



August 17, 2010

Mr. Jim Caldwell, Chair, Liberty Planning Board
Town of Liberty
7 Water St, P.O. Box 116
Liberty, ME 04949-0116

RE: Central Maine Power Company, MPRP Permit Application

Dear Mr. Caldwell:

TRC Engineers, LLC on behalf of Central Maine Power Company (CMP) is submitting eight (8) copies of a Shoreland Zoning Permit Application to the Liberty Planning Board for the proposed construction of a new 115 kV transmission line (section 254) within the Town of Liberty. I understand the Planning Board will review this application at its next scheduled meeting on September 9th, 2010 at 7:00 p.m., and that a date for a special public hearing on the application will be determined at that meeting.

In accordance with your determination at the August 12, 2010 meeting, this is a new application (not a resubmission of the application that was submitted last year and later withdrawn). This application takes into consideration the new design for Section 254 in accordance with the decision from the Independent System Operator for New England (ISO-NE), and Liberty's new Shoreland Zoning Ordinance and zoning map.

A Notice of Intent to File has been sent to the abutters to the MPRP project area, notifying them that the application has been submitted to the Planning Board, and a copy sent to the Town Office. At the Planning Board's August meeting, it was decided that the Liberty Select Board would set an appropriate application fee. Once I receive notification of the Select Board's decision as to the amount of the fee, I will send a check to the Town Office.

I look forward to answering your questions about the Maine Power Reliability Program in Liberty on September 9th.

Sincerely,

Alison Truesdale
Environmental Specialist
TRC

Enclosure(s)

File # 166247.0005 Maine Power Reliability Program



**MAINE POWER
RELIABILITY PROGRAM**
A CENTRAL MAINE POWER COMPANY PROGRAM

**LIBERTY, MAINE
SHORELAND ZONING PERMIT
APPLICATION**

**Segment 6:
Section 254 Transmission Line Construction**

Prepared for:

Central Maine Power Company
83 Edison Drive
Augusta, Maine 04336

Prepared by:



TRC Engineers, LLC
400 Southborough Drive
South Portland, ME 04106

August 2010

Application Form

TOWN OF LIBERTY SHORELAND ZONING APPLICATION

April 3, 2006

The Application consists of three pdf file downloads

Please Download each and combine them into your single application

"Upon submitting an application or pre-application for permit, or notice of construction, to the Town, applicant/owner accepts that designated town officers and officials have an implicit right to visit property for purposes of validating information provided and to inspect for compliance both work in progress as well completed projects."

By signing below the application acknowledges the above language.

Signed:

Alison B. Trusdal
agent for CMP

Date: 8/17/10

Shoreland Zoning Permit Application

FOR OFFICIAL USE ONLY:	
PERMIT NO.	
ISSUE DATE:	
FEE AMOUNT:	

General Information

1. Applicant Central Maine Power Co. c/o Doug Herling	2. Applicant's Address 83 Edison Drive Augusta, ME 04336	Applicant's Tel. # 207-626-4006
4. Property Owner Central Maine Power Co.	5. Owner's Address Same as Applicant	6. Owner's Tel. # Same as Applicant
7. Contractor (agent) TRC c/o Alison Truesdale	8. Agent's Address 400 Southborough Drive South Portland, ME 04106	9. Agent's Tel. # 207-879-1930 x 135 Email: atruesdale@trcsolutions.com
10. Location/Address of Property Existing transmission right-of-way running northeast from the Town of Washington border, roughly parallel with and north of Plains Rd.	11. Tax Map/Page & Lot # 1-33 1-44 2-15A	12. Zoning District Limited Residential Wetland Conservation Wetland Preservation Resource Protection
13. Description of the property including a description of all proposed construction, e.g. Land Clearing, Road Building, Septic Systems, and wells (Please Note That a Site Plan Sketch is required on page 3.) The Maine Power Reliability Program (MPRP) is a project of Central Maine Power Company (CMP) to upgrade the bulk electrical power system throughout much of its service area. In Liberty, the project involves construction of a new 115 kV electrical transmission line to be located approximately parallel to and northwest of the existing 345 kV transmission line and entirely within the existing CMP corridor. The proposed construction is more fully described in the attached application narrative and illustrated in a number of exhibits.		
14. Proposed Use of Project Electric transmission	15. Estimated Cost of Construction \$9.24 million for entire Liberty project	

Front or Rear Elevation

Side Elevation

See typical existing and proposed transmission line corridor cross sections, EXHIBIT 2,
attached.

Shoreland and Property Information

<p>16. Lot Area</p> <p>CMP corridor includes approximately 130 acres, including the public roads that cross the corridor. Approximately 59.5 acres is within the shoreland zone.</p>	<p>17. Frontage on road (ft)</p> <p>Approximately 272 feet on each side of the Back Palermo Road; approximately 381 feet on the west side of Route 220 and 390 feet on the east side; and approximately 270 feet on each side of the Fishtown Road.</p>
<p>18. Sq. ft of lot covered by non-vegetated surfaces</p> <p>Aside from the area covered by the poles themselves, there will be no new non-vegetated areas.</p>	<p>19. Elevation above 100 year flood</p> <p>The corridor ranges between 40 and 120 feet above the floodplain.</p>
<p>20. Frontage on Waterbody (ft):</p> <p>None</p>	<p>21. Height of proposed structure</p> <p>18 H-Frame poles within the shoreland zone will range from 56.5' to 74.5' above ground elevation.</p>
<p>22. Existing use of property</p> <p>Electric power transmission</p>	<p>23. Proposed use of structure</p> <p>Electric power transmission</p>

Note: Questions 24 & 25 apply only to expansions of portions of existing structures which are less than the *required* setback.

