Section 8
Historic Sites

In consultation with the Maine Historic Preservation Commission (MHPC), investigations have been conducted for pre-contact archaeology, European archaeology, and historic architecture that may be affected by the Maine GenLead Project. Copies of the reports (without the voluminous appendices) presenting the results of those investigations area attached as Appendices. The full reports have been submitted to MHPC for their review.

The Phase IA pre-contact archaeological investigation along the transmission line corridor concluded that there are 26 archaeologically sensitive areas within the proposed transmission line corridor that should receive additional archaeological study in the form of subsurface testing to determine whether archaeological sites are present (Appendix 8-1). The sensitive areas consist of river, stream, and brook crossings of the right-of-way. During the summer of 2010, additional subsurface archaeological investigation was conducted at 13 locations, and the results of this investigation were submitted to MHPC.

The Euro-American Phase I survey found no historic archaeological resources and found the project area has low sensitivity for Euroamerican archaeological resources (Appendix 8-2). The report recommends no further archaeological survey for the Maine GenLead 115-Kilovolt Generator Lead transmission line as it is presently designed.

The historic architecture survey concluded that no National Register properties would be affected by the Maine GenLead project (Appendix 8-3). Two properties potentially eligible for inclusion on the National Register of Historic Places were identified as potentially impacts, the Glenwood School in Glenwood and the Mattasseunk Dam and Weldon Hydroelectric Station at the Penobscot River. The report concluded there would be no effect on the Glenwood School because the line would not be visible. The report also stated that there would be no adverse effect on the dam and hydroelectric station considering the existing transmission line and overall hydroelectric setting.

By letter of November 10, 2010, the MHPC concurred with the survey findings that the Maine GenLead project would have no adverse effect on historic architectural resources. MHPC also concluded that since no archaeological resources were found, that no further consultation on archaeological resources was necessary. (Appendix 8-4).

Appendix 8-1

Results of a PreContact Period Archaeological Assessment of the Maine GenLead 115 kV Generator Lead, Aroostook and Penobscot Counties, Maine

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Introduction: Project Overview

This review for Precontact period archaeological sensitivity is for the proposed generator lead that will connect the amended Oakfield Wind Project with a substation in Chester, Maine (Figure 1). Electricity generated by the wind turbines would be collected at 34.5 kV, stepped up to 115 kV at the proposed substation location on South Oakfield Road, and transmitted to a point in Chester where it would tie into the exiting Bangor Hydro Electric system.

Maine GenLead, LLC is proposing to construct an approximately 59 mile 115kV generator lead extending from the Keene Road substation in Chester to the substation servicing the Oakfield Wind Project in Oakfield. The purpose of this 115 kV generator lead is to provide a direct interconnect between the Oakfield Wind Project and the ISO New England transmission system to accommodate the energy output of the expanded Oakfield Wind Project. The design will be primarily single pole structures with double and triple poles, and associated guying, as necessary to support the integrity of the line. The amount of new clearing associated with the corridor will vary from 35 to 120 feet, depending on adjacency to existing infrastructure.

The line will extend through 12 towns and townships---Chester, Woodville, Mattawamkeag, Molunkus Township, Macwahoc Plantation, North Yarmouth Academy Grant, Reed Plantation, Glenwood Plantation, T3R3 WELS, T4R3 WELS, Linneus, and Oakfield Through Chester and Woodville, the line is adjacent to the existing Line 56 transmission line corridor for approximately 7 miles to an intersection with the existing 345 kV MEPCO corridor in Woodville. It then follows, with minor deviations, the MEPCO corridor northeast for approximately 33 miles to the Glenwood Plantation/Haynesville town line. From this point, the line runs north along the westerly side of town boundaries for approximately 16.5 miles, to the town of Oakfield, then approximately 2.5 miles to the substation located at the easterly string of wind turbines for the Oakfield Wind Project.

This report details the results of a review for Precontact period cultural resources within the proposed transmission line right-of-way. The following section examines prehistoric archaeological resource sensitivity. The last section makes cultural resource management recommendations for the project.

Prehistoric Archaeological Resource Assessment

Locations of prehistoric archaeological sites in Maine and elsewhere are predicted on the basis of natural and cultural historical models that incorporate a variety of types of information from several disciplines including anthropology, biology, natural history, and geology. In addition, Maine archaeologists depend to a great degree on historical experience to guide assessments of where to look for the archaeological remains of past inhabitants.

Several inter-related types of information inform the initial search for archaeological sites and materials. Because Maine's prehistoric hunting and gathering peoples were dependent on natural resources available for exploitation in northern Maine, information that seeks to characterize the type and distribution of natural resources within the project region is essential to an understanding of archaeological site location. Choices related to mobility and settlement also

were to a great degree influenced by the nature of the environment. For these reasons, archaeologists look to environmental conditions, both as they exist today and as they are thought to have existed in the past, in an attempt to predict archaeological potential for a project area. Finally, data on previous archaeological discoveries in Maine reveal patterns of prehistoric site location and distribution. This information is used to help predict the setting and type of sites that have a potential to exist in the project area. Consolidation of background information in these areas provides an environmental and cultural historical context in which predictions regarding archaeological resources within the project area can be made.

Environmental and Cultural Context

Evolution of the Early Holocene Landscape. Geologic forces associated with the advance and subsequent retreat of the Laurentide Ice Sheet (LIS) during the end of the Pleistocene epoch shaped the landscape of the region in which the project is located. The LIS advanced across Maine in a southeasterly direction, scouring the landscape as it moved, before attaining a maximum position at Georges Bank in the Gulf of Maine around 22,000-20,000 years ago (Hughes et al. 1985). By 18,000 years ago, it began to retreat across the Gulf of Maine due to the incursion of warm, marine waters underneath the ice. The LIS is believed to have reached the present Maine coastline around 14,000 years ago (Schnitker et al. 2001), and interior portions of Maine by 12,800 years ago (Smith and Hunter 1989). It left behind unsorted clay, silt, sands and rock fragments (till) across much of the landscape in its retreat. These till deposits conform to the local bedrock topography and form most of the surficial deposits in the region. They drape the transmission line area as well.

