

March 23, 2018

Mr. Jay Clement  
U.S. Army Corps of Engineers  
Maine Project Office  
442 Civic Center Drive, Suite 350  
Augusta, Maine 04330

**RE: Responses to USACE February 23, 2018, Data Request  
New England Clean Energy Connect Project  
Application for Department of the Army Permit**

Dear Mr. Clement:

Central Maine Power Company (CMP) is pleased to provide responses to the United States Army Corps of Engineers (USACE) February 23, 2018, request for information associated with the Department of the Army Permit application submitted by CMP on September 29, 2017, for the New England Clean Energy Connect (NECEC) project.

The enclosed CD contains CMP's response and associated attachments along with the copy of the Presidential Permit Application you requested.

If you have any questions regarding these responses, please give me a call at (207) 626-9557 or email [gerry.mirabile@cmpco.com](mailto:gerry.mirabile@cmpco.com).

Sincerely,



Gerry J. Mirabile  
Manager – Environmental Projects  
Environmental Permitting  
AVANGRID Networks, Inc.

Enclosures

cc: James Beyer, MDEP; Samantha Horn, LUPC; Christopher Lawrence, USDOE; Melissa Pauley, USDOE; Bernardo Escudero, CMP; Mark Goodwin, Burns & McDonnell; Matt Manahan, Pierce Atwood; Jared des Rosiers, Pierce Atwood  
File: New England Clean Energy Connect



NEW ENGLAND  
CLEAN ENERGY  
CONNECT

**Response to the  
February 23, 2018  
USACE Information Request**

*New England Clean Energy Connect (NECEC)*



CENTRAL MAINE  
POWER

*Prepared for:*  
**Department of the Army**  
**New England District, Corps of Engineers**  
**Application No. NAE-2017-01342**

**March 23, 2018**

## ENVIRONMENTAL INFORMATION REQUEST FEBRUARY 23, 2018

### Submission of the Application Form

#### RESPONSE

CMP provided a hard copy and digital version of the Corps application form (ENG FORM 4345, DEC 2014) along with the application materials on September 29, 2017. The December 2014 form was the most recent form available at the time of submission. CMP is providing an updated form, ENG FORM 4345, SEP 2017, as provided by the Corps with the February 23, 2018 data request. For your convenience, we have attached a copy of both the December 2014 and September 2017 forms in Attachment A of this response.

#### **NRPA APPLICATION**

- 1. Section 2.2, Purpose & Need. Please verify the project purpose has not changed in the view of the various state and utility decisions to date. Should Massachusetts ultimately decide not to select the NECEC project you will likely have to revisit this issue. CMP alleges that the project would move forward regardless, but such decision would not be supported by the project purpose which is currently MA-centric. Similarly, it would be unclear whether a capacity of 1200 MW was necessary or whether a smaller scale project could suffice. And presumably the air benefits that are sited (also MA-centric) may have to be re-addressed.**

#### RESPONSE

As of the date of this response, the Project's purpose has not changed. As you are aware, Massachusetts Department of Energy Resources (DOER) provided a public update to the Status of Section 83D Procurement on February 16, 2018 in light of the New Hampshire Site Evaluation Committee's (SEC) vote to deny Northern Pass Hydro (NPT) a Certificate of Site and Facility. As a result of the Certificate denial and the likely impact to NPT's schedule, the Electric Distribution Companies (EDCs) have entered into concurrent conditional contract negotiations with NECEC. If contract negotiations with NPT are not successful by March 27, 2018, the NECEC Project (Project) will move forward as the selected project in the Commonwealth's 83D clean energy Request for Proposal (RFP). Should NECEC not move forward under the current proposal, the Project's purpose will be updated and provided to the regulatory agencies.

The Status of Section 83D Procurement is available at <https://macleanenergy.com/2018/02/16/doer-update-on-section-83d-procurement-process/>.

- 2. Section 2.3.1, No Action Alternative. The discussion of the no action alternative needs to be clarified. The no action alternative presumably means a) the project is not built and the needs are not met; or b) some other project is built which addresses the needs. The reference to the economic benefits that CMP will lose through a no action alternative is immaterial and has no bearing in this discussion.**

RESPONSE

The no action alternative means maintaining the status quo (i.e., no project) in cases where a new project is proposed. 43 C.F.R. § 46.30. In this case, the no action alternative means no Project. It does not include the alternative of another project being built that addresses the need for the NECEC. And even if the Project does not move forward in the Commonwealth's RFP, the Project will still seek to fulfill the purpose and need of delivering renewable hydropower energy from Canada to New England, which has a continuing need for such power.

As explained in CMP's NRPA application, not constructing the Project is the no action alternative. Maintaining the status quo and not constructing the Project would not meet the Project's purpose of CMP delivering 1,200 MW of clean energy generation from Quebec to the New England Control Area at the lowest cost to ratepayers (see NRPA Application Section 2.3.1 No Action Alternative and Section 2.2 NECEC Purpose and Need). Nor would maintaining the status quo and not constructing the Project meet the need for the Project, as the no action alternative would not reduce greenhouse gas emissions, would not reduce the wholesale cost of electricity for the benefit of retail customers across the region, and would not enhance electric reliability.

There is no discussion in the Section 2.3.1 No Action Alternative narrative of any economic benefits that CMP would lose through a no action alternative. It merely states that the project purpose would not be met if the Project is not built. Nevertheless, should the Project not be built, the economic benefits to Maine (economic benefits during construction) and New England in general (reduced wholesale cost of electricity) would be lost. See Site Law Application Sections 1.4 and 1.6, referenced at NRPA Application Section 1.0.

- 3. Section 2.3.2, Alternatives. We suggest that the discussion of alternatives be reworded. Other alternatives may be more environmentally damaging but are they ‘impracticable’ as you note, probably not. I remind you of the Section 404(b)(1) Guidelines- an alternative is only impracticable if it is unavailable or incapable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes. An alternative may also be dismissed if it is more environmentally damaging. If you dismiss an alternative as economically impracticable (too costly), you must put that into context with the overall cost of the project. For example, if burying the line in some segment will be multiple times more expensive than not burying it, how does the overall cost of the project change? The Corps encourages that all alternatives be analyzed and dismissed in accordance with the Section 404(b)(1) Guidelines. With a minimum of additional wording, the language in the guidelines could be added to make the analysis more fully compatible with the requirements of the Corps, the Maine DEP, and the federal resource agencies (US EPA, USFWS, and NMFS).**

#### RESPONSE

As stated in Section 2.3.2, the HVDC Alternative 1 and HVDC Alternative 2 are more environmentally damaging than the Preferred Route, and thus may be dismissed. See also Sections 2.3.2.2.2 and 2.3.2.3.2. As explained in the NRPA application, the Preferred Route is environmentally preferable because it is less environmentally damaging.

Cost was discussed in Section 2.3.2 only in reference to the cost and complexity of an underground Appalachian Trail corridor in HVDC Alternative 2. See Section 2.3.2.3.1 (Bigelow Corridor Description) (“The cost and complexity of an underground crossing, whether buried roadside in the Route 27 right of way or placed underneath the Appalachian Trail corridor via directional bore, would pose a financial barrier and an engineering challenge.”). As explained in CMP’s NRPA application, there is a probable need for HVDC Alternative 2 to cross the Appalachian Trail underground. CMP stated that underground transmission line construction costs can be approximately 4-10 times that of overhead construction, a cost that would not be borne in the Preferred Alternative, which would cross the Appalachian Trail in an existing corridor owned by CMP. See Section 2.3.2.3.1 (Bigelow Corridor Description).

With respect to the greenfield segment of the Project transmission line, CMP has now designed the transmission line in the north side of this 300 foot wide right of way to the same level (30%) as the south side design. CMP and its consultants are now evaluating and comparing the engineering and environmental aspects and impacts of the northern versus southern alternatives, and will make a decision regarding which orientation to advance to detailed design based on this evaluation. CMP will provide the results of this evaluation, consistent with the Section 404(b)(1) Guidelines, to the Corps in the near future.

**4. Section 2.3.2.2.1. Why didn't the PUC approve the 1980 project? Please clarify.**

RESPONSE

CMP acquired title, right, or interest on a significant portion of a transmission corridor in connection with a long-term power purchase agreement (PPA) proposed in Maine Public Utilities Commission (MPUC) Case No. 88-111. In that case, CMP petitioned for approval of a significant PPA with Hydro-Quebec (HQ) and proposed an interconnection between HQ and CMP that consisted of HVDC and AC lines and associated facilities. The MPUC, in a 2-1 decision (Gordon dissenting), determined that the economic benefits to CMP and its customers from the PPA were not materially better than other alternatives and therefore denied the petition. Because the PUC rejected the proposed PPA, it did not engage in more than a general inquiry with respect to the physical line itself.

**5. Section 2.3.3, Merrill Road Converter Station. The narrative boils the discussion down to the preferred alternative and then alternative #1 but then speaks to alternative #2; a typo perhaps? And the narrative indicates that alternative #2 (#1?) is not practicable but it is, you allege that it's dismissed because it is just more environmentally damaging, correct?**

RESPONSE

The narrative does include a typo when referencing "Alternative Parcel 2." The discussion eliminates the "CMP parcel" and "Alternative Parcel 2" as not being large enough to accommodate the substation site. A third alternative, "Alternative Parcel 3," was ruled out due to the presence of poorly drained and wetland soils. The discussion further identifies two properties as being the most suitable: 1) the "Preferred Parcel" and 2) "Alternative Parcel 1." Later in the discussion, the reference to "Alternative Parcel 2" is indeed a typo and should reference "Alternative Parcel 1."

The narrative contends that the "Alternative Parcel 1" is not practicable, however, in light of other factors it could be considered practicable, but it is not preferred due to greater environmental impacts associated with the additional transmission line length of 0.5 miles required for use of that site. Based on the discussion presented in Section 2.3.3, the "Preferred Parcel" is the least environmentally damaging practicable alternative and, therefore, preferred by the Project.

**6. Section 2.4.1.1, Beattie Pond. CMP reportedly attempted to negotiate an alternative alignment south of the pond but could not come to mutually acceptable terms with the landowner. Was a reasonable good faith effort made relative to the value of the gross cost of the project and anticipated revenue?**

RESPONSE

CMP did make a good faith effort to negotiate an alternative alignment south of the Beattie Pond P-RR subdistrict through Merrill Strip Township and offered the property owner three to four times the market value of the land. Avoiding the P-RR zone around Beattie Pond, located partially in Beattie Township (T2 R8 WBKP) and partially in Lowelltown Township (T1 R8 WBKP), would require the transmission line corridor to be located in Merrill Strip Township (T2 R7 WBKP) which is owned by Bayroot LLC. Bayroot LLC is managed by Wagner Forest Management (WFM).

CMP, through Dirigo Partners Ltd., its acquisition agent, approached WFM in the summer of 2014 with a proposal for an initial alignment for a transmission line corridor across Merrill Strip extending from the Quebec border to Skinner Township (T1 R7 WBKP). The proposed corridor had a length of about 3.4 miles and an area of about 82 acres. CMP offered \$2,000 per acre for the corridor, which was believed to be three to four times the market value of the land. WFM countered with a price of nearly \$46,000 per acre with limitations regarding future electric utility use of the corridor. This alignment had a segment that was close to the 2700 foot elevation and was several miles south of the current proposed border crossing point.

To avoid the higher elevation land and to have a border crossing point located in an area more acceptable to Hydro Quebec, Dirigo secured rights across land of E.J. Carrier in Beattie Township and then re-approached WFM with a revised alignment that was approximately 1 mile long with an area of about 40 acres. Dirigo had several discussions with WFM and offered additional modifications to the alignment to create more distance between the proposed corridor and a recreational lease located in Merrill Strip. However, WFM increased its price to about \$75,000 per acre for the corridor, again with limitations on the use of the corridor. WFM's price per acre for the 40 acres is equivalent to \$3 million, which is about 97% more per acre than CMP's above fair market value offer.

Finally, CMP senior management had several meetings with WFM with no better results. Dirigo then modified CMP's option agreements in both Skinner Township (Plum Creek Maine Timberlands) and Beattie Township (E.J. Carrier) to avoid Merrill Strip Township, and began negotiations with the Passamaquoddy Tribe for a crossing of the southwest corner of Lowelltown Township.

The CMP offer of \$2,000 per acre was a good faith offer and commensurate with the corridor purchase price of other new corridor on this Project when adjusted for corridor use and access. A higher price could have been justified if Bayroot was also willing to convey access rights and not place limitations on future utility use of the corridor but this adjusted price would still be only about 10% of Bayroot's counteroffer.

During the course of negotiations with WFM, CMP learned that WFM had entered into an option to lease with the Northern Pass Transmission Project for a transmission line corridor across land owned by Bayroot LLC in northern New Hampshire. CMP does not know if the agreement between WFM and Northern Pass affected the position (i.e., the high asking price and restrictions) of WFM in these negotiations. For these reasons, CMP determined that the land held by WFM was not available as an alternative.

**7. Section 2.4.1.2, Kennebec River Gorge. Please confirm that the updated crossing designs and photo sims transmitted in your December 12, 2017 email are the most current (in view of our interagency site visit and any subsequent coordination you've had with DEP and LUPC staff). Is there any updated discussion of the directional drill alternative at this location we should be aware of?**

RESPONSE

Upon further conversations with LUPC, CMP is providing revised photosimulations, dated January 22, 2018, which is an update to the December 12, 2017 photosimulations. The updated photosimulations are of the 3-pole structure redesign, at a "normal view," removing the distortion and providing a more accurate depiction of the conductor sag over the river. Additionally, the mark-up of the panoramic

photos includes overlaid scale references and additional detail of the low point of the conductor sag and the assumed average of the 75-foot existing tree height. See Attachment B: Kennebec River Gorge Photosimulations. At this time, there is no updated discussion of the directional drill alternative at the Kennebec River Gorge.

**8. Section 2.4.1.2.1, Overhead Transmission Alternatives (for river crossing). A table comparing the environmental and other factors for the three options would be helpful here.**

**RESPONSE**

To supplement the information provided in Section 2.4.1.2.1, CMP is providing the table below comparing the three transmission overhead alternatives for the Kennebec River crossing as depicted in Figure 2-6. CMP conducted the desktop analysis of the Preferred Alternative, Brookfield Alternative and CMP Land Alternative using publicly available Geographic Information System (GIS) data. The table presents several comparison criteria, consistent with Section 2.3.2.1. The findings in the table confirm the findings in the narrative, Section 2.4.1.2.1, and its support of the Preferred Route with respect to impacts to water resources (streams, wetlands and aquifers) and wildlife resources (IWWH). In addition, the application concludes that “both alternatives would present similar perceived visual concerns as the Preferred Alternative and would cost approximately \$30 million more than the Preferred Alternative”. The alternatives have therefore been dismissed due to the increased number of jurisdictional resources and greater environmental impacts associated with the additional transmission line length.

