DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO ATTENTION OF

MAINE GENERAL PERMIT (GP)
AUTHORIZATION LETTER AND SCREENING SUMMARY

SEAN DONAHUE
MAINE TURNPIKE AUTHORITY
2360 CONGRESS STREET
PORTLAND, MAINE 04102

CORPS PERMIT # NAE-2018-02510
CORPS GP ID# 18-696
STATE ID# PBR

DESCRIPTION OF WORK:
Place temporary and permanent fill in freshwater wetlands at the intersection of Lewiston Road, I-295 and the Maine Turnpike at West Gardiner, Maine in order to reconstruct and upgrade the West Gardiner toll plaza. The project will result in approximately 27,064 s.f. of permanent and 7,291 s.f. of temporary wetland impact. This work is shown on the attached plans entitled "Maine Turnpike Authority, Exit 103 Open Road Tolling" in one sheet undated and "WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS, ORT CONVERSION" in 14 sheets dated "OCTOBER 2018".

LAT/LONG COORDINATES : 44.212548° N -70.050716° W USGS QUAD: GARDINER, ME

I. CORPS DETERMINATION:

Based on our review of the information you provided, we have determined that your project will have only minimal individual and cumulative impacts on waters and wetlands of the United States. **Your work is therefore authorized by the U.S. Army Corps of Engineers under the enclosed Federal Permit, the Maine General Permit (GP).** Accordingly, we do not plan to take any further action on this project.

You must perform the activity authorized herein in compliance with all the terms and conditions of the GP [including any attached Additional Conditions and any conditions placed on the State 401 Water Quality Certification including any required mitigation]. Please review the enclosed GP carefully, including the GP conditions beginning on page 5, to familiarize yourself with its contents. You are responsible for complying with all of the GP requirements; therefore you should be certain that whoever does the work fully understands all of the conditions. You may wish to discuss the conditions of this authorization with your contractor to ensure the contractor can accomplish the work in a manner that conforms to all requirements.

If you change the plans or construction methods for work within our jurisdiction, please contact us immediately to discuss modification of this authorization. This office must approve any changes before you undertake them.

Condition 38 of the GP (page 16) provides one year for completion of work that has commenced or is under contract to commence prior to the expiration of the GP on October 13, 2020. You will need to apply for reauthorization for any work within Corps jurisdiction that is not completed by October 13, 2021.

This authorization presumes the work shown on your plans noted above is in waters of the U.S. Should you desire to appeal our jurisdiction, please submit a request for an approved jurisdictional determination in writing to the undersigned.

No work may be started unless and until all other required local, State and Federal licenses and permits have been obtained. **This includes but is not limited to a Flood Hazard Development Permit issued by the town if necessary.**

II. STATE ACTIONS: PENDING [X], ISSUED [ ], DENIED [ ] DATE_____

APPLICATION TYPE: PBR: X , TIER 1:____, TIER 2 :____, TIER 3:____, LURC: ____ DMR LEASE: ____ NA: ____

III. FEDERAL ACTIONS:

JOINT PROCESSING MEETING: 12/13/18 LEVEL OF REVIEW: CATEGORY 1:____ CATEGORY 2: X

AUTHORITY (Based on a review of plans and/or State/Federal applications): SEC 10_____, 404___X___ 10/404_____, 103_____

EXCLUSIONS: The exclusionary criteria identified in the general permit do not apply to this project.

FEDERAL RESOURCE AGENCY OBJECTIONS: EPA NO , USF&WS NO , NMFS NO

If you have any questions on this matter, please contact my staff at 207-623-8367 at our Augusta, Maine Project Office. In order for us to better serve you, we would appreciate your completing our Customer Service Survey located at http://corpsmapu.usace.army.mil/cm_apex/f?p=136:4:0

Jay L. Clement
JAY L. CLEMENT
SENIOR PROJECT MANAGER
MAINE PROJECT OFFICE

FOR Jay L. Clement 1/31/19
FRANK J. DEL GIUDICE DATE
CHIEF, PERMITS & ENFORCEMENT BRANCH
REGULATORY DIVISION

US Army Corps
of Engineers ®
New England District

PLEASE NOTE THE FOLLOWING CONDITIONS FOR DEPARTMENT OF THE ARMY GENERAL PERMIT NO. NAE-2018-02510

1. This authorization requires you to 1) notify us before beginning work so we may inspect the project, and 2) submit a Compliance Certification Form. You must complete and return the enclosed Work Start Notification Form(s) to this office at least two weeks before the anticipated starting date. You must complete and return the enclosed Compliance Certification Form within one month following the completion of the authorized work and any required mitigation (but not mitigation monitoring, which requires separate submittals).

2. The permittee shall assure that a copy of this permit is at the work site whenever work is being performed and that all personnel performing work at the site of the work authorized by this permit are fully aware of the terms and conditions of the permit. This permit, including its drawings and any appendices and other attachments, shall be made a part of any and all contracts and sub-contracts for work which affects areas of Corps of Engineers' jurisdiction at the site of the work authorized by this permit. This shall be done by including the entire permit in the specifications for the work. If the permit is issued after construction specifications but before receipt of bids or quotes, the entire permit shall be included as an addendum to the specifications. The term "entire permit" includes permit amendments. Although the permittee may assign various aspects of the work to different contractors or sub-contractors, all contractors and sub-contractors shall be obligated by contract to comply with all environmental protection provisions of the entire permit, and no contract or sub-contract shall require or allow unauthorized work in areas of Corps of Engineers jurisdiction.

3. Adequate sedimentation and erosion control devices, such as geotextile silt fences or other devices capable of filtering the fines involved, shall be installed and properly maintained to minimize impacts during construction. These devices must be removed upon completion of work and stabilization of disturbed areas. The sediment collected by these devices must also be removed and placed upland, in a manner that will prevent its later erosion and transport to a waterway or wetland.

4. All exposed soils resulting from the construction will be promptly seeded and mulched in order to achieve vegetative stabilization.

5. All areas of temporary fill shall be restored to their original contour and character upon completion of the work.

6. All tree cutting shall occur between October 16 and April 19 of any year to the maximum extent practicable and no tree cutting shall occur between June 1 and July 31 of any year in order to minimize potential impacts to federally listed northern long-eared bats.

7. Mitigation shall consist of payment of $102,031.28 to the Natural Resource Mitigation Fund. The completed ILF Project Data Worksheet which must be mailed with a cashier's check or bank draft, made out to "Treasurer, State of Maine", with the permit number noted on the check. The check and worksheet should be mailed to: ME DEP, Attn: ILF Program Administrator, State House Station 17, Augusta, ME 04333. No project construction may begin until the permittee provides the Corps with a copy of the check, with the permit number noted on the check. The ILF amount is only valid for a period of one year from the date on the authorization letter. After that time, the project would need to be reevaluated and a new amount determined.

MAINE IN-LIEU-FEE (ILF)
PROJECT IMPACT WORKSHEET

DEP Invoice # *Filled in by ILF Administrator in Augusta*

Project name: Maine Turnpike Authority; West Gardiner Toll Plaza Reconstruction

Permittee(s): Maine Turnpike Authority

DEP/Corps permit #: /NAE-2018-02510 *Attach a copy of the permit*

DEP/Corps Project Manager: Beth Callahan/J. Clement

ILF Fee Amount: $102,031.28

Check Date: *Filled in by ILF Administrator in Augusta*

Project address: Intersection of Maine Turnpike, I-295 and Lewiston Road; West Gardiner, Maine *Attach a locus map*

Biophysical region - Section: Central Interior & Midcoast

Biophysical region - Subsection: Central Maine Embayment

Total impact area subject to compensation: 27,064 SF (0.62 acres)

Resource(s) impacted:

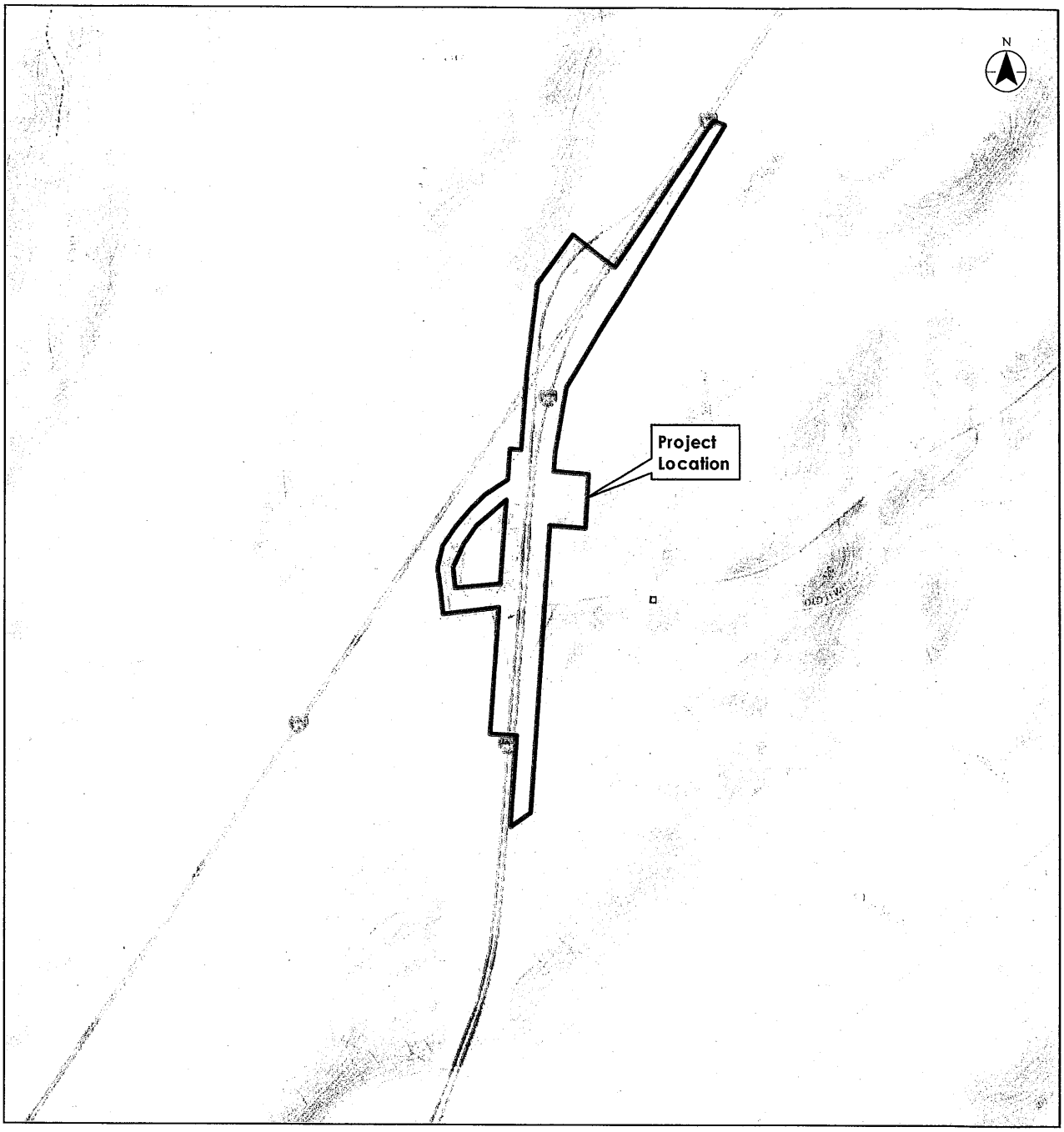
Resource Types (list all that apply)	**Functions & Values** (for wetland impacts) (list all that apply, by resource type)	**Types of Impacts** (list all that apply, by resource type)	**SF Impacted** (by resource type)	**Linear FT of Streams Impacted (for Corps use)**
PFO	WH, FF, STR, NR	Filling	12,541	NA
PEM	WH, FF, STR, NR	Filling	14,523	NA
		Total impacts:	27,064	0

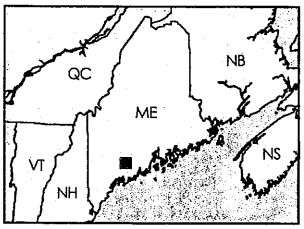
Resource Types: Wetlands by NWI Type (PEM, PFO, PSS, PUB, M1, M2, E1, E2, etc), significant vernal pool depression (SVP), significant vernal pool critical terrestrial habitat (VPCTH), shorebird feeding & staging habitat (shorebird), inland waterfowl & wading bird habitat (IWWH), Tidal waterfowl & wading bird habitat (TWWH), lake or pond (L1, L2), river/stream/brook (RSB)

Wetland Functions & Values: Groundwater recharge/discharge (GWR); floodflow alteration (FF); fish & shellfish habitat (FSH); sediment toxicant retention (STR); nutrient removal (NR); production export (PE); sediment/shoreline stabilization (SS); recreation (R); education/scientific value (ESV); uniqueness/heritage (UH); and visual quality/aesthetics (VQ); wildlife habitat (WH)

Types of Impacts: May include: filling, dredging, vegetation conversion (e.g. forested to shrub/scrub), excavation with associated discharge, etc.

V:\1956\active_Task Owner and other Non-BC\1956 Jobs\195311383\03_data\gis_cad\GIS\mxd\111983_01_Location.mxd Revised: 2018-05-14 By: khoward





Legend

Approximate Project Area

0 2,000 Feet

1:24,000 (at original document size of 8.5x11)

Stantec

Project Location
West Gardiner, Maine

195311383

Prepared by EMK on 2018-03-15
Technical Review by KH on 2018-03-15
Independent Review by RK on 2018-03-15

Client/Project

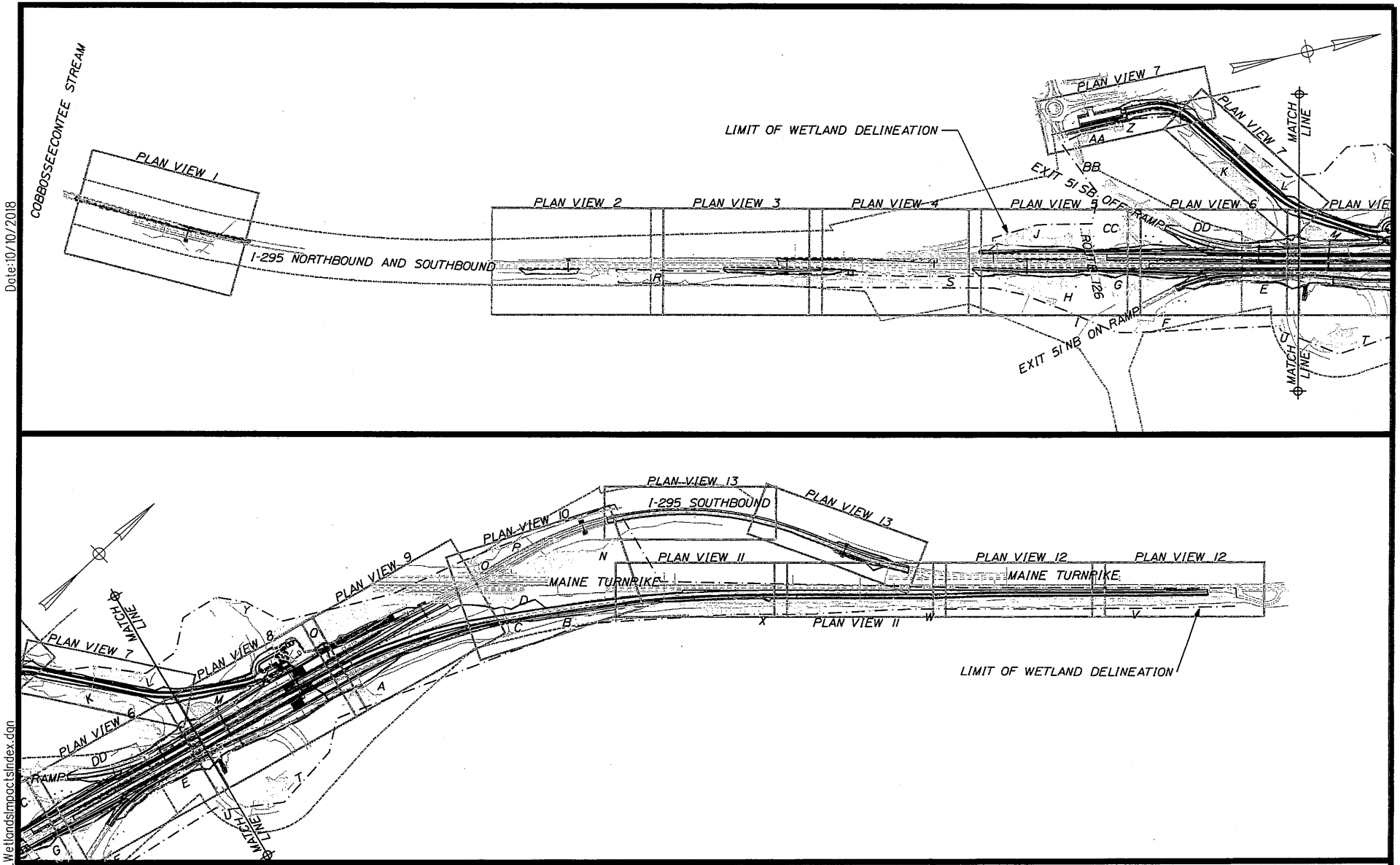
Maine Turnpike Authority
Exit 103 Open Road Tolling

Figure No.
1

Title
Site Location Map

Notes
1. Coordinate System: NAD 1983 UTM Zone 19N
2. USGS Imagery/Topo provided by The National Map Mapping Service (http://basemap.nationalmap.gov/arcgis/services/USGSImageryTopo).

Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants, and agents, from any and all claims arising in any way from the content or provision of the data.



Scale: 400 0 400 800

Scale of Feet

Stantec

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS INDEX PLAN

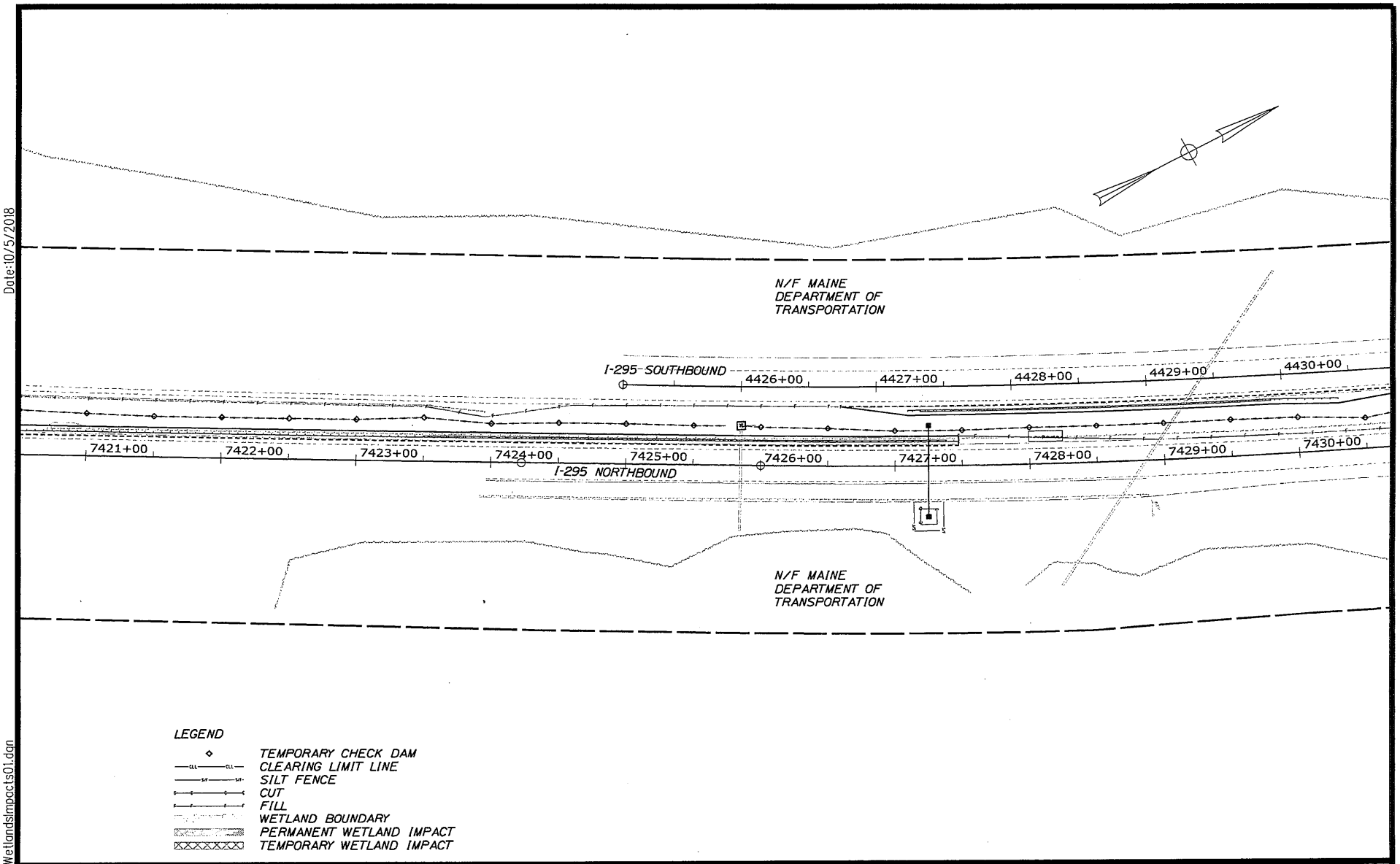
DATE: OCTOBER, 2018

SHEET 1 OF 14

Date:10/10/2018

Filename: ..._WetlandsImpactsIndex.dgn

Date:10/5/2018



LEGEND

- TEMPORARY CHECK DAM
- CLEARING LIMIT LINE
- SILT FENCE
- CUT
- FILL
- WETLAND BOUNDARY
- PERMANENT WETLAND IMPACT
- TEMPORARY WETLAND IMPACT

Scale: 50 0 50 100

Scale of Feet

Stantec

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THE GOLD STAR MEMORIAL HIGHWAY

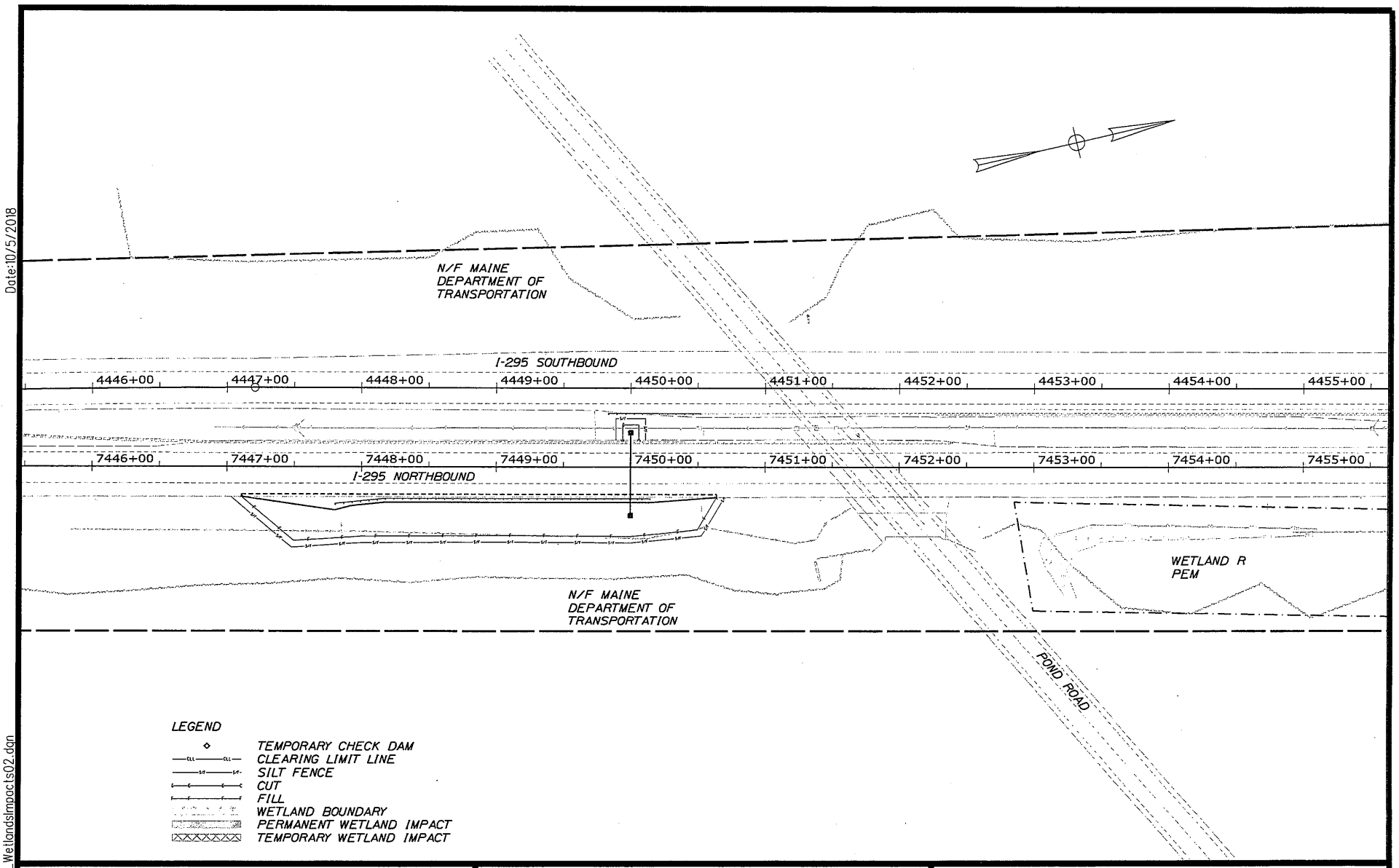
WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 1

DATE: OCTOBER, 2018

SHEET 2 OF 14

Filename: ..._Wetlands\Impacts01.dgn



Date:10/5/2018

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Scale of Feet

Stantec

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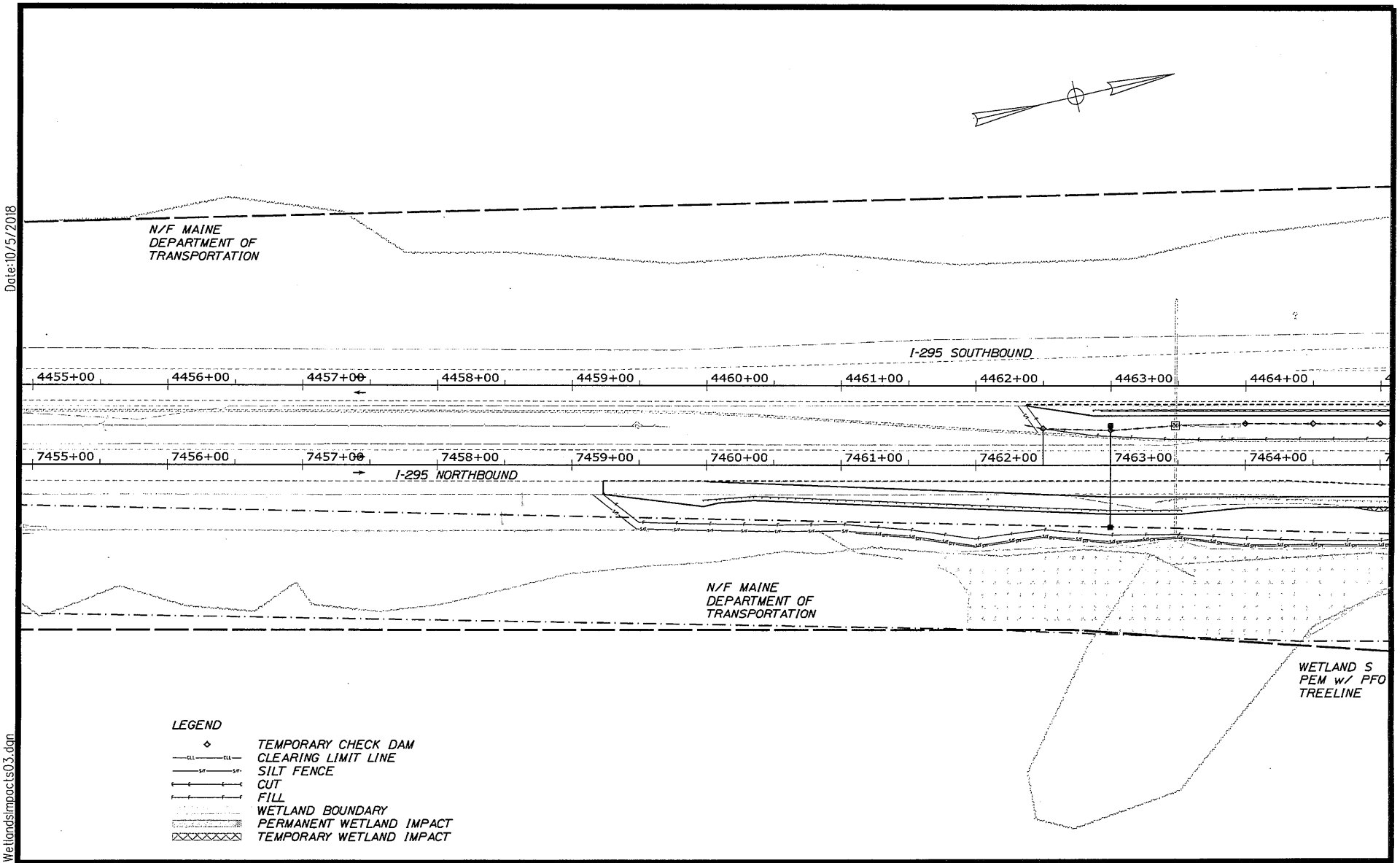
WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 2

DATE: OCTOBER, 2018



Date:10/5/2018

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Scale of Feet

Stantec

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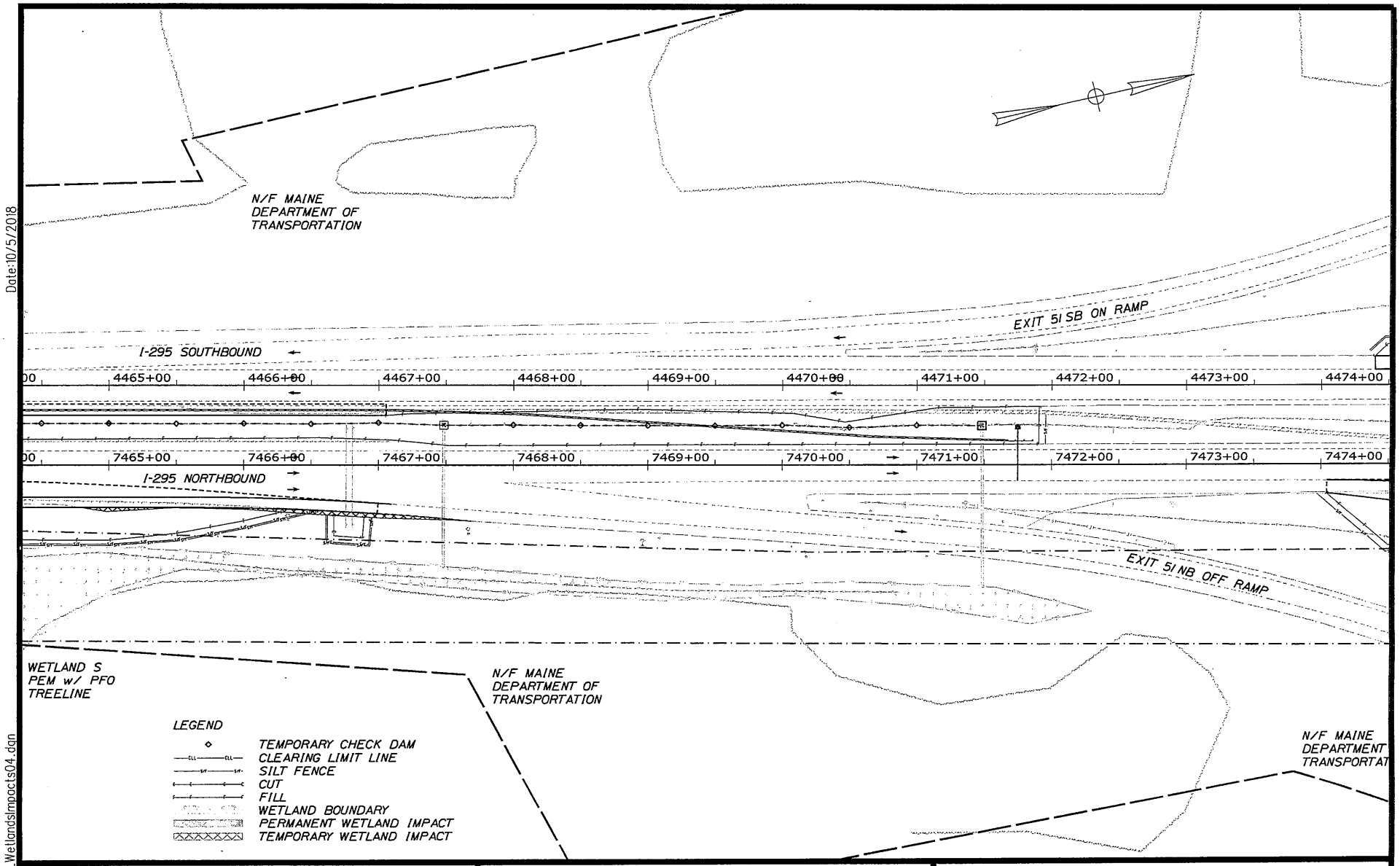
WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 3

DATE: OCTOBER, 2018



Date:10/5/2018

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Scale of Feet

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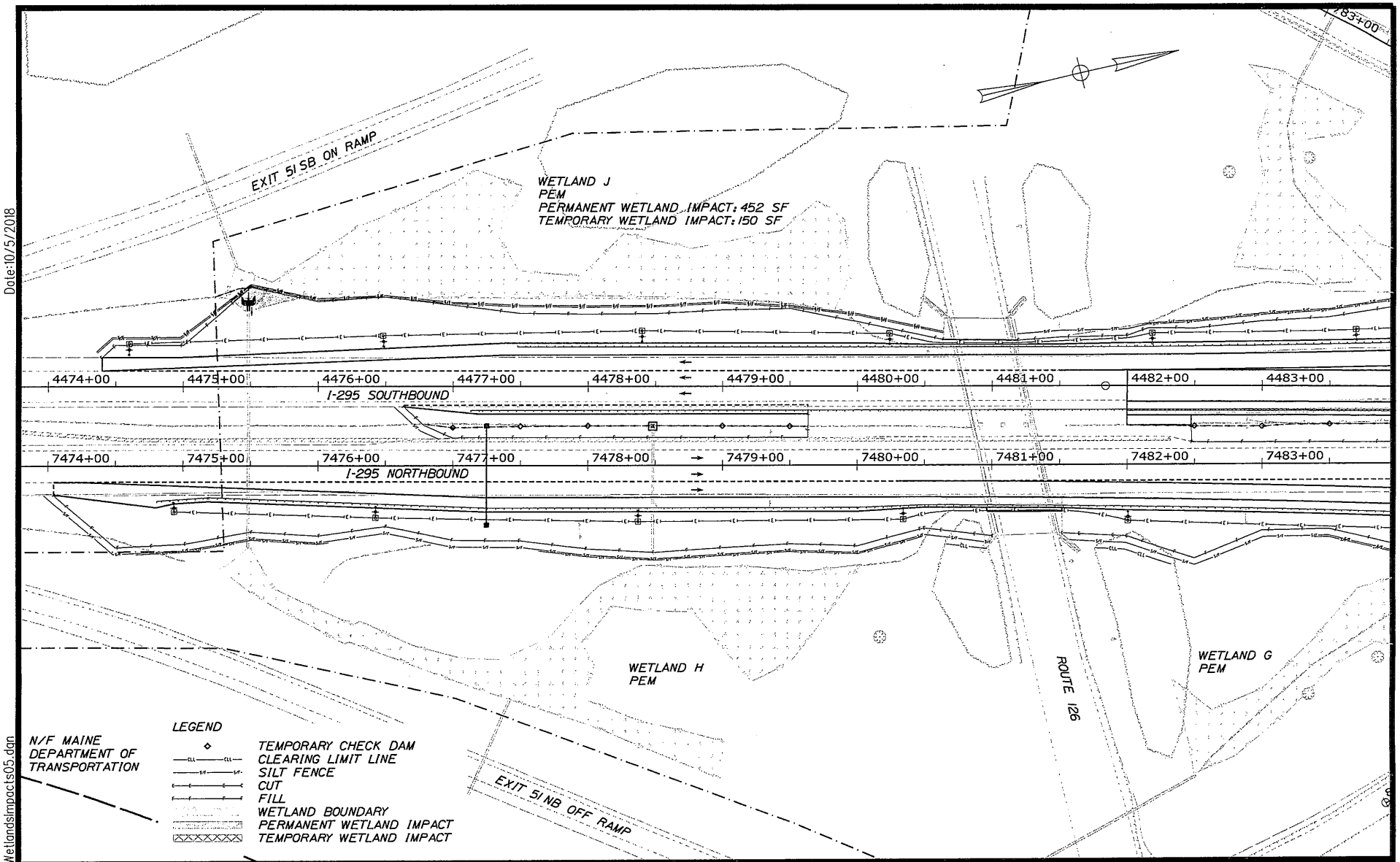
WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 4

DATE: OCTOBER, 2018



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Scale of Feet

Stantec

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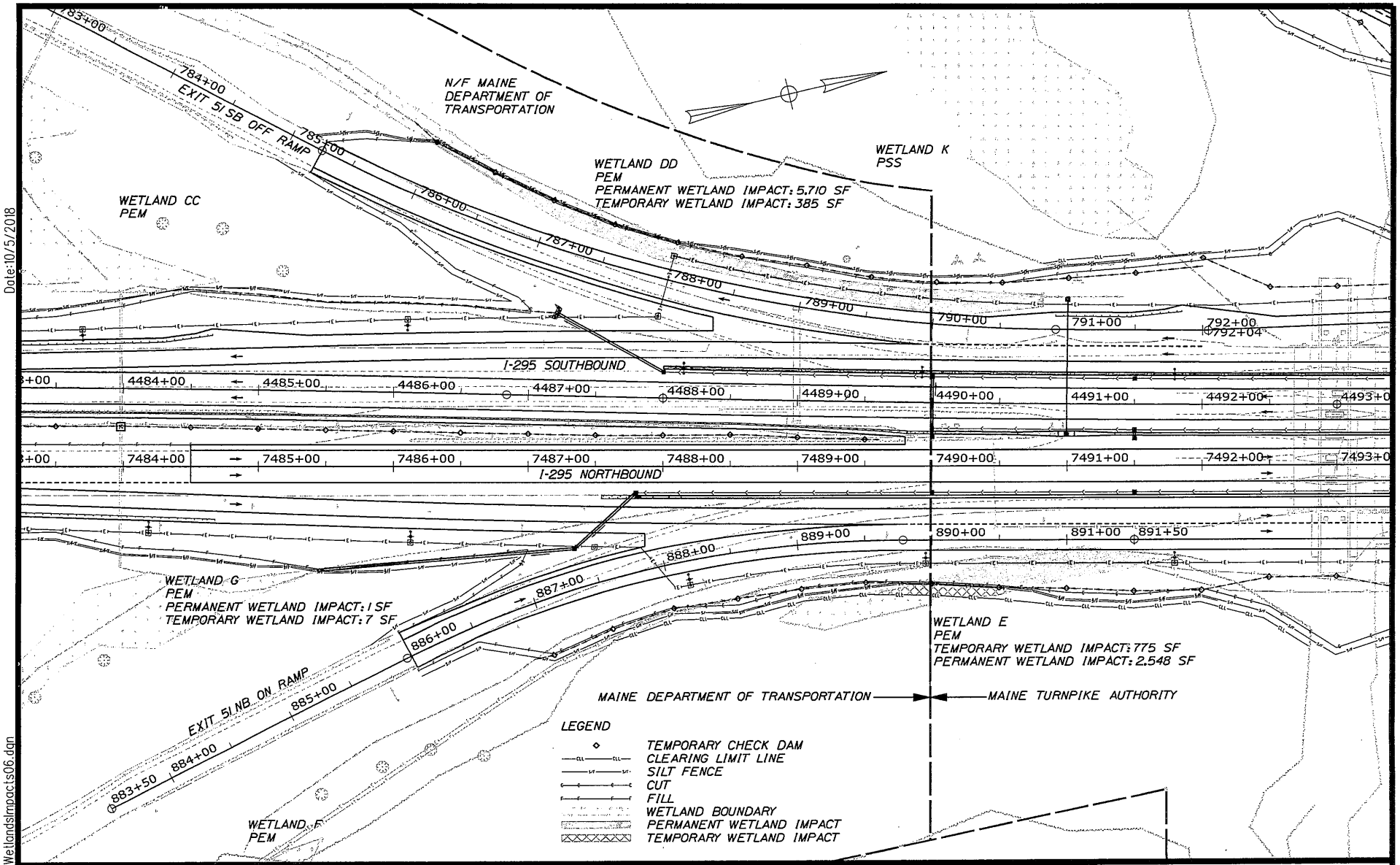
WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 5

DATE: OCTOBER, 2018



Date:10/5/2018

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Scale of Feet

Stantec

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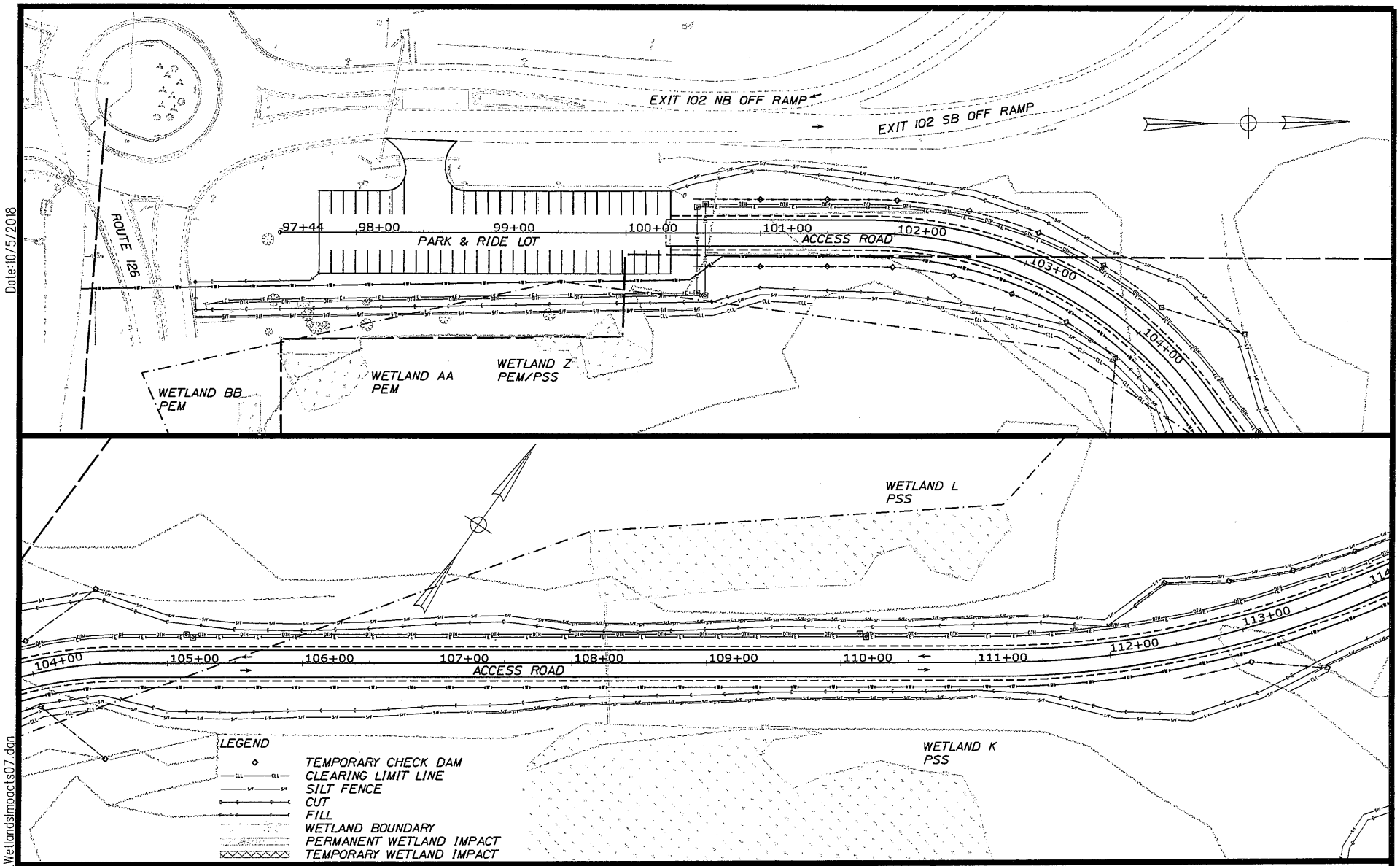
THE GOLD STAR MEMORIAL HIGHWAY

WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 6

DATE: OCTOBER, 2018



Scale: 50 0 50 100
Scale of Feet

Stantec

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

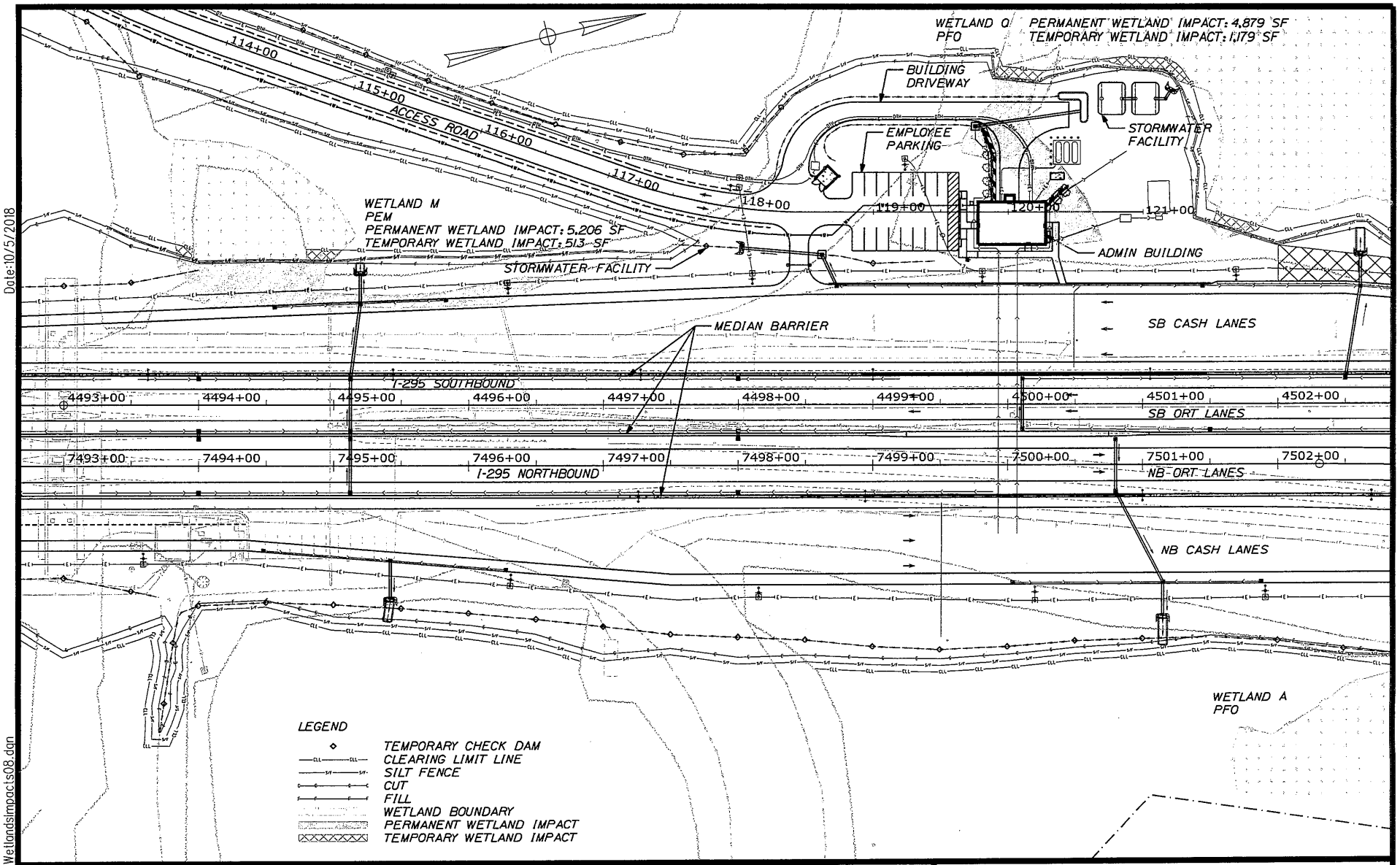
WETLAND IMPACTS PLAN VIEW 7

DATE: OCTOBER, 2018

SHEET 8 OF 14

Date:10/5/2018

Filename: ..._WetlandsImpacts07.dgn



Date:10/5/2018

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Scale of Feet

Stantec

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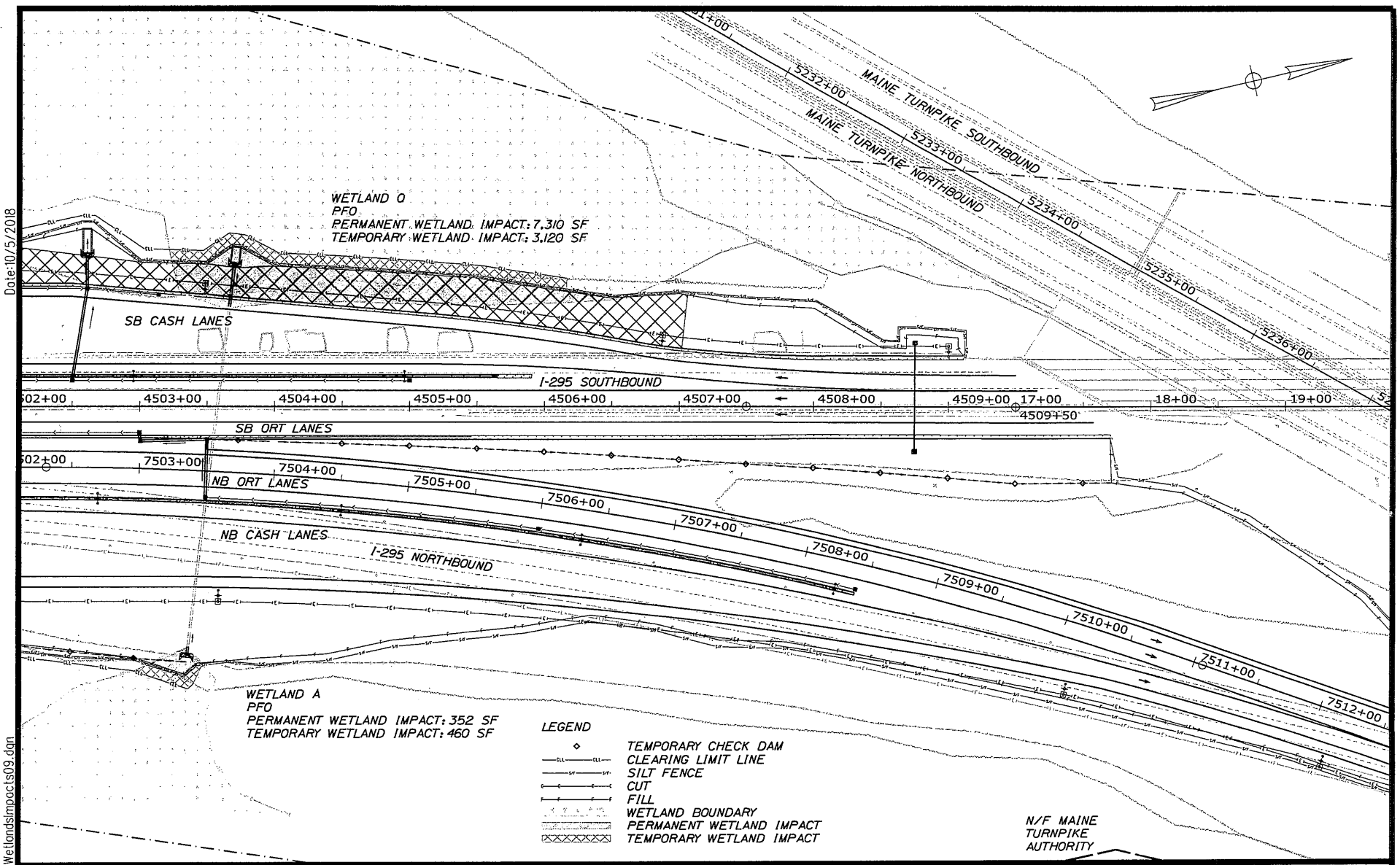
WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 8

