

Findings of Fact | Wetland Conditional Use Permit

City of Portsmouth Planning Board

Date: March 21, 2023

Property Address: Gosling – Ocean Rd

Application #: LU-24-2

Decision:

Findings of Fact:

The local land use board shall issue a final written decision which either approves or disapproves an application for a local permit and make a copy of the decision available to the applicant. **The decision shall include specific written findings of fact that support the decision. Failure of the board to make specific written findings of fact supporting a disapproval shall be grounds for automatic reversal and remand by the superior court upon appeal, in accordance with the time periods set forth in RSA 677:5 or RSA 677:15, unless the court determines that there are other factors warranting the disapproval.** If the application is not approved, the board shall provide the applicant with written reasons for the disapproval. If the application is approved with conditions, the board shall include in the written decision a detailed description of all conditions necessary to obtain final approval.

In order to grant Wetland Conditional Use permit approval the Planning Board shall find the application satisfies criteria set forth in the Section 10.1017.60 (Criteria for Approval) of the Zoning Ordinance.

	Zoning Ordinance Sector 10.1017.60 Criteria for Approval	Finding (Meets Criteria for Approval)	Supporting Information
1	<i>1. The proposed project is in the public interest.</i>	Meets	The project is necessary to maintain existing corridor powerlines with upgraded support poles.
2	2.Design, construction, and maintenance methods will utilize best management practices to minimize any detrimental impact of such use upon the wetland and will include restoration of the site as nearly as possible to its original grade condition and vegetated state.	Meets	The applicant has stated that the work will be conducted in accordance with NHDES Best Management Practices Manual for Utilities in and Adjacent to Wetlands and Waterbodies (NH DNCR 2019). Prior to placement of timber mats, the applicant has stated they will inspect the mats to ensure cleanliness and will clean them off with each reuse. Wooden timber matting will be used to minimize the disturbance of wetlands and sensitive areas and once removed, the areas will be restored and stabilized with seed and mulch. Any areas of soil disturbance will be stabilized with seed and straw mulch.

	Zoning Ordinance Sector 10.1017.60 Criteria for Approval	Finding (Meets Criteria for Approval)	Supporting Information
3	<i>3.No alternative feasible route exists which does not cross or alter a wetland or have a less detrimental impact on a wetland.</i>	Meets	The applicant has chosen the routes with the least amount of impact to access the replacement poles, but the applicant has selected access designed to utilize existing historical access routes where possible to minimize impacts.
4	<i>4.Alterations of natural vegetation or managed woodland will occur only to the extent necessary to achieve construction goals.</i>	Meets	The vegetation is expected to return to its original configuration after the timber mats are removed. However, there will be some vegetation removed exactly where the structure replacement is proposed.
5	<u>Other Board Findings:</u>		

DRAFT



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5 Commerce Park North
Suite 201
Bedford, NH 03110
T: 603.623.3600
F: 603.624.9463
www.gza.com



February 22, 2024
File No. 04.0191410.47

City of Portsmouth
Planning Board
Attn: Rick Chellman, Chairman
1 Junkins Ave, 3rd Floor
Portsmouth, New Hampshire 03801

Re: Conditional Use Permit Application
Eversource Energy
Resistance Substation Retirement Project
Portsmouth, New Hampshire

Dear Chairman Chellman:

This letter transmits a Conditional Use Permit Application on behalf of Public Service Company of New Hampshire doing business as Eversource Energy (Eversource), for Resistance Substation Retirement Project (see attached **Figure 1, Locus Plan**). On behalf of Eversource, GZA GeoEnvironmental, Inc. (GZA) is requesting consideration of a Conditional Use Permit Application for required impacts within the City of Portsmouth.

The proposed project includes the retirement the Resistance Substation located in Portsmouth, New Hampshire and associated electric line work required to retire the substation. The electric line work includes the removal of 0.6 miles of the existing T-13 Transmission Line and installation of a new 0.6-mile 34.5 kV Distribution Line to connect the new Portsmouth terminal. Additionally, the project requires the reconductoring and replacement of existing structures along 1.5 miles of the 3171 Transmission Line from Ocean Road to the 2102 Tap, which in total crosses through portions of Portsmouth and Greenland, New Hampshire, for approximately 2.1 miles. See **Figure 2 – Access and Permitting Plans** for a depiction of the proposed project. In Portsmouth, the proposed work crosses through primarily rural and industrial upland and wetland areas. Natural cover within the ROW includes upland shrublands and wetland emergent and scrub-shrub habitats.

In total, the proposed project requires approximately 256,144 sq. ft. of temporary wetland impact for equipment access and work pad placement. The proposed project also requires 79,310 sq. ft. of temporary buffer impact in uplands for access and work pad placement. The proposed project also requires



725 sq. ft. of permanent wetland impact associated with the replacement of utility poles for caisson and pole installation within wetlands. A summary of proposed wetland and buffer impacts is provided in the table below.

Table 1 – Summary of Wetland and Surface Water Buffer Impacts

Wetland ID	Classification	Temporary Wetland Impact (sq. ft.)	Permanent Wetland Impact (sq. ft.)	Temporary Upland Buffer Impact (sq. ft.)
GW-1	PEM1/PSS1/PFO1E,Fg/R2UB	102,034	275	6,931
PW-1	PEM1/PSS1E,Fg	140,642	400	17,373
PW-2	PEM1/PSS1E	0	0	0
PW-3	PEM1/PSS1E	0	0	0
PW-4	PEM1/PSS1E	0	0	0
PW-5	PEM1/PSS1E	0	0	0
PW-6	PEM1/PSS1E	3,505	25	19,968
PW-7	PEM1/PSS1E,H	2,089	0	5,666
PW-8	PEM1/PSS1E	0	0	0
PW-9	PEM1/PSS1Ex	0	0	0
PW-10	PSS1Ex	0	0	3,029
PW-11	PSS1/PEM1Ex	0	0	3,029
PW-12	PEM1/PSS1E	3,416	0	5,994
PW-13	PEM1/PSS1E	4,458	25	11,988
PW-14	PSS1/PEM1E	0	0	3,103
PW-15	PEM1E	0	0	2,229
	Total	256,144	725	79,310

Key to classifications:

- P = palustrine wetland system
- SS = scrub-shrub, 1 = broad-leaved deciduous
- EM = emergent, 1= persistent, 5 = Phragmites

Modifiers

- E = nontidal, seasonally flooded/saturated
- H = permanently flooded

The proposed project is necessary in order to support current and future electricity demands in the region. The existing wood structures will be replaced with wood equivalent steel structures in order to increase the long-term reliability of the line. There are no proposed expansions to the ROW associated with this project. In addition, work is proposed within an existing and maintained utility ROW, and therefore tree removal is not anticipated as part of this project. Pole replacements will be on average 5-10-ft higher than existing poles due to updated National Electric Safety Code Standards. Work is proposed to begin in May 2024 and pending emergencies and weather-related delays, the proposed project will be completed by December 2024.

In addition to this Conditional Use Permit, Eversource will also be filing a Standard Dredge and Fill Wetlands Application with the New Hampshire Department of Environmental Services (NHDES) Wetlands Bureau.

Wetlands were delineated by GZA in 2016 and confirmed in 2022 and 2023 in accordance with the United States Army Corps of Engineers (USACE) Wetlands Delineation Manual using the Routine Determinations Method, and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual as required by



the New Hampshire Department of Environmental Services (NHDES) Wetlands Bureau and the USACE. GZA photographed resources and recorded data relevant to functions and values provided by these natural resources within the ROW in November 2022 and June and August 2023. GZA classified wetlands in accordance with the “Classification of Wetlands and Deepwater Habitats of United States” (Federal Geographic Committee, 2013).

Where proposed access and work pads are located within existing wetlands, timber matting will be utilized to minimize and prevent rutting and compaction within wetlands. Work will be conducted in accordance with NHDES Best Management Practices Manual for Utilities in and Adjacent to Wetlands and Waterbodies (March 2019). Prior to placement of timber matting within wetlands, timber mats will be reviewed to ensure cleanliness to prevent spread of invasive plant species. Upon completion of work, timber matting will be removed and temporarily impacted wetlands will be stabilized with straw and will be restored using a native herbaceous seed mix.

In accordance with the City of Portsmouth Zoning Ordinance, Article 10, section 10.1017.60, a Conditional Use Permit may be issued by the Planning Board for the construction of Public and Private Utilities within Rights-of-Ways in wetlands and wetland buffers provided that certain conditions are satisfied. The following section describes how the proposed project meets the stated conditions.

- A. ***The proposed construction is in the public interest.*** The proposed project is necessary to maintain the power supply of the existing distribution and transmission lines and if the work is not conducted, the utility poles could eventually fail and prevent power transmission. The project will improve the existing distribution line and increase reliability. This project does not propose expansion of the existing utility line ROW. The project includes replacement and maintenance of existing infrastructure within an existing and maintained utility ROW.
- B. ***Design, construction, and maintenance methods will utilize best management practices to minimize any detrimental impact of such use upon the wetland and will include restoration of the site as nearly as possible to its original grade, condition, and vegetated state.*** As previously mentioned, the proposed work will be conducted in accordance with NHDES Best Management Practices Manual for Utilities in and Adjacent to Wetlands and Waterbodies (March 2019). The access for the project has been sited to avoid prime wetlands and prime wetland buffers to the greatest extent feasible. In addition, the project utilizes existing access trails within the ROW wherever possible to limit and prevent new disturbance. Where access ways temporarily cross a wetland or wetland buffer, the proposed project has been designed to minimize temporary wetland impacts through the use of timber matting. Matting will be temporarily placed in a narrow section of the wetland, to provide appropriate access and prevent rutting and compaction.

Best management practices that include the installation and maintenance of erosion and sediment barriers will be used during construction. In addition, timber matting will be reviewed prior to placement to prevent the spread of invasive plant species. Upon completion of work, temporarily impacted areas will be seeded and mulched with a native herbaceous seed mix to establish permanent vegetative cover, as necessary, to promote restoration as nearly as possible to its original grade, condition, and vegetated state.



- C. **No alternative feasible route exists which does not cross or alter a wetland or have a less detrimental impact on a wetland.** There are no alternatives with less impact that maintain the safety and reliability of the existing transmission line. Access is sited within an existing and maintained utility ROW. In addition, the project has been designed to utilize existing historical access routes along the ROW, where possible, to minimize impacts to wetlands.

- D. **Alterations of natural vegetation or managed woodland will occur only to the extent necessary to achieve construction goals.** The proposed project will utilize existing access trails within the ROW to limit disturbance to wetlands and wetland buffers to the greatest extent feasible. Timber matting will be used to limit impacts on natural vegetation. Best management practices will be used to restore the site as nearly as possible to its original grade, condition and vegetated state. Permanent alterations of natural vegetation are proposed only where Eversource has identified utility structures which must be replaced in order to maintain current and projected future energy demands.

GZA conducted a wetland Function and Value Assessment November 2022. Wetlands within the ROW corridor are typically capable of production export, nutrient removal, and groundwater recharge and discharge. Common principal functions and values include sediment and toxicant retention due to wetlands having close proximity to roadways, wildlife habitat, and flood flow alteration. It is not anticipated that the long-term functions and values of these wetlands will be impacted as a result of the proposed project. The project is maintenance of existing utility infrastructure.

