITY

Filed Under:

**THE MASSACHUSETTS WETLANDS PROTECTION ACT
(MGL CHAPTER 131 SECTION 40, WPA REGULATIONS 310 CMR 10.00)
AND THE TOWN OF BOXFORD WETLANDS PROTECTION BYLAW**

For:

**PROPOSED NATURAL GAS SERVICE CONNECTION
52 HERRICK ROAD
BOXFORD, MASSACHUSETTS**

Property Of:

J & L Dinisman
52 Herrick Road, Boxford, Massachusetts

Submitted To:

Town of Boxford Conservation Commission
7A Spofford Road, Boxford, Massachusetts 01921

Submitted By:

Boston Gas Company
170 Medford Street, Malden, Massachusetts 02148

Prepared by:

Coneco Engineers & Scientists, Incorporated
227 Chelmsford Street, Suite C, Chelmsford, Massachusetts 01824
(978) 656-8684

January 21, 2016
Coneco Project No. 9042

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1.0 PROJECT NARRATIVE

1.1 Introduction

This Request for Determination of Applicability (RDA) is being submitted by Coneco Engineers & Scientists, Incorporated (Coneco) on behalf of the Boston Gas Company d/b/a National Grid (BGC) for a proposed natural gas service connection to the existing residence at 52 Herrick Road in Boxford, Massachusetts (refer to Figure 1 - Site Locus Map and Figure 2 - Aerial Image). This RDA is being filed pursuant to the Massachusetts Wetlands Protection Act (WPA; MGL Ch. 131 § 40) and Regulations (MWPR; 310 CMR 10.00 et seq.) and the Town of Boxford Wetlands Protection Bylaw (Bylaw) and Regulations (WPBR). Please refer to WPA Form 1, provided as Appendix 1.

The purpose of the project is to provide a natural gas service connection to an existing residence located at 52 Herrick Road. The proposed work (“the Project Route”) is located within the 100-Foot Buffer Zone to Bordering Vegetated Wetland (BVW). In reviewing the proposed project with the Town of Boxford Conservation Agent, it was concluded that this work should be filed as an RDA.

1.2 Existing Site Conditions

The Project Route consists of a 193± lf corridor from the existing natural gas main within the roadway right-of-way (ROW) of Herrick Road to the southern corner of the existing residence at 52 Herrick Road. Surrounding areas consist of residential development.

A review of the current Mass GIS data layer for the Natural Heritage and Endangered Species Program’s (NHESP) Massachusetts Natural Heritage Atlas (13th Edition, October 2008) indicates that the Project Route is located within a Priority Habitat of Rare Species and an Estimated Habitat of Rare Wildlife. However, it should be noted that the Project Route will be located within a previously disturbed area. No certified vernal pools under the jurisdiction of the Wetlands Protection Act Regulations or the Massachusetts Endangered Species Act (321 CMR 10.00 et seq.) occur along the Project Route (See Figure 3 - NHESP Map).

According to the November 2014 Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map for Middlesex County, the Project Route is not located within a FEMA Special Flood Hazard Area (See Figure 4 - FEMA Map). The Project Route is not located within an Area of Critical Environmental Concern (ACEC) or within an Outstanding Resource Water (ORW).

Wetland resource areas are described in the following section. Photographs representative of existing conditions in the vicinity of the proposed Project Route are included in Appendix 2.

1.3 Wetland Resource Areas

A Coneco Environmental Scientist conducted a wetland reconnaissance along the Project Route on January 14, 2016 to identify wetlands, watercourses and other resource areas subject to local, state, and federal jurisdiction. Areas within 200 feet of the Project Route were reviewed. A formal delineation was not completed. The reconnaissance was conducted in accordance with the WPA and Regulations; the Bylaw and Bylaw Regulations; and the Clean Water Act. Methods follow the technical guidance outlined in *Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetlands Protection Act: A Handbook* (1995); the *Corps of Engineers Wetlands Delineation Manual* (1987); the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (Version 2.0, 2012), and others, as applicable. Jurisdictional resource areas identified in the vicinity of the Project Route comprised BVW, which is defined as follows:

Bordering Vegetated Wetland – 310 CMR 10.55

310 CMR 10.55 of the WPA defines bordering vegetated wetlands as freshwater wetlands which border on creeks, rivers, streams, ponds and lakes. The types of freshwater wetlands are wet meadows, marshes, swamps and bogs. Bordering Vegetated Wetlands are areas where the soils are saturated and/or inundated such that they support a predominance of wetland indicator plants. The boundary of Bordering Vegetated Wetlands is the line within which 50% or more of the vegetational community consists of wetland indicator plants and saturated or inundated conditions exist. Wetland indicator plants are also those classified in the indicator categories of Facultative, Facultative+, Facultative Wetland-, Facultative Wetland, Facultative Wetland+, or Obligate Wetland in the National List of Plant Species That Occur in Wetlands: Massachusetts (Fish & Wildlife Service, U.S. Department of the Interior, 1988) or plants exhibiting physiological or morphological adaptations to life in saturated or inundated conditions.