<p>24. A) Sq. ft. of the portion of the structure which is less than the required setback as of 1/1/89</p> <p>NA – There will be no expansion of the footprint of existing structures.</p>	<p>25. A) Cu. Ft. portion of structure which is less than the required setback as of 1/1/89</p> <p>NA – There will be no expansion of the footprint of existing structures.</p>
<p>B) Sq. ft. of the expansion of the portion of the structure which is less than the required setback from 1/1/89 to</p>	<p>B) Cu. ft. of the expansion of the portion of the structure which is less than the required setback from 1/1/89 to</p>
<p>C) Sq. ft. of proposed expansion of portion of the structure which is less than required setback</p>	<p>C) Cu. ft. of proposed expansion of portion of the structure which is less than required setback</p>
<p>D) % increase of sq. ft. of actual and proposed expansions of portion of structure which is less than the required setback since 1/1/89</p> $\left[\% \text{ increase} = B + \frac{C}{A} \times 100 \right]$	<p>D) % increase of cu. ft. of actual and proposed expansions of portion of structure which is less than the required setback since 1/1/89</p> $\% \text{ increase} = \left[B + \frac{C}{A} \times 100 \right]$

Additional Permits, Approvals, and/or Reviews Required

Check if required

- Planning Board Review/approval**
(e.g., Subdivision, Site Plan Review)
– **Shoreland Zoning only**
- Board of Appeals Review/approval**
- Flood Hazard Development Permit**
Project crosses no designated federal flood areas.
- Exterior Plumbing Permit**
(Approved HHE 200 Application Form)
- Interior Plumbing Permit**
- DEP Permit**
(Site Location, Natural Resources Protection Act) **granted April 5, 2010**
- Army Corps of Engineers Permit**
(e.g., Sec.404 of Clean Water Act) **granted July 21, 2010**
- Others**
Maine Public Utilities Commission
(Certificate of Need & Public Convenience, 35-A MRSA Sec 3132) **granted June 10, 2010**
- _____
- _____
- _____
- _____

Note: Applicant is advised to consult with the Code Enforcement Officer and appropriate State and Federal Agencies to determine whether additional permits, approvals and reviews are required.

I certify that all information given in this application is accurate. All proposed uses shall be in conformance with this application and the Town of Liberty Shoreland Zoning Ordinance. I agree to future inspections by the Code Enforcement Officer at reasonable hours.

Applicant's Signature

Date

Alvin B. Trucadel

Agent's Signature (if Applicable)

8/17/10

Date

Agent Authorization Letter



Central Maine Power

August 15, 2008

Bureau of Land & Water Quality
Division of Land Resource Regulation
Maine Department of Environmental Protection
17 State House Station
Augusta, ME 04333-0017

Municipalities (various)

Federal Agencies (various)

RE: Central Maine Power Company - Maine Power Reliability Program (MPRP)
Agent Authorization

To Whom It May Concern:

Central Maine Power Company hereby authorizes TRC Engineers, Inc. and TRC staff to act as its agent for all activities associated with the acquisition of Federal, state and local permits related to the above referenced project.

Please call me at 626-9557 or email me at gerry.mirabile@comco.com with any questions. Thank you.

Sincerely,

Gerry J. Mirabile
Lead Analyst - Compliance

An equal opportunity employer

83 Edison Drive | Augusta, ME 04336

tel (207) 623-3521

www.comco.com

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An Energy East Company

SHORELAND ZONING PERMIT APPLICATION

MAINE POWER RELIABILITY PROGRAM DESCRIPTION

The Maine Power Reliability Program (MPRP) is a project by Central Maine Power Company (“CMP”) to upgrade Maine’s bulk power system. The vast majority of Maine’s bulk power transmission system was placed into service in the early 1970s and is now reaching the limits of its ability to meet the growing electrical demand of Maine customers. Since the last major transmission infrastructure was completed about 40 years ago, the patterns of both available generation and customer load have shifted significantly. For example, population has become more concentrated in the southern part of the state, while the generation needed to serve that load is now more distant and dispersed. When these pattern changes are combined with the increasing peak demand for electricity, the current transmission infrastructure in Maine will, in very few years, become inadequate. In addition, the reliability and security standards mandated by law and administered by the North American Electric Reliability Corporation (NERC), the Northeast Power Coordinating Council, Inc. (NPCC) and ISO New England (ISO-NE) have changed significantly in recent years. CMP must upgrade its bulk power system with this proposed project in order to meet the mandatory standards and to provide reliable electric service to Maine customers into the future.

In January of 2007, the MPRP began a comprehensive needs assessment of CMP's bulk power transmission system. The study included a 10-year forecast to evaluate the system in Maine, including a review of system reliability and performance under various system conditions and operating scenarios, as well as a needs assessment to ensure a reliable transmission system in the most cost-effective manner possible. The study identified a number of significant reliability issues with Maine’s bulk transmission system, including insufficient 345 kV transmission capacity, insufficient 115/345 kV transformation capacity, and insufficient transmission support and/or infrastructure in all regions served by CMP.

After completing the needs assessment, the MPRP team studied possible solutions. This included both transmission and non-transmission alternatives. CMP ultimately selected a primarily transmission solution¹ based on a number of factors, including electrical performance, cost effectiveness, impacts to landowners, and various forecasts of future conditions. The proposed solution consists of a network of 345 kV and 115 kV transmission lines and associated substations throughout CMP’s service territory where particular needs were identified. The proposed transmission solution ranges from Eliot in the south, Rumford in the west, Searsport in the east, and Orrington and Pittsfield to the north. In all, MPRP will encompass nearly 80 Maine towns, and has obtained approvals from the Maine Public Utilities Commission, the Maine Department of Environmental Protection, the Army Corps of Engineers, and numerous municipalities.

¹ Two areas known as the South Portland loop and the Midcoast Spur will be addressed through non-transmission alternatives.

PROJECT DESCRIPTION IN LIBERTY

Central Maine Power's right-of-way in Liberty runs approximately 4 miles from the town border with Washington just north of South Liberty village, east-northeast and roughly parallel with the Fishtown and Plains Roads to the Appleton town line. Currently, a 345 kV line, Section 388, runs through the corridor on two-pole wooden structures called "H-frames" that are typically 75 feet high. An AT&T cable line is also located within the corridor on the southeast side, and a gas pipeline is located on the northwest side. (See the "Existing" cross section in EXHIBIT 2.)

CMP proposes to construct a new 115 kV transmission line (Section 254) within the existing corridor. The proposed line will be placed on H-frames smaller than those that already exist within the corridor, typically 55 feet above ground level.² The new structures will be 90 feet to the north of the existing H-frames and 95 feet from the northern edge of the right-of-way, as measured from the centers of the structures. Some clearing will be necessary between the existing structures and the northwest edge of the right-of-way in order to place the new H-frames, but all clearing will be on CMP's existing property. No additional land is being sought or acquired within Liberty for this project. (See the "Proposed" cross section in EXHIBIT 2.) Access to CMP's right of way will be from public roads: Back Palermo Road, Route 220, and Collinstown Road in Appleton.

The proposed upgrades in Liberty, as outlined above, are a part of the program to improve the reliability, safety, and security of the bulk power transmission system in Maine.