DATE: OCTOBER, 2018



Date:10/5/2018

Filename: ..._Wetlandsimpacts09.dgn

Scale: 50 0 50 100
Scale of Feet

Stantec

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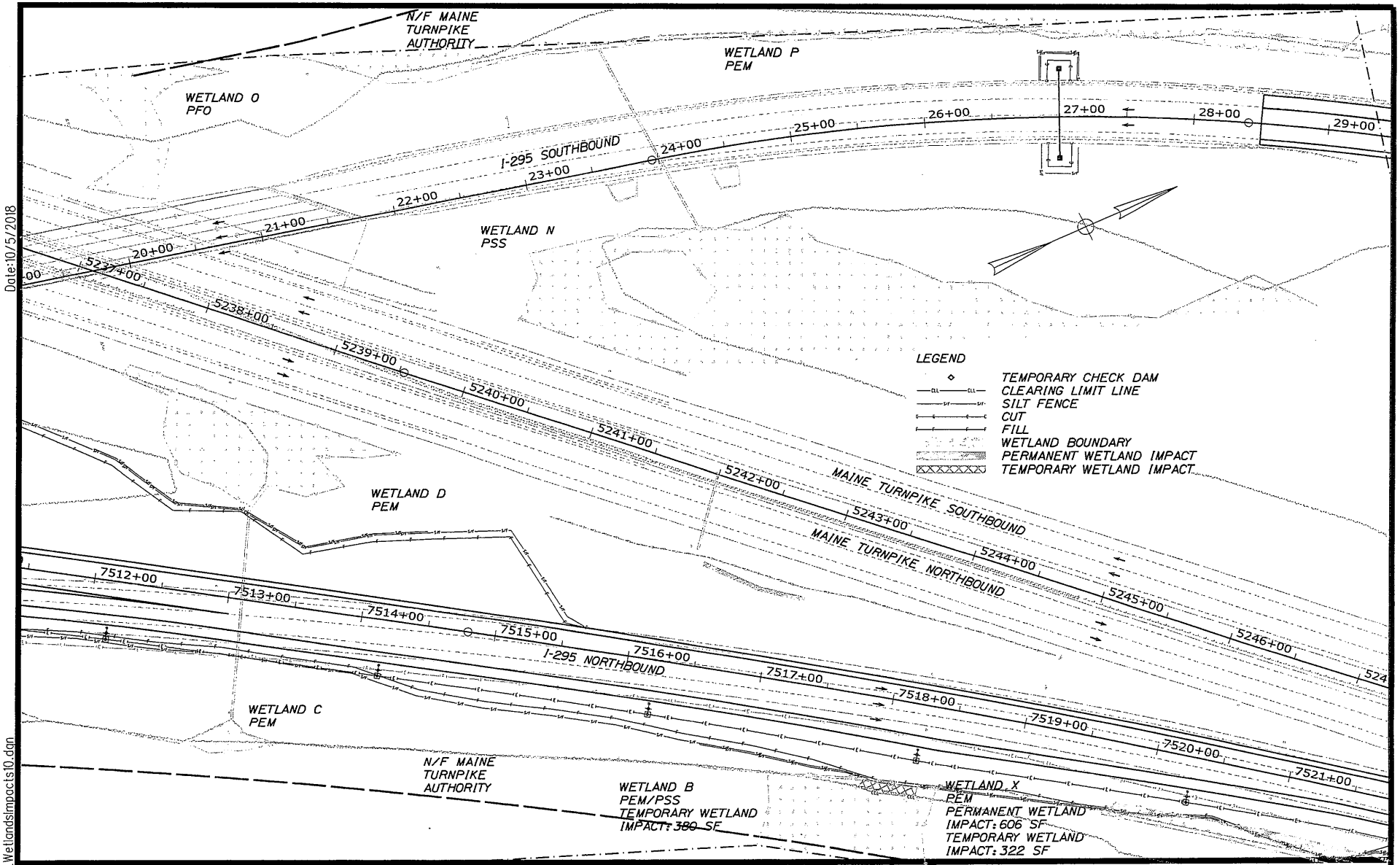
WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 9

DATE: OCTOBER, 2018



Date:10/5/2018

Filename: ..._Wetlandsimpacts10.dgn

Scale: 50 0 50 100

Scale of Feet

Stantec

MAINE TURNPIKE

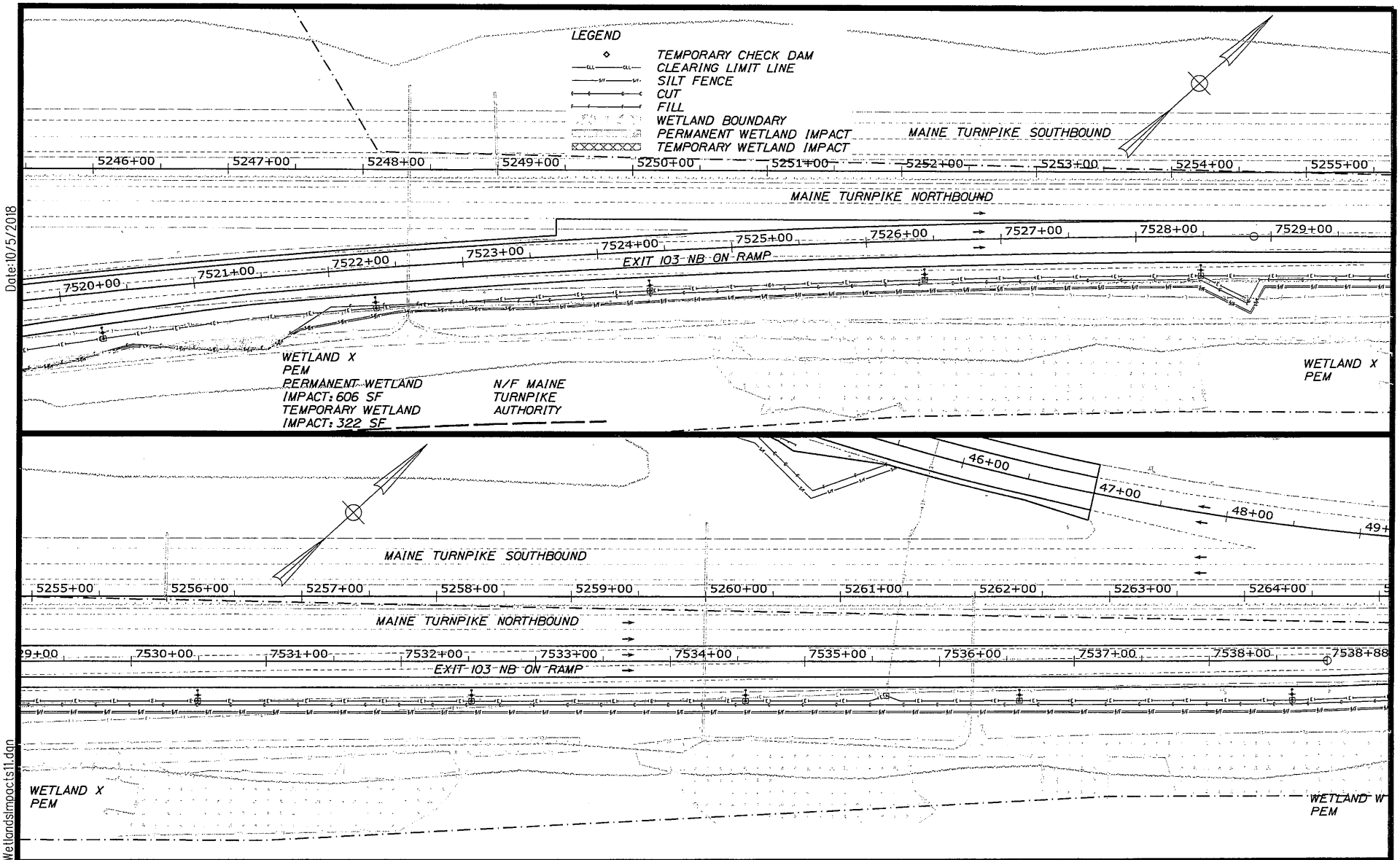
THE GOLD STAR MEMORIAL HIGHWAY

WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 10

DATE: OCTOBER, 2018

SHEET 11 OF 14



Date:10/5/2018

Filename: ..._WetlandsImpacts11.dgn

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Scale of Feet

Stantec

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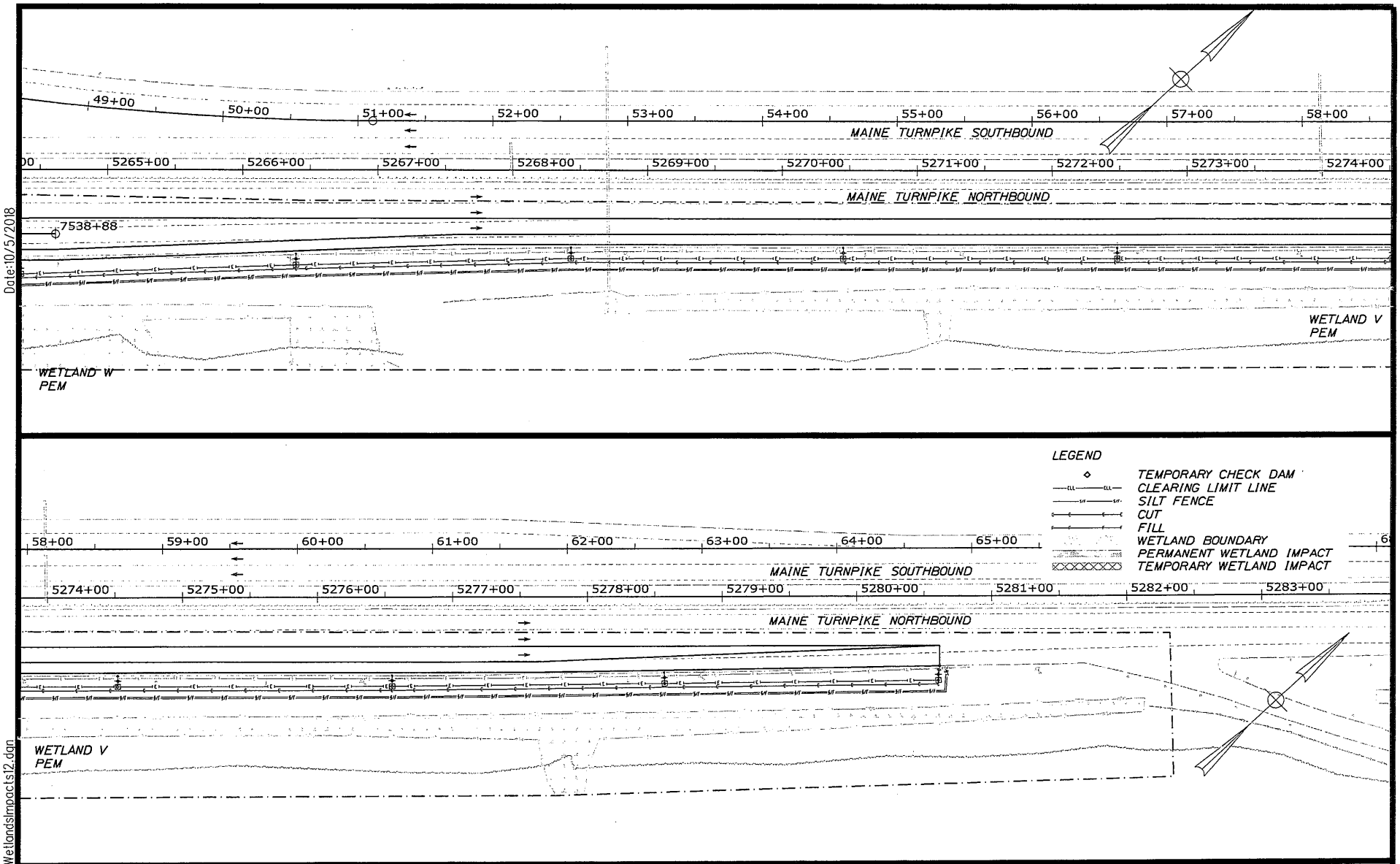
THE GOLD STAR MEMORIAL HIGHWAY

WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 11

DATE: OCTOBER, 2018

SHEET 12 OF 14



Date:10/5/2018

Filename: ..._WetlandsImpacts12.dgn

Scale: 50 0 50 100
Scale of Feet

Stantec

MAINE TURNPIKE

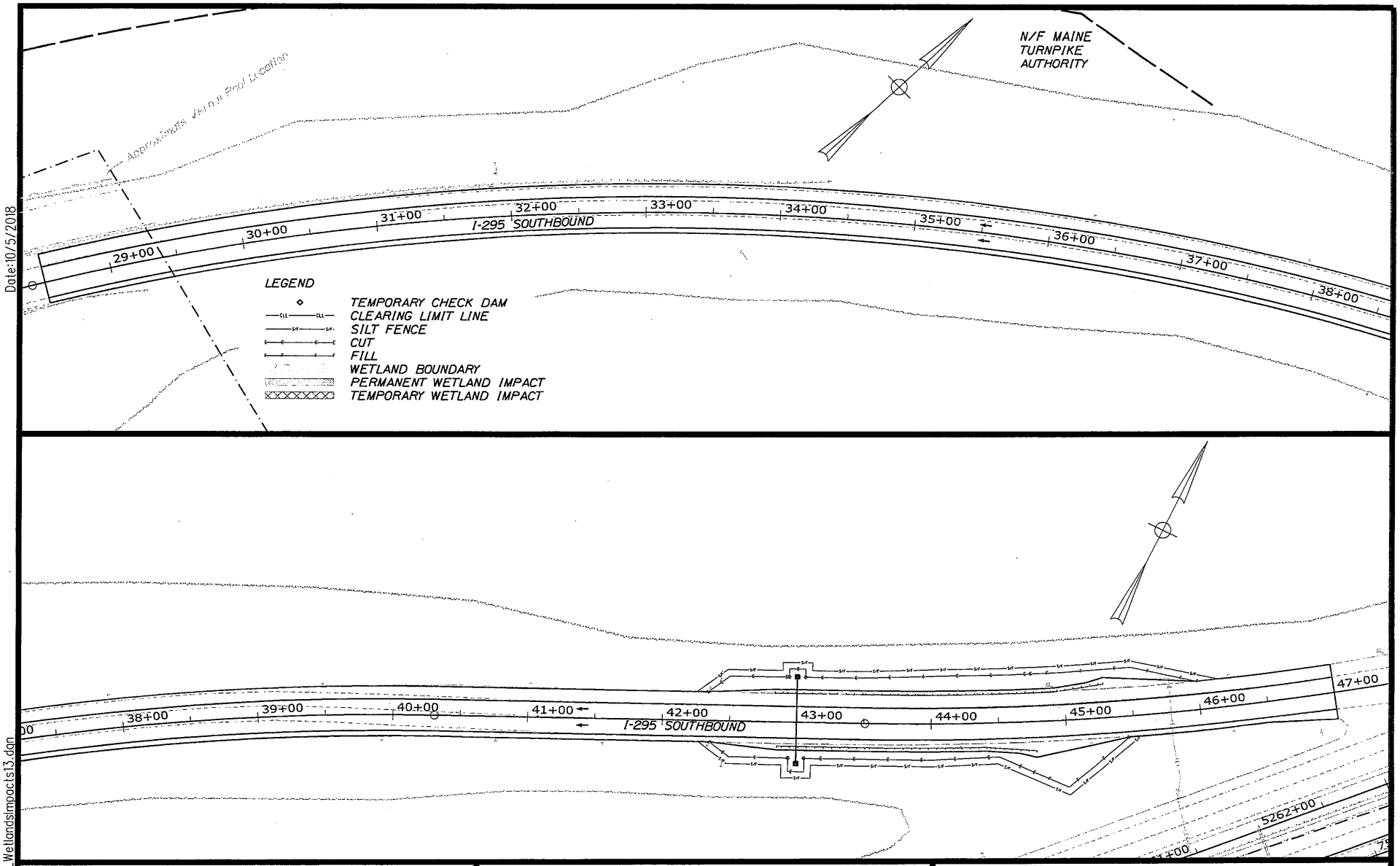
THE GOLD STAR MEMORIAL HIGHWAY

WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 12

DATE: OCTOBER, 2018

SHEET 13 OF 14



Date:10/5/2018

Filename: ..._WetlandsImpacts13.dgn

Scale: 50 0 50 100
Scale of Feet

Stantec

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 13

DATE: OCTOBER, 2018

US Army Corps of Engineers®
New England District

GENERAL PERMIT
WORK-START NOTIFICATION FORM
(Minimum Notice: Two weeks before work begins)

****
* MAIL TO: U.S. Army Corps of Engineers, New England District *
* Permits and Enforcement Branch *
* Regulatory Division *
* 696 Virginia Road *
* Concord, Massachusetts 01742-2751 *
****

Corps of Engineers Permit No. NAE-2018-022510 was issued to the Maine Turnpike Authority on . This work is located in freshwater wetlands at West Gardiner, Maine. The permit authorized the permittee to place temporary and permanent fill in freshwater wetlands at the intersection of Lewiston Road, I-295 and the Maine Turnpike in order to reconstruct and upgrade the West Gardiner toll plaza. The project will result in approximately 27,064 s.f. of permanent and 7,291 s.f. of temporary wetland impact.

The people (e.g., contractor) listed below will do the work, and they understand the permit's conditions and limitations.

PLEASE PRINT OR TYPE

Name of Person/Firm: _____

Business Address: _____

_____

_____

_____

Telephone Numbers: ( ) _____ ( ) _____

Proposed Work Dates: **Start:** _____ **Finish:** _____

Permittee/Agent Signature: _____ **Date:** _____

Printed Name: _____ **Title:** _____

Date Permit Issued: _____ **Date Permit Expires:** _____

****

FOR USE BY THE CORPS OF ENGINEERS

PM: Clement **Submittals Required:** Yes

Inspection Recommendation: Inspect as convenient

_____

_____

US Army Corps of Engineers ®
New England District

(Minimum Notice: Permittee must sign and return notification within one month of the completion of work.)

COMPLIANCE CERTIFICATION FORM

Permit Number: NAE-2018-02510

Project Manager Clement

Name of Permittee: Maine Turnpike Authority

Permit Issuance Date: _____

Please sign this certification and return it to the following address upon completion of the activity and any mitigation required by the permit. You must submit this after the mitigation is complete, but not the mitigation monitoring, which requires separate submittals.

****
* MAIL TO: U.S. Army Corps of Engineers, New England District *
* Permits and Enforcement Branch C *
* Regulatory Division *
* 696 Virginia Road *
* Concord, Massachusetts 01742-2751 *
****

Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit was completed in accordance with the terms and conditions of the above referenced permit, and any required mitigation was completed in accordance with the permit conditions.

_____ _____
Signature of Permittee Date

_____ _____
Printed Name Date of Work Completion

(_____)_____ (_____)_____
Telephone Number Telephone Number

Maine Turnpike Authority
2360 Congress Street
Portland, Maine 04102

Daniel E. Wathen, Augusta, Chairman
Robert D. Stone, Auburn, Vice Chairman
Michael J. Cianchette, Cumberland
John E. Dority, Augusta
Ann R. Robinson, Portland
Thomas J. Zuke, Saco
Karen S. Doyle, Chief Financial Officer MaineDOT, Ex-Officio

Peter Mills, Executive Director
Douglas Davidson, Chief Financial Officer & Treasurer
Peter S. Merfeld, P.E., Chief Operations Officer
Jonathan Arey, Secretary & General Counsel

November 15, 2018

U.S. Army Corps of Engineers
Attn: Jay Clement
442 Civic Center Drive, Suite 350
Augusta, ME 04330

Re: Maine General Permit Pre-Construction Notification
Exit 103 Open Road Tolling Project, West Gardiner

Dear Jay:

Enclosed please find a Pre-Construction Notification for the proposed Exit 103 Open Road Tolling (ORT) project in West Gardiner. The Maine Turnpike Authority (MTA) has an on-going program to implement ORT. The Gardiner Exit 103 ORT Conversion Project on I-295 is a continuation of this program, and will upgrade the tolling system of the Exit 103 barrier toll to an ORT plaza. The MTA is also in the process of upgrading the existing equipment of the cash lanes since the equipment is approaching the end of its useful life.

This work requires realignment and widening of the roadway, construction of a new toll plaza and tunnel, installation of tolling equipment and infrastructure, realignment of the Exit 51 on and off ramps, installation of advanced guide signs, demolition of the existing plaza and administration building, and construction of a new administration building and associated parking. The proposed project will result in 34,355 square feet of disturbance within wetlands, including 7,291 square feet of temporary clearing and disturbance during construction and 27,064 square feet of permanent wetland fill. There are no proposed impacts to streams or vernal pools. If you have any questions or require additional information, please contact me directly at (207) 482-8275 or sdonohue@maineturnpike.com. Thank you for your assistance.

Sincerely,
Maine Turnpike Authority

Sean Donohue, CSS
Permitting Coordinator/ Environmental Liaison

November 15, 2018
Jay Clement

Reference: **Maine Turnpike Authority, Exit 103 ORT Project, West Gardiner, ME: Corps Category 2 Pre-Construction Notification**

TABLE OF CONTENTS

November 15, 2018
Jay Clement

Reference: **Maine Turnpike Authority, Exit 103 ORT Project, West Gardiner, ME: Corps Category 2 Pre-Construction Notification**

EXHIBIT 1: CORPS CATEGORY 2 PERMIT APPLICATION FORM

U.S. Army Corps of Engineers (USACE)

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT

33 CFR 325. The proponent agency is CECW-CO-R.

Form Approved - OMB No. 0710-0003 Expires: 01-08-2018

The public reporting burden for this collection of information, OMB Control Number 0710-0003, is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR APPLICATION TO THE ABOVE EMAIL.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned. System of Record Notice (SORN). The information received is entered into our permit tracking database and a SORN has been completed (SORN #A1145b) and may be accessed at the following website: http://dpcld.defense.gov/Privacy/SORNsIndex/DOD-wide-SORN-Article-View/Article/570115/a1145b-ce.aspx

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME	8. AUTHORIZED AGENT'S NAME AND TITLE (agent is not required)
First - Sean Middle - Last - Donohue	First - Rodney Middle - Last - Kelshaw
Company - Maine Turnpike Authority	Company - Stantec Consulting Services
E-mail Address - sdonohue@maineturnpike.com	E-mail Address - rodney.kelshaw@stantec.com
6. APPLICANT'S ADDRESS:	9. AGENT'S ADDRESS:
Address- 2360 Congress St.	Address- 30 Park Dr.
City - Portland State - ME Zip - 04102 Country - USA	City - Topsham State - ME Zip - 04086 Country - USA
7. APPLICANT'S PHONE NOs. w/AREA CODE	10. AGENTS PHONE NOs. w/AREA CODE
a. Residence b. Business (207) 482-8275 c. Fax	a. Residence b. Business (207) 406-5485 c. Fax

STATEMENT OF AUTHORIZATION

11. I hereby authorize, _____ to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

_____ SIGNATURE OF APPLICANT _____ DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions)
Interchange 103 Barrier Toll Plaza; Open Road Tolling Conversion

13. NAME OF WATERBODY, IF KNOWN (if applicable)	14. PROJECT STREET ADDRESS (if applicable)
Unnamed freshwater wetlands	Address I-295 Toll Plaza
15. LOCATION OF PROJECT	
Latitude: °N 44.212633 Longitude: °W -69.824315	City - West Gardiner State- ME Zip- 04345

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)

State Tax Parcel ID Municipality West Gardiner

Section - N/A Township - N/A Range - N/A

17. DIRECTIONS TO THE SITE

The project begins approximately 3,300' south of the existing toll facility on I-295 at Station 7460+00 on the northbound baseline and extends approximately 2,900' north of the existing gore of I-295 and the Maine Turnpike I-95.

18. Nature of Activity (Description of project, include all features)

The proposed construction includes:

-Two open road tolling (ORT) lanes for each direction with space frames for overhead tolling equipment
-Three cash lanes for each direction with toll booth and canopies and structural roadway slab
-Tunnel from the administration building to the cash lanes
-Exit and entrance lanes for cash traffic
-Concrete barrier to separate directional traffic and ORT/cash traffic
-Modification of Exit 51 NB on and off and SB off ramps
-Reconfiguration of the Exit 103 NB on ramp to a double parallel ramp with the Maine Turnpike Maineline
-Roadway lighting, drainage structures, signing, administration building & access road, employee parking
-Demolition of the existing plaza, bridge, parking, and administration building

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

The Maine Turnpike Authority (MTA) has an on-going program to implement Open Road Tolling (ORT) at many of their toll plazas. The Gardiner Exit 103 ORT Conversion Project on I-295 represents a continuation of this program. The MTA plans to upgrade the tolling system of the Exit 103 barrier toll to an ORT plaza. The MTA is also in the process of upgrading the existing equipment of the cash lanes since the equipment is quickly approaching the end of its useful life.

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

Permanent fill for roadway and associated with extensions.
Temporary impacts during construction.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount in Cubic Yards	Type Amount in Cubic Yards	Type Amount in Cubic Yards

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres 0.79 acres (27,064 square feet of permanent fill; 7,291 square feet of temporary clearing and disturbance)
or
Linear Feet

23. Description of Avoidance, Minimization, and Compensation (see instructions)

See the following Exhibits 5, 6 and 7

24. Is Any Portion of the Work Already Complete? ☐ Yes ☒ No IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

a. Address- See Attached as Exhibit 15 Abutter List

City - State - Zip -

b. Address-

City - State - Zip -

c. Address-

City - State - Zip -

d. Address-

City - State - Zip -

e. Address-

City - State - Zip -

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED
Maine DEP	Permit By Rule #11	pending			
Maine DEP	Construction GP	pending			

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT	DATE	SIGNATURE OF AGENT	DATE
[signature]	11-15-18		

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

November 15, 2018
Jay Clement

Reference: **Maine Turnpike Authority, Exit 103 ORT Project, West Gardiner, ME: Corps Category 2 Pre-Construction Notification**

EXHIBIT 2: TITLE, RIGHTS, INTEREST

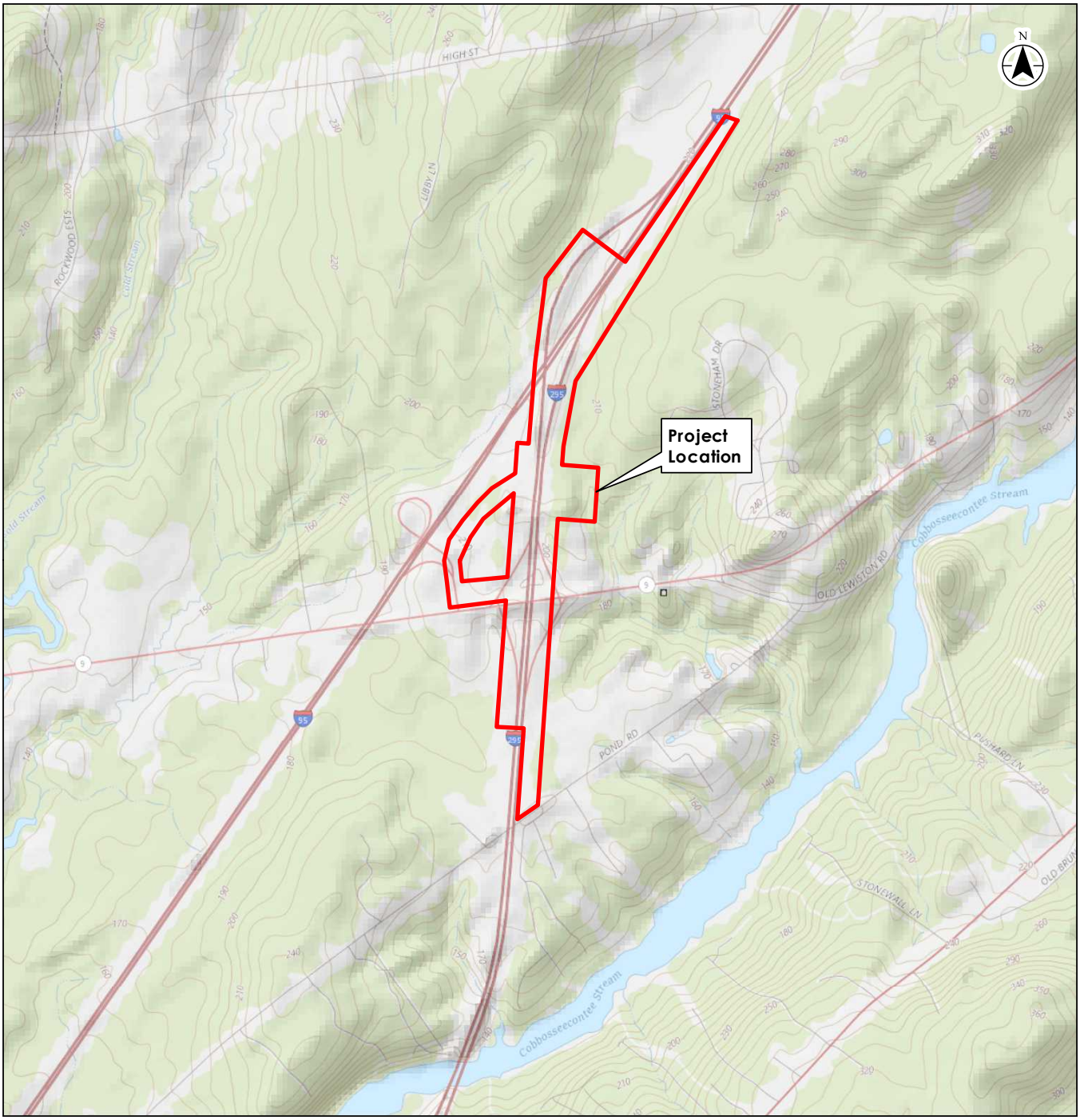
The Maine Turnpike Authority (MTA) and Maine Department of Transportation have public rights-of-way that encompass the project limits. No private right-of-way will be required.

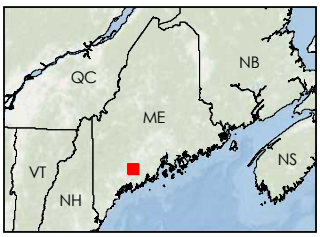
November 15, 2018
Jay Clement

Reference: **Maine Turnpike Authority, Exit 103 ORT Project, West Gardiner, ME: Corps Category 2 Pre-Construction Notification**

EXHIBIT 3: FIGURE 1. PROJECT LOCATION MAP

V:\1956\active_Task Owner and other Non-BC\1956 Jobs\195311384\03_data\gis_cad\GIS\mxd\11383_01_Location.mxd Revised: 2018-05-14 By: khoward





Legend

Approximate Project Area

0 2,000 Feet

1:24,000 (at original document size of 8.5x11)

Stantec

Project Location
West Gardiner, Maine

195311383

Prepared by EMK on 2018-03-15
Technical Review by KH on 2018-03-15
Independent Review by RK on 2018-03-15

Client/Project

Maine Turnpike Authority
Exit 103 Open Road Tolling

Figure No.

1

Title

Site Location Map

Notes

1. Coordinate System: NAD 1983 UTM Zone 19N
2. USGS Imagery/Topo provided by The National Map Mapping Service (http://basemap.nationalmap.gov/arcgis/services/USGSImageryTopo).

Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants, and agents, from any and all claims arising in any way from the content or provision of the data.

November 15, 2018
Jay Clement

Reference: **Maine Turnpike Authority, Exit 103 ORT Project, West Gardiner, ME: Corps Category 2 Pre-Construction Notification**

EXHIBIT 4: NARRATIVE PROJECT DESCRIPTION

The Maine Turnpike Authority (MTA) has an on-going program to implement Open Road Tolling (ORT) at many of their toll plazas. The West Gardiner Exit 103 ORT Conversion Project on I-295 is a continuation of this program. The MTA plans to upgrade the tolling system of the Exit 103 barrier toll to an ORT plaza. The MTA is also in the process of upgrading the existing equipment of the cash lanes since the equipment is quickly approaching the end of its useful life.

The existing barrier toll plaza will be replaced with an ORT plaza that includes two ORT lanes in both the north and southbound directions of I-295 and three cash lanes and three booths for each direction. The new plaza location is approximately 700 feet north of the existing plaza. This work requires realignment and widening of the roadway, construction of toll plaza and a tunnel, installation of tolling equipment and infrastructure, realignment of the Exit 51 northbound (NB) on ramp, NB off ramp, and southbound (SB) off ramp, installation of advanced guide signs, reconfiguration of the Exit 103 NB on ramp to a parallel ramp, demolition of the existing plaza and administrative building, and construction of a new administrative building and associated parking.

November 15, 2018
Jay Clement

Reference: **Maine Turnpike Authority, Exit 103 ORT Project, West Gardiner, ME: Corps Category 2 Pre-Construction Notification**

EXHIBIT 5: ALTERNATIVES ANALYSIS

Stantec

To:	Ralph Norwood, PE, PTOE Maine Turnpike Authority	From:	Lauren Meek, PE Stantec
File:	195311383	Date:	October 23, 2018

Reference: EXIT 103 TOLL PLAZA - ALTERNATIVES ANALYSIS

I. Introduction

This alternatives analysis documents the considerations for improvements to the aging Exit 103 barrier toll plaza that was built in 1973. The plaza is located at the northern terminus of Interstate 295 (I-295) in West Gardiner, Maine. This plaza and the surrounding infrastructure is integral for traffic connectivity because I-295 merges with the Maine Turnpike (I-95) north of the plaza and Exit 103 connects northbound I-295 traffic to the I-95 Turnpike and southbound I-95 Turnpike traffic to I-295. South of the existing 103 plaza is the Exit 51 Interchange for Route 126. The West Gardiner ORT plaza on I-95 Turnpike is south of Exit 103 at Mile Marker 100.

Figure 1 - Location Map

II. Project Purpose

The basic project purpose is to replace the existing Exit 103 barrier toll plaza with a modern Open Road Tolling (ORT) facility that provides:

1.) safe and efficient traffic and toll collection operations for the traveling public and plaza personnel and;

2.) modernization of outdated toll collection equipment and methodologies consistent with the Turnpike-wide toll system conversion which includes implementation of ORT.

An ORT plaza improves motorist safety at toll plazas by physically separating the motorists that must stop and pay cash at a toll booth to the right from the electronically-tolled users that can maintain highway speed in the center lanes. At the existing plaza, both the “stop and go” cash paying traffic and electronically-tolled traffic that does not need to stop must pass through the existing barrier toll plaza. Mixing vehicles traveling at different speeds can cause unsafe conditions and vehicle conflicts. The ORT plaza configuration reduces the total number of vehicles in the cash toll plaza area and segregates the faster-moving traffic.

The existing toll plaza requires toll attendants to cross as many as six lanes of traffic, some of which does not stop, to reach the outermost cash booth. The proposed tunnel for the ORT plaza provides access from the administration building to the cash booths at the opposite side of the plaza, so attendants do not have to cross more than one live lane of traffic, significantly increasing the safety of the toll attendants.

Another safety concern related to the configuration of the existing plaza is the proximity of the I-295 Exit 51 Interchange. The northbound on ramp and southbound off ramp are 300-feet from the existing plaza, creating a situation with merging and diverging traffic patterns intertwined with traffic both accelerating and decelerating. The varied speeds and numerous locations where motorists must make decisions about merging or diverging increase the number of potential vehicle conflicts.

Replacing the plaza will also address the aging toll collection equipment. The toll collection equipment was last upgraded in 2003. In 2011, the Maine Turnpike Authority (MTA) began upgrading the tolling equipment at all plazas, with Exits 45 and 103 as the remaining plazas in the system that have not been updated. The industry standard is to upgrade the tolling equipment every 15 years, and not doing so jeopardizes toll revenue.

III. Alternatives

MTA considered five alternatives:

Alternative 1: No Build/Upgrades – This option consists of leaving the existing toll plaza as-is. This is not a preferred option, because it would maintain the existing unsafe conditions presented by the barrier toll plaza configuration and would not update the existing toll plaza equipment.

As detailed in the project purpose, the unsafe conditions consist of vehicle conflicts with other vehicles and toll attendants. Cash paying traffic mixes with electronically-tolled traffic at the barrier plaza, and the Exit 51 interchange ramps add additional lane changes, with accelerating and decelerating traffic. Concern for plaza personnel safety stems from the toll attendants having to cross up to six active toll lanes.

Based on the 2013-2015 crash data provided by the MaineDOT, this location does not have any high crash locations within the vicinity of the plaza but there have been several crashes in the last five years in the plaza area. There is a notable trend of an increase in the frequency of accidents with 2018 having the most in the last six years. The following table notes the number and type of accidents that have occurred in the plaza area in the last six years. The majority of crashes are from rear ends or sideswipes, which could be the result from traffic merging or changing lanes.

Year	Number of Accidents in Plaza Area		
	Southbound	**Northbound**	**Total**
2013	2 - Rear End / Sideswipe	0	2
2014	0	1 - Rear End / Sideswipe	1
2015	0	3 - Rear End / Sideswipe	3
2016	3 - Rear End / Sideswipe	2 - Rear End / Sideswipe	5
2017	1 - Rear End / Sideswipe	2 - Rear End / Sideswipe 1 – Went off Road 1 – Other	5
2018 (as of 10/18)	2 - Rear End / Sideswipe 1 – Went off Road 1 – Other	2 - Rear End / Sideswipe 1 - Pedestrians	7

In addition to the safety concerns, the toll plaza infrastructure is outdated and needs rehabilitation. The existing toll lanes are only 10 feet wide, so toll equipment is easily damaged by snow plows and wider vehicles; such as RVs. Current MTA standards are to provide 12 feet in width for the toll lane to reduce this maintenance issue. The existing booth islands are 6 feet wide and not able to provide safe and comfortable working conditions for the toll attendants. Current MTA standards are to provide 8-foot-wide toll booth islands to ensure ergonomic working conditions. As described in the project purpose, the toll collection equipment is also obsolete, increasing the potential for lost revenue, which reduces the MTA's ability to keep the infrastructure safe and current.

The no-build option also does not address the existing traffic capacity issues. The existing plaza has seven lanes; the middle lane has reversible capabilities so that a fourth lane can flow in either direction as needed, depending on traffic volumes. A traffic analysis of the plaza volumes indicates that four cash lanes are needed for each direction without a reversible lane. The image below is of the existing plaza showing the existing seven lanes.

Because this No Build/Upgrade alternative does not address the project purpose, it has been dismissed as a viable option.

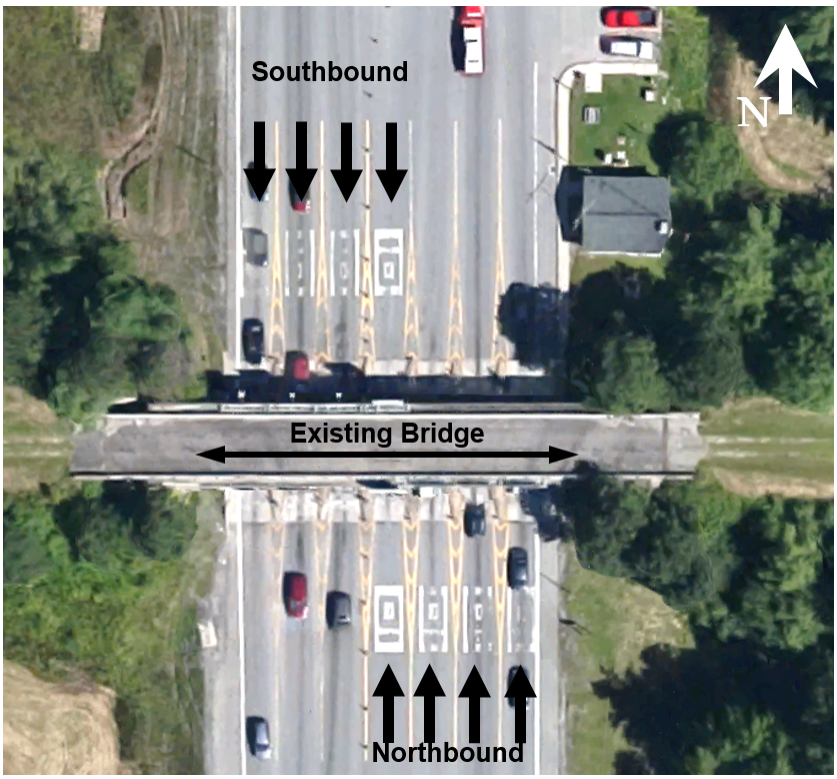


Figure 2 – Existing Barrier Plaza

Alternative 2: Upgrade cash equipment in the existing plaza – This option would replace the tolling equipment and maintain the existing infrastructure (i.e. toll booths and islands, the existing abandoned bridge that serves as a canopy, administrative building and parking lot, etc.) that was built in 1973. This alternative would solve the revenue collection issues. However, it does not address: the safety concerns for vehicles; the safety concerns for toll attendants; poor existing conditions of the infrastructure including not meeting minimum standards for toll attendant booth safety; and capacity issues noted in Alternative 1. For these reasons, Alternative 2 does not address the project purpose and has been dismissed as a viable option.

Alternative 3: Replace the existing plaza at the existing location – This option would replace the existing plaza with either a similar barrier toll plaza or ORT plaza in the existing location. The proximity of the northbound on and southbound off ramps for the I-295 Interchange at Exit 51 would remain a traffic movement and safety issue and would not meet contemporary highway design criteria for appropriate approach and departure zones for the cash booths of either a barrier or ORT plaza configuration. This would maintain potential for vehicle conflicts as noted above and substantially impact traffic operations.

The existing plaza is 122 feet wide and located under a 197 foot long bridge that was part of a previous highway alignment. A new, lower-speed barrier toll plaza would be 166 feet wide and an ORT plaza with highway speed center lanes and separate cash lanes on the outside would be 228 feet wide. Other plazas that have undergone similar updates have conventional canopies, which allow phased demolition and vehicles passing through to occur simultaneously. However, phased construction at this location is challenging because the toll equipment is supported on the bridge as shown in Figure 3. Demolition of the bridge cannot begin until new toll booths become operational. These new lanes would have to be temporary and beyond the existing bridge abutments.

Temporary shoring would be required for the existing bridge to remain during the construction of the temporary booths. Once the temporary booths are operational, the existing plaza would be demolished, and the ORT plaza would be constructed. Challenges for the temporary booths include: providing safe access for MTA personnel with a construction work zone in between the booths; providing the necessary mechanical, power, communication lines to the booths from the existing administration building; and maintaining an alignment that meets design standards for the roadway approaches to the booths. Figure 4 shows in plan-view the existing plaza and bridge, width of an ORT plaza and the location of the temporary booths and administrative building. A new administration building would have to be constructed to the outside of the temporary booths and would be farther from the permanent SB cash booths resulting in a longer tunnel and greater distance to access the cash booths. The complicated bridge demolition and construction of temporary booths would prohibitively increase construction costs. This option also does not address the safety issues of the plaza proximity to the Exit 51 interchange.

Figure 3 – Southbound View of Existing Plaza

In addition, the temporary booths that would have to be constructed to the outside of the bridge abutments and the ORT plaza limits would require significant road widening resulting in additional impacts to natural resources. While impacts to Wetland Q would be reduced from the preferred alternative (Alternative 5), Wetlands E, M, and K would be impacted resulting in more total impacts than Alternative 5.

Given the proximity of Exit 51 and the associated logistical constraints related to construction, this alternative was eliminated as a viable option on the basis of technical and logistical constraints. Moreover, Alternative 3 was not the least environmentally damaging practicable alternative, due to a larger area of wetland impacts as compared to Alternative 5, which was an overriding factor for elimination of Alternative 3 from a permitting perspective.

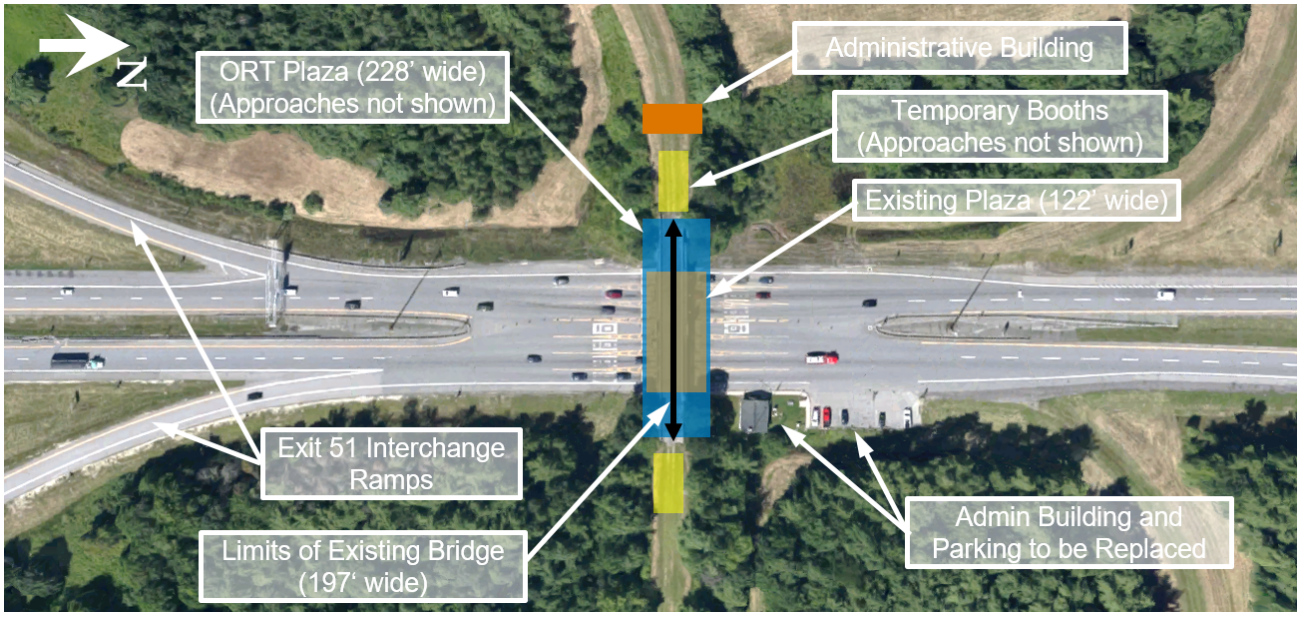


Figure 4 – Alternative 3 Location Map

Alternative 4: Replace the plaza south of existing location – There are two possible locations for this alternative as shown in Figure 5: Alternative A constructs an ORT plaza under the Route 126 bridge within the Exit 51 interchange, or Alternative B constructs an ORT plaza farther to the south and north of Pond Road Bridge.

Figure 5 – Alternative 4 Location Map

A barrier or ORT plaza with lane and toll booth island widths meeting design standards immediately to the north or south of the Route 126 Bridge would require replacing the bridge so that the new bridge can span the widened pavement required for the approach and departure zones of the cash booths. The existing Route 126 two-span steel continuous bridge is 170 feet long and owned by the MaineDOT. The Exit 51 interchange ramps would also require reconfiguration to accommodate the exiting and entering cash traffic. The northbound deceleration lane and southbound acceleration lane would pass under the Pond Road Bridge. To accommodate this additional 12 feet of travel way and maintain the existing bridge, the bridge's concrete slope would have to be modified and possibly a retaining wall in front of the abutments would be required. To maintain the existing toll collection pattern, side toll plazas would be required on the southbound off ramp and

northbound on ramp, adding two additional toll plazas to the project with substantial construction cost implications and right-of-way impacts to adjacent parcels. This scenario of two additional side toll plazas and administration buildings adds to the overall MTA operational and maintenance costs with the added infrastructure and personnel.

Locating the replacement plaza further south of the Exit 51 interchange presents significant technical, logistical, and cost constraints because of the Pond Road Bridge, Cobbosseecontee Stream Bridge and Exit 49 Interchange. This location would require several extraneous efforts: 1.) The Pond Road Bridge would be reconstructed to span the widened footprint for the plaza, 2.) The plaza location and configuration would have to incorporate a bypass for the Exit 51 northbound off and southbound on ramps, 3.) The side toll plazas on the southbound off and northbound on ramps would be required to maintain the existing toll collection pattern and not jeopardize MTA revenue, 4.) The concrete slope would have to be modified and possibly a retaining wall in front of the abutments would be required for the Route 126 Bridge, and 5.) The widened right-of-way needed for the plaza, longer bridge and bypass ramps would have impacts to adjacent parcels.

These southern plaza locations would be within the MaineDOT right-of-way. The I-295 roadway was constructed with Federal Highway Administration (FHWA) funds and tolling is currently not allowed on this section of I-295, therefore making Alternative 4 unavailable as a viable option.

Either of the Alternative 4 locations adds to the number of bridges the MTA has to maintain, replaces bridges that are in good condition, constructs additional side toll plazas, dramatically increases cost, has right-of-way impacts to private parcels, and has a complicated right-of-way process with MaineDOT. Therefore, Alternative 4 was eliminated as a viable option for meeting the project's project purpose on the basis of substantial technical, logistical, and cost constraints, as well as requiring the use of right-of-way property that may be unavailable to MTA.

Alternative 5: Replace the existing plaza north of the existing location with an Open Road Tolling (ORT) plaza (Preferred Alternative) – This option would locate an ORT plaza north of the existing plaza and south of the I-295 southbound bridge over the Maine Turnpike I-95 as shown in Figure 6. A number of essential design and safety factors, environmental factors, and right-of-way impacts were key information used to determine the location of the new ORT plaza, as detailed below.

As noted in Section II of this report, ORT plazas separate traffic traveling at highway speeds from the traffic stopping to pay tolls, resulting in safer operations for the traveling public and toll attendants. The new construction also provides the opportunity to upgrade the toll equipment and toll booths, satisfying the project's purpose.

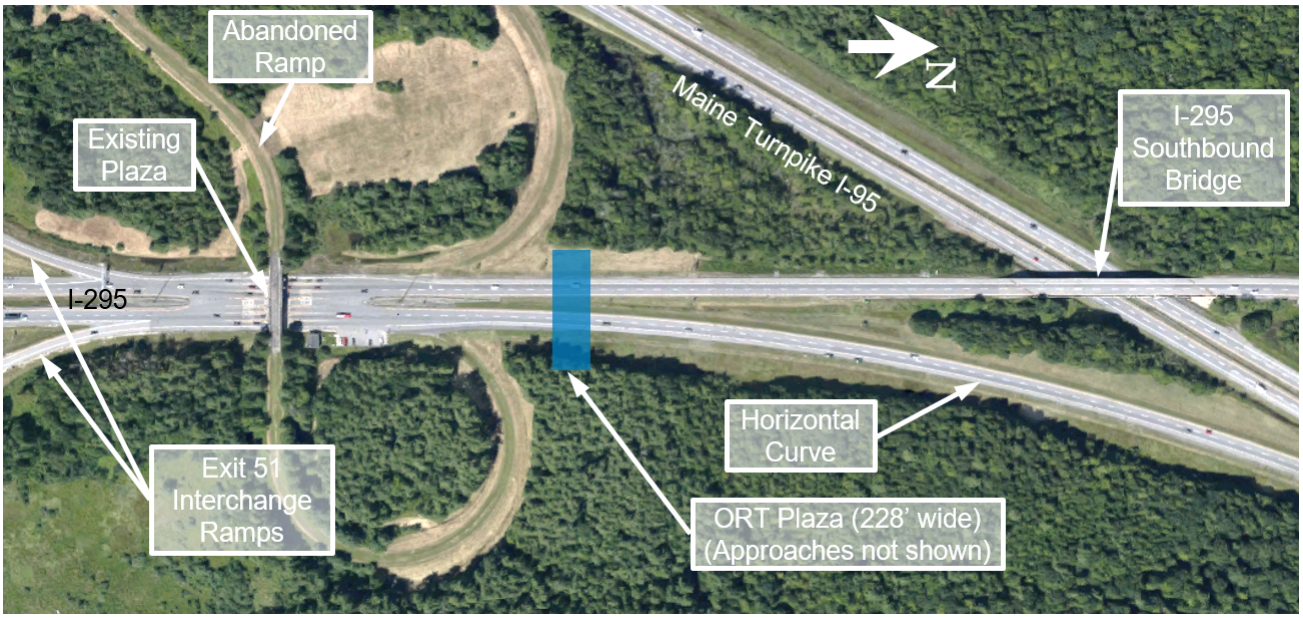


Figure 6 – Alternative 5 Location Map

The location and configuration of the ORT plaza was determined with the following considerations to meet the project purpose, while minimizing environmental impacts:

- The existing Exit 51 interchange northbound on and southbound on ramps are within the plaza footprint and converge with the cash lanes diverging from and merging toward the mainline lanes. To improve traffic operations for the many decision points that motorists must make, traffic destined to and from Exit 51 must go through the cash lanes. The proposed alternative separates the I-295 ORT traffic traveling at highway speed from the slower cash traffic and Exit 51 traffic. To accommodate the added interchange traffic, a third cash booth is needed. The proposed plan to locate the plaza further north of Exit 51 provides safer and more efficient traffic operations.
- Siting of the plaza and administration building considered physical and design constraints to the south and north, safety concerns for the traveling public, and maintaining the ability to collect tolls at the existing plaza until the new plaza is operational. The location of the existing plaza affects the proposed ORT plaza location because increasing the separation between the existing and proposed locations eliminates the need for temporary widening and temporary booth construction as described in and required for Alternative 3. Alternative 5 provides 700 feet of separation between the existing and proposed plazas without the addition of temporary booths or widening. This distance allows traffic to safely shift to and from the existing plaza to the outside of the proposed plaza during construction of the interior section of the proposed plaza at the appropriate design speed of 25 miles per hour. Moving the proposed plaza further south will force the shifting of traffic to be done more abruptly. This raises safety concerns because it will require speed reduction over a shorter distance for interstate traffic.
- The location of the I-295 southbound bridge to the north provides a location constraint prohibiting construction of the proposed ORT plaza further to the north because the separation of the southbound cash traffic from the ORT traffic must begin south of the bridge.
- The location of the proposed ORT plaza is further constrained by the horizontal curve for the northbound roadway north of the proposed plaza. The design standard is to locate toll plazas on a tangent because it provides better sight distance for vehicles approaching the facility. Locating the

plaza on a tangent is additionally important for ORT plazas due to how the ORT infrastructure operates and is maintained. ORT uses tolling loops embedded in concrete slabs. Industry standard is to construct these concrete slabs on a horizontal tangent so that a consistent cross slope (transverse to the roadway) can be maintained. Prior to the horizontal curve, roadway design requires that the cross slope changes in order for the roadway to be banked (superelevated) entering the curve. Having a consistent cross slope for the slabs reduces maintenance concerns of replacing the loops often due to uneven embedment depth which can lead to damage from snow plows. Collection of the tolling revenue in the ORT lanes is dependent on these loops.