The approximate locations of resource areas and buffer zones are shown in Figure 5 - Resource Area and Best Management Practices (BMP) Map. These resource areas and buffer zones, while based on GIS data, appear to be generally representative of field conditions.

2.0 PROPOSED WORK DESCRIPTION

2.1 Introduction

The proposed natural gas service connection will connect to the existing natural gas main in the ROW to Herrick Road and extend southwest 193± lf along the existing stone driveway to the southern corner of the existing residence. A small portion of the work area lies within the paved extent of Herrick Road, specifically the connection to the existing natural gas main in Herrick Road. The service connection will extend through the existing residential stone driveway.

The BVW located along the southern side of the residential property (52 Herrick Road) is located approximately 25 feet from the Project Route at its nearest point. This places the Project Route within the 100-foot Buffer Zone (Figure 5 - Resource Area and BMP Map). Construction associated with the project will occur within previously developed areas, and restored to its previous conditions (to the extent practicable) upon completion of work.

2.2 Erosion Control

To guard against potential impacts from the proposed natural gas service connection, erosion and sedimentation control Best Management Practices (BMPs) consisting of a straw wattle secured by wooden stakes (or an approved equivalent) will be installed between the edge of the work area and the BVW, as necessary (depicted in Figure 5). In addition, silt sacks will be installed for inlet protection (e.g., catch basins), on Herrick Road, as necessary. Details of proposed BMPs are included in Appendix 3.

2.3 General Construction Details

The following is a general construction sequence for the installation of the proposed natural gas service connection along the Project Route. The sequence of construction may vary slightly as necessary to assure completion of the overall project.

General Construction Sequence:

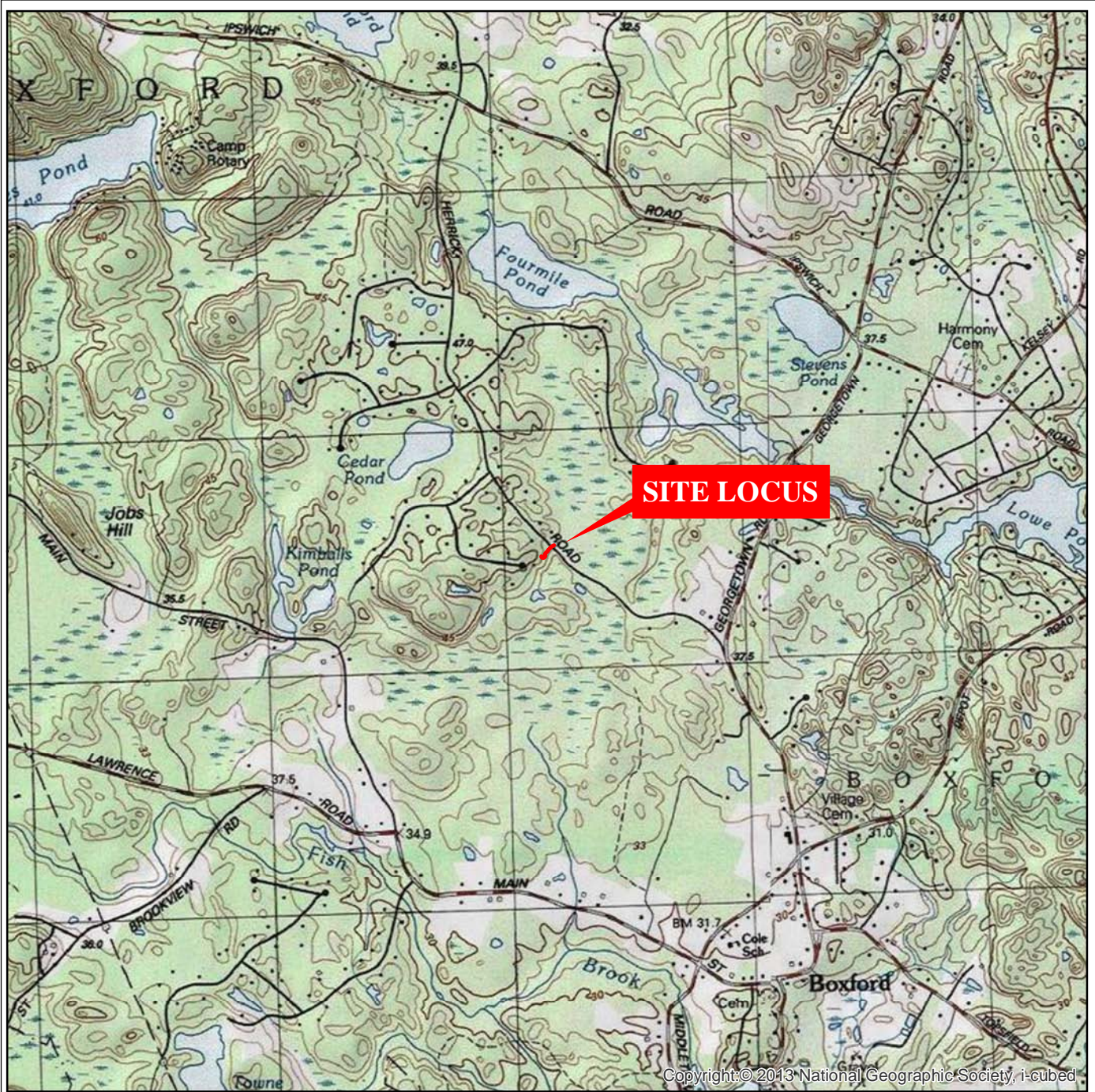
1. Erosion controls will be installed at the Project Route, as necessary.
2. Pavement will be saw cut to the dimensions of the excavation. This will vary from 1-2 feet in width with larger excavations at junctions or where ancillary equipment will be installed.
3. Soil will be excavated to a depth of 2-4 feet and either sidecast (deposited temporarily adjacent to the excavation) or into a dump truck.
4. A gravel bed will be laid within the trench to cradle the pipe.
5. New plastic pipe will be laid in the trench and connected to existing main.
6. The trench will be backfilled either with the excavated soil or with clean fill as necessary at the end of each work day and covered with steel plates or temporary/permanent bituminous pavement. During this process caution tape is left above the pipe to alert future workers of the existence of the pipe. No excavated soil will be left on-Site at the conclusion of each work day.
7. The road will be repaved, following existing contours and the gravel driveway will be repaired. Disturbed, grassed areas (if any) will be seeded (grass seed) and maintained by the property owner.
8. Project area cleanup and erosion control removal will include proper disposal of any surplus soil or other materials.