Should you have any questions, please contact Mr. Conor Madison at 603-232-8784 or at conor.madison@gza.com.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

Conor E. Madison, CPESC, CESSWI
Project Manager

Deborah M. Zarta Gier, CNRP
Principal

Tracy L. Tarr, CWS, CESSWI
Consultant/Reviewer

- Attachments:
- Conditional Use Permit Application Form - Online
 - List of Abutters
 - Photo Log
 - Wetland Function and Value Assessment
 - Figure 1 – Locus Plan
 - Figure 2 – Access and Permitting Plans
 - Application Fee



List of Abutters



**Resistance Substation Retirement Project
Eversource Energy
Abutters List
Portsmouth, New Hampshire**

Wetland Scientist

GZA GeoEnvironmental, Inc.
Attn: Tracy Tarr, CWS, CWB, CESSWI
5 Commerce Park North, Suite 201
Bedford, NH 03110

Tax Map 0214-0003-0000, 0281-0002-0000, R21-052-000

Owner/Applicant
Eversource Energy
PO Box 270
Hartford, CT 06141

Tax Map 0213-0011-0000, 0214-0001-0000, 0214-0002-0000, 58-04, 28-5

GSP Schiller LLC
431 River Road
Bow, NH 03304

Tax Map 0278-0001-0000, 0280-0003-0000, 0281-0001-0000, 0260-0140-0000, 0260-0159-0000, 0259-0010-0000, 0259-0014-0000, 0240-0002-1001

City of Portsmouth
PO Box 628
Portsmouth, NH 03801

Tax Map 0263-0003-0000, 0278-0002-0000, 0278-0003-0000, 0282-0005-0000, 0259-0001-0000, 0234-0007-0003, 0212-0122-0000, R20-001-000

City of Portsmouth
1 Junkins Ave
Portsmouth, NH 03801

Tax Map 0165-0014-0000, 0165-0014-0000

Boston & Maine Corp.
Iron Horse Pk High Street
No. Billerica, MA 01862

Tax Map 0258-0054-0000, 0263-0001-0006,

State of NH Fish & Game
11 Hazen Drive
Concord, NH 03301

Tax Map 0279-0001-0000, 0279-0002-0000, 0279-0008-0000, 0279-0009-0000

Aranosian Oil Co
557 N State Street
Concord, NH 03301

Tax Map 0121-0001-0000, 0121-0001-0000

Boston & Maine Railroad
Market Street
Portsmouth, NH 03801

Tax Map 0216-0001-0010

First Citizens Bank & Trust Co
FCB Mail Code DAV41 100 E Tyron Road
Raleigh, NC 27603

Tax Map 0216-0001-0011, 0213-0001-0000, 0213-0012-0000, 0216-0001-008A

135 Commerce Way LLC
210 Commerce Way Suite 300
Portsmouth, NH 03801

Tax Map 0263-0001-0001

Portsmouth Medical Office Bldg
100 Griffin Road
Portsmouth, NH 03801

Tax Map 0279-0004-0000

Darvid Elisabeth Rev Trust
1630 Greenland Road
Portsmouth, NH 03801

Tax Map 0279-0006-0000

PDNED Greenland LLC
75 Park Plaza
Boston, MA 0216

Tax Map 0280-0001-0000, R21-048-000

Coastal Concrete Company Inc.
PO Box 540
Wakefield, MA 01880

Tax Map 0320-0000-0000, R22-032-000

Pease Airport District
55 International Drive
Portsmouth, NH 03801

Tax Map 0279-0003-0000

Christopher Beliveau
1620 Greenland Road
Portsmouth, NH 03801

Tax Map 0279-0005-0000

Robert Keene
1640 Greenland Road
Portsmouth, NH 03801

Tax Map 0279-0007-0000

Shevlin Family Rev Trust
1648 Greenland Road
Portsmouth, NH 03801

Tax Map 0280-0002-0000, R21-045-000

National Propane LP
PO Box 798
Valley Forge, PA 19482

Tax Map 0262-0010-0000

United States America GZA
Property Management
10 Causeway Street
Boston, MA 02222

Tax Map 0300-0001-0000

James Jalbert
185 Grafton Road
Portsmouth, NH 03801

Tax Map 0260-0001-0000

Shephane & Matthew Campagna
100 Sherburne Road
Portsmouth, NH 03801

Tax Map 0260-0004-0000

Philip Griggs
176 Sherburne Road
Portsmouth, NH 03801



**Resistance Substation Retirement Project
Eversource Energy
Abutters List
Portsmouth, New Hampshire**

Tax Map 0260-0137-0000

Cynthia Jeffries
7 Victory Road
Portsmouth, NH 03801

Tax Map 0260-0138-0000

Sean Evans
96 Sagamore Road
Rye, NH 03870

Tax Map 0260-0139-0000

Thomas Oleary
316 Colonial Drive
Portsmouth, NH 03801

Tax Map 0260-0141-0000

Jared Bedrick
296 Colonial Drive
Portsmouth, NH 03801

Tax Map 0260-0142-0000

Michael Doll
284 Colonial Drive
Portsmouth, NH 03801

Tax Map 0260-0143-0000

Paul Monaghan
272 Colonial Drive
Portsmouth, NH 03801

Tax Map 0260-0144-0000

Craig Simmons
9 Worthen Road
Portsmouth, NH 03801

Tax Map 0260-0145-0000

Kimberly Scott
14 Worthen Road
Portsmouth, NH 03801

Tax Map 0260-0169-0000

Amanda Kaplan
664 State Street Apt 4
Portsmouth, NH 03801

Tax Map 0318-0003-0000

Pease Development Authority
Treatment Plant
Corporate Drive
Portsmouth, NH 03801

Tax Map 0259-0002-0000

Foley/Ciccolini Family Trust
61 Malcom Road South #16
Bridgton, ME 04009

Tax Map 0259-0003-0000

Amanda & Peter Getman
888 Greenland Road
Portsmouth, NH 03801

Tax Map 0259-0005-0000

Gail Wholey
933 Greenland Road
Portsmouth, NH 03801

Tax Map 0259-0009-0000

Douglas Crossman
52 Shelburne Road
Portsmouth, NH 03801

Tax Map 0262-0001-0001

Steven Cobert
20 Shelburne Road
Portsmouth, NH 03801

Tax Map 0262-0002-0000

Richard Blalock
922 Greenland Road
Portsmouth, NH 03801

Tax Map 0262-0003-0000

Michael Thomson
930 Greenland Road
Portsmouth, NH 03801

Tax Map 0262-0004-0000

Kate Arruda
946 Greenland Road
Portsmouth, NH 03801

Tax Map 0262-0005-0000

Shannon Francois
962 Greenland Road
Portsmouth, NH 03801

Tax Map 0262-0006-0000

Meghan Rice
1002 Greenland Road
Portsmouth, NH 03801

Tax Map 0262-0007-0000

Ashley Spinale
1000 Greenland Road
Portsmouth, NH 03801

Tax Map 0262-0008-0000

Amy Lalime
1004 Greenland Road
Portsmouth, NH 03801

Tax Map 0262-0009-0000

State of NH
State House
Concord, NH 03301

Tax Map 0240-0001-0000

Liberty Mutual Insurance Co
Attn: Joanne Bragg
175 Berkeley Street
Boston, MA 02116

Tax Map 0259-0012-0000

Orchard Park Condos
875 Greenland Road
Portsmouth, NH 03801

Tax Map 0259-0013-0000

Chadwick & Trefethen Inc
50 Borwich Ave
Portsmouth, NH 03801

Tax Map 0259-0014-0001

Millennium Borthwick II LLC
155 Borthwick Ave
Portsmouth, NH 03801



**Resistance Substation Retirement Project
Eversource Energy
Abutters List
Portsmouth, New Hampshire**

Tax Map 0259-0015-0000

Northeast Credit Union
Attn: Accounting
PO Box 1240
Portsmouth, NH 03801

Tax Map 0215-0001-0000

Retrosi Properties LLC
150 Gosling Road
Portsmouth, NH 03801

Tax Map 0216-0001-0001

150 Commerce Way LLC
210 Commerce Way Suite 100
Portsmouth, NH 03801

Tax Map 0216-0003-0000

Bromley Portsmouth LLC
57 Dedham Ave
Needham, MA 02492

Tax Map 0212-0168-0000, 0212-0167-0000

Atlantic Pointe Condominium
7 Tokanel Road
Windham, NH 03087

Tax Map 0213-0007-0000

Melissa Gillis
14 Dunlin Way
Portsmouth, NH 03801

Tax Map 0213-0010-0000

Raad Mukhlis
20 Dunlin Way
Portsmouth, NH 03801

Tax Map 0218-0041-0000

Dragan Vidacic
8 Dunlin Way
Portsmouth, NH 03801

Tax Map 0212-0124-0000

Kenneth Hall
276 Crescent Way
Portsmouth, NH 03801

Tax Map 0259-0016-0000

Kennedy Edeltraud Trust of 2017
719 Greenland Road
Portsmouth, NH 03801

Tax Map 0215-0009-0000

Kelly Properties Trust
PO Box 342
Rye Beach, NH 03871

Tax Map 0216-0001-0002

Commerce Center at Portsmouth
273 Corporate Drive Suite 150
Portsmouth, NH 03801

Tax Map 0212-0121-0000

PHA Housing Development
245 Middle Street
Portsmouth, NH 03801

Tax Map 0213-0003-0000

Thom Graeme
212 Mayfield Circle
Alpharette, GA 30009

Tax Map 0213-0008-0000

Dipentima Family Rev Living Trust
16 Dunlin Way
Portsmouth, NH 03801

Tax Map 0217-0002-0000

Spinnaker Point Condo
70 Spinnaker Way
Portsmouth, NH 03801

Tax Map 0218-0042-0000

Maass Family Rev Trust
6 Dunlin Way
Portsmouth, NH 03801

Tax Map 0212-0125-0000

Evon Cooper
16 Garland Road
Lincoln, MA 01773

Tax Map 0240-0002-0001

HCA Health Services of NH Inc.
PO Box 680610
Indianapolis, IN 46280

Tax Map 0215-0014-0000

Cole BJ Portfolio II LLC
25 Research Drive
Westborough, MA 01581

Tax Map 0216-0001-0009

175 Commerce Road LLC
725 Canton Street
Norwood, MA 02062

Tax Map 0212-0123-0000

Lewis Family Trust 2019
595 Las Colindas Road
San Rafael, CA 94903

Tax Map 0213-0006-0000

Abdallah Alhamdan
12 Dunlin Way
Portsmouth, NH 03801

Tax Map 0213-0009-0000

Nania Family Trust
18 Dunlin Way
Portsmouth, NH 03801

Tax Map 0218-0040-0000

Gita Paudel
10 Dunlin Way
Portsmouth, NH 03801

Tax Map 0218-0043-0000

Kristina Jette
2 Dunlin Way
Portsmouth, NH 03801

Tax Map 0212-0126-0000

Karole Smith Rev Trust
254 Crescent Way
Portsmouth, NH 03801



**Resistance Substation Retirement Project
Eversource Energy
Abutters List
Portsmouth, New Hampshire**

Tax Map 0212-0128-0000

Bruce Teatrowe
226 Crescent Way
Portsmouth, NH 03801

Tax Map 0212-0128-0001

Lori Santana
224 Crescent Way
Portsmouth, NH 03801

Tax Map 0212-0129-0000

Keith Hodgdon
220 Crescent Way
Portsmouth, NH 03801

Tax Map 0212-0130-0000

Francis Hartford
1810 State Road
Eliot, ME 03903

Tax Map 0212-0133-0000

Richard Woodhead
187 Porpoise Way
Portsmouth, NH 03801

Tax Map 0212-0153-0000

Alan Baker
180 Porpoise Way
Portsmouth, NH 03801

Tax Map 0212-126A-0000

Atlantic Heights LLC
480 Route 101
Bedford, NH 03101

Tax Map 0258-0020-0000

John Madden Jr
700 Greenland Road
Portsmouth, NH 03801

Tax Map 0258-0021-0000

David Kennard
17 Griffin Road
Portsmouth, NH 03801

Tax Map 0258-0030-0000

Stamatia Miminias
49 Griffin Road
Portsmouth, NH 03801

Tax Map 0260-0146-0000

Abigail Schilemmer
234 Colonial Drive
Portsmouth, NH 03801

Tax Map R20-008-000

AG-EIP 150 Ocean Road LLC
245 Park Ave 24th Floor
New York, NY 10167

Tax Map R21-051-000

Bluebird Greenland, LLC
125 Ocean Road
Greenland, NH 03840

Tax Map R21-054-000

TA Operating LLC
24601 Center Ridge Road
Suite 200
Westlake, OH 44145

Tax Map R21-017-000

Marilyn Twombly
703 Narrow Leaf Drive
Upper Marlborough, MD 20774

Tax Map R21-044-000

Target Corporation
PO Box 9456
Minneapolis, MN 55440

Tax Map R21-044-000

Lowes Home Center Inc
1000 Lowes Blvd
Morresville, NC 28117

Tax Map R21-044-000

Stop & Shop
PO Box 6500
Carlisle, PA 17013



Photo Log

PHOTO LOG
T13/3171, and Resistance SS Project
Portsmouth, and Greenland, New Hampshire
Photos Taken: November 2022 & June and August 2023



Photograph No. 1: Looking north at Wetland GW-1 (PEM1/PSS1/PFO1E.Fg/R2UB) near Structure 94 on the 3171 Line ROW off Ocean Road, Portsmouth, NH.