- The proposed administrative building will be located on the west side of the plaza close to the toll booths for the following reasons:
    - To provide local road access with minimal impacts: The proposed access road uses the abandoned interchange ramps from the existing Exit 102 Park & Ride lot. This is a safer alternative for the toll attendants to access the administrative building in vehicles because it allows for convenient, local road access so that employees do not have to pull off of the higher speed highway to access the building. Providing access to an administrative building on the east side of the plaza would require new right-of-way and increase environmental impacts.
    - To provide enhanced safety for the personnel in the building and toll booth: The proposed design provides direct sight lines between the administrative building and the toll booths. Additionally, the location facilitates a straight tunnel per MTA standard, eliminating blind spots for employees traveling through the tunnel. The tunnel provides safe access for MTA personnel to access the toll booths from the administrative building. A tunnel with bends in it compromises employee safety, and would likely still require fill and impacts to Wetland Q to support a subsurface passage between a building on the west side of the plaza and the toll booths. Therefore, a tunnel with bends in it was eliminated from further consideration.
    - To provide the most efficient configuration of cash slabs, tunnel, and building: The proposed administrative building cannot be shifted further south to avoid wetland alteration (Figure 7) because of safety-related engineering constraints, engineering and technical considerations relative to the ORT slabs and tolling loops, and additional wetland impacts in other areas. The design has been modified to reduce and minimize the proposed impacts to the extent practicable. The administration building would need to be moved an additional 80 to 100 feet to the south to reduce impacts to Wetland Q from the building. However, doing so would increase safety concerns related to maintaining traffic during construction, as discussed earlier. Even if the building were able to be shifted south, some of the impacts to Wetland Q would still exist from the 15 foot high highway embankment. In the proposed design, the cash and ORT slabs containing the tolling loops are on either side of the tunnel and the tunnel is perpendicular to the building and the travel lanes. Moving the building south to avoid the wetland would move the entrance of the tunnel, skewing the tunnel relative to the travel lanes (conceptually shown in orange in Figure 7). The tolling loops in the ORT and cash slabs on either side of the tunnel are very sensitive to the steel reinforcing in the tunnel; the tunnel would have to be buried an additional five feet to eliminate this conflict. The tunnel as currently proposed is less than three feet below the surface, and the additional depth would impact the outlet of the underdrain for the tunnel, resulting in greater wetland impacts to Wetland M where the underdrain outlets, partially negating the reduction in impacts to Wetland Q achieved by shifting the building south. The building access drive and hammerhead turnout would also still impact Wetland Q if the building were shifted south. Between the highway embankment fill in Wetland Q, underdrain outlet impacts to Wetland M, and access drive fill in Wetland Q, the net reduction in wetland impacts compared to the preferred alternative would be minimal. As an additional technical consideration, moving the ORT and cash slabs to avoid a skewed

almost 3-foot-deep tunnel would increase the distance between the loops in the cash and ORT slabs and the control boxes located in the tunnel. The communication wiring between the loops and the control boxes lose efficiency as distance increases and the accuracy of the toll collection is dependent upon this data, so this is not a viable option.

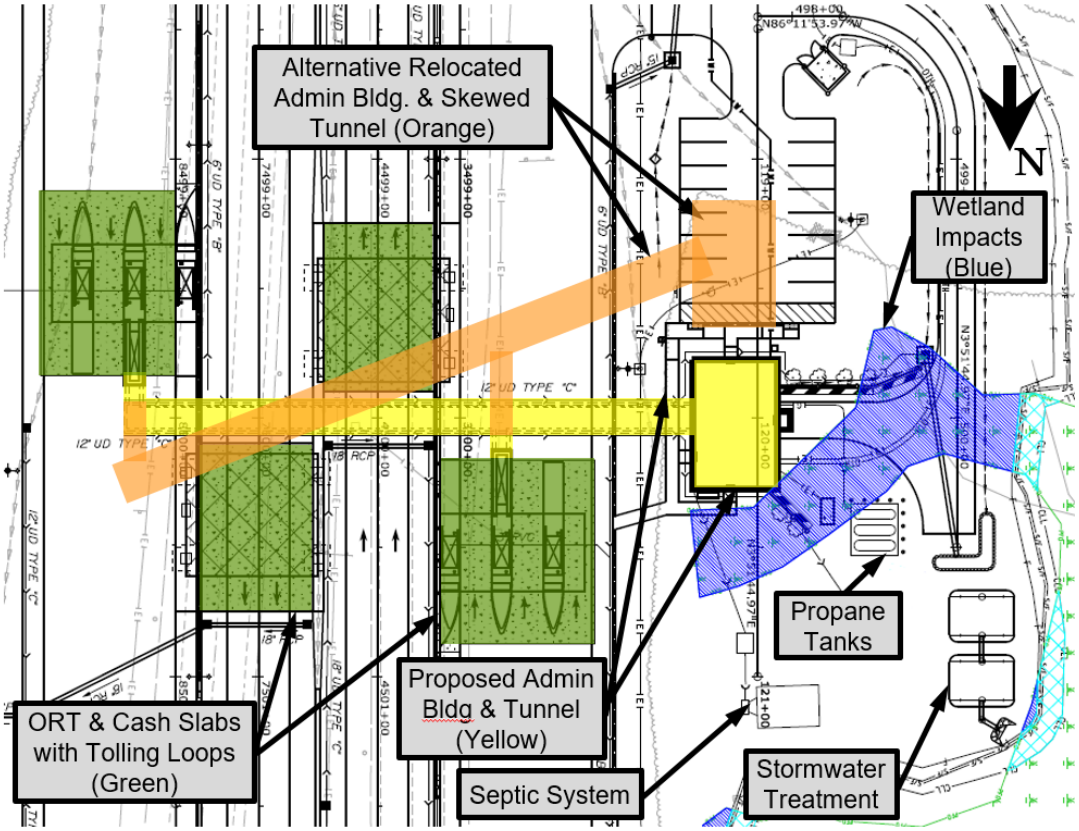


Figure 7 – Location of Admin Building

- The administration building is in 15 feet of fill resulting in impacts to the adjacent wetlands. The parking lot is located south of the administrative building to avoid additional wetland impacts. The septic system is sited and designed in accordance with the *State of Maine Subsurface Wastewater Disposal Rules*, and its location does not increase the area of wetland impacts. The propane tanks and generator pad are located on level ground close to the building and building driveway for ease of access; and locating these facilities there also does not increase the area of wetland impacts because this area would be filled and graded as a result of the construction of the administration building and access driveway. The slope between the parking lot and access drive to the back of the building is 2 horizontal: 1 vertical which is not practical for concrete slabs. Placing the propane tank slabs behind the building also puts them further from traffic, which improves safety. The proposed stormwater treatment area is located at the low point of the site to facilitate passive drainage and does not increase the area of wetlands impacts.

Alternative 5 was selected as the preferred alternative because it best meets the project purpose while minimizing wetland impacts, avoiding right-of-way impacts, minimizing construction constraints, and maintaining financial viability for the project.

IV. Recommendation

The following table summarizes the alternatives the MTA considered with the preferred Alternative 5 highlighted. Alternatives 1 and 2 do not meet the project purpose. Alternative 3 has greater wetland impacts and construction costs due to the temporary booths and widening and does not improve the traffic operations associated with Exit 51 as compared to Alternative 5. Alternative 4 has greater construction costs and long-term costs associated with two additional side toll plazas compared to Alternative 5 and is not viable because it is not possible to toll this portion of I-295. As described above, Alternative 5 was selected because it best meets the project purpose while minimizing wetland impacts within technical, financial, and logistical design constraints and parameters associated with the site and avoids the need for new right-of-way.

Reference: **EXIT 103 TOLL PLAZA - ALTERNATIVES ANALYSIS**

Alternatives Analysis Summary Table

Alternative	Design Consideration								
							Meets Project Purpose		
	Provide Modern Efficient Toll Plaza	Wetland Impacts	Right-Of-Way Impacts – (Acquisition of Land Required)	Constructability	Estimated Construction Cost (does not include ROW & Engineering)	Compatible with Current Revenue Collection "Toll Pay Point"[1]	Resolve Vehicle Safety & Operations Issues	Plaza Personnel Safety	Upgrade Toll Collection Equipment
1 **No Build/Upgrades**	No	None	None	N/A	$0	One Location No change	No	No	No
2 **Upgrade cash equipment in the existing plaza**	No	None	None	Minimal Complexity with phasing (One lane upgraded at a time)	$500,000 to $600,000	One Location No change	No	No	Yes
3 **Replace the existing plaza at the existing location**	No	Yes	None	Extensive Complexity with temporary booths and widening	$24,000,000 to $29,000,000	One Location No change	No	Yes	Yes
4 **Replace the existing plaza south of existing location**	Yes	Yes	Yes	Moderate to Extensive Complexity with phasing	$32,000,000 to $37,000,000	Three Locations (Two additional side plazas)	Yes	Yes	Yes
5 **Replace the existing plaza north of the existing location with an Open Road Tolling (ORT) plaza**	Yes	Yes	None	Moderate Complexity with Phasing (similar to other Plaza projects)	$20,000,000 to $25,000,000	One Location No change	Yes	Yes	Yes

1. A "Toll Pay Point" is a location where tolls are collected. The existing plaza is one toll pay point. Adding additional side toll plazas adds additional pay points which require more facilities (administrative building, parking lot and access), maintenance and operations as well as adds to the "back office" processing of tolls.

November 15, 2018
Jay Clement

Reference: **Maine Turnpike Authority, Exit 103 ORT Project, West Gardiner, ME: Corps Category 2 Pre-Construction Notification**

EXHIBIT 6: STATEMENT OF AVOIDANCE AND MINIMIZATION

The process for road design follows a protocol using typical engineering standards. Data inputs for design include proposed road use, location, and vehicles per hour. Using this data, the engineers design the typical road alignment including elevation and side slopes. Then this information is integrated with natural resource mapping to determine where project plans may impact natural resources. Then project plans are modified to avoid the resources where possible and then minimize impacts to the greatest extent practicable.

Project plans were modified in several ways to avoid and minimize wetland impacts where design standards allow. Where avoidance of these natural resources was possible, the plans were further modified to minimize resource alterations and to achieve the least environmentally damaging practicable alternative (LEDPA) for the project design. Modifications to the design included introducing guardrail with steeper side slopes, eliminating the 2-foot guardrail offset recommended by AASHTO, and reducing the pavement width 1 foot by utilizing 8-foot-long guardrail posts. However, guardrail is generally not desired since it is considered a hazard to traffic. The longitudinal length of the wetland impact and need for guardrail for other reasons was used to determine if guardrail was appropriate for each, individual location.

Design did not have to be modified to avoid or minimize impacts to Wetland areas C, N, O, P, R, S and CC in the project area. By reconfiguring the NB On Ramp with the Turnpike, the pavement width is reduced along a portion of Wetland X north of the existing culvert, and Wetlands W and V. Due to project plan changes, alteration of these three wetlands was avoided.

Modifying the road design in the area of several wetlands to minimize impact was explored but not achieved. This is because steepening slopes and adding guardrail would widen the pavement and ultimately extend the slopes further into the wetlands or introduce an undesirable amount of guardrail to the roadway which is a safety concern. In these instances, the design standards for a roadway with no guardrail were maintained and temporary and permanent wetland impacts were incurred. This is the case with Wetlands A, B, E, G, M, DD and a portion of Wetland X south of the existing culvert. The inlet pipe at Wetland A is proposed to be extended 6 feet to maintain existing roadway drainage. The impacts for Wetland B are temporary and adding guardrail will add permanent and more temporary impacts. Along Wetland E, the pavement widens approximately 30’ to separate the higher speed ORT traffic from the entering ramp and cash traffic for a short distance. Adding guardrail with steepened slopes would reduce impacts minimally and would be a hazard to the traffic. Most of the impacted area of Wetland M occurs within 100’ of the roadway lengthwise. Adding guardrail for such a short length of steepened slope is not desirable to minimize the use of guardrail.

Proposed Wetland D impacts were avoided, and the existing culvert is maintained by steepening the NB ORT left side slope to 4:1 (H:V) from the standard slope of 6:1 (H:V) for a length of 100 feet.

Guardrail proposed under the Route 126 bridge was extended to minimize proposed impacts to Wetland J and avoid proposed impacts to Wetlands G, H, and CC. The side slopes at the existing culvert inlet at Wetland J were benched from 6:1 (H:V) to 4:1 (H:V) at the clear zone to minimize extending the culvert.

The Access Road to the Administration Building took advantage of the existing abandoned ramp embankments to avoid proposed impacts to Wetlands K & L. The electrical and communication lines required for the administration building are located close to the pavement of the existing Park & Ride Lot to avoid proposed impacts to Wetlands Z, AA, and BB.

Along Wetland Q, several measures were taken to minimize impacts. The barrier separating the southbound cash and ORT traffic allowed for the vertical alignment of the cash plaza approach to be lowered, reducing the fill height and limiting the slope construction. At the barrier, the cash portion of the facility is up to 1.85 feet lower than the ORT lanes. To further reduce the pavement width, the standard 8-foot-wide shoulder plus 2-foot guardrail offset and 3-foot guardrail berm (totaling 13 feet) was reduced to an 8' shoulder with no guardrail offset and 2-foot berm (totaling 10 feet). The sideslopes were steepened to 1½:1 (H:V) and stabilized with a geocell confinement system. The drainage for the admin building and site has been separated with two stormwater treatment facilities, one for the parking lot located south of the site and one for the building driveway and admin building located near Wetland Q. Diverting some of the site drainage south of the site allowed for the size of the stormwater treatment facility behind the admin building to be reduced.

November 15, 2018
Jay Clement

Reference: **Maine Turnpike Authority, Exit 103 ORT Project, West Gardiner, ME: Corps Category 2 Pre-Construction Notification**

EXHIBIT 7: COMPENSATION

The Applicant designed the project to minimize and avoid project wetland impacts where practicable. Impacts to Wetlands of Special Significance (WoSS) and Significant Wildlife Habitats (SWH) were avoided. In portions of the project area where impacts could not be avoided, the Applicant plans to mitigate unavoidable impacts associated with the project in accordance with Maine's Natural Resources Protection Act (NRPA) (38 M.R.S.A. § 480 A – BB) and the In-LieuFee (ILF) guidelines.

The proposed project will result in placement of fill and associated tree clearing within wetlands totaling 34,355 square feet. This is composed of 7,291 square feet of temporary fill and 27,064 square feet of permanent wetland fill. We propose to compensate for the proposed 27,064 square feet of permanent wetland alteration. The compensation rates found in the current (August 18, 2017-December 31, 2019) ILF guidelines provide a compensation value for Kennebec County of $3.77/square foot. Applying that value to the proposed permanent wetland alteration, the resulting ILF payment is $102,031.28.

November 15, 2018
Jay Clement

Reference: **Maine Turnpike Authority, Exit 103 ORT Project, West Gardiner, ME: Corps Category 2 Pre-Construction Notification**

EXHIBIT 8: PROJECT PLANS/WETLAND IMPACT PLANS

(contained within Exhibit 9: Wetland Delineation and Function and Values Report)

November 15, 2018
Jay Clement

Reference: **Maine Turnpike Authority, Exit 103 ORT Project, West Gardiner, ME: Corps Category 2 Pre-Construction Notification**

EXHIBIT 9: WETLAND DELINEATION AND FUNCTION AND VALUES REPORT

Wetland Delineation and Functions and Values Report

Exit 103 Open Road Tolling
Project:
Interstate 95
West Gardiner, Maine

Prepared for:
Maine Turnpike Authority
2360 Congress Street
Portland, ME 04102

Prepared by:
Stantec Consulting Services Inc.
30 Park Drive
Topsham, ME 04086

November 1, 2018

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Appendices

1.0 INTRODUCTION

At the request of the Maine Turnpike Authority (MTA) Stantec Consulting Services Inc. (Stantec) conducted wetland delineations and natural resource surveys proximal to the existing toll plaza and I-95/I-295 connector area in West Gardiner, Maine (Figure 1). The surveys occurred on April 25 and November 9, 2017, and April 24, May 4, and August 8, 2018. The MTA proposes to perform upgrades to their infrastructure in this area, which may include open road tolling, road widening, and the addition of a toll operator office structure.

The wetland delineation and natural resource surveys were conducted to support two adjacent and overlapping MTA projects in West Gardiner: the I-295 Bridge over I-95 project and the Exit 103 Open Road Tolling (ORT) project. A memo describing the findings of the I-295 Bridge over I-95 project, entitled "Natural Resource Summary, I-295 Bridge over I-95, West Gardiner, Maine", dated June 2, 2017, was provided to MTA for permitting support of the project. Stantec also provided a Draft Wetland Delineation Report as part of the 10% design of the Exit 103 ORT project, dated March 15, 2015. Since the time that report was submitted, the proposed Exit 103 ORT project site has expanded, and additional wetland delineation and natural resource surveys were performed. Those surveys also updated wetland information from the previous surveys related to the I-295 Bridge project. This report is a comprehensive report that combines the data from the surveys performed for both projects that is specific to the present Exit 103 ORT project.

2.0 SITE DESCRIPTION

The project area is located in the town of West Gardiner and includes approximately 1.5 miles along I-295 and I-95 within the highway's right of way (ROW). The width of the ROW varied along the length of the survey area. The survey area on the northbound side extended from the northern side of the Pond Road overpass on I-295 to the existing plow turn around on I-95, south of the High Street overpass. On the southbound side it included the southern half of the I-295 off ramp from I-95 and extended southerly to the Route 126 on ramp. It also extended westerly to include the area adjacent to the Park & Ride and Route 126 traffic circle (Figure 1).

The shoulder of the highway is regularly maintained in most areas with mowing. The landscape beyond the maintained area is primarily forested. Uplands within the survey area are dominated by eastern white pine (*Pinus strobus*), red spruce (*Picea rubens*), gray birch (*Betula populifolia*), and balsam fir (*Abies balsamea*) in the forest canopy. The understory is dominated by eastern white pine, red spruce, red maple (*Acer rubrum*), and eastern teaberry (*Gaultheria procumbens*).

3.0 WETLAND AND WATERCOURSE DELINEATION AND VERNAL POOL SURVEY

3.1 WETLAND AND WATERCOURSE DELINEATION AND VERNAL POOL SURVEY METHODS

Wetland boundaries under federal and state jurisdiction were determined using the technical criteria described in the *Corps of Engineers Wetlands Delineation Manual*[1] and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Regional Supplement*[2]. Wetland boundaries were marked with pink, alphanumeric-coded flags and located by a licensed land surveyor (Titcomb Associates). Maine Department of Environmental Protection (MDEP) and U.S. Army Corps of Engineers (Corps) jurisdictional streams and Wetlands of Special Significance (WoSS) determinations were based on the criteria in the Maine Natural Resources Protection Act (NRPA) and Section 404 of the Clean Water Act, respectively. Determinations were limited to observable conditions at the time of the survey and publicly available natural resource data. During the surveys, there was no snow cover and the ground was not frozen.

Natural resource surveys included an evaluation for potential vernal pools during the November 2017 survey and in-season vernal pool survey during the spring 2018 surveys. Vernal pools were evaluated based on the criteria provided in Chapter 335, Significant Wildlife Habitat, of the Maine NRPA and the Corps' Maine General Permit, respectively and conducted in accordance using the technical guidelines outlined in the Maine Association of Wetland Scientists 2010 Interim Vernal Pool Survey Protocol.

3.2 WETLAND AND WATERCOURSE DELINEATION AND VERNAL POOL SURVEY RESULTS

Stantec identified 30 wetlands and 1 stream, which are summarized in Appendix A and are depicted on Figure 2. Wetland Impacts Plan Set (sheets 1–14).

The wetlands are located adjacent to existing highway infrastructure; including stormwater swales, road edge of fill, Route 126, the Park & Ride, and fill berms that were previously used for access ramps. Approximately half of the wetlands extend outside the project area. Areas mapped as wetland that occur within the disturbed portions of the survey area are hydrologically connected to, and part of, naturally occurring wetlands. They also obtain their hydrology from these natural features and, despite being disturbed, contain the three factors

[1] Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, MS.
[2] U.S. Army Corps of Engineers. 2012. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0), ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

used to identify an area as wetland. Maintained stormwater swales excavated from uplands along the roadway were not part of, or connected to, a naturally occurring wetland; although these swales currently contain hydrophytic vegetation, they were not mapped as wetlands.

Wetlands A, O, Q, T, and U are predominantly palustrine (freshwater) forested wetlands (PFO) and occupy less disturbed site areas. Red maple, gray birch, balsam fir, and eastern arborvitae (*Thuja occidentalis*) are the dominant tree species. Wetlands K, L, N, and Z are predominantly palustrine scrub shrub (PSS) wetlands dominated by speckled alder (*Alnus incana*), winterberry (*Ilex verticillata*), red maple, and gray birch saplings. The remaining wetlands are palustrine emergent marsh (PEM) wetland and the dominant plant species include broad-leaved cat-tail (*Typha latifolia*), reed canary grass (*Phalaris arundinacea*), bluejoint (*Calamagrostis canadensis*), and sensitive fern (*Onoclea sensibilis*). Most of these wetland areas would be further identified as wet meadow, which are typically located within the disturbed portion of the highway's ROW. For additional wetland information, see Appendix A: Wetland and Stream Resource Summary Table.

Soils within the wetlands are generally described by a dark, loamy, over silt loam material with a depleted matrix. Redoximorphic concentrations were present within the majority of the wetland soil profiles. These are generally classified as loamy and clayey soils with a depleted matrix or depleted with a dark surface. Wetland hydrology generally consisted of soil saturation, a water table at or near the soil surface, evidence of iron reduction, microtopography, drainage patterns, geomorphic position, and passing the FAC-Neutral test. Representative photos of the resources and adjacent uplands are provided in Appendix B.

One stream was identified on-site, 01BE, which flows primarily in a ditch on the west side of the I-295 ramp. The stream begins in Wetland P and drains a large wetland system located off-site to the north. The stream channel was observed to continue for several hundred feet into the forest. The stream had a defined channel within the ditch, with a scoured mineral bottom and aquatic invertebrates present in the channel. These three regulatory factors resulted in the identification as a stream rather than the unregulated bottom of the ditch. Wetland within 25 feet of the stream is a WoSS.

Amphibian egg masses of vernal pool indicator species were observed within ponded areas in five of the wetlands (Wetlands B, P, V, W, and X). The portions of these wetlands where the egg masses were observed are artificially-created ditches, and function as stormwater conveyance swales along the interstate. Egg mass counts and other information are detailed in Table 1. These areas where egg masses were observed also contained fish populations. The MDEP would not regulate these resources as vernal pools because the ponded portions of these wetlands were artificially-created and contained fish populations. The Corps does not distinguish between naturally occurring and artificially-created vernal pools and can regulate artificially-created vernal pools. However, the vernal pool cannot have a permanent inlet or outlet or a population of predatory fish. One wetland (Wetland P) where indicator species egg masses were observed had a permanently flowing outlet (Stream 01BE) with observed fish. Therefore, these wetlands do not meet the definition of a vernal pool as provided in the Corps' General Permit and add

further evidence as to why it would not be regulated as such by the Corps. The Corps does have jurisdictional authority over activities and impacts such as excavations, discharges of dredged or fill material, and/or suspended sediment producing activities in jurisdictional waters that provide value as fish migratory areas, fish and shellfish spawning or nursery areas, or amphibian and migratory bird breeding areas. These wetlands may require additional oversight or avoidance because they are functioning as amphibian breeding areas.

Table 1. Amphibian Breeding Area Documentation.

Wetland ID	Survey Date	Wood Frog Egg Mass Number	Spotted Salamander Egg Mass Number	Stream Present	Fish Present	Notes
B	24-Apr-18	22	0	No	Yes	Artificially created stormwater swale
P	25-Apr-17 and 4-May-18	0	10 and 9	Yes	Yes	Artificially created depression within stormwater swale/ditch, green frogs also observed
V	24-Apr-18	0	46	No	Yes	Artificially created stormwater swale
W	24-Apr-18	0	4	No	Yes	Artificially created stormwater swale
X	24-Apr-18	31	16	No	Yes	Artificially created stormwater swale

4.0 WETLAND FUNCTION AND VALUE ASSESSMENT

4.1 WETLAND FUNCTION AND VALUE ASSESSMENT METHODS

Wetland functions and values were evaluated using *The Highway Methodology Workbook Supplement*.[3] This method bases function and value determinations on the presence or absence of criteria for each of 13 wetland functions and values typically considered by MDEP and the Corps in the wetland alteration permitting process. The criteria are assessed through direct field observations and a review of existing public data sources. As part of the evaluation, the "principal" (i.e., most important) functions and values associated with the subject wetland are identified and described. In addition, the ecological integrity of the wetland is evaluated based on the existing and past levels of disturbance and the overall significance of that wetland within

[3] U.S. Army Corps of Engineers. 1999. *The Highway Methodology Workbook Supplement, Wetland Functions and Values: A Descriptive Approach*. U.S. Army Corps of Engineers. New England Division. 32pp. NAEEP-360-1-30a.

the local watershed. This descriptive and qualitative approach integrates wetland science with subjective value judgments made by wetland professionals.

Following are the 13 wetland functions and values considered in the assessment.

Groundwater Interchange (Recharge/Discharge)
This function considers the potential for a wetland to serve as groundwater recharge and/or discharge areas. It refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodwater Alteration (Storage and Desynchronization)
This function considers the effectiveness of the wetlands in reducing flood damage by water retention for prolonged periods following precipitation and the gradual release of floodwaters.

Fish and Shellfish Habitat
This function considers the effectiveness of seasonal or permanent waterbodies associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant Retention
This function relates to a wetland's ability to reduce or prevent degradation of surface water and ground water quality by trapping sediments, toxicants, or pathogens that may enter the wetland. A wetland's effectiveness in performing this function is typically related to factors such as soil type, vegetation type and density, and the position in the landscape.

Nutrient Removal/Retention/Transformation
This wetland function relates to the effectiveness of the wetland to assimilate nutrients and prevent or reduce the adverse effects of excess nutrients on aquifers or surface waters such as ponds, lakes, streams, rivers, or estuaries.

Production Export
This function relates to the effectiveness of the wetland to produce and export food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization
This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion, primarily through the presence of persistent, well-rooted vegetation.

Wildlife Habitat
This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and migrating species are considered.

Recreation (Consumptive and Non-Consumptive)
This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting, and other active or passive recreational activities.

Educational/Scientific Value
This value considers the effectiveness of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage
This value relates to the effectiveness of the wetland or its associated water bodies to provide certain special values such as archaeological sites, unusual aesthetic quality, historical events, or unique plants, animals, or geologic features.

Visual Quality/Aesthetics
This value relates to the visual and aesthetic qualities of the wetland.

Endangered Species Habitat
This value considers the suitability of the wetland to support threatened or endangered species.

4.2 WETLAND FUNCTION AND VALUE ASSESSMENT RESULTS

This project is proposed along and directly adjacent to Interstates 295 and 95. This is a heavily traveled area. The roadways, supporting infrastructure, and areas exempted from current use have resulted in development and disturbance that altered natural wetlands and diminishes the ability for some of the remaining wetlands to have significant functions and values that are typical of natural wetland complexes. The wetland delineation field investigation was limited to areas associated with and immediately adjacent to the proposed project activity areas. Therefore, the wetlands within the project area have been generally affected from past and ongoing anthropogenic activities including ditching for stormwater conveyance, fill from roadways and other infrastructure, and effects from ambient noise and lighting. The most common principal functions and values are Sediment/Toxicant Retention and Nutrient Removal/Retention/Transformation. Limited Wildlife Habitat was observed in several wetlands, primarily due to amphibian breeding observed in ponded areas in the roadside ditches and use by white-tailed deer (*Odocoileus virginianus*) and beaver (*Castor canadensis*); Floodwater Alteration occurs in some of the larger wetlands that possess flatter topography and dense vegetation. Uniqueness/Heritage, Recreation, Educational/Scientific Value, and Visual Quality/Aesthetics are not present because the area is not open to public access due to safety concerns and past anthropogenic disturbances have reduced these values. Appendix A Wetland and Stream Resource Summary Table lists the individual wetland primary functions and values. Appendix C contains the individual wetland functions and value forms.

5.0 REGULATORY SUMMARY

5.1 STATE AND FEDERAL WETLAND REGULATIONS

The MDEP and Corps regulate the wetlands identified within the survey area. Under the provisions of Section 404 of the Clean Water Act, the Corps regulates activities within Waters of the U.S., which include navigable waters and all their tributaries, adjacent wetlands, and other waters or wetlands where degradation or destruction could affect interstate or foreign commerce. Under the provisions of the Natural Resources Protection Act (38 MRSA 480-B) the MDEP regulates activities in, on or over any protected natural resource; which includes freshwater wetlands. The Corps has issued a General Permit for the State of Maine that merges the federal and state permit review process for many projects.

The proposed project will result in placement of a total of 34, 355 square feet of fill in freshwater wetlands; including 7,291 square feet of temporary impacts associated with construction and 34,355 square feet of permanent wetland fill. Because this is greater than 15,000 square feet of wetland fill this project qualifies for a Corps Category 2 Pre-Construction Notification (PCN). This project also requires a MDEP NRPA application for freshwater wetland alteration. Because this project is under the authority of the MTA it qualifies for a permit by rule (PBR) under Chapter 305, Section 11 of the MDEP NRPA. Section 11 of the PBR applies to the maintenance, repair, reconstruction, rehabilitation, replacement, or minor construction of a State Transportation Facility carried out by, or under the authority of, the Maine Department of Transportation (MaineDOT) or the MTA, including any testing or preconstruction engineering and associated technical support services.

Full identification of WoSS involves contacting natural resource agencies such as Maine Natural Areas Program (MNAP) and Maine Department of Inland Fisheries and Wildlife (MDIFW) to determine if there are any documented occurrences of rare, threatened, or endangered species or communities or significant wildlife habitats within or in the vicinity of the project area. Based on a review of publicly available information and correspondence with these agencies it was determined that there are no known occurrences of rare, threatened, or endangered species or communities or significant wildlife habitat within the project area. There is a mapped Deer Wintering Area (DWA 020457) west of the I-95 southbound off-ramp to I-295; however, it does not extend into the project area.

6.0 CONCLUSIONS

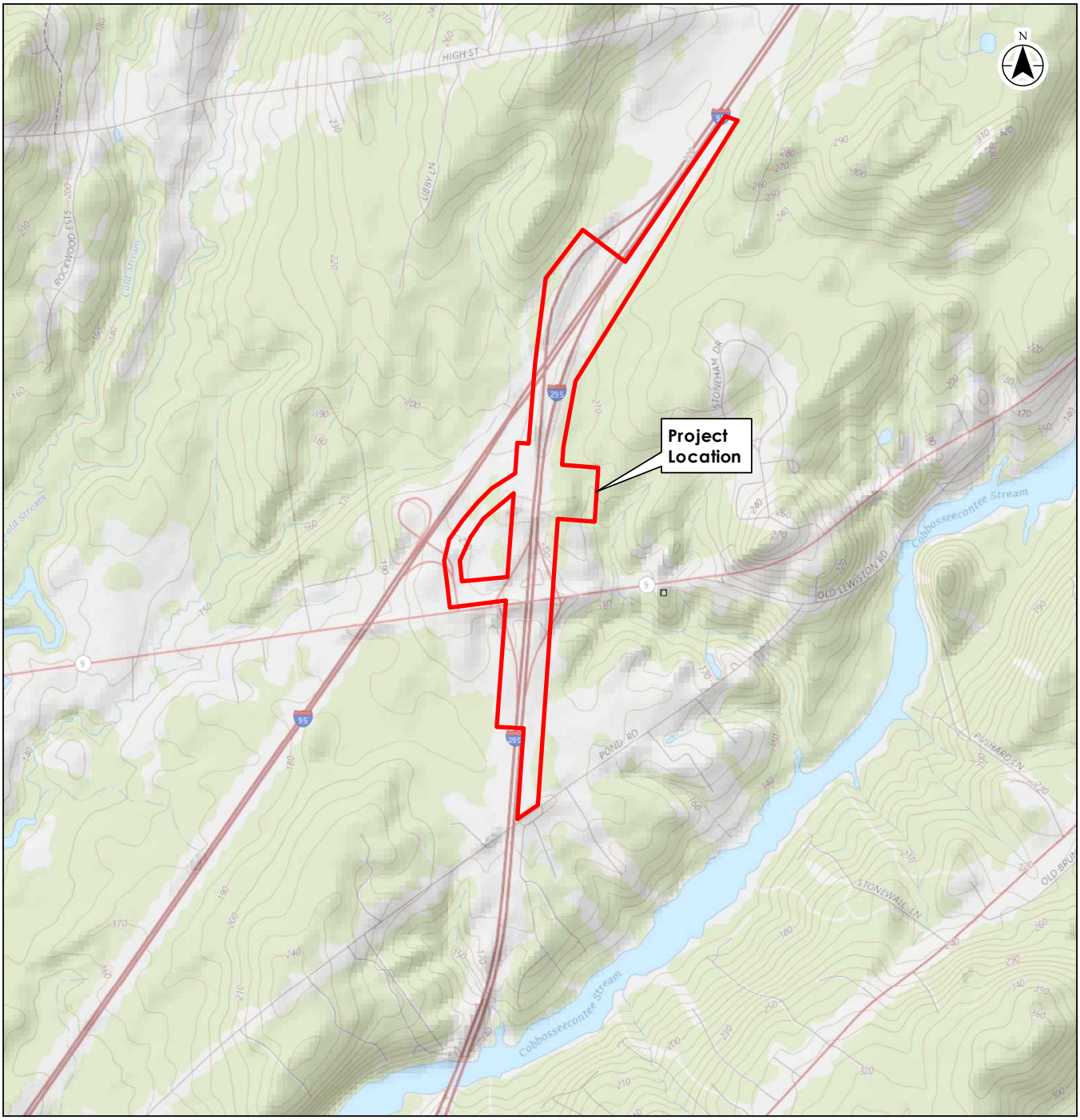
The project area contains several wetlands that are located directly adjacent to the roadways and other infrastructure that is proposed to be part of the project area. Wetlands and watercourses in the project area are considered jurisdictional by the Corps and MDEP. Project planning should take steps to avoid and minimize permanent and temporary impacts to

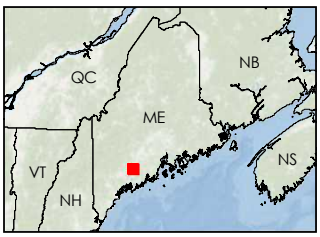
wetlands ad watercourses within the survey area. Wetland impacts in the project area will require permitting by MDEP and the Corps. PBR Section 11 for state transportation facilities may streamline permitting for this project.

FIGURES

Figure 1. Site Location Map

V:\1956\active_Task Owner and other Non-BC\1956 Jobs\195311384\03_data\gis_cad\GIS\mxd\11383_01_Location.mxd Revised: 2018-05-14 By: khoward





Legend

Approximate Project Area

0 2,000 Feet

1:24,000 (at original document size of 8.5x11)

Stantec

Project Location
West Gardiner, Maine

195311383

Prepared by EMK on 2018-03-15
Technical Review by KH on 2018-03-15
Independent Review by RK on 2018-03-15

Client/Project

Maine Turnpike Authority
Exit 103 Open Road Tolling

Figure No.

1

Title

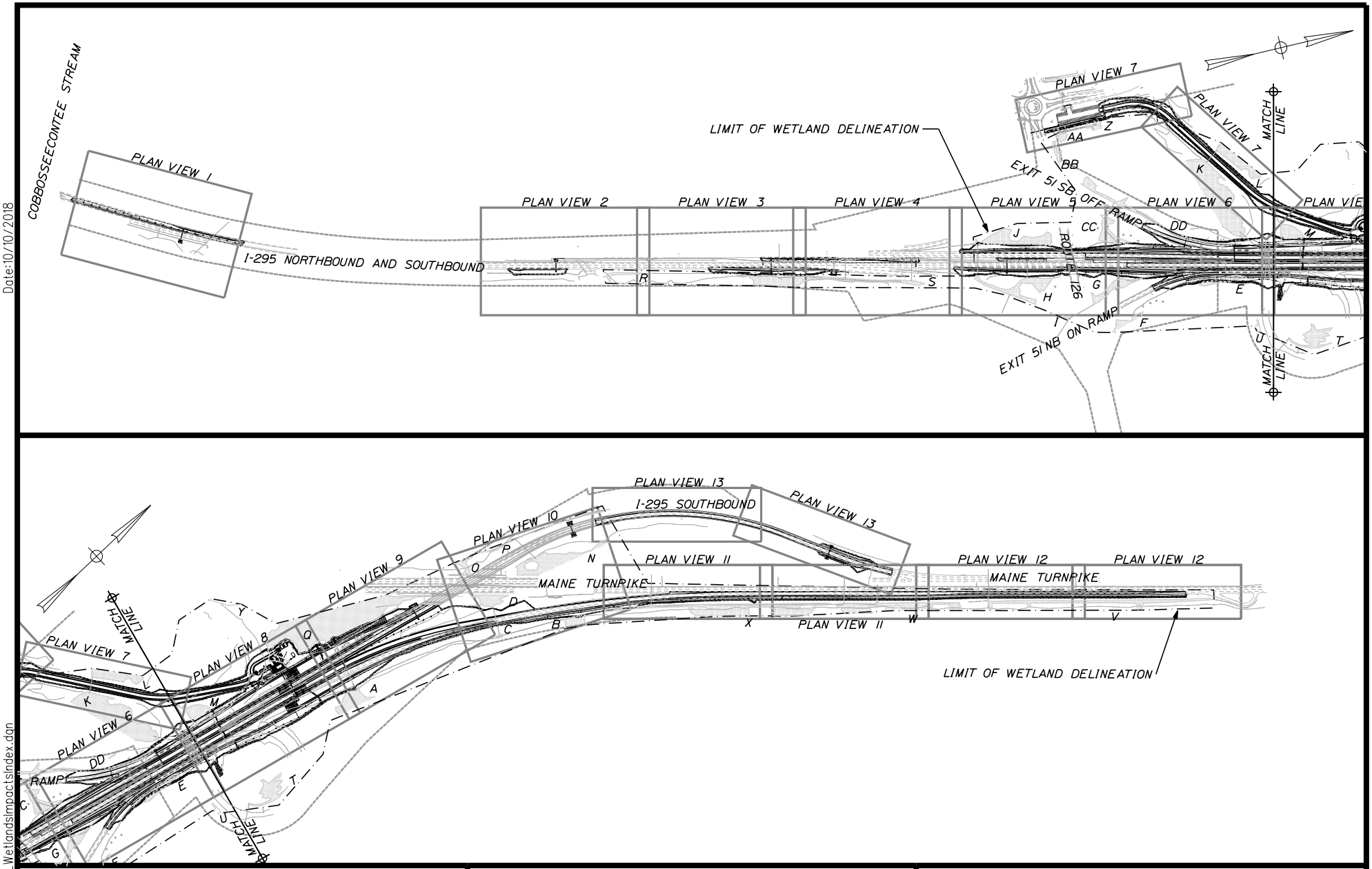
Site Location Map

Notes

1. Coordinate System: NAD 1983 UTM Zone 19N
2. USGS Imagery/Topo provided by The National Map Mapping Service (http://basemap.nationalmap.gov/arcgis/services/USGSImageryTopo).

Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants, and agents, from any and all claims arising in any way from the content or provision of the data.

Figure 2. Wetland Impacts Plan Set



Scale: 400 0 400 800

Scale of Feet

Stantec

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

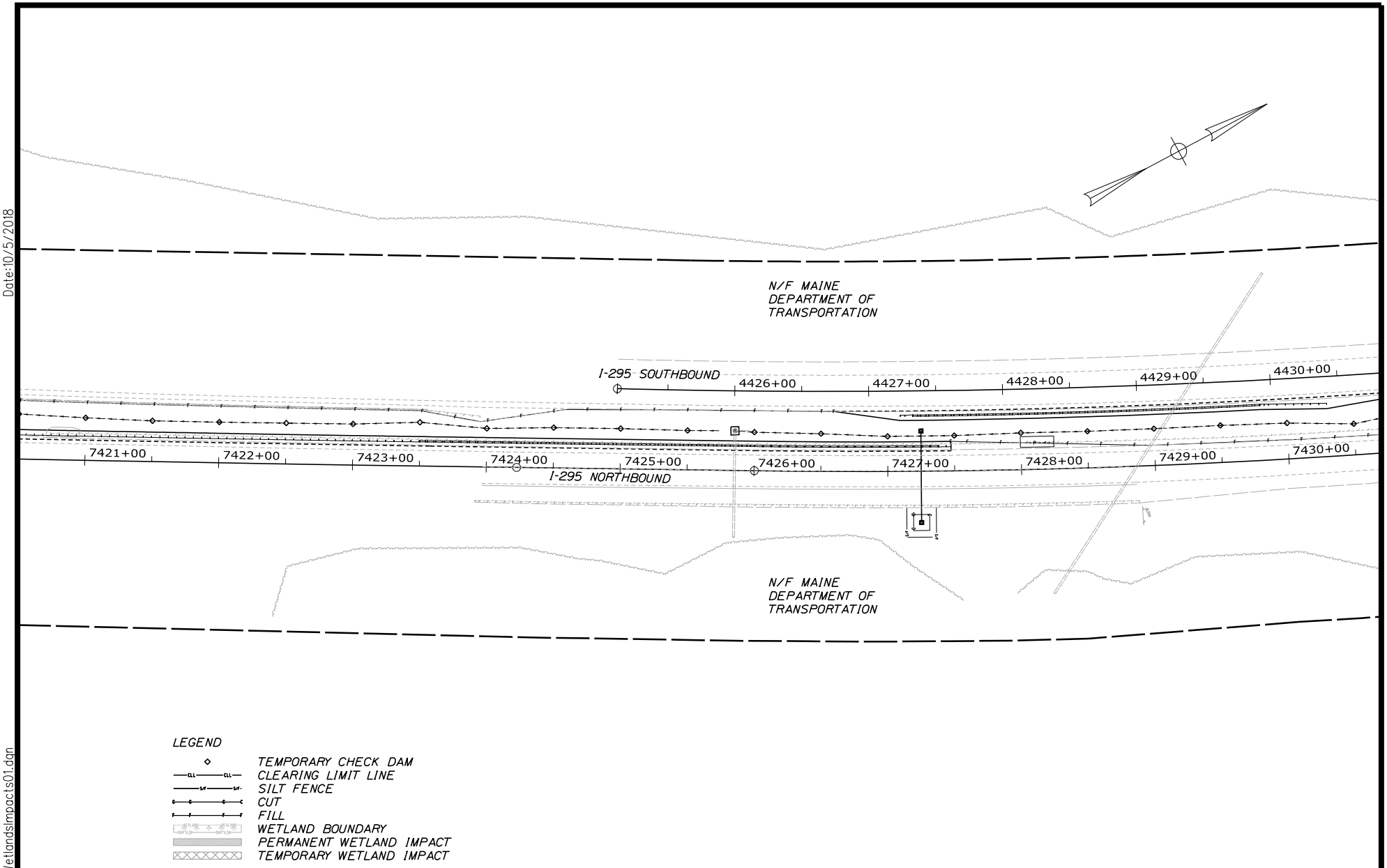
WETLAND IMPACTS INDEX PLAN

DATE: OCTOBER, 2018

SHEET 1 OF 14

Date:10/10/2018

Filename: ..._WetlandsImpactsIndex.dgn



LEGEND

- TEMPORARY CHECK DAM
- CLEARING LIMIT LINE
- SILT FENCE
- CUT
- FILL
- WETLAND BOUNDARY
- PERMANENT WETLAND IMPACT
- TEMPORARY WETLAND IMPACT

Scale: 50 0 50 100

Scale of Feet

Stantec

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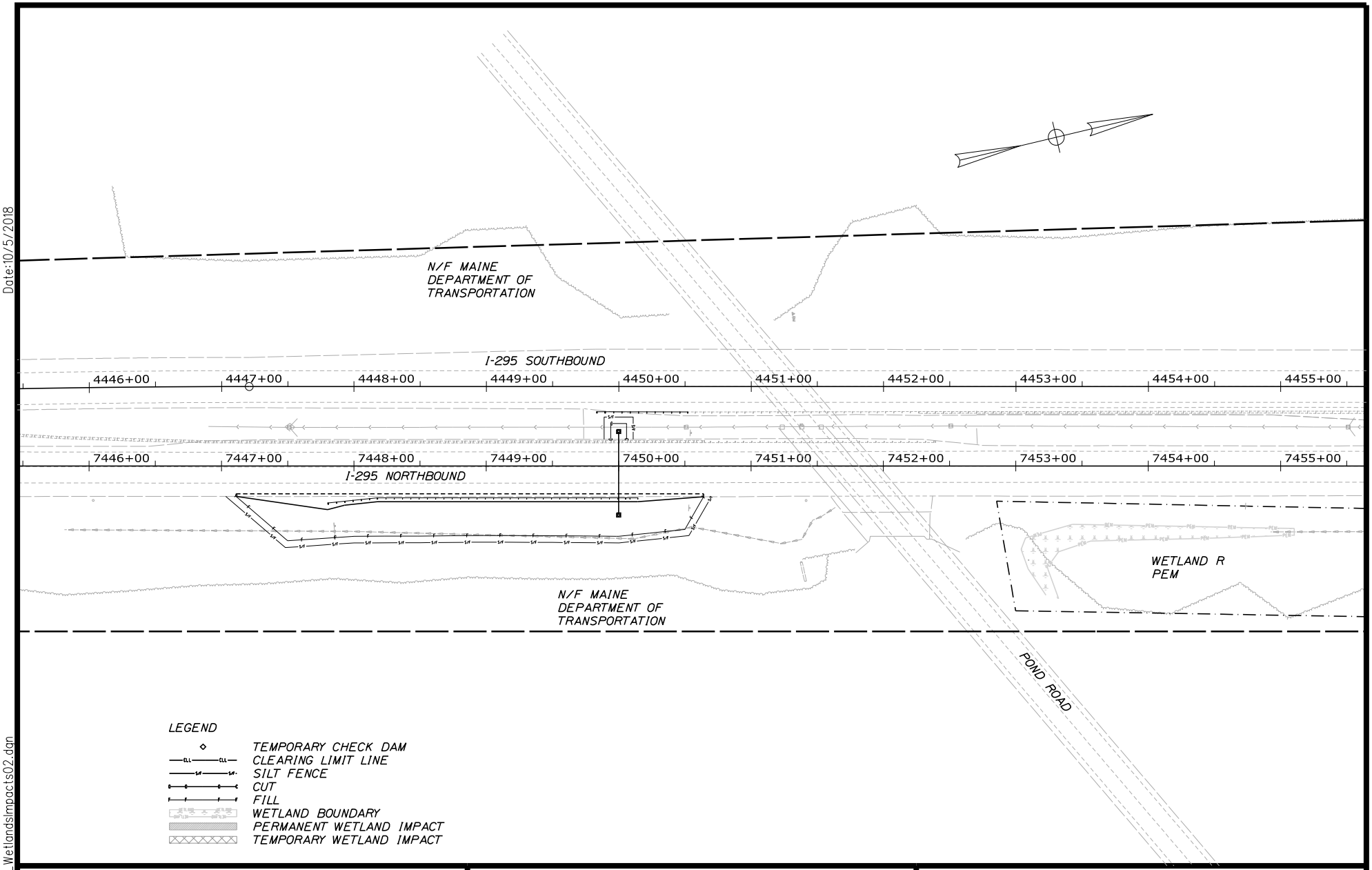
WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 1

DATE: OCTOBER, 2018

Date:10/5/2018

Filename: ..._WetlandsImpacts01.dgn



LEGEND

- TEMPORARY CHECK DAM
- CLEARING LIMIT LINE
- SILT FENCE
- CUT
- FILL
- WETLAND BOUNDARY
- PERMANENT WETLAND IMPACT
- TEMPORARY WETLAND IMPACT

Scale: 50 0 50 100

Scale of Feet

Stantec

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WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

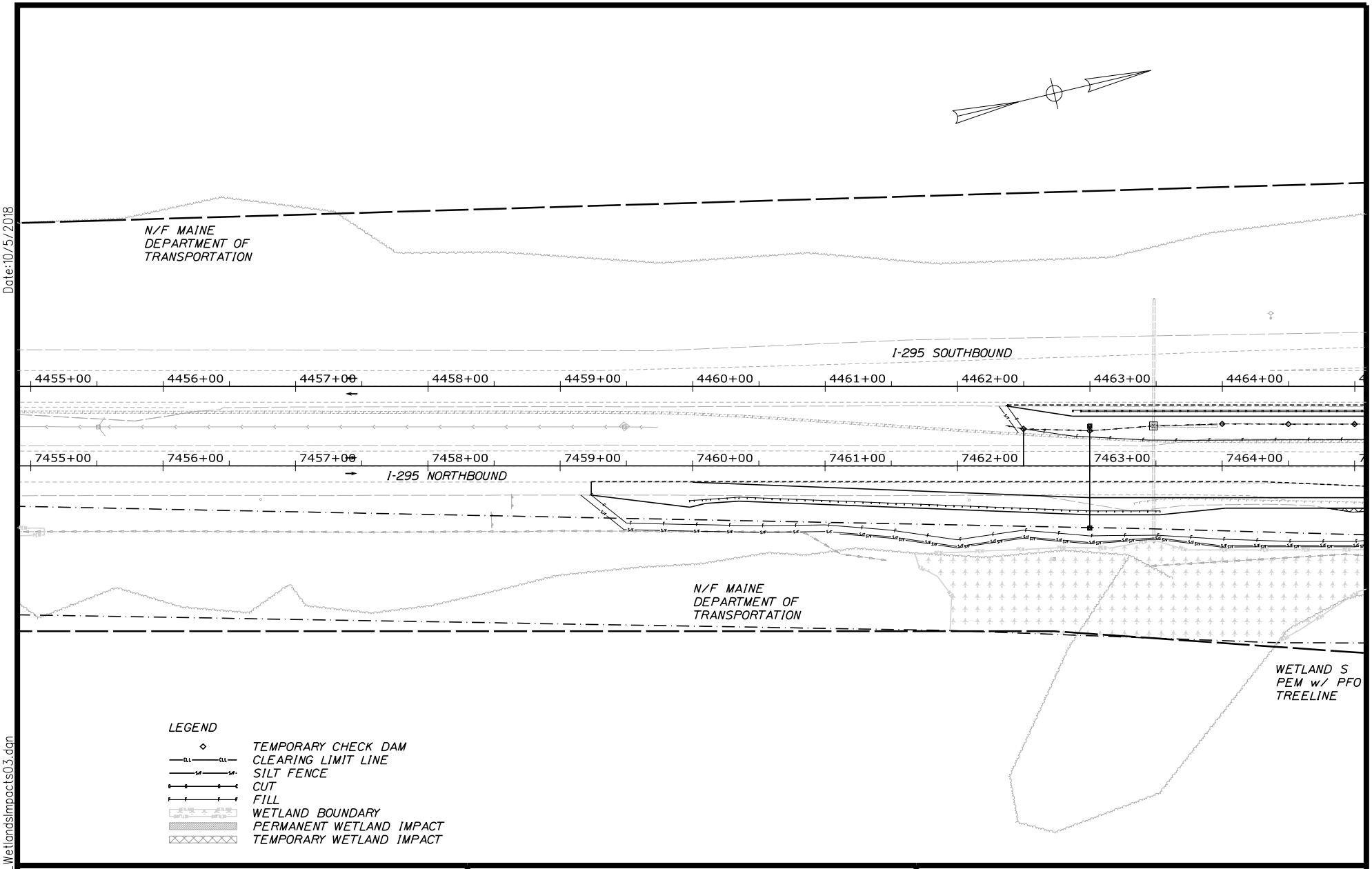
WETLAND IMPACTS PLAN VIEW 2

DATE: OCTOBER, 2018

SHEET 3 OF 14

Date:10/5/2018

Filename: ..._WetlandsImpacts02.dgn



Date:10/5/2018

Filename: ..._WetlandsImpacts03.dgn

Scale: 50 0 50 100

Scale of Feet

Stantec

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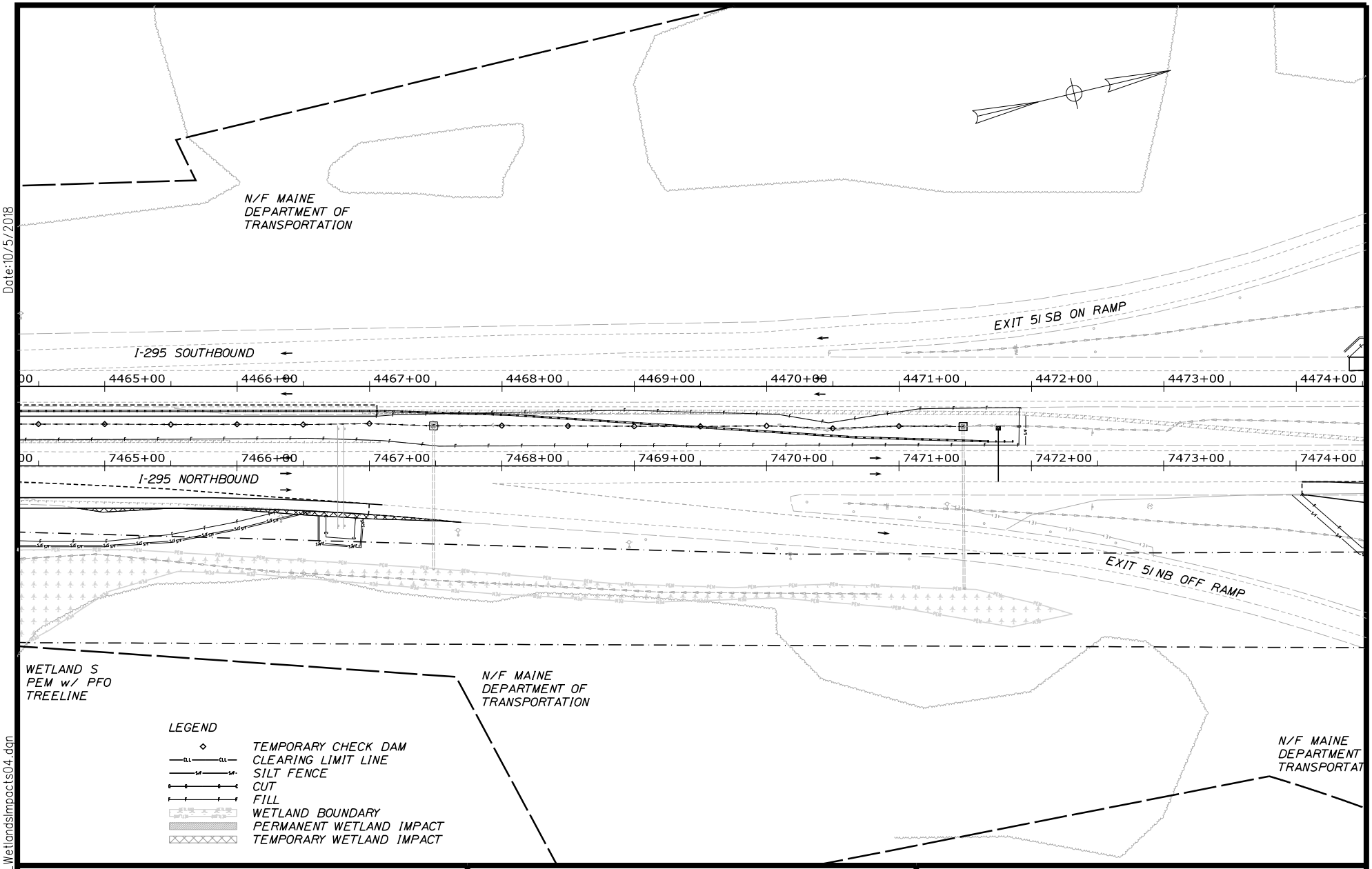
THE GOLD STAR MEMORIAL HIGHWAY

WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 3

DATE: OCTOBER, 2018



Date:10/5/2018

Filename: ..._WetlandsImpacts04.dgn

Scale: 50 0 50 100
Scale of Feet

Stantec

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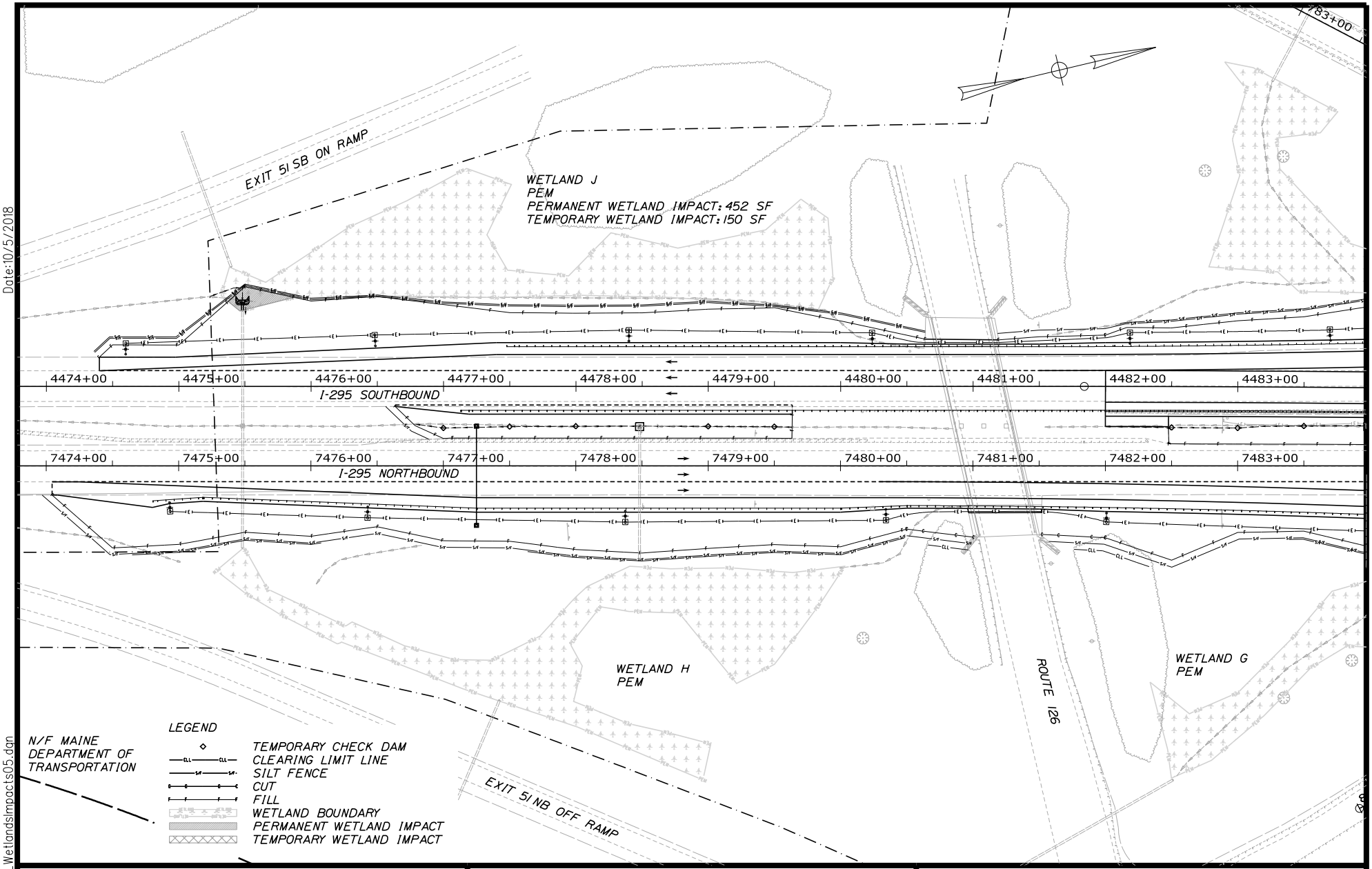
THE GOLD STAR MEMORIAL HIGHWAY

WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 4

DATE: OCTOBER, 2018



Date:10/5/2018

Filename: ..._WetlandsImpacts05.dgn

Scale: 50 0 50 100

Scale of Feet

Stantec

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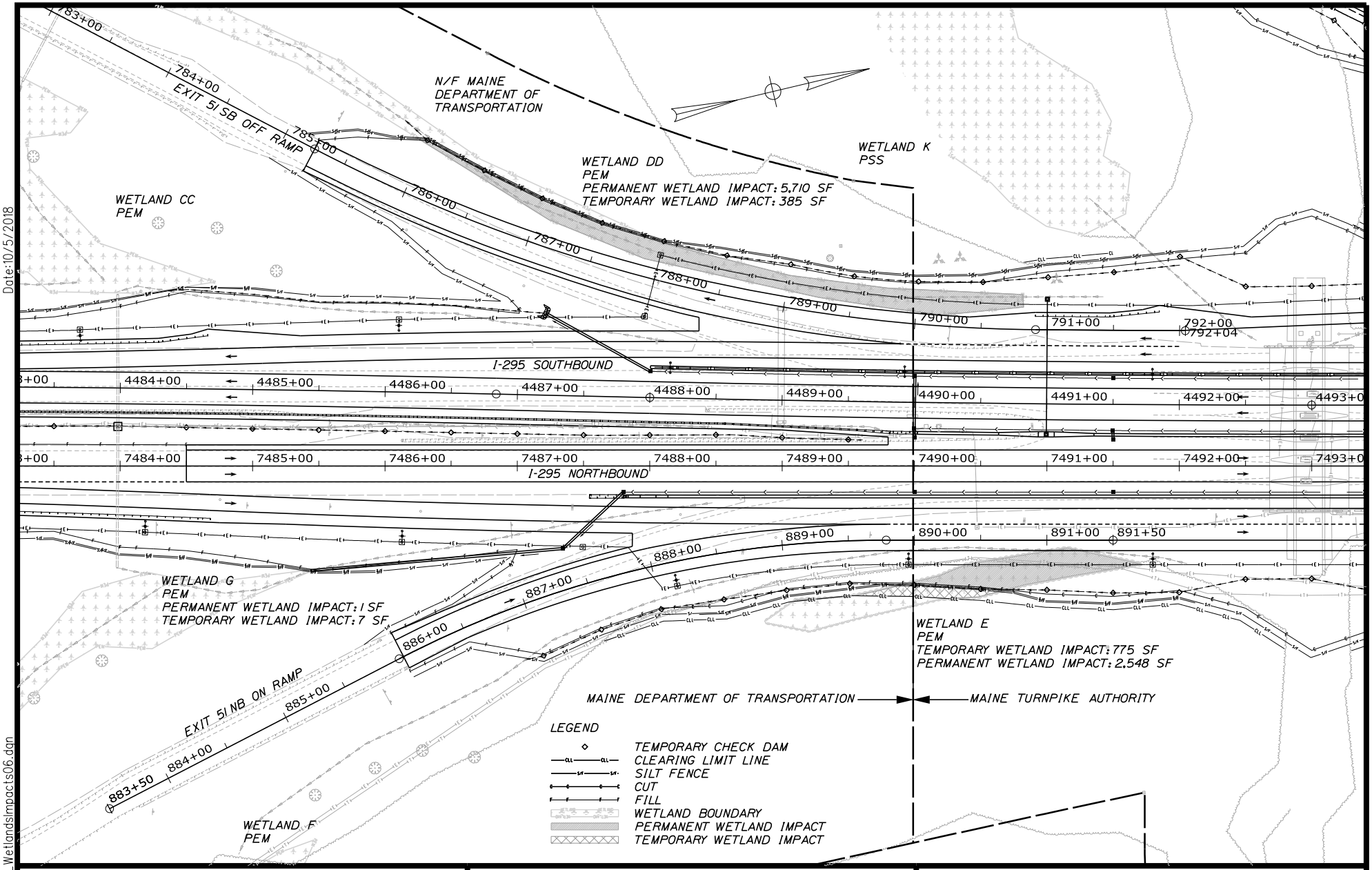
THE GOLD STAR MEMORIAL HIGHWAY

WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 5

DATE: OCTOBER, 2018



Date:10/5/2018

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Scale: 50 0 50 100

Scale of Feet

Stantec

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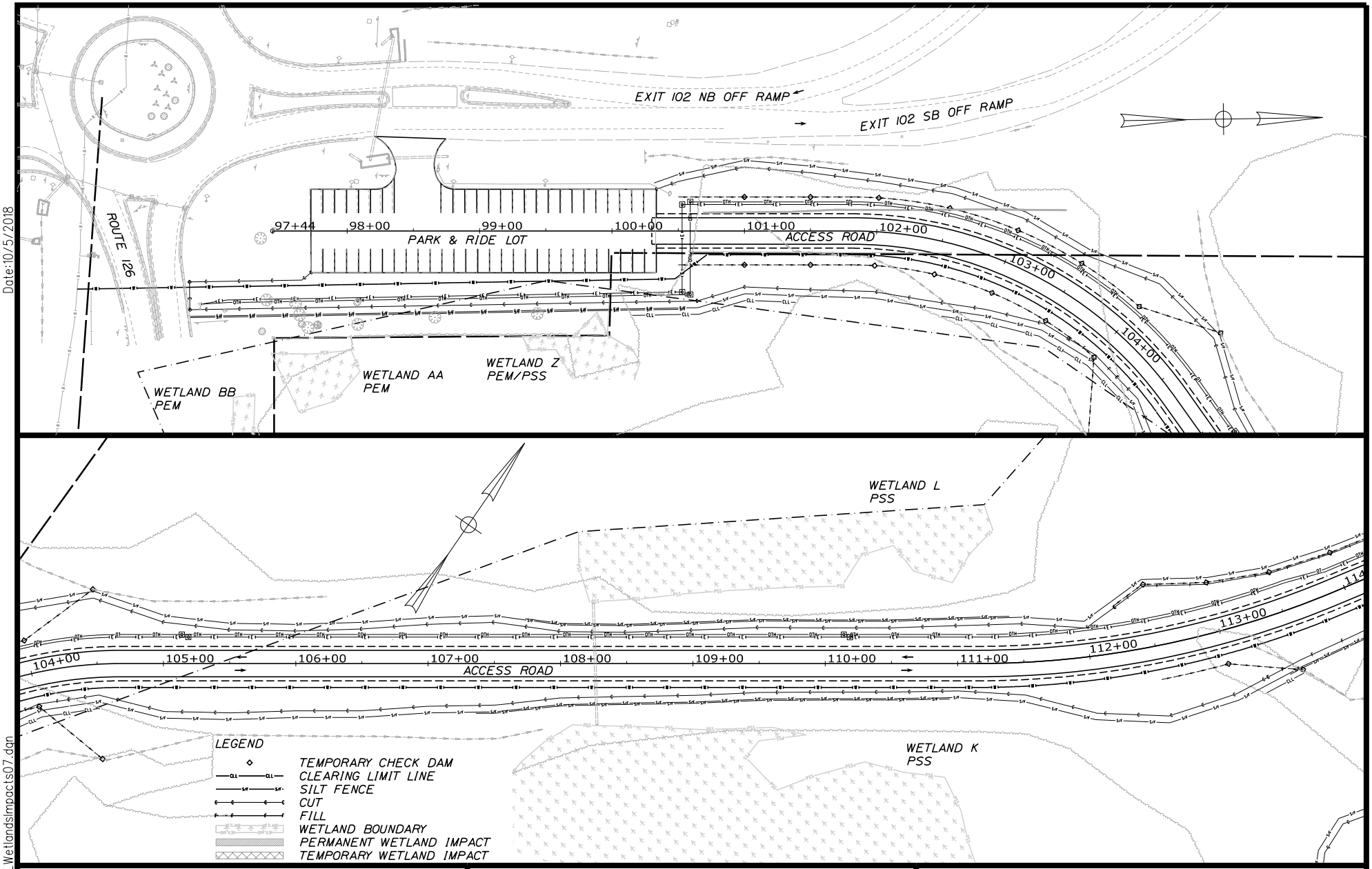
THE GOLD STAR MEMORIAL HIGHWAY

WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 6

DATE: OCTOBER, 2018



Date:10/5/2018

Filename: ..._WetlandsImpacts07.dgn

Scale: 50 0 50 100

Scale of Feet

Stantec

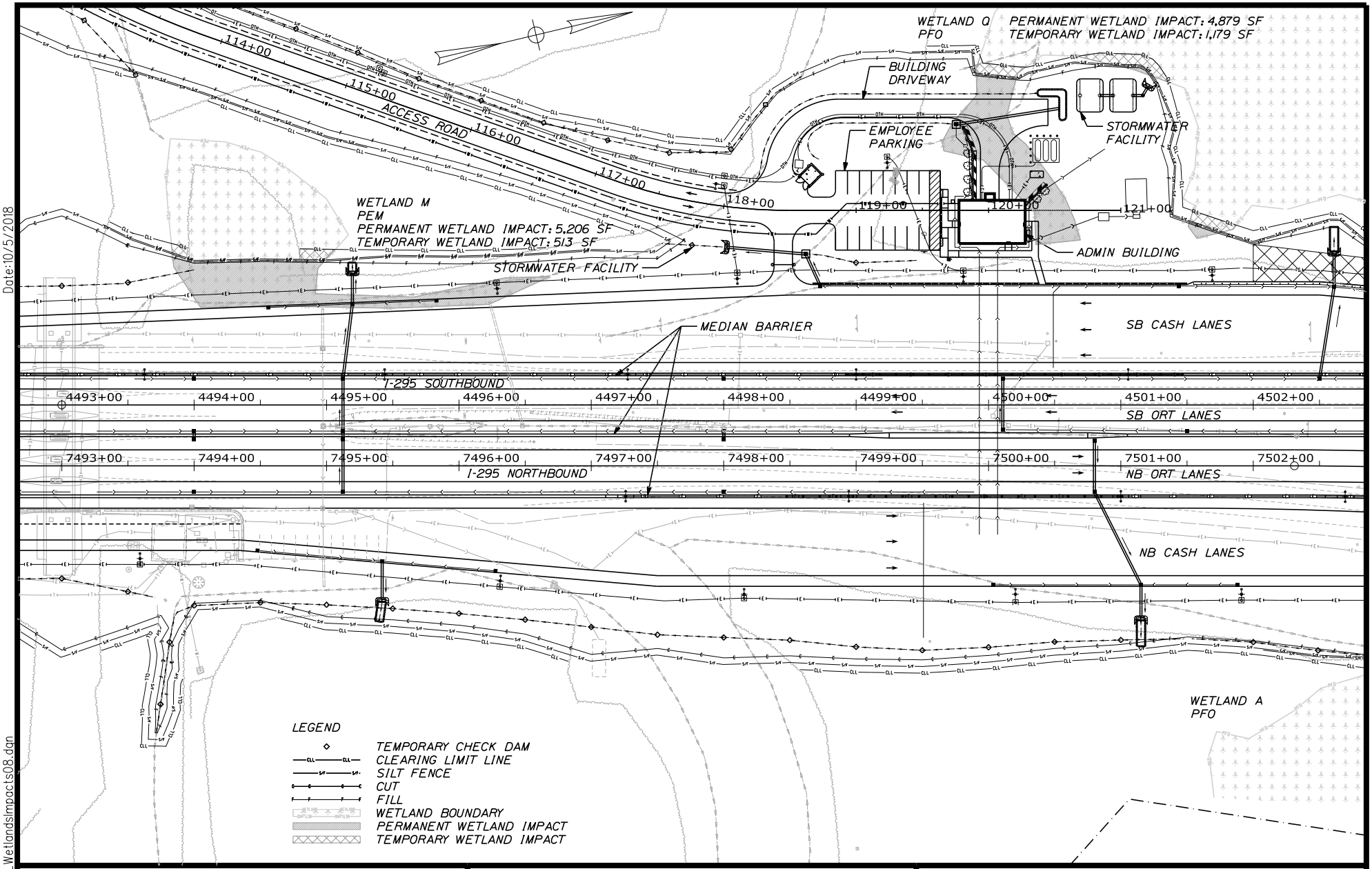
MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 7

DATE: OCTOBER, 2018



Date:10/5/2018

Filename: ..._WetlandsImpacts08.dgn

Scale: 50 0 50 100

Scale of Feet

Stantec

MAINE TURNPIKE

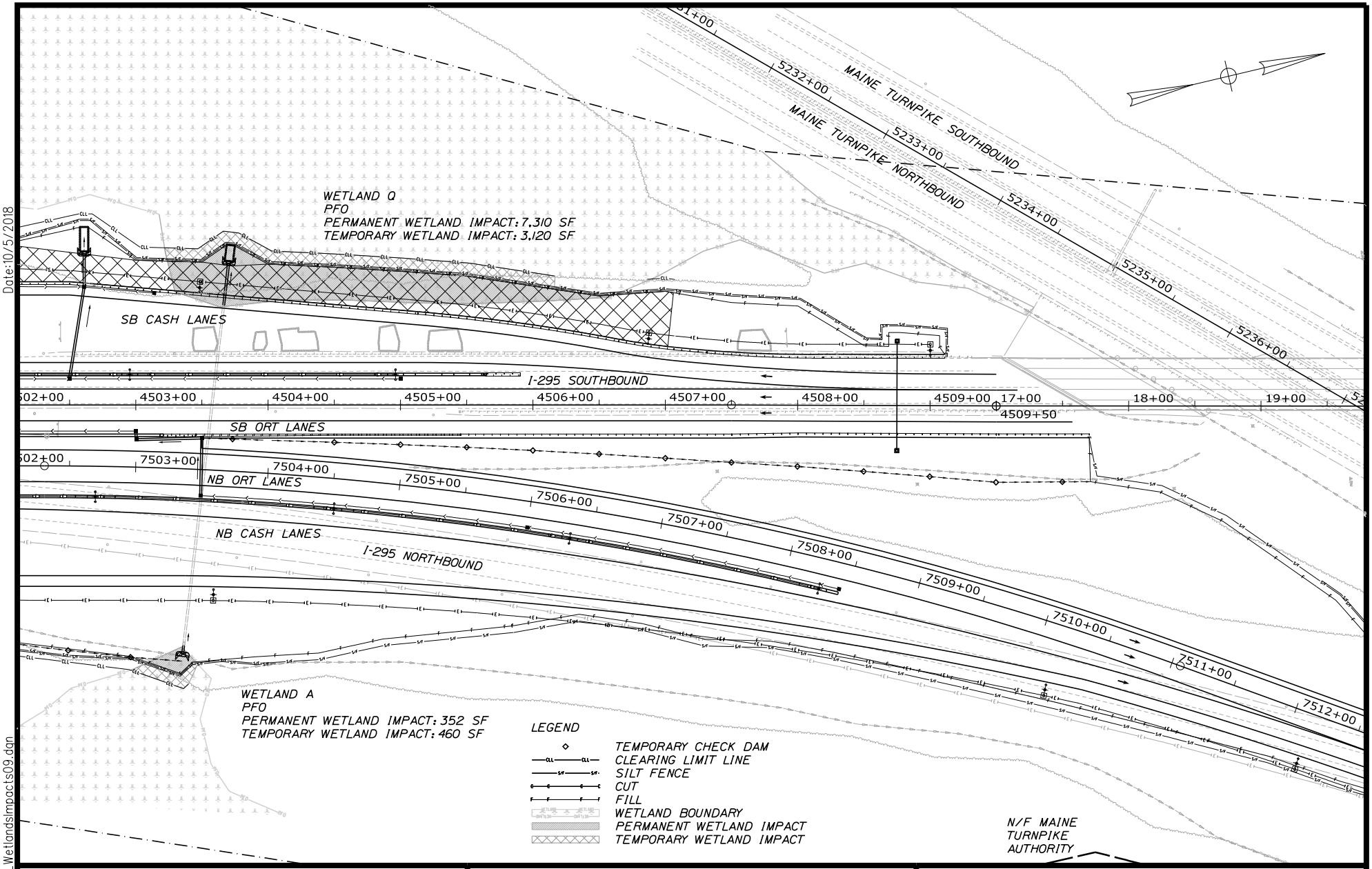
THE GOLD STAR MEMORIAL HIGHWAY

WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 8

DATE: OCTOBER, 2018

SHEET 9 OF 14



Date:10/5/2018

Filename: ..._WetlandsImpacts09.dgn

Scale: 50 0 50 100
Scale of Feet

Stantec

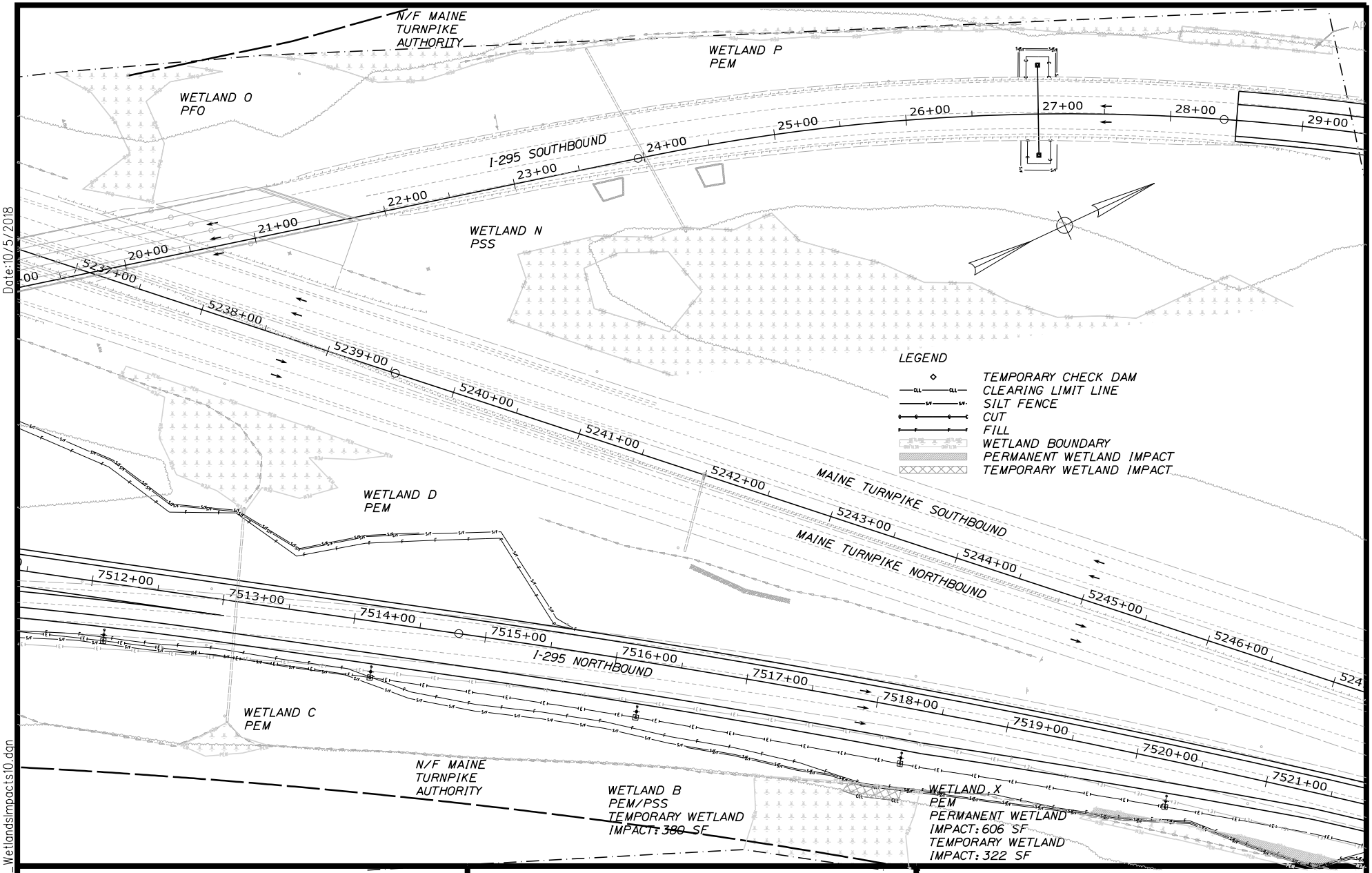
MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 9

DATE: OCTOBER, 2018



Date:10/5/2018

Filename: ..._WetlandsImpacts10.dgn

Scale: 50 0 50 100
Scale of Feet

Stantec

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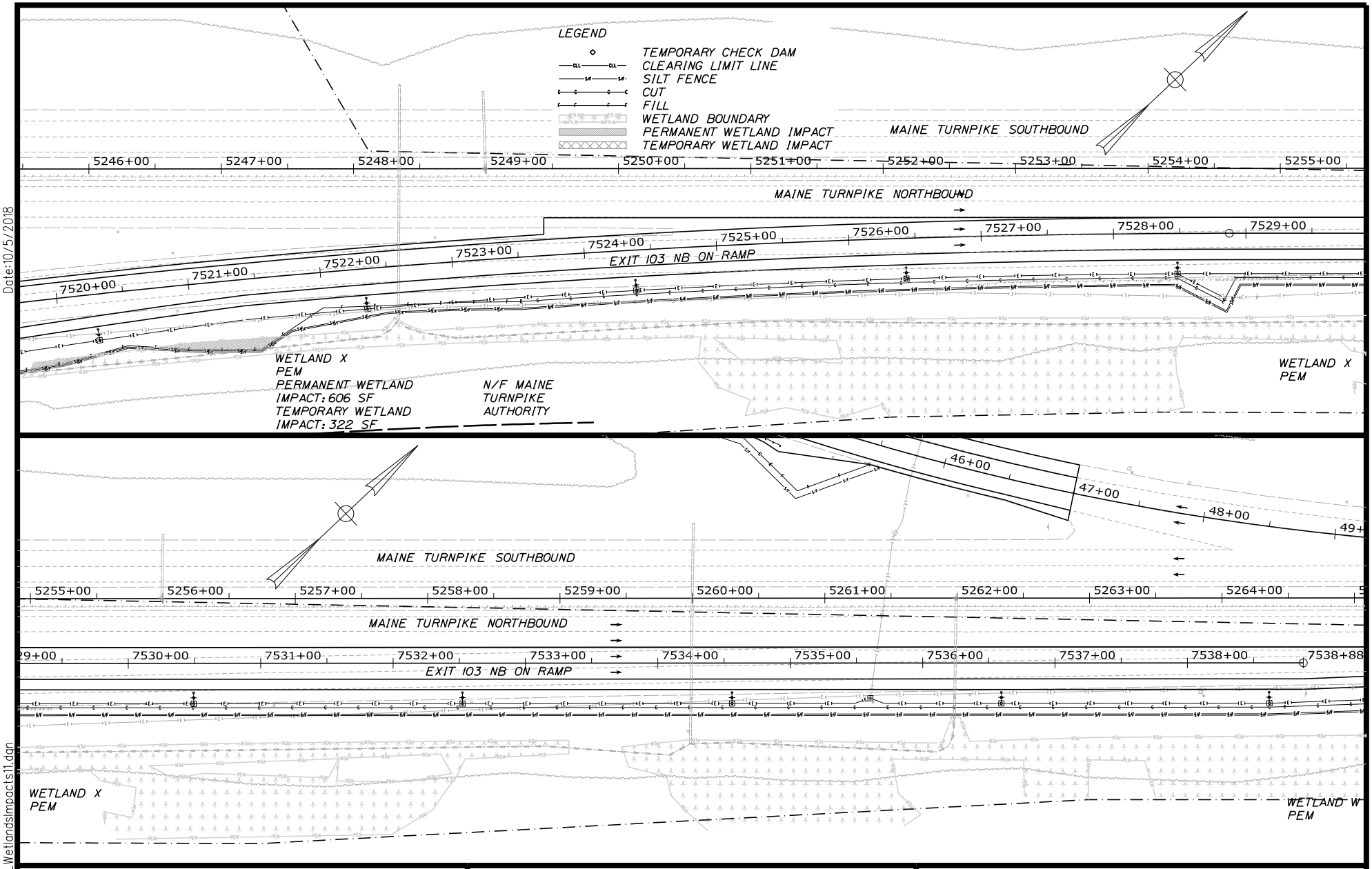
THE GOLD STAR MEMORIAL HIGHWAY

WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 10

DATE: OCTOBER, 2018



Date:10/5/2018

Filename: ..._WetlandsImpacts11.dgn

Scale: 50 0 50 100

Scale of Feet

Stantec

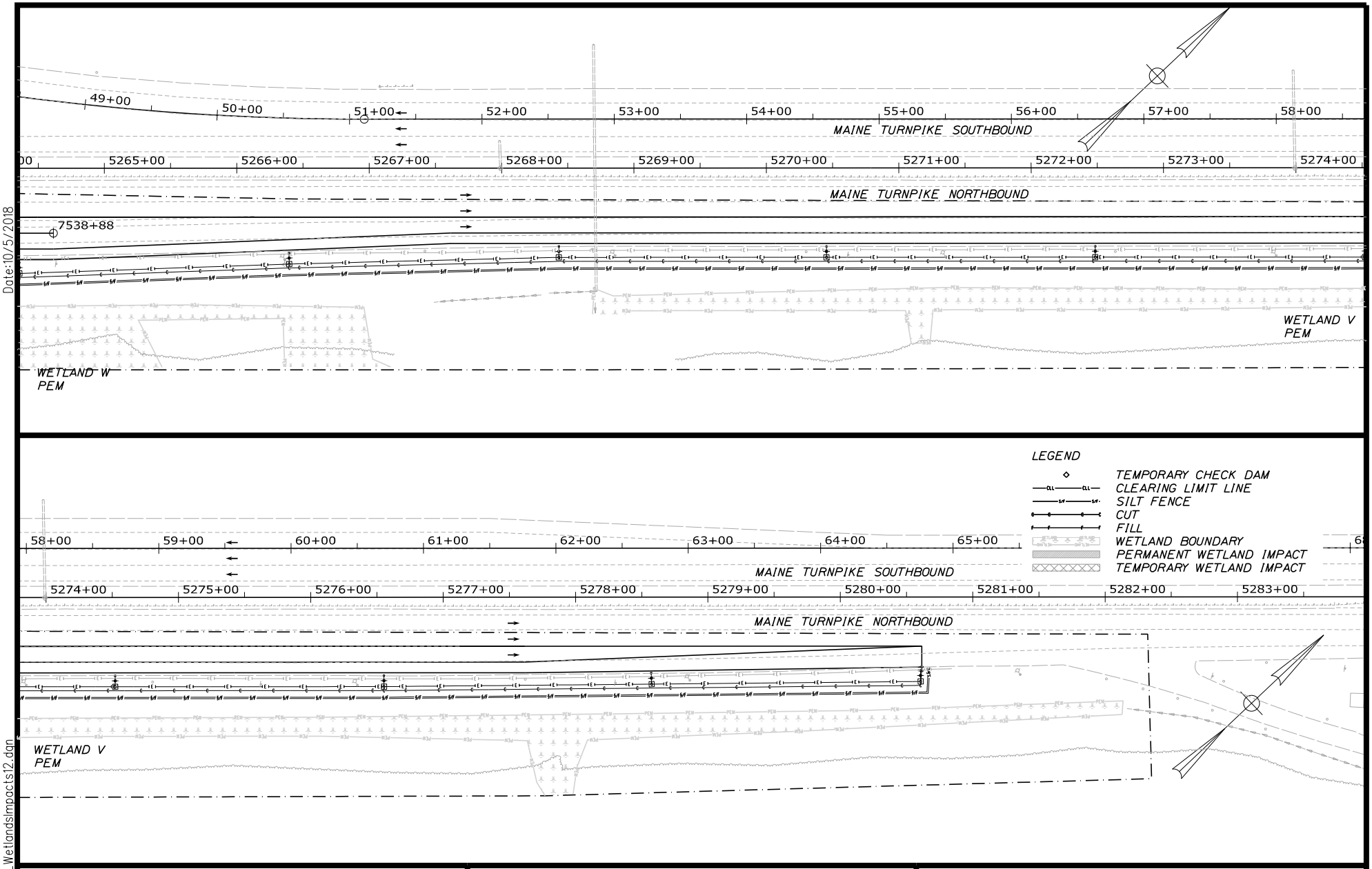
MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 11

DATE: OCTOBER, 2018



Date:10/5/2018

Filename: ..._WetlandsImpacts12.dgn

Scale: 50 0 50 100

Scale of Feet

Stantec

MAINE TURNPIKE

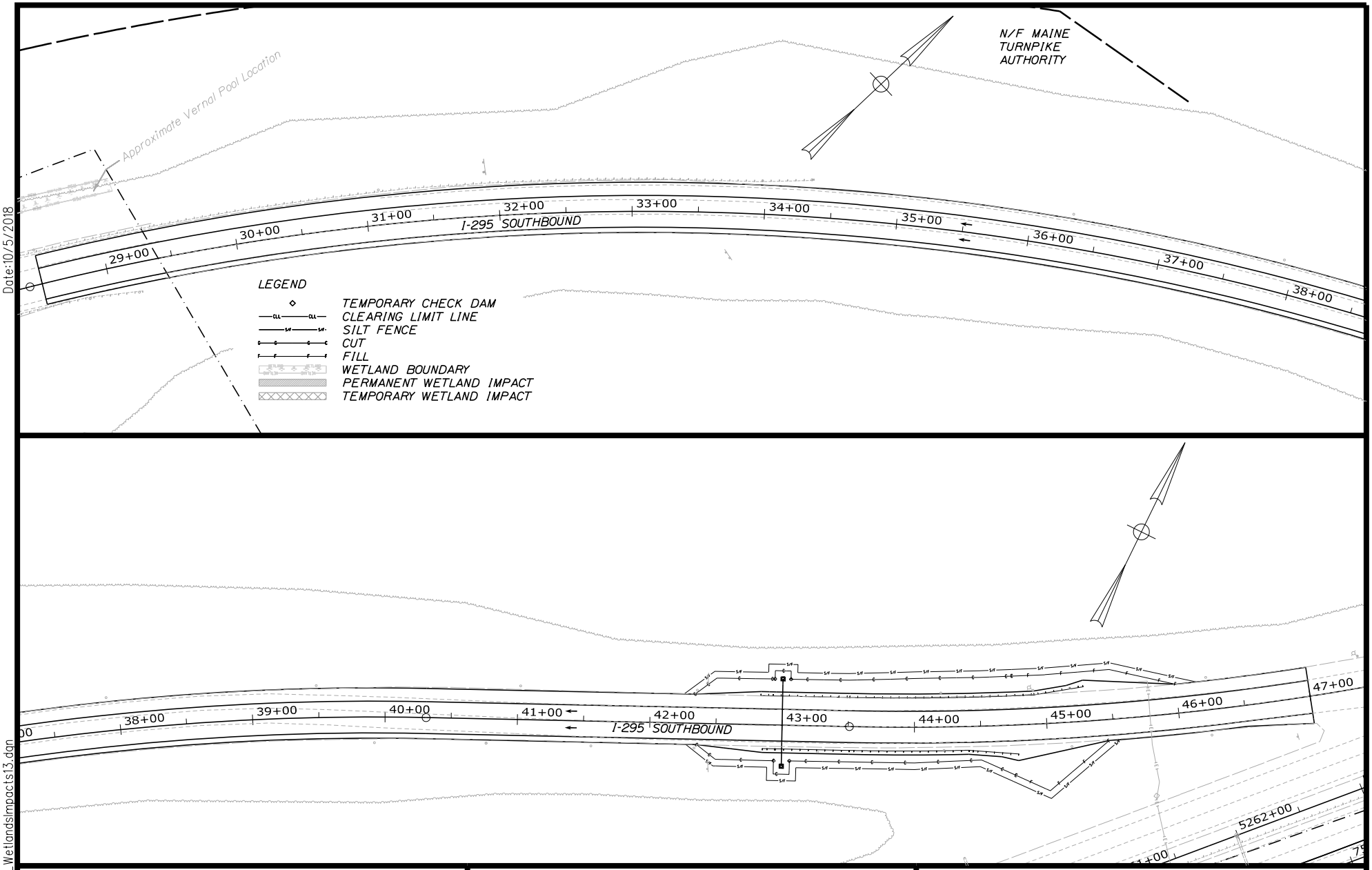
THE GOLD STAR MEMORIAL HIGHWAY

WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 12

DATE: OCTOBER, 2018

SHEET 13 OF 14



Date:10/5/2018

Filename: ..._WetlandsImpacts13.dgn

Scale: 50 0 50 100

Scale of Feet

Stantec

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 13

DATE: OCTOBER, 2018

APPENDICES

APPENDIX A WETLAND AND STREAM RESOURCE SUMMARY

WETLAND AND STREAM RESOURCE SUMMARY

Resource ID	Maine MTA Feature Map ID	Cowardin Wetland Classification	WOSS (Yes/No, Type)	Stream Type	Principal Functions & Values	Notes
01BEA	A	PFO	No	NA	STPR, NRRT	Large wetland, extends off-site to east
01BEB	B	PEM/PSS	No	NA	STPR, NRRT	Wetland along I-95 northbound connected to forested wetland along site boundary; contained amphibian egg masses and fish
01BEC	C	PEM	No	NA	STPR, NRRT	Closed depression, connected to roadside ditches
01BED	D	PEM	No	NA	FA, STPR, NRRT	Closed depression, connected to roadside ditches
01BEE	E	PEM w/PSS on treeline	No	NA	STPR, NRRT	Closed depression, connected to roadside ditches
01BEF	F	PEM	No	NA	GRD, STPR, NRRT	Large wetland, extends off-site to east
01BEG	G	PEM	No	NA	STPR, NRRT	Closed depression, connected to roadside ditches
01BEH/I	H	PEM	No	NA	STPR, NRRT	Closed depression, connected to roadside ditches
01EBB	I	PEM	No	NA	STPR, NRRT	Closed depression, connected to roadside ditches
01BEJ	J	PEM	No	NA	STPR, NRRT	Closed depression, connected to roadside ditches
01BEK	K	PSS	No	NA	FA, STPR, NRRT	Extends off-site to south
01BEL	L	PSS	No	NA	FA, STPR, NRRT	Extends off-site to northwest
01BEM	M	PEM	No	NA	STPR, NRRT	Closed depression, connected to roadside ditches
01BEA I-295	N	PSS	No	NA	FA, STPR, NRRT	Located between I-295 ramp and I-95
01BEC I-295	O	PFO	No	NA	GRD, FA, STPR, NRRT	Connects to 01BE stream off-site
01BED I-295	P	PEM	Yes, w/in 25' of stream	NA	GRD, FA, FSH, STPR, NRRT, WH	Wetland is a ditch at head of 01BE stream, contained amphibian egg masses and fish
01BEE I-295	Q	PFO	No	NA	FA, STPR, NRRT, WH	Located between I-295 and I-95
01RKA	R	PEM	No	NA	STPR, NRRT	Swale along I-295 north of Pond Road overpass
01RKB	S	PEM w/PFO treeline	No	NA	STPR, NRRT	Part of a larger off-site wetland
01RKC	T	PFO	No	NA	GRD	Natural wetland bordering out of service off ramp east of toll plaza
01RKD	U	PFO	No	NA	GRD	Natural wetland bordering out of service off ramp east of toll plaza
01RKE	V	PEM	No	NA	GRD, STPR, NRRT, WH	Stormwater swale along I-95 northbound connected to forested wetland along site boundary; contained amphibian egg masses and fish
01RKF	W	PEM	No	NA	GRD, STPR, NRRT, WH	Stormwater swale along I-95 northbound connected to forested wetland along site boundary; contained amphibian egg masses and fish
01RKG	X	PEM	No	NA	GRD, STPR, NRRT, WH	Stormwater swale along I-95 northbound connected to forested wetland along site boundary; contained amphibian egg masses and fish
01RKL	Y	PEM	No	NA	FA, STPR, NRRT, WH	PEM along I-295, apparently connected to wetland Q off-site
01RKM	Z	PSS/PEM	No	NA	STPR, NRRT	Extends off-site and located east of Park & Ride
01RKN	AA	PEM	No	NA	STPR, NRRT	Isolated depression and located east of Park & Ride
01RKO	BB	PEM	No	NA	STPR, NRRT	Off-site wetland drains to roadside along Route 126
01RKP	CC	PEM	No	NA	STPR, NRRT	Located between Route 126 off ramp and I-295 southbound
01RKQ	DD	PEM	No	NA	STPR, NRRT	Off-site wetland drains to ditch located along Route 126 off ramp
01BE	01BE	R3UB1	NA	Perennial	NA	Appx. 5' wide flows out of wetland P

NA = Not Applicable

Principal Functions & Values Acronyms:

GRD = Groundwater Recharge/Discharge; **FA** = Floodflow Alteration; **FSH** = Fish and Shellfish Habitat; **STPR** = Sediment/Toxicant/Pathogen Retention; **NRRT** = Nutrient Removal/Retention/Transformation; **PE** = Production Export; **SSS** = Sediment/Shoreline Stabilization; **WH**

APPENDIX B REPRESENTATIVE SITE PHOTOS

Photo 1. Wetland A: PFO wetland along I-295, north of existing toll booth; large wetland that extends outside the survey area. Stantec, November 9, 2017.

Photo 2. Wetland B: Typical PEM wetland with scrub shrub fringe along I-295 on ramp to I-95; part of a larger wetland that extends outside the survey area. Stantec, November 9, 2017.

Photo 3. Wetland C: PEM/PSS, closed, depressional wetland along roadside toe of fill; outlet of culvert from Wetland D. Stantec, November 9, 2017.

Photo 4. Wetland D: Typical PEM wetland along I-95 off-ramp to I-295 southbound; impounded by roadway and culvert outlets to Wetland C. Stantec, November 9, 2017.

Photo 5. Wetland E: PEM/PSS wetland along I-295; extends into woody vegetated area. Stantec, November 9, 2017.

Photo 6. Wetland F: Large PEM wetland along I-295 on-ramp, south of existing toll booth. Stantec, November 9, 2017.

Photo 7. Wetland G: PEM wetland between I-295; connected to Wetlands CC and DD and wetland outside the survey area to the west by culverts. Stantec, November 9, 2017.

Photo 8. Wetland H: PEM wetland along I-295 northbound; extends outside survey area. Stantec, November 9, 2017.

Photo 9. Wetland J: Large, non-maintained PEM wetland along I-295 southbound, south of existing toll booth. Stantec, November 9, 2017.

Photo 10. Wetland M: PEM wetland along southbound lane I-295; narrow swale portion of a large wetland area to the west. Stantec, November 9, 2017.

Photo 11. Wetland V: PEM wetland along northbound lane I-95; portion of a stormwater swale downslope and connected to forested wetland to the east. Stantec, April 24, 2018.

Photo 12. Wetland DD: PEM wetland along I-295, southbound off ramp to Route 126; extends outside the survey area to the west. Stantec, May 4, 2018.

Photo 13. Wetland V: Spotted salamander egg mass.
Stantec, April 24, 2018.

Photo 14. Wetland W: Wood frog egg mass.
Stantec, April 24, 2018.

APPENDIX C FUNCTIONS AND VALUES FORMS

Wetland Function-Value Evaluation Form

Total area of wetland 16,479sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PFO Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. A

Latitude 44.21528 Longitude 69.82319

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type temp. & perm. fill & clearing Area 206 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6		
Floodflow Alteration	N	4, 9, 15		natural wetland
Fish and Shellfish Habitat	N	1, 2		forested
Sediment/Toxicant Retention	Y	1, 2, 3, 4, 8	X	adjacent to highway
Nutrient Removal	Y	3, 4, 7, 10	X	adjacent to highway
Production Export	N	8		
Sediment/Shoreline Stabilization	N			not assoc. w/ shoreline
Wildlife Habitat	Y	5, 7, 8, 14, 15		
Recreation	N	12		
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 2,003sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. AA

Latitude 44.20958 Longitude 69.82764

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6		
Floodflow Alteration	N	9		
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4	X	adjacent to highway Park & Ride
Nutrient Removal	Y	3, 4, 10	X	adjacent to highway Park & Ride
Production Export	N	4		deer tracks
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	7, 8, 17		deer tracks
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 7,311sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM/PSS Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? One Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. B

Latitude 44.21897 Longitude 69.82178

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type temp. fill Area 49 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6, 9, 15		
Floodflow Alteration	N	4, 7, 9, 18		natural wetland
Fish and Shellfish Habitat	Y	1, 2, 4, 10, 12, 16		not a watercourse or waterbody
Sediment/Toxicant Retention	Y	1, 2, 3, 4, 5	X	adjacent to highway
Nutrient Removal	Y	3, 4, 7, 8, 9, 10	X	adjacent to highway
Production Export	Y	2, 4, 6, 7		fish and amphibian egg masses observed
Sediment/Shoreline Stabilization	N			not assoc. w/ shoreline
Wildlife Habitat	Y	5, 7, 8, 13, 15, 16, 18, 20		fish and amphibian egg masses observed
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N	6		
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 2,340sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. BB

Latitude 44.20941 Longitude 69.82745

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6, 15		
Floodflow Alteration	N	9		
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4	X	adjacent to highway Park & Ride and Route 126
Nutrient Removal	Y	3, 4, 10	X	adjacent to highway Park & Ride and Route 126
Production Export	N	4		deer tracks
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	7, 8, 17		deer tracks
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 829sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. C

Latitude 44.21786 Longitude 69.82246

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6, 10		culvert outlet
Floodflow Alteration	N	4, 9		
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4	X	adjacent to highway
Nutrient Removal	Y	3, 4, 7, 10	X	adjacent to highway
Production Export	N			
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	N	7		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 11,710sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. CC

Latitude 44.21003 Longitude 69.82504

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6		
Floodflow Alteration	N	6, 9		
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4	X	adjacent to highway
Nutrient Removal	Y	3, 4, 7, 10	X	adjacent to highway
Production Export	N			
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	N	7		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 8,693sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. D

Latitude 44.21801 Longitude 69.82332

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6		disturbance, ditch outlet
Floodflow Alteration	Y	4, 5, 6, 7, 9, 18	X	flat, dense veg.
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 3, 4, 5	X	adjacent to highway, dense veg.
Nutrient Removal	Y	3, 4, 5, 7, 8, 9, 10, 11	X	adjacent to highway, dense veg
Production Export	N	2, 7		
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	7, 8 13, 20		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 18,725sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. DD

Latitude 44.21122 Longitude 69.82501

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6, 15		
Floodflow Alteration	N	6, 9		
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4	X	adjacent to highway
Nutrient Removal	Y	3, 4, 10	X	adjacent to highway
Production Export	N	4		
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	7, 8		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 5,065 sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM w/ PSS treeline Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. E

Latitude 44.21193 Longitude 69.82398

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type temp. & perm. fill Area 5,065 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6		disturbance, ditch
Floodflow Alteration	N	4, 9		
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 3, 4, 5	X	adjacent to highway
Nutrient Removal	Y	3, 4, 6	X	adjacent to highway
Production Export	N	8		
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	5, 7, 8, 14, 15		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 5,065 sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. F

Latitude 44.21026 Longitude 69.82311

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6,15	X	extends off-site as larger wetland
Floodflow Alteration	N	4, 5, 6, 9,		extends off-site as larger wetland
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4, 8	X	adjacent to highway
Nutrient Removal	Y	3, 4, 7	X	adjacent to highway
Production Export	N	1		
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	5, 6, 7, 8		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 10,713sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. G

Latitude 44.21 Longitude 69.82398

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type temp. & perm. fill Area 8 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6		closed depression connected to ditches
Floodflow Alteration	N	4, 9		
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2	X	adjacent to highway
Nutrient Removal	Y	3, 4, 10	X	adjacent to highway
Production Export	N	1		
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	N	7		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 18,815sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. H

Latitude 44.20856 Longitude 69.82424

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6		closed depression connected to ditches
Floodflow Alteration	Y	4, 6, 9, 18		
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 3, 4	X	adjacent to highway
Nutrient Removal	Y	3, 4, 7, 8, 9, 10	X	adjacent to highway
Production Export	N			
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	N	7, 8		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 457sq ft Human made? Yes Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. I

Latitude 44.20924 Longitude 69.82331

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6		closed depression connected to ditches
Floodflow Alteration	Y	4		
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4	X	adjacent to highway
Nutrient Removal	Y	3, 4, 7, 8, 10	X	adjacent to highway
Production Export	N			
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	N	7, 8		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 22,291sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. J

Latitude 44.20836 Longitude 69.82519

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type temp. & perm. fill Area 363 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6, 15		closed depression connected to ditches
Floodflow Alteration	Y	4, 6, 8, 9, 18		
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 3, 4	X	adjacent to highway
Nutrient Removal	Y	3, 4, 7, 8, 9, 10	X	adjacent to highway
Production Export	N			
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	N	7, 8		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 61,920sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PSS Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. K

Latitude 44.21191 Longitude 69.82603

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6		extends off-site
Floodflow Alteration	Y	4, 6, 8, 9, 18	X	
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4, 5, 8	X	adjacent to highway
Nutrient Removal	Y	3, 4, 7, 8, 9, 10	X	adjacent to highway
Production Export	N			
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	N	7, 8		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 14,894sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PSS Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. L

Latitude 44.21219 Longitude 69.82675

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6		extends off-site
Floodflow Alteration	Y	4, 6, 8, 9, 18	X	
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4, 5, 8	X	adjacent to highway
Nutrient Removal	Y	3, 4, 7, 8, 9, 10	X	adjacent to highway
Production Export	N			
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	N	7, 8		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 15,120sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. M

Latitude 44.21306 Longitude 69.82473

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type temp. & perm. fill Area 5,790 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6		closed depression, connected to ditches
Floodflow Alteration	Y	4, 9		
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 3	X	adjacent to highway
Nutrient Removal	Y	3, 4, 7, 8, 9, 10	X	adjacent to highway
Production Export	N	7		
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	7, 8, 13		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 28,883sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PSS Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. N

Latitude 44.21919 Longitude 69.8233

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6, 15		
Floodflow Alteration	Y	4, 6, 7, 8, 9, 18	X	
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4, 7, 8	X	adjacent to highway
Nutrient Removal	Y	3, 4, 7, 8, 9, 10, 11	X	adjacent to highway
Production Export	N	7		
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	7, 8, 13, 21		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 4,317sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PFO Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. 0

Latitude 44.21805 Longitude 69.82422

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6, 7, 10, 15	X	connected to stream off-site
Floodflow Alteration	Y	4, 13	X	
Fish and Shellfish Habitat	Y	7, 12, 15, 16, 17		
Sediment/Toxicant Retention	Y	1, 2, 4, 8, 10	X	adjacent to highway
Nutrient Removal	Y	4, 7	X	adjacent to highway
Production Export	N	6		
Sediment/Shoreline Stabilization	Y	2, 3, 4		
Wildlife Habitat	Y	6, 7, 8		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 6,902sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? One Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. P

Latitude 44.21871 Longitude 69.82415

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6, 7, 10, 15	X	ditch at headwater of stream
Floodflow Alteration	Y	7, 9, 13, 15	X	
Fish and Shellfish Habitat	Y	1, 3, 4, 10, 12, 15, 16, 17	X	
Sediment/Toxicant Retention	Y	1, 2, 3, 4, 10	X	adjacent to highway
Nutrient Removal	Y	3, 4, 7, 9, 10, 13	X	adjacent to highway
Production Export	Y	4, 6		fish, amphibian egg masses, beaver
Sediment/Shoreline Stabilization	Y	1, 2, 3, 4		
Wildlife Habitat	Y	5, 6, 7, 8, 16, 17, 18, 20, 21	X	fish, amphibian egg masses, beaver
Recreation	N	5		
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19, 22, 27		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 131,704sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PFO Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. Q

Latitude 44.21597 Longitude 69.82462

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type temp. & perm. fill Area 14,725 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6, 15		
Floodflow Alteration	Y	6, 7, 8, 9, 18	X	
Fish and Shellfish Habitat	N	2		
Sediment/Toxicant Retention	Y	1, 2, 3, 4, 7, 8	X	adjacent to highway
Nutrient Removal	Y	3, 4, 5, 7, 8, 10	X	adjacent to highway
Production Export	Y	4, 7, 8		old beaver activity
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	7, 8, 9, 13, 14, 15, 17, 21	X	old beaver activity
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19, 27		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 2,610sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? YES If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. R

Latitude 44.20186 Longitude 69.82509

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6		
Floodflow Alteration	N	9, 15		
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4	X	adjacent to highway
Nutrient Removal	Y	3, 4, 9, 10	X	adjacent to highway
Production Export	N			
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	N	7, 8		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 30,761sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. S

Latitude 44.20546 Longitude 69.82462

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6		extends off-site
Floodflow Alteration	Y	6, 8, 9, 18		
Fish and Shellfish Habitat	N	1		
Sediment/Toxicant Retention	Y	1, 2, 3, 4, 5, 7, 8	X	adjacent to highway
Nutrient Removal	Y	3, 4, 7, 8, 9, 10	X	adjacent to highway
Production Export	N	7		
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	5, 7, 8, 13, 21		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 13671sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PFO Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. T

Latitude 44.21323 Longitude 69.82254

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6, 9	X	discharges to ditch
Floodflow Alteration	N	9		
Fish and Shellfish Habitat	N	1		
Sediment/Toxicant Retention	Y	1, 2, 4		adjacent to old highway ramp
Nutrient Removal	Y	3, 4, 7		adjacent to old highway ramp
Production Export	N			
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	5, 7, 8		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 1,211sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PFO Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. U

Latitude 44.21241 Longitude 69.82264

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6, 9	X	extends off-site
Floodflow Alteration	N	9		
Fish and Shellfish Habitat	N	1		
Sediment/Toxicant Retention	Y	1, 2, 4		adjacent to old highway ramp
Nutrient Removal	Y	3, 4, 7		adjacent to old highway ramp
Production Export	N			
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	5, 7, 8		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 22,971sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? One Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. V

Latitude 44.22633 Longitude 69.81542

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6, 7, 13, 15	X	highway ditch connecting natural wetlands
Floodflow Alteration	N	9, 18		
Fish and Shellfish Habitat	Y	1, 3, 4, 10, 12, 16		fish observed in ditch
Sediment/Toxicant Retention	Y	1, 2, 3, 4, 5, 14, 16	X	adjacent to highway
Nutrient Removal	Y	3, 4, 5, 7, 8, 9, 10, 12, 13, 14	X	adjacent to highway
Production Export	Y	2, 4, 6, 7		
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	5, 7, 8, 10, 13, 16, 17, 18, 20	X	fish and amphibian egg masses
Recreation	N	5		
Educational/Scientific Value	N	5		
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 29,287sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? One Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W

Latitude 44.22393 Longitude 69.81773

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6, 7, 13, 15	X	highway ditch connecting natural wetlands
Floodflow Alteration	N	9, 18		
Fish and Shellfish Habitat	Y	1, 3, 4, 10, 12, 16		fish observed in ditch
Sediment/Toxicant Retention	Y	1, 2, 3, 4, 5, 14, 16	X	adjacent to highway
Nutrient Removal	Y	3, 4, 5, 7, 8, 9, 10, 12, 13, 14	X	adjacent to highway
Production Export	Y	2, 4, 6, 7		
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	5, 7, 8, 10, 13, 16, 17, 18, 20	X	fish and amphibian egg masses
Recreation	N	5		
Educational/Scientific Value	N	5		
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 47,905sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? One Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. X

Latitude 44.22081 Longitude 69.82058

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type temp. & perm. fill Area 928 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6, 7, 13, 15	X	highway ditch connecting natural wetlands
Floodflow Alteration	N	9, 18		
Fish and Shellfish Habitat	Y	1, 3, 4, 10, 12, 16		fish observed in ditch
Sediment/Toxicant Retention	Y	1, 2, 3, 4, 5, 14, 16	X	adjacent to highway
Nutrient Removal	Y	3, 4, 5, 7, 8, 9, 10, 12, 13, 14	X	adjacent to highway
Production Export	Y	2, 4, 6, 7		
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	5, 7, 8, 10, 13, 16, 17, 18, 20	X	fish and amphibian egg masses
Recreation	N	5		
Educational/Scientific Value	N	5		
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 2,86sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. Y

Latitude 44.21752 Longitude 69.8262

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6, 15		
Floodflow Alteration	Y	6, 7, 8, 9, 18	X	
Fish and Shellfish Habitat	N	2		
Sediment/Toxicant Retention	Y	1, 2, 3, 4, 7, 8	X	adjacent to highway
Nutrient Removal	Y	3, 4, 5, 7, 8, 10	X	adjacent to highway
Production Export	Y	4, 7, 8		old beaver activity
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	7, 8, 9, 13, 14, 15, 17, 21	X	old beaver activity
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19, 27		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 47,905sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PSS Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. Z

Latitude 44.20988 Longitude 69.82768

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6		
Floodflow Alteration	N	9		
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4	X	adjacent to highway Park & Ride
Nutrient Removal	Y	3, 4, 10	X	adjacent to highway Park & Ride
Production Export		1, 4		shrub drupes, deer tracks
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	7, 8, 17		shrub drupes, deer tracks
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

APPENDIX D MDIFW AND MNAP LETTERS

PAUL R. LEPAGE
GOVERNOR

STATE OF MAINE
DEPARTMENT OF
INLAND FISHERIES & WILDLIFE
284 STATE STREET
41 STATE HOUSE STATION
AUGUSTA ME 04333-0041

CHANDLER E. WOODCOCK
COMMISSIONER

September 27, 2018

Rodney Kelshaw
Stantec
30 Park Drive
Topsham ME 04086-1737

RE: Information Request - I-95 Exit 103 Toll Plaza Improvements, West Gardiner

Dear Rodney:

Per your request received September 20, 2018, we have reviewed current Maine Department of Inland Fisheries and Wildlife (MDIFW) information for known locations of Endangered, Threatened, and Special Concern species; designated Essential and Significant Wildlife Habitats; and fisheries habitat concerns within the vicinity of the *I-95 Exit 103 Toll Plaza Improvements Project* in West Gardiner.