3.0 REGULATORY COMPLIANCE

As a result of the proposed work, there will be impacts within the 100-foot Buffer Zone. These impacts are temporary, and the proposed work area will be returned to pre-existing conditions (to the extent practicable) upon completion of the installation. The project is not anticipated to result in impacts to adjacent Resource Areas. Proposed work qualifies as a Limited Project under 310 CMR 10.53(3)(d) of the WPA regulations: *The construction, reconstruction, operation and maintenance of underground and overhead utilities, such as...natural gas lines, may be permitted...*

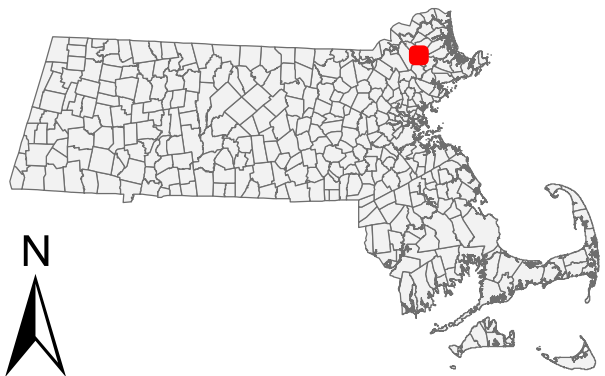
4.0 SUMMARY

A 193± If natural gas service connection is being proposed to provide a new natural gas service connection to the existing residence at 52 Herrick Road. The Project Route lies within the 100-Foot Buffer Zone to bordering vegetated wetlands. Proposed work qualifies as a Limited Project under 310 CMR 10.53(3)(d) of the Wetlands Protection Act. Given this designation, the nature of proposed work, and the proposed used of erosion and sedimentation control BMPs to protect adjacent resource areas during construction, Coneco (on behalf of BGC) respectfully requests that the Town of Boxford Conservation Commission issue a Negative Determination (boxes c and d), allowing the natural gas service extension to proceed as proposed.



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LONGITUDE: 42.67504°
 LATITUDE: -71.01073°



SITE LOCUS MAP
 Proposed Natural Gas
 Service Connection Project
 52 Herrick Road
 Boxford, Massachusetts

