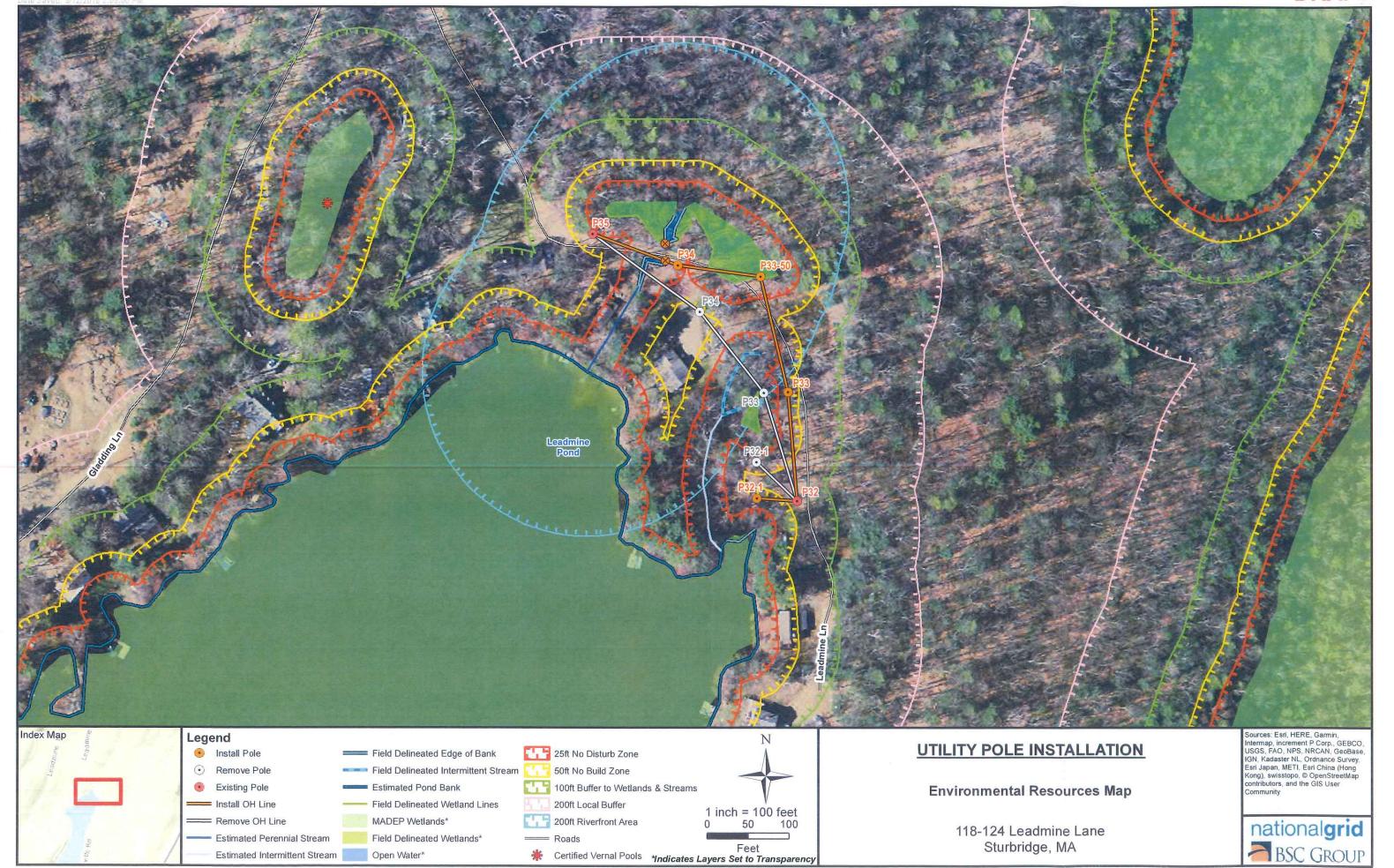
Estimated Perennial Stream

Estimated Intermittent Stream

Field Delineated Wetlands*

Open Water*

----- Roads



Feet

Sturbridge, MA

depth less than one foot or with drainage 0.2% Annual Chance Flood Hazard, Areas areas of less than one square mile Zone X of 1% annual chance flood with average Area with Flood Risk due to Levee Zone D SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT Zone A. V. ASS With BFE or Depth Zone AE, AO, AH, VE, AR No screen Area of Minimal Flood Hazard Zone X Without Base Flood Elevation (BFE) The flood hazard information is derived directly from the Future Conditions 1% Annual Chance Flood Hazard Zone X Coastal Transect Baseline GENERAL ---- Channel, Culvert, or Storm STRUCTURES | 1111111 Levee, Dike, or Floodwall Digital Data Available Hydrographic Feature Regulatory Floodway Coastal Transect **Effective LOMRs** Profile Baseline Limit of Study Unmapped 17.5 OTHER FEATURES OTHER AREAS OF FLOOD HAZARD SPECIAL FLOOD HAZARD AREAS OTHER AREAS MAP PANELS Legend 72°7'0,09"W E FEMA USGS The National Map: Ortholmagery. Data refreshed National Flood Hazard Layer FIRMette 1:6,000 25027 00928E eff. 7 /4 /2011 TOWNOFSTURBRIDGE **■** Feet AREA OF MINIMAL FLOOD HAZARD 1,500 O 2 POT ANNUAL CHANCEIFLOOD HAZARD 25027 C0909E eff. 7/4/2011 500 72°7'37,55"W