***Kennebec River Crossing Overhead Alternative Comparison***

<b>Point of Comparison</b>	<b>Unit</b>	<b>Preferred Route</b>	<b>CMP Land Alternative</b>	<b>Brookfield Alternative</b>
Conserved lands	no./acres	0 / 0	1 / 4.3	2 / 7.1
Undeveloped ROW	miles	8.3	6.7	6.6
Clearing	acres	151	147.3	157.9
Parcel count total	no.	1	24	25
Stream crossings	no.	3	13	13
Transmission line length	miles	8.2	13.3	14.5
NWI mapped wetlands	no./acres	6 / 6.8	38 / 17.4	38 / 14.0
Deer wintering areas (DWA)	no./acres	0 / 0	0 / 0	0 / 0
Inland waterfowl and wading bird habitat (IWWH)	no./acres	0 / 0	2 / 6.8	2 / 6.8
Public water supplies within 500 feet	no.	0	0	0
Significant sand and gravel aquifers	no.	0	1	1

**9. Section 2.4.1.2.2, Directional Drill Alternative. Please put the noted additional cost of this alternative into perspective with the overall cost of the project.**

RESPONSE

CMP conducted a study evaluating a ±320 kV HVDC underground transmission line and termination stations at the Kennebec River crossing. The Horizontal Directional Drill (HDD) would be approximately 2,900 feet in length and 360 feet in depth and would be utilized for the Kennebec River crossing to install a duct bank. The bore would pass beneath the river with approximately thirty feet (30') of clearance from the river bottom. The HVDC underground cable installation would require approximately fifteen hundred feet (1500') of open trenching to connect to the Cable Termination Stations on each side of the river. Upgrades on approximately fifteen miles of unimproved roads and associated bridges would be required to provide access to the Termination Stations in addition to the grading necessary for the stations and laydown area for drilling equipment. The two termination stations would be similar on both sides of the river, with an approximate 200 foot by 250 foot station footprint. CMP anticipates there will be significant natural resource impacts associated with these improvements.

CMP's study included cost estimates for each alternative: the underground transmission line crossing and the overhead transmission line-three pole option. It should be noted that the overhead transmission line-three pole option is a design update to the five pole option originally submitted with the Project's applications on September 29, 2017. This redesign was completed to increase and maximize the forested buffer on both sides of the river bank and to remove three structures (3006-21, 3006-22 and 3006-23) from the line of the sight of the users approaching the crossing point from upriver. As noted in response to question 7, an updated photosimulation of the three-pole overhead option is attached to this submittal, Attachment B.

The table below provides a cost of both options and also provides the cost of each option as a percentage of the overall Project cost, for comparative purposes.

Alternatives	Cost (2021)	Cost as a percentage of overall Project cost
Underground Transmission Line	\$36,889,395	3.9%
Overhead Transmission Line (3 pole option)	\$6,076,287	0.6%

**10. Section 12.1.2.2, Table 12-1. This table shows 4.49 acres of permanent wetland impact for substation development. Please verify that the remaining 0.21 acres of the referenced total project impact encompasses the entire project, Quebec- Southern Maine.**

RESPONSE

We have reviewed the results of our GIS data query and have confirmed that the above referenced permanent wetland impact calculations encompass the entire Project. The 0.21 acres of permanent wetland impact are associated with permanent fill from 204 transmission poles. The Project has minimized permanent impact to wetlands by maximizing the average span for the HVDC line (~1,000 feet) and, to the extent practicable, siting structures sited outside of natural resource areas.

**11. Section 13, Mitigation.**

Please verify that Table 13-1 is reflective of the Corps current mitigation guidance (2016). Refer to our web site at:

[https://www.nae.usace.army.mil/portals/74/docs/regulatory/Mitigation/2016\\_New\\_England\\_Compensatory\\_Mitigation\\_Guidance.pdf](https://www.nae.usace.army.mil/portals/74/docs/regulatory/Mitigation/2016_New_England_Compensatory_Mitigation_Guidance.pdf)

- a. The table does not appear to address temporary conversion of wetlands, if any.
- b. How long will the temporary fills remain in place? Any temporary fills that remain in place longer than our prescribed time limits in the mitigation guidance may have required compensation.
- c. Please verify that the calculations for direct and indirect vernal pool impacts meet current state and federal guidance. For example, indirect impacts (clearing) that result in >25% loss of forested cover within 750' of the pool (250' for the DEP) may require compensation for an assumed full loss of pool productivity. Similarly, fills within 100' of the pool or within the pool itself may require compensation.
- d. I did not see the calculations in support of your suggested mitigation levels. Again, refer to our current mitigation guidance and capture all of the project's direct and indirect impacts to aquatic resources.
- e. Verify that for the 641 vernal pools identified along the existing alignment, that direct and indirect impacts don't rise to the level of requiring compensation.

RESPONSE

Section 13-1 of the NRPA application addresses compensatory mitigation requirements of both the MDEP and USACE, pursuant to NRPA 38 M.R.S. §480 (Z) and the 2016 USACE New England District Compensatory Mitigation Guidance ("USACE Guidance").

- a) The Project does not propose temporary conversion of wetlands. Forested wetlands within the clearing limits will be converted to early successional cover type wetlands, and maintained in such a state as part of CMP's permanently maintained transmission right-of-way.
- b) Section 13.2 of the NRPA Application states "All temporary impacts will be of short duration, i.e., less than 18 months, and typically much shorter than 18 months." CMP has been unable to identify prescribed time limits in the USACE Guidance and is awaiting further clarification from the USACE.
- c) CMP is in the process of developing this information and will provide a response to this request concurrent with its response to the December 20, 2017, Maine Department of Inland Fisheries and Wildlife vernal pool data request. The MDIFW data request was provided to CMP by the MDEP and forwarded to the USACE on February 13, 2018.
- d) CMP plans to meet with the ACOE and MDEP to determine mitigation ratios for the Project and to discuss mitigation that will be proposed to offset loss of functions and values to jurisdictional resources as a result of the Project. CMP will request an interagency meeting with the MDEP and the USACE in Spring 2018 and come to a mutually acceptable agreement on the terms of compensation for project impacts.
- e) See response to c (above).

**SITE LAW APPLICATION**

**12. Section 1. Please verify that all of the descriptions and plans for other proposed upgrades to stations are up to date and they will not require new impacts to aquatic resources.**

RESPONSE

As of the date of this response, the descriptions and plans provided in Section 1 of the Site Law Application have not changed and no additional impacts to aquatic resources are proposed. In the event the detailed design necessitates changes to the Project description or plans, they will be provided in a subsequent submittal.

**13. Section 7.3.7.1, Canada lynx. Please summarize your latest coordination with USFWS.**

RESPONSE

The Project has not had any post-filing coordination with USFWS regarding the Canada lynx. We are aware that the USFWS completed a scientific review of the Canada lynx and that the species may no longer warrant protection under the Endangered Species Act (USFWS News Release, 1/11/2018). We understand that the outcome of this analysis does not remove the species from Endangered Species Act protections, but the Agency may begin the process to delist the Canada lynx through the appropriate procedures. Despite the recent development, CMP plans to continue correspondence with wildlife biologists that specialize in Canada lynx and will provide its findings to the Army Corps.

**14. Section 7.3.7.2, Bats. Please update the project's tree clearing limits (total for T-line and any substations). Section 7.4.4.2 notes a 1,809 acres of total conversion but elsewhere in the applications a figure of 124.14 acres is cited. Relative to the standard BMPs to minimize potential impacts to the species, can CMP restrict tree clearing to only the winter months (October 16 to April 19) and/or have no tree cutting between June 1-July 31 of any year?**

RESPONSE

The total area of tree clearing for transmission lines and substations is approximately 1,809 acres as cited in Site Law Section 7.4.4.2. The total area of tree clearing in forested wetlands (permanent cover type conversion of forested wetlands) is 124.14 acres, as cited in NRPA Table 13-1: Summary of Resource Impacts.

As discussed in the Site Law application, the Project intends to meet the provisions described in the "Optional framework to Streamline Section 7 Consultation for the Northern Long-eared Bat." The Project will avoid prohibited incidental take outlined in the 4(d) Rule, by suspending tree clearing activities between June 1 through July 31 (maternity roost season) for any year during the NECEC's construction period to avoid disturbing known or unknown maternity roost trees. Additionally, CMP has confirmed with wildlife biologists that the Project is located greater than 0.25 miles from any known hibernaculum in the State, therefore clearing prohibitions outside of the maternity roost season would not apply.

In the July 19, 2017 Interagency Resource Consultation meeting between CMP, Burns & McDonnell, USACE, USFWS, MDIFW, and MNAP, Wende Mahaney (USFWS) stated that the agency recommends

winter clearing and that the action agency (USACE) will likely encourage the applicant to agree to no clearing between June 1 and July 31. As with all transmission line projects, CMP considers clearing during the winter months advantageous for numerous reasons including minimizing impacts to natural resources, and while a specific clearing schedule will not be determined until the project construction schedule is refined and a clearing contract is awarded, NECEC will strive to schedule clearing during the winter months.

**15. Section 7.5.2.2, Salmon. There will apparently be no direct impacts to salmon streams but we need to quantify any indirect impact from clearing proximate to these resources.**

RESPONSE

Approximately 40.3 acres of clearing will occur within 100 feet of salmon streams, all of which is in Segment 3 of the Project. Salmon streams were identified using NOAA's Atlantic Salmon Critical Habitat GIS data layer.

**16. Exhibit 7-1, Agency Correspondence. The USFWS Official Species List notes the possible presence of small whorled pogonia. Guidance for field searches was provided by MNAP in June 2017, were plants or habitat found? Was this information coordinated with MNAP?**

RESPONSE

CMP received the above referenced guidance from MNAP in June 2017 but did not conduct field surveys prior to the submission of the Project applications. CMP intends to perform a landscape analysis to identify areas for targeted field surveys for the small whorled pogonia, as well as other state listed rare plants and unusual natural communities, during the 2018 field season. CMP plans to perform the desktop review in April 2018, followed by field surveys during the summer of 2018. Both the desktop review and field survey effort will be coordinated closely with MNAP. The results will be provided to the agencies upon completion. Please see the preliminary schedule for rare plant studies and field work in Attachment C.

**17. Section 9.1. The narrative indicates that surveys for state listed rare plants are not complete, what is the status of these investigations?**

RESPONSE

Please refer to the response to question 16.

**18. Section 10.1, Exhibit 10-1. Table 1 has a list of invasive species. This is far from a comprehensive list compared to those listed in our mitigation guidance. Please clarify.**

RESPONSE

CMP will incorporate those species listed in *Appendix K: Invasive and Other Unacceptable Plant Species* within the *New England District Compensatory Mitigation Guidance*, dated 9-7-16 into its Exhibit 10-1: NECEC Plan for Protection of Sensitive Natural Resources During Initial Vegetation Clearing. CMP will develop an invasive species and vegetation monitoring plan based on the comprehensive species list provided by the Corps mitigation guidance. This plan will be submitted to the USACE and MDEP for review and approval prior to construction of the Project.

**19. Section 19, Flooding. In the towns where the 30 structures and substations will be placed within or otherwise affect the 100 year flood plain you will be required to obtain a Flood Hazard Prevention Act permit. Any permit from the Corps will be so conditioned as a means of complying with Federal Executive Order 11988. You may wish to pursue these local permits now.**

RESPONSE

During the municipal permitting phase of the Project, CMP will apply for and secure Flood Hazard Prevention Act permits in each affected municipality.

**SITE LAW APPLICATION ATTACHMENT 1 Volume 1**

**20. Attachment 1, Plans. Please provide a master plan that shows the whole project route 1) on one sheet relative to the whole state; and b) in a more detailed view. This is for reference purposes in our future public notice.**

RESPONSE

Attachment D contains a master sheet that shows the various Project segments in relation to the State of Maine. To provide a more detailed view, we have included area-specific depictions of the Project components on individual pages keyed to the master sheet.

**21. Section maps. Please relabel the section maps with larger font so that they are more legible.**

RESPONSE

The section maps, also known as natural resource maps, have been edited with larger font as requested. For reference, an example map page is provided in Attachment D. CMP intends to provide the entire updated map set and updated natural resource impact numbers when the engineered design is 70% complete.

**22. Can the various sections be consolidated to a more limited number of 'typical' sheets for purposes of our future public notice? Can you also provide a generic web link that we can add to our public notice that would allow the public to view plans specific to their region or location of interest?**

RESPONSE

As discussed with Jay Clement (USACE) on March 15, 2018, a subset of representative cross-sections, like those used in the public information meetings hosted by CMP, is included in Attachment D.

The application materials can be viewed at the MDEP's website:  
<http://www.maine.gov/dep/land/projects/neccec/index.html>.

**23. The Corps requires a more detailed set of plans for the border crossing. This is a requirement for our process, for our combined review with the Dept. of Energy (DOE), and for the review that must be conducted by the International Joint Commission.**

RESPONSE

Please see the border crossing plan provided in Attachment D. CMP will update this plan with additional details if requested by the USACE or the DOE.

**24. Please provide a 'typical' plan of a stream crossing using mats as well as a wetland crossing. If culverts or other measures will be used to insure wetland cross drainage or downstream flows, the section should show that.**

RESPONSE

CMP will adopt the USACE New England District Construction Mat Best Management Practices (BMPs) and example typical figures included in Attachment E, and will require construction contractors to implement these BMPs. In addition, CMP will implement the BMPs for the use of construction mats included in Exhibit 10-1 and Exhibit 10-2 of the Site Law application. CMP is proposing to construct the Project with no in-stream construction activity. In the event atypical conditions necessitate the installation of a culvert, CMP will request a variance from the USACE and will not proceed without agency approval. The variance request will include a site-specific plan for the crossing that identifies the bank to bank width and other stream characteristics, photos of existing conditions at the crossing location, proposed culvert size, the anticipated duration that the culvert will be in place, and the restoration measures that will be implemented upon its removal.

**25. Upon receipt of the additional information and application form the Corps will author a preliminary jurisdictional determination that will encompass the entire project. It will be necessary for CMP to sign this before we can issue a public notice.**

RESPONSE

When available, please forward the applicable documents for CMP's signature.

**26. In order to initiate Section 7 consultation with USFWS pursuant to the Endangered Species Act, the Corps will need to submit a biological assessment. The consultation process can be streamlined if you assist in the development of the BA. Please indicate your willingness to do so.**

RESPONSE

CMP is willing to assist in the development of the BA. Please clarify CMP's and/or its consultants' role and expectation of draft deliverables as part of this process.

**27. We are aware that the DEP has determined that a public hearing is a required element of their review. Since such a hearing may obviate the need to have a duplicative hearing by the Corps (and perhaps DOE), please update us on its proposed schedule. We would attend the hearing and if possible, reference it in our public notice.**

RESPONSE

CMP and MDEP are currently discussing the scope of peer review on several components of the permit applications filed for the Project. In addition, CMP will be completing additional natural and cultural resource field surveys between April and September of 2018. It is currently anticipated that the hearing required by the MDEP will not be held until late summer or early fall of 2018 such that the results of the additional field survey and peer review work can be considered in that hearing. CMP will inform the USACE of the hearing date when it has been identified by the MDEP.

**28. As you are aware, the Corps and DOE are coordinating our two permit processes in the interest of streamlining and avoiding duplication of effort. In addition to echoing the Corps request for plans for the border crossing, DOE has asked whether there have been any substantive changes to/refinement of the information previously provided to in their Presidential permit application. Please provide the Corps with a copy of their application and any updates.**

RESPONSE

A copy of the Presidential permit application is being provided in CD format along with this response. There have been no updates to this application.

**29. The DEP and by association, IF&W and MHPC have asked for additional information. Please copy the Corps on any response(s) to these requests. Of particular note, IF&W has asked for an updated vernal pool table. The Corps requests that all vernal pools be reflected on such a table, not just the 'significant' and 'natural' pools subject to state regulation. We're also interested in your response to DEP's technical questions on stormwater and erosion controls. And on November 28, 2017 MHPC requested additional survey information. That information must be provided in order for the Corps and DOE to continue consultation pursuant to Section 106 of the Historic Preservation Act.**

RESPONSE

CMP will provide all data requests and responses to the Army Corps including, but not limited to the following agencies: DOE, MDEP, LUPC, MDIFW and MHPC.