SCALE	PROJECT NO.	FIGURE
1:25,000	9042	1



- - - - - Existing Natural Gas Main
- Proposed Natural Gas Service Connection

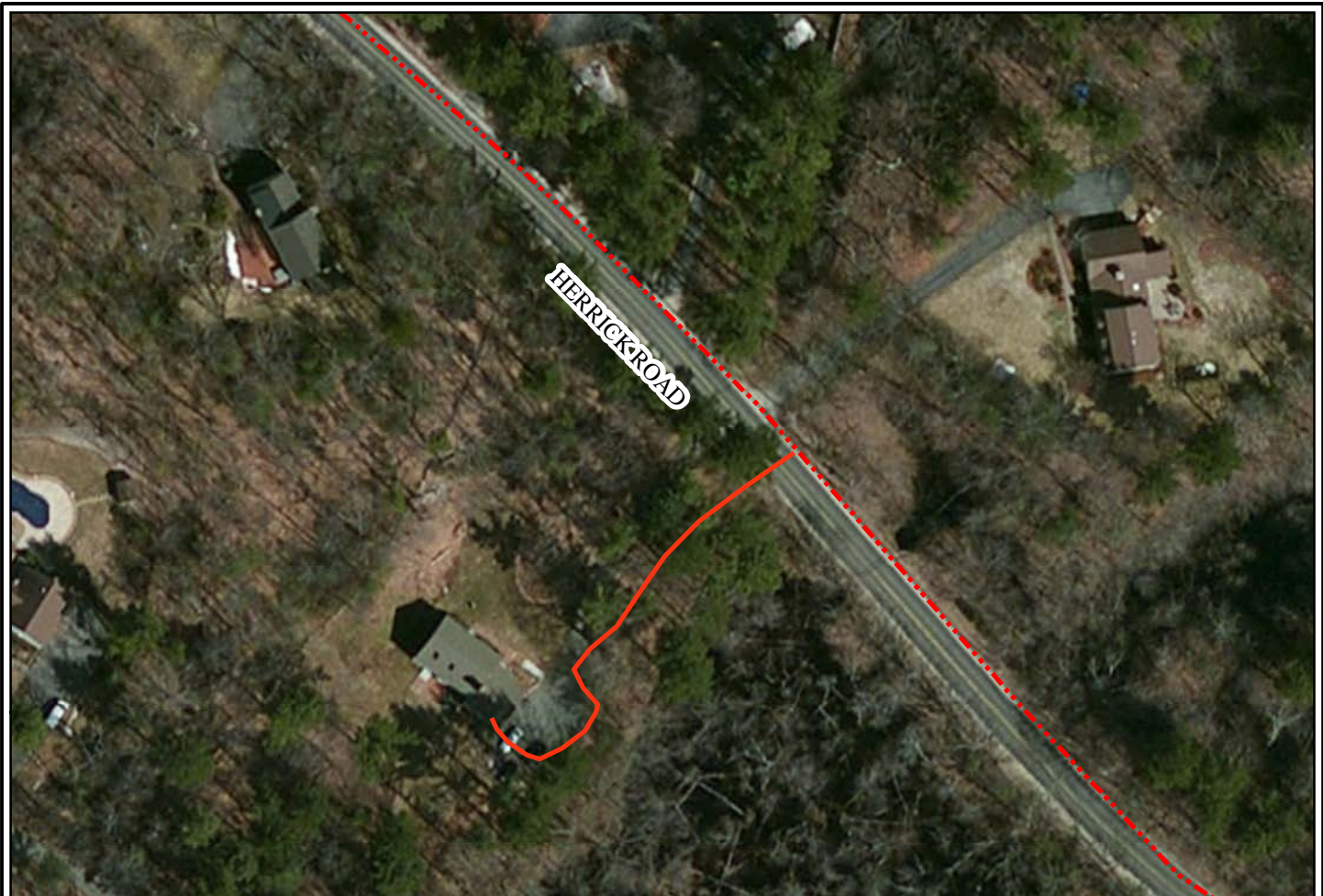
Source: Esri, DigitalGlobe, GeoEye, I-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

	PREPARED FOR BOSTON GAS COMPANY	AERIAL IMAGE PROPOSED NATURAL GAS SERVICE CONNECTION PROJECT 52 HERRICK ROAD BOXFORD, MASSACHUSETTS		
	PREPARED BY 	SCALE	PROJECT NO.	FIGURE
		1" = 75'	9042	2



Source: Esri, DigitalGlobe, GeoEye, I-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

	PREPARED FOR BOSTON GAS COMPANY	NHESP MAP PROPOSED NATURAL GAS SERVICE CONNECTION PROJECT 52 HERRICK ROAD BOXFORD, MASSACHUSETTS		
	PREPARED BY 	SCALE	PROJECT NO.	FIGURE
		1" = 75'	9042	3



--- Existing Natural Gas Main

— Proposed Natural Gas Service Connection

FEMA National Flood Hazard Layer

Flood Zone Designations

- A: 1% Annual Chance of Flooding, no BFE
- AE: 1% Annual Chance of Flooding, with BFE
- AE: Regulatory Floodway
- AH: 1% Annual Chance of 1-3ft Ponding, with BFE
- AO: 1% Annual Chance of 1-3ft Sheet Flow Flooding, with Depth
- VE: High Risk Coastal Area
- D: Possible But Undetermined Hazard
- X: 0.2% Annual Chance of Flooding
- X: Reduced Flood Risk due to Levee
- Area Not Included
- Area with no DFIRM - Paper FIRMs in Effect

Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



PREPARED FOR

BOSTON GAS COMPANY

PREPARED BY

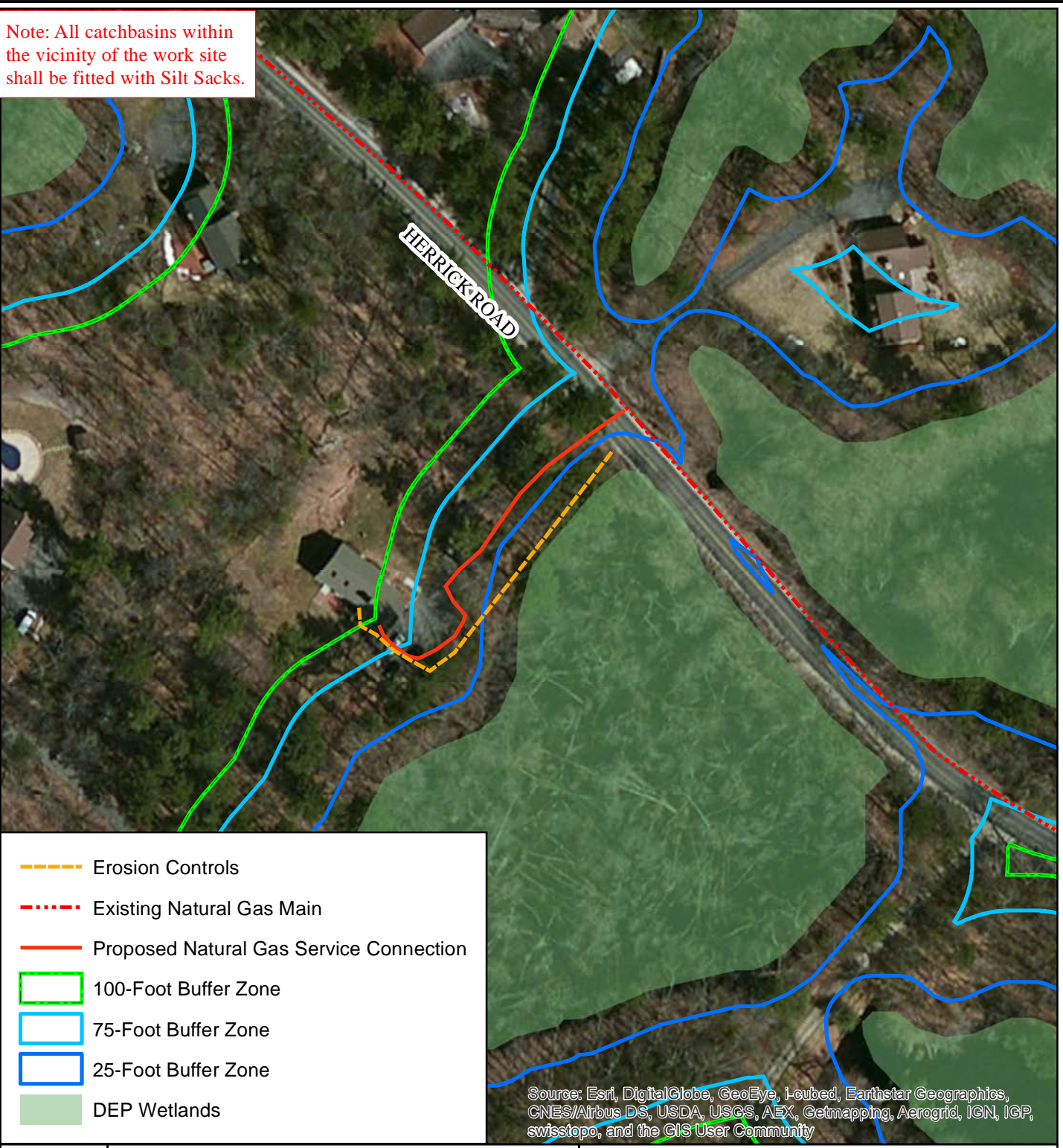


FEMA MAP








PROPOSED NATURAL GAS
SERVICE CONNECTION PROJECT
52 HERRICK ROAD
BOXFORD, MASSACHUSETTS

SCALE	PROJECT NO.	FIGURE
1" = 100'	9042	4

Note: All catchbasins within the vicinity of the work site shall be fitted with Silt Sacks.



Source: Esri, DigitalGlobe, GeoEye, I-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

-  Erosion Controls
-  Existing Natural Gas Main
-  Proposed Natural Gas Service Connection
-  100-Foot Buffer Zone
-  75-Foot Buffer Zone
-  25-Foot Buffer Zone
-  DEP Wetlands



PREPARED FOR
BOSTON GAS COMPANY

PREPARED BY


RESOURCE AREA AND BMP MAP
 PROPOSED NATURAL GAS
 SERVICE CONNECTION
 52 HERRICK ROAD
 BOXFORD, MASSACHUSETTS

SCALE	PROJECT NO.	FIGURE
1" = 100'	9042	5

WPA FORM 1



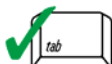
WPA Form 1- Request for Determination of Applicability

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
Name
 170 Medford Street
Mailing Address
 Malden
City/Town
 MA
State
 02148
Zip Code
 508-922-6309
Phone Number
 Fax Number (if applicable)

2. Representative (if any):

Coneco Engineers & Scientists, Incorporated
Firm
 John Aevazelis
Contact Name
 jaevazelis@coneco.com
E-Mail Address
 227 Chelmsford Street, Suite C
Mailing Address
 Chelmsford
City/Town
 MA
State
 01824
Zip Code
 508-962-7423
Phone Number
 508-697-5996
Fax Number (if applicable)

B. Determinations

1. I request the Boxford 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:

Boxford
Name of Municipality

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



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):

<u>52 Herrick Road</u>	<u>Boxford</u>
Street Address	City/Town
<u>Road Right-of-Way and Map 24</u>	<u>02/16/3</u>
Assessors Map/Plat Number	Parcel/Lot Number

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

The natural gas service connection project will extend from the current natural gas main in the roadway right-of-way to Herrick Road onto the residential property at 52 Herrick Road. Areas immediately surrounding the project corridor predominantly consist of residential development.