Colonization of the region by flora during and following deglaciation is characterized by continuous changes, particularly from 14,000 to 9,000 years ago. This time frame marks the transition from an open, tundra-like environment to woodlands, and eventually to a closed forest across much of the New England region (Davis and Jacobson 1985). Pollen and macrofossil studies from lake cores suggest species responded individually to climatic changes in a time-transgressive manner, following the ice front northward. Woodland vegetation, dominated by poplar and spruce, is believed to have spread along the coastal lowlands to New Brunswick by 12,000 years ago, and pushed into interior portions by 11,000 years ago. The transition from woodlands to closed forests initially began in southern Maine around 12,000 years ago and developed rapidly over the region between 11,000 to 10,000 years ago. The closed forests were initially dominated by spruce, balsam fir, birch, and poplar, but pine emerged as the dominant species approximately 1,000 years after closure of the forests. The emergence of pine, and concomitantly the demise of spruce, signaled a warming trend that reached its peak sometime around 5,000 years ago. Studies from lake cores suggest this warming trend was characterized by a drier climate and lower water levels, particularly between 8,000-6,000 years ago (Almquist-Jacobson et al. 2001). Cooler, wetter conditions prevailed after about 4,500 years ago, resulting in an increase in birch, followed by a return of spruce around 2,000 years ago (Almquist-Jacobson and Sanger 1995). During this time, water levels rose, particularly from 3,000-2,500 years ago (Almquist-Jacobson et al. 2001:196).

Precontact period Archaeological Record. The archaeological record of Maine is long and complex and dates back more than 11,000 years. Much of this record has been studied in

areas to the south and west of the proposed project area. The rarity of known Precontact period archaeological sites around the project area may be due to the scarcity of cultural resource management surveys conducted in the region and to the lack of research interests of university archaeologists who have tended to focus their studies on coastal Maine and areas geographically closer to their universities. There are exceptions; however, and these are noted in the overview of the Precontact period of Maine presented below.

Archaeologists have divided this Precontact period record into three major periods known as the Paleoindian, Archaic, and Ceramic cultural periods (Table 1). Further subdivisions within these periods area based on similarities in artifact forms and cultural adaptations over broad regions (Spiess 1990). It is important to note that these divisions are archaeological constructs and that their temporal boundaries represent changes perceived as culturally significant by archaeologists in the region. They do not necessarily coincide with Maine Native Americans' perceptions of their history as passed down through oral history.

Paleoindian Period (ca. 11,500-9,500 years ago). The earliest archaeological culture in the region is referred to as the Paleoindian period. The hallmark of Paleoindian period artifacts is the fluted spear point, which was presumably used to hunt large game species, many of which are now extinct. These spear points are lanceolate in shape and possess a long, groove-like scar caused by a flake struck from their base on both faces. Other diagnostic tool forms include steep-edged end scrapers and other unifacially-flaked implements. Paleoindian tool kits are characteristically manufactured from high quality lithic materials often derived from quarry sources that are located great distances from habitation sites.

In Maine, the Paleoindian period dates from approximately 11,500 to 9,500 years ago when much of the landscape was still vegetated in tundra and/or woodlands. The Paleoindian subsistence/settlement pattern is characterized as highly mobile hunters and gatherers reliant mainly on caribou that presumably were abundant at that time (Spiess, Wilson, and Bradley 1998). Flintknappers crafted tools from very fine-grained, colorful rocks obtained from a limited number of sources in the region. Site locations are typically removed from present day water bodies (Spiess, Wilson and Bradley 1998). These locations were rarely occupied during later cultural periods and are often strategically located above some form of low-lying terrain that may have been suitable habitat for caribou and other game animals or near out-crops of fine-grained rocks that were quarried for tool-making. These sites are typically indicative of short-term habitations by small groups of people, perhaps in some cases by even a single, extended family.

The end of the Paleoindian period and subsequent transition into the Early Archaic period is poorly understood. Archaeological evidence indicates that during the later Paleoindian period, fluted spear points were replaced by smaller, unfluted points. Other point styles also emerge in the region, most notable of which are long, slender lanceolate points with distinct parallel flake scars (Doyle et al. 1985; Cox and Petersen 1997; Will and Moore 2002). These technological changes coincide with the transformation of the environment from more open, woodlands to closed forests. By the Early Archaic period, the archaeological record contains a dramatically different material culture than that recovered from sites dating to the preceding Paleoindian period.

Less than 100 Paleoindian period sites have been discovered in Maine. They consist of campsites that vary in size from less than 300 m^2 to more than 18,000 m^2. Some of the best reported Maine Paleoindian sites include the Michaud Site located in Auburn (Spiess and Wilson 1987), the Vail and Adkins Sites located on the shores of Aziscohos Lake in extreme western Oxford County (Gramly 1982, 1988), and the Hedden Site, which is located on the Kennebunk Plains (Spiess and Mosher 1994; Spiess et al. 1995). Two additional, unpublished, Paleoindian sites from southern Maine are under study by Nathan Hamilton. Another unpublished location is site 84.5 which is located along the North Branch of the Dead River in the Flagstaff Lake project area. Also well known, but underreported includes the Paleoindian site complex at the thoroughfare of Munsungun and Chase Lakes, which is located west and north of the project area.

Table 1. Comprehensive Planning Archaeological Study Units

Time Period (RCYBP)	Study Unit
11,500 - 10,200	Fluted Point Paleoindian Tradition
10,200 - 9,500	Late Paleoindian Tradition
10,000 - 6,000	Early and Middle Archaic Traditions
6,000 - 4,200	Late Archaic: Laurentian Tradition
6,000 - 2,000	Late Archaic: Small-stemmed Point Tradition
4,500 - 3,700	Late Archaic: Moorehead Phase
3,900 – 3,000	Late Archaic: Susquehanna Tradition
3,000 - 450	Ceramic Period

Note: RCYBP equals radiocarbon years before present; AD equals calendar years. All dates are estimates. Source: Spiess (1990 and pers. comm. 1999).

Archaic Period (ca. 9,500-3,000 years ago). The Archaic period represents the longest archaeological cultural period in the region, spanning around 6,500 years. This time frame is indicative of persistent cultural adaptations, as inferred from artifact assemblages, which lasted over several millennia. Early and Middle Archaic subsistence and settlement patterns were different from those of the Paleoindian period, as suggested by the location of Archaic period sites along present-day water bodies, and the presence of food remains of aquatic species, particularly beaver, muskrat, turtles, and fish.