Area with Reduced Flood Risk due to Levee. See Notes. Zone X

Area of Undetermined Flood Hazard Zone D

Channel, Culvert, or Storm Sewer

Cross Sections with 1% Annual Chance Water Surface Elevation

Base Flood Elevation Line (BFE)

Jurisdiction Boundary

No Digital Data Available

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of The basemap shown complies with FEMA's basemap digital flood maps if it is not void as described below

authoritative NFHL web services provided by FEMA. This map reflect changes or amendments subsequent to this date and was exported on 9/25/2018 at 11:11:01 AM and does not time. The NFHL and effective information may change or become superseded by new data over time. This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Attachment C

Leadmine Lane Pole Relocation and Installation Project Sturbridge, Massachusetts Notice of Intent

SITE PHOTOGRAPHS





Photo #1: View of the P35 and Leadmine Lane. A culvert runs underneath the road providing hydrological connection for the perennial stream. Wetland located northeast (right side) of the road. *Facing northwest.*



Photo #2: View of the proposed location for P33-50 (stake), Located within 10-feet from the road. Some tree removal and trimming will be required to install overhead lines. Wetland located to the right of the stake. *Facing northwest*.

Site Photographs Leadmine Lane Pole Relocation and Installation Project 118-124 Leadmine Lane, Sturbridge, MA September 2018



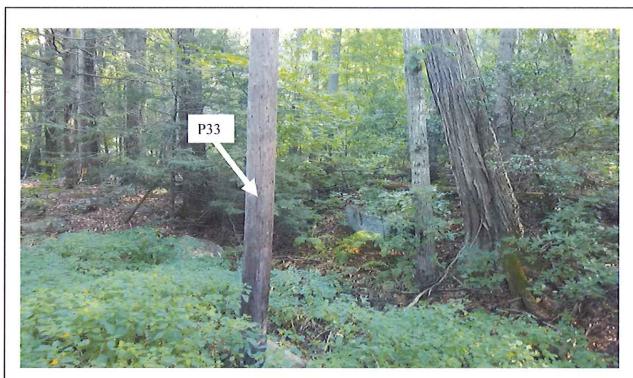


Photo #3: View of P33 located within the wetland and proposed to be removed, new pole P33 will be installed greater than 25-feet from wetland boundary. Large, leaning tree at the far right poses a threat to existing overhead wires. *Facing north*.



Photo #4: View of P34 proposed for removal. Located on the edge of an existing driveway. *Facing south.*

Site Photographs Leadmine Lane Pole Relocation and Installation Project 118-124 Leadmine Lane, Sturbridge, MA September 2018



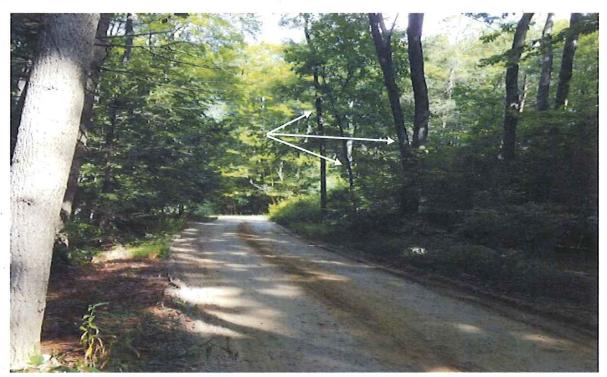


Photo #5: View of potential tree removal (an ash, a yellow birch, and a red maple) for the installation of P33 and P33-50 and overhead wires. *Facing northeast*.



Photo #6: View of two red oaks which potentially require removal for the installation of P33 and overhead wires. *Facing north*.

Site Photographs Leadmine Lane Pole Relocation and Installation Project 118-124 Leadmine Lane, Sturbridge, MA September 2018



Attachment D

Leadmine Lane Pole Relocation and Installation Project Sturbridge, Massachusetts Notice of Intent

ABUTTERS' INFORMATION





Town of Sturbridge Barbara A. Barry, Finance Director

Conservation Commission

Department/Board/Committee: Conservation Commission	
Please verify outstanding tax/fee status for the following property owner:	
Property Owner:Gary F Kellaher; John R Fitzgerald; R. Thomas Cerny	
Property Location:118 Leadmine Lane, 120 Leadmine Lane, 124 Leadmine Lane (respectively)
The license/permit may be released.	
☐ The license/permit may not be released.	
Sinance Director Page 19-25-18 Date	_



Town of Sturbridge

Ann P. Murphy, MAA. - Principal Assessor

ABUTTER LIST REQUEST (Please allow 10 days for final list)

PARCEL ADDRESS REQUESTED118 Leadmine Lane, 120 Leadmine Lane, 124 Leadmine Lane
OWNER OF RECORD:_Gary F Kellaher; John R Fitzgerald; R. Thomas Cerny (respectivly)
CONTACT PERSON_Corey Schutzman
SIGNATURE A
DATE_Septemer 24, 2018 TELEPHONE #(617) 896-4532
COST: \$5.00 FOR EACH PARCEL REQUESTED \$3.00 PER SHEET OF MAILING LABELS
Direct Abutter
_X_Conservation (200')
Planning / Zoning Board of Appeals (300')
Board of SelectmenForest Cutting (200')
Liquor License (Contact assessors office for requirements)
Miscellaneous (Contact assessors office for instructions)