APPLICABILITY OF LIBERTY'S SHORELAND ZONING ORDINANCE

Pursuant to Section 3 of the Town of Liberty Shoreland Zoning Ordinance, the ordinance applies to (as relevant here):

- land areas within 250 feet, horizontal distance, of the normal high-water line of any great pond or river,
- all forested and freshwater wetlands that fall within the definition of a wetland as defined in Section 17,
- land areas within 250 feet as depicted on the official shoreland zoning map, horizontal distance, of the upland edge of a freshwater wetland which is 10 acres or more in size, and
- all land areas within 75 feet, horizontal distance, of the normal high-water line of a stream.³

The word "wetland" is defined in Section 17 as "a freshwater, forested or coastal wetland." A "freshwater wetland" is defined as follows:

² Please note that structure heights will vary due to topography and the need to achieve spans that will avoid or minimize impacts to natural resources. Actual heights may be greater or less than "typical," due to site-specific conditions. See the strip maps in EXHIBIT 3 for actual individual structure heights, and EXHIBIT 4 for a summary of structure heights.

³ Town of Liberty Shoreland Zoning Ordinance, Section 3, page 6.

freshwater swamps, marshes, bogs, and similar areas, other than forested wetlands, which are:

1. *Of ten or more contiguous acres; or of less than 10 contiguous acres and adjacent to a surface water body, excluding any river, stream or brook, such that in a natural state, the combined surface area is in excess of 10 acres; and*
2. *Inundated or saturated by surface or ground water at a frequency and for a duration sufficient to support, and which under normal circumstances do support, a prevalence of wetland vegetation typically adapted for life in saturated soils.*⁴

Portions of CMP's right-of-way fall within these areas, and so may be regulated by the ordinance. The Liberty Shoreland Zoning Map depicts these areas in Liberty as an initial matter; areas not shown on the shoreland zoning map are not included within the shoreland zone, unless specifically provided.⁵ Section 9 of Liberty's Shoreland Zoning Ordinance (Districts and Zoning Map) provides:

*The areas to which this Ordinance is applicable are hereby divided into the following districts as shown on the Official Shoreland Zoning Map, which is made a part of this Ordinance . . .*⁶ (emphasis added).

Section 10 of the Ordinance (Interpretation of District Boundaries) provides for some potential modifications to the zones shown on the map:

*The depiction of the Shoreland Districts on the Shoreland Zoning Map are merely illustrative of their general location. The upland boundaries of these districts shall be determined by measurement of the horizontal distance from the normal high-water mark of the water body or the upland edge of wetland vegetation, regardless of the location of the boundary shown on the map. . . . In cases involving the determination of the upland edge of a wetland, the Planning Board shall consider evidence presented from an on-site evaluation conducted by a qualified wetlands or soils scientist in making its determination.*⁷

Finally, Section 15.U(3) provides that some areas that are not shown on the map may be regulated by the Ordinance:

⁴ Town of Liberty Shoreland Zoning Ordinance, Section 17, page 44.

⁵ According to the Maine DEP's *Guidelines for Municipal Shoreland Zoning Ordinances*, DEP Reg. ch. 1000:

The Maine Supreme Judicial Court has held that the Official Shoreland Zoning Map is the primary tool to which to refer in determining district boundaries under ordinances that are not more explicit in their district descriptions than the language of the Guidelines, and that where there is inconsistency between the Map and these general text descriptions of the shoreland districts as provided in the minimum guidelines, the Map prevails.

⁶ Town of Liberty Shoreland Zoning Ordinance, Section 9, page 8.

⁷ Town of Liberty Shoreland Zoning Ordinance, Section 10, page 8.

Areas within a project site which encompass 2 or more acres of wetland vegetation and hydric soils (which are not otherwise designated as a Wetland Conservation or Wetland Preservation District) shall be subject to the same standards and permit requirements as defined for the Resource Protection District.⁸

Accordingly, this application addresses proposed construction within the shoreland zoning districts shown on Liberty's Shoreland Zoning map, modified as follows (as shown on the maps in EXHIBIT 3):

- Areas within CMP's right-of-way which encompass 2 or more acres of wetland vegetation and hydric soils that are not otherwise designated as a Wetland Conservation or Wetland Preservation District (designated at Resource Protection, in accordance with Section 15.U(3)); and
- Upland areas within 250 feet of site-delineated wetlands that are part of wetlands located within the shoreland zones shown on the Liberty Shoreland Zoning Map (interpreting the district boundaries in accordance with Section 10).

ZONING DISTRICTS IMPACTED

The proposed project will traverse three types of districts in the Shoreland Zone – Limited Residential (LR), Wetland Conservation (WC) and Resource Protection (RP) as follows:

Wetland Conservation (WC) Districts:

- the wetland associated with a tributary to Fish Brook just east of Route 220 (a wetland shown on the Liberty Shoreland Zoning map, but site-delineated);
- the wetland associated with Fish Brook (a wetland shown on the Liberty Shoreland Zoning map, but site-delineated); and
- the wetland north of Plains Road and west of McLain Road (a wetland shown on the Liberty Shoreland Zoning map, but site-delineated).

Limited Residential (LR) Districts:

- Along the Medomak River just east of where the Back Palermo Road crosses the corridor (land areas within 250 feet of the on-site delineated normal high water line of the river).
- Areas upland of a wetland where Route 220 (Pinnacle Road) crosses the corridor (land within 250 feet of site-delineated wetlands shown on the Liberty Shoreland Zoning Map).
- Areas upland of a wetland along Fish Brook (land within 250 feet of site-delineated wetlands shown on the Liberty Shoreland Zoning Map).
- Areas upland of a wetland just north of Plains Road and west of McLain Road (land within 250 feet of site-delineated wetlands shown on the Liberty Shoreland Zoning Map).

⁸ Town of Liberty Shoreland Zoning Ordinance, Section 15.U(3), page 33.

Wetland Preservation (WP) District:

- the wetland associated with Fish Brook and two of its tributaries just north of Plains Road (site-delineated wetlands shown on the Liberty Shoreland Zoning Map).

Resource Protection (RP) Districts:

- Areas upland of the wetland associated with Fish Brook and its tributaries rated by the state as moderate or high value habitat (land within 250 feet of the wetland shown on the Liberty Shoreland Zoning map, but site delineated);
- an area of 2 or more acres within the project area not shown on the Liberty Shoreland Zoning map, but characterized by wetland vegetation and hydric soil, on either side of McLain Road.

SPECIFIC AREAS OF SHORELAND ZONING IMPACT

Impacts within individual shoreland districts are summarized in the table and more fully described below. The districts are listed in order from west to east.