**30. We are aware that some of the other state data requests also require additional field work this season. It would be helpful to have a projected task list and timetable for anticipated field work and responses back to the interagency review team. Coupled with what we understand may be a late summer/early fall public hearing, it may make sense to delay issuance of our public notice and/or further processing. In the short term, it may also make sense to reconvene the interagency review team for a project update, particularly in light of the confusing (and apparently dynamic) MA and NH regulatory processes.**

RESPONSE

CMP has prepared a preliminary schedule for tasks that require additional field work during the 2018 field season. CMP will execute the cultural resource surveys and rare plant surveys beginning in April 2018, as identified in Attachment C. These tasks will be advanced prior to a late summer/early fall hearing, and deliverables will be provided to the agencies as soon as they are available. CMP will update the Corps on anticipated deliverables availability dates as 2018 field work schedules are refined.

CMP plans to reconvene with the agencies for a Project update, and to continue compensatory mitigation discussions, in April of 2018.

**Attachment A: USACE Application Forms**

**U.S. ARMY CORPS OF ENGINEERS  
APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT**  
33 CFR 325. The proponent agency is CECW-CO-R.

*Form Approved -  
OMB No. 0710-0003  
Expires: 30-SEPTEMBER-2015*

Public reporting for this collection of information 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 this burden estimate or any other aspect of the collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters, Executive Services and Communications Directorate, Information Management Division and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003). 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 form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

**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.

**(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 First - Gerry Middle - Last - Mirabile Company - Central Maine Power Company E-mail Address - gerry.mirabile@cmpco.com		8. AUTHORIZED AGENT'S NAME AND TITLE (agent is not required) First - Mark Middle - Last - Goodwin Company - Burns & McDonnell E-mail Address - magoodwin@burnsmcd.com	
6. APPLICANT'S ADDRESS: Address- 83 Edison Drive City - Augusta State - ME Zip - 04336 Country - USA		9. AGENT'S ADDRESS: Address- 27 Pearl Street, 2nd Floor City - Portland State - ME Zip - 04101 Country - USA	
7. APPLICANT'S PHONE NOs. w/AREA CODE a. Residence b. Business c. Fax (207) 626-9557		10. AGENTS PHONE NOs. w/AREA CODE a. Residence b. Business c. Fax (207) 517-8482	

**STATEMENT OF AUTHORIZATION**

11. I hereby authorize, Mark Goodwin-Burns&McDonnl 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

9/25/2017  
 \_\_\_\_\_  
 DATE

**NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY**

12. PROJECT NAME OR TITLE (see instructions) New England Clean Energy Connect (NECEC)			
13. NAME OF WATERBODY, IF KNOWN (if applicable) See attached.		14. PROJECT STREET ADDRESS (if applicable) Address See Sec. 1.0 Development Description of Site Law Applic.	
15. LOCATION OF PROJECT Latitude: °N See attached. Longitude: °W See attached.		City -	State- Zip-
16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions) State Tax Parcel ID See attached. Municipality Section - Township - Range -			

17. DIRECTIONS TO THE SITE

See Section 1.0 Development Description of the Site Law application, attached.

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

A new HVDC transmission line, new transmission lines, and rebuild of existing transmission lines, with associated DC to AC converter station and STATCOM substation. See Section 1.0 Development Description of the Site Law application, attached.

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

See Section 1.4 Needs Assessment of the Site Law application, attached.

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

20. Reason(s) for Discharge

Not applicable.

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
-------------------------------	-------------------------------	-------------------------------

Not applicable.

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

Acres 4.70 acres of permanent wetland fill, 50.97 acres of temporary wetland fill  
or  
Linear Feet

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

See applicable sections of the attached Site Law and NRPA applications, attached.

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 Abutter List- Exhibit 26-1 of the attached Site Law application.

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
MDEP	NRPA	n/a	9/27/2017		
MDEP	Site Law	n/a	9/27/2017		

\* 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.




\_\_\_\_\_ 9/25/2017 \_\_\_\_\_ 9.26.2017  
 SIGNATURE OF APPLICANT DATE SIGNATURE OF AGENT DATE

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.



17. DIRECTIONS TO THE SITE

See Section 1.0 Development Description of the Site Law application, attached.

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

A new HVDC transmission line, new transmission lines, and rebuild of existing transmission lines, with associated DC to AC converter station and STATCOM substation. See Section 1.0 Development Description of the Site Law application, attached.

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

See Section 1.4 Needs Assessment of the Site Law application, attached.

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

20. Reason(s) for Discharge

Not applicable.

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
-------------------------------	-------------------------------	-------------------------------

Not applicable.

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

Acres 4.70 acres of permanent wetland fill, 50.97 acres of temporary wetland fill

or

Linear Feet

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

See applicable sections of the attached Site Law and NRPA applications, attached.

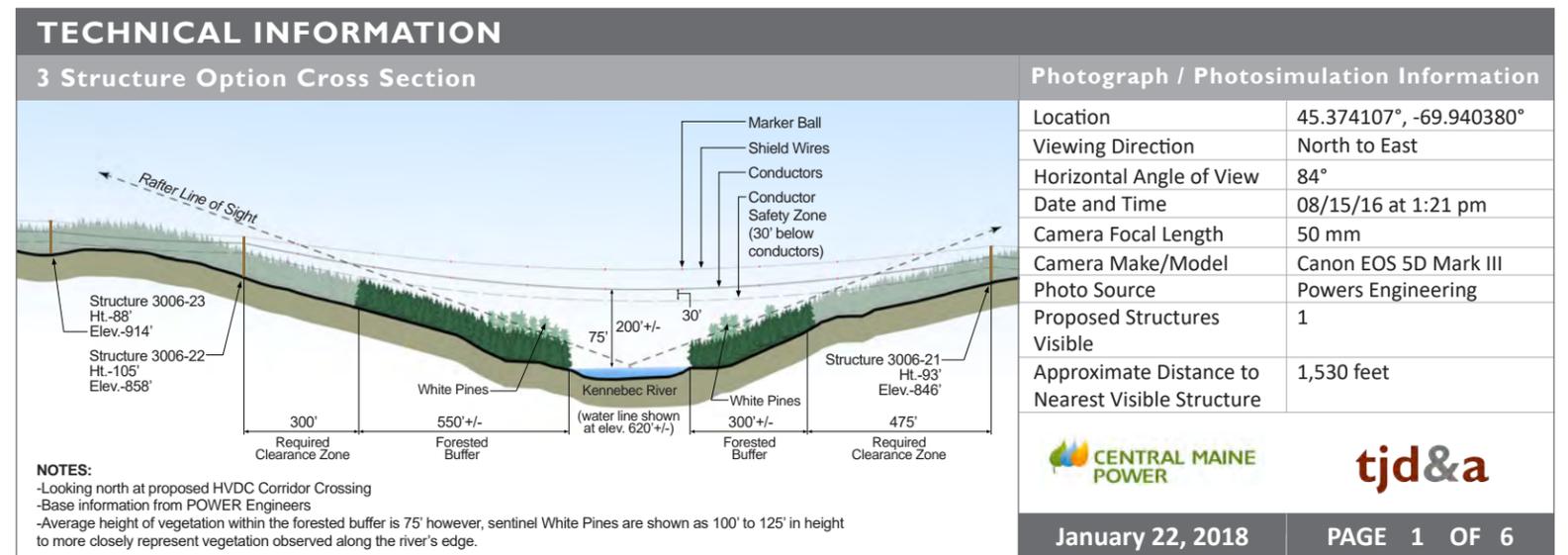
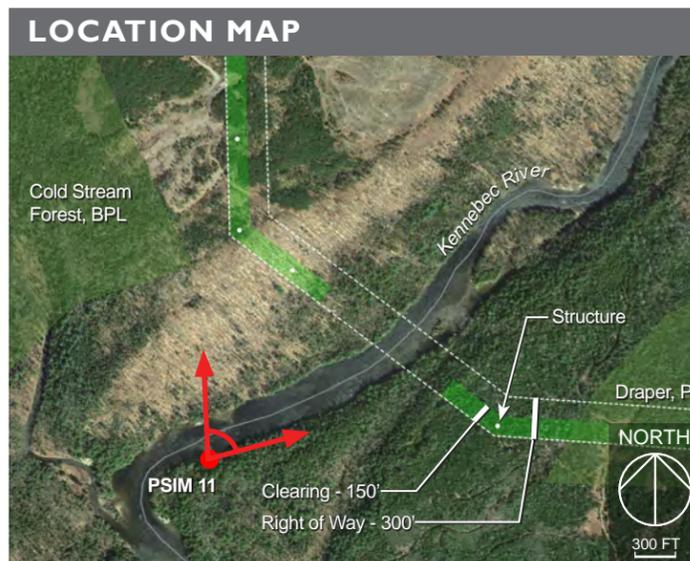


**Attachment B: Kennebec River Gorge Photosimulations**

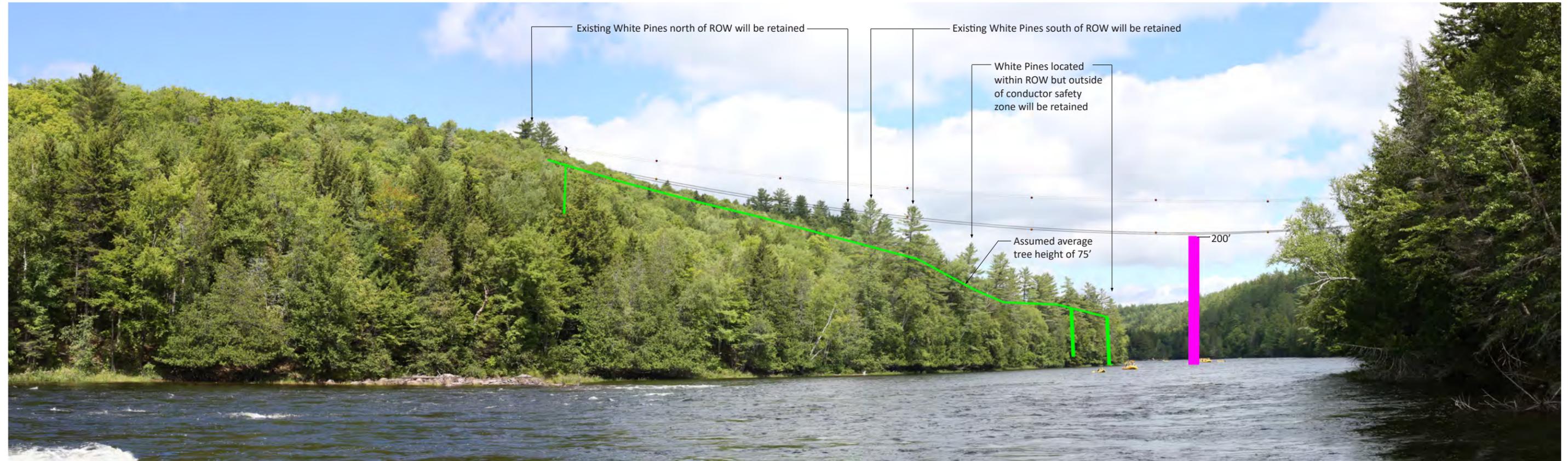
# PHOTOSIMULATION 11: KENNEBEC GORGE Looking North, Moxie Gore, 3 Structure Option



**Proposed Conditions:** Panoramic view looking from north to east from near the picnic area on the Kennebec River, 1,400' +/- south of the proposed HVDC transmission line crossing. The top of one structure will be visible from this viewpoint at a distance of 1,530'. A forested buffer of approximately 550' will be maintained along the northwest shore between the shoreline and the closest structure. The conductors would be approximately 200' above the water level. Approximately eighteen marker balls will be placed on the shield wires and conductors above the Kennebec Gorge. Approximately twelve marker balls are visible in this photosimulation. See Appendix B: Study Area Photographs for additional images.

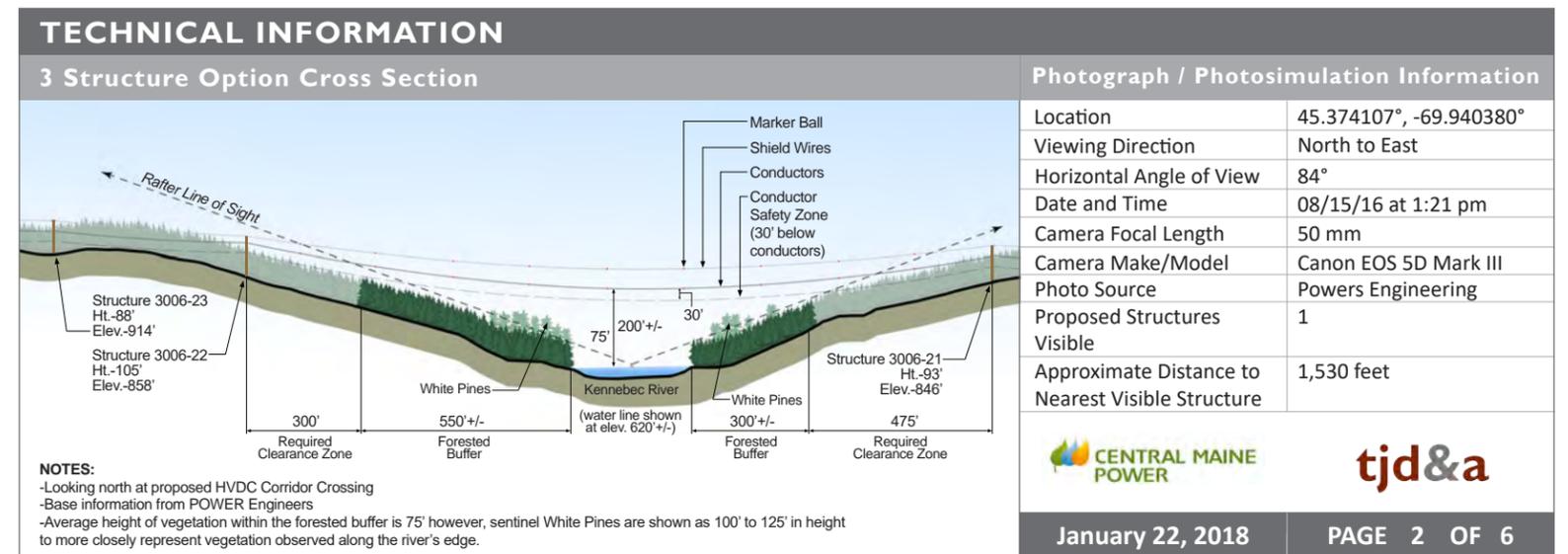
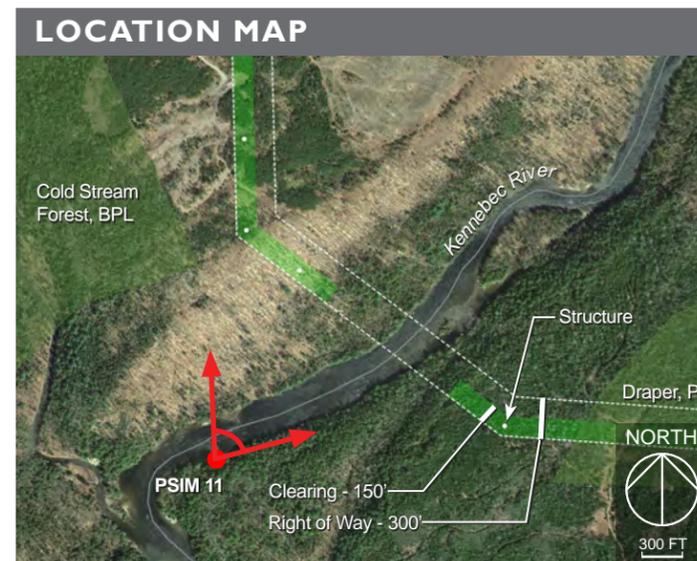


# PHOTOSIMULATION 11: KENNEBEC GORGE Looking North, Moxie Gore, 3 Structure Option



**Proposed Conditions:** Panoramic view looking from north to east from near the picnic area on the Kennebec River, 1,400'+/- south of the proposed HVDC transmission line crossing. The top of one structure will be visible from this viewpoint at a distance of 1,530'. A forested buffer of approximately 550' will be maintained along the northwest shore between the shoreline and the closest structure. The conductors would be approximately 200' above the water level. Approximately eighteen marker balls will be placed on the shield wires and conductors above the Kennebec Gorge. Approximately twelve marker balls are visible in this photosimulation. See Appendix B: Study Area Photographs for additional images.