Archaeological assemblages dating to the Early and Middle Archaic periods in Maine are different from their predecessors, and somewhat unique to the Maine region, particularly with respect to the Early Archaic period. Tools were typically produced from local stone, often collected in cobble form, and lack the finely crafted, chipped stone spear points that characterize the Paleoindian period. Rather, flakes and roughly fashioned unifacial tools dominate the assemblages. In addition, a new technology using pecking and grinding techniques appears for the first time in the archaeological record (Robinson 1992). This new technology produced a suite of groundstone tools that became more elaborate through time. By the Middle Archaic period, chipped stone spear points become increasingly more abundant and the first cemetery sites occur. These cemetery sites reveal mortuary practices that included the lavish use of red ochre, and the offering of grave goods, such as gouges, slate spear points, and stone rods (Willoughby 1898; Moorehead 1922; Robinson 1992). Commonly referred to as the “Red Paint

People," sites dating to their tradition have typically been found east of the Kennebec River with some sites displaying a strong focus on maritime resources.

The close of the Late Archaic period is characterized by another archaeological tradition known as the Susquehanna Tradition (Sanger 1979; Bourque 1995). It is widespread in Maine and New England. Susquehanna Tradition subsistence appears to have been focused more on terrestrial resources than marine. Diagnostic tool forms include large, broad-bladed chipped stone spear points.

The relationships between the various Late Archaic traditions continue to be a source of debate among Maine archaeologists. At the root of the argument is whether the various archaeological assemblages of the Late Archaic reflect local, long-term cultural adaptations, or movement of people into the region with different cultures. Whatever the origins of the cultural changes observed, they again roughly coincide with increasing changes in the environment that provided more favorable habitat for deer populations, and other modern species as well.

Archaic period sites are rarely reported from Aroostook County except in areas along major watersway, such as the St. John River (see Sanger 1977, 1978, and 1979; Putnam 1997). They are, however, commonly known from large lakes in Piscataquis County, which is adjacent to Aroostook County. Importantly, there were probably strong cultural ties between Archaic period people living in northern Maine and people living in New Brunswick. This is indicated by the fact that Maine sites often contain lithic materials that are known to have come from New Brunswick (see Burke 2000, for example).

Ceramic Period (ca. 3,000-450 years ago). The introduction of pottery manufacture and use in Maine defines the onset of what Maine archaeologists call the Ceramic period (Sanger 1979). In other parts of the Northeast, this cultural period is referred to as the Woodland period. The differences between the two terms is mainly that hunting and gathering for food remained the primary means of subsistence throughout much of Maine and the Maritimes, while a reliance on horticulture and a tendency toward larger, more permanent settlement patterns developed in other regions during the same time period. Ceramics first appear in the archaeological record of Maine around 3,000 years ago and they persist until contact with Europeans when clay pots were replaced in favor of iron and copper kettles that were traded for beaver pelts and other animal furs.

Ceramic period sites are abundant in Maine, along both the coast and in the Maine interior (Sanger 1979). Along the coast, they are most visible in the form of shell middens, which have attracted the attention of professional and amateur archaeologists since the late 19th century (Wyman 1868). Sites in the interior are most common along waterways, ponds, and lakes. Assemblages from the interior differ from coastal sites in that food bone remains are poorly represented due to differences in preservation. One of the best reported on Ceramic period sites in Aroostook County was excavated on the Aroostook River in Caribou, Maine. Known as the Chan Site, it contained an abundance of end scrapers, many of which were manufactured from lithic materials obtained in New Brunswick (Burke 2000).

The picture that emerges from Ceramic period sites is one showing long-standing cultural adaptation to the diversified use of local resources. In addition, the nature of artifact forms present, and certain types of stone recovered, from Ceramic period sites indicate trade and communication with peoples far to the north, south, and west. By the end of the period, historical and archaeological evidence suggests horticulture was practiced in southern Maine. The Ceramic period ends with European contact around 450 years ago. At this time, most of the artifacts attributable to Precontact period inhabitants of Maine disappear from the archaeological record.

Precontact Period Archaeological Sensitivity

Just as today, people in the Precontact period did not uniformly occupy the landscape; Maine state archaeological survey maps, which show site locations, affirm this conclusion. Some areas were more attractive than others to people deciding where to establish camps and villages. Some locations were used more often than others, because of the availability of unique resources (e.g. plants, animals, and raw materials) or perhaps even through historical accident. And, some areas may simply not have been frequented and used at all. Against this reality is the likelihood that not all human behavior produces archaeologically visible traces. Additional problems affecting understanding of Precontact period landuse is the fact that even when an archaeological site is produced, it may not last long due to preservation biases created by local environmental conditions. Interpretation is further confounded, because sharp differences in how land is used and modified in the present compared with the Precontact past has resulted in the destruction of many archaeological site locations.

Mindful of these concerns, the design of Precontact period archaeological resource sensitivity assessments to discover site locations in Maine is supported by more than 100 years of archaeological field investigations and several decades of testing predictive models to determine where sites may be expected to occur. All of these efforts demonstrate that proximity to water resources was a dominant variable used by Precontact period hunter/gatherers for selecting site locations (see, for example, Kellogg 1987, 1994; Spiess 1992, 1994; Will et al. 1995; Will et. al. 1997; Will et. al. 1999). This conclusion is likely not simply a sampling bias. For example, several archaeological cultural resource surveys conducted in eastern Maine (at least in part) during the last 20 years support the conclusion. First, are results obtained from the Phase I survey of the Maritimes and Northeast natural gas pipeline by ARC, Inc. in 1997-1998 (Will et al. 1997; Will et al. 1999) and by TRC in 2004. Briefly, the sensitivity design for the survey focused on identifying the potential for areas within that project's APE (a 200 foot or 62 m wide corridor) to contain Precontact archaeological sites. Predictions of where archaeological resources might be present, and where they were not likely to be present, were made based on a set of key environmental variables for which data could be readily obtained:

High Sensitivity:
fresh or saltwater resources within 150 meters (m);
well-drained sandy soils;
level to moderately level topography (0 to 3 percent slope).