Our Department has not mapped any Essential Habitats that would be directly affected by your project.

Endangered, Threatened, and Special Concern Species

Bats

Of the eight species of bats that occur in Maine, the three *Myotis* species are protected under Maine's Endangered Species Act (MESA) and are afforded special protection under 12 M.R.S §12801 - §12810. The three *Myotis* species include little brown bat (State Endangered), northern long-eared bat (State Endangered), and eastern small-footed bat (State Threatened). The five remaining bat species are listed as Special Concern: big brown bat, red bat, hoary bat, silver-haired bat, and tri-colored bat.

While a comprehensive statewide inventory for bats has not been completed, based on historical evidence it is likely that several of these species occur within the project area during migration and/or the breeding season. We recommend that you contact the U.S. Fish and Wildlife Service--Maine Fish and Wildlife Complex (Wende Mahaney, 207-902-1569) for further guidance, as the northern long-eared bat is also listed as a Threatened Species under the Federal Endangered Species Act. Otherwise, our Agency does not anticipate significant impacts to any of the bat species as a result of this project.

Significant Wildlife Habitat

Deer Wintering Areas

The project search area appears to intersect with a Deer Winter Area (DWA). DWAs contain habitat cover components that provide conditions where deer find protection from deep snow and cold wind,

which is important for overwinter survival. MDIFW recommends that development projects be designed to avoid losses or impacts to the continued availability of coniferous winter shelter. Any removal of vegetation should be conducted in such a way that improves the quality and vigor of the coniferous species providing this winter shelter.

Significant Vernal Pools

At this time, MDIFW Significant Wildlife Habitat maps indicate no known presence of Significant Vernal Pools in the project search area; however, a comprehensive statewide inventory for Significant Vernal Pools has not been completed. Therefore, we recommend that surveys for vernal pools be conducted within the project boundary by qualified wetland scientists prior to final project design to determine whether there are Significant Vernal Pools present in the area. These surveys should extend up to 250 feet beyond the anticipated project footprint because of potential performance standard requirements for off-site Significant Vernal Pools, assuming such pools are located on land owned or controlled by the applicant. Once surveys are completed, survey forms should be submitted to our Agency for review well before to the submission of any necessary permits. Our Department will need to review and verify any vernal pool data prior to final determination of significance.

Fisheries Habitat

We generally recommend that a 100-foot undisturbed vegetated buffers be maintained along streams. Buffers should be measured from the edge of stream or associated fringe and floodplain wetlands. Maintaining and enhancing buffers along streams that support coldwater fisheries is critical to the protection of water temperatures, water quality, natural inputs of coarse woody debris, and various forms of aquatic life necessary to support conditions required by many fish species. If an existing crossing needs to be modified, it should be designed to provide full fish passage. Small streams, including intermittent streams, can provide crucial rearing habitat, cold water for thermal refugia, and abundant food for juvenile salmonids on a seasonal basis and undersized crossings may inhibit these functions. Generally, MDIFW recommends that all new, modified, and replacement stream crossings be sized to span at least 1.2 times the bankfull width of the stream. In addition, we generally recommend that stream crossings be open bottomed (i.e. natural bottom), although embedded structures which are backfilled with representative streambed material have been shown to be effective in not only providing habitat connectivity for fish but also for other aquatic organisms. Construction Best Management Practices should be closely followed to avoid erosion, sedimentation, alteration of stream flow, and other impacts as eroding soils from construction activities can travel significant distances as well as transport other pollutants resulting in direct impacts to fish and fisheries habitat. In addition, we recommend that any necessary instream work occur between July 15 and October 1.

This consultation review has been conducted specifically for known MDIFW jurisdictional features and should not be interpreted as a comprehensive review for the presence of other regulated features that may occur in this area. Prior to the start of any future site disturbance we recommend additional consultation with the municipality, and other state resource agencies including the Maine Natural Areas Program and Maine Department of Environmental Protection in order to avoid unintended protected resource disturbance.

Please feel free to contact my office if you have any questions regarding this information, or if I can be of any further assistance.

Best regards,

John Perry
Environmental Review Coordinator

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
93 STATE HOUSE STATION
AUGUSTA, MAINE 04333

PAUL R. LEPAGE
GOVERNOR

WALTER E. WHITCOMB
COMMISSIONER

October 3, 2018

Rodney Kelshaw
Stantec
30 Park Drive
Topsham, ME 04086

Via email: rodney.kelshaw@stantec.com

Re: Rare and exemplary botanical features in proximity to: #195311383, Toll Plaza Improvements, I-95, Exit 103, West Gardiner, Maine

Dear Mr. Kelshaw:

I have searched the Natural Areas Program's Biological and Conservation Data System files in response to your request received September 20, 2018 for information on the presence of rare or unique botanical features documented from the vicinity of the project in West Gardiner, Maine. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural communities. Our review involves examining maps, manual and computerized records, other sources of information such as scientific articles or published references, and the personal knowledge of staff or cooperating experts.

Our official response covers only botanical features. For authoritative information and official response for zoological features you must make a similar request to the Maine Department of Inland Fisheries and Wildlife, 284 State Street, Augusta, Maine 04333.

According to the information currently in our Biological and Conservation Data System files, there are no rare botanical features documented specifically within the project area. This lack of data may indicate minimal survey efforts rather than confirm the absence of rare botanical features. You may want to have the site inventoried by a qualified field biologist to ensure that no undocumented rare features are inadvertently harmed.

If a field survey of the project area is conducted, please refer to the enclosed supplemental information regarding rare and exemplary botanical features documented to occur in the vicinity of the project site. The list may include information on features that have been known to occur historically in the area as well as recently field-verified information. While historic records have not been documented in several years, they may persist in the area if suitable habitat exists. The enclosed list identifies features with potential to occur in the area, and it should be considered if you choose to conduct field surveys.

This finding is available and appropriate for preparation and review of environmental assessments, but it is not a substitute for on-site surveys. Comprehensive field surveys do not exist for all natural areas in Maine, and in the absence of a specific field investigation, the Maine Natural Areas Program cannot provide a definitive statement on the presence or absence of unusual natural features at this site.

MOLLY DOCHERTY, DIRECTOR
MAINE NATURAL AREAS PROGRAM

DEPARTMENT OF Agriculture Conservation & Forestry

PHONE: (207) 287-8044
FAX: (207) 287-8040
WWW.MAINE.GOV/DACF/MNAP

The Natural Areas Program is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We would appreciate the contribution of any information obtained should you decide to do field work. The Natural Areas Program welcomes coordination with individuals or organizations proposing environmental alteration, or conducting environmental assessments. If, however, data provided by the Natural Areas Program are to be published in any form, the Program should be informed at the outset and credited as the source.

The Natural Areas Program has instituted a fee structure of $75.00 an hour to recover the actual cost of processing your request for information. You will receive an invoice for $150.00 for two hours of our services.

Thank you for using the Natural Areas Program in the environmental review process. Please do not hesitate to contact me if you have further questions about the Natural Areas Program or about rare or unique botanical features on this site.

Sincerely,

Kristen Puryear | Ecologist | Maine Natural Areas Program
207-287-8043 | kristen.puryear@maine.gov

Rare and Exemplary Botanical Features within 4 miles of
Project: #195311383, Toll Plaza Improvements, I-95 Exit 103,West Gardiner, Maine

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
Alpine Rush						
	SC	S3	G5T5	1908	4	Non-tidal rivershore (non-forested, seasonally wet)
American Ginseng						
	E	S3	G3G4	1989	33	Hardwood to mixed forest (forest, upland)
	E	S3	G3G4	1912-07	17	Hardwood to mixed forest (forest, upland)
Broad Beech Fern						
	SC	S2	G5	1912-08-09	10	Hardwood to mixed forest (forest, upland)
	SC	S2	G5	1897-08-30	9	Hardwood to mixed forest (forest, upland)
Columbia Water-meal						
	SC	S2	G5	2007-08-14	5	Open water (non-forested, wetland)
Estuary Bur-marigold						
	SC	S3	G4	2013-10-04	30	Tidal wetland (non-forested, wetland)
Freshwater Tidal Marsh						
	<null>	S2	G4?	2013-09-10	16	Tidal wetland (non-forested, wetland)
Parker's Pipewort						
	SC	S3	G3	2013-10-04	16	Tidal wetland (non-forested, wetland)
Showy Orchis						
	E	S1	G5	1941	15	Hardwood to mixed forest (forest, upland)
Water Stargrass						
	SC	S3	G5	2002-09-12	11	Open water (non-forested, wetland)

STATE RARITY RANKS

S1 Critically imperiled in Maine because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extirpation from the State of Maine.

S2 Imperiled in Maine because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.

S3 Rare in Maine (20-100 occurrences).

S4 Apparently secure in Maine.

S5 Demonstrably secure in Maine.

SU Under consideration for assigning rarity status; more information needed on threats or distribution.

SNR Not yet ranked.

SNA Rank not applicable.

S#? Current occurrence data suggests assigned rank, but lack of survey effort along with amount of potential habitat create uncertainty (e.g. S3?).

Note: **State Rarity Ranks** are determined by the Maine Natural Areas Program for rare plants and rare and exemplary natural communities and ecosystems. The Maine Department of Inland Fisheries and Wildlife determines State Rarity Ranks for animals.

GLOBAL RARITY RANKS

G1 Critically imperiled globally because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extinction.

G2 Globally imperiled because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.

G3 Globally rare (20-100 occurrences).

G4 Apparently secure globally.

G5 Demonstrably secure globally.

GNR Not yet ranked.

Note: **Global Ranks** are determined by NatureServe.

STATE LEGAL STATUS

Note: State legal status is according to 5 M.R.S.A. § 13076-13079, which mandates the Department of Conservation to produce and biennially update the official list of Maine's **Endangered** and **Threatened** plants. The list is derived by a technical advisory committee of botanists who use data in the Natural Areas Program's database to recommend status changes to the Department of Conservation.

E ENDANGERED; Rare and in danger of being lost from the state in the foreseeable future; or federally listed as Endangered.

T THREATENED; Rare and, with further decline, could become endangered; or federally listed as Threatened.

NON-LEGAL STATUS

SC SPECIAL CONCERN; Rare in Maine, based on available information, but not sufficiently rare to be considered Threatened or Endangered.

PE Potentially Extirpated; Species has not been documented in Maine in past 20 years or loss of last known occurrence has been documented.

ELEMENT OCCURRENCE RANKS - EO RANKS

Element Occurrence ranks are used to describe the quality of a rare plant population or natural community based on three factors:

- **Size**: Size of community or population relative to other known examples in Maine. Community or population's viability, capability to maintain itself.
- **Condition**: For communities, condition includes presence of representative species, maturity of species, and evidence of human-caused disturbance. For plants, factors include species vigor and evidence of human-caused disturbance.
- **Landscape context**: Land uses and/or condition of natural communities surrounding the observed area. Ability of the observed community or population to be protected from effects of adjacent land uses.

These three factors are combined into an overall ranking of the feature of **A**, **B**, **C**, or **D**, where **A** indicates an **excellent** example of the community or population and **D** indicates a **poor** example of the community or population. A rank of **E** indicates that the community or population is **extant** but there is not enough data to assign a quality rank. The Maine Natural Areas Program tracks all occurrences of rare (S1-S3) plants and natural communities as well as A and B ranked common (S4-S5) natural communities.

Note: **Element Occurrence Ranks** are determined by the Maine Natural Areas Program for rare plants and rare and exemplary natural communities and ecosystems. The Maine Department of Inland Fisheries and Wildlife determines Element Occurrence ranks for animals.

Visit our website for more information on rare, threatened, and endangered species!
http://www.maine.gov/dacf/mnap

November 15, 2018
Jay Clement

Reference: **Maine Turnpike Authority, Exit 103 ORT Project, West Gardiner, ME: Corps Category 2 Pre-Construction Notification**

EXHIBIT 10: PROJECT PHOTOGRAPHS

(contained within Exhibit 7: Wetland Delineation and Function and Values Report)

November 15, 2018
Jay Clement

Reference: **Maine Turnpike Authority, Exit 103 ORT Project, West Gardiner, ME: Corps Category 2 Pre-Construction Notification**

EXHIBIT 11: MAINE HISTORIC PRESERVATION COMMISSION AND OTHER AGENCY CONTACTS

Stantec Consulting Services Inc.
30 Park Drive, Topsham ME 04086-1737

May 29, 2018
File: 195311383

Attention: Kirk F. Mohney, Director
Maine Historic Preservation Commission
65 State House Station
Augusta, Maine 04333-0065

Reference: Significant Cultural / Historic Resources Information Request – Proposed Toll Plaza Improvements Project, Interstate 95 Exit 103, West Gardiner, Maine

Dear Mr. Mohney,

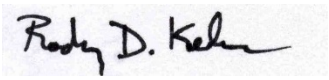
The purpose of this letter is to request information on any significant natural (or: cultural or historic) resources associated with the location depicted on the attached figure. We are assisting the Maine Turnpike Authority (MTA) with evaluating this site for toll plaza improvements at Exit 103 in West Gardner, Maine.

Please review the attached map and let me know if there are any known or suspected cultural or historic resources associated with this proposed project. Should you have any questions, please feel free to contact me.

Thank you for your assistance in obtaining this information.

Regards,

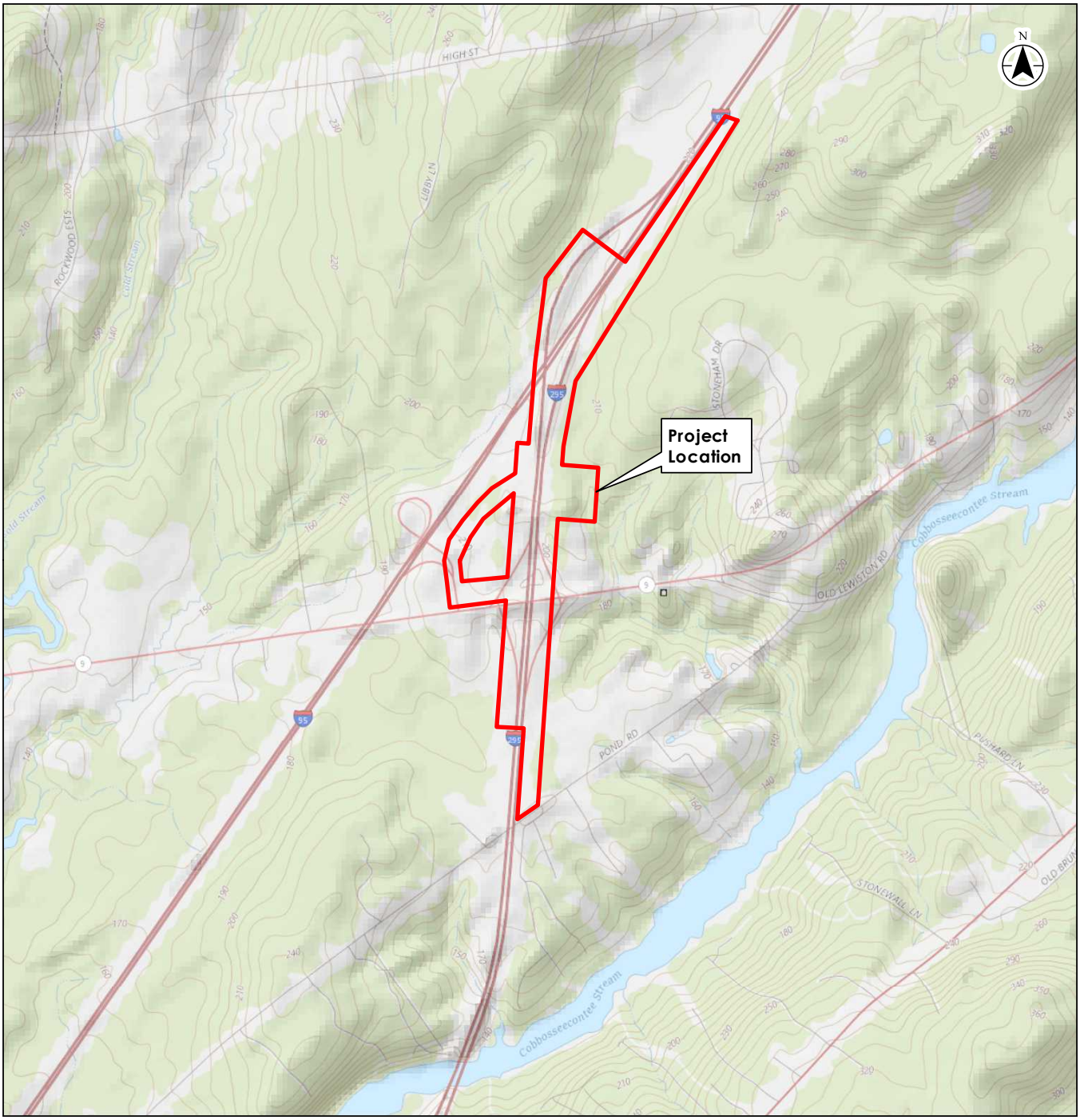
STANTEC CONSULTING SERVICES INC.

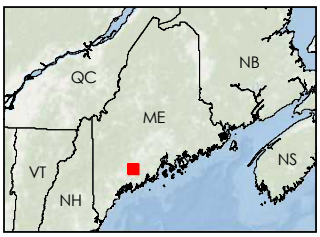


Rodney Kelshaw, CPSS, CWB, CSS, PWS, LSE, CPESC
Project Manager
Phone: (207) 406-5485
Fax: (207) 729-2715
Rodney.Kelshaw@stantec.com

Attachment: Site Location Map

V:\1956\active_Task Owner and other Non-BC\1956 Jobs\195311384\03_data\gis_cad\GIS\mxd\1383_01_Location.mxd Revised: 2018-05-14 By: khoward





Legend

Approximate Project Area

0 2,000 Feet

1:24,000 (at original document size of 8.5x11)

Stantec

Project Location
Gardiner, Maine

195311383

Prepared by EMK on 2018-03-15
Technical Review by KH on 2018-03-15
Independent Review by RK on 2018-03-15

Client/Project

Maine Turnpike Authority
Exit 103 Open Road Tolling

Figure No.

1

Title

Site Location Map

Notes

1. Coordinate System: NAD 1983 UTM Zone 19N
2. USGS Imagery/Topo provided by The National Map Mapping Service (http://basemap.nationalmap.gov/arcgis/services/USGSImageryTopo).

Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants, and agents, from any and all claims arising in any way from the content or provision of the data.

Stantec

Stantec Consulting Services Inc.
30 Park Drive, Topsham ME 04086-1737

RECEIVED
JUN 04 2018
By 0710-18

May 29, 2018
File: 195311383

Attention: Kirk F. Mohney, Director
Maine Historic Preservation Commission
65 State House Station
Augusta, Maine 04333-0065

Reference: Significant Cultural / Historic Resources Information Request – Proposed Toll Plaza Improvements Project, Interstate 95 Exit 103, West Gardiner, Maine

Dear Mr. Mohney,

The purpose of this letter is to request information on any significant natural (or: cultural or historic) resources associated with the location depicted on the attached figure. We are assisting the Maine Turnpike Authority (MTA) with evaluating this site for toll plaza improvements at Exit 103 in West Gardner, Maine.

Please review the attached map and let me know if there are any known or suspected cultural or historic resources associated with this proposed project. Should you have any questions, please feel free to contact me.

Thank you for your assistance in obtaining this information.

Regards,

STANTEC CONSULTING SERVICES INC.

Rodney D. Kelshaw

Rodney Kelshaw, CPSS, CWB, CSS, PWS, LSE, CPESC
Project Manager
Phone: (207) 406-5485
Fax: (207) 729-2715
Rodney.Kelshaw@stantec.com

Attachment: Site Location Map

Based on the information submitted, I have concluded that there will be no historic properties affected by the proposed undertaking, as defined by Section 106 of the National Historic Preservation Act. Consequently, pursuant to 36 CFR 800.4(d)(1), no further Section 106 consultation is required unless additional resources are discovered during project implementation pursuant to 36 CFR 800.13.

Kirk F. Mohney, 6/11/18

Kirk F. Mohney, Date
State Historic Preservation Officer
Maine Historic Preservation Commission

Stantec Consulting Services Inc.
30 Park Drive, Topsham ME 04086-1737

May 29, 2018
File: 195311383

Susan Young, Tribal Historic Preservation Officer & Environmental Planner
Houlton Band of Maliseet Indians
88 Bell Road
Littleton, ME 04730

VIA EMAIL: envplanner@maliseets.com; ogs1@maliseets.com

Reference: Significant Cultural / Historic Resources Information Request – Proposed Toll Plaza Improvements Project, Interstate 95 Exit 103, West Gardiner, Maine

Dear Mrs. Young,

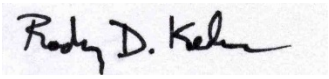
The purpose of this letter is to request information on any significant cultural or historic tribal resources that are associated with the location depicted on the attached figure. We are assisting the Maine Turnpike Authority (MTA) with evaluating this site for toll plaza improvements at Exit 103 in West Gardner, Maine.

Please review the attached map and let me know if there are any known or suspected cultural or historic resources associated with this proposed project. Should you have any questions please feel free to contact me.

Thank you for your assistance obtaining this information.

Regards,

STANTEC CONSULTING SERVICES INC.



Rodney Kelshaw, CPSS, CSS, PWS, CWB, LSE, CPESC
Project Scientist
Phone: (207) 729-1199
Rodney.Kelshaw@stantec.com

Attachment: Figure 1. Site Location Map

From: Sue Young
To: Kelshaw, Rodney
Subject: RE: Cultural Information Request - West Gardiner
Date: Tuesday, May 29, 2018 3:42:17 PM

Mr. Kelshaw,

We do not have an immediate concern with your project or project site, and do not currently have the resources to fully investigate same. Should any human remains, archaelogical properties or other items of historical importance be unearthed while working on this project, we recommend that you stop your project and report your findings to the appropriate authorities including the Houlton Band of Maliseet Indians.

Thank you.

<><><><><><><><><><><>

Susan Young
Tribal Historic Preservation Officer
Natural Resources Director
Houlton Band of Maliseets
88 Bell Road
Littleton, ME 04730
207-532-4273 ext. 202
fax 207-532-6883

ogs1@maliseets.com
www.maliseets.com

From: Kelshaw, Rodney [mailto:Rodney.Kelshaw@stantec.com]
Sent: Tuesday, May 29, 2018 3:22 PM
To: envplanner@maliseets.com; ogs1@maliseets.com
Subject: RE: Cultural Information Request - West Gardiner

Good Afternoon,
Please see the attached letter request for information regarding potential cultural resources in West Gardiner.

Thank you for your time.

Rodney Kelshaw CSS, PWS, AWB, LSE, CPESC
Project Scientist

Direct: 207 729-1199
Mobile: 207 944-6776
Rodney.Kelshaw@stantec.com

Stantec

The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written

Stantec Consulting Services Inc.
30 Park Drive, Topsham ME 04086-1737

May 29, 2018
File: 195311383

Jennifer Pictou, Tribal Historic Preservation Officer
Aroostook Band of Micmacs
7 Northern Road
Presque Isle, ME 04769

VIA EMAIL: jpictou@micmac-nsn.gov, reaserchandhistory@gmail.com

Reference: Significant Cultural / Historic Resources Information Request – Proposed Toll Plaza Improvements Project, Interstate 95 Exit 103, West Gardiner, Maine

Dear Ms. Pictou,

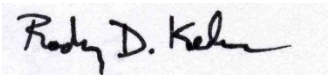
The purpose of this letter is to request information on any significant cultural or historic tribal resources that are associated with the location depicted on the attached figure. We are assisting the Maine Turnpike Authority (MTA) with evaluating this site for toll plaza improvements at Exit 103 in West Gardner, Maine.

Please review the attached map and let me know if there are any known or suspected cultural or historic resources associated with this proposed project. Should you have any questions please feel free to contact me.

Thank you for your assistance obtaining this information.

Regards,

STANTEC CONSULTING SERVICES INC.



Rodney Kelshaw, CPSS, CSS, PWS, CWB, LSE, CPESC
Project Scientist
Phone: (207) 729-1199
Rodney.Kelshaw@stantec.com

Attachment: Figure 1. Site Location Map

Stantec Consulting Services Inc.
30 Park Drive, Topsham ME 04086-1737

May 29, 2018
File: 195311383

Donald Soctomah, Tribal Historic Preservation Office
Passamaquoddy Tribe of Indians
Pleasant Point Reservation
P.O. Box 343
Perry, ME 04667

VIA EMAIL: soctomah@gmail.com

Significant Cultural / Historic Resources Information Request – Proposed Toll Plaza Improvements Project, Interstate 95 Exit 103, West Gardiner, Maine

Dear Mr. Soctomah,

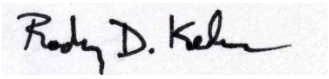
The purpose of this letter is to request information on any significant cultural or historic tribal resources that are associated with the location depicted on the attached figure. We are assisting the Maine Turnpike Authority (MTA) with evaluating this site for toll plaza improvements at Exit 103 in West Gardner, Maine.

Please review the attached map and let me know if there are any known or suspected cultural or historic resources associated with this proposed project. Should you have any questions please feel free to contact me.

Thank you for your assistance obtaining this information.

Regards,

STANTEC CONSULTING SERVICES INC.



Rodney Kelshaw, CPSS, CSS, PWS, CWB, LSE, CPESC
Project Scientist
Phone: (207) 729-1199
Rodney.Kelshaw@stantec.com

Attachment: Figure 1. Site Location Map

Stantec Consulting Services Inc.
30 Park Drive, Topsham ME 04086-1737

May 29, 2018
File: 195311383

Donald Soctomah, Tribal Historic Preservation Office
Passamaquoddy Tribe of Indians
Indian Township Reservation
P.O. Box 301
Princeton, ME 04668

VIA EMAIL: soctomah@gmail.com

Reference: Significant Cultural / Historic Resources Information Request – Proposed Toll Plaza Improvements Project, Interstate 95 Exit 103, West Gardiner, Maine

Dear Mr. Soctomah,

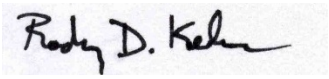
The purpose of this letter is to request information on any significant cultural or historic tribal resources that are associated with the location depicted on the attached figure. We are assisting the Maine Turnpike Authority (MTA) with evaluating this site for toll plaza improvements at Exit 103 in West Gardner, Maine.

Please review the attached map and let me know if there are any known or suspected cultural or historic resources associated with this proposed project. Should you have any questions please feel free to contact me.

Thank you for your assistance obtaining this information.

Regards,

STANTEC CONSULTING SERVICES INC.



Rodney Kelshaw, CPSS, CSS, PWS, CWB, LSE, CPESC
Project Scientist
Phone: (207) 729-1199
Rodney.Kelshaw@stantec.com

Attachment: Figure 1. Site Location Map

Stantec Consulting Services Inc.
30 Park Drive, Topsham ME 04086-1737

May 29, 2018
File: 195311383

Chris Sockalexis, Tribal historic Preservation Officer
Penobscot Nation
Cultural and Historic Preservation Department
12 Wabanaki Way
Indian Island, ME 04468

VIA EMAIL: chris.sockalexis@penobscotnation.org

Reference: Significant Cultural / Historic Resources Information Request – Proposed Toll Plaza Improvements Project, Interstate 95 Exit 103, West Gardiner, Maine

Dear Mr. Sockalexis,

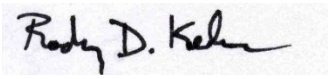
The purpose of this letter is to request information on any significant cultural or historic tribal resources that are associated with the location depicted on the attached figure. We are assisting the Maine Turnpike Authority (MTA) with evaluating this site for toll plaza improvements at Exit 103 in West Gardner, Maine.

Please review the attached map and let me know if there are any known or suspected cultural or historic resources associated with this proposed project. Should you have any questions please feel free to contact me.

Thank you for your assistance obtaining this information.

Regards,

STANTEC CONSULTING SERVICES INC.



Rodney Kelshaw, CPSS, CSS, PWS, CWB, LSE, CPESC
Project Scientist
Phone: (207) 729-1199
Rodney.Kelshaw@stantec.com

Attachment: Figure 1. Site Location Map

November 15, 2018
Jay Clement

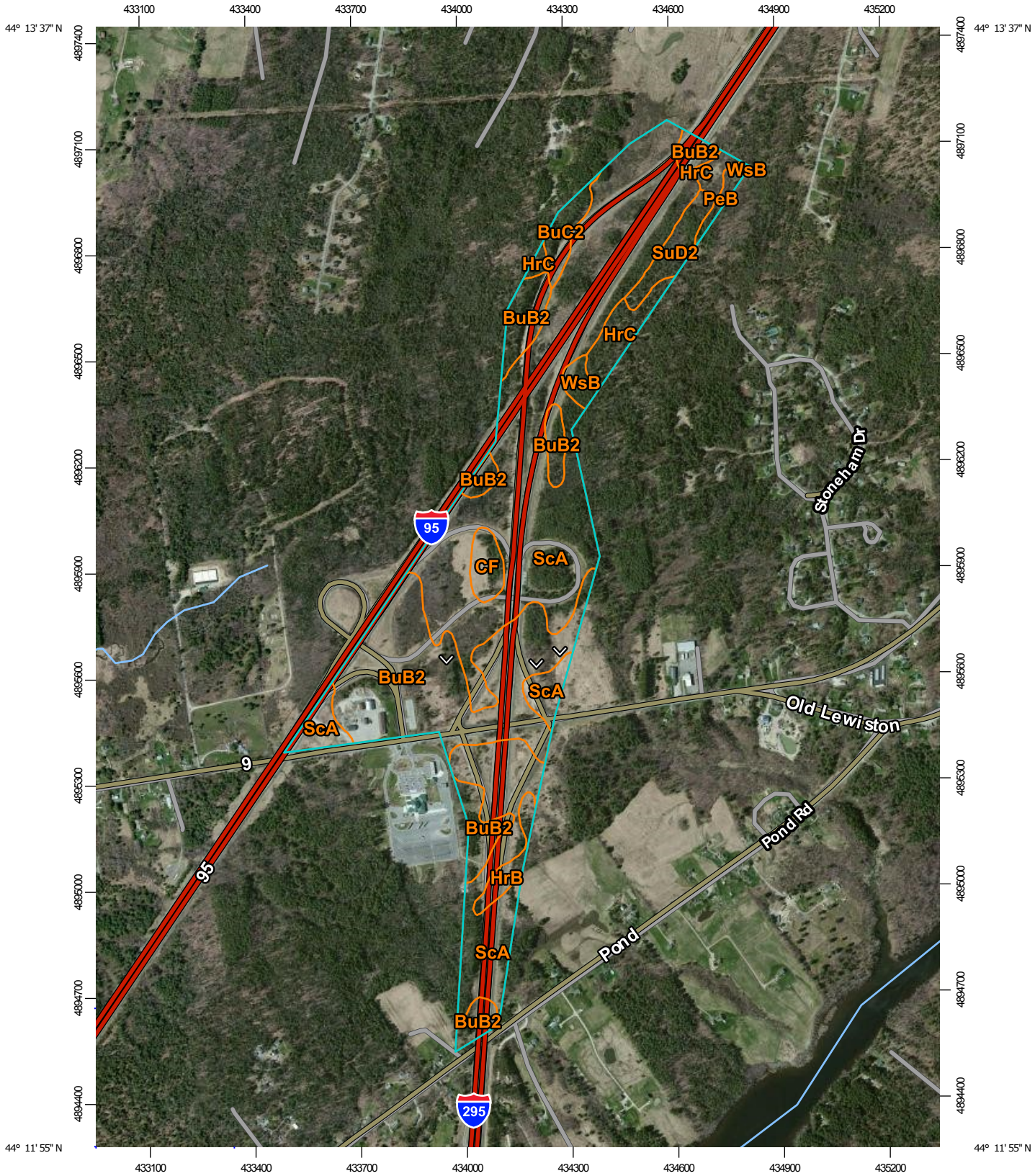
Reference: **Maine Turnpike Authority, Exit 103 ORT Project, West Gardiner, ME: Corps Category 2 Pre-Construction Notification**

EXHIBIT 12: UNITED STATES DEPARTMENT OF AGRICULTURE (USDA) NATURAL RESOURCES CONSERVATION SERVICE (NRCS) SOIL SURVEY MAP

Source: USDA NRCS Web Soil Survey

2018-09-27

https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm



Map Scale: 1:15,400 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 200 400 800 1200

Feet: 0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Kennebec County, Maine
Survey Area Data: Version 17, Sep 11, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Data not available.

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BuB2	Lamoine silt loam, 3 to 8 percent slopes	68.3	30.3%
BuC2	Buxton silt loam, 8 to 15 percent slopes	4.2	1.9%
CF	Cut and fill land	3.9	1.7%
HrB	Lyman-Tunbridge complex, 0 to 8 percent slopes, rocky	3.5	1.6%
HrC	Lyman-Tunbridge complex, 8 to 15 percent slopes, rocky	9.0	4.0%
PeB	Paxton-Charlton very stony fine sandy loams, 3 to 8 percent slopes	1.9	0.8%
ScA	Scantic silt loam, 0 to 3 percent slopes	126.4	56.1%
SuD2	Suffield silt loam, 15 to 25 percent slopes, eroded	5.8	2.6%
WsB	Woodbridge very stony fine sandy loam, 3 to 8 percent slopes	2.3	1.0%
Totals for Area of Interest		**225.2**	**100.0%**

November 15, 2018
Jay Clement

Reference: **Maine Turnpike Authority, Exit 103 ORT Project, West Gardiner, ME: Corps Category 2 Pre-Construction Notification**

EXHIBIT 13: UNITED STATES FISH AND WILDLIFE SERVICE (USFWS) NATIONAL WETLAND INVENTORY (NWI) MAP

Source: USFWS wetland mapper

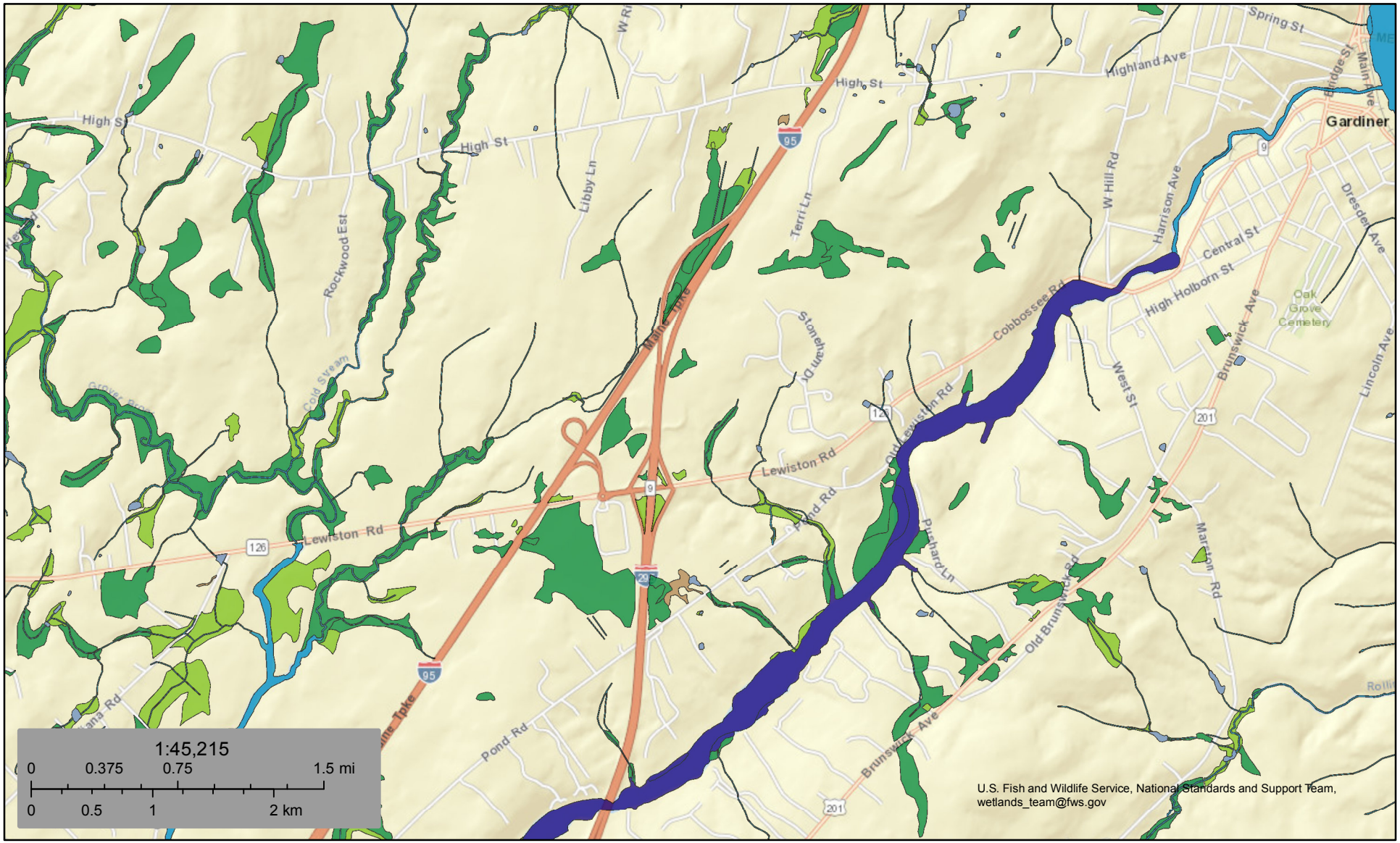
2018-09-27

https://www.fws.gov/wetlands/data/Mapper.html

U.S. Fish and Wildlife Service

National Wetlands Inventory

Exit 103 ORT NWI



September 27, 2018

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

November 15, 2018
Jay Clement

Reference: **Maine Turnpike Authority, Exit 103 ORT Project, West Gardiner, ME: Corps Category 2 Pre-Construction Notification**

EXHIBIT 14: FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) – FLOOD MAPS

Source: FEMA Flood Map Service Center

2018-09-27

https://www.fws.gov/wetlands/data/Mapper.html

National Flood Hazard Layer FIRMette

FEMA

Feet
0 250 500 1,000 1,500 2,000
1:6,000

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

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

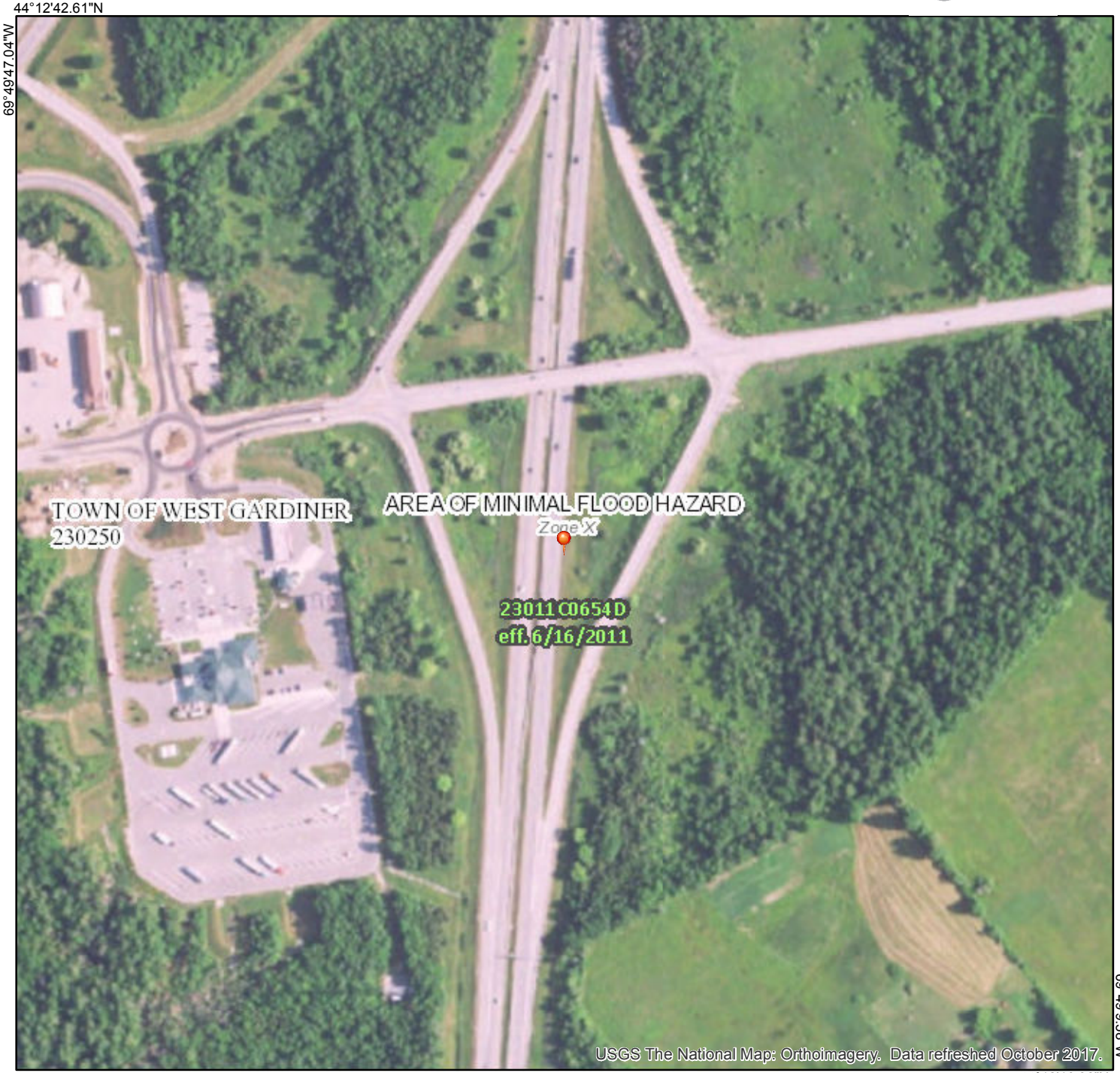
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/27/2018 at 11:53:49 AM and does not reflect changes or amendments subsequent to this date and 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.

National Flood Hazard Layer FIRMette

FEMA



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

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 digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/27/2018 at 11:54:41 AM and does not reflect changes or amendments subsequent to this date and 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.

National Flood Hazard Layer FIRMette

FEMA

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

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 digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/27/2018 at 11:55:39 AM and does not reflect changes or amendments subsequent to this date and 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.

November 15, 2018
Jay Clement

Reference: **Maine Turnpike Authority, Exit 103 ORT Project, West Gardiner, ME: Corps Category 2 Pre-Construction Notification**

EXHIBIT 15: LIST OF ABUTTERS

Lot Number	Owner	Address
30-2 & 30-3	Cobalt Properties	PO Box 868 Calais, ME 04619
31-1	Seth McGee	630 High Street West Gardiner, ME 04345
33-1	Candace Gagnon	19 Patty Ann Lane West Gardiner, ME 04345

November 15, 2018
Jay Clement

Reference: **Maine Turnpike Authority, Exit 103 ORT Project, West Gardiner, ME: Corps Category 2 Pre-Construction Notification**

EXHIBIT 16: US FISH AND WILDLIFE SERVICE INFORMATION PLANNING AND CONSULTATION SYSTEM (IPAC SEARCH)

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 04431
Phone: (207) 469-7300 Fax: (207) 902-1588
http://www.fws.gov/mainefieldoffice/index.html

In Reply Refer To:
Consultation Code: 05E1ME00-2018-SLI-0456
Event Code: 05E1ME00-2018-E-00925
Project Name: West Gardner Project

March 06, 2018

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies the threatened, endangered, candidate, and proposed species and designated or proposed critical habitat that may occur within the boundary of your proposed project or may be affected by your proposed project. This species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC Web site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the Endangered Species Consultation Handbook at: http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

This species list also identifies candidate species under review for listing and those species that the Service considers species of concern. Candidate species have no protection under the Act but are included for consideration because they could be listed prior to completion of your project. Species of concern are those taxa whose conservation status is of concern to the Service (i.e., species previously known as Category 2 candidates), but for which further information is needed.

If a proposed project may affect only candidate species or species of concern, you are not required to prepare a Biological Assessment or biological evaluation or to consult with the Service. However, the Service recommends minimizing effects to these species to prevent future conflicts. Therefore, if early evaluation indicates that a project will affect a candidate species or species of concern, you may wish to request technical assistance from this office to identify appropriate minimization measures.

Please be aware that bald and golden eagles are not protected under the Endangered Species Act but are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.). Projects affecting these species may require development of an eagle conservation plan: http://www.fws.gov/windenergy/eagle_guidance.html Information on the location of bald eagle nests in Maine can be found on the Maine Field Office Web site: http://www.fws.gov/mainefieldoffice/Project%20review4.html

Additionally, wind energy projects should follow the wind energy guidelines: http://www.fws.gov/windenergy/ for minimizing impacts to migratory birds and bats. Projects may require development of an avian and bat protection plan.

Migratory birds are also a Service trust resource. Under the Migratory Bird Treaty Act, construction activities in grassland, wetland, stream, woodland, and other habitats that would result in the take of migratory birds, eggs, young, or active nests should be avoided. Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g.,

cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm and at: http://www.towerkill.com; and at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 04431
(207) 469-7300

Project Summary

Consultation Code: 05E1ME00-2018-SLI-0456

Event Code: 05E1ME00-2018-E-00925

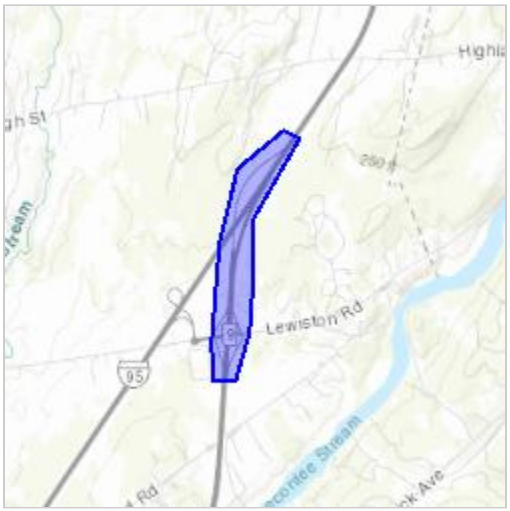
Project Name: West Gardner Project

Project Type: TRANSPORTATION

Project Description: Proposed Road Upgrade

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/44.21550542036282N69.8237330370388W



Counties: Kennebec, ME

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Fishes

NAME	STATUS
Atlantic Salmon *Salmo salar* Population: Gulf of Maine DPS There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2097	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Maine Turnpike Authority
2360 Congress Street
Portland, Maine 04102

Daniel E. Wathen, Augusta, Chairman
Robert D. Stone, Auburn, Vice Chairman
Michael J. Cianchette, Cumberland
John E. Dority, Augusta
Ann R. Robinson, Portland
Thomas J. Zuke, Saco
Karen S. Doyle, Chief Financial Officer MaineDOT, Ex-Officio

Peter Mills, Executive Director
Douglas Davidson, Chief Financial Officer & Treasurer
Peter S. Merfeld, P.E., Chief Operations Officer
Jonathan Arey, Secretary & General Counsel

November 15, 2018

Maine Department of Environmental Protection
Attn: Dawn Hallowell
17 State House Station
Augusta, Maine 04333-0017

Re: Permit by Rule # 11 Notification
Exit 103 Open Road Tolling Project, West Gardiner

Dear Dawn:

Enclosed please find a Permit by Rule #11 Notification for the proposed Exit 103 Open Road Tolling (ORT) project in West Gardiner. The Maine Turnpike Authority (MTA) has an on-going program to implement ORT. The Gardiner Exit 103 ORT Conversion Project on I-295 is a continuation of this program, and will upgrade the tolling system of the Exit 103 barrier toll to an ORT plaza. The MTA is also in the process of upgrading the existing equipment of the cash lanes since the equipment is approaching the end of its useful life.