Town of Sturbridge

Conservation Commission

STURBRIDGE CONSERVATION COMMISSION AFFIDAVIT OF SERVICE

Under the Massachusetts Wetlands Protection Act and the Town of Sturbridge Wetland Bylaws
I, Corey Schutzman , hereby certify under the pains and penalties of perjury
that on (date) October 1, 2018, I gave notification to abutters in compliance with the
second paragraph of the Massachusetts General Laws Chapter 131, § 40, and the DEP Guide to
Abutter Notification as well as the Town of Sturbridge Wetland Bylaws, in connection with the
following matter:
X A Notice of Intent OR
A Request for Determination OR
An Abbreviated Notice of Resource Area Delineation
that was filed under the Massachusetts Wetlands Protection Act and the Town of Sturbridge Bylaws,
by Corey Schutzman with the Sturbridge Conservation Commission
on (date) October 1, 2018 for the property located at
118 Leadmine Lane, 120 Leadmine Lane, and 124 Leadmine Lane in Sturbridge, MA
The form of the Notification and a list of abutters to whom it was given and their addresses are
included in the application file.
AL
(signature of applicant) (date)
Corey Schutzman, Representive on behalf of Massachusetts Electric Company (MECO)
(name of applicant-printed or typed)

Parcel ID	Owner	Owner Address	Owner City	State	Zip	Property Card
398-04055-124	CERNY R THOMAS	6243 MFADOWWOOD	GRAND BLANC	3	48439	48439 124 LEADMINE LANE
398-04045-110	DIANE SHERRY	110 LEADMINE LANE	FISKDALE	MA	01518	01518 110 LEADMINE LANE
398-04045-120	FITZGERALD JOHN R	120 LEADMINE LANE	FISKDALE	MA	01518	01518 120 LEADMINE LANE
398-04035-087	KLAGES KURT	83 LEADMINE LANE	FISKDALE	MA	01518-1290	01518-1290 87 LEADMINE LANE
398-04035-085	KLAGES KURT	83 LEADMINE LANE	FISKDALE	MA	01518	01518 85 LEADMINE LANE
398-04035-083	KLAGES KURT E	83 LEADMINE LANE	FISKDALE	MA	01518-1290	01518-1290 83 LEADMINE LANE
303-04055-102	PELSKI SHERRI A	102 GLADDING LANE	FISKDALE	MA	01518	01518 102 GLADDING LANE
303-04042-112	PELSKI SHERRI A	102 GLADDING LANE	FISKDALE	MA	01518	01518 112 GLADDING LANE
398-04035-080	PELSKI SHERRI A	102 GLADDING LANE	STURBRIDGE	MA	01566	01566 80 LEADMINE LANE
398-04045-108	SCHERMERHORN GLEN S	507 LEADMINE ROAD	STURBRIDGE	MA	01566	01566 108 LEADMINE LANE
398-04045-114	_	65 MAYFAIR DRIVE	WESTWOOD	MA	02090	02090 114 LEADMINE LANE
398-04045-116	WATSKY MATTHEW	65 MAYFAIR DRIVE	WESTWOOD	MA	02090	02090 116 LEADMINE LANE
398-04056-128	ZAJAC JOHN S	P.O. BOX 737	STURBRIDGE	MA	01566	01566 128 LEADMINE LANE
398-04055-126	ZAJAC JOHN S	PO BOX 737	STURBRIDGE	MA	01566	01566 126 LEADMINE LANE
398-04056-130	ZAJAC JOHN S	P.O. BOX 737	STURBRIDGE	MA	01566	130 LEADMINE LANE
	BOARD OF ASSESSORS	e e				
Above persons l	Above persons listed are record owners as they appear on the most recent applicable tax list.	hey appear on the most i	recent applicable	tax list.		
Assessors are no	Assessors are not responsible for errors or omissions. RE: M.G.L.	1	Chapter 40A, Section 11	n 11		
	Planing/Zoning Board Of	5				
טטמניכוס בוסנ	1 131111111111111111111111111111111111					
RE: 118 LEADMINE LANE	NE LANE		Si .			
Certified Copy						
Assessor:	Charles Miller the					3
	1: 1					
Date:	4-25-18					

					81756	Date:
					The second second	
				4	Charles I was	Assessor:
					1 0 0	Certified Copy
					NE LANE	RE: 120 LEADMINE LANE
				300'	Planning/Zoning Board - 30	Abutters List -
		n 11	apter 40A, Section	missions, RE: M.G.L Ch	Assessors are not responsible for errors or omissions. RE: M.G.L Chapter 40A, Section 11	Assessors are no
		tax list.	recent applicable	hey appear on the most r	Above persons listed are record owners as they appear on the most recent applicable	Above persons li
					BOARD OF ASSESSORS	
01566 130 LEADMINE LANE	01566	MA	STURBRIDGE	P.O. BOX 737	ZAJAC JOHN S	398-04056-130
01566 126 LEADMINE LANE	01566	MA	STURBRIDGE	PO BOX 737	ZAJAC JOHN S	398-04055-126
01566 128 LEADMINE LANE	01566	MA	STURBRIDGE	P.O. BOX 737	ZAJAC JOHN S	398-04056-128
02090 TTO LEADININE LAINE	02050	MA	WESTWOOD	65 MAYFAIR DRIVE	WATSKY MATTHEW	398-04045-116
02090 116 LEADIVINE LANE	05020	MA	WESTWOOD	65 MAYFAIR DRIVE	WATSKY MATTHEW	398-04045-114
01566 10 SHATTUCK KUAU	01566	MA	STURBRIDGE	308 MAIN STREET	TOWN OF STURBRIDGE	570-03337-010
01566 108 LEADMINE LANE	01566	MA	STURBRIDGE	507 LEADMINE ROAD	SCHERMERHORN GLEN S	398-04045-108
01518 112 GLADDING LANE	01518	MA	FISKDALE	102 GLADDING LANE	PELSKI SHERRI A	
01518-1290 87 LEADMINE LANE	01518-1290	MA	FISKDALE	83 LEADMINE LANE	KLAGES KURT	398-04035-087
01518 118 LEADMINE LANE	01518	MA .	FISKDALE	118 LEADMINE LANE	KELLAHER GARY F	398-04045-118
01518 110 LEADMINE LANE	01518	MA	FISKDALE	110 LEADMINE LANE	DIANE SHERRY	398-04045-110
01518 132 LEADMINE LANE	01518	MA	FISKDALE	132 LEADMINE LANE	CRANE ANTHONY R	398-04055-132
124 LEADMINE LANE	48439	MI	GRAND BLANC	6243 MEADOWWOOD	CERNY R THOMAS	398-04055-124
			/:			
יייטףכינץ ייממיכטט	71P	State	Owner City	Owner Address	Owner	Parcel ID