Photograph No. 2: Looking south at Wetland GW-1 (PEM1/PSS1/PFO1E.Fg/R2UB) near Structure 94 on the 3171 Line ROW off Ocean Road, Greenland, NH.

PHOTO LOG
T13/3171, and Resistance SS Project
Portsmouth, and Greenland, New Hampshire
Photos Taken: November 2022 & June and August 2023



Photograph No. 3: Looking northeast at Wetland GW-1 (PEM1/PSS1/PFO1E.Fg/R2UB) near Structure 93 on the 3171 Line ROW off Ocean Road, Greenland, NH.



Photograph No. 4: Looking east at Wetland GW-1 (PEM1/PSS1/PFO1E.Fg/R2UB) near Structure 92 on the 3171 Line ROW off Ocean Road, Portsmouth, NH.

PHOTO LOG
T13/3171, and Resistance SS Project
Portsmouth, and Greenland, New Hampshire
Photos Taken: November 2022 & June and August 2023



Photograph No. 5: Looking southwest at Wetland GW-1 (PEM1/PSS1/PFO1E.Fg/R2UB) near Structure 91 on the 3171 Line ROW off Ocean Road, Portsmouth, NH.



Photograph No. 6: Looking north at Wetland GW-1 (PEM1/PSS1/PFO1E.Fg/R2UB) near Structure 90 on the 3171 Line ROW off Ocean Road, Portsmouth, NH.

PHOTO LOG
T13/3171, and Resistance SS Project
Portsmouth, and Greenland, New Hampshire
Photos Taken: November 2022 & June and August 2023



Photograph No. 7: Looking east at Wetland GW-1 (PEM1/PSS1/PFO1E.Fg/R2UB) near Structure 89 on the 3171 Line ROW off Ocean Road, Portsmouth, NH.



Photograph No. 8: Looking east at Wetland GW-1 (PEM1/PSS1/PFO1E.Fg/R2UB) near Structure 88 on the 3171 Line ROW off Ocean Road, Portsmouth, NH.

PHOTO LOG
T13/3171, and Resistance SS Project
Portsmouth, and Greenland, New Hampshire
Photos Taken: November 2022 & June and August 2023



Photograph No. 9: Looking west at Wetland GW-1 (PEM1/PSS1/PFO1E.Fg/R2UB) near Structure 87 on the 3171 Line ROW off Ocean Road, Portsmouth, NH.



Photograph No. 10: Looking north towards Structure 86 on the 3171 Line ROW off Ocean Road, Portsmouth, NH.

PHOTO LOG
T13/3171, and Resistance SS Project
Portsmouth, and Greenland, New Hampshire
Photos Taken: November 2022 & June and August 2023



Photograph No. 11: Looking east at Structures 85 and 84 on the 3171 Line ROW off NH33, Portsmouth, NH



Photograph No. 12: Looking east at Wetland PW-1 (PEM1/PSS1E.Fg) near Structure 83 on the 3171 Line ROW off NH33, Portsmouth, NH

PHOTO LOG
T13/3171, and Resistance SS Project
Portsmouth, and Greenland, New Hampshire
Photos Taken: November 2022 & June and August 2023



Photograph No. 13: Looking southwest at Wetland PW-1 (PEM1/PSS1E.Fg) near Structure 82 on the 3171 Line ROW off NH33, Portsmouth, NH



Photograph No. 14: Looking west at Wetland PW-1 (PEM1/PSS1E.Fg) near Structure 81 on the 3171 Line ROW off NH33, Portsmouth, NH

PHOTO LOG
T13/3171, and Resistance SS Project
Portsmouth, and Greenland, New Hampshire
Photos Taken: November 2022 & June and August 2023



Photograph No. 15: Looking southwest at Wetland PW-1 (PEM1/PSS1E.Fg) near Structure 80 on the 3171 Line ROW off NH33, Portsmouth, NH



Photograph No. 16: Looking northwest at Wetland PW-1 (PEM1/PSS1E.Fg) near Structure 79 on the 3171 Line ROW off NH33, Portsmouth, NH.

PHOTO LOG
T13/3171, and Resistance SS Project
Portsmouth, and Greenland, New Hampshire
Photos Taken: November 2022 & June and August 2023



Photograph No. 17: Looking west at Wetland PW-1 (PEM1/PSS1E.Fg) near Structures 78 and 77 on the 3171 Line ROW off NH33, Portsmouth, NH.



Photograph No. 18: Looking northeast at Wetland PW-1 (PEM1/PSS1E.Fg) towards Structure 77 to 73 on the 3171 Line ROW off NH33, Portsmouth, NH.

PHOTO LOG
T13/3171, and Resistance SS Project
Portsmouth, and Greenland, New Hampshire
Photos Taken: November 2022 & June and August 2023



Photograph No. 19: Looking northwest towards Structures 72 and 72.6 on the 3171 Line ROW off NH33, Portsmouth, NH.



Photograph No. 20: Looking southeast at Structures 72.1 to 72.5 on the 3171 Line ROW off Griffin Road, Portsmouth, NH.

PHOTO LOG
T13/3171, and Resistance SS Project
Portsmouth, and Greenland, New Hampshire
Photos Taken: November 2022 & June and August 2023



Photograph No. 21: Looking northeast at Structure 1 on the T13 Line ROW off Gosling Road, Portsmouth, NH.



Photograph No. 22: Looking south near Wetland PW-2 (PEM1/PSS1E) on the T13 Line ROW off Gosling Road, Portsmouth, NH.

PHOTO LOG
T13/3171, and Resistance SS Project
Portsmouth, and Greenland, New Hampshire
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Photograph No. 23: Looking northwest near Wetland PW-3 (PEM1/PSS1E) between Structures 1 and 2 on the T13 Line ROW off Gosling Road, Portsmouth, NH.



Photograph No. 24: Looking southwest at Structure 2 on the T13 Line ROW off Gosling Road, Portsmouth, NH.

PHOTO LOG
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Portsmouth, and Greenland, New Hampshire
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Photograph No. 25: Looking northwest at Wetland PW-4 (PEM1/PSS1E) near Structure 2 on the T13 Line ROW off Gosling Road, Portsmouth, NH.



Photograph No. 26: Looking south at Structure 3 and Wetlands PW-5 (PEM1/PSS1E) and PW-6 (PEM1/PSS1E) on the T13 Line ROW off Gosling Road, Portsmouth, NH.

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Portsmouth, and Greenland, New Hampshire
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Photograph No. 27: Looking west at Structure 3.5 and Wetland PW-6 (PEM1/PSS1E) on the T13 Line ROW off Gosling Road, Portsmouth, NH.



Photograph No. 28: Looking southeast at Structure 4 on the T13 Line ROW off Gosling Road, Portsmouth, NH.

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Photograph No. 29: Looking south at Structure 5 on the T13 Line ROW off Gosling Road, Portsmouth, NH.



Photograph No. 30: Looking east at Structure 6 and Wetland PW-7 (PEM1/PSS1E,H) on the T13 Line ROW off Gosling Road, Portsmouth, NH.

PHOTO LOG
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Photograph No. 31: Looking east at Wetlands PW-9 (PEM1/PSS1Ex) and PW-8 (PEM1/PSS1E) near Structure 6 on the T13 Line ROW off Gosling Road, Portsmouth, NH.



Photograph No. 32: Looking east at Structure 7 and Wetlands PW-10 (PSS1Ex) and PW-11 (PSS1/PEM1Ex) on the T13 Line ROW off Gosling Road, Portsmouth, NH.

PHOTO LOG
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Photograph No. 33: Looking east at Wetland PW-11 (PSS1/PEM1Ex) between Structures 7 and 8 on the T13 Line ROW off Gosling Road, Portsmouth, NH



Photograph No. 34: Looking northeast at Structure 9 and Wetland PW-12 (PEM1/PSS1E) on the T13 Line ROW off Gosling Road, Portsmouth, NH.

PHOTO LOG
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Portsmouth, and Greenland, New Hampshire
Photos Taken: November 2022 & June and August 2023



Photograph No. 35: Looking east at Wetland PW-13 (PEM1/PSS1E) and Structure 10 on the T13 Line ROW off Gosling Road, Portsmouth, NH.



Photograph No. 36: Looking southeast at Wetlands PW-13 (PEM1/PSS1E), PW-14 (PSS1/PEM1E), and PW-15 (PEM1E), and at Structures 10 and 11 on the T13 Line ROW off Gosling Road, Portsmouth, NH.



Wetland Function and Value Assessment



**3171 & T13 STRUCTURE REPLACEMENT PROJECT
GREENLAND & PORTSMOUTH, NEW HAMPSHIRE**

File No: 04.0191410.47		WETLAND FUNCTION – VALUE EVALUATION FORM			Date: 10/19/2023	
Wetland ID: PW-1 PEM1/PSS1E,Fg					GZA Personnel: Peter Petkauskos CWS, Tracy Tarr CWS	
Function/Value	Capability Y N		Rationale (Reference #)	Summary	Principal Yes/No	
Groundwater Recharge/Discharge	Y		1, 2, 6	Wetland hydrology is supported by runoff and a seasonally high-water table. The wetland is not directly underlain by an aquifer (see Aquifer Transmissivity Overlay).	Y	
Floodflow Alteration	Y		3, 4, 5, 6, 7, 8, 9, 18	The wetland receives and retains overland sheet flow. Dense vegetation is present.	Y	
Fish and Shellfish Habitat		N	Not Applicable	The wetland is not associated with a watercourse or permanently flooded habitat.	N	
Sediment/Toxicant Retention	Y		1, 2, 4, 5, 8	The wetland contains dense vegetation suitable for sediment/toxicant detention and retention and accepts runoff from I95 North.	Y	
Nutrient Removal	Y		2, 3, 5, 6, 7, 8, 9, 10	Dense vegetation and poorly drained organic soils are present with ponded water.	Y	
Production Export	Y		1, 4, 5, 7, 12	The wetland contains dense vegetation and export is occurring through wildlife use in the wetland.	Y	
Sediment/Shoreline Stabilization		N	Not Applicable	No streams or shoreline edges are associated with the wetland.	N	
Wildlife Habitat	Y		5, 6, 7, 8, 11, 13, 18, 19, 23	A portion of the wetland is located in “highest ranked habitat in New Hampshire” (see Wildlife Action Plan overlay).	Y	
Recreation		N	1, 5	There are no water-based recreational opportunities present.	N	
Educational/Scientific Value	Y		5, 6	The wetland is located on City of Portsmouth conservation land (Great Bog). However, parking suitable for school buses is not present and the wetland is located under an active distribution line adjacent to Interstate 95 and an existing rail bed.	N	
Uniqueness/Heritage	Y		13, 17, 19	The wetland contains a Priority Resource Area (PRA) mapped Peatland Habitat in the northeast portion of the wetland.	N	
Visual Quality/Aesthetics		N	2, 8, 12	The wetland does not contain open water or emergent marsh vistas and is surrounded by Interstate 95 and an existing rail bed.	N	
ES Endangered Species Habitat	Y		1, 2	NHB does not have records of rare species in the vicinity of this wetland (see NHB memo dated NHB22-3650).	N	

Notes: Plants within the herbaceous layer include reed canary grass, broadleaf cattail, jewel weed, cinnamon fern, sensitive fern, reed canary grass, phragmites, and sphagnum moss. Plants within the shrub/sapling layer include meadowsweet, silky dogwood, glossy buckthorn, red maple, and gray birch.