**Scale Reference from 3D Model:** The green lines represent an assumed average height of 75' for existing trees. Several white pines along the river's edge appear taller than 75' in height. The magenta line represents 200' from the water surface directly beneath the proposed conductors (lowest point in conductor sag).





**Existing Conditions:** Normal view looking northeast from the Kennebec Gorge.

**PHOTOSIMULATION I I A: KENNEBEC GORGE Looking Northeast, Moxie Gore, 3 Structure Option**



**Proposed Conditions:** Normal view looking northeast from near the picnic area on the Kennebec River 1,400' +/- south of the proposed HVDC transmission line crossing. The top of one structure will be visible from this viewpoint at a distance of 1,530'. The lowest point of the conductors would be approximately 200' above the water level. Approximately eighteen marker balls will be placed on the shield wires and conductors above the Kennebec Gorge.



**Existing Conditions:** Normal view looking northeast from the Kennebec Gorge.

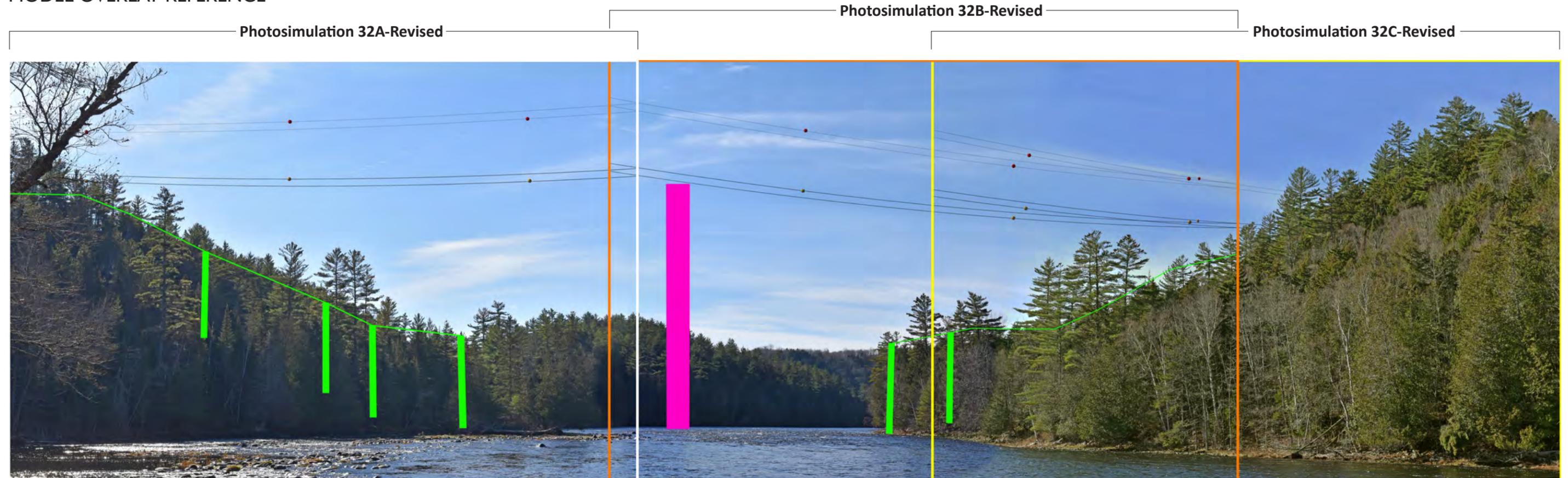
**PHOTOSIMULATION I 1B: KENNEBEC GORGE Looking Northeast, Moxie Gore, 3 Structure Option**



**Proposed Conditions:** Normal view looking northeast from near the picnic area on the Kennebec River 1,400'+/- south of the proposed HVDC transmission line crossing. The lowest point of the conductors would be approximately 200' above the water level. Approximately eighteen marker balls will be placed on the shield wires and conductors above the Kennebec Gorge.

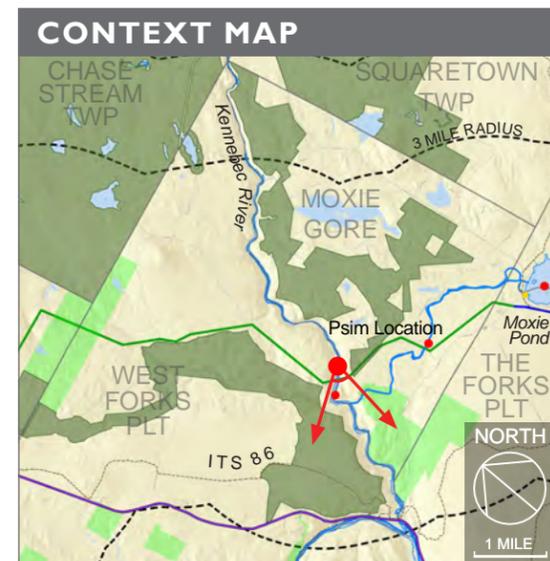
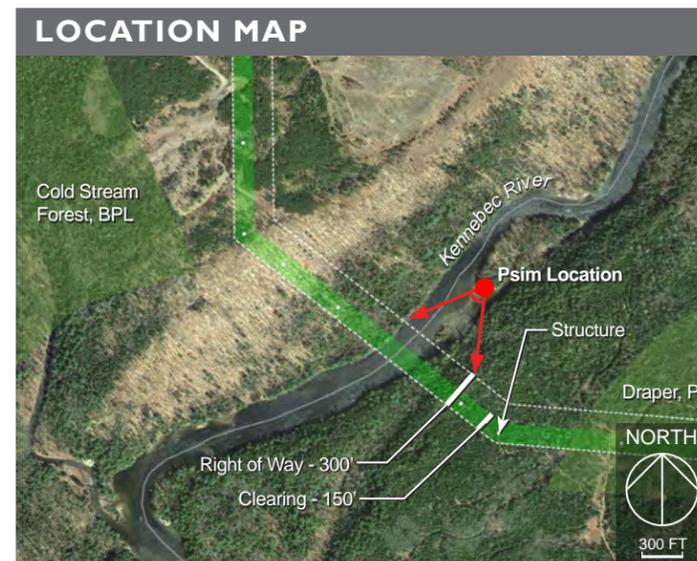
# PHOTOSIMULATION 32: KENNEBEC GORGE PICNIC AREA Looking Southwest, 3 Structure Option

## MODEL OVERLAY REFERENCE



**Proposed Conditions:** Panoramic view looking from south to southwest from a point 750' +/- north of the proposed HVDC transmission line crossing of the Kennebec River near a rafting company picnic area. The closest structure, screened by vegetation in this view, is 850' +/- to the south. Conductors, approximately 200' above the river, will be visible to recreational boaters for approximately 1,600' approaching the crossing. Marker balls will be visible on the shield wires and conductors.

**3D MODEL Scale Reference:** This panoramic diagram shows the 'normal' view output from the modeling software over the merged panoramic image. Due to the relatively close (750') distance of the viewer to the proposed conductors, the lines appear similar to a "fish eye" lens (i.e. the conductors seem wider and higher over the middle of the river). In the photosimulation submitted on 12/12/17, the location of the conductors were adjusted to appear as continuous lines which resulted in the lines appearing to be approximately 25' lower than they would appear from this viewpoint. The proposed Project visibility is best assessed by reviewing the normal views because there is no distortion, see the updated images included on the following pages. Also included in the image above are scale references from the 3D Model; the magenta line represents 200' from the water surface directly beneath the proposed conductors (lowest point of conductor sag) and the green lines represent an assumed average height of 75' for existing trees within the Project corridor. Several white pines along the river's edge appear taller than 75' in height.



TECHNICAL INFORMATION		Photograph / Photosimulation Information	
<b>3 Structure Option Cross Section</b>		Location	45.374158°, -69.940566°
		Viewing Direction	South to Southwest
<p><b>NOTES:</b></p> <ul style="list-style-type: none"> <li>-Looking north at proposed HVDC Corridor Crossing</li> <li>-Base information from POWER Engineers</li> <li>-Average height of vegetation within the forested buffer is 75' however, sentinel White Pines are shown as 100' to 125' in height to more closely represent vegetation observed along the river's edge.</li> </ul>		Horizontal Angle of View	80°
		Date and Time	11/09/17 at 12:41 pm
		Camera Focal Length	35 mm
		Camera Make/Model	Nikon D5500
		Photo Source	TJD&A
		Proposed Structures Visible	0
		Approximate Distance to Nearest Structure	850 feet
<p>January 22, 2018</p>		<p>PAGE 1 OF 7</p>	



**Existing Conditions:** Normal view looking south from a picnic area on the Kennebec River.



**Proposed Conditions:** Normal view looking south from a point 750' +/- north of the proposed HVDC transmission line crossing of the Kennebec River near a picnic area. The closest structure, screened by vegetation in this view, is 850' +/- to the south. Conductors over the river will be visible to recreational boaters for approximately 1,600' approaching the crossing.



**Existing Conditions:** Normal view looking southwest from a picnic area on the Kennebec River.



**Proposed Conditions:** Normal view looking southwest from a point 750' +/- north of the proposed HVDC transmission line crossing of the Kennebec River near picnic area. The closest structure, screened by vegetation in this view, is 850' +/- to the south. Conductors over the river will be visible to recreational boaters for approximately 1,600' approaching the crossing.



**Existing Conditions:** Normal view looking southwest from a picnic area on the Kennebec River.



**Proposed Conditions:** Normal view looking southwest from a point 750' +/- north of the proposed HVDC transmission line crossing of the Kennebec River near picnic area. The closest structure, screened by vegetation in this view, is 850' +/- to the south. Conductors over the river will be visible to recreational boaters for approximately 1,600' approaching the crossing.

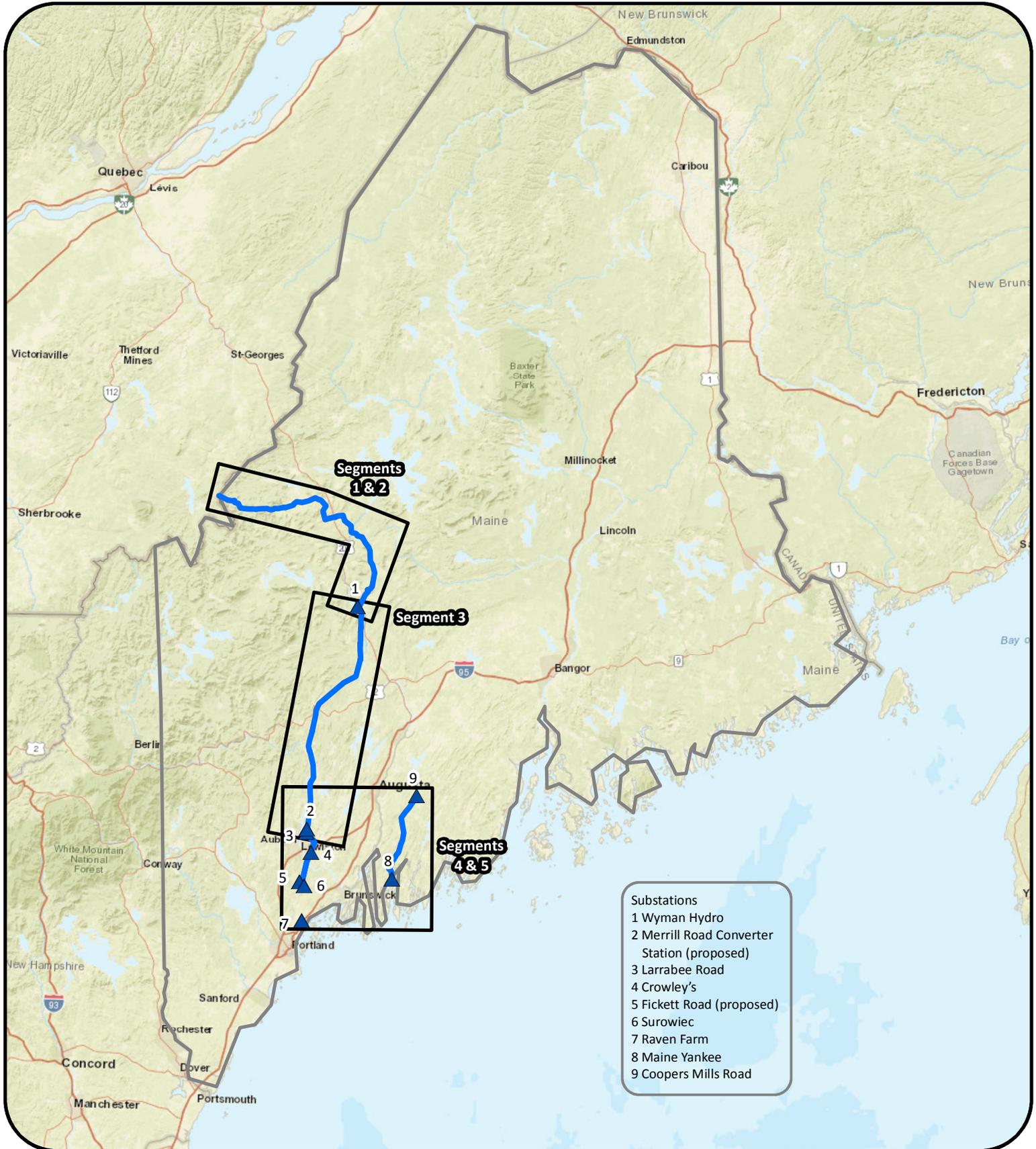
**Attachment C: Preliminary 2018 Field Survey Schedules**

## NECEC 2018 Preliminary Field Survey Schedule

<b>Historical Resources Surveys</b>	<b>Start Date</b>	<b>End Date</b>	<b>Calendar Days</b>
1. Reconnaissance Field Survey	4/12/2018	4/24/2018	12
2. Draft Addendum Report and Phase I Archaeology and Intensive Architectural History SOW to MHPC	4/24/2018	5/15/2018	21
3. MHPC Review and Approval of Phase 1/ Intensive SOW by MHPC	5/15/2018	6/15/2018	30
4. Phase I Archaeology and Intensive Architecture Field Survey	6/15/2018	7/15/2018	30
5. Draft Phase I Archaeology and Intensive Architecture Survey Report to MHPC	7/15/2018	8/15/2018	30
6. MHPC Review and Approval of NRHP Evaluation SOW	8/15/2018	9/15/2018	30
7. Phase II Archaeological Investigations and Architectural History Evaluation Fieldwork/Research	9/15/2018	10/15/2018	30
8. NRHP Eligibility Evaluation Report to MHPC	11/1/2018	12/15/2018	45
9. Memorandum of Agreement Execution		12/31/2018	