Parcel ID	Owner	Owner Address	Owner City	State	Zip	Property Address
398-04055-124	CERNY R THOMAS	6243 MEADOWWOOD	GRAND BLANC	M	48439	48439 124 LEADMINE LANE
398-04055-132	CRANE ANTHONY R	132 LEADMINE LANE	FISKDALE	MA	01518	01518 132 LEADMINE LANE
398-04045-110	DIANE SHERRY	110 LEADMINE LANE	FISKDALE	MA	01518	01518 110 LEADMINE LANE
398-04045-120	FITZGERALD JOHN R	120 LEADMINE LANE	FISKDALE	MA	01518	01518 120 LEADMINE LANE
398-04045-118	KELLAHER GARY F	118 LEADMINE LANE	FISKDALE	MA	01518	01518 118 LEADMINE LANE
398-04035-087	KLAGES KURT	83 LEADMINE LANE	FISKDALE	MA	01518-1290	87 LEADMINE LANE
145-04055-068	KLEIMAN JOHN B	71 BENNETTS ROAD	STURBRIDGE	MA	01566	01566 68 BENNETTS ROAD
145-04055-071	KLEIMAN JOHN B	71 BENNETTS ROAD	STURBRIDGE	MA	01566	01566 71 BENNETTS ROAD
	SCHERMERHORN GLEN S	507 LEADMINE ROAD	STURBRIDGE	MA	01566	108 LEADMINE LANE
398-04045-114	WATSKY MATTHEW	65 MAYFAIR DRIVE	WESTWOOD	MA	02090	02090 114 LEADMINE LANE
398-04045-116	WATSKY MATTHEW	65 MAYFAIR DRIVE	WESTWOOD	MA	02090	02090 116 LEADMINE LANE
398-04056-128	ZAJAC JOHN S	P.O. BOX 737	STURBRIDGE	MA	01566	01566 128 LEADMINE LANE
398-04055-126	ZAJAC JOHN S	PO BOX 737	STURBRIDGE	MA	01566	01566 126 LEADMINE LANE
398-04056-130	ZAJAC JOHN S	P.O. BOX 737	STURBRIDGE	MA	01566	130 LEADMINE LANE
	BOARD OF ASSESSORS			-		
Above persons li	Above persons listed are record owners as they appear on the most recent applicable tax list.	hey appear on the most r	ecent applicable	tax list.		
Assessors are no	Assessors are not responsible for errors or omissions. RE: M.G.L Chapter 40A, Section 11	missions. RE: M.G.L Ch	apter 40A, Sectio	n 11		
Abutters List -	Planning/Zoning Board - 300'	0'				
RE: 124 LEADMINE LANE	NE LANE					
Certified Copy	2					
Assessor:	Champ. Willseffery					
Date:	425-18					
1						



Town of Sturbridge

Conservation Commission

Notification to Abutters

under the MA Wetlands Protection Act and the Town of Sturbridge Wetland Bylaw Regulations

In accordance with the second paragraph of Massachusetts General Laws, Chapter 131, § 40, as well as the Town of Sturbridge Wetland Bylaws, you are hereby notified of the following permit application for work within a wetland resource area and/or within the 200-foot buffer zone to a resource area:

Α.	The name of the applicant is: Massachusetts Electric Company (MECO)
В.	The address of the lot(s) where the activity is proposed is:118, 120, 124 Leadmine Lane, Sturbridge
C.	The nature of the activity proposed includes: <u>Utility Pole Relocation and Installation Project</u>
D.	The applicant has filed the following in accordance with the Wetlands Protection Act (MGL c. 131, § 40), and/or the Town of Sturbridge Wetland Bylaws.
	Notice of Intent seeking permission to conduct work within a wetland, water body or resource area
	Request for Determination seeking permission to conduct work within a buffer zone to a wetland, waterboo or resource area
	☐ Abbreviated Notice of Resource Area Delineation seeking to confirm the wetland resource area boundaries
	☐ Request to amend an existing Order of Conditions for DEP File #300
E.	Copies of the application may be examined at the Sturbridge Conservation Department, 301 Main Street, Center Office Building, Sturbridge, MA between the hours of 9:00 a.m. – 3:30 p.m. Monday through Friday. Additional times may available by appointment. Please call ahead to check for availability. (508) 347-2506
F.	Copies of the application may be obtained from either \square the applicant: or \square the applicant's representative: corey Schutzman, by calling telephone # _617-896-4532 on the following days of the week: between the hours of and 4pm
8	The Public Hearing for this application will be held in the Center Office Building, 301 Main Street, 2nd Floor on October 16, 2018 at 6 pm.