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File No: 04.0191410.47		WETLAND FUNCTION – VALUE EVALUATION FORM			Date: 10/19/2023	
Wetland ID: PW-2 PEM1/PSS1E					GZA Personnel: Peter Petkauskos CWS, Tracy Tarr CWS	
Function/Value	Capability		Rationale (Reference #)	Summary	Principal Yes/No	
	Y	N				
Groundwater Recharge/Discharge	Y		4	Wetland hydrology is supported by runoff and a seasonally high-water table. The wetland is not directly underlain by an aquifer (see Aquifer Transmissivity Overlay).	N	
Floodflow Alteration	Y		5, 6, 9	The wetland receives and retains overland sheet flow. Dense vegetation is present.	N	
Fish and Shellfish Habitat		N	Not Applicable	The wetland is not associated with a watercourse or permanently flooded habitat.	N	
Sediment/Toxicant Retention	Y		1, 2	The wetland contains dense vegetation suitable for sediment/toxicant detention and retention and accepts runoff from Gosling Road.	Y	
Nutrient Removal	Y		3, 8, 9	Dense vegetation is present.	N	
Production Export	Y		7, 12	The wetland contains dense vegetation and export is occurring through wildlife use in the wetland.	N	
Sediment/Shoreline Stabilization		N	Not Applicable	No streams or shoreline edges are associated with the wetland.	N	
Wildlife Habitat	Y		7, 8	The wetland contains scrub-shrub cover in a commercial area. Over size limits its capability.	N	
Recreation		N	5	There are no water-based recreational opportunities present.	N	
Educational/Scientific Value		N	5	The wetland is located on private property and is located under an active transmission line.	N	
Uniqueness/Heritage		N	17	The wetland is not known to contain exemplary communities and is not designated as a prime wetland.	N	
Visual Quality/Aesthetics		N	8	The wetland does not contain open water or emergent marsh vistas.	N	
ES Endangered Species Habitat		N	Not Applicable	NHB does not have records of rare species in the vicinity of this wetland (see NHB memo dated NHB22-3650).	N	

Notes:















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File No: 04.0191410.47		WETLAND FUNCTION – VALUE EVALUATION FORM			Date: 10/19/2023	
Wetland ID: PW-3 PEM1/PSS1E					GZA Personnel: Peter Petkauskos CWS, Tracy Tarr CWS	
Function/Value	Capability Y N		Rationale (Reference #)	Summary	Principal Yes/No	
 Groundwater Recharge/Discharge	Y		4	Wetland hydrology is supported by runoff and a seasonally high-water table. The wetland is not directly underlain by an aquifer (see Aquifer Transmissivity Overlay).	N	
 Floodflow Alteration	Y		5, 6, 9	The wetland receives and retains overland sheet flow. Dense vegetation is present.	N	
 Fish and Shellfish Habitat		N	Not Applicable	The wetland is not associated with a watercourse or permanently flooded habitat.	N	
 Sediment/Toxicant Retention	Y		1, 2	The wetland contains dense vegetation suitable for sediment/toxicant detention and retention.	Y	
 Nutrient Removal	Y		3, 8, 9	Dense vegetation is present.	N	
 Production Export	Y		7, 12	The wetland contains dense vegetation and export is occurring through wildlife use in the wetland.	N	
 Sediment/Shoreline Stabilization		N	Not Applicable	No streams or shoreline edges are associated with the wetland.	N	
 Wildlife Habitat	Y		7, 8	The wetland contains scrub-shrub cover in a commercial area. Over size limits its capability.	N	
 Recreation		N	5	There are no water-based recreational opportunities present.	N	
 Educational/Scientific Value		N	5	The wetland is located on private property and is located under an active transmission line.	N	
 Uniqueness/Heritage		N	17	The wetland is not known to contain exemplary communities and is not designated as a prime wetland.	N	
 Visual Quality/Aesthetics		N	8	The wetland does not contain open water or emergent marsh vistas.	N	
ES Endangered Species Habitat		N	Not Applicable	NHB does not have records of rare species in the vicinity of this wetland (see NHB memo dated NHB22-3650).	N	

Notes:



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File No: 04.0191410.47		WETLAND FUNCTION – VALUE EVALUATION FORM			Date: 10/19/2023	
Wetland ID: PW-4 PEM1/PSS1E					GZA Personnel: Peter Petkauskos CWS, Tracy Tarr CWS	
Function/Value	Capability		Rationale (Reference #)	Summary	Principal Yes/No	
	Y	N				
 Groundwater Recharge/Discharge	Y		4	Wetland hydrology is supported by runoff and a seasonally high-water table. The wetland is not directly underlain by an aquifer (see Aquifer Transmissivity Overlay).	N	
 Floodflow Alteration	Y		5, 6, 9	The wetland receives and retains overland sheet flow. Dense vegetation is present.	N	
 Fish and Shellfish Habitat		N	Not Applicable	The wetland is not associated with a watercourse or permanently flooded habitat.	N	
 Sediment/Toxicant Retention	Y		1, 2	The wetland contains dense vegetation suitable for sediment/toxicant detention and retention.	Y	
 Nutrient Removal	Y		3, 8, 9	Dense vegetation is present.	N	
 Production Export	Y		7, 12	The wetland contains dense vegetation and export is occurring through wildlife use in the wetland.	N	
 Sediment/Shoreline Stabilization		N	Not Applicable	No streams or shoreline edges are associated with the wetland.	N	
 Wildlife Habitat	Y		7, 8	The wetland contains scrub-shrub cover in a commercial area.	N	
 Recreation		N	5	There are no water-based recreational opportunities present.	N	
 Educational/Scientific Value		N	5	The wetland is located on private property and is located under an active transmission line.	N	
 Uniqueness/Heritage		N	17	The wetland is not known to contain exemplary communities and is not designated as a prime wetland.	N	
 Visual Quality/Aesthetics		N	8	The wetland does not contain open water or emergent marsh vistas.	N	
ES Endangered Species Habitat		N	Not Applicable	NHB does not have records of rare species in the vicinity of this wetland (see NHB memo dated NHB22-3650).	N	

Notes:















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File No: 04.0191410.47		WETLAND FUNCTION – VALUE EVALUATION FORM			Date: 10/19/2023	
Wetland ID: PW-4 PEM1/PSS1E					GZA Personnel: Peter Petkauskos CWS, Tracy Tarr CWS	
Function/Value	Capability		Rationale (Reference #)	Summary	Principal Yes/No	
	Y	N				
Groundwater Recharge/Discharge	Y		4	Wetland hydrology is supported by runoff and a seasonally high-water table. The wetland is not directly underlain by an aquifer (see Aquifer Transmissivity Overlay).	N	
Floodflow Alteration	Y		5, 6, 9	The wetland receives and retains overland sheet flow. Dense vegetation is present.	N	
Fish and Shellfish Habitat		N	Not Applicable	The wetland is not associated with a watercourse or permanently flooded habitat.	N	
Sediment/Toxicant Retention	Y		1, 2	The wetland contains dense vegetation suitable for sediment/toxicant detention and retention.	Y	
Nutrient Removal	Y		3, 8, 9	Dense vegetation is present.	N	
Production Export	Y		7, 12	The wetland contains dense vegetation and export is occurring through wildlife use in the wetland.	N	
Sediment/Shoreline Stabilization		N	Not Applicable	No streams or shoreline edges are associated with the wetland.	N	
Wildlife Habitat	Y		7, 8	The wetland contains scrub-shrub cover in a commercial area.	N	
Recreation		N	5	There are no water-based recreational opportunities present.	N	
Educational/Scientific Value		N	5	The wetland is located on private property and is located under an active transmission line.	N	
Uniqueness/Heritage		N	17	The wetland is not known to contain exemplary communities and is not designated as a prime wetland.	N	
Visual Quality/Aesthetics		N	8	The wetland does not contain open water or emergent marsh vistas.	N	
ES Endangered Species Habitat		N	Not Applicable	NHB does not have records of rare species in the vicinity of this wetland (see NHB memo dated NHB22-3650).	N	

Notes:















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File No: 04.0191410.47		WETLAND FUNCTION – VALUE EVALUATION FORM			Date: 10/19/2023	
Wetland ID: PW-6 PEM1/PSS1E					GZA Personnel: Peter Petkauskos CWS, Tracy Tarr CWS	
Function/Value	Capability Y N		Rationale (Reference #)	Summary	Principal Yes/No	
 Groundwater Recharge/Discharge	Y		4	Wetland hydrology is supported by runoff and a seasonally high-water table. The wetland is not directly underlain by an aquifer (see Aquifer Transmissivity Overlay).	N	
 Floodflow Alteration	Y		5, 6, 7, 9	The wetland receives and retains overland sheet flow. Dense vegetation is present. Some ponded water is present.	N	
 Fish and Shellfish Habitat		N	Not Applicable	The wetland is not associated with a watercourse or permanently flooded habitat.	N	
 Sediment/Toxicant Retention	Y		1, 2	The wetland contains dense vegetation suitable for sediment/toxicant detention and retention.	Y	
 Nutrient Removal	Y		3, 8, 9	Dense vegetation is present.	N	
 Production Export	Y		7, 12	The wetland contains dense vegetation and export is occurring through wildlife use in the wetland.	N	
 Sediment/Shoreline Stabilization		N	Not Applicable	No streams or shoreline edges are associated with the wetland.	N	
 Wildlife Habitat	Y		7, 8	The wetland contains scrub-shrub cover in a commercial area.	N	
 Recreation		N	5	There are no water-based recreational opportunities present.	N	
 Educational/Scientific Value		N	5	The wetland is located on private property and is located under an active transmission line.	N	
 Uniqueness/Heritage		N	17	The wetland is not known to contain exemplary communities and is not designated as a prime wetland.	N	
 Visual Quality/Aesthetics		N	8	The wetland does not contain open water or emergent marsh vistas.	N	
ES Endangered Species Habitat		N	Not Applicable	NHB does not have records of rare species in the vicinity of this wetland (see NHB memo dated NHB22-3650).	N	

Notes:



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File No: 04.0191410.47		WETLAND FUNCTION – VALUE EVALUATION FORM			Date: 10/19/2023	
Wetland ID: PW-7 PEM1/PSS1E,H					GZA Personnel: Peter Petkauskos CWS, Tracy Tarr CWS	
Function/Value	Capability Y N		Rationale (Reference #)	Summary	Principal Yes/No	
 Groundwater Recharge/Discharge	Y		4	Wetland hydrology is supported by runoff and a seasonally high-water table. The wetland is not directly underlain by an aquifer (see Aquifer Transmissivity Overlay).	N	
 Floodflow Alteration	Y		5, 6, 7, 9	The wetland receives and retains overland sheet flow. Dense vegetation is present. Some ponded water is present.	N	
 Fish and Shellfish Habitat		N	Not Applicable	The wetland is not associated with a watercourse or permanently flooded habitat.	N	
 Sediment/Toxicant Retention	Y		1, 2	The wetland contains dense vegetation suitable for sediment/toxicant detention and retention.	Y	
 Nutrient Removal	Y		3, 8, 9	Dense vegetation is present.	N	
 Production Export	Y		7, 12	The wetland contains dense vegetation and export is occurring through wildlife use in the wetland.	N	
 Sediment/Shoreline Stabilization		N	Not Applicable	No streams or shoreline edges are associated with the wetland.	N	
 Wildlife Habitat	Y		7, 8, 18	The wetland contains a potential vernal pool and scrub-shrub cover in a commercial area.	Y	
 Recreation		N	5	There are no water-based recreational opportunities present.	N	
 Educational/Scientific Value		N	5	The wetland is located on private property and is located under an active transmission line.	N	
 Uniqueness/Heritage		N	17	The wetland is not known to contain exemplary communities and is not designated as a prime wetland.	N	
 Visual Quality/Aesthetics		N	8	The wetland does not contain open water or emergent marsh vistas.	N	
ES Endangered Species Habitat		N	Not Applicable	NHB does not have records of rare species in the vicinity of this wetland (see NHB memo dated NHB22-3650).	N	

Notes:















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File No: 04.0191410.47		WETLAND FUNCTION – VALUE EVALUATION FORM			Date: 10/19/2023	
Wetland ID: PW-8 PEM1/PSS1E					GZA Personnel: Peter Petkauskos CWS, Tracy Tarr CWS	
Function/Value	Capability		Rationale (Reference #)	Summary	Principal Yes/No	
	Y	N				
Groundwater Recharge/Discharge	Y		4	Wetland hydrology is supported by runoff and a seasonally high-water table. The wetland is not directly underlain by an aquifer (see Aquifer Transmissivity Overlay).	N	
Floodflow Alteration	Y		5, 6, 7, 9	The wetland receives and retains overland sheet flow. Dense vegetation is present.	N	
Fish and Shellfish Habitat		N	Not Applicable	The wetland is not associated with a watercourse or permanently flooded habitat.	N	
Sediment/Toxicant Retention	Y		1, 2	The wetland contains dense vegetation suitable for sediment/toxicant detention and retention. The wetland accepts stormwater from surrounding roads.	Y	
Nutrient Removal	Y		3, 8, 9	Dense vegetation is present.	N	
Production Export	Y		7, 12	The wetland contains dense vegetation and export is occurring through wildlife use in the wetland.	N	
Sediment/Shoreline Stabilization		N	Not Applicable	No streams or shoreline edges are associated with the wetland.	N	
Wildlife Habitat	Y		7, 8	The wetland contains scrub-shrub cover in a commercial area.	N	
Recreation		N	5	There are no water-based recreational opportunities present.	N	
Educational/Scientific Value		N	5	The wetland is located on private property and is located under an active transmission line.	N	
Uniqueness/Heritage		N	17	The wetland is not known to contain exemplary communities and is not designated as a prime wetland.	N	
Visual Quality/Aesthetics		N	8	The wetland does not contain open water or emergent marsh vistas.	N	
ES Endangered Species Habitat		N	Not Applicable	NHB does not have records of rare species in the vicinity of this wetland (see NHB memo dated NHB22-3650).	N	

Notes:















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File No: 04.0191410.47		WETLAND FUNCTION – VALUE EVALUATION FORM			Date: 10/19/2023	
Wetland ID: PW-9 PEM1/PSS1Ex					GZA Personnel: Peter Petkauskos CWS, Tracy Tarr CWS	
Function/Value	Capability		Rationale (Reference #)	Summary	Principal Yes/No	
	Y	N				
 Groundwater Recharge/Discharge	Y		4	Wetland hydrology is supported by runoff and a seasonally high-water table. The wetland is not directly underlain by an aquifer (see Aquifer Transmissivity Overlay).	N	
 Floodflow Alteration	Y		5, 6, 7, 9	The wetland receives and retains overland sheet flow. Dense vegetation is present.	N	
 Fish and Shellfish Habitat		N	Not Applicable	The wetland is not associated with a watercourse or permanently flooded habitat.	N	
 Sediment/Toxicant Retention	Y		1, 2	The wetland contains dense vegetation suitable for sediment/toxicant detention and retention. The wetland accepts stormwater from surrounding roads.	Y	
 Nutrient Removal	Y		3, 8, 9	Emergent and scrub shrub cover is present.	N	
 Production Export	Y		7, 12	The wetland contains dense vegetation.	N	
 Sediment/Shoreline Stabilization		N	Not Applicable	No streams or shoreline edges are associated with the wetland.	N	
 Wildlife Habitat	Y		7, 8	The wetland contains scrub-shrub cover in a commercial area.	N	
 Recreation		N	5	There are no water-based recreational opportunities present.	N	
 Educational/Scientific Value		N	5	The wetland is located on private property and is located under an active transmission line.	N	
 Uniqueness/Heritage		N	17	The wetland is not known to contain exemplary communities and is not designated as a prime wetland.	N	
 Visual Quality/Aesthetics		N	8	The wetland does not contain open water or emergent marsh vistas.	N	
ES Endangered Species Habitat		N	Not Applicable	NHB does not have records of rare species in the vicinity of this wetland (see NHB memo dated NHB22-3650).	N	

Notes:















**3171 & T13 STRUCTURE REPLACEMENT PROJECT
GREENLAND & PORTSMOUTH, NEW HAMPSHIRE**

File No: 04.0191410.47		WETLAND FUNCTION – VALUE EVALUATION FORM			Date: 10/19/2023	
Wetland ID: PW-10 PSS1Ex					GZA Personnel: Peter Petkauskos, Tracy Tarr	
Function/Value	Capability Y N		Rationale (Reference #)	Summary	Principal Yes/No	
 Groundwater Recharge/Discharge	Y		4	Wetland hydrology is supported by runoff and a seasonally high-water table. The wetland is not directly underlain by an aquifer (see Aquifer Transmissivity Overlay).	N	
 Floodflow Alteration	Y		5, 6, 7, 9	The wetland receives and retains overland sheet flow. Dense vegetation is present.	N	
 Fish and Shellfish Habitat		N	Not Applicable	The wetland is not associated with a watercourse or permanently flooded habitat.	N	
 Sediment/Toxicant Retention	Y		1, 2	The wetland contains dense vegetation suitable for sediment/toxicant detention and retention. The wetland accepts stormwater from surrounding roads.	Y	
 Nutrient Removal	Y		3, 8, 9	Scrub shrub cover is present.	N	
 Production Export	Y		7, 12	The wetland contains dense vegetation.	N	
 Sediment/Shoreline Stabilization		N	Not Applicable	No streams or shoreline edges are associated with the wetland.	N	
 Wildlife Habitat	Y		7, 8	The wetland contains scrub-shrub cover in a commercial area.	N	
 Recreation		N	5	There are no water-based recreational opportunities present.	N	
 Educational/Scientific Value		N	5	The wetland is located on private property and is located under an active transmission line.	N	
 Uniqueness/Heritage		N	17	The wetland is not known to contain exemplary communities and is not designated as a prime wetland.	N	
 Visual Quality/Aesthetics		N	8	The wetland does not contain open water or emergent marsh vistas.	N	
ES Endangered Species Habitat		N	Not Applicable	NHB does not have records of rare species in the vicinity of this wetland (see NHB memo dated NHB22-3650).	N	

Notes:















**3171 & T13 STRUCTURE REPLACEMENT PROJECT
GREENLAND & PORTSMOUTH, NEW HAMPSHIRE**

File No: 04.0191410.47		WETLAND FUNCTION – VALUE EVALUATION FORM			Date: 10/19/2023	
Wetland ID: PW-11 PSS1/PEM1Ex					GZA Personnel: Peter Petkauskos CWS, Tracy Tarr CWS	
Function/Value	Capability Y N		Rationale (Reference #)	Summary	Principal Yes/No	
 Groundwater Recharge/Discharge	Y		4	Wetland hydrology is supported by runoff and a seasonally high-water table. The wetland is not directly underlain by an aquifer (see Aquifer Transmissivity Overlay).	N	
 Floodflow Alteration	Y		5, 6, 7, 9	The wetland receives and retains overland sheet flow. Dense vegetation is present. Pondered water is present in an existing stormwater basin.	N	
 Fish and Shellfish Habitat		N	Not Applicable	The wetland is not associated with a watercourse or permanently flooded habitat.	N	
 Sediment/Toxicant Retention	Y		1, 2	The wetland contains dense vegetation suitable for sediment/toxicant detention and retention. The wetland accepts stormwater from surrounding roads and contains a stormwater basin.	Y	
 Nutrient Removal	Y		3, 8, 9	Scrub shrub and emergent cover is present.	N	
 Production Export	Y		7, 12	The wetland contains dense vegetation.	N	
 Sediment/Shoreline Stabilization		N	Not Applicable	No streams or shoreline edges are associated with the wetland.	N	
 Wildlife Habitat	Y		7, 8	The wetland contains scrub-shrub cover in a commercial area.	N	
 Recreation		N	5	There are no water-based recreational opportunities present.	N	
 Educational/Scientific Value		N	5	The wetland is located on private property and is located under an active transmission line.	N	
 Uniqueness/Heritage		N	17	The wetland is not known to contain exemplary communities and is not designated as a prime wetland.	N	
 Visual Quality/Aesthetics		N	8	The wetland does not contain open water or emergent marsh vistas.	N	
ES Endangered Species Habitat		N	Not Applicable	NHB does not have records of rare species in the vicinity of this wetland (see NHB memo dated NHB22-3650).	N	

Notes:















**3171 & T13 STRUCTURE REPLACEMENT PROJECT
GREENLAND & PORTSMOUTH, NEW HAMPSHIRE**

File No: 04.0191410.47		WETLAND FUNCTION – VALUE EVALUATION FORM			Date: 10/19/2023	
Wetland ID: PW-12 and PW-13 PEM1/PSS1E					GZA Personnel: Peter Petkauskos CWS, Tracy Tarr CWS	
Function/Value	Capability Y N		Rationale (Reference #)	Summary	Principal Yes/No	
 Groundwater Recharge/Discharge	Y		4	Wetland hydrology is supported by runoff and a seasonally high-water table. The wetland is not directly underlain by an aquifer (see Aquifer Transmissivity Overlay).	N	
 Floodflow Alteration	Y		5, 6, 7, 9	The wetland receives and retains overland sheet flow. Dense vegetation is present.	N	
 Fish and Shellfish Habitat		N	Not Applicable	The wetland is not associated with a watercourse or permanently flooded habitat.	N	
 Sediment/Toxicant Retention	Y		1, 2	The wetland contains dense vegetation suitable for sediment/toxicant detention and retention. The wetland accepts stormwater from surrounding roads.	Y	
 Nutrient Removal	Y		3, 8, 9	Scrub shrub and emergent cover is present.	N	
 Production Export	Y		7, 12	The wetland contains dense vegetation.	N	
 Sediment/Shoreline Stabilization		N	Not Applicable	No streams or shoreline edges are associated with the wetland.	N	
 Wildlife Habitat	Y		7, 8	The wetland contains scrub-shrub cover in a commercial area.	N	
 Recreation		N	5	There are no water-based recreational opportunities present.	N	
 Educational/Scientific Value		N	5	The wetland is located on private property and is located under an active transmission line.	N	
 Uniqueness/Heritage		N	17	The wetland is not known to contain exemplary communities and is not designated as a prime wetland.	N	
 Visual Quality/Aesthetics		N	8	The wetland does not contain open water or emergent marsh vistas.	N	
ES Endangered Species Habitat		N	Not Applicable	NHB does not have records of rare species in the vicinity of this wetland (see NHB memo dated NHB22-3650).	N	