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

<u>Figures 1 through 5 as noted in the Table of Contents</u>	<u>January 13, 2016</u>
Title	Date
<u> </u>	<u> </u>
Title	Date
<u> </u>	<u> </u>
Title	Date

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

The project proposes installation of approximately one hundred ninety three (193) linear feet of natural gas main to service the residence at 52 Herrick Road. See RDA narrative for additional details.



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).

Limited Project provisions, 310 CMR 10.53(3)(d): The construction, reconstruction, operation and maintenance of underground and overhead public utilities, such as...natural gas lines, may be permitted...

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.)

N/A



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:

J & L Dinisman

Name

52 Herrick Road

Mailing Address

Boxford

City/Town

MA

State

01921

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.

[Handwritten Signature]

Signature of Applicant

1/20/16

Date

[Handwritten Signature]

Signature of Representative (if any)

1/20/16

Date

PHOTOGRAPHIC DOCUMENTATION



Photo 1
View of the approximate Project Route within the roadway right-of-way to Herrick Road and the residential property at 52 Herrick Road, as viewed from the north.

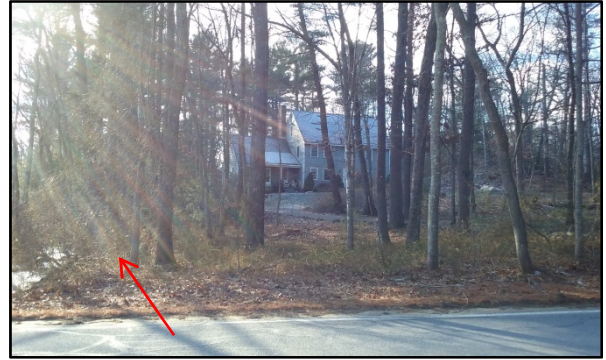




Photo 2
View of the wetland area located approximately 25 feet southeast of the Project Route, as viewed from the northeast.



Photo 3
View of the wetland area located approximately 25 feet southeast of the Project Route, as viewed from the northeast.

			PROPOSED NATURAL GAS MAIN SERVICE CONNECTION PROJECT 52 HERRICK ROAD BOXFORD, MASSACHUSETTS
PHOTOGRAPHER	DATE	CHECKED	FILE No.
AEN	1/15/16	JDA	Y:\\9042\PHOTOS\9042- PHOTOS.DOC

BEST MANAGEMENT PRACTICES

 ENVIRONMENTAL GUIDANCE	Doc. No.	EG-303NE
	Page 9 of 49	Rev. 5
	Date	07/01/2015
SUBJECT Access, Maintenance and Construction Best Management Practices	Reference EP No. 3 – Natural Resource Protection (Chapter 6)	

4.1 Sedimentation and Erosion Controls

Appropriate sedimentation and erosion control devices shall be installed at work sites, in accordance with permit conditions and/or regulatory approvals, and as needed to prevent adverse impacts to water resources and adjacent properties.

The overall purpose of such controls is to prevent and control the movement of disturbed soil and sediment from work sites to adjacent, undisturbed areas, and particularly to water resources, public roads and adjacent properties. All proprietary controls shall be installed per manufacturer’s recommendations and specifications.


Appropriate sedimentation and erosion control devices include but are not limited to: silt fencing, straw bales, wood chip bags, straw wattles, compost socks, erosion control blankets, mulch, slope interruption practices, flocculent powder/blocks and storm drain/catch basin inlet protection. Such controls shall be installed between the work area and environmentally sensitive areas such as wetlands, streams, drainage courses, roads and adjacent property when work activities shall disturb soils and result in a potential for causing sedimentation and erosion.

Staked straw bales often serve as the demarcation of the limits of work and/or sensitive areas to be avoided. Work shall never be conducted outside the limit of erosion controls without prior approval from the National Grid Environmental Scientist.

Project plans depict proposed erosion controls, however field conditions may warrant additional practices be implemented (e.g., wet conditions, frozen conditions, poorly drained soils, steep slopes, materials used for work pads, transition areas to swamp mats, number of trips across work areas, etc.).

Any deviation from the approved erosion controls shown in the EFI and/or SWPPP plans needs to be communicated immediately to the National Grid Environmental Scientist as it may require additional permitting or result in a permit violation.