PLEASE NOTE: Notice of this Public Hearing will be published as follows:

- In The Southbridge Evening News at least five days in advance of the hearing
- In the Town Hall at the Town Clerks office, not less than 48 hours in advance of the hearing
- On the Town's Meeting Calendar not less than 48 hours in advance of the hearing (www.town.sturbridge.ma.us)
- On the Conservation Commission webpage not less than 48 hours in advance of the hearing

You may contact the Sturbridge Conservation Commission Office (508) 347-2506 or the Department of Environmental Protection Central Regional Office at 508-792-7650 with questions in regards to the Notice of Intent application process or the Wetlands Protection Act.

Town Hall 308 Main Street Sturbridge, MA 01566 508-347-2506

Attachment E

Leadmine Lane Pole Relocation and Installation Project Sturbridge, Massachusetts Notice of Intent

BEST MANAGEMENT PRACTICES (BMPS)

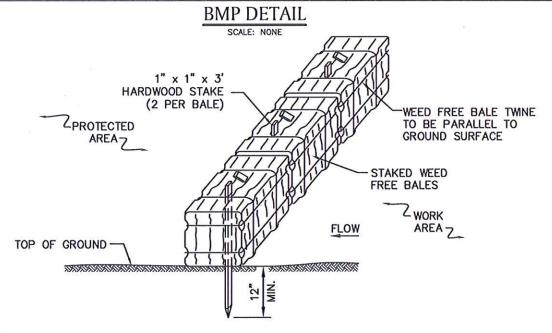


ENVIRONMENTAL GUIDANCE

Doc. No.	EG-303NE
Page: 7-1	Rev. No. 4
Date	02/20/18

SUBJECT

Access, Maintenance and Construction Best Management Practices Reference EP No. 3 - Natural Resource Protection (Chapter 6)



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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VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

SEC-1 WEED FREE BALE BARRIER

CANCIONA PI

Access, Maintenance and Construction

SUBJECT

ENVIRONMENTAL GUIDANCE

 Doc. No.
 EG-303NE

 Page: 7-2
 Rev. No. 4

 Date
 02/20/18

Reference

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

HARDWOOD
STAKE

PROFILE

HARDWOOD
STAKE

PROFILE

HARDWOOD
STAKE

Protection (Chapter 6)

BMP DETAIL
SCALE: NONE

B A COUPLER

B A COUPLER

B A COUPLER

SECTION A SECTION B

SECTION B

SECTION

SECTION

SECTION

BMP PICTURE

PLAN



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 $\frac{\text{SEC-2}}{\text{CONTROL FENCE}}$

Concept Conception

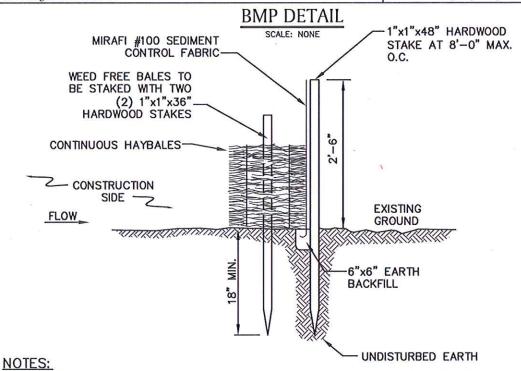
ENVIRONMENTAL GUIDANCE

Doc. No.	EG-303NE
Page: 7-3	Rev. No. 4
Date	02/20/18

SUBJECT

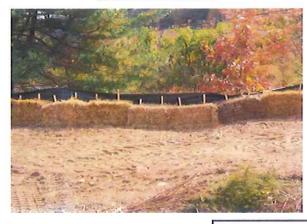
Access, Maintenance and Construction **Best Management Practices**

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



- 1.
- BALES SHALL BE PLACED IN A ROW WITH THE ENDS TIGHTLY ABUTTING THE ADJACENT BALES. 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. 2.
- INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY 3. AS NEEDED.
- BALES SHALL BE REMOVED AND REPLACED WHEN THEY BECOME FILLED WITH SEDIMENT AND 4. BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
- BALES SHALL BE REMOVED WHEN THE EMBANKMENTS STABILIZE. BALES TO BE TWINE BOUND. 5.
- 6.

BMP PICTURE



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SEC-3 SILT FENCE / WEED FREE BARRIER

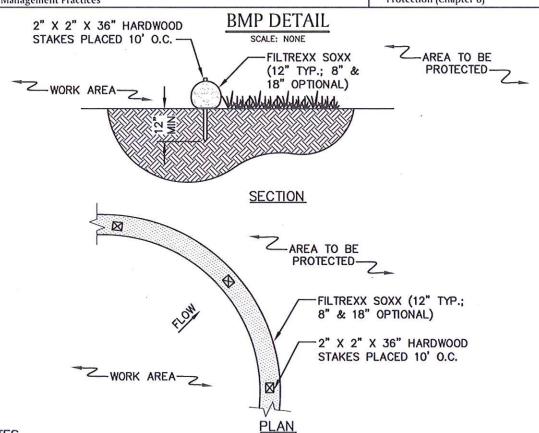
ENVIRONMENTAL GUIDANCE

Doc. No.	EG-303NE
Page: 7-4	Rev. No. 4
Date	02/20/18

SUBJECT

Access, Maintenance and Construction **Best Management Practices**

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



NOTES

- PRODUCT TO BE FILTREXX SILT SOXX OR APPROVED EQUAL BY NATIONAL GRID ENVIRONMENTAL SCIENTIST. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS.
 FILTER MEDIA FILL TO MEET APPLICATION REQUIREMENTS.
 MESH CONTAINMENT MATERIAL SHOULD BE KNITTED PHOTODEGRADABLE OR BIODEGRADABLE MATERIAL, WITH OPENING SIZES BETWEEN 1/8" - 3/8".