Moderate Sensitivity:

fresh or saltwater resources within 150 to 500 m;
well-drained to moderately well-drained, sandy to cobbly soils;
moderately level topography (3 to 8 percent slope);
minimal to moderate ground disturbance
archaeological sites in vicinity of project area.

Low Sensitivity:
no fresh or salt water for more than 500 m;
poorly drained or inundated areas;
steep topography (8 percent slope or greater);
moderate to extensive ground disturbance;
no archaeological sites in vicinity of project area.

The model was tested with information collected from more than 300 miles of the Maritime & Northeast pipeline corridor. On that project, more than 2,500 testholes were excavated in almost equal proportions among areas of high, medium, and low sensitivity. An important conclusion of this undertaking was that all Precontact period sites (with the exception of one Paleoindian period artifact) were found adjacent to water.

Second, another large archaeological survey using a similar sensitivity model was conducted in Penobscot and Washington Counties by the Maine State Museum under the direction of Dr. Stephen Cox in 1989 (Cox 1989). He surveyed a proposed Bangor Hydroelectric Company 345 kV transmission line route, and examined 87 sampling areas of varying archaeological sensitivity along the route from Orrington to the St. Croix River in Baileyville. A total of 996 testholes were excavated. Three, small, Precontact period archaeological sites were discovered, and all of them were located along a major river or stream.

Third, a major survey on a revised Bangor Hydroelectric Company 345 kV transmission line route was conducted by TRC in 2004 (Clark and Moore 2004). That survey examined a route parallel to the existing Maritimes and Northeast pipeline from Orrington to the St. Croix River. In all, 18 locations and landforms were tested for the presence of Precontact cultural sites and materials using 317 testholes. No Precontact sites or materials were discovered.

Proximity to water is unquestionably a sensitive variable for predicting the locations of Precontact period hunter/gatherers who inhabited Maine. In fact, approximately 95% of all Precontact period archaeological sites reported in Maine (out of a sample of more than 5,000 sites) have been discovered either along the seacoast or along the margins of interior rivers, streams, lakes, and wetlands (Spiess 1994). Even in New York, archaeologist Robert Funk's research (1993) has similarly shown that Precontact period sites are generally located within 300 feet of water.

Most of the sites discovered near water are campsites or villages. They may also have been food extraction locations: places to fish, hunt waterfowl, or dig clams. However, the locations of ritual sites (e.g., cemeteries) or resource extraction sites (e.g., rock quarrying for tool making) are often not near water and are discovered more often by accident rather than by design. They constitute the 5% of sites in the Precontact period inventory of archaeological

sites recorded in Maine. Although they represent only a small portion of known sites, they are as equally important as near-water sites for understanding the lifestyles of Precontact period people.

Archaeological sensitivity (or the ability to offer educated judgments about where archaeological resources may have been located) of the project area is derived from taking into consideration where archaeological sites have already been discovered in Aroostook County (and adjacent counties), where sites have not been discovered as a result of systematic survey, and knowledge about the environments present in the project area.

What is known about the project area is that soils are generally poorly drained (largely glacial till draped over bedrock) and that topography is very hilly (Thompson and Borns 1985). Consequently, proximity to water in the project area is the only variable with high sensitivity for Precontact period archaeological resources. Low archaeological sensitivity was assigned to everywhere else. In addition to habitation sites, special purposes sites, such as rock quarrying locations (e.g., Mt. Kineo at Moosehead Lake and the Munsungun Formation west of Ashland) have been identified as Precontact period archaeological sites. The existence of such sites is dependent on the presence of fine-grained lithic material (rock that produces a conchoidal fracture when broken to make chipped stone tools). The bedrock geology of the project area was reviewed from maps (Osberge, Hussey, and Boone 1985) to determine whether fine-grained lithic materials might be present. None were noted; however.

Precontact Period Archaeological Sensitivity within the Transmission Line Corridor

Review of Maine Historic Preservation Commission files (on March 10, 2009) and application of sensitivity criteria discussed above resulted in the identification of 26 locations within the proposed transmission line corridor that are sensitive for archaeological resources. These locations consist of river, stream and brook crossings that are identified in Table 2. The locations are referenced by map sheets provided by Stantec, Inc., U.S.G.S 7.5 minute topographic sheet name, MHPC map designations and reports, and crossing names (if available). Although there are some sites (dating to the general Prehistoric period or attributable to either Archaic or ceramic period sites) on topographic sheets that also contain portions of the transmission line, there is only one site potentially within the right-of-way. This site (123.9) is located on MHPC map 123C at the Penobscot River crossing. The site is described in a journal written by Joseph Treat in 1820 as the location of an Indian campsite (Pawling 2007). Dr. Arthur Spiess of the MHPC scaled Treat's map to overlay it onto the Mattaseunk Lake topographic 7.5 minute topographic sheet to estimate the site's location.

Conclusions and Recommendations

There are twenty-six archaeologically sensitive areas within the proposed transmission line corridor that should receive additional archaeological study in the form of subsurface testing to determine whether archaeological sites are present. The sensitive areas consist of river, stream, and brook crossings of the right-of-way. This additional archaeological work is currently underway.

Table 2. Correlation Between Project Maps and MHPC Maps and Archaeological Data.

Project Reference Map Number	**USGS Map Sheet Name**	**MHPC Map Designation**	**Water Crossings**	**Archaeological Sites Recorded or Archaeological Surveys**	**MHPC Report Numbers**
1	(Oakfield, Maine [1986]/Meduxnekeag Lake, Maine [1989])	148C/148D	1	No/no	NA
2	(Oakfield, Maine [1986])	148D	1	no	NA
3	(Oakfield, Maine [1986])	148D	no	no	NA
4	(Oakfield, Maine [1986])	148D	1	no	NA
5	(Oakfield, Maine [1986])	148D	no	no	NA
6	(Monument Brook, Maine [1989]/Oakfield, Maine [1986])	137B/148D	no	no	NA
7	(Monument Brook, Maine [1989])	137B	no	no	NA
8	(Monument Brook, Maine [1989])	137B	no	no	NA
9	(Monument Brook, Maine [1989])	137B	no	no	NA
10	(Monument Brook, Maine [1989])	137B	no	no	NA
11	(Monument Brook, Maine [1989])	137B	2	no	NA
12	(Monument Brook, Maine [1989])	137B	1	no	NA
13	Alder Brook, Maine [1989]/ 137B (Monument Brook, Maine [1989])	137D	no	no	NA
14	Alder Brook, Maine [1989]	137D	1	no	NA
15	Alder Brook, Maine [1989]	137D	1	no	NA
16	Alder Brook, Maine [1989]	137D	1	no	NA

Table 2. Correlation Between Project Maps and MHPC Maps and Archaeological Data, Continued.