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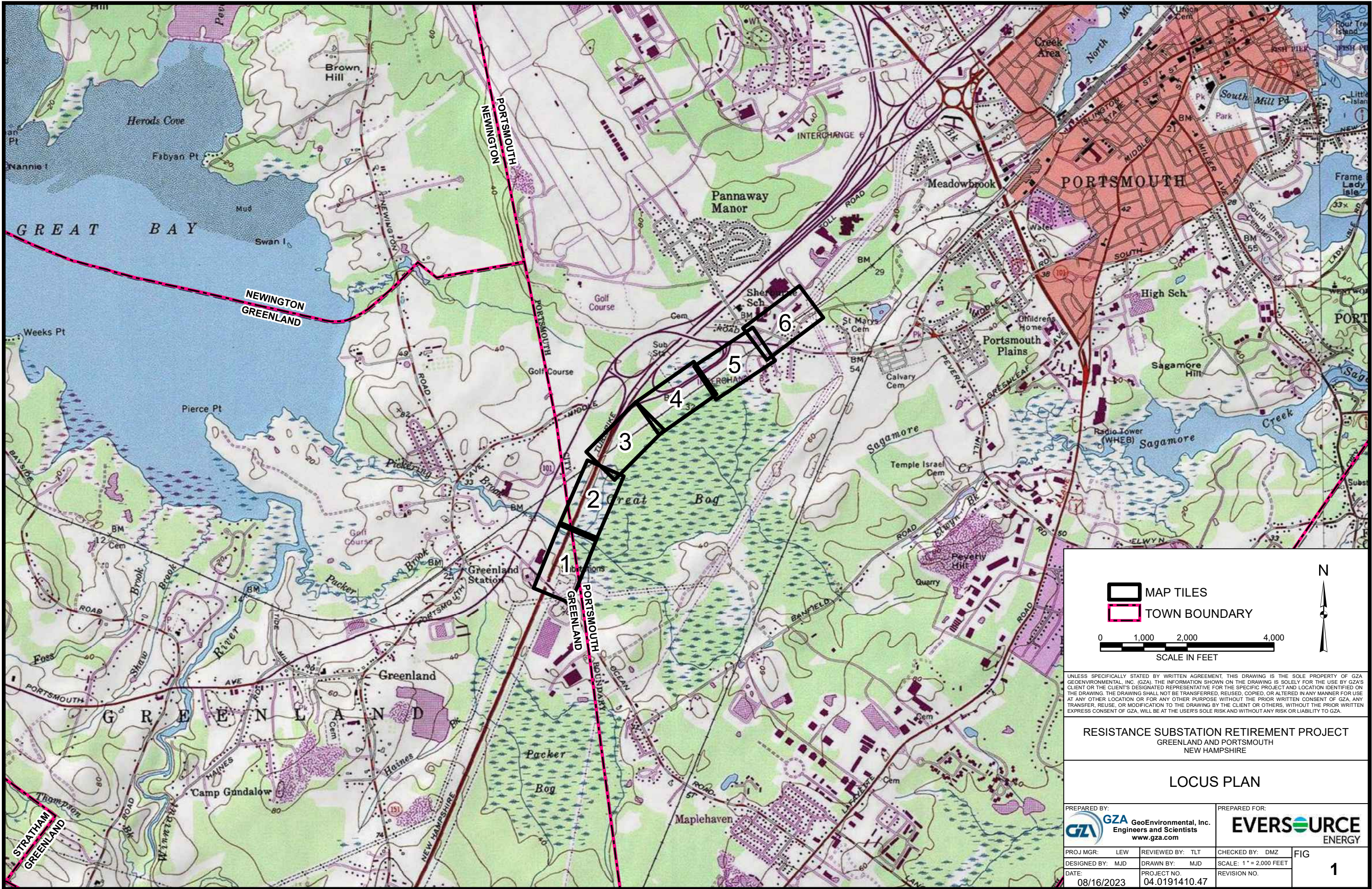
**3171 & T13 STRUCTURE REPLACEMENT PROJECT
GREENLAND & PORTSMOUTH, NEW HAMPSHIRE**

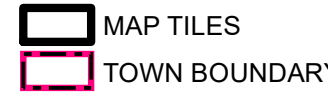
File No: 04.0191410.47		WETLAND FUNCTION – VALUE EVALUATION FORM			Date: 10/19/2023	
Wetland ID: PW-12 and PW-13 PSS1/PEM1E					GZA Personnel: Peter Petkauskos CWS, Tracy Tarr CWS	
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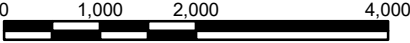
Figure 1 – Locus Plan






MAP TILES

TOWN BOUNDARY



 0 1,000 2,000 4,000

 SCALE IN FEET





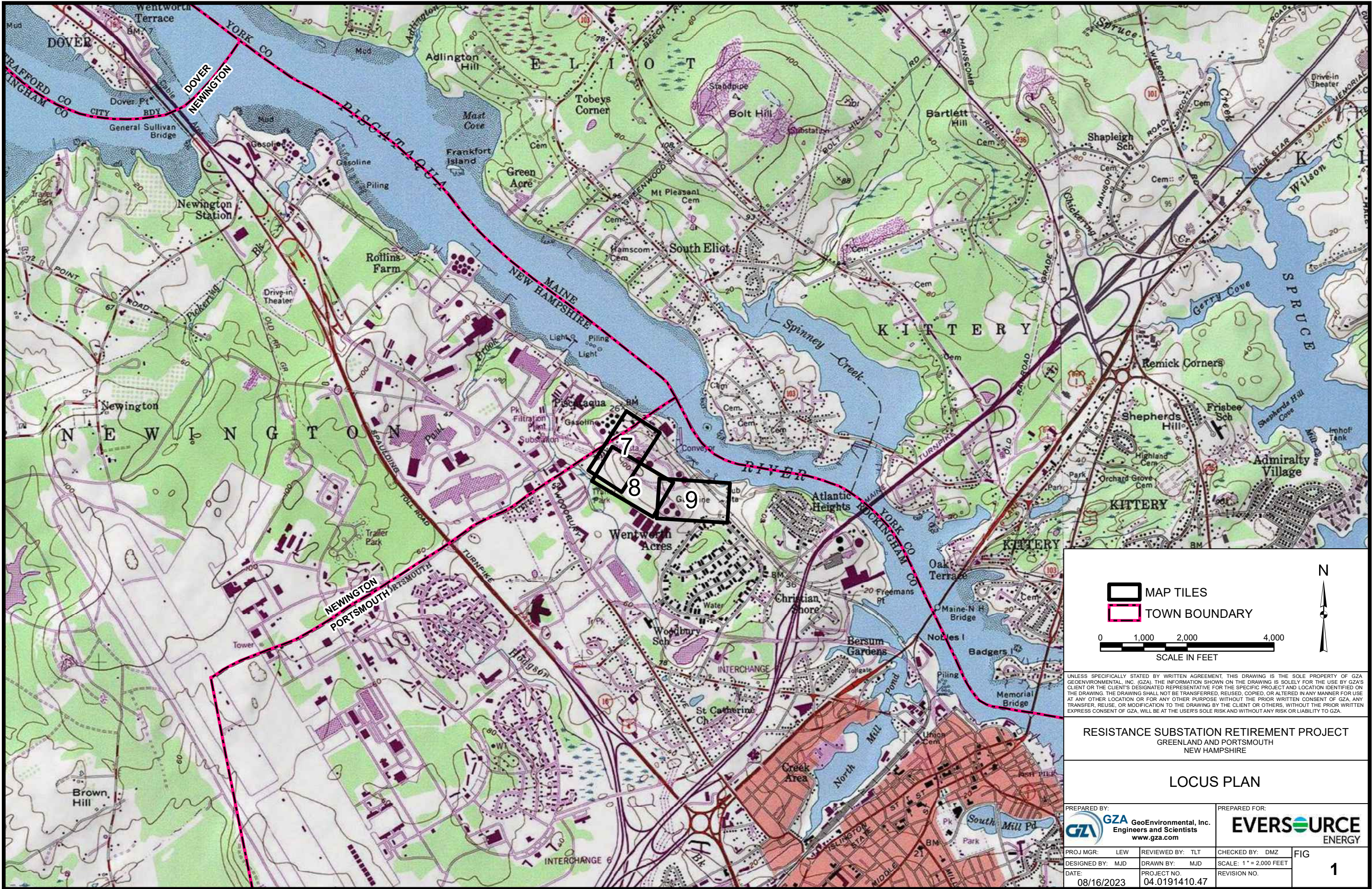
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RESISTANCE SUBSTATION RETIREMENT PROJECT
GREENLAND AND PORTSMOUTH
NEW HAMPSHIRE

LOCUS PLAN

PREPARED BY:  GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR:  EVERSOURCE ENERGY	
PROJ MGR: LEW	REVIEWED BY: TLT	CHECKED BY: DMZ	FIG
DESIGNED BY: MJD	DRAWN BY: MJD	SCALE: 1" = 2,000 FEET	1
DATE: 08/16/2023	PROJECT NO: 04.0191410.47	REVISION NO.	



MAP TILES
TOWN BOUNDARY

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 SCALE IN FEET

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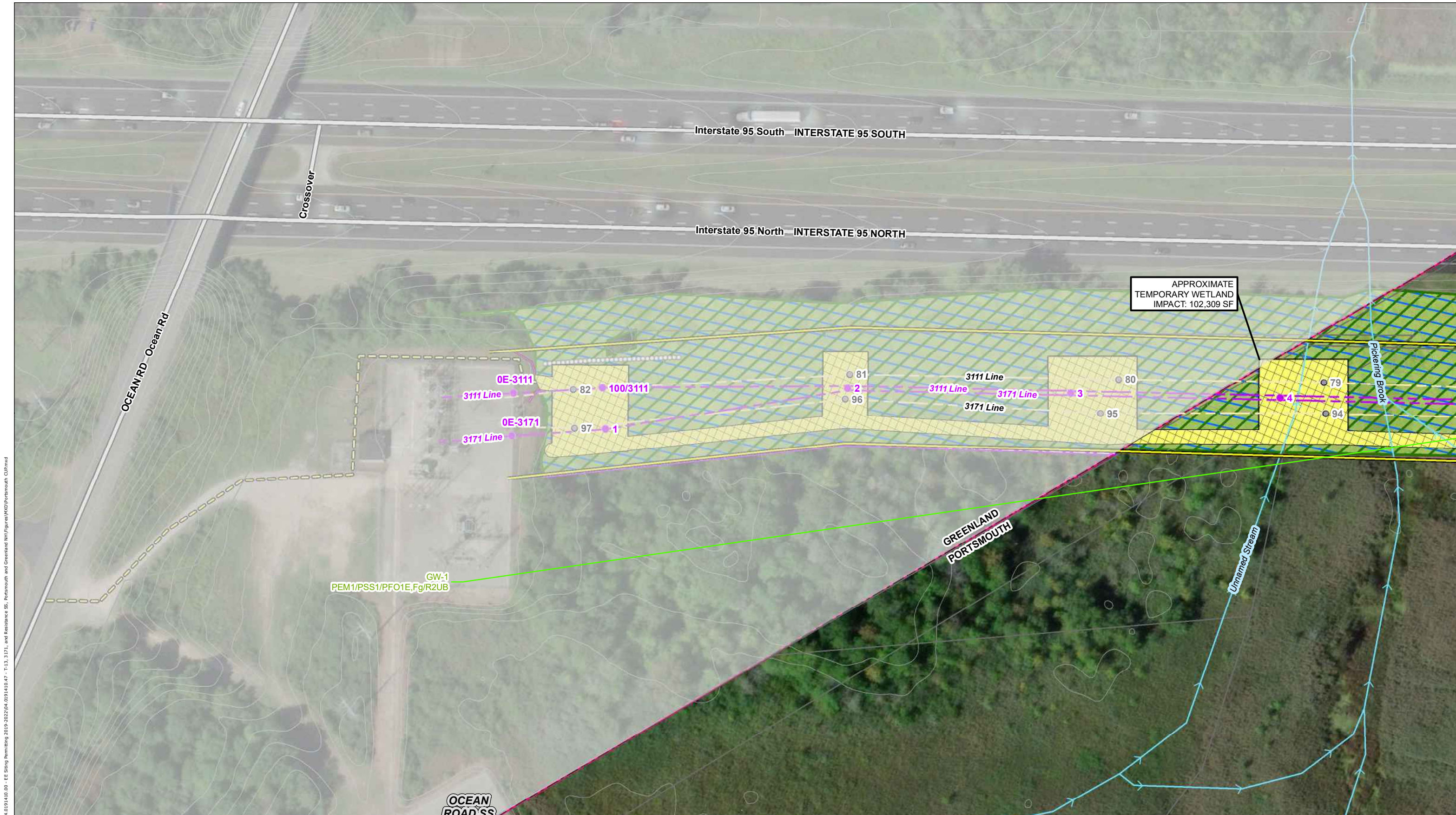
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 GREENLAND AND PORTSMOUTH
 NEW HAMPSHIRE