 COMPOST MEDIA SHOULD HAVE PARTICLE SIZE WHERE 99% < 2", 50% > 1/2".

 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 APPROVED BY: VICE PRESIDENT, ENMRONMENTAL SERVICES
PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

SEC-4 SILT SOXX *

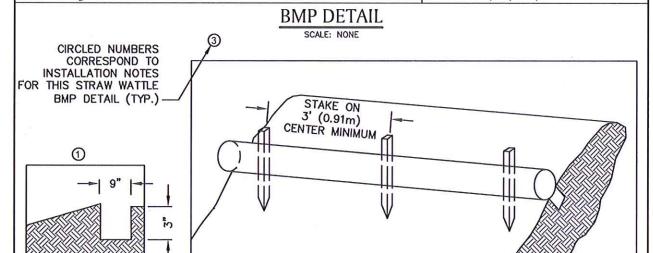
ENVIRONMENTAL GUIDANCE

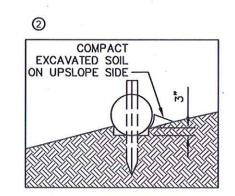
Doc. No.	EG-303NE
Page: 7-5	Rev. No. 4
Date	02/20/18

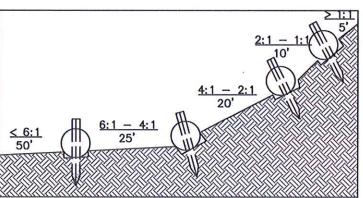
SUBJECT

Access, Maintenance and Construction Best Management Practices Reference

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







TYPICAL WATTLE SPACING DETAIL

NOTES:

- 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:

- 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.
- 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
APPROVED BY: VICE PRESIDENT, ENVIRONMENTAL SERVICES
PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED
VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

SEC-5 STRAW WATTLE * (1 OF 2)

: Straw Wattle, dwg

ENVIRONMENTAL GUIDANCE

Doc. No.	EG-303NE
Page: 7-6	Rev. No. 4
Date	02/20/18

SUBJECT

Access, Maintenance and Construction Best Management Practices Reference EP No. 3 - Natural Resource Protection (Chapter 6)

BMP PICTURE



STRAW WATTLE - SHALLOW SLOPE (≤4:1) (ALTERNATE STAKING)

ALTERNATE STAKING INSTALLATION NOTES:

- ON SHALLOW SLOPES (≤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.
- 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.

* DETAIL AND PICTURE PROVIDED BY TENSAR NORTH AMERICAN GREEN APPROVED BY: VICE PRESIDENT, ENMRONMENTAL SERVICES PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

SEC-5 STRAW WATTLE * (2 OF 2)

Strow Wattle, dwa

ENVIRONMENTAL GUIDANCE

Doc. No.	EG-303NE
Page: 7-12	Rev. No. 4
Date	02/20/18
Reference	

SUBJECT

Access, Maintenance and Construction **Best Management Practices**

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

BMP

Definition

Applying coarse plant residue or chips, or other suitable materials, to cover the soil surface.

Purpose

The primary purpose is to provide initial erosion control while a seeding or shrub planting is establishing. Mulch will conserve moisture and modify the surface soil temperature and reduce fluctuation of both. Mulch will prevent soil surface crusting and aid in weed control. Mulch is also used alone for temporary stabilization in nongrowing months.

Conditions Where Practice Applies

On soils subject to erosion and on new seedings and shrub plantings. Mulch is useful on soils with low infiltration rates by retarding runoff.

Criteria

Site preparation prior to mulching requires the installation of necessary erosion control or water management practices and drainage systems.

Slope, grade and smooth the site to fit needs of selected mulch products.

Remove all undesirable stones and other debris to meet the needs of the anticipated land use and maintenance required.

Apply mulch after soil amendments and planting is accomplished or simultaneously if hydroseeding is used.

Select appropriate mulch material and application rate or material needs. Determine local availability.

Select appropriate mulch anchoring material.

NOTE: The best combination for grass/legume establishment is straw (cereal grain) mulch applied at 2 ton/ acre (90 lbs./1000sq.ft.) and anchored with wood fiber mulch (hydromulch) at 500 - 750 lbs./acre (11 - 17 lbs./1000 sq. ft.). The wood fiber mulch must be applied through a hydroseeder immediately after mulching.



NOTE:

- PICTURE DEPICTS STRAW MULCH APPLICATION (FROM MULCH SPREADER) ON STEEP SLOPE WITH AN IMPROVED DRAINAGE SWALE.
- COORDINATE MULCH MATERIALS AND RATES WITH NATIONAL GRID ENVIRONMENTAL SCIENTIST.
- BMP INFORMATION FROM "NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL (AUGUST, 2005)." INFORMATION INFORMATION OBTAINED VIA WEBSITE: http://www.dec.ny.gov/chemicol/29066.html
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SEC-9 MULCH MATERIALS, RATES AND USES (FROM NY) *

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SUBJECT

Access, Maintenance and Construction **Best Management Practices**

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

UPLAND ROW RESTORATION MIX - GENERAL

Species Composition Options:

- Andropogon gerardii; Niagra Big Bluestem Schizachyrium scoparium; Little Bluestem Elymus Canadensis; Canada Wild Rye