District	Area within Right of Way and District			
	Total (acres)	Structures/ impact (#/sq. ft.)	Clearing (acres)	DWA (acres)
1. Limited Residential District along the Medomak River just east of where the Back Palermo Road crosses the corridor	3.3	0/0	0.8	3.3
2. Limited Residential District buffering a wetland along a tributary to Fish Brook	5.0	2/120	1.0	0
3. Wetland Conservation District at a wetland associated with a tributary to Fish Brook	1.0	0/0	0.1	0
4. Limited Residential District buffering a wetland along Fish Brook	4.1	2/120	0.4	0
5. Wetland Conservation District at a wetland associated with Fish Brook	0.6	0/0	0.1	0
6. Resource Protection District buffering a wetland associated with Fish Brook along the Fishtown and Plains Roads	9.8	6/360	1.6	0
7. Wetland Preservation District at the wetland associated with Fish Brook and its tributaries	11.5	1/60	1.2	0
8. Limited Residential District buffering a wetland just north of Plains Road and west of McLain Road	11.3	4/240	0.2	0
9. Wetland Conservation District at the wetland north of Plains Road and west of McLain Road	11.2	3/210	0.7	0
10. Resource Protection Districts at a wetland just north of Plains Road and west of McLain Road	1.7	0/0	0.1	0

1. Limited Residential District along the Medomak River just east of where the Back Palermo Road crosses the corridor (see EXHIBIT 3, Map 1):

Approximately 3.3 acres of this LR district are within the transmission corridor. No transmission structures are proposed in the district, and no accessways will cross it. Species capable of growing tall enough to present a safety hazard will be cleared along the northern side of the right-of-way, leaving a 25-foot buffer along the river banks. A total of 0.8 acre of capable species will be cleared.

The entire district is part of a 323-acre deer wintering area (DWA) designated by the Maine Department of Inland Fisheries and Wildlife (MDIFW), and rated as of “indeterminate” value. The amount of tree clearing within this DWA is negligible (0.25% of the total DWA) and will not adversely affect the deer habitat. The district also includes a 1,284-square foot Amphibian Breeding Area (ABA)⁹, but there will be no impacts on the ABA.

2. Limited Residential District buffering a wetland along a tributary to Fish Brook (see EXHIBIT 3, Maps 1 and 2):

Five acres of this LR district are within the corridor. There are two structures proposed here: one on either side of the tributary to Fish Brook. Each structure will have a total estimated impact of 60 square feet (30 square feet per pole). Approximately 0.96 acre will be cleared of capable species on either side of the road, and in the middle of the corridor. Access to the right-of-way will be from Route 220, and accessways will generally utilize existing trails.

3. Wetland Conservation District at a wetland associated with a tributary to Fish Brook (see EXHIBIT 3, Maps 1 and 2):

One acre of this WC district is within the corridor. There are no structures proposed within the district, but a temporary accessway will cross the wetland, following an established ATV trail in order to avoid creating a new trail. There is a 636 square foot ABA within the ATV trail within this district; however, construction activities are scheduled to take place in late summer, after the amphibians have hatched and left the pool. Less than a tenth-acre of capable species will be cleared within the district.

4. Limited Residential District buffering a wetland along Fish Brook (see EXHIBIT 3 Map 2):

There are a little over 4 acres of this district within the transmission corridor at this location. Two structures proposed here: one on either side of the main stem of Fish Brook. These two structures will have a total estimated impact of 120 square feet, and approximately one third acre of capable species will be cleared within the district.

⁹ “Amphibian Breeding Area” is a term for human-made, seasonally wet depressions where amphibians breed. Often, these areas are ATV ruts. The Maine Department of Environmental Protection does not regulate these areas as vernal pools since they are not naturally occurring and, therefore, do not meet the statutory definition of “vernal pool.”

5. Wetland Conservation District at a wetland associated with Fish Brook (see EXHIBIT 3, Map 2):

There are no structures proposed within this district, 0.6-acre of which is within the transmission corridor. A temporary accessway will cross the wetland at its narrowest point within the corridor, following an established ATV trail and avoiding having to create a new trail. One tenth of an acre of capable species will be cleared within the district.

6. Resource Protection District buffering a wetland associated with Fish Brook along the Fishtown and Plains Roads (see EXHIBIT 3, Maps 2 and 3):

9.8 acres of this district covers various areas within the right-of-way, upland of a single 251-acre wetland complex associated with Fish Brook and two of its tributaries. There are six proposed structures within this Resource Protection District. Each structure will have an estimated 60 square feet of impact, for a total impact area of 360 square feet.

Parts of two ABAs are located within this district. One is located in an excavated area and the other is in a trail rut. The ABAs will not be impacted due to the timing of the construction activities after the amphibians have hatched and left the pools.

Clearing of capable species within this district is estimated at 1.6 acres. Temporary accessways will cross the district, following the ATV trail, except where wetlands can be avoided by diverging from this trail.

7. Wetland Preservation District at the wetland associated with Fish Brook and its tributaries (see EXHIBIT 3, Maps 2 and 3):

This district covers 11.5 acres within the right-of-way and is part of a 251-acre wetland complex associated with Fish Brook and two of its tributaries. One structure is proposed within this district, impacting approximately 60 square feet. The size and extent of the wetland within the corridor make it impossible to avoid placing this structure within the wetland itself. Careful design has placed the other structures in the vicinity of this wetland in upland areas (see #6 above), but it is not practical to avoid placing this one structure within the wetland. Avoiding doing so would require relocating the corridor, or installing tall towers with foundations in order to span the wetland. These alternatives would have greater environmental, visual and landowner impacts than the proposed design.

Parts of three ABAs are located within this district. Two of these are within trail ruts, the other is in an excavated area. The temporary accessway will cross these areas, but will not impact the ABAs because the construction will take place after the amphibians have hatched and left the pools. Approximately 1.2 acres of capable species in a strip in the center of the corridor will be cleared, leaving the shrubs. This will convert the treed strip to the same type of shrub-scrub habitat present in the rest of the district.

Impacts to wetlands will be mitigated through the use of construction mats or gravel fill placed over geotextile fabric. See the Construction Plan submitted as part of the Natural Resources Protection Act application to the Maine Department of Environmental Protection, EXHIBIT 8, for more detail on how wetland habitats will be protected during construction.

8. Limited Residential District buffering a wetland just north of Plains Road and west of McLain Road (see EXHIBIT 3, Maps 4 and 5):

There are 11.3 acres of this LR district within the corridor at this location. Four structures are proposed within the district. These structures will have an estimated total impact of 240 square feet.

There is one ABA in the district, in an impoundment created by an existing road that was originally built to construct Section 388. This habitat will not be impacted by the project in any way.

Clearing of capable species in the center of the right-of-way will impact an estimated 0.2 acre.