Appendix 7 provides typical sketches of common sedimentation and erosion controls. If a SWPPP is required for the project, maintenance and inspection of erosion controls shall follow the SWPPP requirements. Sedimentation and erosion controls shall be properly maintained and

 ENVIRONMENTAL GUIDANCE	Doc. No.	EG-303NE
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	Date	07/01/2015
SUBJECT Access, Maintenance and Construction Best Management Practices	Reference EP No. 3 – Natural Resource Protection (Chapter 6)	

inspected on a periodic basis, until work sites are properly stabilized and restored. Inspections shall be documented using the Inspection Form “Storm Water, Wetlands & Priority Habitat Environmental Compliance Site Inspection/Monitoring Report” (**Appendix 6**).

The sequence and timing of the installation of sedimentation and erosion control measures is critical to their success. Sedimentation and erosion controls shall be installed prior to commencing construction activities that may result in any soil disturbance or cause otherwise polluted site runoff. Inspection of these devices may be required by the National Grid Environmental Scientist or by regulators prior to the start of work. The installation of water bars and other erosion control measures shall be installed shortly thereafter.

SUBJECT

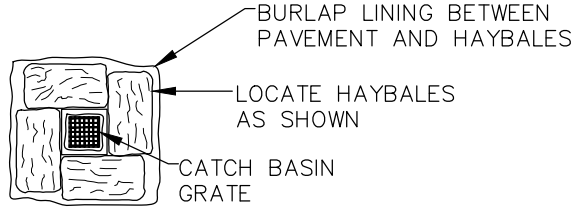
Access, Maintenance and Construction
Best Management Practices

Reference

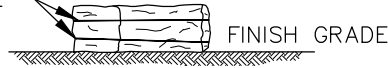
EP No. 3 - Natural Resource
Protection (Chapter 6)

BMP DETAIL

SCALE: NONE



TIE HAYBALES TOP &
BOTTOM WITH 14
GAUGE WIRE



NOTES:

1. SURROUND STREET DRAINAGE STRUCTURE INLET WITH HAY BALES PRIOR TO CONSTRUCTION AND MAINTAIN UNTIL CONSTRUCTION IS COMPLETED. ACCUMULATED SEDIMENTS SHALL BE REMOVED.
2. HAYBALES PLACED ON PAVEMENT SHALL HAVE BURLAP PLACED BETWEEN PAVEMENT AND HAYBALE

BMP PICTURE



File: CB_Inlet_Protection.dwg

APPROVED BY: VICE PRESIDENT, ENVIRONMENTAL SERVICES
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VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