- Elymus virginicus; Virginia Wildrye
- Lolium multiflorum; Annual Ryegrass
- Sorghastrum nutans; Indiangrass
- Chamaecrista fasciculate; Partridge Pea
- Desmodium canadense; Showy Tick Trefoil Helioposis helianthoides; Ox—Eye Sunflower Panicum virgatum; Switchgrass
- Rudbeckia hirta; Black Eyed Susan
- Poa palustris; Fowl Bluegrass Agrostis perennans; Upland Bentgrass
- Agrostis alba; Redtop
- Festuca rubra; Red Fescue
- Lotus corniculatus; Birds-Foot Trefoil
- Chrysanthemum leucanthem; Ox-Eye Daisy
- Aster novae-angliae; New England Aster

Example Seed Mixes:

- Native Upland wildlife forage and Cover Meadow Mix Ernst Conservation Seeds (ERNMX-123)
- Eastern Ecotype Native Grass Mix- Ernst Conservation Seeds (ERNMX-177)
- New England Native Warm Season Grass Mix New England Wetland Plants, Inc.
- New England Logging Road Mix New England Wetland Plants, Inc.
- Northeast Upland Wildflower/Restoration Erosion Mix Southern Tier Consulting (STCMX-2)

UPLAND ROW RESTORATION MIX - DRY/ROCKY SITES

Species Composition Options:

- Festuca rubra; Red Fescue
- Schizachyrium scoparium; Little Bluestem
- Elymus Canadensis; Canada Wild Rye Bouteloua gracillis; Blue Grama
- Lolium multiflorum; Annual Ryegrass
- Lolium perenne; Perennial Ryegrass
- Agrostics scabra; Rough Bentgrass
- Agrostis perennans; Upland Bentgrass
- Sorghastrum nutans; Indiangrass

Example Seed Mixes:

- New England Erosion Control/Restoration Mix for Dry Sites New England Wetland Plants, Inc.
- Ernst Conservation Seeds and similar companies can create a custom seed mix matching the composition above (with site specific additions if necessary).

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SEC-10 SEEDING OPTIONS -**UPLAND SEED MIXES**

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WETLAND ROW RESTORATION MIX

Species Composition Options:

- Agrostis stolonifera; Creeping Bentgrass Poa trivialis; Rough Bluegrass
- Alopecurus arundinaceus; Creeping Meadow Foxtail
- Lolium multiflorum; Annual Ryegrass
- Festuca rubra; Creeping Red Fescue
- Elymus virginicus; Virginia Wildrye
- Schizachyrium scoparium; Little Bluestem
- Andropogon gerardii; Niagra Big Bluestem Carex vulpinoidea; Fox sedge
- Panicum virgatum; Switchgrass
- Agrostis scabra; Rough Bentgrass
- Aster novae-angliae; New England Aster
- Eupatorium perfoliatum; Boneset
- Euthamia graminifolia; Grass Leaved Goldenrod
- Scirpus atrovirens; Green Bulrush Verbene hastate; Blue Vervain
- Juncus effusus; Soft Rush
- Scirpus cyperinus; Wool Grass
- Panicum clandestinum; Deertongue

Example Seed Mixes

- New England Erosion Control/Restoration Mix for Detention Basins and Moist Sites New England Wetland Plants, Inc.
- Northeast Wetland Grass Seed Mix Southern Tier Consulting (STCMX-7)
- Ernst Conservation Seeds and similar companies can create a custom seed mix matching the composition above (with site specific additions if necessary).

GERNERAL NOTES:

- Seed mixes described herein are intended to cover a variety of typical new england landscapes. However, site specific seed mixes will need to be evaluated in coastal or mountainous regions.
- Seed mixes described herein are intended for general ROW restoration. Site specific wetland seed mixes may be required by local, state and/or federal regulators for certain impacts to wetlands.
- All seed mixes are to be approved by National Grid Environmental Scientist prior to construction and must conform with all project permits.
- Seedbed preparation and maintenance as well as temporary erosion and sediment controls are crucial to the establishment of newly seeded areas. Coordinate with National Grid Environmental Scientist on seed bed preparation and maintenance as well as temporary erosion and sediment controls prior to construction.

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SEC-11 **SEEDING OPTIONS -**WETLAND SEED MIX

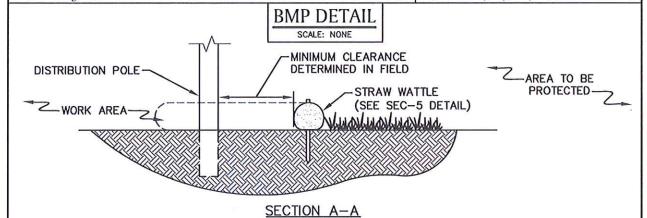
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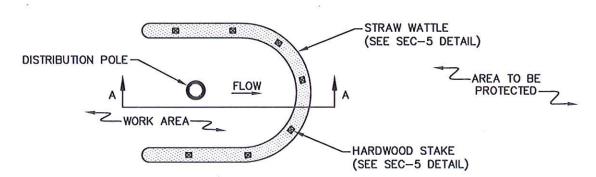
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PLAN

NOTES

- 1. PRODUCT TO BE STRAW WATTLE OR APPROVED EQUAL BY NATIONAL GRID ENVIRONMENTAL SCIENTIST (SEE SEC-5 BMP DETAIL).
- STRAW BALE BARRIER PER SEC-1 BMP DETAIL TO BE AN AVAILABLE ALTERNATE DEPENDING ON SITE CONDITIONS AT THE DIRECTION OF NATIONAL GRID ENVIRONMENTAL SCIENTIST (SEE FIGURE 2).
 MINIMUM CLEARANCE BETWEEN POLE AND EROSION CONTROL TO BE DETERMINED BY CONDITIONS OF POLE
- INSTALLATION/REPLACEMENT WORK AND ASSOCIATED DISTURBANCE.