This work requires realignment and widening of the roadway, construction of a new toll plaza and tunnel, installation of tolling equipment and infrastructure, realignment of the Exit 51 on and off ramps, installation of advanced guide signs, demolition of the existing plaza and administration building, and construction of a new administration building and associated parking. The proposed project will result in 34,355 square feet of disturbance within wetlands, including 7,291 square feet of temporary clearing and disturbance during construction and 27,064 square feet of permanent wetland fill. There are no proposed impacts to streams or vernal pools. If you have any questions or require additional information, please contact me directly at (207) 482-8275 or sdonohue@maineturnpike.com. Thank you for your assistance.

Sincerely,
Maine Turnpike Authority

Sean Donohue, CSS
Permitting Coordinator/ Environmental Liaison

November 15, 2018
Dawn Hallowell
PBR

Reference: **Maine Turnpike Authority, Exit 103 ORT Project, West Gardiner, ME: PBR**

ATTACHMENT 1: PBR APPLICATION FORM

04/06/2017

DEPARTMENT OF ENVIRONMENTAL PROTECTION
PERMIT BY RULE NOTIFICATION FORM

(For use with DEP Regulation, Natural Resouces Protection Act- Permit by Rule Standards, Chapter 305)

PLEASE TYPE OR PRINT IN *BLACK INK ONLY*

APPLICANT INFORMATION (Owner)		AGENT INFORMATION (If Applying on Behalf of Owner)	
Name:	Sean Donohue, Maine Turnpike Authority	**Name:**	Rodney Kelshaw, Stantec
Mailing Address:	2360 Congress Street	**Mailing Address:**	30 Park Drive
Town:	Portland	**Town:**	Topsham
State and Zip Code:	Maine, 04102	**State and Zip Code:**	Maine, 04086
Daytime Phone #:	(207) 482-8275	**Daytime Phone #:**	(207) 406-5485
Email Address:	sdonohue@maineturnpike.com	**Email Address:**	rodney.kelshaw@stantec.com

PROJECT INFORMATION

Part of a larger project? (check one):	☐ Yes ■ No	**After the Fact? (check one):**	☐ Yes ■ No	**Project involves work below mean low water? (check one):**	☐ Yes ■ No	**Name of waterbody:**	Unnamed Wetlands
Project Town:	West Gardiner	**Project Location (Address):**	Exit 103 Maine Turnpike			**Map & Lot Number:**	N/A
Brief Project Description:	This project is a continuation of the the MTA implementation of open Road Tolling (ORT) and an upgrade of the outdated tolling system. This will include a new tolling station, associated road re-alignment and a new tolling attendant building.						
Brief Directions to Site:	Exit 103 on Interstate 295 in West Gardiner.						

PERMIT BY RULE (PBR) SECTIONS (Check at least one): I am filing notice of my intent to carry out work which meets the requirements for Permit By Rule (PBR) under DEP Rules, Chapter 305. **I and my agents, if any, have read and will comply with all of the standards in the Sections checked below.**

- ☐ **Sec. (2) Act. Adj. to Protected Natural Res.**
- ☐ **Sec. (3) Intake Pipes**
- ☐ **Sec. (4) Replacement of Structures**
- ☐ **Sec. (5) REPEALED**
- ☐ **Sec. (6) Movement of Rocks or Vegetation**
- ☐ **Sec. (7) Outfall Pipes**
- ☐ **Sec. (8) Shoreline stabilization**
- ☐ **Sec. (9) Utility Crossing**
- ☐ **Sec.(10) Stream Crossing**
- ■ **Sec. (11) State Transportation Facil.**
- ☐ **Sec. (12) Restoration of Natural Areas**
- ☐ **Sec. (13) F&W Creation/Enhance/Water Quality Improvement**
- ☐ **Sec. (14) REPEALED**
- ☐ **Sec. (15) Public Boat Ramps**
- ☐ **Sec. (16) Coastal Sand Dune Projects**
- ☐ **Sec. (17) Transfers/Permit Extension**
- ☐ **Sec. (18) Maintenance Dredging**
- ☐ **Sec. (19) Activities in/on/over significant vernal pool habitat**
- ☐ **Sec. (20) Activities located in/on/over high or moderate value inland waterfowl & wading bird habitat or shorebird feeding & roosting areas**

NOTE: Municipal permits *may* also be required. Contact your local code enforcement office for more information. Federal permits may be required for stream crossings and for projects involving wetland fill. Contact the Army Corps of Engineers at the Maine Project Office for more information.

NOTIFICATION FORMS CANNOT BE ACCEPTED WITHOUT THE NECESSARY ATTACHMENTS

- ■ ***Attach*** **all required submissions for the PBR Section(s) checked above. The required submissions for each PBR Section are outlined in Chapter 305 and may differ depending on the Section you are submitting under.**
- ■ ***Attach*** **a check for the correct fee made payable to: "Treasurer, State of Maine".The current fee for NRPA PBR Notifications can be found at the Department's website: http://www.maine.gov/dep/feesched.pdf**
- ■ ***Attach*** **a location map that clearly identifies the site (U.S.G.S. topo map, Maine Atlas & Gazetteer, or similar).**
- ☐ ***Attach Proof of Legal Name*** **if applicant is a corporation, LLC, or other legal entity. Provide a copy of Secretary of State's *registration information* (available at http://icrs.informe.org/nei-sos-icrs/ICRS?MainPage=x) Individuals and municipalities are not required to provide any proof of identity.**

I authorize staff of the Departments of Environmental Protection, Inland Fisheries & Wildlife, and Marine Resources to access the project site for the purpose of determining compliance with the rules.

I also understand that this PBR becomes effective 14 calendar days after receipt by the Department *unless the Department approves or denies the PBR prior to that date.*

By signing this Notification Form, I represent that the project meets all applicability requirements and standards in the rule and that the applicant has sufficient title, right, or interest in the property where the activity takes place.

Signature of Agent or Applicant:		**Date:**	11-15-2018

Keep a copy as a record of permit. Send the form with attachments via certified mail or hand deliver to the Maine Dept. of Environmental Protection **at the appropriate regional office listed below**. The DEP will send a copy to the Town Office as evidence of the DEP's receipt of notification. No further authorization by DEP will be issued after receipt of notice. Permits are valid for two years. **Work carried out in violation of any standard is subject to enforcement action.**

AUGUSTA DEP
17 STATE HOUSE STATION
AUGUSTA, ME 04333-0017
(207)287-7688

PORTLAND DEP
312 CANCO ROAD
PORTLAND, ME 04103
(207)822-6300

BANGOR DEP
106 HOGAN ROAD
BANGOR, ME 04401
(207)941-4570

PRESQUE ISLE DEP
1235 CENTRAL DRIVE
PRESQUE ISLE, ME 04769
(207)764-0477

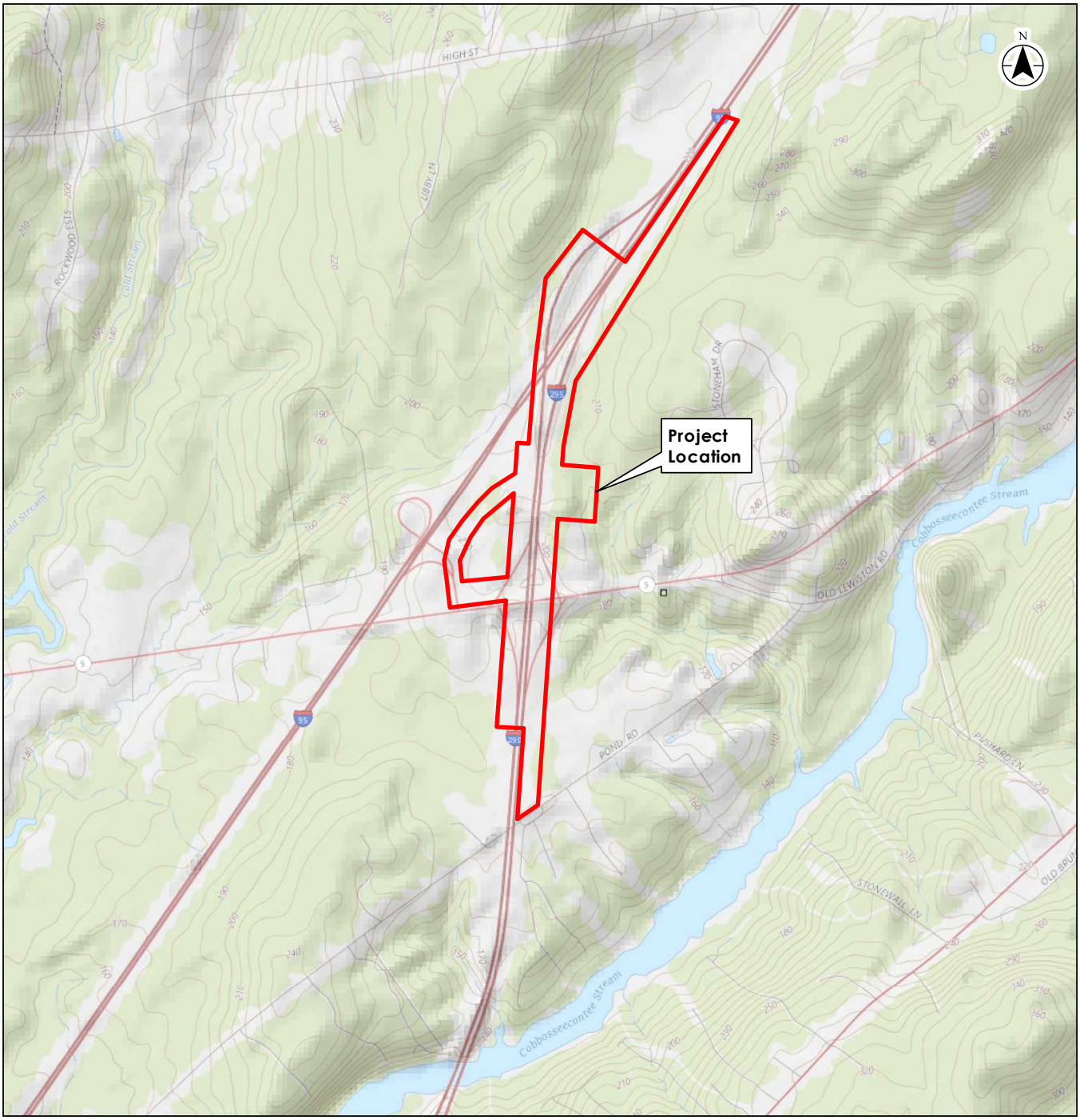
OFFICE USE ONLY	Ck.#		Staff	Staff	
PBR #	FP	Date	Acc. Date	Def. Date	After Photos

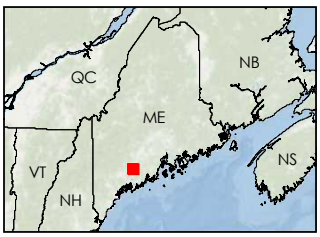
November 15, 2018
Dawn Hallowell
PBR

Reference: **Maine Turnpike Authority, Exit 103 ORT Project, West Gardiner, ME: PBR**

ATTACHMENT 2: FIGURE 1. PROJECT LOCATION MAP

V:\1956\active_Task Owner and other Non-BC\1956 Jobs\195311384\03_data\gis_cad\GIS\mxd\11383_01_Location.mxd Revised: 2018-05-14 By: khoward





Legend

Approximate Project Area

0 2,000 Feet

1:24,000 (at original document size of 8.5x11)

Stantec

Project Location
West Gardiner, Maine

195311383

Prepared by EMK on 2018-03-15
Technical Review by KH on 2018-03-15
Independent Review by RK on 2018-03-15

Client/Project

Maine Turnpike Authority
Exit 103 Open Road Tolling

Figure No.

1

Title

Site Location Map

Notes

1. Coordinate System: NAD 1983 UTM Zone 19N
2. USGS Imagery/Topo provided by The National Map Mapping Service (http://basemap.nationalmap.gov/arcgis/services/USGSImageryTopo).

Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants, and agents, from any and all claims arising in any way from the content or provision of the data.

November 15, 2018
Dawn Hallowell
PBR

Reference: **Maine Turnpike Authority, Exit 103 ORT Project, West Gardiner, ME: PBR**

ATTACHMENT 3: WETLAND DELINEATION AND FUNCTION AND VALUE REPORT

Wetland Delineation and Functions and Values Report

Exit 103 Open Road Tolling
Project:
Interstate 95
West Gardiner, Maine

Prepared for:
Maine Turnpike Authority
2360 Congress Street
Portland, ME 04102

Prepared by:
Stantec Consulting Services Inc.
30 Park Drive
Topsham, ME 04086

November 1, 2018

Table of Contents

Tables

Figures

Appendices

1.0 INTRODUCTION

At the request of the Maine Turnpike Authority (MTA) Stantec Consulting Services Inc. (Stantec) conducted wetland delineations and natural resource surveys proximal to the existing toll plaza and I-95/I-295 connector area in West Gardiner, Maine (Figure 1). The surveys occurred on April 25 and November 9, 2017, and April 24, May 4, and August 8, 2018. The MTA proposes to perform upgrades to their infrastructure in this area, which may include open road tolling, road widening, and the addition of a toll operator office structure.

The wetland delineation and natural resource surveys were conducted to support two adjacent and overlapping MTA projects in West Gardiner: the I-295 Bridge over I-95 project and the Exit 103 Open Road Tolling (ORT) project. A memo describing the findings of the I-295 Bridge over I-95 project, entitled "Natural Resource Summary, I-295 Bridge over I-95, West Gardiner, Maine", dated June 2, 2017, was provided to MTA for permitting support of the project. Stantec also provided a Draft Wetland Delineation Report as part of the 10% design of the Exit 103 ORT project, dated March 15, 2015. Since the time that report was submitted, the proposed Exit 103 ORT project site has expanded, and additional wetland delineation and natural resource surveys were performed. Those surveys also updated wetland information from the previous surveys related to the I-295 Bridge project. This report is a comprehensive report that combines the data from the surveys performed for both projects that is specific to the present Exit 103 ORT project.

2.0 SITE DESCRIPTION

The project area is located in the town of West Gardiner and includes approximately 1.5 miles along I-295 and I-95 within the highway's right of way (ROW). The width of the ROW varied along the length of the survey area. The survey area on the northbound side extended from the northern side of the Pond Road overpass on I-295 to the existing plow turn around on I-95, south of the High Street overpass. On the southbound side it included the southern half of the I-295 off ramp from I-95 and extended southerly to the Route 126 on ramp. It also extended westerly to include the area adjacent to the Park & Ride and Route 126 traffic circle (Figure 1).

The shoulder of the highway is regularly maintained in most areas with mowing. The landscape beyond the maintained area is primarily forested. Uplands within the survey area are dominated by eastern white pine (*Pinus strobus*), red spruce (*Picea rubens*), gray birch (*Betula populifolia*), and balsam fir (*Abies balsamea*) in the forest canopy. The understory is dominated by eastern white pine, red spruce, red maple (*Acer rubrum*), and eastern teaberry (*Gaultheria procumbens*).

3.0 WETLAND AND WATERCOURSE DELINEATION AND VERNAL POOL SURVEY

3.1 WETLAND AND WATERCOURSE DELINEATION AND VERNAL POOL SURVEY METHODS

Wetland boundaries under federal and state jurisdiction were determined using the technical criteria described in the *Corps of Engineers Wetlands Delineation Manual*[1] and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Regional Supplement*[2]. Wetland boundaries were marked with pink, alphanumeric-coded flags and located by a licensed land surveyor (Titcomb Associates). Maine Department of Environmental Protection (MDEP) and U.S. Army Corps of Engineers (Corps) jurisdictional streams and Wetlands of Special Significance (WoSS) determinations were based on the criteria in the Maine Natural Resources Protection Act (NRPA) and Section 404 of the Clean Water Act, respectively. Determinations were limited to observable conditions at the time of the survey and publicly available natural resource data. During the surveys, there was no snow cover and the ground was not frozen.

Natural resource surveys included an evaluation for potential vernal pools during the November 2017 survey and in-season vernal pool survey during the spring 2018 surveys. Vernal pools were evaluated based on the criteria provided in Chapter 335, Significant Wildlife Habitat, of the Maine NRPA and the Corps' Maine General Permit, respectively and conducted in accordance using the technical guidelines outlined in the Maine Association of Wetland Scientists 2010 Interim Vernal Pool Survey Protocol.

3.2 WETLAND AND WATERCOURSE DELINEATION AND VERNAL POOL SURVEY RESULTS

Stantec identified 30 wetlands and 1 stream, which are summarized in Appendix A and are depicted on Figure 2. Wetland Impacts Plan Set (sheets 1–14).

The wetlands are located adjacent to existing highway infrastructure; including stormwater swales, road edge of fill, Route 126, the Park & Ride, and fill berms that were previously used for access ramps. Approximately half of the wetlands extend outside the project area. Areas mapped as wetland that occur within the disturbed portions of the survey area are hydrologically connected to, and part of, naturally occurring wetlands. They also obtain their hydrology from these natural features and, despite being disturbed, contain the three factors

[1] Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, MS.
[2] U.S. Army Corps of Engineers. 2012. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0), ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

used to identify an area as wetland. Maintained stormwater swales excavated from uplands along the roadway were not part of, or connected to, a naturally occurring wetland; although these swales currently contain hydrophytic vegetation, they were not mapped as wetlands.

Wetlands A, O, Q, T, and U are predominantly palustrine (freshwater) forested wetlands (PFO) and occupy less disturbed site areas. Red maple, gray birch, balsam fir, and eastern arborvitae (*Thuja occidentalis*) are the dominant tree species. Wetlands K, L, N, and Z are predominantly palustrine scrub shrub (PSS) wetlands dominated by speckled alder (*Alnus incana*), winterberry (*Ilex verticillata*), red maple, and gray birch saplings. The remaining wetlands are palustrine emergent marsh (PEM) wetland and the dominant plant species include broad-leaved cat-tail (*Typha latifolia*), reed canary grass (*Phalaris arundinacea*), bluejoint (*Calamagrostis canadensis*), and sensitive fern (*Onoclea sensibilis*). Most of these wetland areas would be further identified as wet meadow, which are typically located within the disturbed portion of the highway's ROW. For additional wetland information, see Appendix A: Wetland and Stream Resource Summary Table.

Soils within the wetlands are generally described by a dark, loamy, over silt loam material with a depleted matrix. Redoximorphic concentrations were present within the majority of the wetland soil profiles. These are generally classified as loamy and clayey soils with a depleted matrix or depleted with a dark surface. Wetland hydrology generally consisted of soil saturation, a water table at or near the soil surface, evidence of iron reduction, microtopography, drainage patterns, geomorphic position, and passing the FAC-Neutral test. Representative photos of the resources and adjacent uplands are provided in Appendix B.

One stream was identified on-site, 01BE, which flows primarily in a ditch on the west side of the I-295 ramp. The stream begins in Wetland P and drains a large wetland system located off-site to the north. The stream channel was observed to continue for several hundred feet into the forest. The stream had a defined channel within the ditch, with a scoured mineral bottom and aquatic invertebrates present in the channel. These three regulatory factors resulted in the identification as a stream rather than the unregulated bottom of the ditch. Wetland within 25 feet of the stream is a WoSS.

Amphibian egg masses of vernal pool indicator species were observed within ponded areas in five of the wetlands (Wetlands B, P, V, W, and X). The portions of these wetlands where the egg masses were observed are artificially-created ditches, and function as stormwater conveyance swales along the interstate. Egg mass counts and other information are detailed in Table 1. These areas where egg masses were observed also contained fish populations. The MDEP would not regulate these resources as vernal pools because the ponded portions of these wetlands were artificially-created and contained fish populations. The Corps does not distinguish between naturally occurring and artificially-created vernal pools and can regulate artificially-created vernal pools. However, the vernal pool cannot have a permanent inlet or outlet or a population of predatory fish. One wetland (Wetland P) where indicator species egg masses were observed had a permanently flowing outlet (Stream 01BE) with observed fish. Therefore, these wetlands do not meet the definition of a vernal pool as provided in the Corps' General Permit and add

further evidence as to why it would not be regulated as such by the Corps. The Corps does have jurisdictional authority over activities and impacts such as excavations, discharges of dredged or fill material, and/or suspended sediment producing activities in jurisdictional waters that provide value as fish migratory areas, fish and shellfish spawning or nursery areas, or amphibian and migratory bird breeding areas. These wetlands may require additional oversight or avoidance because they are functioning as amphibian breeding areas.

Table 1. Amphibian Breeding Area Documentation.

Wetland ID	Survey Date	Wood Frog Egg Mass Number	Spotted Salamander Egg Mass Number	Stream Present	Fish Present	Notes
B	24-Apr-18	22	0	No	Yes	Artificially created stormwater swale
P	25-Apr-17 and 4-May-18	0	10 and 9	Yes	Yes	Artificially created depression within stormwater swale/ditch, green frogs also observed
V	24-Apr-18	0	46	No	Yes	Artificially created stormwater swale
W	24-Apr-18	0	4	No	Yes	Artificially created stormwater swale
X	24-Apr-18	31	16	No	Yes	Artificially created stormwater swale

4.0 WETLAND FUNCTION AND VALUE ASSESSMENT

4.1 WETLAND FUNCTION AND VALUE ASSESSMENT METHODS

Wetland functions and values were evaluated using *The Highway Methodology Workbook Supplement*.[3] This method bases function and value determinations on the presence or absence of criteria for each of 13 wetland functions and values typically considered by MDEP and the Corps in the wetland alteration permitting process. The criteria are assessed through direct field observations and a review of existing public data sources. As part of the evaluation, the "principal" (i.e., most important) functions and values associated with the subject wetland are identified and described. In addition, the ecological integrity of the wetland is evaluated based on the existing and past levels of disturbance and the overall significance of that wetland within

[3] U.S. Army Corps of Engineers. 1999. *The Highway Methodology Workbook Supplement, Wetland Functions and Values: A Descriptive Approach*. U.S. Army Corps of Engineers. New England Division. 32pp. NAEEP-360-1-30a.

the local watershed. This descriptive and qualitative approach integrates wetland science with subjective value judgments made by wetland professionals.

Following are the 13 wetland functions and values considered in the assessment.

Groundwater Interchange (Recharge/Discharge)
This function considers the potential for a wetland to serve as groundwater recharge and/or discharge areas. It refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodwater Alteration (Storage and Desynchronization)
This function considers the effectiveness of the wetlands in reducing flood damage by water retention for prolonged periods following precipitation and the gradual release of floodwaters.

Fish and Shellfish Habitat
This function considers the effectiveness of seasonal or permanent waterbodies associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant Retention
This function relates to a wetland's ability to reduce or prevent degradation of surface water and ground water quality by trapping sediments, toxicants, or pathogens that may enter the wetland. A wetland's effectiveness in performing this function is typically related to factors such as soil type, vegetation type and density, and the position in the landscape.

Nutrient Removal/Retention/Transformation
This wetland function relates to the effectiveness of the wetland to assimilate nutrients and prevent or reduce the adverse effects of excess nutrients on aquifers or surface waters such as ponds, lakes, streams, rivers, or estuaries.

Production Export
This function relates to the effectiveness of the wetland to produce and export food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization
This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion, primarily through the presence of persistent, well-rooted vegetation.

Wildlife Habitat
This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and migrating species are considered.

Recreation (Consumptive and Non-Consumptive)
This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting, and other active or passive recreational activities.

Educational/Scientific Value
This value considers the effectiveness of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage
This value relates to the effectiveness of the wetland or its associated water bodies to provide certain special values such as archaeological sites, unusual aesthetic quality, historical events, or unique plants, animals, or geologic features.

Visual Quality/Aesthetics
This value relates to the visual and aesthetic qualities of the wetland.

Endangered Species Habitat
This value considers the suitability of the wetland to support threatened or endangered species.

4.2 WETLAND FUNCTION AND VALUE ASSESSMENT RESULTS

This project is proposed along and directly adjacent to Interstates 295 and 95. This is a heavily traveled area. The roadways, supporting infrastructure, and areas exempted from current use have resulted in development and disturbance that altered natural wetlands and diminishes the ability for some of the remaining wetlands to have significant functions and values that are typical of natural wetland complexes. The wetland delineation field investigation was limited to areas associated with and immediately adjacent to the proposed project activity areas. Therefore, the wetlands within the project area have been generally affected from past and ongoing anthropogenic activities including ditching for stormwater conveyance, fill from roadways and other infrastructure, and effects from ambient noise and lighting. The most common principal functions and values are Sediment/Toxicant Retention and Nutrient Removal/Retention/Transformation. Limited Wildlife Habitat was observed in several wetlands, primarily due to amphibian breeding observed in ponded areas in the roadside ditches and use by white-tailed deer (*Odocoileus virginianus*) and beaver (*Castor canadensis*); Floodwater Alteration occurs in some of the larger wetlands that possess flatter topography and dense vegetation. Uniqueness/Heritage, Recreation, Educational/Scientific Value, and Visual Quality/Aesthetics are not present because the area is not open to public access due to safety concerns and past anthropogenic disturbances have reduced these values. Appendix A Wetland and Stream Resource Summary Table lists the individual wetland primary functions and values. Appendix C contains the individual wetland functions and value forms.

5.0 REGULATORY SUMMARY

5.1 STATE AND FEDERAL WETLAND REGULATIONS

The MDEP and Corps regulate the wetlands identified within the survey area. Under the provisions of Section 404 of the Clean Water Act, the Corps regulates activities within Waters of the U.S., which include navigable waters and all their tributaries, adjacent wetlands, and other waters or wetlands where degradation or destruction could affect interstate or foreign commerce. Under the provisions of the Natural Resources Protection Act (38 MRSA 480-B) the MDEP regulates activities in, on or over any protected natural resource; which includes freshwater wetlands. The Corps has issued a General Permit for the State of Maine that merges the federal and state permit review process for many projects.

The proposed project will result in placement of a total of 34, 355 square feet of fill in freshwater wetlands; including 7,291 square feet of temporary impacts associated with construction and 34,355 square feet of permanent wetland fill. Because this is greater than 15,000 square feet of wetland fill this project qualifies for a Corps Category 2 Pre-Construction Notification (PCN). This project also requires a MDEP NRPA application for freshwater wetland alteration. Because this project is under the authority of the MTA it qualifies for a permit by rule (PBR) under Chapter 305, Section 11 of the MDEP NRPA. Section 11 of the PBR applies to the maintenance, repair, reconstruction, rehabilitation, replacement, or minor construction of a State Transportation Facility carried out by, or under the authority of, the Maine Department of Transportation (MaineDOT) or the MTA, including any testing or preconstruction engineering and associated technical support services.

Full identification of WoSS involves contacting natural resource agencies such as Maine Natural Areas Program (MNAP) and Maine Department of Inland Fisheries and Wildlife (MDIFW) to determine if there are any documented occurrences of rare, threatened, or endangered species or communities or significant wildlife habitats within or in the vicinity of the project area. Based on a review of publicly available information and correspondence with these agencies it was determined that there are no known occurrences of rare, threatened, or endangered species or communities or significant wildlife habitat within the project area. There is a mapped Deer Wintering Area (DWA 020457) west of the I-95 southbound off-ramp to I-295; however, it does not extend into the project area.

6.0 CONCLUSIONS

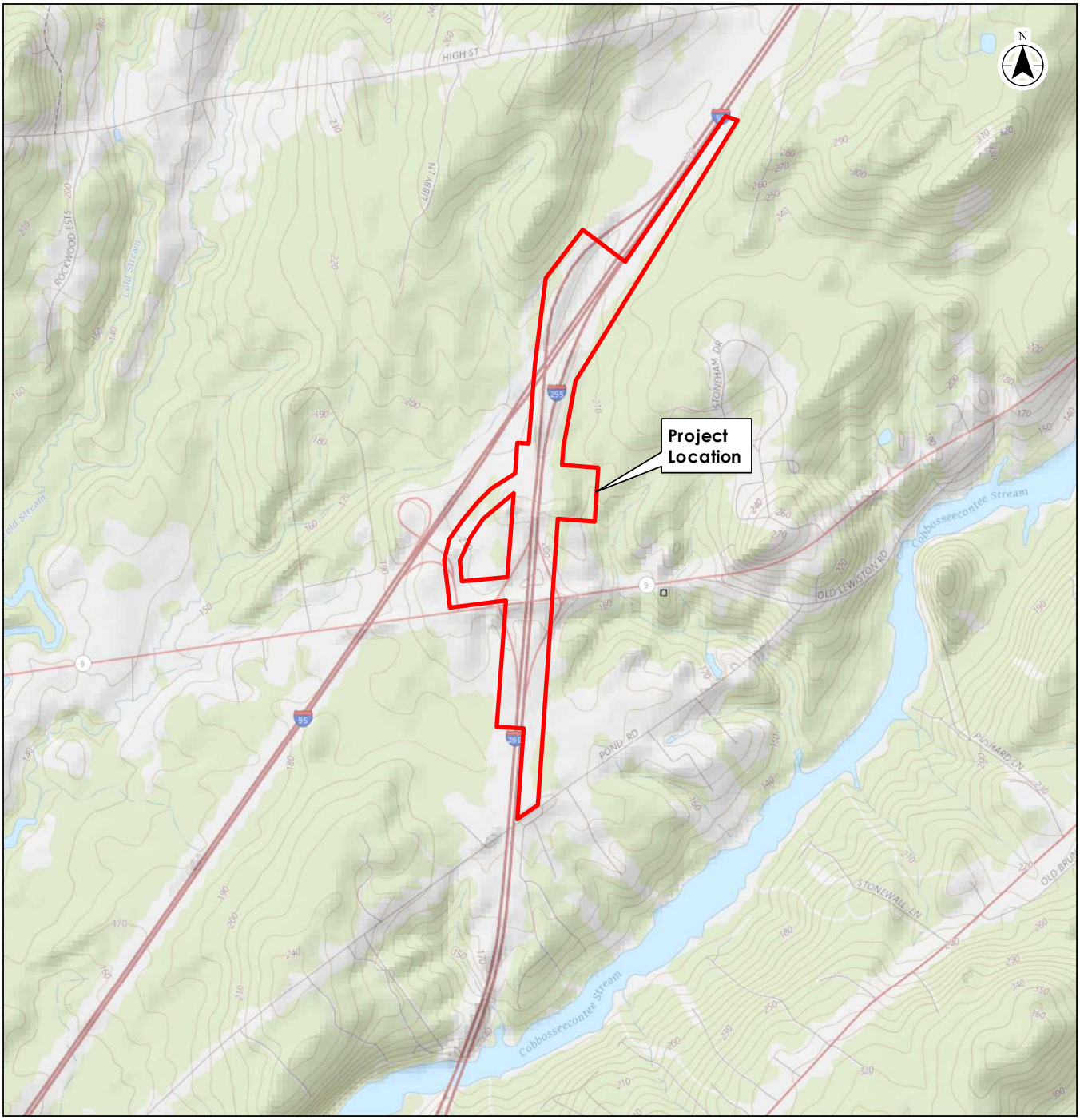
The project area contains several wetlands that are located directly adjacent to the roadways and other infrastructure that is proposed to be part of the project area. Wetlands and watercourses in the project area are considered jurisdictional by the Corps and MDEP. Project planning should take steps to avoid and minimize permanent and temporary impacts to

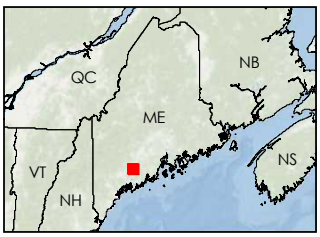
wetlands ad watercourses within the survey area. Wetland impacts in the project area will require permitting by MDEP and the Corps. PBR Section 11 for state transportation facilities may streamline permitting for this project.

FIGURES

Figure 1. Site Location Map

V:\1956\active_Task Owner and other Non-BC\1956 Jobs\195311384\03_data\gis_cad\GIS\mxd\11383_01_Location.mxd Revised: 2018-05-14 By: khoward





Legend

Approximate Project Area

0 2,000 Feet

1:24,000 (at original document size of 8.5x11)

Stantec

Project Location
West Gardiner, Maine

195311383

Prepared by EMK on 2018-03-15
Technical Review by KH on 2018-03-15
Independent Review by RK on 2018-03-15

Client/Project

Maine Turnpike Authority
Exit 103 Open Road Tolling

Figure No.

1

Title

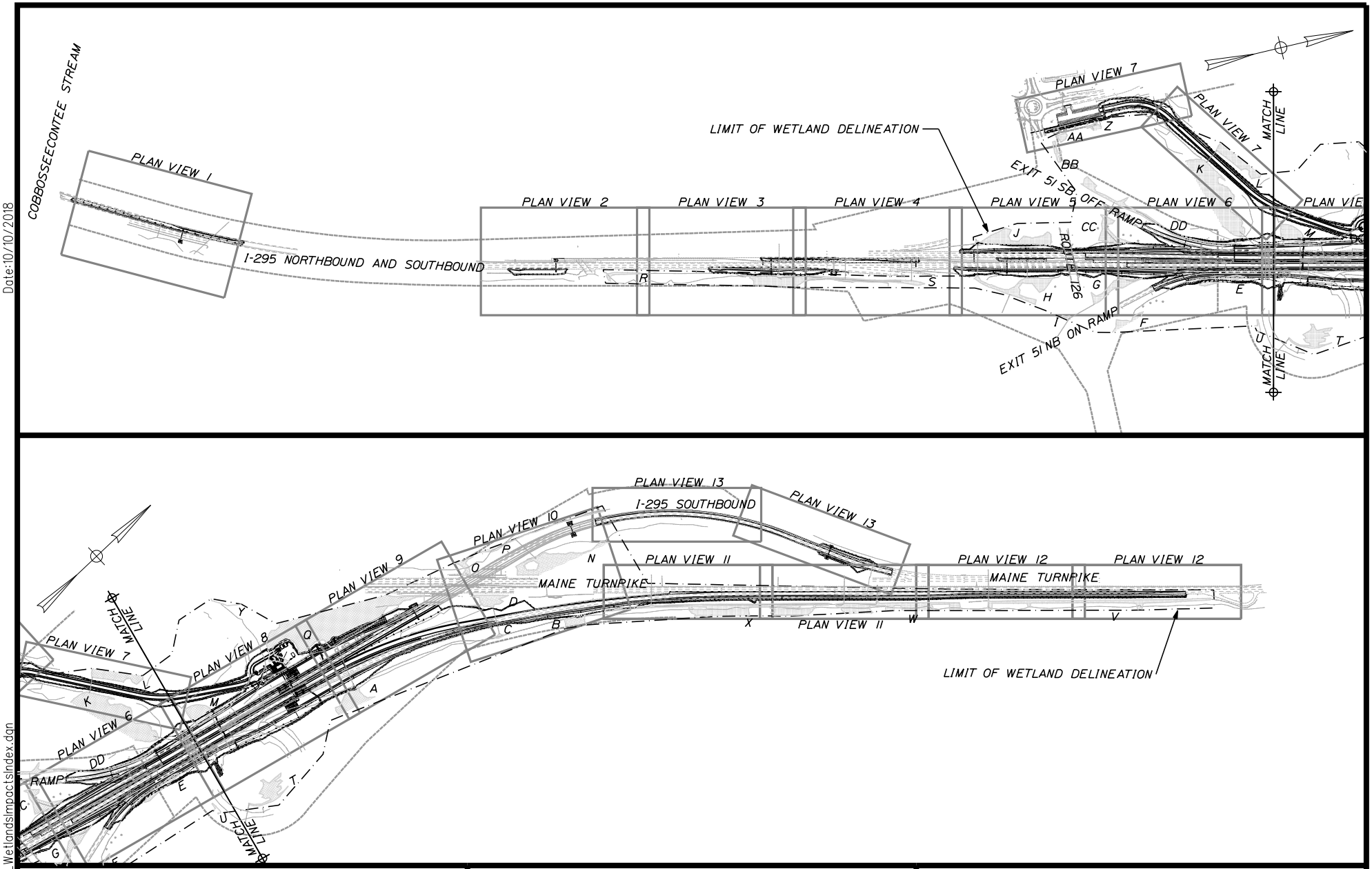
Site Location Map

Notes

1. Coordinate System: NAD 1983 UTM Zone 19N
2. USGS Imagery/Topo provided by The National Map Mapping Service (http://basemap.nationalmap.gov/arcgis/services/USGSImageryTopo).

Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants, and agents, from any and all claims arising in any way from the content or provision of the data.

Figure 2. Wetland Impacts Plan Set



Scale: 400 0 400 800

Scale of Feet

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THE GOLD STAR MEMORIAL HIGHWAY

WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

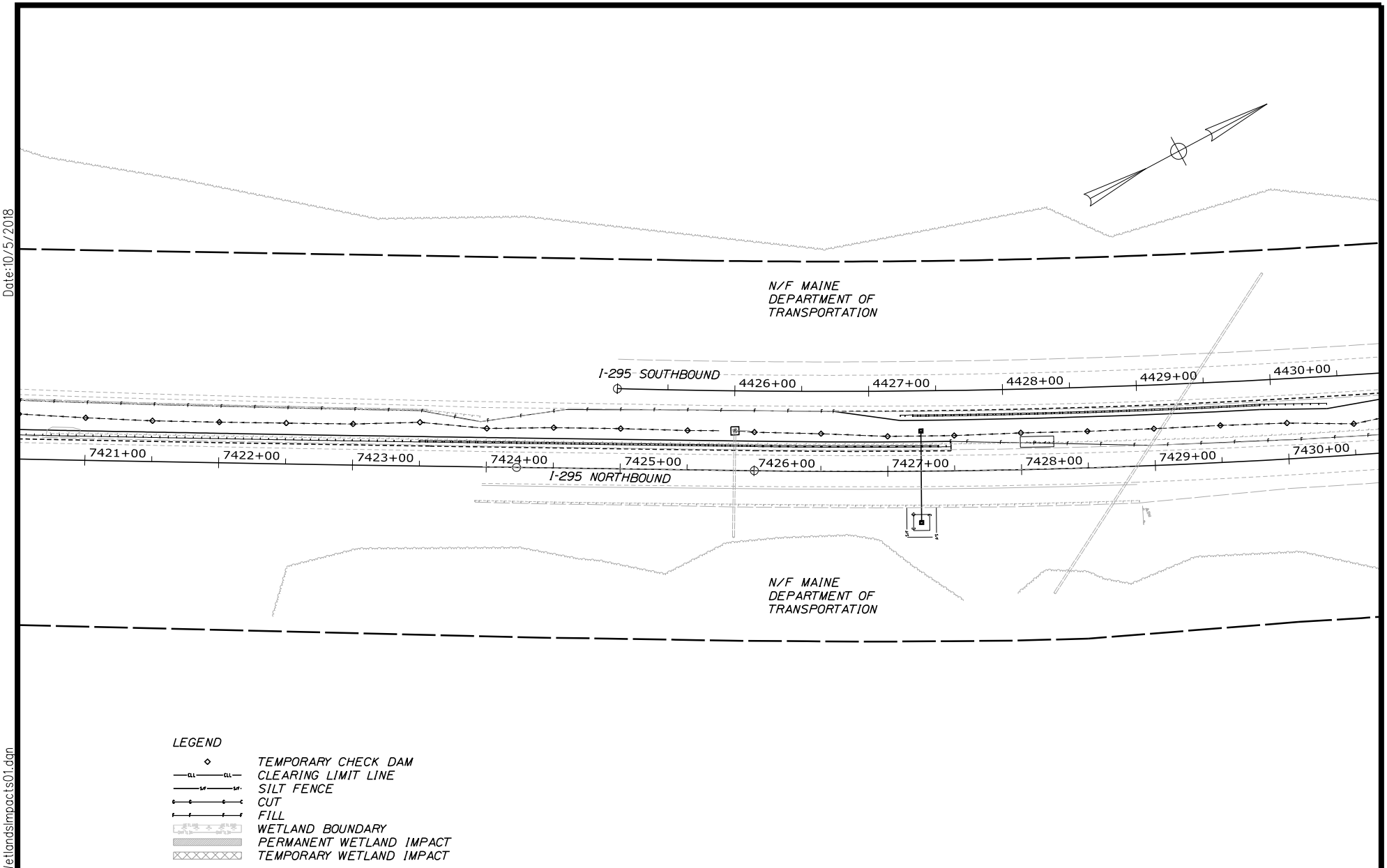
WETLAND IMPACTS INDEX PLAN

DATE: OCTOBER, 2018

SHEET 1 OF 14

Date:10/10/2018

Filename: ..._WetlandsImpactsIndex.dgn



LEGEND

- TEMPORARY CHECK DAM
- CLEARING LIMIT LINE
- SILT FENCE
- CUT
- FILL
- WETLAND BOUNDARY
- PERMANENT WETLAND IMPACT
- TEMPORARY WETLAND IMPACT

Scale: 50 0 50 100

Scale of Feet

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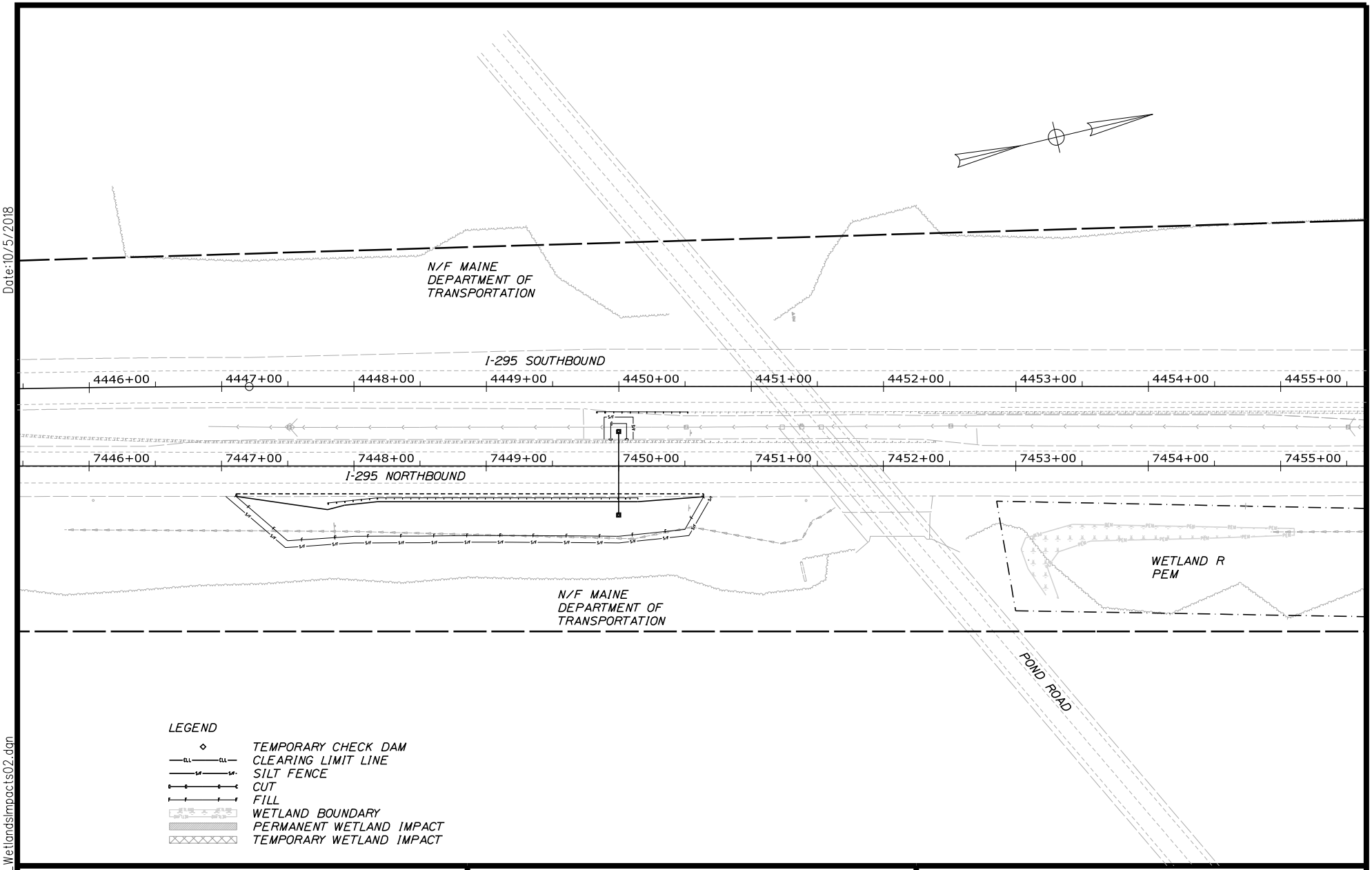
WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 1

DATE: OCTOBER, 2018

Date:10/5/2018

Filename: ..._WetlandsImpacts01.dgn



LEGEND

- TEMPORARY CHECK DAM
- CLEARING LIMIT LINE
- SILT FENCE
- CUT
- FILL
- WETLAND BOUNDARY
- PERMANENT WETLAND IMPACT
- TEMPORARY WETLAND IMPACT

Scale: 50 0 50 100

Scale of Feet

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WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

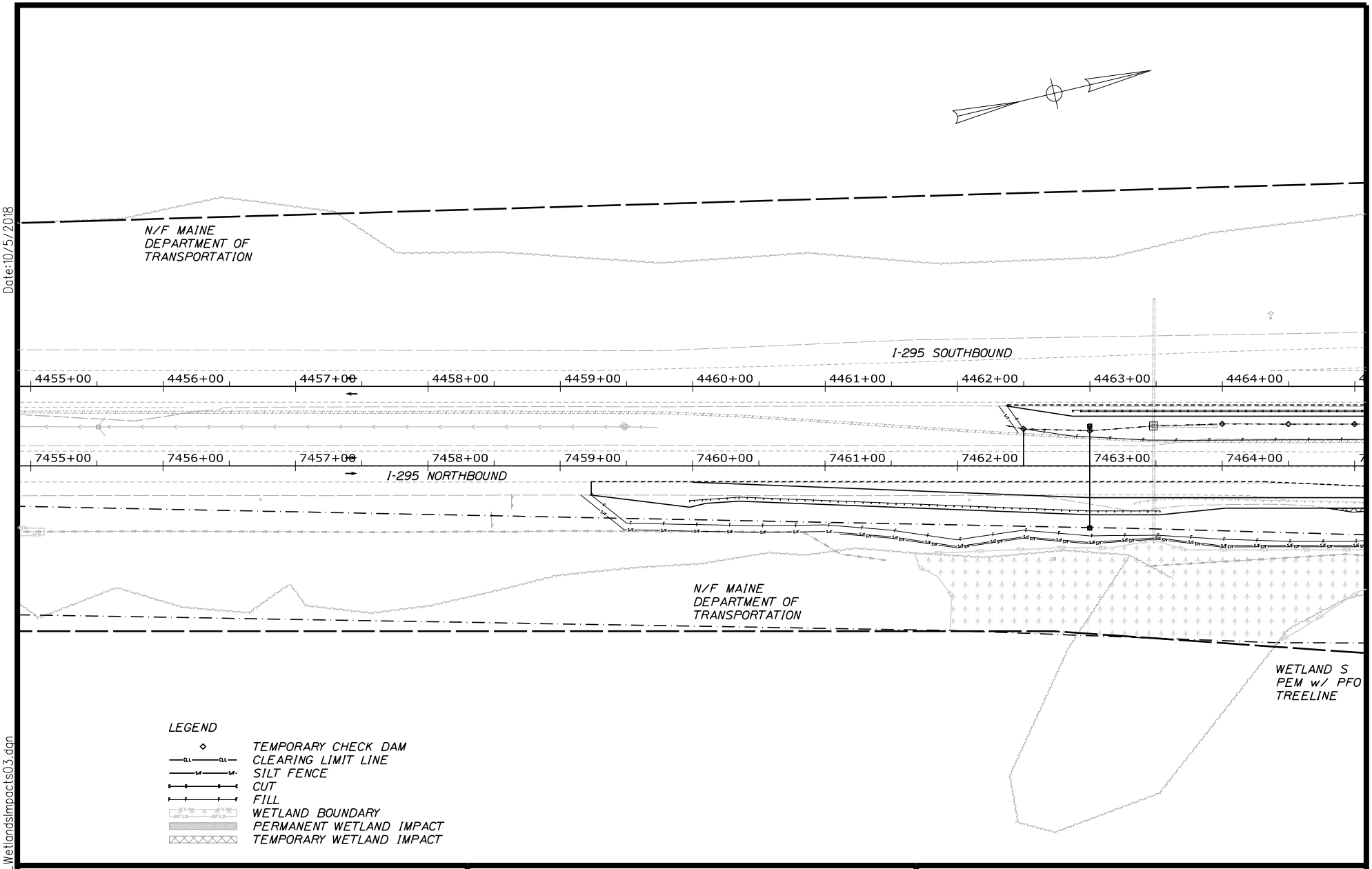
WETLAND IMPACTS PLAN VIEW 2

DATE: OCTOBER, 2018

SHEET 3 OF 14

Date:10/5/2018

Filename: ..._WetlandsImpacts02.dgn



Date:10/5/2018

Filename: ..._WetlandsImpacts03.dgn

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Scale of Feet

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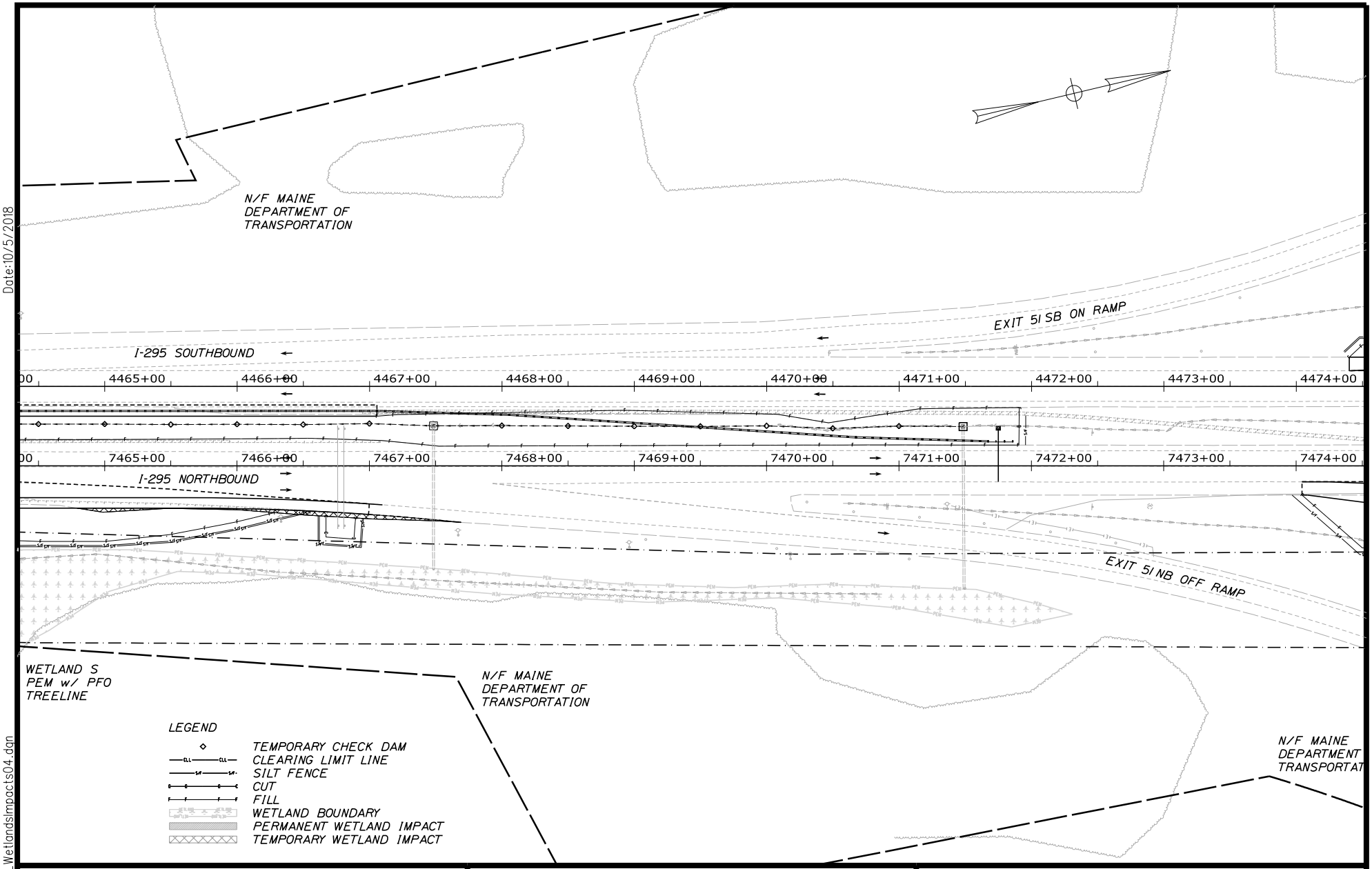
WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 3