<b>Rare Plant Surveys</b>	<b>Start Date</b>	<b>End Date</b>	<b>Calendar Days</b>
1. Desktop Review Period and Field Survey SOW Identification in Coordination with MNAP	3/28/2018	5/28/2018	60
2. Early Summer Field Survey	5/28/2018	6/27/2018	30
3. Late Summer Field Survey	8/1/2018	8/31/2018	30
4. Report Preparation and Review Period	9/1/2018	9/15/2018	15
5. Final Report Deliverable		9/15/2018	

**Attachment D: Master Plan and Index Maps  
Natural Resource Map Example  
Representative Cross Section  
Border Crossing Plan**



- Substations**
- 1 Wyman Hydro
  - 2 Merrill Road Converter Station (proposed)
  - 3 Larrabee Road
  - 4 Crowley's
  - 5 Fickett Road (proposed)
  - 6 Surowiec
  - 7 Raven Farm
  - 8 Maine Yankee
  - 9 Coopers Mills Road

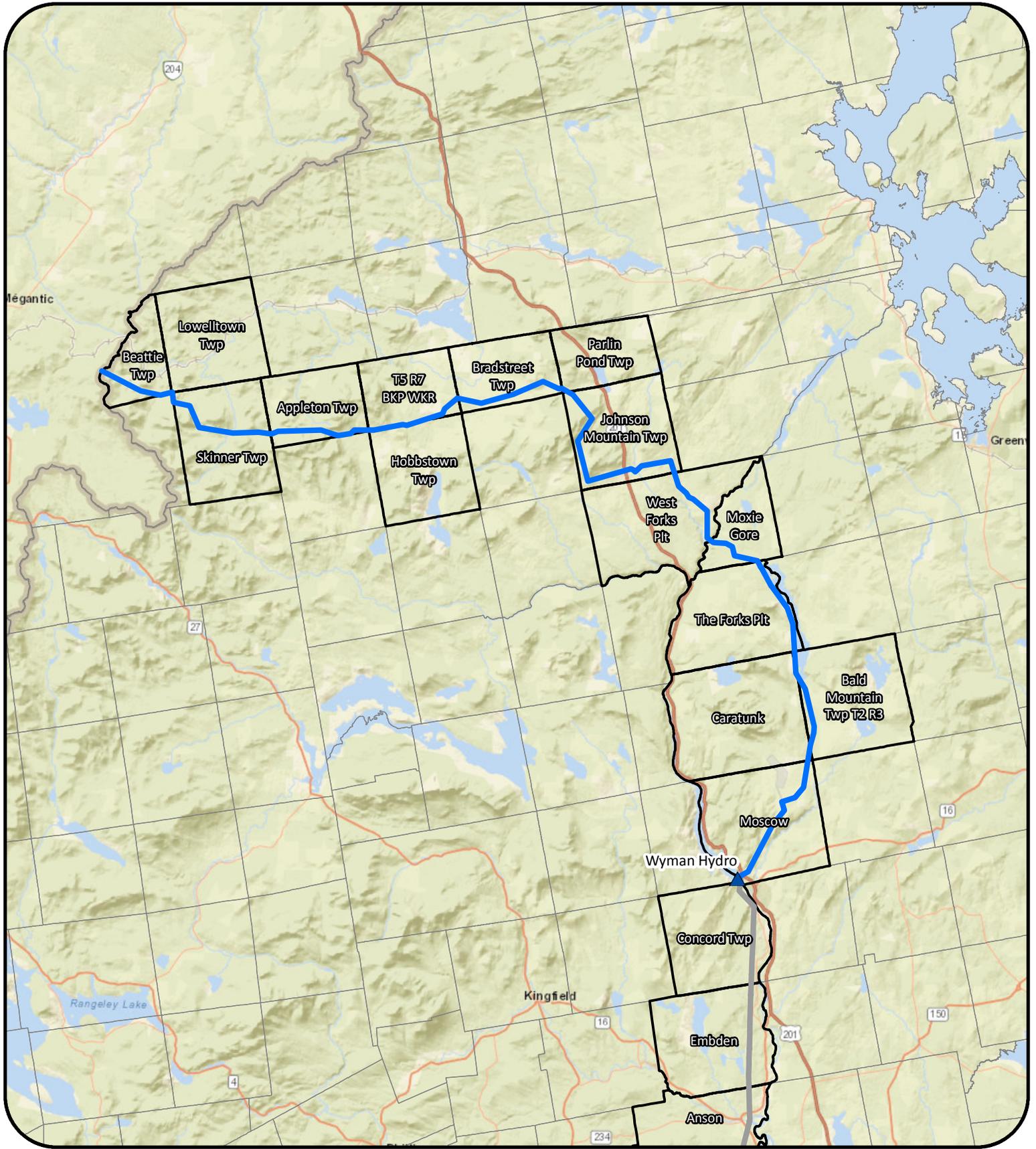


**Legend**

- NECEC Project Route
- Substation

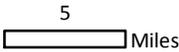
**New England  
Clean Energy  
Connect**

**CENTRAL MAINE  
POWER**



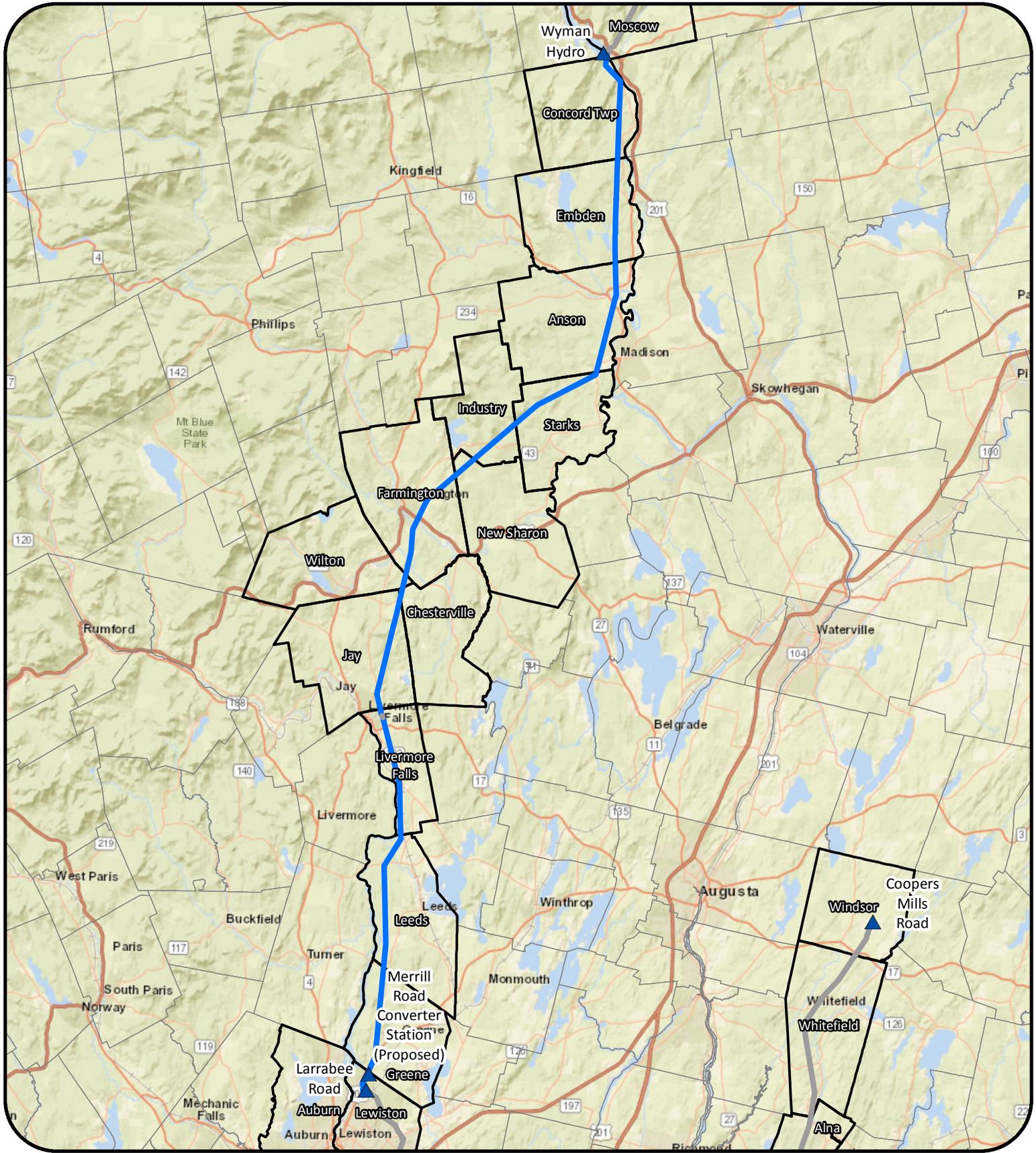
**Legend**

- Segments 1 & 2
- Other Segment
- ▲ Substation

**New England  
Clean Energy  
Connect  
Segments 1 & 2**

 **CENTRAL MAINE  
POWER**



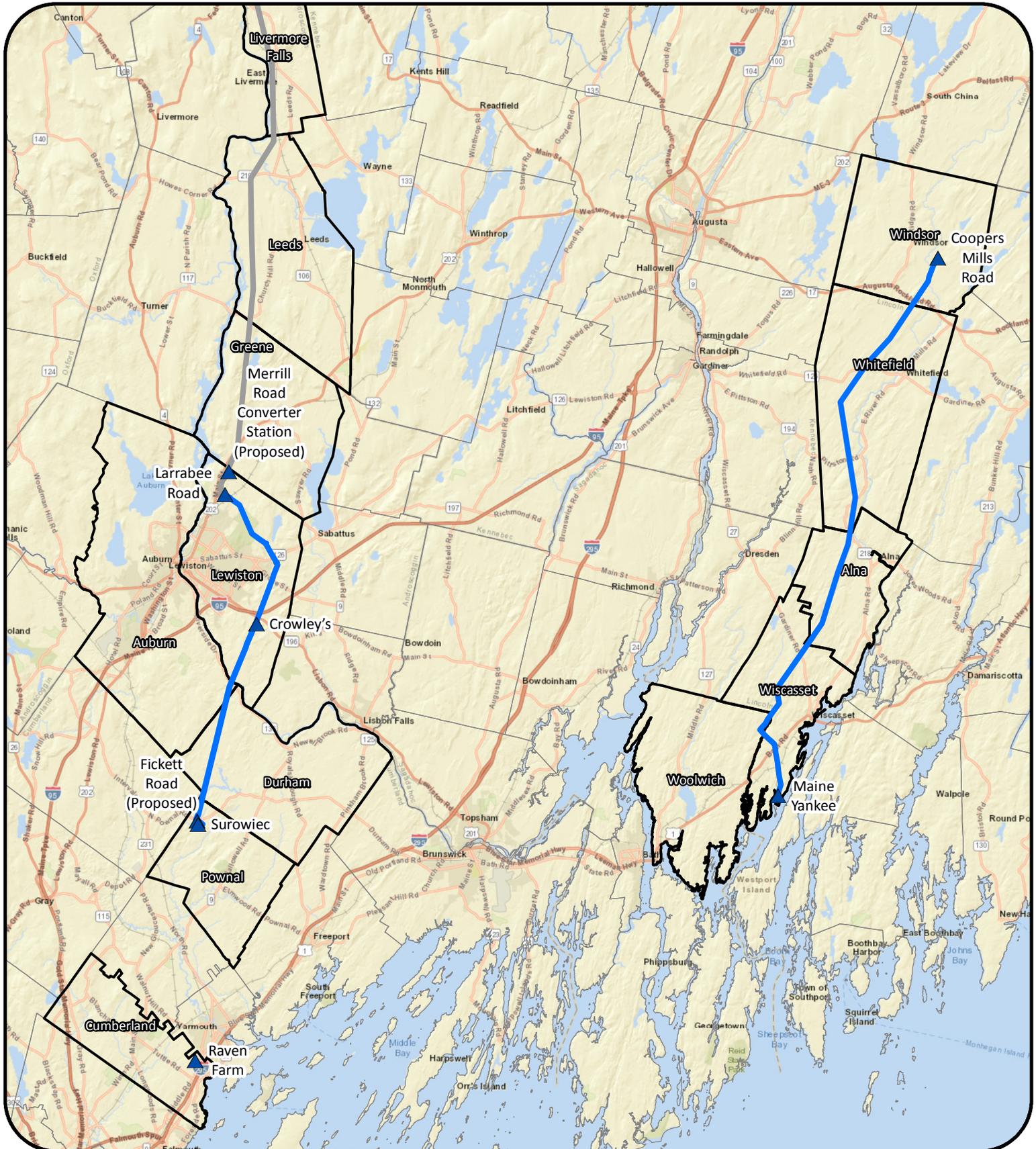
**Legend**

- Segment 3
- Other Segment
- ▲ Substation

5 Miles

**New England  
Clean Energy  
Connect  
Segment 3**

**CENTRAL MAINE  
POWER**



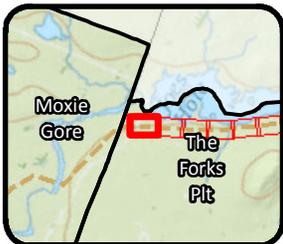
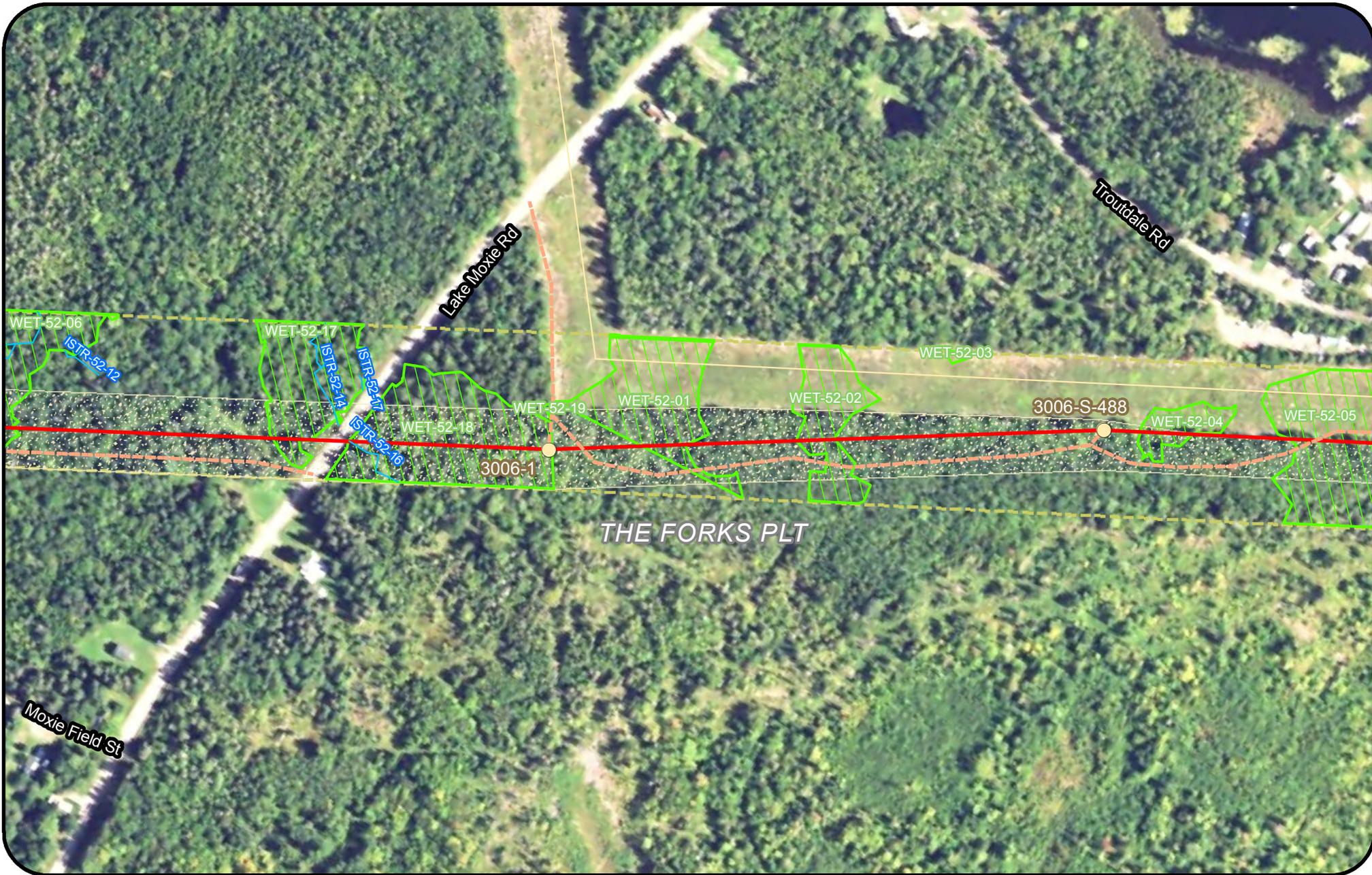
**Legend**