Project Reference Map Number	**USGS Map Sheet Name**	**MHPC Map Designation**	**Water Crossings**	**Archaeological Sites Recorded or Archaeological Surveys**	**MHPC Report Numbers**
17	Alder Brook, Maine [1989]	137D	no	no	NA
18	Alder Brook, Maine [1989]	137D	1	no	NA
19	Alder Brook, Maine [1989]	137D	no	no	NA
20	Alder Brook, Maine [1989]	137D	1	no	NA
21	Reed Pond, Maine [1988]/Alder Brook, Maine [1989]	124A/137D	no/no	No/no	NA
22	Reed Pond, Maine [1988]	124A	no	no	NA
23	Reed Pond, Maine [1988]	124A	1	no	NA
24	Reed Pond, Maine [1988]	124A	no	no	NA
25	Reed Pond, Maine [1988]	124A	no	no	NA
26	Reed Pond, Maine [1988]	124A	no	no	NA
27	Reed Pond, Maine [1988]	124A	2	no	NA
28	Reed Pond, Maine [1988]	124A	1	no	NA
29	Molunkus Lake, Maine [1988]	123B	3	No sites, but survey at Macwahoc River	3556
30	Mattawamkeag, Maine [1988]	123D	no	Sites on Penobscot River and Mattawamkeag Rivers in sw quarter of topo sheet	2764, 3702
31	Mattawamkeag, Maine [1988]	123D	no	Sites on Penobscot River and Mattawamkeag Rivers in sw quarter of topo sheet	2764, 3702

Table 2. Correlation Between Project Maps and MHPC Maps and Archaeological Data, Continued.

Project Reference Map Number	**USGS Map Sheet Name**	**MHPC Map Designation**	**Water Crossings**	**Archaeological Sites Recorded or Archaeological Surveys**	**MHPC Report Numbers**
32	Mattawamkeag, Maine [1988]	123D	no	Sites on Penobscot River and Mattawamkeag Rivers in sw quarter of topo sheet	2764, 3702
33	Mattawamkeag, Maine [1988]	123D	no	Sites on Penobscot River and Mattawamkeag Rivers in sw quarter of topo sheet	2764, 3702
34	Mattawamkeag, Maine [1988]	123D	1	Sites on Penobscot River and Mattawamkeag Rivers in sw quarter of topo sheet	2764, 3702
35	Mattaseunk Lake, Me [1988]	123C	1	Site 123.9 in project APE at Penobscot River crossing, other sites near confluence with Salmon Stream	NA
36	Mattaseunk Lake, Me [1988]	123C	1	Site 123.9 in project APE at Penobscot River crossing, other sites near confluence with Salmon Stream	NA
37	Mattaseunk Lake, Me [1988]	123C	2	Site 123.9 in project APE at Penobscot River crossing, other sites near confluence with Salmon Stream	NA

Table 2. Correlation Between Project Maps and MHPC Maps and Archaeological Data, Continued.

Project Reference Map Number	**USGS Map Sheet Name**	**MHPC Map Designation**	**Water Crossings**	**Archaeological Sites Recorded or Archaeological Surveys**	**MHPC Report Numbers**
38	Mattaseunk Lake, Me [1988]	123C	no	Site 123.9 in project APE at Penobscot River crossing, other sites near confluence with Salmon Stream	NA
39	Mattaseunk Lake, Me [1988]	123C	no	Site 123.9 in project APE at Penobscot River crossing, other sites near confluence with Salmon Stream	NA
40	Mattaseunk Lake, Me [1988]	123C	no	Site 123.9 in project APE at Penobscot River crossing, other sites near confluence with Salmon Stream	NA
41	Lincoln Center [1988]	109A	no	no	NA
42	Lincoln Center [1988]	109A	no	no	NA
43	Lincoln Center [1988]	109A	1	no	NA
44	Lincoln Center [1988]/Nine meadow Ridge [1988]	109A/108B	no	No/yes, site on Penobscot River in se quarter of topo sheet; survey (no sites) in se corner of topo sheet along Mattamiscontis Stream	2780,2991

Table 2. Correlation Between Project Maps and MHPC Maps and Archaeological Data, Continued.

Project Reference Map Number	**USGS Map Sheet Name**	**MHPC Map Designation**	**Water Crossings**	**Archaeological Sites Recorded or Archaeological Surveys**	**MHPC Report Numbers**
45	Nine Meadow Ridge [1988]	108B	1	No/yes, site on Penobscot River in se quarter of topo sheet; survey (no sites) in se corner of topo sheet along Mattamiscontis Stream	2780,2991
46	Nine Meadow Ridge [1988]	108B	1	No/yes, site on Penobscot River in se quarter of topo sheet; survey (no sites) in se corner of topo sheet along Mattamiscontis Stream	2780,2991
47	Nine Meadow Ridge [1988]	108B	no	No/yes, site on Penobscot River in se quarter of topo sheet; survey (no sites) in se corner of topo sheet along Mattamiscontis Stream	2780,2991

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Results of Phase I Precontact Archaeological Survey of the GenLead LLC Transmission Line, Aroostook and Penobscot Counties, Maine

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October 13, 2010

Management Summary

This review for Precontact period archaeological sensitivity is for Maine GenLead, LLC's proposed 59 mile long 115kV transmission line extending from the Keene Road substation in Chester to the substation servicing the Oakfield Wind Project in Oakfield. The purpose of this 115 kV transmission line is to provide a direct interconnect between the Oakfield Wind Project and the ISO New England transmission system to accommodate the energy output of the expanded Oakfield Wind Project. The design will be primarily single pole structures with double and triple poles, and associated guying, as necessary to support the integrity of the line. The amount of new clearing associated with the corridor will vary from 50 to 100 feet, depending on adjacency to existing infrastructure.