9. Wetland Conservation District at the wetland north of Plains Road and west of McLain Road (see EXHIBIT 3, Maps 4 and 5):

A little over 11 acres of a 233-acre wetland is within the corridor and designated as a WC district. There will be three structures within this district, one of which will have three poles rather than the standard two poles. The estimated total impact of the three structures is 210 square feet. As with the other large wetland crossed by the corridor, it is not possible to avoid placing these structures within the wetland without incurring greater impacts.

Avoiding the wetland would mean either rerouting the entire corridor, and/or installing tall towers so that the wetland could be spanned. Either option would mean far greater impacts than the 120 square feet impacted by the proposed design.

There are four ABAs within this district. One was created as a result of disturbance from the pipeline project; two are in ruts created by ATVs; the fourth was created in an area associated with excavation for Section 388. No structures are proposed within these ABAs, and the temporary accessway will only cross part of one, but at a time of year when the amphibians will not be affected. In general, measures will be taken to prevent impacts to the wetland, such as the use of construction mats or gravel placed over geotextile fabric. See the Construction Plan, EXHIBIT 8.

10. Resource Protection Districts at a wetland just north of Plains Road and west of McLain Road (see EXHIBIT 3, Maps 4 and 5):

No structures are proposed within this district.

There is one ABA within this district, in a trail rut. The temporary accessway will cross the district, but will not impact the ABA due to the timing of construction activities late in summer when amphibians are no longer using the pool as habitat. Approximately 0.1 acre will be cleared of capable species.

PERMITTED LAND USES

(From Table 1: Land Uses in the Shoreland Zone District, pages 3-4 of the Town of Liberty Shoreland Zoning Ordinance, approved March, 2010)

The MPRP is classified under the Ordinance as an “essential service,” which, pursuant to Table 1, Item 21.D, is a permitted use in all districts with the approval of the Planning Board. Essential services are also subject to the specific requirements of Section 15(L)(2) of the Ordinance, addressed below, page 11. Within the Resource Protection district, any areas also within the 100-year floodplain, areas with sustained slopes of 20% or greater, or areas supporting wetland vegetation and hydric soils are also subject to the use restrictions and permit requirements designated for the Resource Protection district and Section 15(U). There are no areas within the transmission corridor within the 100-year floodplain, or with sustained slopes of 20% or greater; however, areas supporting wetland vegetation and hydric soils are present within the corridor, and have been described in the discussion of the Resource Protection district above (see page 8). The provisions of Section 15(U) are addressed below, on page 14.

LAND USE STANDARDS

(From Section 15 of the Shoreland Zoning Ordinance)

A. Minimum Lot Standards

Not applicable.

B. Principal and Accessory Structures

Not applicable.

C. Piers, Docks, Wharfs, Bridges, etc.

Not applicable.

D. Campgrounds

Not applicable.

E. Individual Private Campsites

Not applicable.

F. Commercial and Industrial Uses

Not applicable.

G. Parking Areas

There will be no parking areas associated with the project.

H. Roads and Driveways

There will be no new permanent roads or driveways associated with the project, other than CMP-maintained access points and ways suitable for routine and urgent maintenance by its own vehicles. Temporary accessways, which are not considered roads or driveways and which will not add any impervious surface area, will be established for use during the construction phase (see EXHIBIT 3). This will be an ongoing process as access is established to areas undergoing immediate construction. Determinations surrounding the exact nature of the construction of these temporary accessways will be made by the contractor in consultation with an environmental representative. All access paths are temporary and will be removed once construction is complete.

Temporary accessways will be established for general access to the corridor for construction purposes. These temporary accessways will be in place for more than one growing season, and will be removed once all aspects of construction in that area are complete. Access to individual pole sites, either for removal or for construction, will also be achieved by temporary accessways, which will be in place for no more than one growing season.

In general, accessways are created with a minimum amount of disturbance. Capable species will be removed, but shrubs will remain. Measures will be taken to avoid and minimize impacts to streams and wetlands through the use of crane mats, temporary bridges, geotextile fabrics, and culverts, where appropriate. Appropriate erosion controls will be installed wherever warranted. If necessary, mats will be placed parallel to the upland edge as abutments to protect bank stability. There will be no extensive grubbing (grading to remove root systems), but some minor grading may be required to create a stable area for construction vehicles. Streams that are too wide to cross with crane mats or temporary bridges will be avoided.

Once an accessway is no longer needed, all gravel, culverts and geotextiles will be removed, and any areas where soils have been disturbed will be restored to the original grade, then mulched with hay. Native vegetation will be allowed to reestablish itself.

I. Signs

There will be no signage associated with the project.

J. Storm Water Runoff

With the exception of the immediate area occupied by the support structures, there is no increase in impervious surface area associated with the transmission line; therefore, there will be no significant storm water run-off generated from the project. All new construction will be designed to minimize storm water runoff from the site in excess of the natural predevelopment conditions.

K. Septic Waste Disposal

Not applicable.

L. Essential Services

(1) Where feasible, the installation of essential services shall be limited to existing public ways and existing service corridors.

A guiding principle in the design of the MPRP transmission line upgrades has been to utilize the existing transmission line corridors to the maximum extent possible. CMP seeking to widen the existing corridors only where the existing corridors cannot accommodate the proposed upgrades while meeting safety and reliability standards. As a result, the vast majority of the transmission line upgrades proposed as part of the MPRP are located within or immediately adjacent to existing corridors. Co-location of the transmission line upgrades, as opposed to the creation of new corridors, has multiple benefits, including the minimization of impacts to communities, individual property owners, and the environment. Within Liberty, the construction of the new 115 kV transmission line will occur entirely within the existing transmission line corridor.

(2) The installation of essential services . . . is not allowed in a Resource Protection or Stream Protection District, except to provide services to a permitted use within said district, or except where the applicant demonstrates that no reasonable alternative exists. Where allowed, such structures and facilities shall be located so as to minimize any adverse impacts on surrounding uses and resources, including visual impacts.

The corridor along which the new transmission line will run crosses the Resource Protection district in several places. The installation of essential services, other than road-side distribution lines, is not allowed in a Resource Protection or Stream Protection District, except to provide services to a permitted use within said district, or except where the applicant demonstrates that no reasonable alternative exists. For the MPRP, no reasonable alternative exists to locating transmission structures in the RP district.¹⁰ CMP has, to the greatest extent practicable, sited each individual structure so as to avoid – and where unavoidable, to minimize – adverse impacts on surrounding uses and resources. As part of this avoidance and minimization effort, CMP has attempted to site the H-frame structures so that none is located within the Resource Protection district. In Liberty, however, six structures will be located in the RP, due to the fact that the existing corridor crosses the Resource Protection district and the structures cannot be sited in a manner that allows the entire district to be spanned. Furthermore, siting a minimum number of structures within the RP makes it possible to keep structures out of the wetlands themselves.