DATE: OCTOBER, 2018



Date:10/5/2018

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Scale of Feet

Stantec

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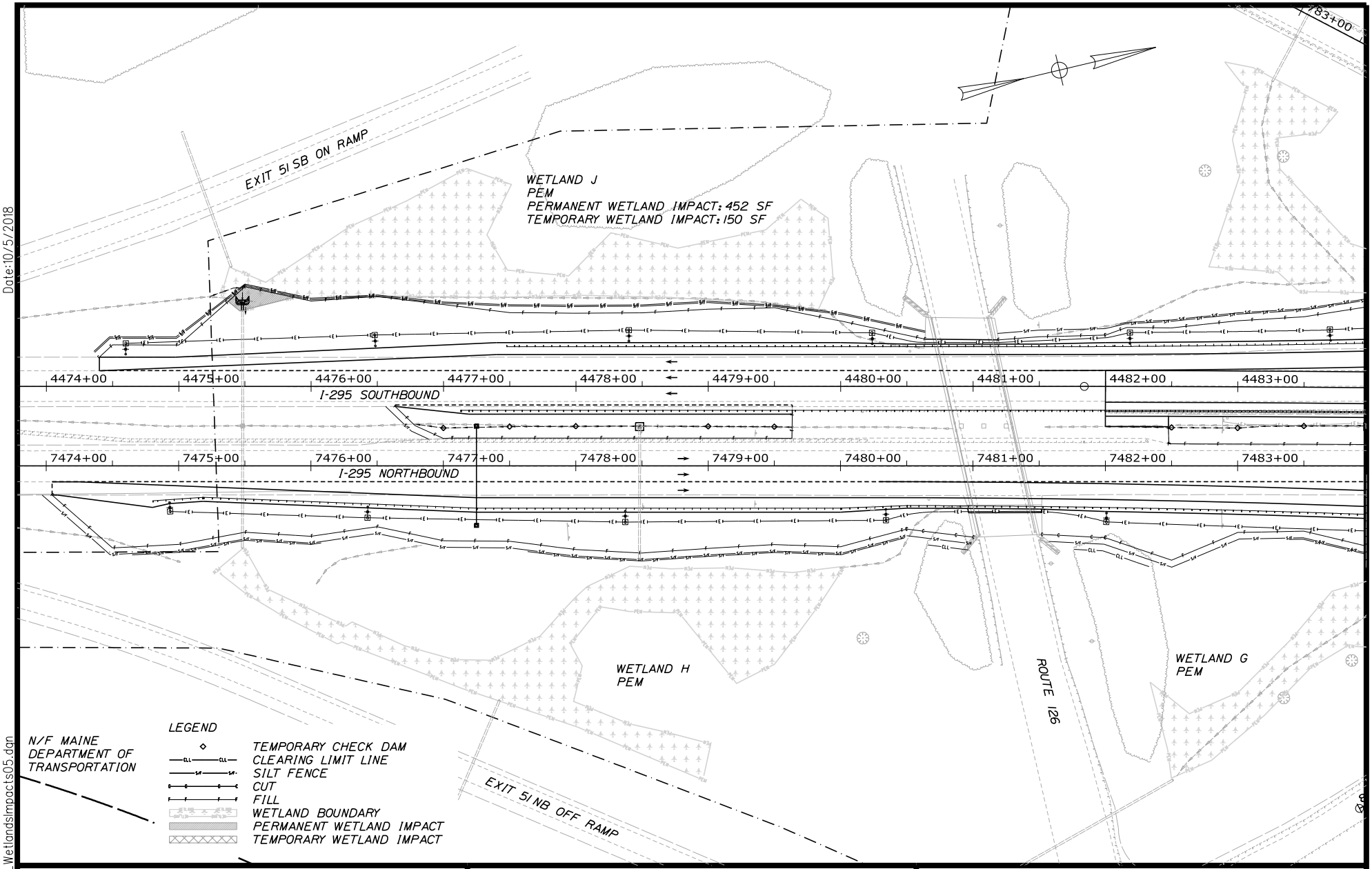
WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 4

DATE: OCTOBER, 2018



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Scale of Feet

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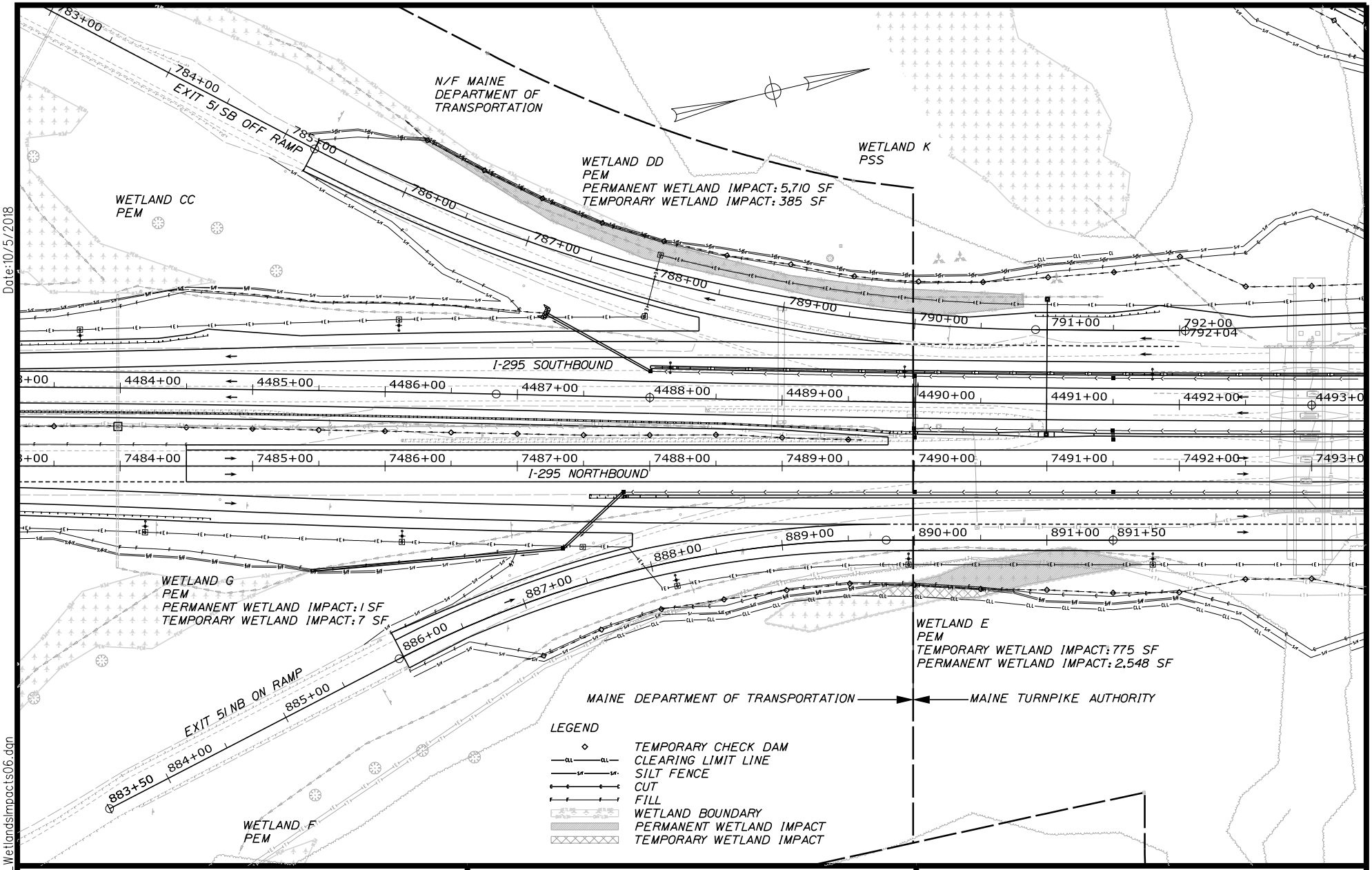
WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 5

DATE: OCTOBER, 2018



Date:10/5/2018

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Scale of Feet

Stantec

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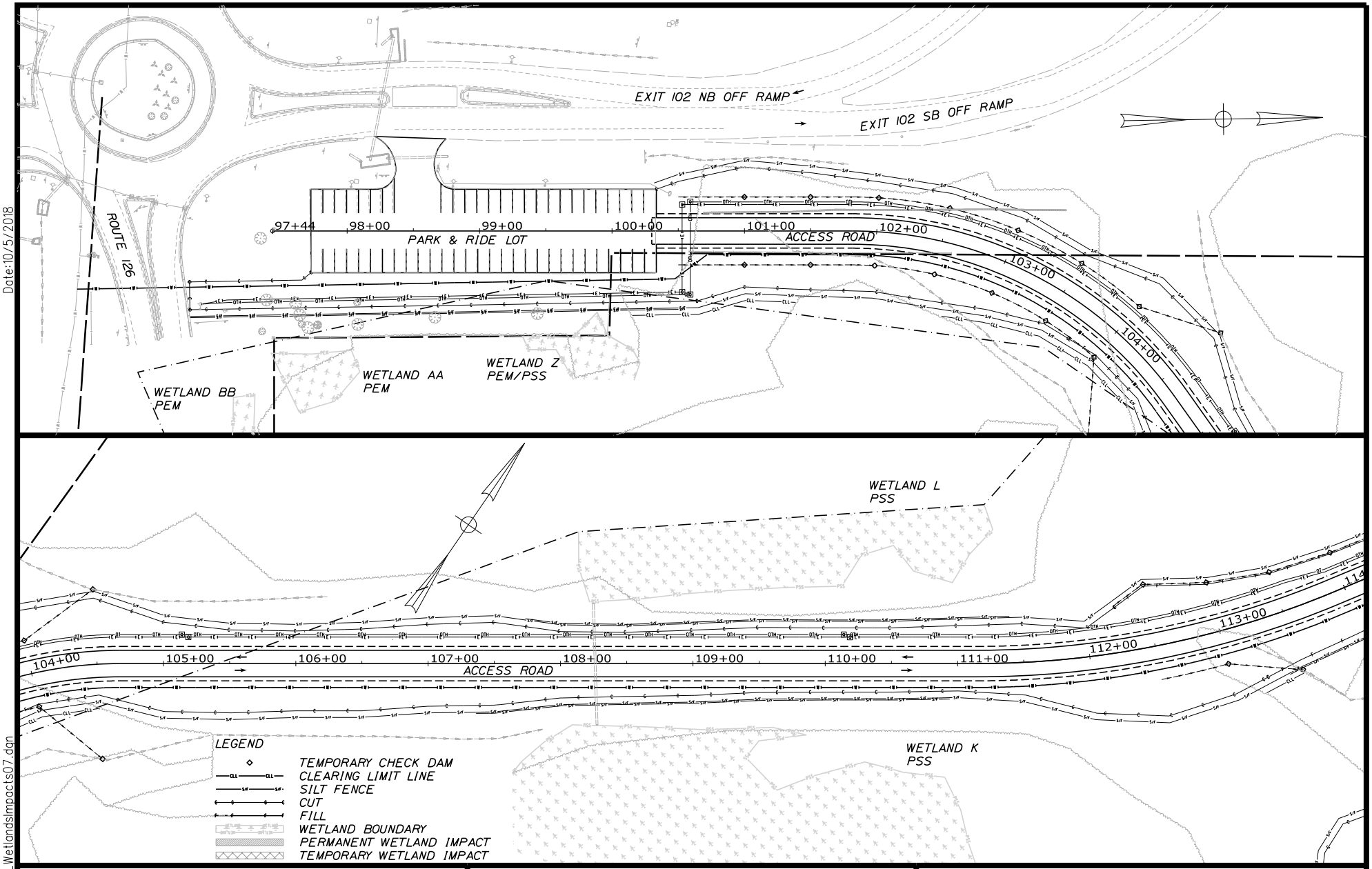
WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 6

DATE: OCTOBER, 2018



Date:10/5/2018

Filename: ..._WetlandsImpacts07.dgn

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Scale of Feet

Stantec

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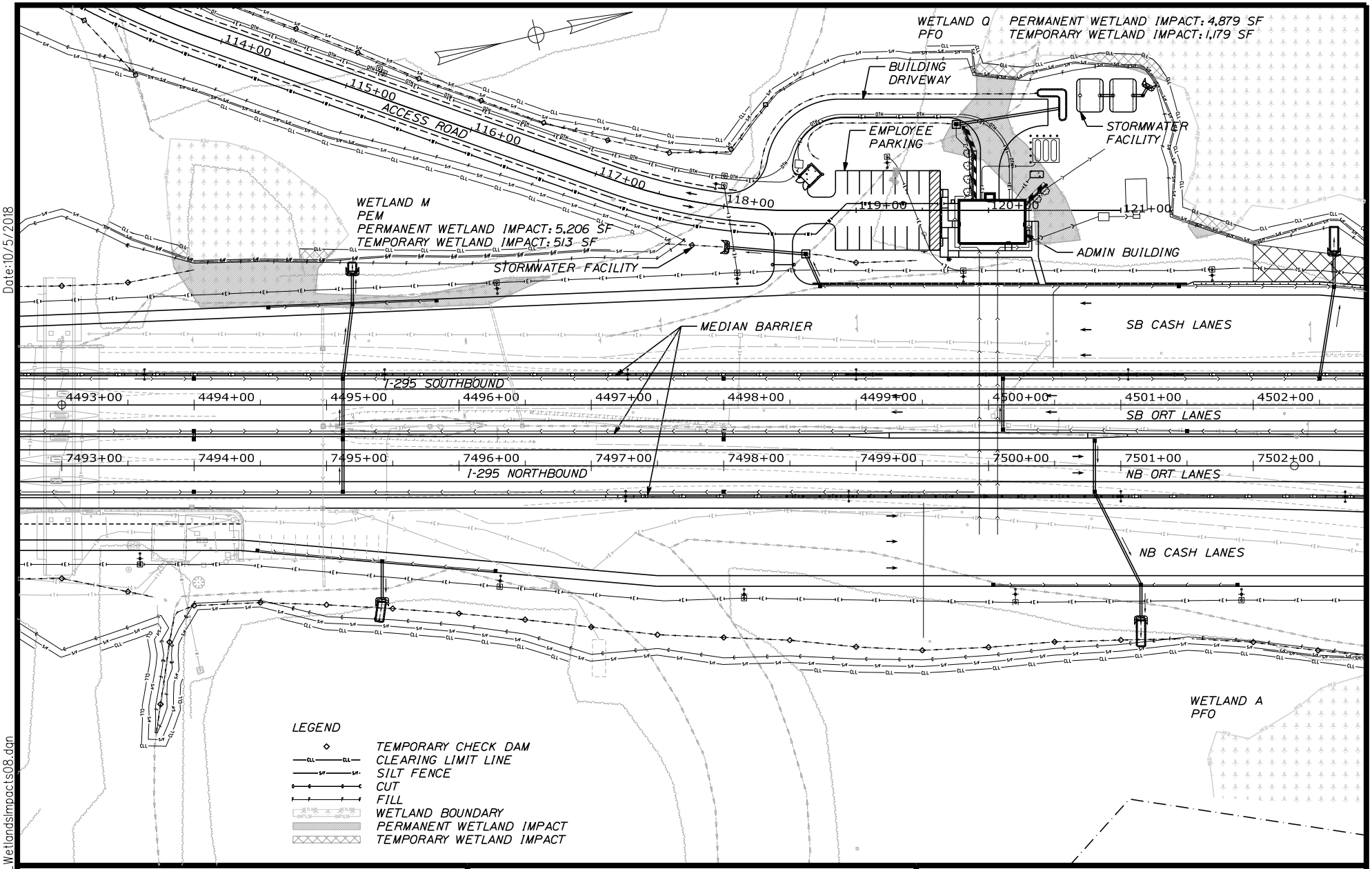
WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 7

DATE: OCTOBER, 2018



Date:10/5/2018

Filename: ..._WetlandsImpacts08.dgn

Scale: 50 0 50 100

Scale of Feet

Stantec

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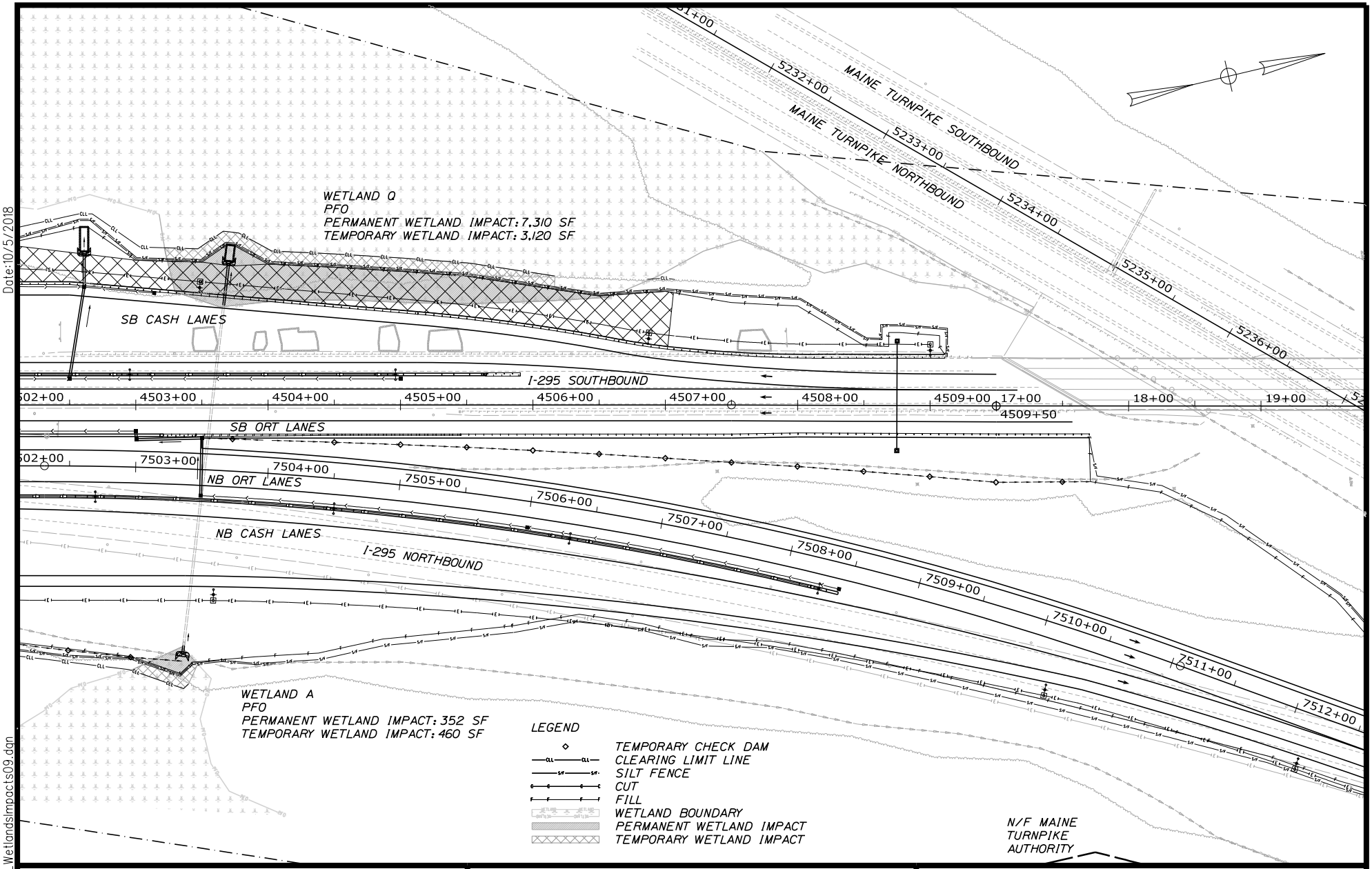
WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 8

DATE: OCTOBER, 2018

SHEET 9 OF 14



Date:10/5/2018

Filename: ..._WetlandsImpacts09.dgn

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Scale of Feet

Stantec

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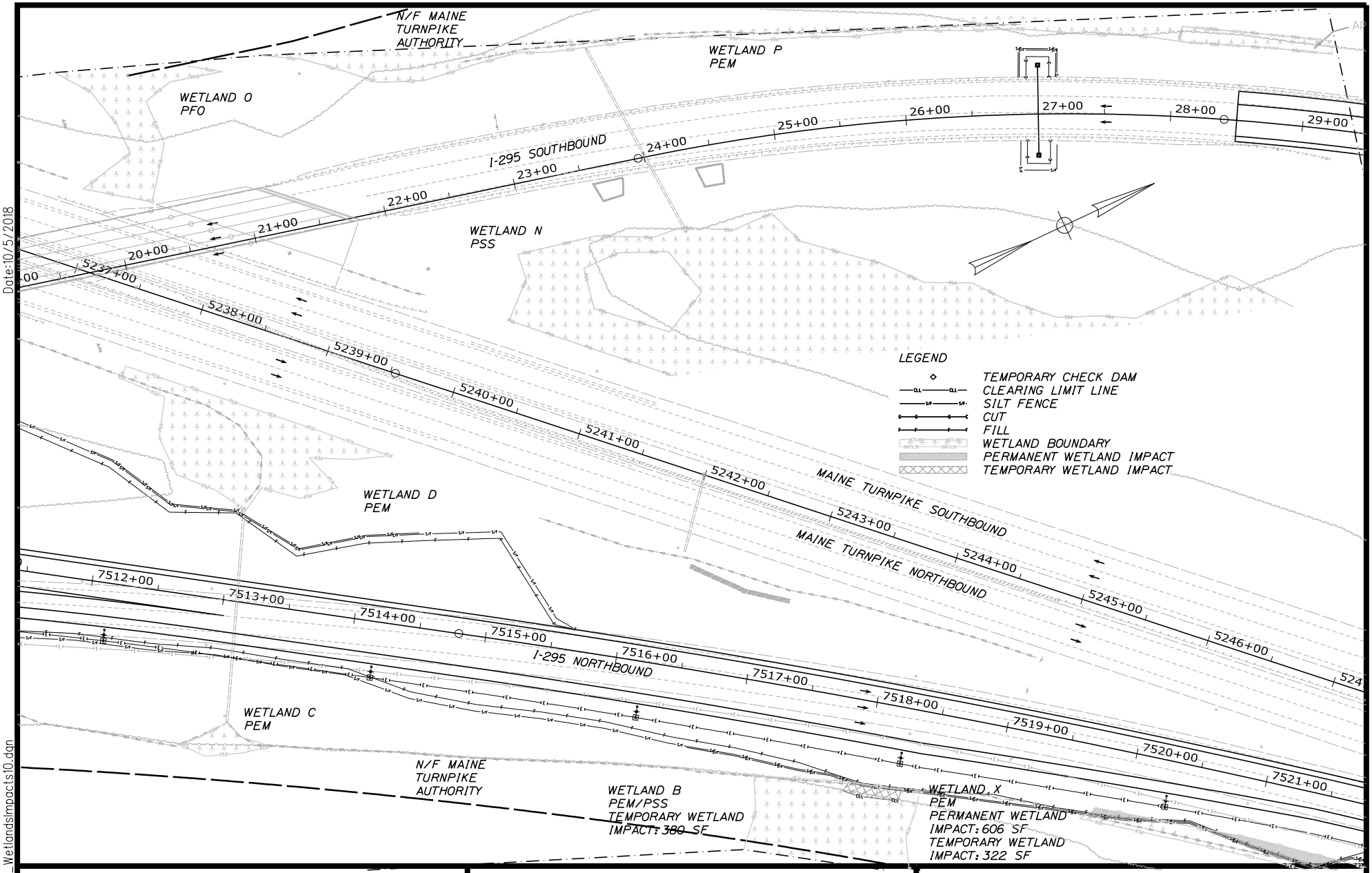
THE GOLD STAR MEMORIAL HIGHWAY

WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 9

DATE: OCTOBER, 2018



Date:10/5/2018

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Scale of Feet

Stantec

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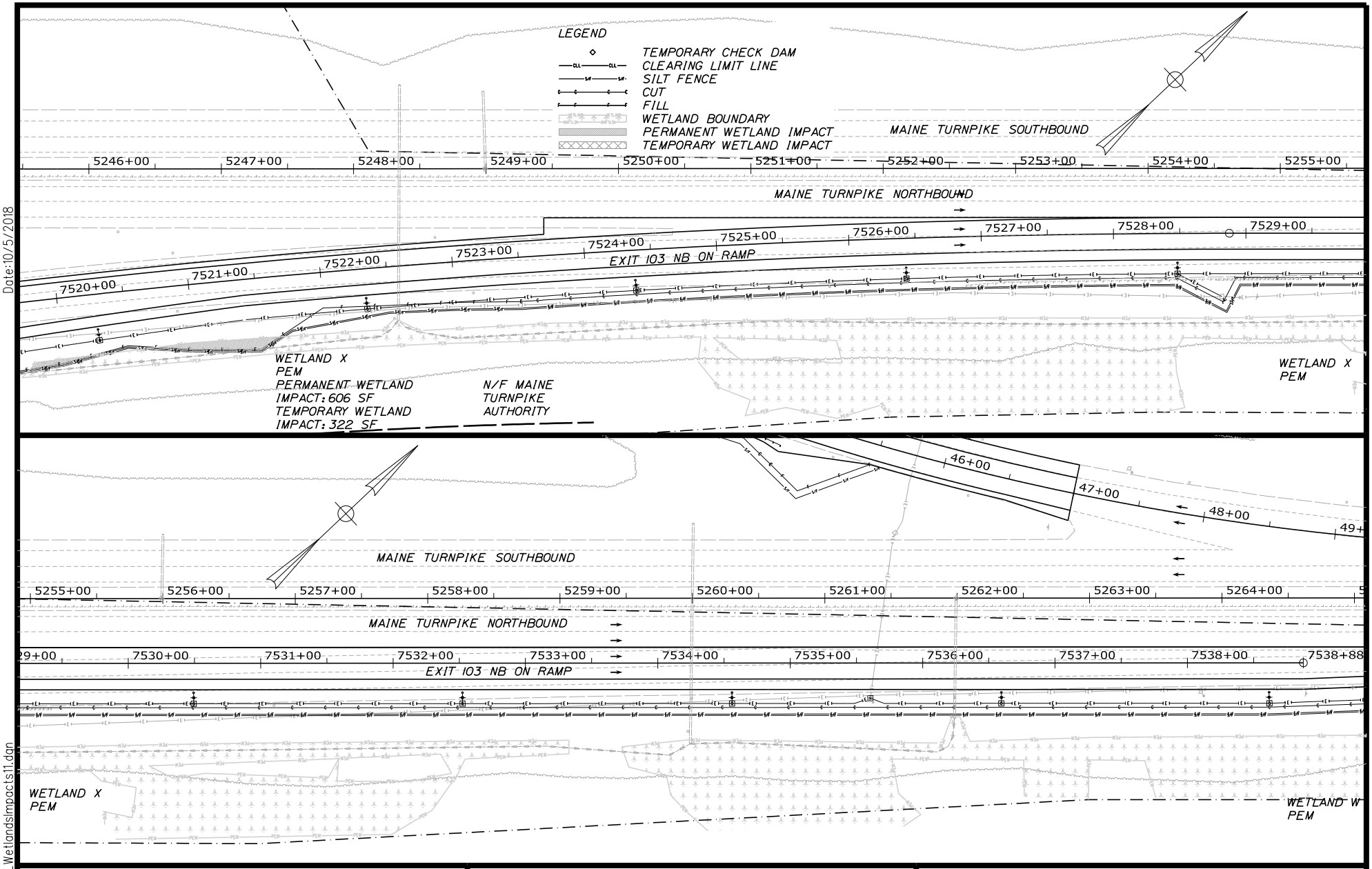
WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 10

DATE: OCTOBER, 2018



Date:10/5/2018

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Scale: 50 0 50 100

Scale of Feet

Stantec

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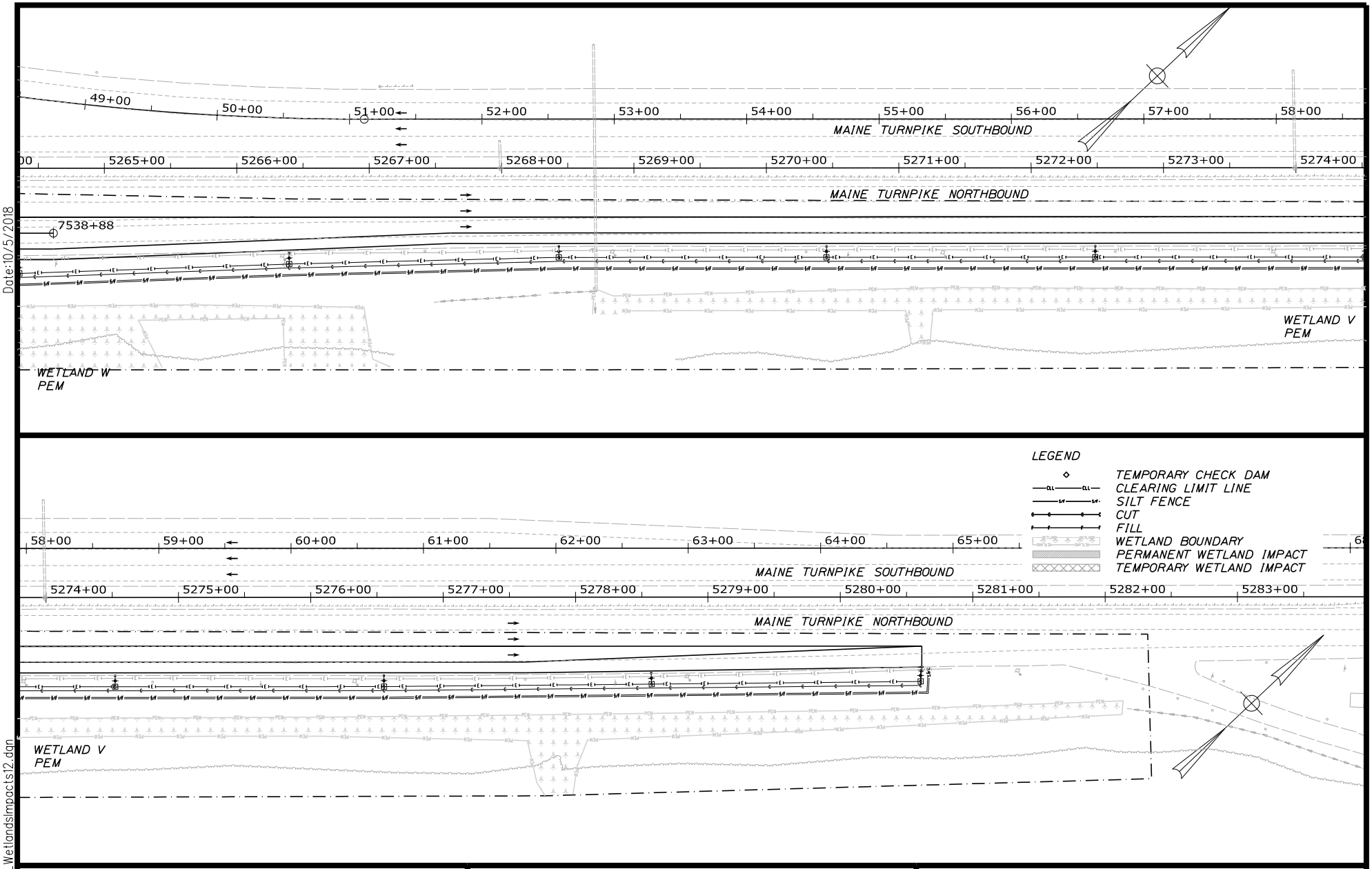
THE GOLD STAR MEMORIAL HIGHWAY

WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 11

DATE: OCTOBER, 2018



Date:10/5/2018

Filename: ..._WetlandsImpacts12.dgn

Scale: 50 0 50 100

Scale of Feet

Stantec

MAINE TURNPIKE

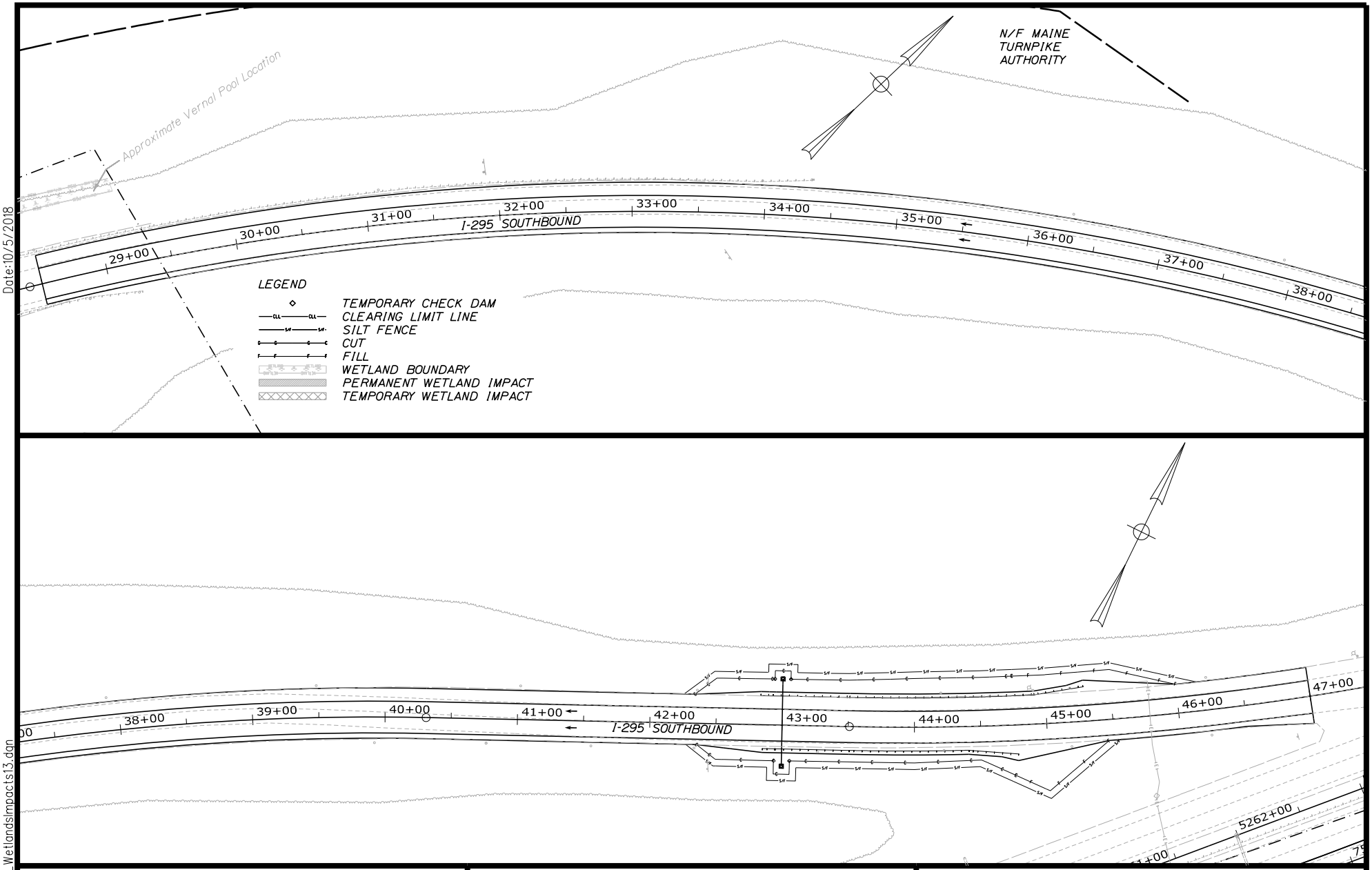
THE GOLD STAR MEMORIAL HIGHWAY

WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 12

DATE: OCTOBER, 2018

SHEET 13 OF 14



Date:10/5/2018

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Scale of Feet

Stantec

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

WEST GARDINER (EXIT 103) INTERCHANGE IMPROVEMENTS ORT CONVERSION

WETLAND IMPACTS PLAN VIEW 13

DATE: OCTOBER, 2018

APPENDICES

APPENDIX A WETLAND AND STREAM RESOURCE SUMMARY

WETLAND AND STREAM RESOURCE SUMMARY

Resource ID	Maine MTA Feature Map ID	Cowardin Wetland Classification	WOSS (Yes/No, Type)	Stream Type	Principal Functions & Values	Notes
01BEA	A	PFO	No	NA	STPR, NRRT	Large wetland, extends off-site to east
01BEB	B	PEM/PSS	No	NA	STPR, NRRT	Wetland along I-95 northbound connected to forested wetland along site boundary; contained amphibian egg masses and fish
01BEC	C	PEM	No	NA	STPR, NRRT	Closed depression, connected to roadside ditches
01BED	D	PEM	No	NA	FA, STPR, NRRT	Closed depression, connected to roadside ditches
01BEE	E	PEM w/PSS on treeline	No	NA	STPR, NRRT	Closed depression, connected to roadside ditches
01BEF	F	PEM	No	NA	GRD, STPR, NRRT	Large wetland, extends off-site to east
01BEG	G	PEM	No	NA	STPR, NRRT	Closed depression, connected to roadside ditches
01BEH/I	H	PEM	No	NA	STPR, NRRT	Closed depression, connected to roadside ditches
01EBB	I	PEM	No	NA	STPR, NRRT	Closed depression, connected to roadside ditches
01BEJ	J	PEM	No	NA	STPR, NRRT	Closed depression, connected to roadside ditches
01BEK	K	PSS	No	NA	FA, STPR, NRRT	Extends off-site to south
01BEL	L	PSS	No	NA	FA, STPR, NRRT	Extends off-site to northwest
01BEM	M	PEM	No	NA	STPR, NRRT	Closed depression, connected to roadside ditches
01BEA I-295	N	PSS	No	NA	FA, STPR, NRRT	Located between I-295 ramp and I-95
01BEC I-295	O	PFO	No	NA	GRD, FA, STPR, NRRT	Connects to 01BE stream off-site
01BED I-295	P	PEM	Yes, w/in 25' of stream	NA	GRD, FA, FSH, STPR, NRRT, WH	Wetland is a ditch at head of 01BE stream, contained amphibian egg masses and fish
01BEE I-295	Q	PFO	No	NA	FA, STPR, NRRT, WH	Located between I-295 and I-95
01RKA	R	PEM	No	NA	STPR, NRRT	Swale along I-295 north of Pond Road overpass
01RKB	S	PEM w/PFO treeline	No	NA	STPR, NRRT	Part of a larger off-site wetland
01RKC	T	PFO	No	NA	GRD	Natural wetland bordering out of service off ramp east of toll plaza
01RKD	U	PFO	No	NA	GRD	Natural wetland bordering out of service off ramp east of toll plaza
01RKE	V	PEM	No	NA	GRD, STPR, NRRT, WH	Stormwater swale along I-95 northbound connected to forested wetland along site boundary; contained amphibian egg masses and fish
01RKF	W	PEM	No	NA	GRD, STPR, NRRT, WH	Stormwater swale along I-95 northbound connected to forested wetland along site boundary; contained amphibian egg masses and fish
01RKG	X	PEM	No	NA	GRD, STPR, NRRT, WH	Stormwater swale along I-95 northbound connected to forested wetland along site boundary; contained amphibian egg masses and fish
01RKL	Y	PEM	No	NA	FA, STPR, NRRT, WH	PEM along I-295, apparently connected to wetland Q off-site
01RKM	Z	PSS/PEM	No	NA	STPR, NRRT	Extends off-site and located east of Park & Ride
01RKN	AA	PEM	No	NA	STPR, NRRT	Isolated depression and located east of Park & Ride
01RKO	BB	PEM	No	NA	STPR, NRRT	Off-site wetland drains to roadside along Route 126
01RKP	CC	PEM	No	NA	STPR, NRRT	Located between Route 126 off ramp and I-295 southbound
01RKQ	DD	PEM	No	NA	STPR, NRRT	Off-site wetland drains to ditch located along Route 126 off ramp
01BE	01BE	R3UB1	NA	Perennial	NA	Appx. 5' wide flows out of wetland P

NA = Not Applicable

Principal Functions & Values Acronyms:

GRD = Groundwater Recharge/Discharge; **FA** = Floodflow Alteration; **FSH** = Fish and Shellfish Habitat; **STPR** = Sediment/Toxicant/Pathogen Retention; **NRRT** = Nutrient Removal/Retention/Transformation; **PE** = Production Export; **SSS** = Sediment/Shoreline Stabilization; **WH**

APPENDIX B REPRESENTATIVE SITE PHOTOS

Photo 1. Wetland A: PFO wetland along I-295, north of existing toll booth; large wetland that extends outside the survey area. Stantec, November 9, 2017.

Photo 2. Wetland B: Typical PEM wetland with scrub shrub fringe along I-295 on ramp to I-95; part of a larger wetland that extends outside the survey area. Stantec, November 9, 2017.

Photo 3. Wetland C: PEM/PSS, closed, depressional wetland along roadside toe of fill; outlet of culvert from Wetland D. Stantec, November 9, 2017.

Photo 4. Wetland D: Typical PEM wetland along I-95 off-ramp to I-295 southbound; impounded by roadway and culvert outlets to Wetland C. Stantec, November 9, 2017.

Photo 5. Wetland E: PEM/PSS wetland along I-295; extends into woody vegetated area. Stantec, November 9, 2017.

Photo 6. Wetland F: Large PEM wetland along I-295 on-ramp, south of existing toll booth. Stantec, November 9, 2017.

Photo 7. Wetland G: PEM wetland between I-295; connected to Wetlands CC and DD and wetland outside the survey area to the west by culverts. Stantec, November 9, 2017.

Photo 8. Wetland H: PEM wetland along I-295 northbound; extends outside survey area. Stantec, November 9, 2017.

Photo 9. Wetland J: Large, non-maintained PEM wetland along I-295 southbound, south of existing toll booth. Stantec, November 9, 2017.

Photo 10. Wetland M: PEM wetland along southbound lane I-295; narrow swale portion of a large wetland area to the west. Stantec, November 9, 2017.

Photo 11. Wetland V: PEM wetland along northbound lane I-95; portion of a stormwater swale downslope and connected to forested wetland to the east. Stantec, April 24, 2018.

Photo 12. Wetland DD: PEM wetland along I-295, southbound off ramp to Route 126; extends outside the survey area to the west. Stantec, May 4, 2018.

Photo 13. Wetland V: Spotted salamander egg mass.
Stantec, April 24, 2018.

Photo 14. Wetland W: Wood frog egg mass.
Stantec, April 24, 2018.

APPENDIX C FUNCTIONS AND VALUES FORMS

Wetland Function-Value Evaluation Form

Total area of wetland 16,479sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PFO Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. A

Latitude 44.21528 Longitude 69.82319

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type temp. & perm. fill & clearing Area 206 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6		
Floodflow Alteration	N	4, 9, 15		natural wetland
Fish and Shellfish Habitat	N	1, 2		forested
Sediment/Toxicant Retention	Y	1, 2, 3, 4, 8	X	adjacent to highway
Nutrient Removal	Y	3, 4, 7, 10	X	adjacent to highway
Production Export	N	8		
Sediment/Shoreline Stabilization	N			not assoc. w/ shoreline
Wildlife Habitat	Y	5, 7, 8, 14, 15		
Recreation	N	12		
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 2,003sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. AA

Latitude 44.20958 Longitude 69.82764

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6		
Floodflow Alteration	N	9		
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4	X	adjacent to highway Park & Ride
Nutrient Removal	Y	3, 4, 10	X	adjacent to highway Park & Ride
Production Export	N	4		deer tracks
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	7, 8, 17		deer tracks
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 7,311sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM/PSS Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? One Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. B

Latitude 44.21897 Longitude 69.82178

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type temp. fill Area 49 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6, 9, 15		
Floodflow Alteration	N	4, 7, 9, 18		natural wetland
Fish and Shellfish Habitat	Y	1, 2, 4, 10, 12, 16		not a watercourse or waterbody
Sediment/Toxicant Retention	Y	1, 2, 3, 4, 5	X	adjacent to highway
Nutrient Removal	Y	3, 4, 7, 8, 9, 10	X	adjacent to highway
Production Export	Y	2, 4, 6, 7		fish and amphibian egg masses observed
Sediment/Shoreline Stabilization	N			not assoc. w/ shoreline
Wildlife Habitat	Y	5, 7, 8, 13, 15, 16, 18, 20		fish and amphibian egg masses observed
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N	6		
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 2,340sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. BB

Latitude 44.20941 Longitude 69.82745

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6, 15		
Floodflow Alteration	N	9		
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4	X	adjacent to highway Park & Ride and Route 126
Nutrient Removal	Y	3, 4, 10	X	adjacent to highway Park & Ride and Route 126
Production Export	N	4		deer tracks
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	7, 8, 17		deer tracks
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 829sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. C

Latitude 44.21786 Longitude 69.82246

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6, 10		culvert outlet
Floodflow Alteration	N	4, 9		
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4	X	adjacent to highway
Nutrient Removal	Y	3, 4, 7, 10	X	adjacent to highway
Production Export	N			
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	N	7		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 11,710sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. CC

Latitude 44.21003 Longitude 69.82504

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6		
Floodflow Alteration	N	6, 9		
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4	X	adjacent to highway
Nutrient Removal	Y	3, 4, 7, 10	X	adjacent to highway
Production Export	N			
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	N	7		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 8,693sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. D

Latitude 44.21801 Longitude 69.82332

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6		disturbance, ditch outlet
Floodflow Alteration	Y	4, 5, 6, 7, 9, 18	X	flat, dense veg.
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 3, 4, 5	X	adjacent to highway, dense veg.
Nutrient Removal	Y	3, 4, 5, 7, 8, 9, 10, 11	X	adjacent to highway, dense veg
Production Export	N	2, 7		
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	7, 8 13, 20		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 18,725sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. DD

Latitude 44.21122 Longitude 69.82501

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6, 15		
Floodflow Alteration	N	6, 9		
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4	X	adjacent to highway
Nutrient Removal	Y	3, 4, 10	X	adjacent to highway
Production Export	N	4		
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	7, 8		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 5,065 sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM w/ PSS treeline Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. E

Latitude 44.21193 Longitude 69.82398

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type temp. & perm. fill Area 5,065 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6		disturbance, ditch
Floodflow Alteration	N	4, 9		
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 3, 4, 5	X	adjacent to highway
Nutrient Removal	Y	3, 4, 6	X	adjacent to highway
Production Export	N	8		
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	5, 7, 8, 14, 15		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 5,065 sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. F

Latitude 44.21026 Longitude 69.82311

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6,15	X	extends off-site as larger wetland
Floodflow Alteration	N	4, 5, 6, 9,		extends off-site as larger wetland
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4, 8	X	adjacent to highway
Nutrient Removal	Y	3, 4, 7	X	adjacent to highway
Production Export	N	1		
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	5, 6, 7, 8		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 10,713sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. G

Latitude 44.21 Longitude 69.82398

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type temp. & perm. fill Area 8 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6		closed depression connected to ditches
Floodflow Alteration	N	4, 9		
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2	X	adjacent to highway
Nutrient Removal	Y	3, 4, 10	X	adjacent to highway
Production Export	N	1		
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	N	7		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 18,815sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. H

Latitude 44.20856 Longitude 69.82424

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6		closed depression connected to ditches
Floodflow Alteration	Y	4, 6, 9, 18		
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 3, 4	X	adjacent to highway
Nutrient Removal	Y	3, 4, 7, 8, 9, 10	X	adjacent to highway
Production Export	N			
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	N	7, 8		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 457sq ft Human made? Yes Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. I

Latitude 44.20924 Longitude 69.82331

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6		closed depression connected to ditches
Floodflow Alteration	Y	4		
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4	X	adjacent to highway
Nutrient Removal	Y	3, 4, 7, 8, 10	X	adjacent to highway
Production Export	N			
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	N	7, 8		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 22,291sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. J

Latitude 44.20836 Longitude 69.82519

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type temp. & perm. fill Area 363 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6, 15		closed depression connected to ditches
Floodflow Alteration	Y	4, 6, 8, 9, 18		
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 3, 4	X	adjacent to highway
Nutrient Removal	Y	3, 4, 7, 8, 9, 10	X	adjacent to highway
Production Export	N			
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	N	7, 8		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 61,920sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PSS Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. K

Latitude 44.21191 Longitude 69.82603

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6		extends off-site
Floodflow Alteration	Y	4, 6, 8, 9, 18	X	
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4, 5, 8	X	adjacent to highway
Nutrient Removal	Y	3, 4, 7, 8, 9, 10	X	adjacent to highway
Production Export	N			
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	N	7, 8		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 14,894sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PSS Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. L

Latitude 44.21219 Longitude 69.82675

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6		extends off-site
Floodflow Alteration	Y	4, 6, 8, 9, 18	X	
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4, 5, 8	X	adjacent to highway
Nutrient Removal	Y	3, 4, 7, 8, 9, 10	X	adjacent to highway
Production Export	N			
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	N	7, 8		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 15,120sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. M

Latitude 44.21306 Longitude 69.82473

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type temp. & perm. fill Area 5,790 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6		closed depression, connected to ditches
Floodflow Alteration	Y	4, 9		
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 3	X	adjacent to highway
Nutrient Removal	Y	3, 4, 7, 8, 9, 10	X	adjacent to highway
Production Export	N	7		
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	7, 8, 13		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 28,883sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PSS Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. N

Latitude 44.21919 Longitude 69.8233

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6, 15		
Floodflow Alteration	Y	4, 6, 7, 8, 9, 18	X	
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4, 7, 8	X	adjacent to highway
Nutrient Removal	Y	3, 4, 7, 8, 9, 10, 11	X	adjacent to highway
Production Export	N	7		
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	7, 8, 13, 21		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 4,317sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PFO Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. 0

Latitude 44.21805 Longitude 69.82422

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6, 7, 10, 15	X	connected to stream off-site
Floodflow Alteration	Y	4, 13	X	
Fish and Shellfish Habitat	Y	7, 12, 15, 16, 17		
Sediment/Toxicant Retention	Y	1, 2, 4, 8, 10	X	adjacent to highway
Nutrient Removal	Y	4, 7	X	adjacent to highway
Production Export	N	6		
Sediment/Shoreline Stabilization	Y	2, 3, 4		
Wildlife Habitat	Y	6, 7, 8		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 6,902sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? One Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. P

Latitude 44.21871 Longitude 69.82415

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6, 7, 10, 15	X	ditch at headwater of stream
Floodflow Alteration	Y	7, 9, 13, 15	X	
Fish and Shellfish Habitat	Y	1, 3, 4, 10, 12, 15, 16, 17	X	
Sediment/Toxicant Retention	Y	1, 2, 3, 4, 10	X	adjacent to highway
Nutrient Removal	Y	3, 4, 7, 9, 10, 13	X	adjacent to highway
Production Export	Y	4, 6		fish, amphibian egg masses, beaver
Sediment/Shoreline Stabilization	Y	1, 2, 3, 4		
Wildlife Habitat	Y	5, 6, 7, 8, 16, 17, 18, 20, 21	X	fish, amphibian egg masses, beaver
Recreation	N	5		
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19, 22, 27		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 131,704sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PFO Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. Q

Latitude 44.21597 Longitude 69.82462

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type temp. & perm. fill Area 14,725 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6, 15		
Floodflow Alteration	Y	6, 7, 8, 9, 18	X	
Fish and Shellfish Habitat	N	2		
Sediment/Toxicant Retention	Y	1, 2, 3, 4, 7, 8	X	adjacent to highway
Nutrient Removal	Y	3, 4, 5, 7, 8, 10	X	adjacent to highway
Production Export	Y	4, 7, 8		old beaver activity
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	7, 8, 9, 13, 14, 15, 17, 21	X	old beaver activity
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19, 27		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 2,610sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? YES If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. R

Latitude 44.20186 Longitude 69.82509

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6		
Floodflow Alteration	N	9, 15		
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4	X	adjacent to highway
Nutrient Removal	Y	3, 4, 9, 10	X	adjacent to highway
Production Export	N			
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	N	7, 8		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 30,761sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. S

Latitude 44.20546 Longitude 69.82462

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6		extends off-site
Floodflow Alteration	Y	6, 8, 9, 18		
Fish and Shellfish Habitat	N	1		
Sediment/Toxicant Retention	Y	1, 2, 3, 4, 5, 7, 8	X	adjacent to highway
Nutrient Removal	Y	3, 4, 7, 8, 9, 10	X	adjacent to highway
Production Export	N	7		
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	5, 7, 8, 13, 21		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 13671sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PFO Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. T

Latitude 44.21323 Longitude 69.82254

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6, 9	X	discharges to ditch
Floodflow Alteration	N	9		
Fish and Shellfish Habitat	N	1		
Sediment/Toxicant Retention	Y	1, 2, 4		adjacent to old highway ramp
Nutrient Removal	Y	3, 4, 7		adjacent to old highway ramp
Production Export	N			
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	5, 7, 8		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 1,211sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PFO Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. U

Latitude 44.21241 Longitude 69.82264

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6, 9	X	extends off-site
Floodflow Alteration	N	9		
Fish and Shellfish Habitat	N	1		
Sediment/Toxicant Retention	Y	1, 2, 4		adjacent to old highway ramp
Nutrient Removal	Y	3, 4, 7		adjacent to old highway ramp
Production Export	N			
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	5, 7, 8		
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 22,971sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? One Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. V

Latitude 44.22633 Longitude 69.81542

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6, 7, 13, 15	X	highway ditch connecting natural wetlands
Floodflow Alteration	N	9, 18		
Fish and Shellfish Habitat	Y	1, 3, 4, 10, 12, 16		fish observed in ditch
Sediment/Toxicant Retention	Y	1, 2, 3, 4, 5, 14, 16	X	adjacent to highway
Nutrient Removal	Y	3, 4, 5, 7, 8, 9, 10, 12, 13, 14	X	adjacent to highway
Production Export	Y	2, 4, 6, 7		
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	5, 7, 8, 10, 13, 16, 17, 18, 20	X	fish and amphibian egg masses
Recreation	N	5		
Educational/Scientific Value	N	5		
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 29,287sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? One Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. W

Latitude 44.22393 Longitude 69.81773

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6, 7, 13, 15	X	highway ditch connecting natural wetlands
Floodflow Alteration	N	9, 18		
Fish and Shellfish Habitat	Y	1, 3, 4, 10, 12, 16		fish observed in ditch
Sediment/Toxicant Retention	Y	1, 2, 3, 4, 5, 14, 16	X	adjacent to highway
Nutrient Removal	Y	3, 4, 5, 7, 8, 9, 10, 12, 13, 14	X	adjacent to highway
Production Export	Y	2, 4, 6, 7		
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	5, 7, 8, 10, 13, 16, 17, 18, 20	X	fish and amphibian egg masses
Recreation	N	5		
Educational/Scientific Value	N	5		
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 47,905sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? One Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. X

Latitude 44.22081 Longitude 69.82058

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type temp. & perm. fill Area 928 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6, 7, 13, 15	X	highway ditch connecting natural wetlands
Floodflow Alteration	N	9, 18		
Fish and Shellfish Habitat	Y	1, 3, 4, 10, 12, 16		fish observed in ditch
Sediment/Toxicant Retention	Y	1, 2, 3, 4, 5, 14, 16	X	adjacent to highway
Nutrient Removal	Y	3, 4, 5, 7, 8, 9, 10, 12, 13, 14	X	adjacent to highway
Production Export	Y	2, 4, 6, 7		
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	5, 7, 8, 10, 13, 16, 17, 18, 20	X	fish and amphibian egg masses
Recreation	N	5		
Educational/Scientific Value	N	5		
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 2,86sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PEM Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. Y

Latitude 44.21752 Longitude 69.8262

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6, 15		
Floodflow Alteration	Y	6, 7, 8, 9, 18	X	
Fish and Shellfish Habitat	N	2		
Sediment/Toxicant Retention	Y	1, 2, 3, 4, 7, 8	X	adjacent to highway
Nutrient Removal	Y	3, 4, 5, 7, 8, 10	X	adjacent to highway
Production Export	Y	4, 7, 8		old beaver activity
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	7, 8, 9, 13, 14, 15, 17, 21	X	old beaver activity
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19, 27		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 47,905sq ft Human made? No Is wetland part of a wildlife corridor? No or a "habitat island"? No

Adjacent land use Interstate, roads, residential, forest. Distance to nearest roadway or other development 25 ft

Dominant wetland systems present PSS Contiguous undeveloped buffer zone present No

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? Mid/Low

How many tributaries contribute to the wetland? None Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. Z

Latitude 44.20988 Longitude 69.82768

Prepared by: RK Date 09/20/2018

Wetland Impact:
Type None Area 0 sq. ft.