Fieldwork on the Project was completed from July 5 - 20, 2010. Project directors James Clark and Karen Mack conducted walkover survey of 20 locations and determined subsurface testing was needed at 13 of those areas. Areas that were selected for sampling generally fell into one or more categories. Most areas exhibit archaeologically sensitive soils and were on landforms adjacent to major streams, drainages, or wetlands. Many locations that were identified as having "moderate to high archaeological sensitivity" based on map inspection were determined to not require testing based on field observation. These areas either border minor or intermittent streams and wetlands, are disturbed by logging activities, or display no marked break in slope or inhabitable surface. Subsurface testing of these test areas entailed the excavation of 215 50 cm^2 testholes along 30 transects within the APE. No prehistoric cultural materials or sites were discovered during Phase I archaeological survey of the Project. No further survey for prehistoric resources is recommended for

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Introduction: Project Overview

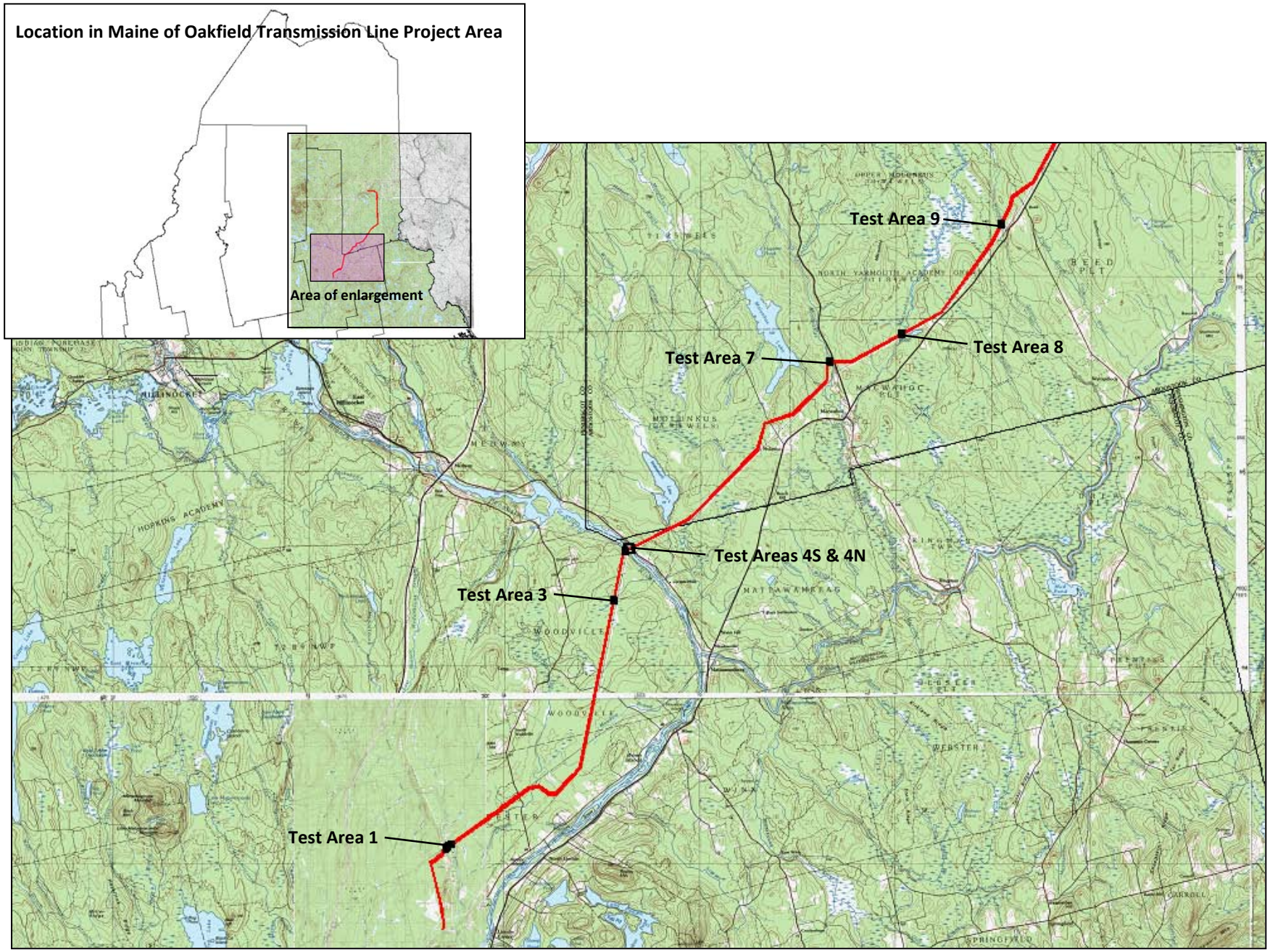
This review for Precontact period archaeological sensitivity is for Maine GenLead, LLC's proposed 59 mile long 115kV transmission line extending from the Keene Road substation in Chester to the substation servicing the Oakfield Wind Project in Oakfield. The purpose of this 115 kV transmission line is to provide a direct interconnect between the Oakfield Wind Project and the ISO New England transmission system to accommodate the energy output of the expanded Oakfield Wind Project. The design will be primarily single pole structures with double and triple poles, and associated guying, as necessary to support the integrity of the line. The amount of new clearing associated with the corridor will vary from 50 to 100 feet, depending on adjacency to existing infrastructure.

The proposed transmission line will extend through 12 towns and townships including: Chester, Woodville, Mattawamkeag, Molunkus Township, Macwahoc Plantation, North Yarmouth Academy Grant, Reed Plantation, Glenwood Plantation, T3R3 WELS, T4R3 WELS, Linneus, and Oakfield. Through Chester and Woodville, the line will run adjacent to the existing Line 56 transmission line corridor for approximately seven miles to an intersection with the existing 345 kV MEPCO corridor in Woodville. It then follows, with minor deviations, the MEPCO corridor northeast for approximately 33 miles to the Glenwood Plantation/Haynesville town line. From this point, the line runs north along the westerly side of town boundaries for approximately 16.5 miles, to the town of Oakfield, and then approximately 2.5 miles to the substation located at the easterly string of wind turbines for the Oakfield Wind Project.