There are no reasonable alternatives for locating these structures outside the RP. The amount of ground disturbance associated with the planned structures will be small (*i.e.*, limited to the immediate vicinity of the pole placements), and since the project is co-located within the existing transmission line corridor that contains structures of a similar bulk and style, locating structures within the RP causes the least overall impact when compared with the alternatives. Avoiding this district would require expanding or moving the existing transmission line corridor, or erecting much taller and much more substantial structures (e.g.,

¹⁰ Although CMP does not believe the MPRP work in Liberty involves “installation” of an essential service because an essential service already exists in this location, the MPRP meets the requirement that no reasonable alternative exists.

steel towers with concrete footings) to achieve the required spans. The overall environmental and visual impacts of either of these alternatives would be greater than the impacts associated with the project as planned. (See the sections related to specific Shoreland Zone Districts starting on page 5 for more detailed information.)

(3) Not applicable.

M. Mineral Exploration and Extraction

Not applicable.

N. Agriculture

Not applicable.

O. Timber Harvesting

Not applicable.

P. Clearing of Vegetation for Development

A total of approximately 6 acres of clearing of vegetation will be required within the shoreland zone to accommodate the project and ensure that the project meets federal reliability and safety standards (in accordance with P(1) of this standard) (see the table on page 5). The amount of clearing will be limited to that which is necessary for development of the project, and is generally limited to removal of species that are capable of growing tall enough to interfere with the transmission lines (so-called “capable species”). Non-capable species are allowed to remain to ensure that the corridor is vegetated, which prevents erosion and provides early successional-type habitat. No grubbing (i.e., stump removal) will take place. The cutting work will be performed using equipment typical of logging operations, including cable and hook skidders, forwarders, tree movers, chain saws, and logging trucks. In general, all trees, saplings of capable species, and sometimes tall shrubs are cut at ground level. All root systems are left intact. All slash (i.e., limbs, tree trunks, wood chips, etc.) from the cutting operation is disposed of in accordance with the Maine Slash Law (12 M.R.S.A. § 9333). The remaining vegetation is typically composed of scattered growth of small shrubs of non-capable species and herbaceous plants. After initial clearing, the condition of these cleared areas generally resembles that of a high-quality forestry operation – although there is very limited height structure to the vegetation, great care is taken to prevent rutting and erosion.

After construction is completed, non-capable species are allowed to grow to ensure that the corridor is vegetated, which prevents erosion and provides wildlife habitat. Over a relatively short period of time (generally within one calendar year), the newly cleared portions of the corridors will exhibit the early-successional habitat type that is typical of existing transmission line corridors in Maine.

See the attached maps (EXHIBIT 3), and the sections related to specific Shoreland Zone Districts, starting on page 5, for more detailed information.

Q. Erosion and Sedimentation Control

With the exception of the immediate area around the base of the support structures, there will be no increase in impervious surface area associated with the transmission line. The amount of ground disturbance associated with this project will be limited to the immediate vicinity of the pole placements and the impacts associated with access roads. CMP has developed a standard manual, “Environmental Guidelines for Construction and Maintenance Activities on Transmission line and Substation Projects” (2010), which it uses as a routine part of all transmission and substation projects. (A copy of the manual is attached as EXHIBIT 7.) This manual contains erosion and sedimentation control requirements, standards, and methods that will be used to protect soil and water resources during construction of the various MPRP components. The manual was developed in consultation with the Maine Department of Environmental Protection (DEP) and is largely based on DEP’s *Maine Erosion and Sediment Control BMPs*, dated March 2003, and DEP’s Chapter 500, and contains specific Best Management Practices appropriate for electric transmission line and substation construction. These guidelines will be followed in the construction of transmission lines.

R. Soils

Based on the applicants’ analysis of the Soil Survey Geographic Database compiled by the United States Department of Agriculture – Natural Resources Conservation Service, soils within the transmission line corridor will accommodate the proposed MPRP construction activities. Soil constraints within the transmission line corridor will be managed and mitigated through implementation of erosion and sediment control measures, proper site and project design, and special construction procedures. If concrete foundations for specific poles should need to be constructed, soil borings will be conducted and the foundations will be designed in accordance with soil characteristics.

S. Water Quality

To minimize spill potential during construction, no fueling or maintenance of vehicles will be performed within 100 feet of wetlands, streams or other sensitive natural resources. After construction, the electrical transmission line corridor will be maintained to encourage the growth of scrub-shrub vegetation. Trees within the corridor that are capable of growing up into the conductors (“capable species”) must be removed for safety and reliability reasons. CMP uses a selective herbicide program to treat an area once every four years to maintain an early successional stage of growth. Herbicide is selectively applied (using a low-pressure backpack applicator) to capable species to prevent growth (or re-growth of a cut plant) of individual plants. CMP does not use herbicides within 25 feet of any waterbody or wetland with standing water. Crew forepersons are certified by the Maine Pesticide Control Board, and all herbicides are EPA registered. The selective use of herbicides within the transmission line corridor does not impose a threat to groundwater quality and will not impair designated uses or the water classification of any water body.

T. Archaeological and Historic Resources

Following consultation with the Maine Historic Preservation Commission (MHPC) CMP has conducted extensive pre-historic archaeological, historic archaeological and historic

architectural surveys along the project corridor. The investigations have not found any archaeological or historical resources in Liberty. Survey reports have been submitted to the MHPC.

U. Site Limitations

(1) Within the 100 year floodplain

Not applicable.

(2) Areas with sustained slopes of 20% or greater

Not applicable. Neither the topographic map nor the Soil Conservation Service's Soil Survey maps for Liberty indicate any sustained slopes within CMP's right-of-way greater than 20%.

(3) Areas within a project site which encompass 2 or more acres of wetland vegetation and hydric soils (which are not otherwise designated as a Wetland Conservation or Wetland Preservation District) shall be subject to the same standards and permit requirements as defined for the Resource Protection District.

These areas are designated on the maps in EXHIBIT 3 as Resource Protection. See the description of the project within these districts, starting on page 5, and the discussion of how the project meets the standards for Essential Services in Resource Protection districts, page 11.

(4) Land areas along rivers subject to severe erosion

Not applicable. The Soil Conservation Service's Soil Survey of Waldo County, Maine shows the area around the Medomak River within the transmission corridor as Borosaprists soils. These soils are described as level, very poorly drained organic soils, and not highly erodible.