LOCUS PLAN

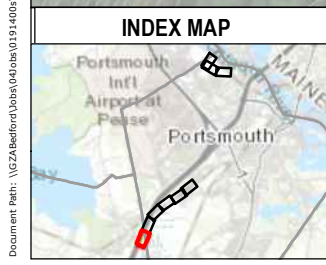
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: EVERSOURCE ENERGY	
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DESIGNED BY: MJD	DRAWN BY: MJD	SCALE: 1" = 2,000 FEET	1
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Figure 2 – Access and Permitting Plans

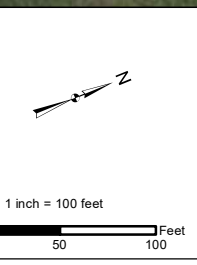


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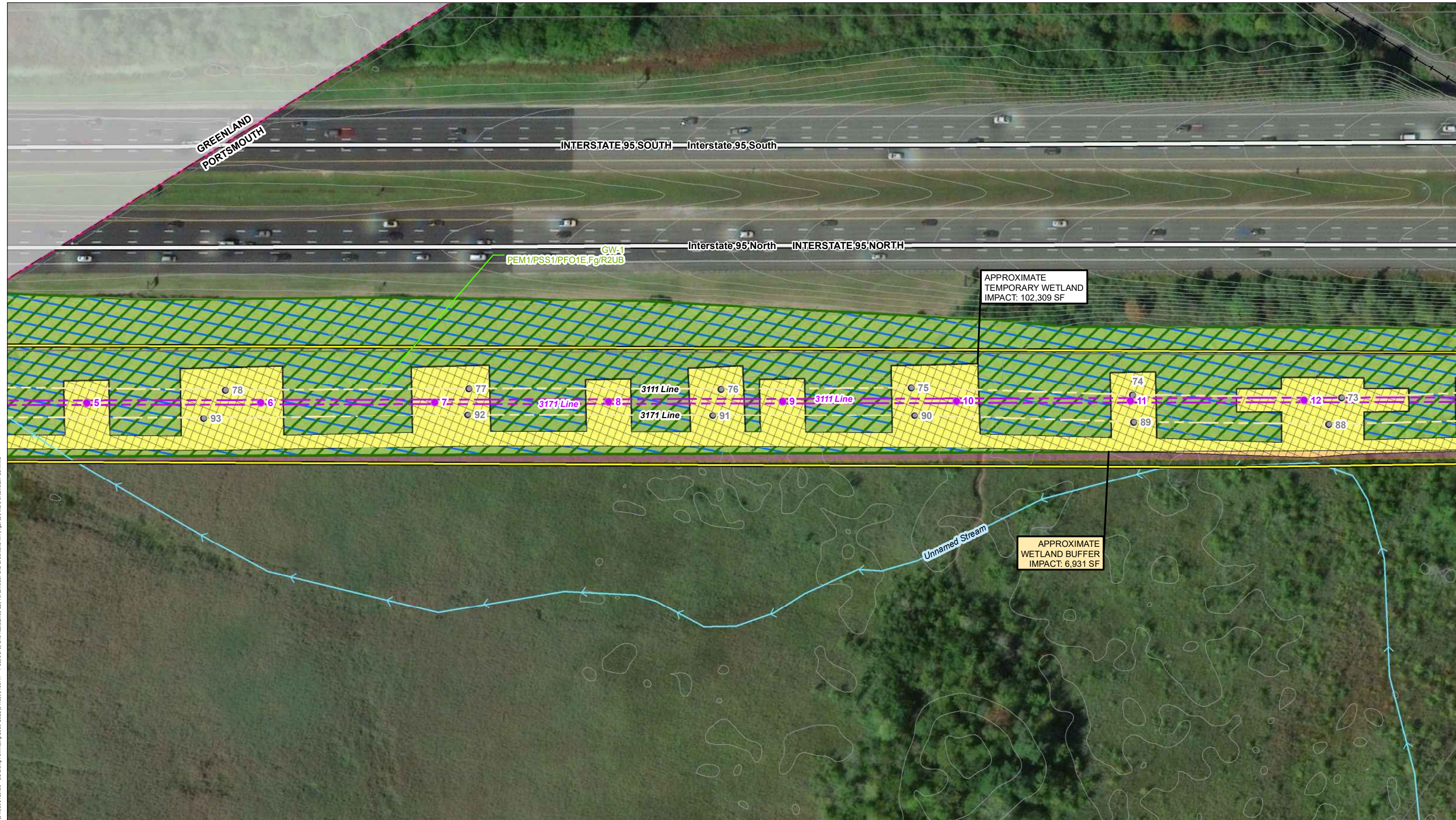


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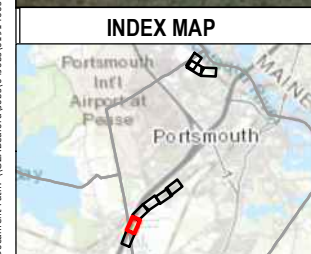
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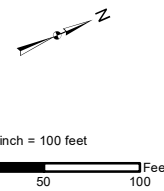


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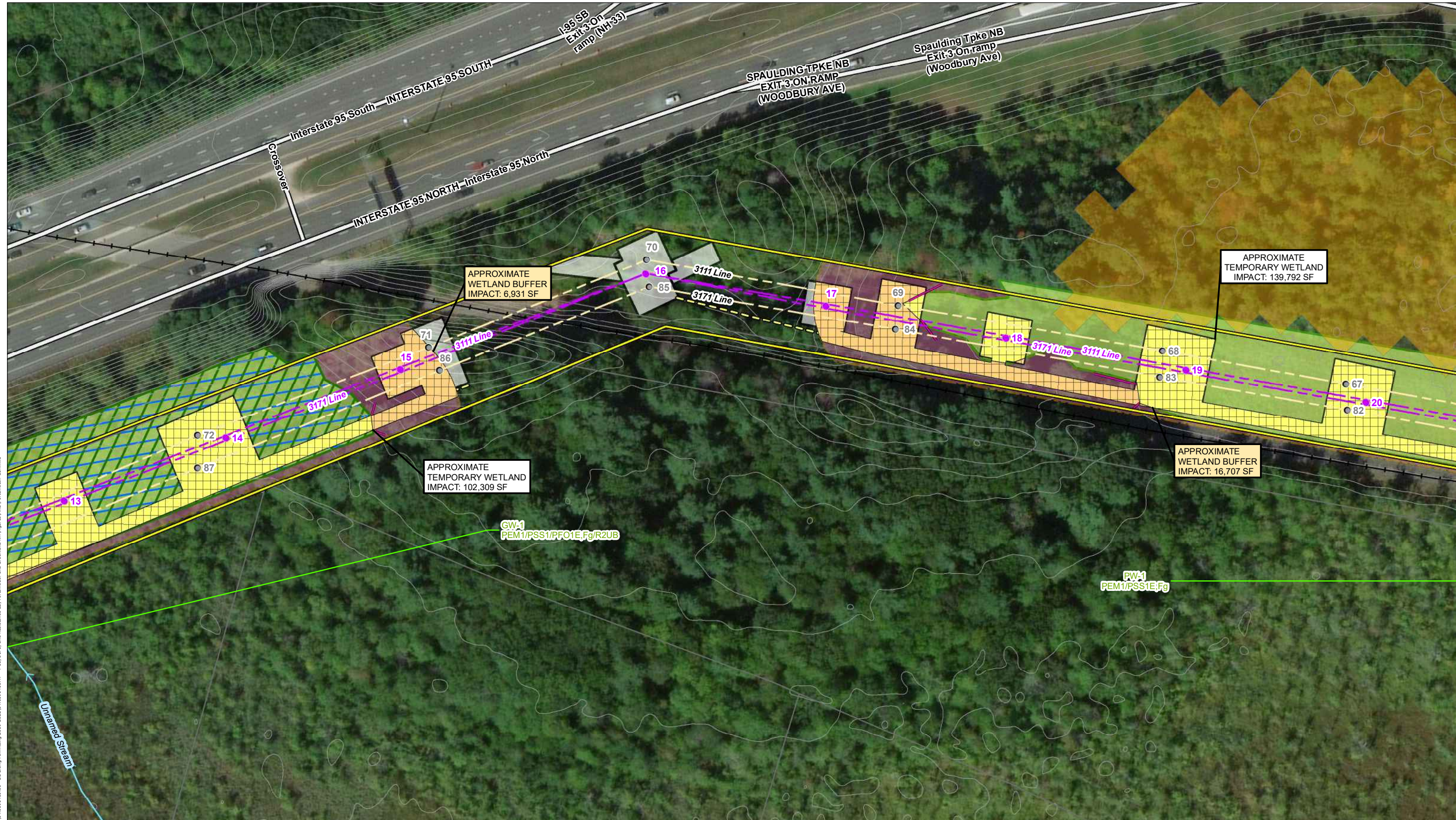


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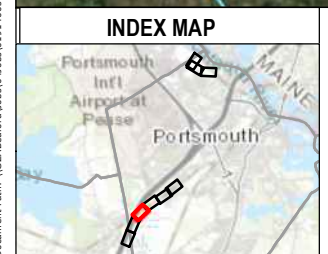
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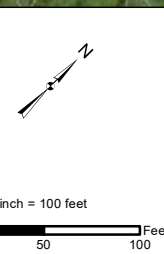