BMP PICTURE



FIGURE 1: TYP. STRAW WATTLE APPLICATION



FIGURE 2: ALT. STRAW BALE APPLICATION

SEC-12 **DISTRIBUTION POLE** SEDIMENT CONTROL

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Massachusetts Electric Company

Leadmine Lane Pole Relocation and Installation Project Notice of Intent

Sturbridge, MA

Town of Sturbridge Conservation Commission October 2018

Prepared for:

Massachusetts Electric Company d/b/a National Grid 40 Sylvan Road Waltham, MA 02451

BSC Project No. 89575.43





October 1, 2018

33 Waldo Street Worcester, MA 01608

Tel: 508-792-4500 800-288-8123

www.bscgroup.com

Attn: Edward Goodwin, Chair Sturbridge Conservation Commission Center Office Building 308 Main Street Sturbridge, MA 01566

RE: Notice of Intent

Leadmine Lane Pole Relocation and Installation Project 118-124 Leadmine Lane, Sturbridge, MA Massachusetts Electric Company

Dear Members of the Sturbridge Conservation Commission:

On behalf of Massachusetts Electric Company d/b/a National Grid (MECO), BSC Group, Inc. (BSC) is pleased to submit this Notice of Intent (NOI) for activities associated with the removal of three (3) poles and installation of four (4) utility poles between 118 and 124 Leadmine Lane in Sturbridge, MA. The proposed activity will occur within the 100-foot Buffer Zone to Bordering Vegetated Wetland (BVW) and Inland Bank, the 200-foot Riverfront Area (RFA), locally regulated 200-foot buffer zone to areas subject to protection under the Sturbridge Wetland Bylaw, and the 50-foot "No-Build" and 25-foot "No-Disturb" zones. Poles will be installed within 10-feet of the existing roadway. This NOI is being submitted under the Massachusetts Wetlands Protection Act (M.G.L. Ch. 131 S.40) (WPA) and its implementing regulations (310 CMR 10.00) and the Town of Sturbridge Wetland Bylaw.

Project activities include the relocation of P33 and P34, installation of a push brace for P33 and an anchor for P34, installation of P33-50 and associated anchor, and relocation of P32-1 and associated anchor. P34 and P33-50 are within the 100-foot Buffer Zone to Bordering Vegetated Wetlands (BVW) and Inland Bank, as well as the 200-Foot RFA. P32 and P32-1 are within the 100-foot Buffer Zone to Inland Bank of Leadmine Pond. P33-50 and P34 are within the locally regulated 25-foot "No-Disturb" zone.

The installation of the new poles will not directly impact wetland resource areas. To provide the necessary clearances for installation and operation of the new poles and new overhead connections, tree trimming and removal will be required. Throughout the Project, Best Management Practices (BMPs) will be utilized to avoid adverse impacts to adjacent Wetland Resource Areas. Therefore, MECO is requesting the Sturbridge Conservation Commission issue an Order of Conditions to allow the proposed Project activities to proceed as described herein.

The proposed work is eligible for review as a limited project under 310 CMR 10.53(3)(d) which allows for the "...construction, reconstruction, operation and maintenance of underground and overhead public utilities..." This NOI is being submitted to obtain approval under the WPA and Sturbridge Wetland Bylaw for the installation of four (4) new poles in RFA and buffer zones and the associated tree removal and trimming necessary to accomplish

Engineers

Environmental Scientists

Custom Software Developers

Landscape Architects

Planners

Surveyors



the project and provide clearance for overhead lines.

Throughout the Project, Best Management Practices (BMPs) will be utilized to avoid adverse impacts to Resource Areas and disturbed areas will be restored upon completion of construction. Therefore, MECO is requesting the Sturbridge Conservation Commission issue an Order of Conditions to allow the proposed Project activities to proceed as described herein. Additional details regarding the proposed activities, construction methods, and BMPs to be used during the Project are provided in the Narrative in Attachment A.

Enclosed, please find the Massachusetts Wetlands Protection Act Notice of Intent Application form (WPA Form 3) and supporting information. A copy of the enclosed application has also been sent to the Massachusetts Department of Environmental Protection (DEP) — Central Regional Office electronically. A check and Fee Transmittal Forms have been submitted to the DEP.

The following information is included with this application:

- Attachment A WPA Form 3
 - o Fee Calculations Form and Copy of Checks
 - Project Narrative
 - NOI Checklist
- Attachment B Project Figures and plans
- Attachment C Site Photographs
- Attachment D Abutters Notification Letter, Abutters List, Affidavit of Service and Tax Verification Form
- Attachment E National Grid's EG-303 Best Management Practices

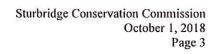
Please find enclosed two (2) copies of the NOI application and attachments. We respectfully request that this application be heard at the next meeting on October 16, 2018. If the commission would like to schedule a site visit of the proposed Project, we would be pleased to arrange a meeting prior to the scheduled hearing.

If you have any questions, please do not hesitate to contact me at 617-896-4532 or cschutzman@bscgroup.com if you have any questions or require additional information. Thank you for your review and consideration.

Very truly yours,

BSC GROUP, INC.

Corey Schutzman





Project Manager/Environmental Biologist

Cc: Jaime Walker, National Grid MassDEP, Central Region