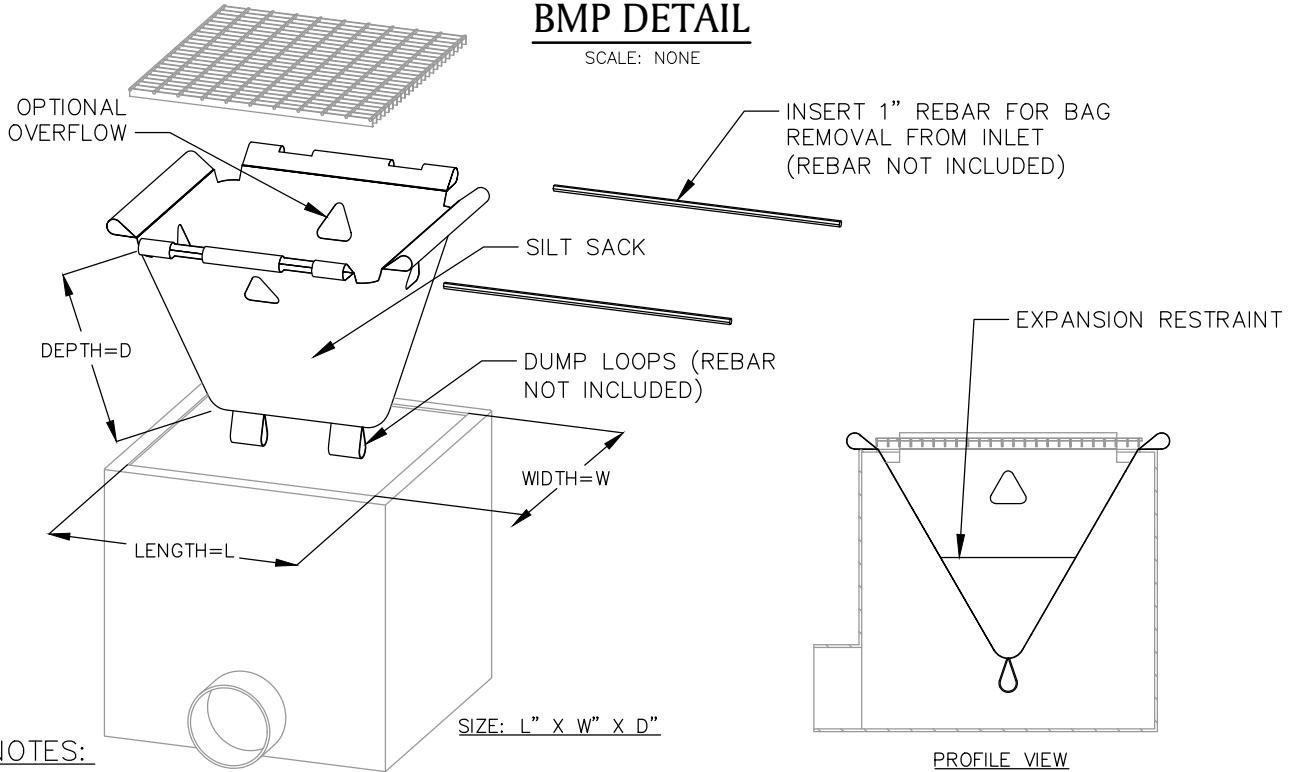
BMP # 40
CATCH BASIN INLET PROTECTION

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
APPROVED BY: VICE PRESIDENT, ENVIRONMENTAL SERVICES
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BMP # 41
SILT SACK *

SUBJECT

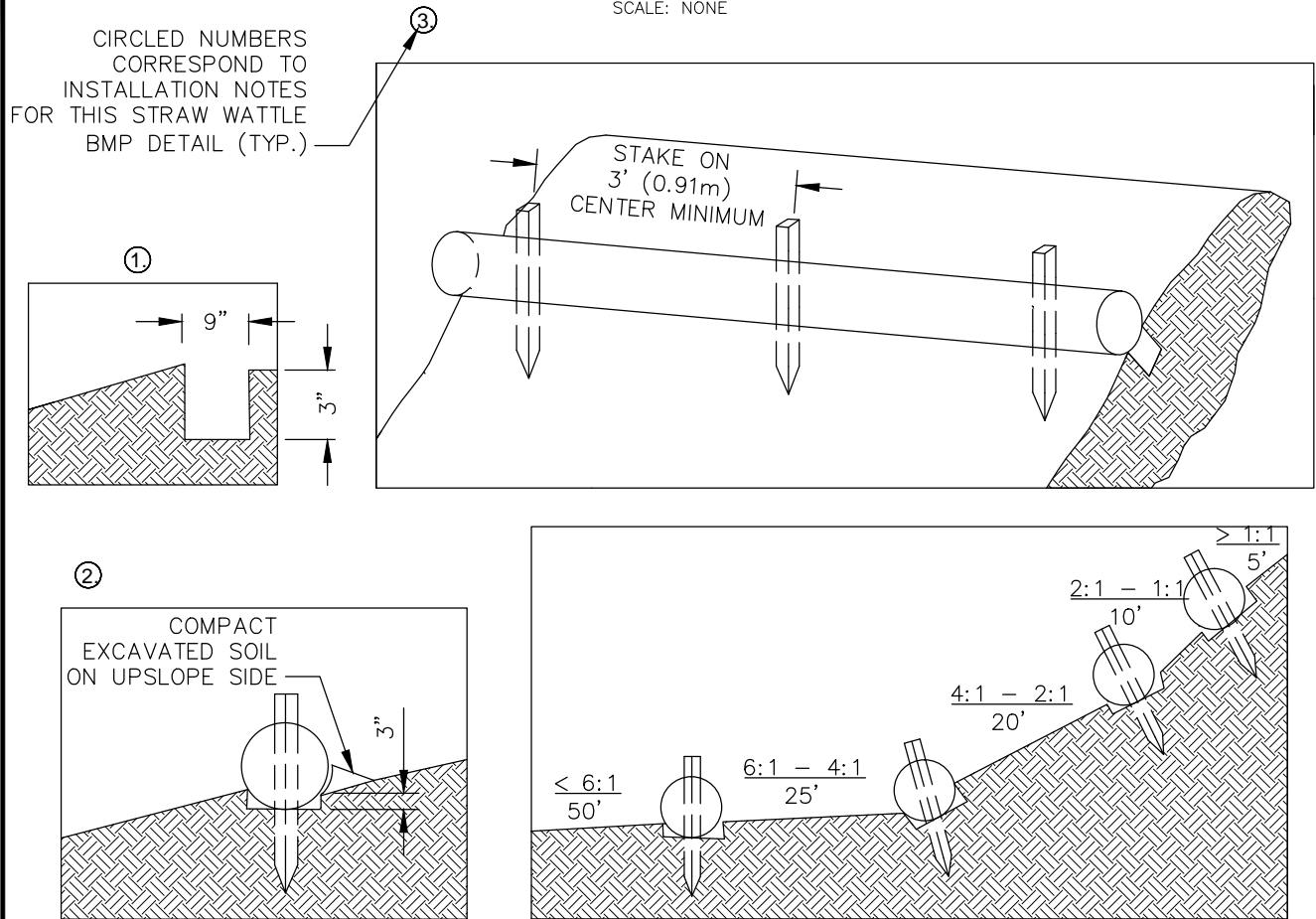
Access, Maintenance and Construction
Best Management Practices

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.

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" 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.

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BMP # 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



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