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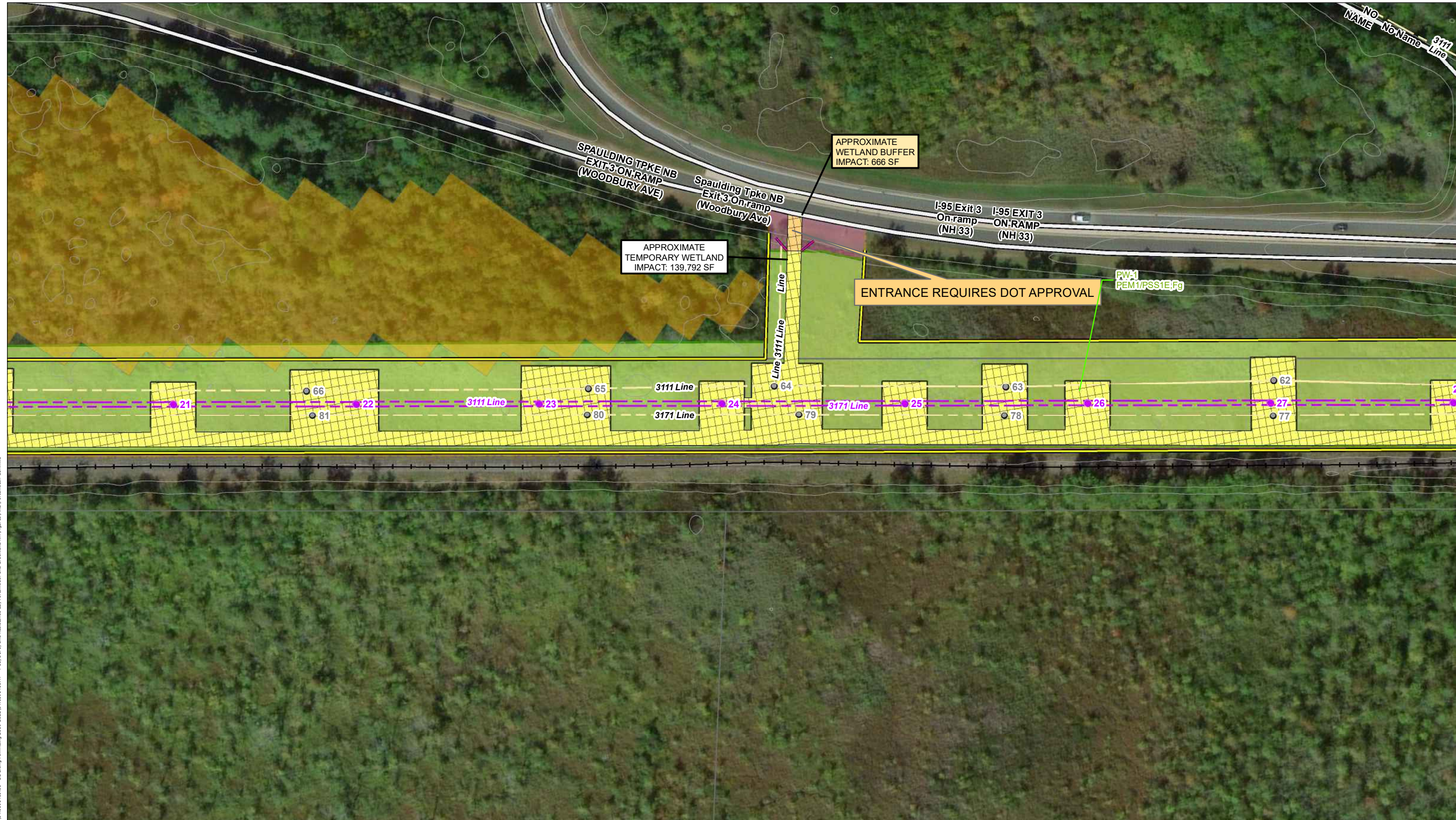


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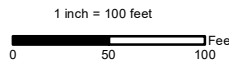


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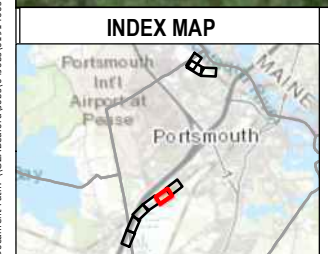
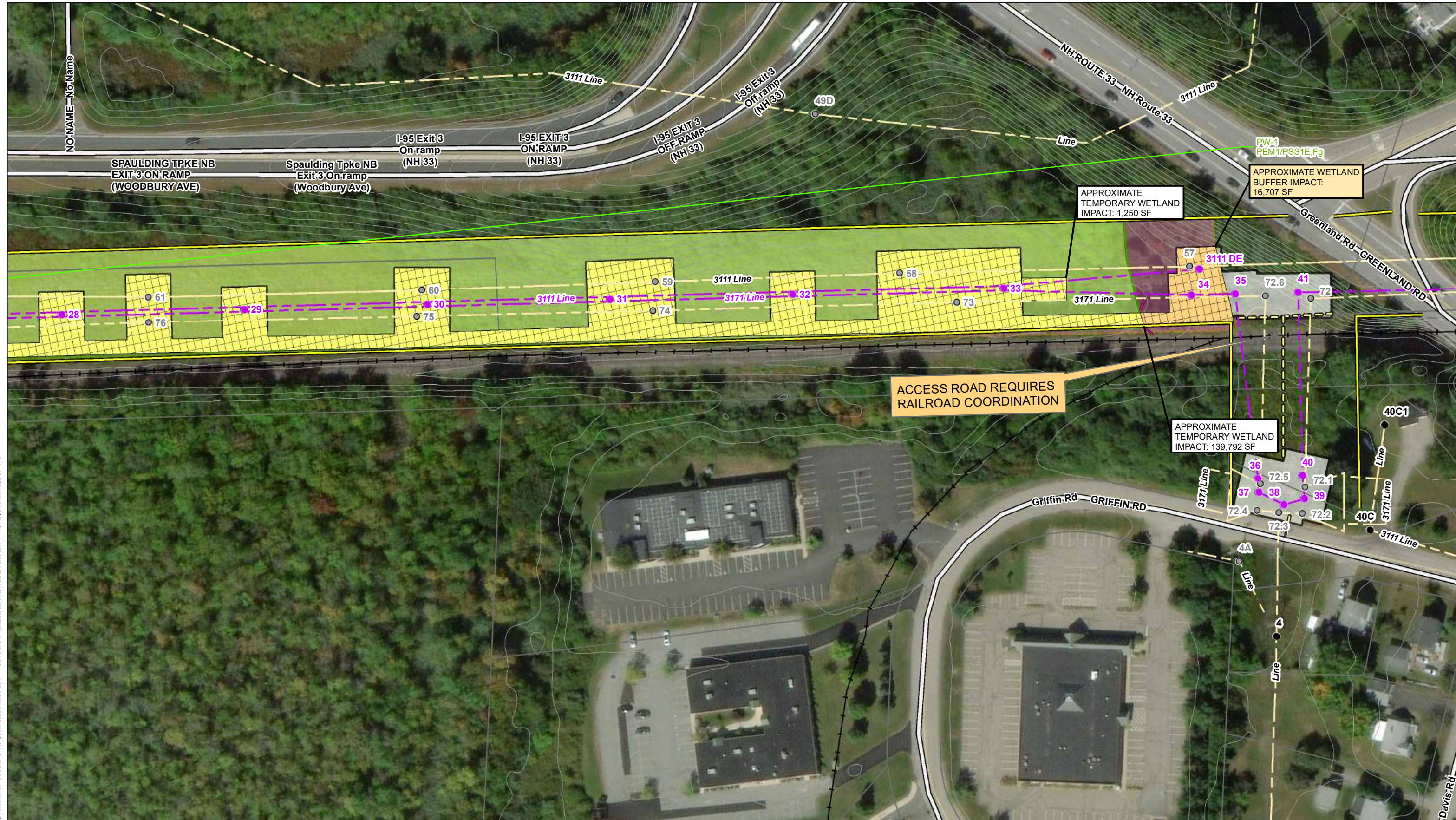


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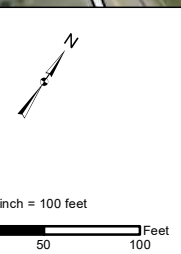
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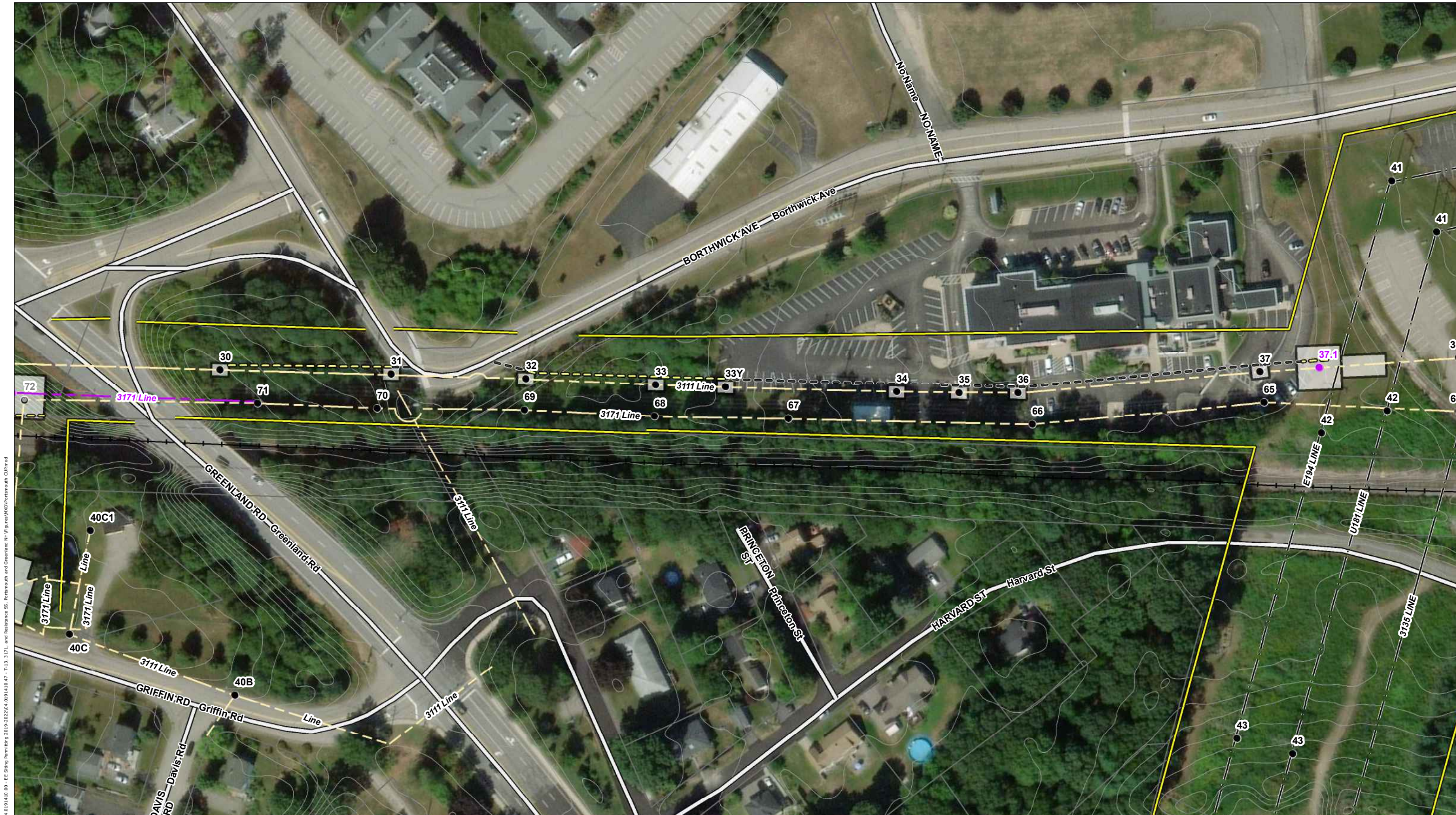
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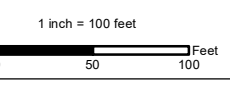
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INDEX MAP



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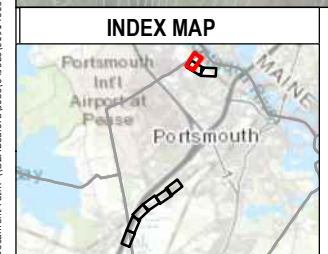
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1 inch = 100 feet

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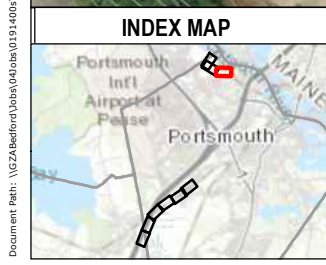
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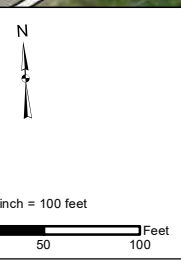


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