This report details the results of Phase I archaeological fieldwork on the GenLead LLC transmission Line Project (Project). It is divided into several sections. We first look at various types of information that provide the environmental and cultural context for the present study. These factors in general provide guidelines for the evaluation of the potential significance of archaeological resources within a given project area. We next discuss the research design and survey methods employed by the present study. This section is followed by a detailed discussion of the results of the Phase I archaeological resource survey on the Project. Finally, we present our conclusions and make cultural resource management recommendations for the project.

Environmental Context

The proposed area of potential effect (APE) of the transmission line crosses a variety of physical environments and variations exist in topography, surficial materials, ground cover, and historical/cultural activity along its route from Oakfield south to Chester. Along its route, the proposed APE traverses forested highlands, forested and open wetlands, and numerous major and minor brooks and streams, which include moving south to north Medunkeunk Stream, Ebhorse Stream, Eagle Stream, Penobscot River, Mattaseunk Stream, Little Molunkus Stream, Molunknus Stream, Macwahoc Stream, Wytopitloc Stream, Smith Brook, Alder Brook, West Branch of Mattawamkeag River, East Branch of Mattawamkeag River, Beaver Brook, Mud Lake Brook, Centerline Brook, and Moose Brook. Figures 2 and 3 illustrate typical environments encountered within the Project.



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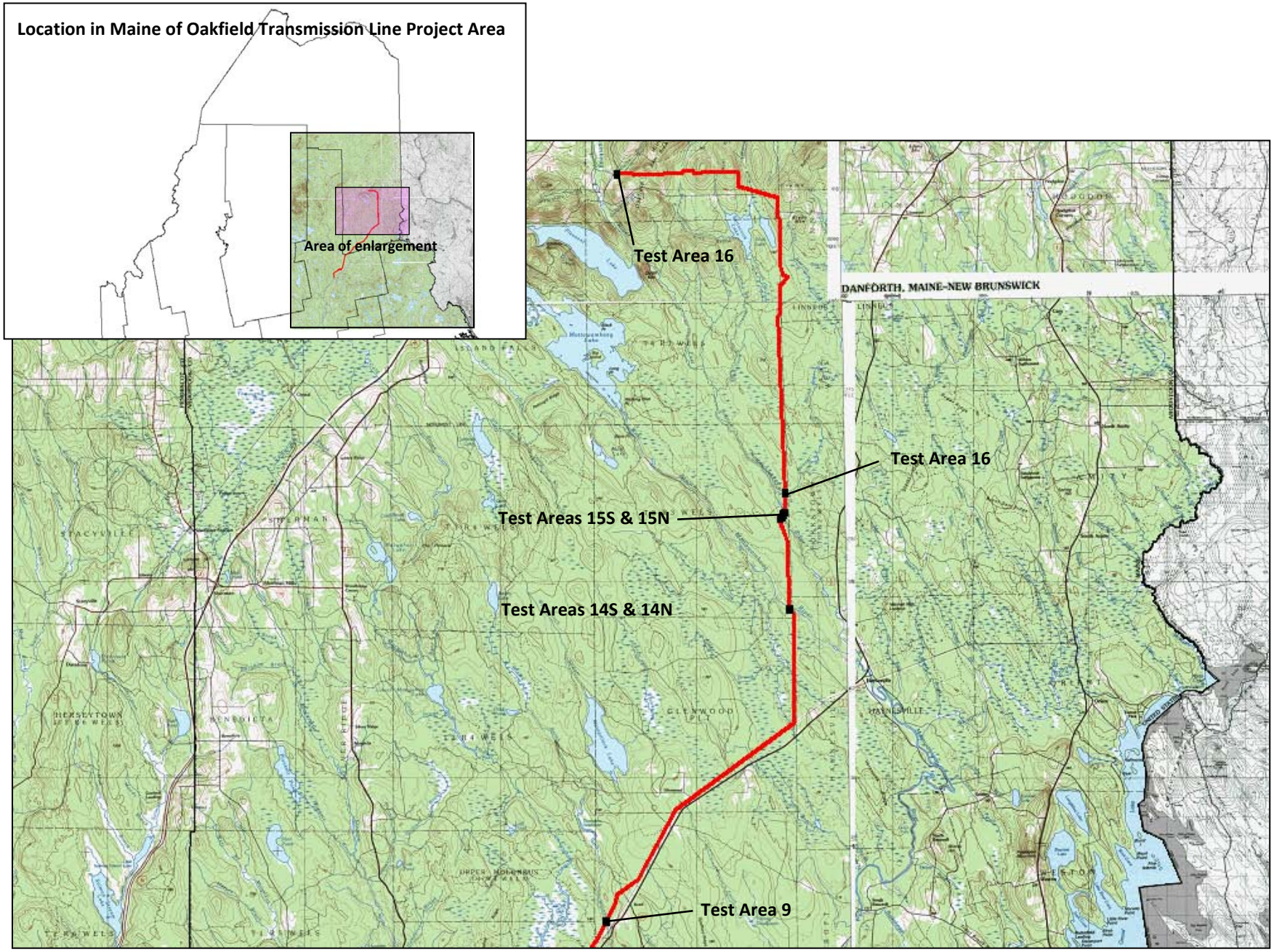
Maine GenLead, LLC
Oakfield Transmission Line Project

Figure 1A. Southern portion of the Oakfield Transmission Line Project APE showing the location of Phase 1 archaeological test areas.



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Maine GenLead, LLC
Oakfield Transmission Line Project

Figure 1B. Northern portion of the Oakfield Transmission Line Project APE showing the location of Phase 1 archaeological test areas.

a.

b.

c.

d.

Maine GenLead LLC Transmission Line Phase I Archaeological Survey **71 Oak Street** **Ellsworth, Maine 04605** **207-667-4055**	Figure 2. a.) Medunkeunk Stream crossing TA1 b.) Beaver Brook crossing TA 16; c.) unnamed tributary to the Penobscot River TA3; and d.) south side of the Mattamwamkeag River TA 14S.

Surface features and topography largely reflect events associated with the Wisconsinan glaciation, the last major glacial advance in the Northeast. Most of the landforms along the transmission line route alternate between irregular terrain composed of angular till to water-laid features and sediments produced by glacial run-off and melt-water drainage. Because these variations in Project environment relate to the area's geologic, glacial, and post-glacial history, the following description of the environment of eastern Maine is presented to provide a general overview of the environmental context for the Precontact period cultural occupation in the Project area.