Evaluation based on:
Office X Field X

Corps manual wetland delineation completed? Y X N

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	Y	2, 6		
Floodflow Alteration	N	9		
Fish and Shellfish Habitat	N			
Sediment/Toxicant Retention	Y	1, 2, 4	X	adjacent to highway Park & Ride
Nutrient Removal	Y	3, 4, 10	X	adjacent to highway Park & Ride
Production Export		1, 4		shrub drupes, deer tracks
Sediment/Shoreline Stabilization	N			
Wildlife Habitat	Y	7, 8, 17		shrub drupes, deer tracks
Recreation	N			
Educational/Scientific Value	N			
Uniqueness/Heritage	N	19		
Visual Quality/Aesthetics	N			
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

APPENDIX D MDIFW AND MNAP LETTERS

PAUL R. LEPAGE
GOVERNOR

STATE OF MAINE
DEPARTMENT OF
INLAND FISHERIES & WILDLIFE
284 STATE STREET
41 STATE HOUSE STATION
AUGUSTA ME 04333-0041

CHANDLER E. WOODCOCK
COMMISSIONER

September 27, 2018

Rodney Kelshaw
Stantec
30 Park Drive
Topsham ME 04086-1737

RE: Information Request - I-95 Exit 103 Toll Plaza Improvements, West Gardiner

Dear Rodney:

Per your request received September 20, 2018, we have reviewed current Maine Department of Inland Fisheries and Wildlife (MDIFW) information for known locations of Endangered, Threatened, and Special Concern species; designated Essential and Significant Wildlife Habitats; and fisheries habitat concerns within the vicinity of the *I-95 Exit 103 Toll Plaza Improvements Project* in West Gardiner.

Our Department has not mapped any Essential Habitats that would be directly affected by your project.

Endangered, Threatened, and Special Concern Species

Bats

Of the eight species of bats that occur in Maine, the three *Myotis* species are protected under Maine's Endangered Species Act (MESA) and are afforded special protection under 12 M.R.S §12801 - §12810. The three *Myotis* species include little brown bat (State Endangered), northern long-eared bat (State Endangered), and eastern small-footed bat (State Threatened). The five remaining bat species are listed as Special Concern: big brown bat, red bat, hoary bat, silver-haired bat, and tri-colored bat.

While a comprehensive statewide inventory for bats has not been completed, based on historical evidence it is likely that several of these species occur within the project area during migration and/or the breeding season. We recommend that you contact the U.S. Fish and Wildlife Service--Maine Fish and Wildlife Complex (Wende Mahaney, 207-902-1569) for further guidance, as the northern long-eared bat is also listed as a Threatened Species under the Federal Endangered Species Act. Otherwise, our Agency does not anticipate significant impacts to any of the bat species as a result of this project.

Significant Wildlife Habitat

Deer Wintering Areas

The project search area appears to intersect with a Deer Winter Area (DWA). DWAs contain habitat cover components that provide conditions where deer find protection from deep snow and cold wind,

which is important for overwinter survival. MDIFW recommends that development projects be designed to avoid losses or impacts to the continued availability of coniferous winter shelter. Any removal of vegetation should be conducted in such a way that improves the quality and vigor of the coniferous species providing this winter shelter.

Significant Vernal Pools

At this time, MDIFW Significant Wildlife Habitat maps indicate no known presence of Significant Vernal Pools in the project search area; however, a comprehensive statewide inventory for Significant Vernal Pools has not been completed. Therefore, we recommend that surveys for vernal pools be conducted within the project boundary by qualified wetland scientists prior to final project design to determine whether there are Significant Vernal Pools present in the area. These surveys should extend up to 250 feet beyond the anticipated project footprint because of potential performance standard requirements for off-site Significant Vernal Pools, assuming such pools are located on land owned or controlled by the applicant. Once surveys are completed, survey forms should be submitted to our Agency for review well before to the submission of any necessary permits. Our Department will need to review and verify any vernal pool data prior to final determination of significance.

Fisheries Habitat

We generally recommend that a 100-foot undisturbed vegetated buffers be maintained along streams. Buffers should be measured from the edge of stream or associated fringe and floodplain wetlands. Maintaining and enhancing buffers along streams that support coldwater fisheries is critical to the protection of water temperatures, water quality, natural inputs of coarse woody debris, and various forms of aquatic life necessary to support conditions required by many fish species. If an existing crossing needs to be modified, it should be designed to provide full fish passage. Small streams, including intermittent streams, can provide crucial rearing habitat, cold water for thermal refugia, and abundant food for juvenile salmonids on a seasonal basis and undersized crossings may inhibit these functions. Generally, MDIFW recommends that all new, modified, and replacement stream crossings be sized to span at least 1.2 times the bankfull width of the stream. In addition, we generally recommend that stream crossings be open bottomed (i.e. natural bottom), although embedded structures which are backfilled with representative streambed material have been shown to be effective in not only providing habitat connectivity for fish but also for other aquatic organisms. Construction Best Management Practices should be closely followed to avoid erosion, sedimentation, alteration of stream flow, and other impacts as eroding soils from construction activities can travel significant distances as well as transport other pollutants resulting in direct impacts to fish and fisheries habitat. In addition, we recommend that any necessary instream work occur between July 15 and October 1.

This consultation review has been conducted specifically for known MDIFW jurisdictional features and should not be interpreted as a comprehensive review for the presence of other regulated features that may occur in this area. Prior to the start of any future site disturbance we recommend additional consultation with the municipality, and other state resource agencies including the Maine Natural Areas Program and Maine Department of Environmental Protection in order to avoid unintended protected resource disturbance.

Please feel free to contact my office if you have any questions regarding this information, or if I can be of any further assistance.

Best regards,

John Perry
Environmental Review Coordinator

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
93 STATE HOUSE STATION
AUGUSTA, MAINE 04333

PAUL R. LEPAGE
GOVERNOR

WALTER E. WHITCOMB
COMMISSIONER

October 3, 2018

Rodney Kelshaw
Stantec
30 Park Drive
Topsham, ME 04086

Via email: rodney.kelshaw@stantec.com

Re: Rare and exemplary botanical features in proximity to: #195311383, Toll Plaza Improvements, I-95, Exit 103, West Gardiner, Maine

Dear Mr. Kelshaw:

I have searched the Natural Areas Program's Biological and Conservation Data System files in response to your request received September 20, 2018 for information on the presence of rare or unique botanical features documented from the vicinity of the project in West Gardiner, Maine. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural communities. Our review involves examining maps, manual and computerized records, other sources of information such as scientific articles or published references, and the personal knowledge of staff or cooperating experts.

Our official response covers only botanical features. For authoritative information and official response for zoological features you must make a similar request to the Maine Department of Inland Fisheries and Wildlife, 284 State Street, Augusta, Maine 04333.

According to the information currently in our Biological and Conservation Data System files, there are no rare botanical features documented specifically within the project area. This lack of data may indicate minimal survey efforts rather than confirm the absence of rare botanical features. You may want to have the site inventoried by a qualified field biologist to ensure that no undocumented rare features are inadvertently harmed.

If a field survey of the project area is conducted, please refer to the enclosed supplemental information regarding rare and exemplary botanical features documented to occur in the vicinity of the project site. The list may include information on features that have been known to occur historically in the area as well as recently field-verified information. While historic records have not been documented in several years, they may persist in the area if suitable habitat exists. The enclosed list identifies features with potential to occur in the area, and it should be considered if you choose to conduct field surveys.

This finding is available and appropriate for preparation and review of environmental assessments, but it is not a substitute for on-site surveys. Comprehensive field surveys do not exist for all natural areas in Maine, and in the absence of a specific field investigation, the Maine Natural Areas Program cannot provide a definitive statement on the presence or absence of unusual natural features at this site.

MOLLY DOCHERTY, DIRECTOR
MAINE NATURAL AREAS PROGRAM

DEPARTMENT OF Agriculture Conservation & Forestry

PHONE: (207) 287-8044
FAX: (207) 287-8040
WWW.MAINE.GOV/DACF/MNAP

The Natural Areas Program is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We would appreciate the contribution of any information obtained should you decide to do field work. The Natural Areas Program welcomes coordination with individuals or organizations proposing environmental alteration, or conducting environmental assessments. If, however, data provided by the Natural Areas Program are to be published in any form, the Program should be informed at the outset and credited as the source.

The Natural Areas Program has instituted a fee structure of $75.00 an hour to recover the actual cost of processing your request for information. You will receive an invoice for $150.00 for two hours of our services.

Thank you for using the Natural Areas Program in the environmental review process. Please do not hesitate to contact me if you have further questions about the Natural Areas Program or about rare or unique botanical features on this site.

Sincerely,

Kristen Puryear | Ecologist | Maine Natural Areas Program
207-287-8043 | kristen.puryear@maine.gov

Rare and Exemplary Botanical Features within 4 miles of
Project: #195311383, Toll Plaza Improvements, I-95 Exit 103,West Gardiner, Maine

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
Alpine Rush						
	SC	S3	G5T5	1908	4	Non-tidal rivershore (non-forested, seasonally wet)
American Ginseng						
	E	S3	G3G4	1989	33	Hardwood to mixed forest (forest, upland)
	E	S3	G3G4	1912-07	17	Hardwood to mixed forest (forest, upland)
Broad Beech Fern						
	SC	S2	G5	1912-08-09	10	Hardwood to mixed forest (forest, upland)
	SC	S2	G5	1897-08-30	9	Hardwood to mixed forest (forest, upland)
Columbia Water-meal						
	SC	S2	G5	2007-08-14	5	Open water (non-forested, wetland)
Estuary Bur-marigold						
	SC	S3	G4	2013-10-04	30	Tidal wetland (non-forested, wetland)
Freshwater Tidal Marsh						
	<null>	S2	G4?	2013-09-10	16	Tidal wetland (non-forested, wetland)
Parker's Pipewort						
	SC	S3	G3	2013-10-04	16	Tidal wetland (non-forested, wetland)
Showy Orchis						
	E	S1	G5	1941	15	Hardwood to mixed forest (forest, upland)
Water Stargrass						
	SC	S3	G5	2002-09-12	11	Open water (non-forested, wetland)

STATE RARITY RANKS

S1 Critically imperiled in Maine because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extirpation from the State of Maine.

S2 Imperiled in Maine because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.

S3 Rare in Maine (20-100 occurrences).

S4 Apparently secure in Maine.

S5 Demonstrably secure in Maine.

SU Under consideration for assigning rarity status; more information needed on threats or distribution.

SNR Not yet ranked.

SNA Rank not applicable.

S#? Current occurrence data suggests assigned rank, but lack of survey effort along with amount of potential habitat create uncertainty (e.g. S3?).

Note: **State Rarity Ranks** are determined by the Maine Natural Areas Program for rare plants and rare and exemplary natural communities and ecosystems. The Maine Department of Inland Fisheries and Wildlife determines State Rarity Ranks for animals.

GLOBAL RARITY RANKS

G1 Critically imperiled globally because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extinction.

G2 Globally imperiled because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.

G3 Globally rare (20-100 occurrences).

G4 Apparently secure globally.

G5 Demonstrably secure globally.

GNR Not yet ranked.

Note: **Global Ranks** are determined by NatureServe.

STATE LEGAL STATUS

Note: State legal status is according to 5 M.R.S.A. § 13076-13079, which mandates the Department of Conservation to produce and biennially update the official list of Maine's **Endangered** and **Threatened** plants. The list is derived by a technical advisory committee of botanists who use data in the Natural Areas Program's database to recommend status changes to the Department of Conservation.

E ENDANGERED; Rare and in danger of being lost from the state in the foreseeable future; or federally listed as Endangered.

T THREATENED; Rare and, with further decline, could become endangered; or federally listed as Threatened.

NON-LEGAL STATUS

SC SPECIAL CONCERN; Rare in Maine, based on available information, but not sufficiently rare to be considered Threatened or Endangered.

PE Potentially Extirpated; Species has not been documented in Maine in past 20 years or loss of last known occurrence has been documented.

ELEMENT OCCURRENCE RANKS - EO RANKS

Element Occurrence ranks are used to describe the quality of a rare plant population or natural community based on three factors:

- **Size**: Size of community or population relative to other known examples in Maine. Community or population's viability, capability to maintain itself.
- **Condition**: For communities, condition includes presence of representative species, maturity of species, and evidence of human-caused disturbance. For plants, factors include species vigor and evidence of human-caused disturbance.
- **Landscape context**: Land uses and/or condition of natural communities surrounding the observed area. Ability of the observed community or population to be protected from effects of adjacent land uses.

These three factors are combined into an overall ranking of the feature of **A**, **B**, **C**, or **D**, where **A** indicates an **excellent** example of the community or population and **D** indicates a **poor** example of the community or population. A rank of **E** indicates that the community or population is **extant** but there is not enough data to assign a quality rank. The Maine Natural Areas Program tracks all occurrences of rare (S1-S3) plants and natural communities as well as A and B ranked common (S4-S5) natural communities.

Note: **Element Occurrence Ranks** are determined by the Maine Natural Areas Program for rare plants and rare and exemplary natural communities and ecosystems. The Maine Department of Inland Fisheries and Wildlife determines Element Occurrence ranks for animals.

Visit our website for more information on rare, threatened, and endangered species!
http://www.maine.gov/dacf/mnap

November 15, 2018
Dawn Hallowell
PBR

Reference: **Maine Turnpike Authority, Exit 103 ORT Project, West Gardiner, ME: PBR**

ATTACHMENT 4: ALTERNATIVES ANALYSIS

Stantec

To:	Ralph Norwood, PE, PTOE Maine Turnpike Authority	From:	Lauren Meek, PE Stantec
File:	195311383	Date:	October 23, 2018

Reference: EXIT 103 TOLL PLAZA - ALTERNATIVES ANALYSIS

I. Introduction

This alternatives analysis documents the considerations for improvements to the aging Exit 103 barrier toll plaza that was built in 1973. The plaza is located at the northern terminus of Interstate 295 (I-295) in West Gardiner, Maine. This plaza and the surrounding infrastructure is integral for traffic connectivity because I-295 merges with the Maine Turnpike (I-95) north of the plaza and Exit 103 connects northbound I-295 traffic to the I-95 Turnpike and southbound I-95 Turnpike traffic to I-295. South of the existing 103 plaza is the Exit 51 Interchange for Route 126. The West Gardiner ORT plaza on I-95 Turnpike is south of Exit 103 at Mile Marker 100.

Figure 1 - Location Map

II. Project Purpose

The basic project purpose is to replace the existing Exit 103 barrier toll plaza with a modern Open Road Tolling (ORT) facility that provides:

1.) safe and efficient traffic and toll collection operations for the traveling public and plaza personnel and;

2.) modernization of outdated toll collection equipment and methodologies consistent with the Turnpike-wide toll system conversion which includes implementation of ORT.

An ORT plaza improves motorist safety at toll plazas by physically separating the motorists that must stop and pay cash at a toll booth to the right from the electronically-tolled users that can maintain highway speed in the center lanes. At the existing plaza, both the “stop and go” cash paying traffic and electronically-tolled traffic that does not need to stop must pass through the existing barrier toll plaza. Mixing vehicles traveling at different speeds can cause unsafe conditions and vehicle conflicts. The ORT plaza configuration reduces the total number of vehicles in the cash toll plaza area and segregates the faster-moving traffic.

The existing toll plaza requires toll attendants to cross as many as six lanes of traffic, some of which does not stop, to reach the outermost cash booth. The proposed tunnel for the ORT plaza provides access from the administration building to the cash booths at the opposite side of the plaza, so attendants do not have to cross more than one live lane of traffic, significantly increasing the safety of the toll attendants.

Another safety concern related to the configuration of the existing plaza is the proximity of the I-295 Exit 51 Interchange. The northbound on ramp and southbound off ramp are 300-feet from the existing plaza, creating a situation with merging and diverging traffic patterns intertwined with traffic both accelerating and decelerating. The varied speeds and numerous locations where motorists must make decisions about merging or diverging increase the number of potential vehicle conflicts.

Replacing the plaza will also address the aging toll collection equipment. The toll collection equipment was last upgraded in 2003. In 2011, the Maine Turnpike Authority (MTA) began upgrading the tolling equipment at all plazas, with Exits 45 and 103 as the remaining plazas in the system that have not been updated. The industry standard is to upgrade the tolling equipment every 15 years, and not doing so jeopardizes toll revenue.

III. Alternatives

MTA considered five alternatives:

Alternative 1: No Build/Upgrades – This option consists of leaving the existing toll plaza as-is. This is not a preferred option, because it would maintain the existing unsafe conditions presented by the barrier toll plaza configuration and would not update the existing toll plaza equipment.

As detailed in the project purpose, the unsafe conditions consist of vehicle conflicts with other vehicles and toll attendants. Cash paying traffic mixes with electronically-tolled traffic at the barrier plaza, and the Exit 51 interchange ramps add additional lane changes, with accelerating and decelerating traffic. Concern for plaza personnel safety stems from the toll attendants having to cross up to six active toll lanes.

Based on the 2013-2015 crash data provided by the MaineDOT, this location does not have any high crash locations within the vicinity of the plaza but there have been several crashes in the last five years in the plaza area. There is a notable trend of an increase in the frequency of accidents with 2018 having the most in the last six years. The following table notes the number and type of accidents that have occurred in the plaza area in the last six years. The majority of crashes are from rear ends or sideswipes, which could be the result from traffic merging or changing lanes.

Year	Number of Accidents in Plaza Area		
	Southbound	**Northbound**	**Total**
2013	2 - Rear End / Sideswipe	0	2
2014	0	1 - Rear End / Sideswipe	1
2015	0	3 - Rear End / Sideswipe	3
2016	3 - Rear End / Sideswipe	2 - Rear End / Sideswipe	5
2017	1 - Rear End / Sideswipe	2 - Rear End / Sideswipe 1 – Went off Road 1 – Other	5
2018 (as of 10/18)	2 - Rear End / Sideswipe 1 – Went off Road 1 – Other	2 - Rear End / Sideswipe 1 - Pedestrians	7

In addition to the safety concerns, the toll plaza infrastructure is outdated and needs rehabilitation. The existing toll lanes are only 10 feet wide, so toll equipment is easily damaged by snow plows and wider vehicles; such as RVs. Current MTA standards are to provide 12 feet in width for the toll lane to reduce this maintenance issue. The existing booth islands are 6 feet wide and not able to provide safe and comfortable working conditions for the toll attendants. Current MTA standards are to provide 8-foot-wide toll booth islands to ensure ergonomic working conditions. As described in the project purpose, the toll collection equipment is also obsolete, increasing the potential for lost revenue, which reduces the MTA's ability to keep the infrastructure safe and current.

The no-build option also does not address the existing traffic capacity issues. The existing plaza has seven lanes; the middle lane has reversible capabilities so that a fourth lane can flow in either direction as needed, depending on traffic volumes. A traffic analysis of the plaza volumes indicates that four cash lanes are needed for each direction without a reversible lane. The image below is of the existing plaza showing the existing seven lanes.

Because this No Build/Upgrade alternative does not address the project purpose, it has been dismissed as a viable option.

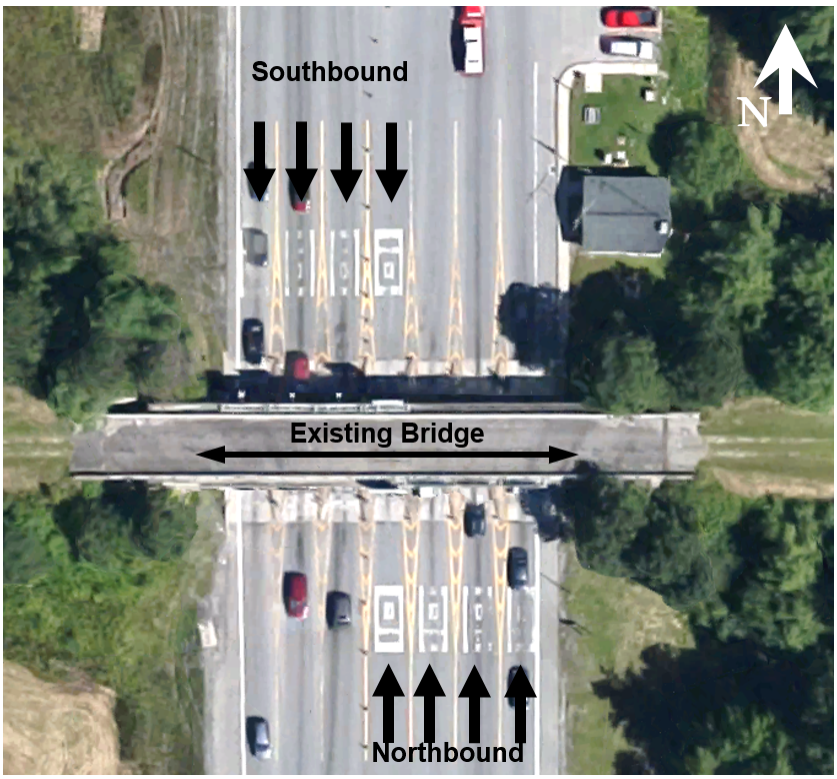

Figure 2 – Existing Barrier Plaza

Alternative 2: Upgrade cash equipment in the existing plaza – This option would replace the tolling equipment and maintain the existing infrastructure (i.e. toll booths and islands, the existing abandoned bridge that serves as a canopy, administrative building and parking lot, etc.) that was built in 1973. This alternative would solve the revenue collection issues. However, it does not address: the safety concerns for vehicles; the safety concerns for toll attendants; poor existing conditions of the infrastructure including not meeting minimum standards for toll attendant booth safety; and capacity issues noted in Alternative 1. For these reasons, Alternative 2 does not address the project purpose and has been dismissed as a viable option.

Alternative 3: Replace the existing plaza at the existing location – This option would replace the existing plaza with either a similar barrier toll plaza or ORT plaza in the existing location. The proximity of the northbound on and southbound off ramps for the I-295 Interchange at Exit 51 would remain a traffic movement and safety issue and would not meet contemporary highway design criteria for appropriate approach and departure zones for the cash booths of either a barrier or ORT plaza configuration. This would maintain potential for vehicle conflicts as noted above and substantially impact traffic operations.

The existing plaza is 122 feet wide and located under a 197 foot long bridge that was part of a previous highway alignment. A new, lower-speed barrier toll plaza would be 166 feet wide and an ORT plaza with highway speed center lanes and separate cash lanes on the outside would be 228 feet wide. Other plazas that have undergone similar updates have conventional canopies, which allow phased demolition and vehicles passing through to occur simultaneously. However, phased construction at this location is challenging because the toll equipment is supported on the bridge as shown in Figure 3. Demolition of the bridge cannot begin until new toll booths become operational. These new lanes would have to be temporary and beyond the existing bridge abutments.

Temporary shoring would be required for the existing bridge to remain during the construction of the temporary booths. Once the temporary booths are operational, the existing plaza would be demolished, and the ORT plaza would be constructed. Challenges for the temporary booths include: providing safe access for MTA personnel with a construction work zone in between the booths; providing the necessary mechanical, power, communication lines to the booths from the existing administration building; and maintaining an alignment that meets design standards for the roadway approaches to the booths. Figure 4 shows in plan-view the existing plaza and bridge, width of an ORT plaza and the location of the temporary booths and administrative building. A new administration building would have to be constructed to the outside of the temporary booths and would be farther from the permanent SB cash booths resulting in a longer tunnel and greater distance to access the cash booths. The complicated bridge demolition and construction of temporary booths would prohibitively increase construction costs. This option also does not address the safety issues of the plaza proximity to the Exit 51 interchange.

Figure 3 – Southbound View of Existing Plaza

In addition, the temporary booths that would have to be constructed to the outside of the bridge abutments and the ORT plaza limits would require significant road widening resulting in additional impacts to natural resources. While impacts to Wetland Q would be reduced from the preferred alternative (Alternative 5), Wetlands E, M, and K would be impacted resulting in more total impacts than Alternative 5.

Given the proximity of Exit 51 and the associated logistical constraints related to construction, this alternative was eliminated as a viable option on the basis of technical and logistical constraints. Moreover, Alternative 3 was not the least environmentally damaging practicable alternative, due to a larger area of wetland impacts as compared to Alternative 5, which was an overriding factor for elimination of Alternative 3 from a permitting perspective.

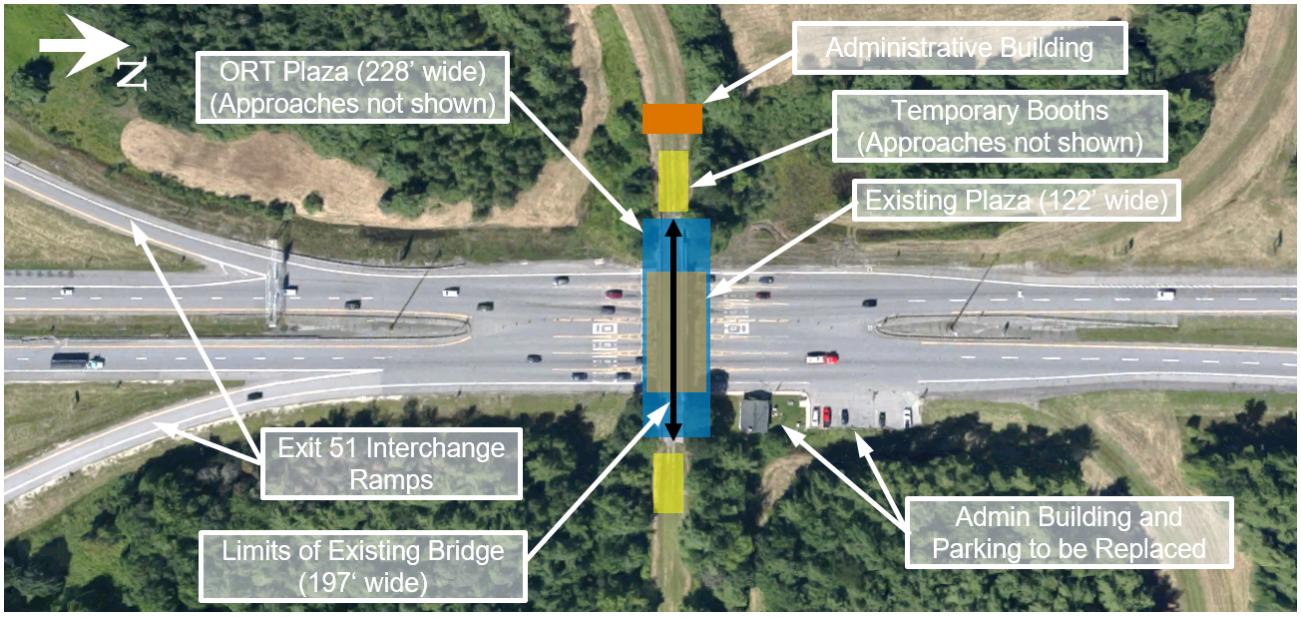

Figure 4 – Alternative 3 Location Map

Alternative 4: Replace the plaza south of existing location – There are two possible locations for this alternative as shown in Figure 5: Alternative A constructs an ORT plaza under the Route 126 bridge within the Exit 51 interchange, or Alternative B constructs an ORT plaza farther to the south and north of Pond Road Bridge.

Figure 5 – Alternative 4 Location Map

A barrier or ORT plaza with lane and toll booth island widths meeting design standards immediately to the north or south of the Route 126 Bridge would require replacing the bridge so that the new bridge can span the widened pavement required for the approach and departure zones of the cash booths. The existing Route 126 two-span steel continuous bridge is 170 feet long and owned by the MaineDOT. The Exit 51 interchange ramps would also require reconfiguration to accommodate the exiting and entering cash traffic. The northbound deceleration lane and southbound acceleration lane would pass under the Pond Road Bridge. To accommodate this additional 12 feet of travel way and maintain the existing bridge, the bridge's concrete slope would have to be modified and possibly a retaining wall in front of the abutments would be required. To maintain the existing toll collection pattern, side toll plazas would be required on the southbound off ramp and

northbound on ramp, adding two additional toll plazas to the project with substantial construction cost implications and right-of-way impacts to adjacent parcels. This scenario of two additional side toll plazas and administration buildings adds to the overall MTA operational and maintenance costs with the added infrastructure and personnel.

Locating the replacement plaza further south of the Exit 51 interchange presents significant technical, logistical, and cost constraints because of the Pond Road Bridge, Cobbosseecontee Stream Bridge and Exit 49 Interchange. This location would require several extraneous efforts: 1.) The Pond Road Bridge would be reconstructed to span the widened footprint for the plaza, 2.) The plaza location and configuration would have to incorporate a bypass for the Exit 51 northbound off and southbound on ramps, 3.) The side toll plazas on the southbound off and northbound on ramps would be required to maintain the existing toll collection pattern and not jeopardize MTA revenue, 4.) The concrete slope would have to be modified and possibly a retaining wall in front of the abutments would be required for the Route 126 Bridge, and 5.) The widened right-of-way needed for the plaza, longer bridge and bypass ramps would have impacts to adjacent parcels.

These southern plaza locations would be within the MaineDOT right-of-way. The I-295 roadway was constructed with Federal Highway Administration (FHWA) funds and tolling is currently not allowed on this section of I-295, therefore making Alternative 4 unavailable as a viable option.

Either of the Alternative 4 locations adds to the number of bridges the MTA has to maintain, replaces bridges that are in good condition, constructs additional side toll plazas, dramatically increases cost, has right-of-way impacts to private parcels, and has a complicated right-of-way process with MaineDOT. Therefore, Alternative 4 was eliminated as a viable option for meeting the project's project purpose on the basis of substantial technical, logistical, and cost constraints, as well as requiring the use of right-of-way property that may be unavailable to MTA.

Alternative 5: Replace the existing plaza north of the existing location with an Open Road Tolling (ORT) plaza (Preferred Alternative) – This option would locate an ORT plaza north of the existing plaza and south of the I-295 southbound bridge over the Maine Turnpike I-95 as shown in Figure 6. A number of essential design and safety factors, environmental factors, and right-of-way impacts were key information used to determine the location of the new ORT plaza, as detailed below.

As noted in Section II of this report, ORT plazas separate traffic traveling at highway speeds from the traffic stopping to pay tolls, resulting in safer operations for the traveling public and toll attendants. The new construction also provides the opportunity to upgrade the toll equipment and toll booths, satisfying the project's purpose.

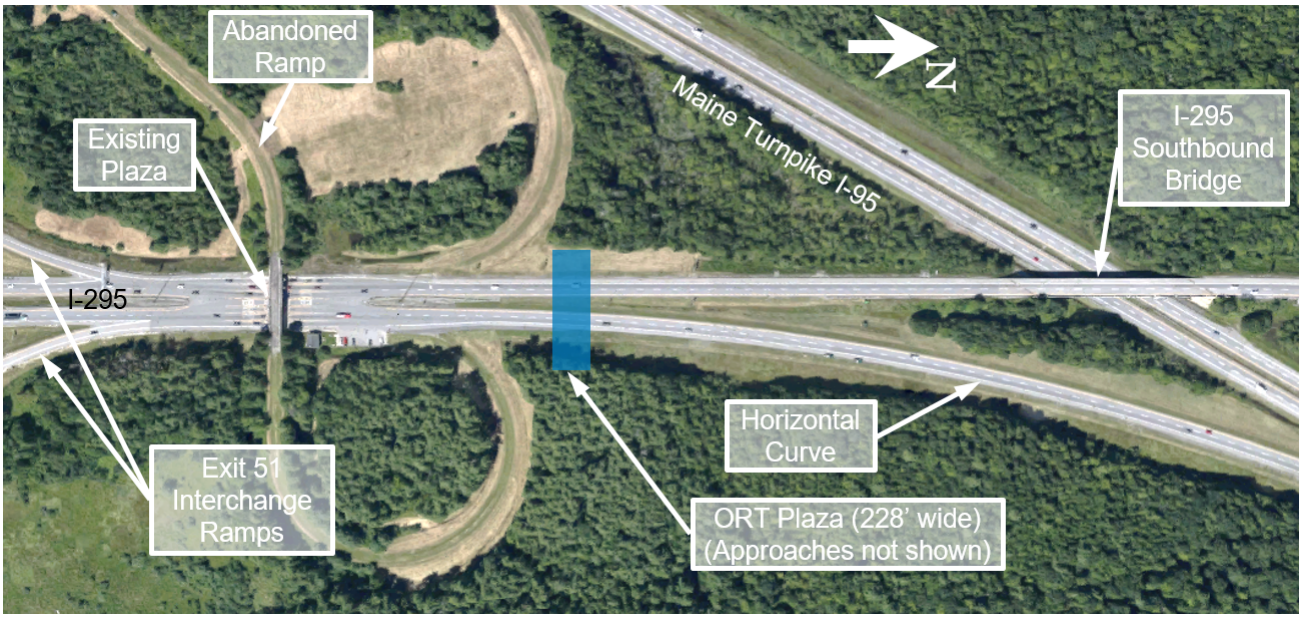

Figure 6 – Alternative 5 Location Map

The location and configuration of the ORT plaza was determined with the following considerations to meet the project purpose, while minimizing environmental impacts:

- The existing Exit 51 interchange northbound on and southbound on ramps are within the plaza footprint and converge with the cash lanes diverging from and merging toward the mainline lanes. To improve traffic operations for the many decision points that motorists must make, traffic destined to and from Exit 51 must go through the cash lanes. The proposed alternative separates the I-295 ORT traffic traveling at highway speed from the slower cash traffic and Exit 51 traffic. To accommodate the added interchange traffic, a third cash booth is needed. The proposed plan to locate the plaza further north of Exit 51 provides safer and more efficient traffic operations.
- Siting of the plaza and administration building considered physical and design constraints to the south and north, safety concerns for the traveling public, and maintaining the ability to collect tolls at the existing plaza until the new plaza is operational. The location of the existing plaza affects the proposed ORT plaza location because increasing the separation between the existing and proposed locations eliminates the need for temporary widening and temporary booth construction as described in and required for Alternative 3. Alternative 5 provides 700 feet of separation between the existing and proposed plazas without the addition of temporary booths or widening. This distance allows traffic to safely shift to and from the existing plaza to the outside of the proposed plaza during construction of the interior section of the proposed plaza at the appropriate design speed of 25 miles per hour. Moving the proposed plaza further south will force the shifting of traffic to be done more abruptly. This raises safety concerns because it will require speed reduction over a shorter distance for interstate traffic.
- The location of the I-295 southbound bridge to the north provides a location constraint prohibiting construction of the proposed ORT plaza further to the north because the separation of the southbound cash traffic from the ORT traffic must begin south of the bridge.
- The location of the proposed ORT plaza is further constrained by the horizontal curve for the northbound roadway north of the proposed plaza. The design standard is to locate toll plazas on a tangent because it provides better sight distance for vehicles approaching the facility. Locating the

plaza on a tangent is additionally important for ORT plazas due to how the ORT infrastructure operates and is maintained. ORT uses tolling loops embedded in concrete slabs. Industry standard is to construct these concrete slabs on a horizontal tangent so that a consistent cross slope (transverse to the roadway) can be maintained. Prior to the horizontal curve, roadway design requires that the cross slope changes in order for the roadway to be banked (superelevated) entering the curve. Having a consistent cross slope for the slabs reduces maintenance concerns of replacing the loops often due to uneven embedment depth which can lead to damage from snow plows. Collection of the tolling revenue in the ORT lanes is dependent on these loops.

- The proposed administrative building will be located on the west side of the plaza close to the toll booths for the following reasons:
    - To provide local road access with minimal impacts: The proposed access road uses the abandoned interchange ramps from the existing Exit 102 Park & Ride lot. This is a safer alternative for the toll attendants to access the administrative building in vehicles because it allows for convenient, local road access so that employees do not have to pull off of the higher speed highway to access the building. Providing access to an administrative building on the east side of the plaza would require new right-of-way and increase environmental impacts.
    - To provide enhanced safety for the personnel in the building and toll booth: The proposed design provides direct sight lines between the administrative building and the toll booths. Additionally, the location facilitates a straight tunnel per MTA standard, eliminating blind spots for employees traveling through the tunnel. The tunnel provides safe access for MTA personnel to access the toll booths from the administrative building. A tunnel with bends in it compromises employee safety, and would likely still require fill and impacts to Wetland Q to support a subsurface passage between a building on the west side of the plaza and the toll booths. Therefore, a tunnel with bends in it was eliminated from further consideration.
    - To provide the most efficient configuration of cash slabs, tunnel, and building: The proposed administrative building cannot be shifted further south to avoid wetland alteration (Figure 7) because of safety-related engineering constraints, engineering and technical considerations relative to the ORT slabs and tolling loops, and additional wetland impacts in other areas. The design has been modified to reduce and minimize the proposed impacts to the extent practicable. The administration building would need to be moved an additional 80 to 100 feet to the south to reduce impacts to Wetland Q from the building. However, doing so would increase safety concerns related to maintaining traffic during construction, as discussed earlier. Even if the building were able to be shifted south, some of the impacts to Wetland Q would still exist from the 15 foot high highway embankment. In the proposed design, the cash and ORT slabs containing the tolling loops are on either side of the tunnel and the tunnel is perpendicular to the building and the travel lanes. Moving the building south to avoid the wetland would move the entrance of the tunnel, skewing the tunnel relative to the travel lanes (conceptually shown in orange in Figure 7). The tolling loops in the ORT and cash slabs on either side of the tunnel are very sensitive to the steel reinforcing in the tunnel; the tunnel would have to be buried an additional five feet to eliminate this conflict. The tunnel as currently proposed is less than three feet below the surface, and the additional depth would impact the outlet of the underdrain for the tunnel, resulting in greater wetland impacts to Wetland M where the underdrain outlets, partially negating the reduction in impacts to Wetland Q achieved by shifting the building south. The building access drive and hammerhead turnout would also still impact Wetland Q if the building were shifted south. Between the highway embankment fill in Wetland Q, underdrain outlet impacts to Wetland M, and access drive fill in Wetland Q, the net reduction in wetland impacts compared to the preferred alternative would be minimal. As an additional technical consideration, moving the ORT and cash slabs to avoid a skewed

almost 3-foot-deep tunnel would increase the distance between the loops in the cash and ORT slabs and the control boxes located in the tunnel. The communication wiring between the loops and the control boxes lose efficiency as distance increases and the accuracy of the toll collection is dependent upon this data, so this is not a viable option.

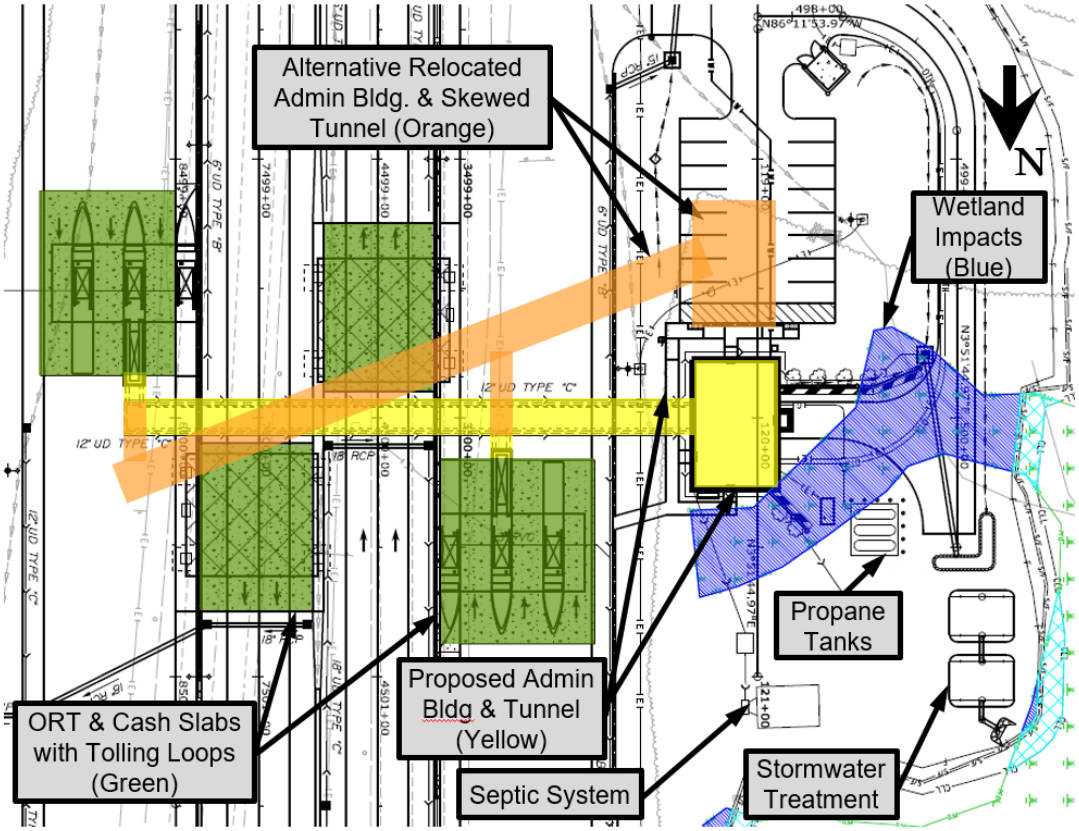

Figure 7 – Location of Admin Building

- The administration building is in 15 feet of fill resulting in impacts to the adjacent wetlands. The parking lot is located south of the administrative building to avoid additional wetland impacts. The septic system is sited and designed in accordance with the *State of Maine Subsurface Wastewater Disposal Rules*, and its location does not increase the area of wetland impacts. The propane tanks and generator pad are located on level ground close to the building and building driveway for ease of access; and locating these facilities there also does not increase the area of wetland impacts because this area would be filled and graded as a result of the construction of the administration building and access driveway. The slope between the parking lot and access drive to the back of the building is 2 horizontal: 1 vertical which is not practical for concrete slabs. Placing the propane tank slabs behind the building also puts them further from traffic, which improves safety. The proposed stormwater treatment area is located at the low point of the site to facilitate passive drainage and does not increase the area of wetlands impacts.

Alternative 5 was selected as the preferred alternative because it best meets the project purpose while minimizing wetland impacts, avoiding right-of-way impacts, minimizing construction constraints, and maintaining financial viability for the project.

IV. Recommendation

The following table summarizes the alternatives the MTA considered with the preferred Alternative 5 highlighted. Alternatives 1 and 2 do not meet the project purpose. Alternative 3 has greater wetland impacts and construction costs due to the temporary booths and widening and does not improve the traffic operations associated with Exit 51 as compared to Alternative 5. Alternative 4 has greater construction costs and long-term costs associated with two additional side toll plazas compared to Alternative 5 and is not viable because it is not possible to toll this portion of I-295. As described above, Alternative 5 was selected because it best meets the project purpose while minimizing wetland impacts within technical, financial, and logistical design constraints and parameters associated with the site and avoids the need for new right-of-way.

Reference: **EXIT 103 TOLL PLAZA - ALTERNATIVES ANALYSIS**

Alternatives Analysis Summary Table

Alternative	Design Consideration								
							Meets Project Purpose		
	Provide Modern Efficient Toll Plaza	Wetland Impacts	Right-Of-Way Impacts – (Acquisition of Land Required)	Constructability	Estimated Construction Cost (does not include ROW & Engineering)	Compatible with Current Revenue Collection "Toll Pay Point"[1]	Resolve Vehicle Safety & Operations Issues	Plaza Personnel Safety	Upgrade Toll Collection Equipment
1 **No Build/Upgrades**	No	None	None	N/A	$0	One Location No change	No	No	No
2 **Upgrade cash equipment in the existing plaza**	No	None	None	Minimal Complexity with phasing (One lane upgraded at a time)	$500,000 to $600,000	One Location No change	No	No	Yes
3 **Replace the existing plaza at the existing location**	No	Yes	None	Extensive Complexity with temporary booths and widening	$24,000,000 to $29,000,000	One Location No change	No	Yes	Yes
4 **Replace the existing plaza south of existing location**	Yes	Yes	Yes	Moderate to Extensive Complexity with phasing	$32,000,000 to $37,000,000	Three Locations (Two additional side plazas)	Yes	Yes	Yes
5 **Replace the existing plaza north of the existing location with an Open Road Tolling (ORT) plaza**	Yes	Yes	None	Moderate Complexity with Phasing (similar to other Plaza projects)	$20,000,000 to $25,000,000	One Location No change	Yes	Yes	Yes

1. A "Toll Pay Point" is a location where tolls are collected. The existing plaza is one toll pay point. Adding additional side toll plazas adds additional pay points which require more facilities (administrative building, parking lot and access), maintenance and operations as well as adds to the "back office" processing of tolls.

November 15, 2018
Dawn Hallowell
PBR

Reference: **Maine Turnpike Authority, Exit 103 ORT Project, West Gardiner, ME: PBR**

ATTACHMENT 5: STATEMENT OF AVOIDANCE AND MINIMIZATION

The process for road design follows a protocol using typical engineering standards. Data inputs for design include proposed road use, location, and vehicles per hour. Using this data, the engineers design the typical road alignment including elevation and side slopes. Then this information is integrated with natural resource mapping to determine where project plans may impact natural resources. Then project plans are modified to avoid the resources where possible and then minimize impacts to the greatest extent practicable.

Project plans were modified in several ways to avoid and minimize wetland impacts where design standards allow. Where avoidance of these natural resources was possible, the plans were further modified to minimize resource alterations and to achieve the least environmentally damaging practicable alternative (LEDPA) for the project design. Modifications to the design included introducing guardrail with steeper side slopes, eliminating the 2-foot guardrail offset recommended by AASHTO, and reducing the pavement width 1 foot by utilizing 8-foot-long guardrail posts. However, guardrail is generally not desired since it is considered a hazard to traffic. The longitudinal length of the wetland impact and need for guardrail for other reasons was used to determine if guardrail was appropriate for each, individual location.

Design did not have to be modified to avoid or minimize impacts to Wetland areas C, N, O, P, R, S and CC in the project area. By reconfiguring the NB On Ramp with the Turnpike, the pavement width is reduced along a portion of Wetland X north of the existing culvert, and Wetlands W and V. Due to project plan changes, alteration of these three wetlands was avoided.

Modifying the road design in the area of several wetlands to minimize impact was explored but not achieved. This is because steepening slopes and adding guardrail would widen the pavement and ultimately extend the slopes further into the wetlands or introduce an undesirable amount of guardrail to the roadway which is a safety concern. In these instances, the design standards for a roadway with no guardrail were maintained and temporary and permanent wetland impacts were incurred. This is the case with Wetlands A, B, E, G, M, DD and a portion of Wetland X south of the existing culvert. The inlet pipe at Wetland A is proposed to be extended 6 feet to maintain existing roadway drainage. The impacts for Wetland B are temporary and adding guardrail will add permanent and more temporary impacts. Along Wetland E, the pavement widens approximately 30’ to separate the higher speed ORT traffic from the entering ramp and cash traffic for a short distance. Adding guardrail with steepened slopes would reduce impacts minimally and would be a hazard to the traffic. Most of the impacted area of Wetland M occurs within 100’ of the roadway lengthwise. Adding guardrail for such a short length of steepened slope is not desirable to minimize the use of guardrail.

Proposed Wetland D impacts were avoided, and the existing culvert is maintained by steepening the NB ORT left side slope to 4:1 (H:V) from the standard slope of 6:1 (H:V) for a length of 100 feet.

Guardrail proposed under the Route 126 bridge was extended to minimize proposed impacts to Wetland J and avoid proposed impacts to Wetlands G, H, and CC. The side slopes at the existing culvert inlet at Wetland J were benched from 6:1 (H:V) to 4:1 (H:V) at the clear zone to minimize extending the culvert.

The Access Road to the Administration Building took advantage of the existing abandoned ramp embankments to avoid proposed impacts to Wetlands K & L. The electrical and communication lines required for the administration building are located close to the pavement of the existing Park & Ride Lot to avoid proposed impacts to Wetlands Z, AA, and BB.

Along Wetland Q, several measures were taken to minimize impacts. The barrier separating the southbound cash and ORT traffic allowed for the vertical alignment of the cash plaza approach to be lowered, reducing the fill height and limiting the slope construction. At the barrier, the cash portion of the facility is up to 1.85 feet lower than the ORT lanes. To further reduce the pavement width, the standard 8-foot-wide shoulder plus 2-foot guardrail offset and 3-foot guardrail berm (totaling 13 feet) was reduced to an 8’ shoulder with no guardrail offset and 2-foot berm (totaling 10 feet). The sideslopes were steepened to 1½:1 (H:V) and stabilized with a geocell confinement system. The drainage for the admin building and site has been separated with two stormwater treatment facilities, one for the parking lot located south of the

site and one for the building driveway and admin building located near Wetland Q. Diverting some of the site drainage south of the site allowed for the size of the stormwater treatment facility behind the admin building to be reduced.

November 15, 2018
Dawn Hallowell
PBR

Reference: **Maine Turnpike Authority, Exit 103 ORT Project, West Gardiner, ME: PBR**

ATTACHMENT 6: COMPENSATION

The Applicant designed the project to minimize and avoid project wetland impacts where practicable. Impacts to Wetlands of Special Significance (WoSS) and Significant Wildlife Habitats (SWH) were avoided. In portions of the project area where impacts could not be avoided, the Applicant plans to mitigate unavoidable impacts associated with the project in accordance with Maine's Natural Resources Protection Act (NRPA) (38 M.R.S.A. § 480 A – BB) and the In-Lieu Fee (ILF) guidelines.

The proposed project will result in placement of fill and associated tree clearing within wetlands totaling 34,355 square feet. This is composed of 7,291 square feet of temporary fill and 27,064 square feet of permanent wetland fill. We propose to compensate for the proposed 27,064 square feet of permanent wetland alteration. The compensation rates found in the current (August 18, 2017-December 31, 2019) ILF guidelines provide a compensation value for Kennebec County of $3.77/square foot. Applying that value to the proposed permanent wetland alteration, the resulting ILF payment is $102,031.28.