-  Segments 4 & 5
-  Other Segment
-  Substation


**New England  
Clean Energy  
Connect  
Segments 4 & 5**

 **CENTRAL MAINE  
POWER**



- |                                 |                            |  |                                 |
|---------------------------------|----------------------------|--|---------------------------------|
| Clearing Limits                 | Proposed Structure         | SVP/ PSVP                                  | Waterfowl Wading Habitat (IWWH) |
| CMP Ownership / Easement Extent | Existing Structure         | ABA  | SVP and PSVP Buffer (250')      |
| Town Boundary                   | Existing Substation        | NVP  | Substation Limit of Disturbance |
| Project Centerline              | Proposed Converter Station | T and E Species                            |                                 |
| Existing Transmission Line      | Stream                     | Bald Eagle Nest                            |                                 |
| Proposed Access Road            | Wetland                    | Deer Wintering Area (DWA)                  |                                 |
|                                 | Rare Plant                 | Tidal Waterfowl Wading Bird Habitat (TWWH) |                                 |

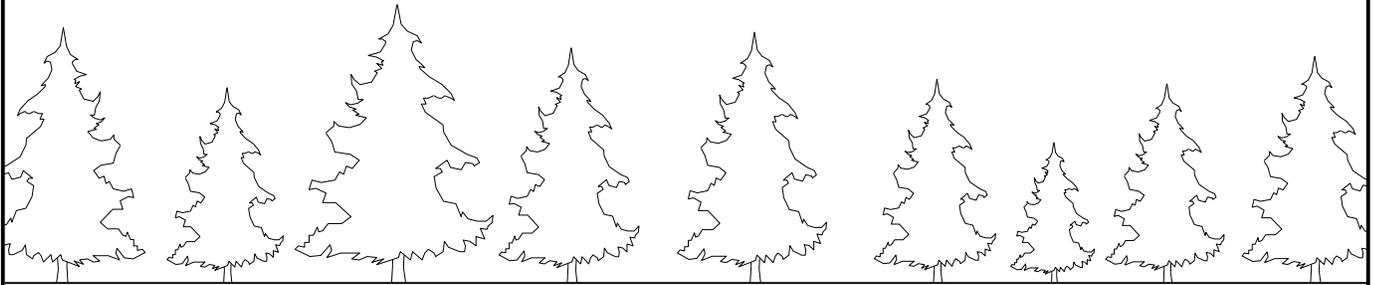
**New England Clean Energy Connect**  
 Natural Resource Maps  
 Segment 2  
 250

**CENTRAL MAINE POWER**

**Representative Cross Section  
from Quebec Border to  
The Forks Plantation**

EXISTING

**PRELIMINARY  
NOT FOR CONSTRUCTION**



LIMIT  
R.O.W.

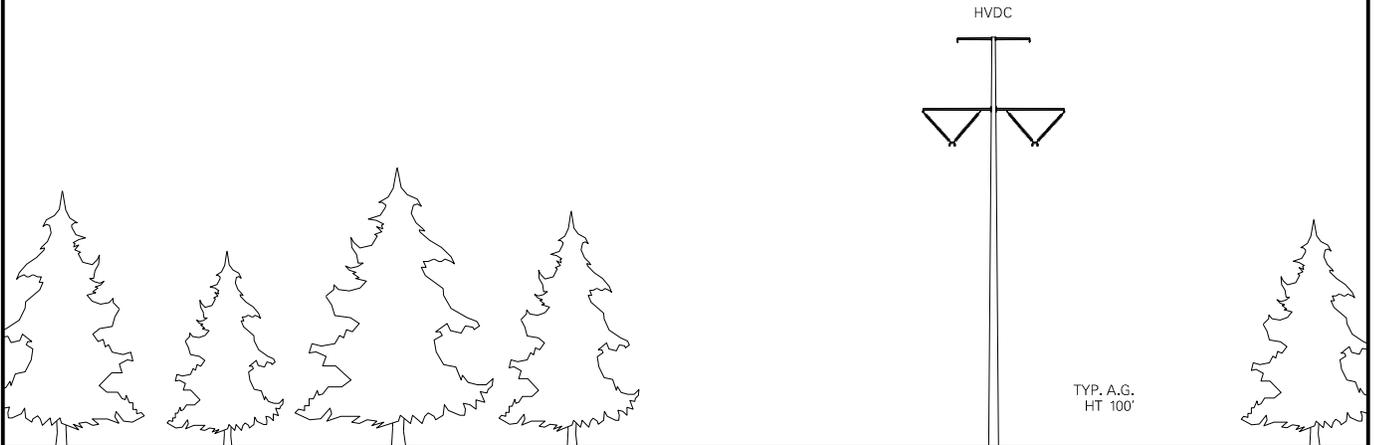
300'

LIMIT  
R.O.W.

LOOKING FROM QUEBEC BORDER TOWARDS WYMAN HYDRO SS  
(APPROX. 53.5 MILES)

NOTE:  
ADDITIONAL R.O.W. SECURED  
TO ACCOMMODATE FUTURE  
TRANSMISSION LINES.

PROPOSED



LIMIT  
R.O.W.

150'

75'

75'

150' CLEARED

300'

TYP. A.G.  
HT 100'

LIMIT  
R.O.W.

LOOKING FROM QUEBEC BORDER TOWARDS WYMAN HYDRO SS  
(APPROX. 53.5 MILES)

THIS DRAWING SHALL  
BE REVISED ON THE  
CADD SYSTEM ONLY

-DRAFT-  
FOR REVIEW ONLY

S222 POLE 95 TO QUEBEC BORDER

ENG. CONTRACTOR

**NEW ENGLAND CLEAN ENERGY CONNECT**  
EXISTING AND PROPOSED R.O.W.  
SEGMENT 1

		//	
		//	
		//	
		//	
1	ISSUED FOR RFP RESPONSE	9/19/17	PEI

CHECKED  
CRM 4/11/17

DESIGNED JAR  
DRAWN SCF

DATE 3/2/17  
APPR.

SEGMENT I

NO. REVISION DATE BY SCALE NTS



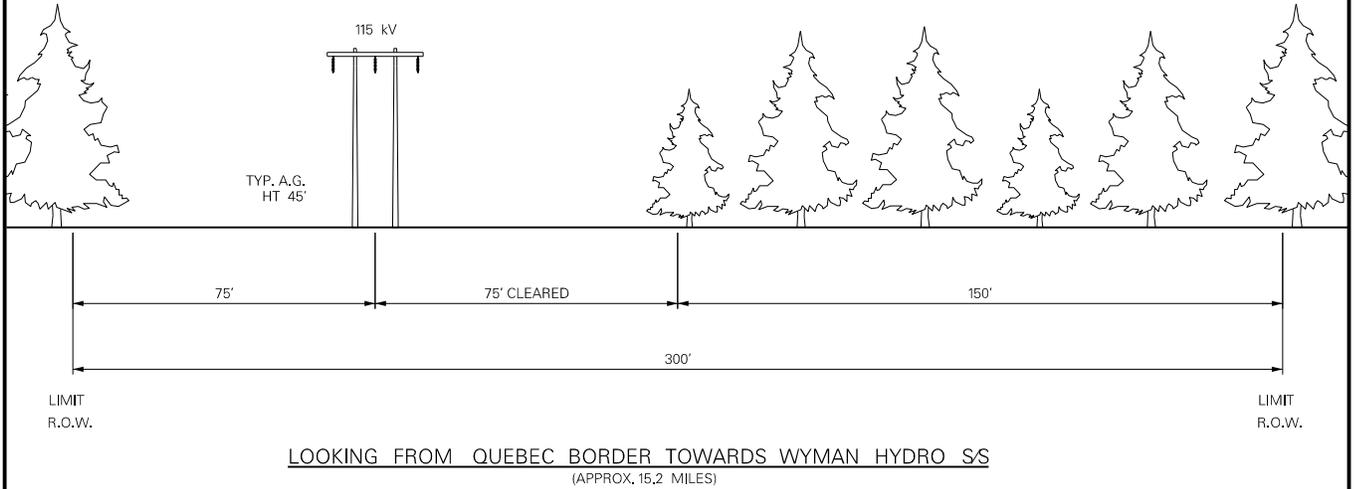
SHEET NECEC-I

**Representative Cross Section  
from The Forks Plantation to  
Moscow**

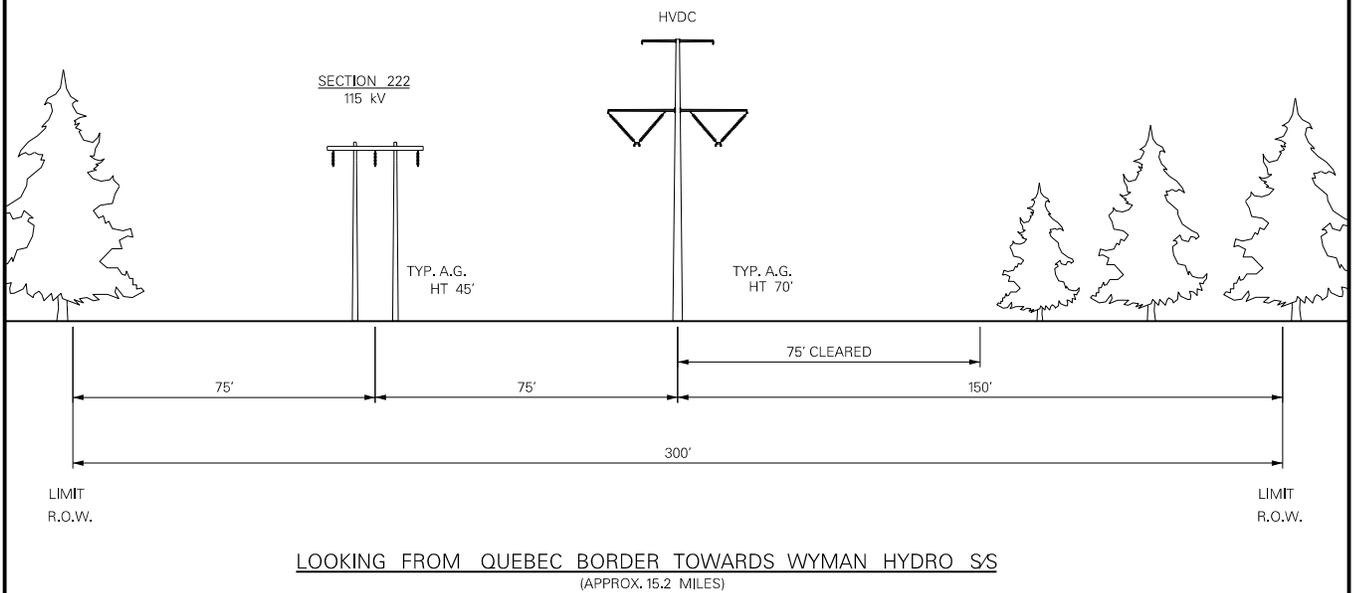
EXISTING

**PRELIMINARY  
NOT FOR CONSTRUCTION**

**\*Some areas may differ**



PROPOSED



THIS DRAWING SHALL BE REVISED ON THE CADD SYSTEM ONLY

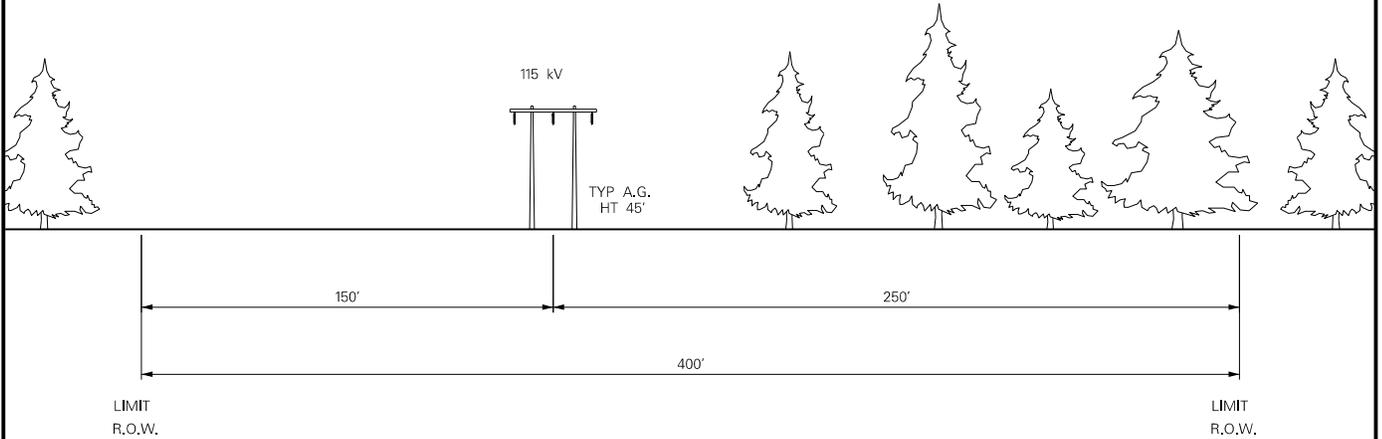
-DRAFT- FOR REVIEW ONLY				S222 POLE 95 TO S222 POLE 178	
ENG. CONTRACTOR		<b>NEW ENGLAND CLEAN ENERGY CONNECT</b>			
		EXISTING AND PROPOSED R.O.W.			
		SEGMENT 2			
2	REVISED STRUCTURE HEIGHTS	11/9/17	PEI	CHECKED CRM	DESIGNED JAR DRAWN SCF
1	ISSUED FOR RFP RESPONSE	9/19/17	PEI	4/11/17	DATE 3/2/17 APPR.
NO.	REVISION	DATE	BY	SCALE	NTS
					<b>CENTRAL MAINE POWER</b>
					SEGMENT 2
					SHEET NECEC-2