APPROVAL STANDARDS

(From Section 16 D of the Shoreland Zoning Ordinance)

The proposed use will:

1. Maintain safe and healthful conditions.

The proposed project will maintain the same safe and healthful conditions that are already present in the transmission line corridor. The transmission line corridor and the structures within it are maintained to established industry standards to ensure the safety of utility workers and the general public. Maintaining sufficient clearances around the conductors is paramount to the safe operation of the line. These clearances are achieved through appropriate siting of the structures themselves, and through vegetation maintenance practices as described above. All construction will be in accordance with CMP's transmission standards, general industry standards, and "Good Utility Practice," including all necessary live-line working clearances, strength factors, and reliability factors as governed by the National Electrical Safety Code (NESC). In all instances, the line will be designed to meet or

exceed the NESC and other standards, as applicable. The transmission line and all facilities will be operated in full compliance with CMP safety standards, which fully comply with Federal Occupational Safety & Health Administration requirements.

A health concern that is sometimes expressed revolves around the electric and magnetic fields produced by transmission lines. These fields are produced by any electric equipment or anything that carries electric current. The World Health Organization and numerous other scientific agencies around the world have studied the issue extensively. These studies have been unable to establish that electric and magnetic fields produced by transmission lines such as those being proposed as part of the MPRP cause any adverse health effects. Furthermore, there is no scientific basis to project any adverse health effects as a result of the electric and magnetic fields produced by transmission lines associated with this project. Accordingly, this standard has been met.

2. Not result in water pollution, erosion, or sedimentation to surface waters.

As described above with respect to Ordinance Sections 15(J) and (S), the MPRP will not result in water pollution, erosion, or sedimentation to surface waters.

3. Adequately provide for the disposal of all wastewater.

There will be no wastewater disposal required for this project, and therefore this standard has been met.

4. Not have an adverse impact on spawning grounds, fish, aquatic life, bird, or other wildlife habitat.

Impacts to wildlife habitat will be largely avoided through the use of the existing service corridor, which has been in place for several decades. In general, given the existing landscape characteristics of the site, construction and maintenance of the project is not expected to create conditions that are not already common to the project area. It is fully anticipated that local wildlife populations will adapt and respond to any additional alterations much as they already do to ongoing land uses within the vicinity of the proposed project. Therefore, impacts to wildlife are expected to be minimal to non-existent.

In areas where clearing within deer wintering areas is required, the percentage of the habitat where trees will be removed is not significant (0.25% of the total designated DWA). Vernal pools will be avoided entirely through careful siting and placement of poles. Transmission structures will be located within wetlands only when avoiding them would cause greater impacts (e.g., by creating a new transmission corridor or by installing taller structures that may require foundations and create visual impacts that could otherwise be avoided). Once installed, the transmission line structures, due to the minimal amount of ground surface area they occupy, will have no significant impact.

All accessways will be temporary. Where accessways cross sensitive areas, construction mats, temporary bridges, geotextiles and other measures will be used to minimize these temporary impacts. Once the accessways are removed, the area will be restored. See the attached maps, (EXHIBIT 3), the sections related to specific Shoreland Zone Districts, beginning on page 5, and the Erosion and Sedimentation Control Plan, EXHIBIT 7, for more detailed information.

5. Conserve shore cover and visual, as well as actual, points of access to inland waters.

The proposed project will take place entirely within the existing corridor, and since the corridor already contains structures of a similar nature, the proposed project will not significantly affect visual points of access to inland waters, and will have no impact on actual points of access to inland waters. The corridor will continue to be maintained in a vegetated state, thereby preserving a similar degree of shore cover to that which currently exists. Twenty-five foot buffers along stream banks will be maintained, where vegetation removal will be minimized (see x).

6. Protect archaeological and historic resources as designated in the comprehensive plan.

Not applicable, as Liberty has no comprehensive plan. In addition, as discussed above with respect to Ordinance Section 15(T), the project will not impact any historical or archaeological resources.

7. Will avoid problems associated with flood plain development and use.

The right-of-way does not cross the 100-year flood plain.

8. Be in conformance with the provisions of Section 15, Land Use Standards.

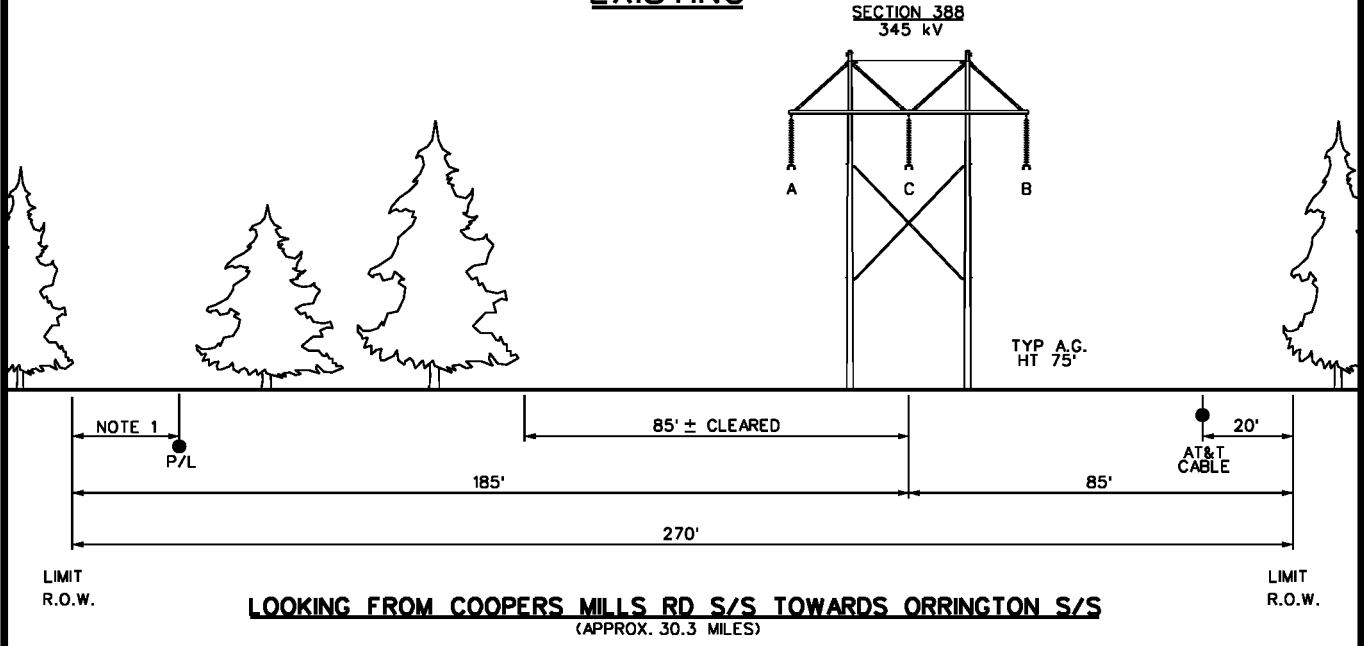
As discussed above with respect to Ordinance Sections 15(A) through (U), above, this project complies with all of the provisions of Section 15 of the Ordinance.