**Representative Cross Section  
from Moscow to Jay**

EXISTING

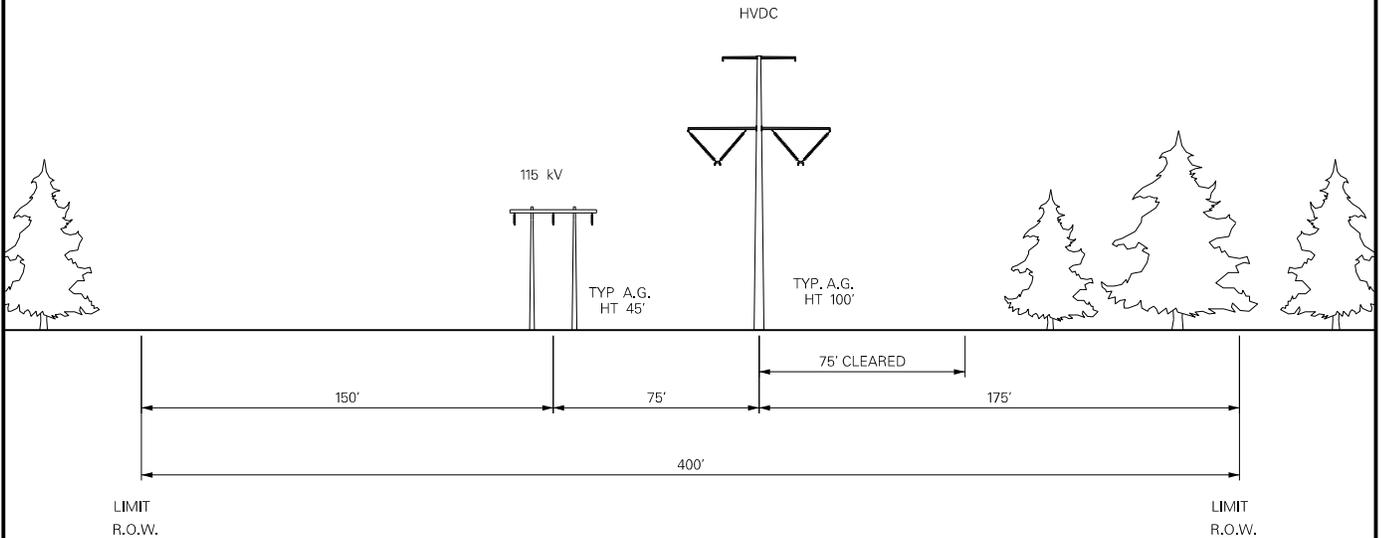
**PRELIMINARY  
NOT FOR CONSTRUCTION**

**\*Some areas may differ**



LOOKING FROM WYMAN HYDRO S/S TOWARDS MERRILL S/S  
(APPROX. 25.2 MILES)

PROPOSED



LOOKING FROM WYMAN HYDRO S/S TOWARDS MERRILL S/S  
(APPROX. 25.2 MILES)

THIS DRAWING SHALL BE REVISED ON THE CADD SYSTEM ONLY

-DRAFT-  
FOR REVIEW ONLY

STARKS S/S TO S278 POLE 330

ENG. CONTRACTOR

**NEW ENGLAND CLEAN ENERGY CONNECT**  
EXISTING AND PROPOSED R.O.W.  
SEGMENT 3

		///	
		///	
		///	
		///	
1	ISSUED FOR RFP RESPONSE	9/19/17	PEI

CHECKED  
CRM 4/11/17

DESIGNED JAR DATE 3/2/17  
DRAWN SCF APPR.

SEGMENT 3

NO. REVISION DATE BY SCALE NTS



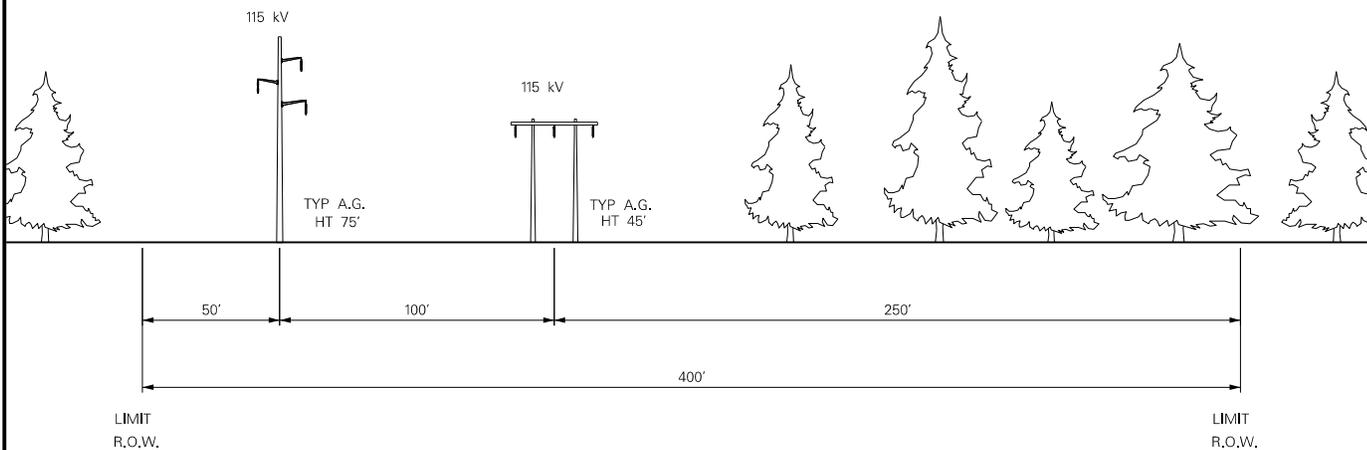
SHEET NECEC-8

**Representative Cross Section  
from Livermore Falls to  
Merrill Rd in Lewiston**

**\*Some areas may differ**

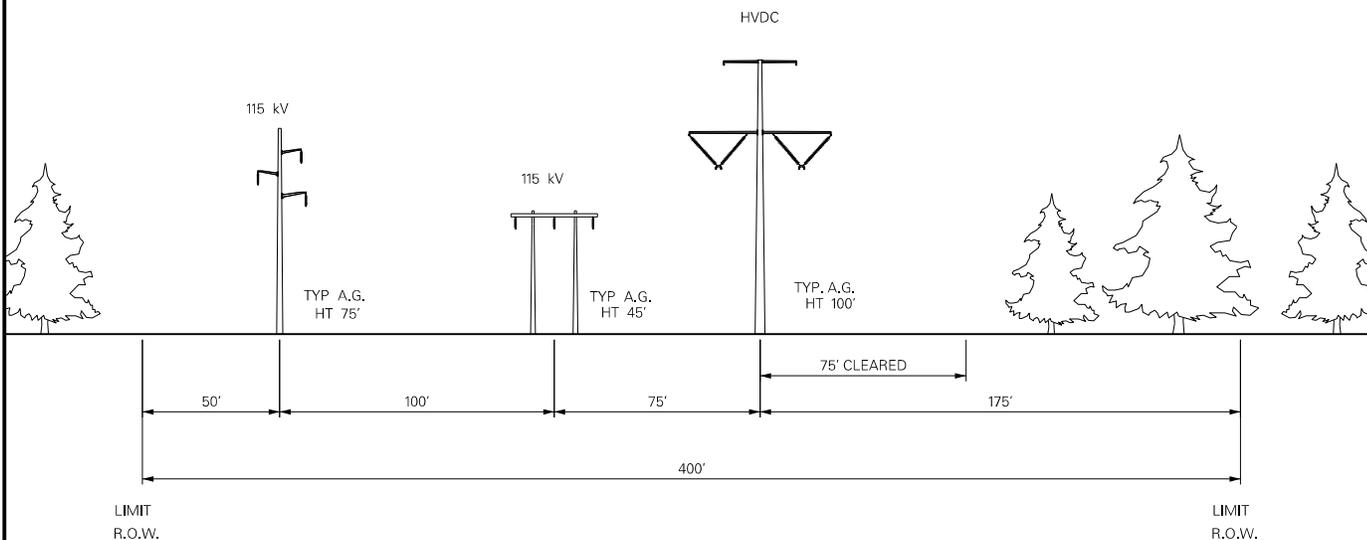
EXISTING

**PRELIMINARY  
NOT FOR CONSTRUCTION**



LOOKING FROM WYMAN HYDRO SS TOWARDS MERRILL SS  
(APPROX. 17.8 MILES)

PROPOSED



LOOKING FROM WYMAN HYDRO SS TOWARDS MERRILL SS

THIS DRAWING SHALL  
BE REVISED ON THE  
CADD SYSTEM ONLY

-DRAFT-  
FOR REVIEW ONLY

S251 POLE 5 TO S251 POLE 56

ENG. CONTRACTOR

**NEW ENGLAND CLEAN ENERGY CONNECT**  
EXISTING AND PROPOSED R.O.W.  
SEGMENT 3

		///	
		///	
		///	
		///	
1	ISSUED FOR RFP RESPONSE	9/19/17	PEI

CHECKED		DESIGNED	JAR	DATE	3/2/17
CRM	4/11/17	DRAWN	SCF	APPR.	

SEGMENT 3

NO. REVISION DATE BY SCALE NTS



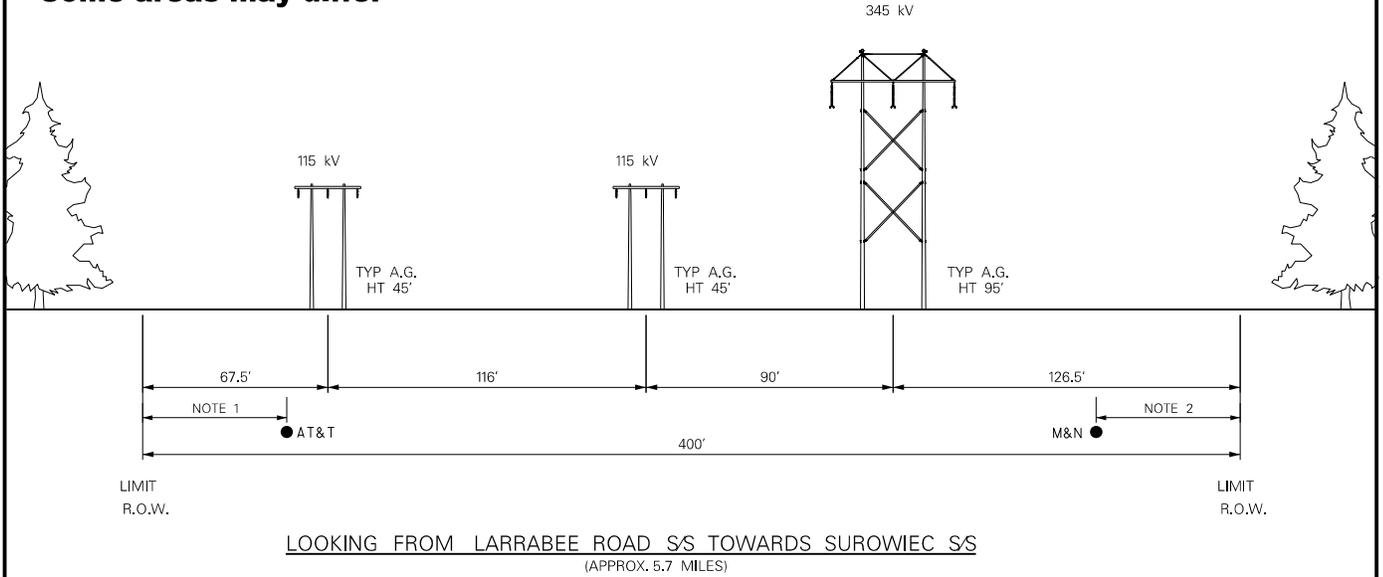
SHEET NECEC-12

**Representative Cross Section  
from Lewiston to Pownal**

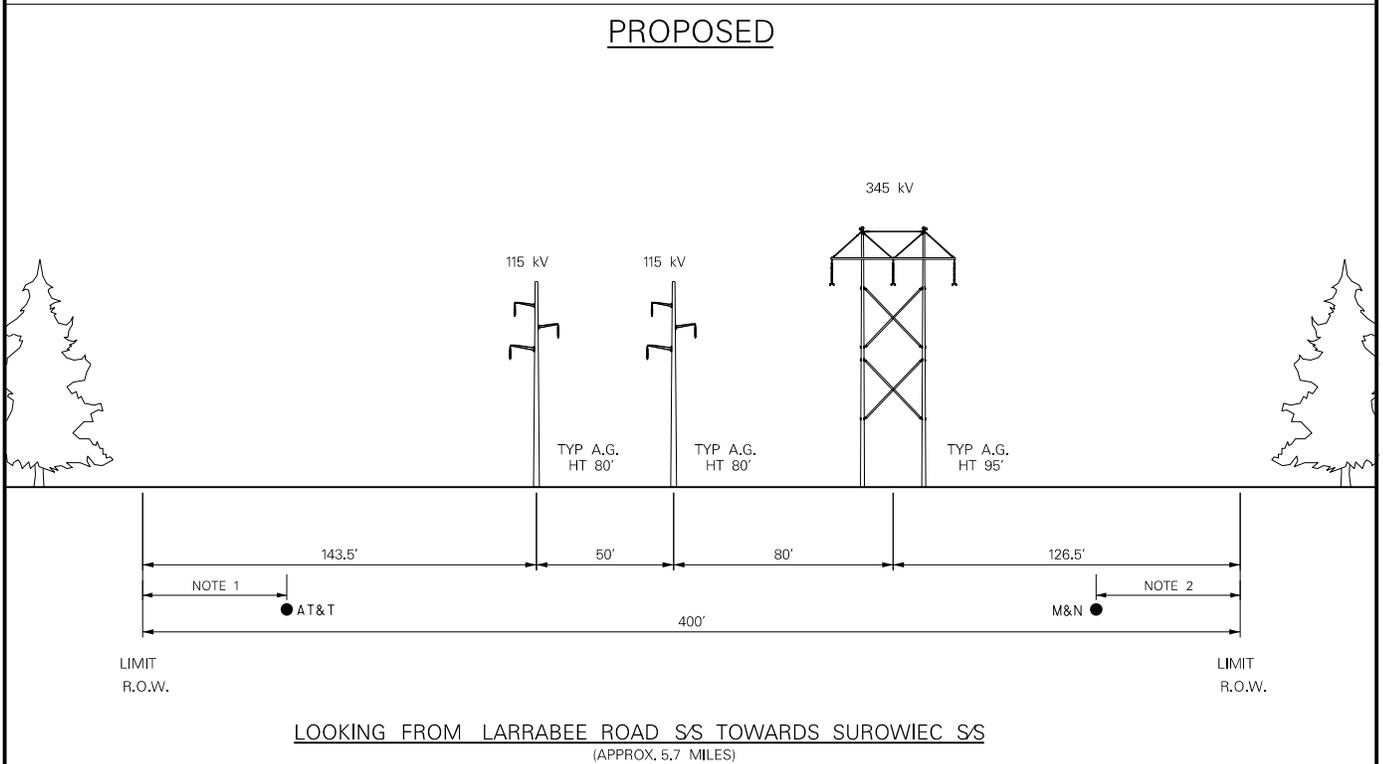
EXISTING

**PRELIMINARY  
NOT FOR CONSTRUCTION**

**\*Some areas may differ**



PROPOSED



THIS DRAWING SHALL BE REVISED ON THE CADD SYSTEM ONLY

-DRAFT- FOR REVIEW ONLY				SECTION 3026		POLE 62 TO 73		STA 361+00 TO 420+44.56	
ENG. CONTRACTOR				<b>NEW ENGLAND CLEAN ENERGY CONNECT</b>					
				EXISTING AND PROPOSED R.O.W.					
				SEGMENT 4					
				CHECKED		DESIGNED CRM		DATE 4/11/17	
				CRM		4/11/17		DRAWN SCF	
								APPR.	
1		ISSUED FOR RFP RESPONSE		9/19/17		PEI		SEGMENT 4	
NO.		REVISION		DATE		BY			
				SCALE		NTS		SHEET S4-II	

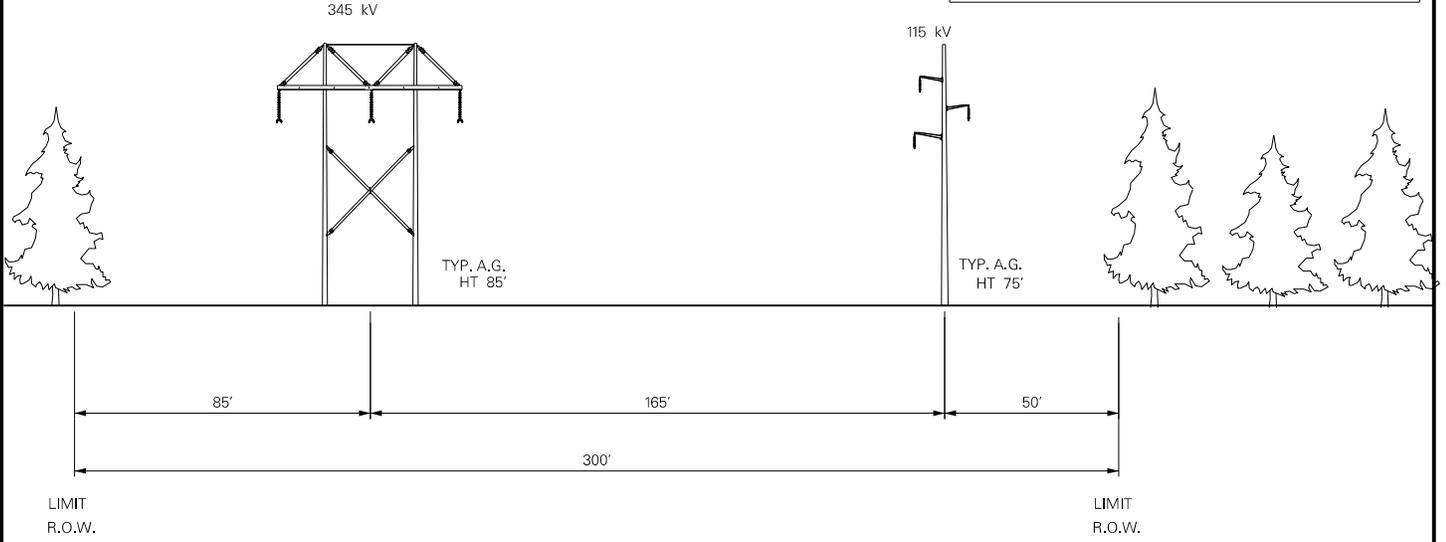


**Representative Cross Section  
from Windsor to Wiscasset**

**\*Some areas may differ**

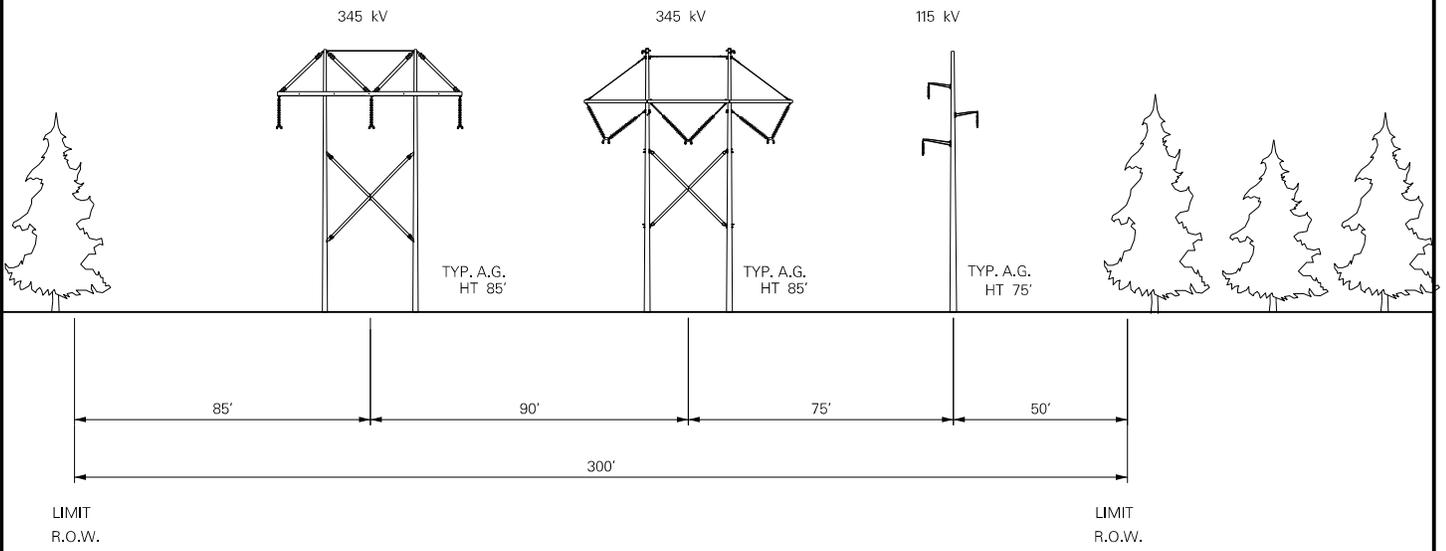
EXISTING

**PRELIMINARY  
NOT FOR CONSTRUCTION**



LOOKING FROM MAINE YANKEE SS TOWARDS COOPERS MILLS ROAD SS  
(APPROX. 17.2 MILES)

PROPOSED



LOOKING FROM MAINE YANKEE SS TOWARDS COOPERS MILLS ROAD SS  
(APPROX. 17.2 MILES)

**-DRAFT-  
FOR REVIEW ONLY**

SECTION 392

POLE 64 TO 214

STA. 434+35 TO 1342+37

**NEW ENGLAND CLEAN ENERGY CONNECT  
EXISTING AND PROPOSED R.O.W.  
SEGMENT 5**

ENG. CONTRACTOR			
		//	
		//	
		//	
		//	
		//	
1	ISSUED FOR RFP RESPONSE	9/19/17	PEI
NO.	REVISION	DATE	BY

CHECKED		DESIGNED CRM	DATE 4/10/17
CRM	4/11/17	DRAWN SCF	APPR.
SCALE NTS		<b>CENTRAL MAINE POWER</b>	

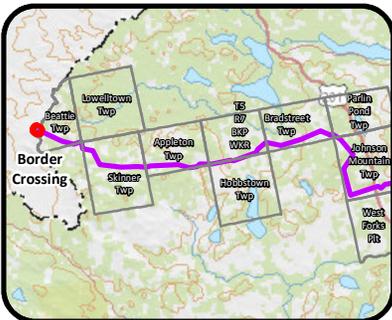
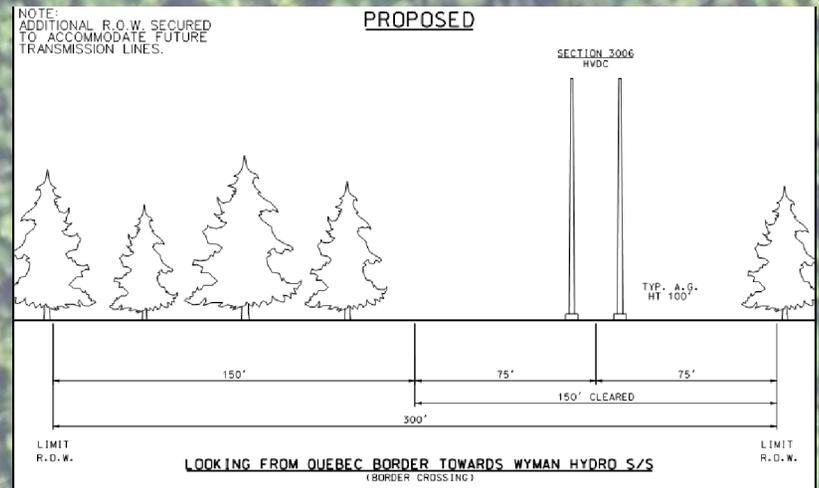
**SEGMENT 5**

SHEET S5-9

THIS DRAWING SHALL  
BE REVISED ON THE  
CADD SYSTEM ONLY

CANADA

MAINE / US

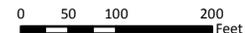


**Legend**

- CMP Ownership / Easement Extent
- Project Centerline
- Pole Footprint
- Access Road
- Work Pad
- Clearing Limits
- Wetland
- Stream
- NVP
- Town Boundary



1:2,400



Note: cross section not to scale

**New England  
Clean Energy Connect  
Border Crossing Plan**



**Attachment E: USACE New England District Construction Mat BMPs**



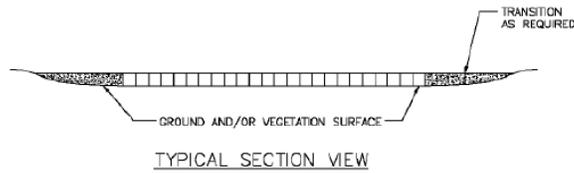
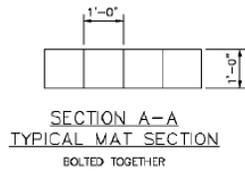
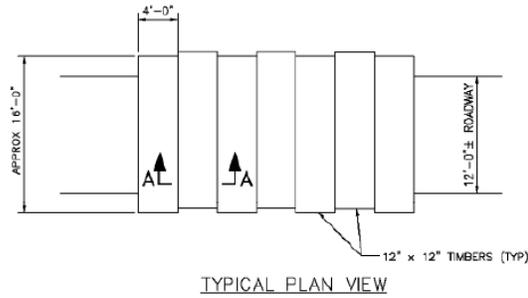
## **Construction Mat Best Management Practices (BMPs)**

<b>Installation</b>	
	<ul style="list-style-type: none"><li>• Mats should be in good condition to ensure proper installation, use and removal.</li><li>• Operating heavy equipment in wetlands shall be minimized, and such equipment other than fixed equipment (drill rigs, fixed cranes, etc.) shall not be stored, maintained, fueled or repaired in wetlands unless the equipment is broken down and cannot be easily removed.</li><li>• An adequate supply of spill containment equipment shall be maintained on site.</li><li>• General Permits in New England do not authorize dragging construction mats into position in waters of the U.S.</li><li>• Woody vegetation (trees, shrubs, etc.) shall be cut at or above ground level and not uprooted in order to prevent disruption to the wetland soil structure and to allow stump sprouts to revegetate the work area.</li><li>• Where feasible, place mats in a location that would minimize the amount needed for the wetlands crossing.</li><li>• Minimize impacts to wetland areas during installation, use, and removal.</li><li>• Install adequate erosion and sediment controls at approaches to mats to promote a smooth transition to, and minimize sediment tracking onto, swamp mats.</li><li>• In most cases, construction mats should be placed along the travel area so that the individual boards are resting perpendicular to the direction of traffic. No gaps should exist between mats. Place mats far enough on either side of the resource area to rest on firm ground.</li><li>• Provide standard construction mat BMP details to work crews (examples provided below).</li></ul>
<b>Wetland/Stream Channel Crossing</b>	
	<ul style="list-style-type: none"><li>• At “dry” crossings where no flow is present or anticipated during project construction, the mats may be placed directly onto the ground in order to prevent excessive rutting, provided stream banks and bottoms are not adversely altered.</li><li>• Construction mats may be used as a temporary bridge over a stream to allow vehicles access to the work site. Small sections of mat are placed within and along the stream parallel to the flow of water. Mats may then be placed perpendicular to the stream, resting on top of the initial construction mat supports. It may be necessary to place additional reinforcement for extra stability and to minimize the amount of sediment that could fall between the spaces of each timber.</li><li>• In areas where wildlife passage or migration is a consideration, mats may be installed in accordance with the diagram “Typical Stream Crossing with Swamp Mats.”</li><li>• Mats should not be placed so that they restrict the natural flow of the stream.</li><li>• Minimize number of stream/wetland crossings. Where feasible, locate crossing site where stream channel is narrow for the shortest possible clear span and where stream banks are stable and well defined. For large wetland complexes, consider accessing structures from opposite sides where possible to avoid crossing the entire wetland.</li><li>• More than one layer of mats may be necessary in areas which are inundated or have deep organic wetland soils.</li></ul>

Maintenance	
	<ul style="list-style-type: none"> <li>Matted wetland crossings should be monitored to assure correct functioning of the mats. Inspect mats after use. Look for any defects or structural problems. Mats which become covered with soils or construction debris should be cleaned and the materials removed and disposed of in an upland location. The material should not be scraped and shoveled into the resource area. Mats which become imbedded must be reset or layered to prevent mud from covering them or water passing over them.</li> </ul>
Removal	
	<ul style="list-style-type: none"> <li>Matting should be removed by “backing” out of the site, removing mats one at a time. Any rutting or significant indentations identified during mat removal should be regraded immediately, taking care not to compact soils.</li> <li>Mats should be cleaned before transport to another wetland location to remove soil and any invasive plant species seed stock or plant material.</li> <li>Mats shall be cleaned of soil and any invasive plant species seed stock or plant material from before installation.</li> <li>Cleaning methods may include but are not limited to shaking or dropping mats in a controlled manner with a piece of machinery to knock off attached soil and debris, spraying with water or air, and sweeping.</li> <li>Crossings should be inspected following mat removal to determine the level of restoration required.</li> </ul>
Restoration	
	<ul style="list-style-type: none"> <li>Special precautions should be taken to promptly stabilize areas of disturbed soil located near wetlands and streams. Matted areas within wetlands shall be restored to their original condition and elevation. This may involve natural revegetation from existing root and seed stock of native plant species. Conditions may warrant planting and the broadcast of a wetland seed mix over the matted area to supplement the existing seed and rootstock. Seed mixes and vegetation shall contain only plant species native to New England. The use of mulch in wetlands shall consist of weed-free mulch to mitigate the risk of the spread of invasive plant species.</li> </ul>

# Example Mat Diagrams -

Best Management Practices Manual for Utility Maintenance  
 In and Adjacent to Wetlands and Waterbodies in New Hampshire  
 Interim January 2010.



- NOTE:
1. TO BE INSTALLED IF NECESSARY TO PREVENT RUTTING, TO ACCESS STRUCTURES.
  2. THIS DETAIL SHOWS TYPICAL DIMENSIONS. SOME CONTRACTORS SWAMP MATS ARE DIMENSIONALLY DIFFERENT FROM WHAT IS SHOWN HERE.
  3. DEPENDENT ON SITE CONDITIONS, MULTIPLE LAYERS OF SWAMP MATS MAY BE INSTALLED.

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 Interim January 2010.