EXHIBIT 1: Transmission Line Corridor Location Map

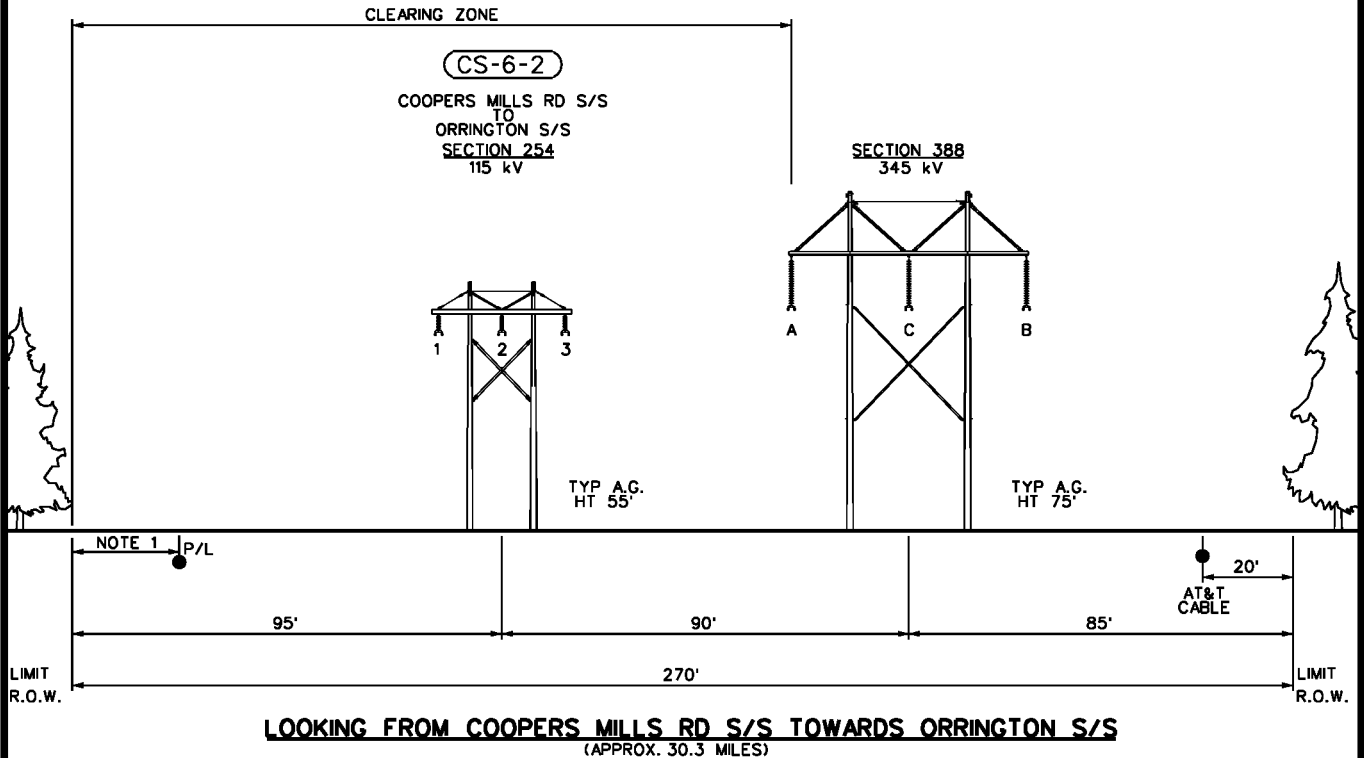
EXHIBIT 2: Transmission Line Configuration Cross Section

NOTE 1: GAS PIPELINE LOCATION
VARIES ALONG R.O.W.

EXISTING



PROPOSED



THIS DRAWING SHALL
BE REVISED ON THE
CADD SYSTEM ONLY

-DRAFT- FOR REVIEW ONLY				SECTION 388	POLE 10 TO 274	STA. 1412+80 TO 2981+72			
ENG. CONTRACTOR				MAINE POWER RELIABILITY PROGRAM					
EXISTING AND PROPOSED R.O.W. ALTERNATIVE N5 FOR N-1-1 ANALYSIS									
F	REVISED STATIONING/ REVISED CLEARING ZONE	2/12/10	PEI	CHECKED		DESIGNED KJF DATE 8/27/07			
E	REVISED S254 STRUCTURE/SPACING/ REVISED CLEARING ZONE	12/1/09	PEI	SGW	8/4/09		DRAWN SAT APPR.		
D	ADDED CLEARING ZONE	9/23/09	PEI	CENTRAL MAINE POWER CO. TRANSMISSION ENGINEERING					
C	ADDED SEQUENCING/PHASING	8/7/09	PEI				SEGMENT 6		
B	ADDED SECTION NO.	4/11/08	PEI				SHEET N5-6-2		
A	ISSUED FOR REVIEW	9/28/07	PEI						
NO.	REVISION	DATE	BY	SCALE	NTS				

EXHIBIT 3: Transmission Line Corridor Strip Maps

EXHIBIT 4: Summary of Structure Heights

EXHIBIT 6: Proof of Right, Title or Interest

EXHIBIT 7: Erosion and Sedimentation Control Plan

EXHIBIT 8: Construction Plan

EXHIBIT 7-1
Temporary Timber Mat Paths

EXHIBIT 7-2

Stream Crossing Using Equipment Mat Bridge (Typical)

EXHIBIT 7-3

**Typical Use of Laydown Area for a
Wood Pole Structure Installation**

EXHIBIT 7-4

**Longer-term Access Path (Geo-tech Fabric and Clean Gravel)
and Culvert Details**

EXHIBIT 7-5

**Longer-term Access Path (Typical) –
Stream Crossing**

EXHIBIT 7-6

**Typical Use of Laydown Area
for a Steel Pole Structure Installation**

EXHIBIT 7-7

**Example Plan Drawing of
Light-and Heavy-Duty Access Ways**

EXHIBIT 7-8

Photos of Typical Equipment Mat Placement

EXHIBIT 7-9

Example of Stream Crossing Using Equipment Mats

EXHIBIT 7-10
Structure Site Preparation