Bedrock Geology. Much of the exposed bedrock seen throughout the Project area owes its origins to events leading up to and during the Acadian Orogeny between 400-360 million years ago. This mountain building period stems from the convergence and subsequent collision of the North American plate with a crustal block of the Eurasian Plate known as Avalonia. The collision caused widespread metamorphism and resulted in large slabs of crust being subducted into the mantle, forming plutons that later intruded into overlying metamorphosed rock. Some of these plutons are exposed on the surface today and can occasionally be noted in Penobscot County.

The associated deformation of the orogeny is reflected in major northeast-southwest trending folds and faults. This deformation is observed across the state in the form of linear, northeast-southwest trending ridges and drainages. One of the major fault areas is the Norumbega Fault Zone, a two-mile wide area of crushed rock, extending from below Portland through Bangor to Vanceboro. This defines the northern boundary of a remnant piece of Avalonia welded onto North America (Kendall 1993:168-169). The fault zone was created when older rock was thrust onto younger rock during the latter stages of plate collision. Much of the clasts and fragments contained in glacial drift and till that blanket much of the terrain crossed by the Project route is composed of rock from this deformation.

Certain types of bedrock were particularly well suited for use by Native people for the manufacture of stone implements. In Maine, fine-grained, aphanitic rocks of meta-sedimentary and volcanic origin—cherts, felsite, and quartz predominantly—because of their flaking qualities, were used to make flaked stone tools such as projectile points and scraping/processing tools. Another class of tools, manufactured through a combination of flaking, pecking, and grinding, were typically manufactured from other rock types, including basalt, slate, and phyllite.

Outcroppings of knappable stone that might have attracted quarrying activity by precontact native people are not present within the Project area. South of the Project route along the Penobscot River, Sanger (1996) has postulated extensive prehistoric quarrying of phyllite outcrops along the Penobscot River where people extracted stone for groundstone tool manufacture. It is worth noting that, given the extent of glacial mixing and movement of lithic materials across the state, rocks of all types were likely available to prehistoric people in the Project area in the form of surficial and outwash/runoff deposits.

Surficial Geology. During the last glaciation of the Pleistocene, the Laurentian Ice Sheet (LIS) flowed south-southeast across the present coastline to reach a terminal position in the Gulf of Maine at Georges Bank some 18,000 to 20,000 years B.P. (Hughes et. al. 1985). At that time, the area through which the Project runs was depressed under an enormous weight of ice. As the ice retreated across the landscape, marine waters followed it into the interior of present-day Maine as far north as the town of Lincoln. Fine silt flowing from the ice margin settled as it met calmer marine waters, blanketing coarser glacial deposits in lower elevations and river valleys. These deposits were named the "Presumpscot Formation" by Bloom (1963), and their internal characteristics, fossil assemblages, and chronological relationships with other surficial materials have greatly enhanced understanding of the evolution of the present landscape. Deposits associated with this marine transgression are encountered in the Penobscot River valley and eastward from Blackman Stream, and these may

contribute to extensive areas of wetland in the Project area. Till-based silts, outwash sands and gravel deposits, a well as small dune deposits of very fine sand are also present within the Project area.

Eventually, the landscape began to rebound; the rate of rebound exceeded the rate of inundation by sea level rise, so that the early Maine coastline extended beyond its present-day limits out onto the Continental Shelf. Proglacial sandy outwash moved out of the ice in meltwater streams, filling valleys and forming deltas (Thompson 1982; Smith and Hunter 1989). The lower sea levels resulted in rivers quickly down-cutting through softer sediments. Kelley et. al. (1992) show a rapid rise in sea level prior to 10,000 years ago. After that time, the rise slowed and since about 9,000 years ago, it has been rising at a slow and steady rate of approximately 1.5 to 2 mm per year. Since then, rivers have continued to incise their valleys, adding deposits of alluvial sediments along flood plains.

This process of incision and infilling was more extensive in the western and southern parts of Maine than in the Project area. Whereas major drainages in the southern portion of Maine show considerable deposition of Holocene alluvium, drainages in the north and east, such as the Penobscot and St. Croix have slower moving waterways with poorly defined margins and very little, if any, floodplain development. In fact, many of the streams and rivers in the Project area appear to still be eroding along their margins rather than depositing sediment. This disparity is most likely the result of a combination of factors related to topography, the materials through which the rivers and streams are down-cutting, and the type of sediment load being carried.

The overlying sediment throughout most of the Project is the direct result of glacial advances and retreats during the Pleistocene epoch of the Quaternary Period. During this time, ice sheets moved from northern centers of accumulation outward toward the edges of the Continental Shelf and, in the process, scoured weathered bedrock to fresh surfaces and realigned drainages. Former V-shaped valleys in the mountains were rounded and smoothed to create U-shaped valleys. In the wake of the ice sheets, mass amounts of unsorted clay, silt, and debris (till) were deposited across the landscape filling hollows and forming ridges or moraines. Melt water flowing underneath the glaciers reworked and deposited sediments along its coarse and margins, often as long, sinuous ridges called "eskers."

Vegetation. Since the retreat of the LIS and subsequent regression of marine waters, vegetation in the Project area has undergone a series of changes throughout the Holocene leading up to and continuing to the present day. These changes were not synchronous throughout the Project area, but rather occurred as successive, location-specific responses of individual species to changes in the physical environment. Some of the changes may have been more pronounced in certain portions of the Project area than in others. Many of the changes are well documented by Davis and Jacobson (1985) and Jacobson and Davis (1988) and briefly summarized here.

The initial vegetation to colonize the landscape left bare by the LIS consisted of tundra and open woodland species of poplar, spruce, and paper birch. By 12,000 years ago, a closed spruce forest began to form over southern Maine and progressively moved northward. During the early Holocene (ca. 10,000-7,000 years B.P.), spruce declined dramatically and was replaced predominately by species of pine, as well as oak and birch. Between 8,000-5,000 years ago, pine declined considerably, birch and oak less so, with the emergence of hemlock. With the exception of a short period of decline in hemlock as well as the emergence of beech between 5,000-4,000 years B.P., forests remained relatively unchanged until about 1,500-1,000 years B.P. when spruce and fir show slight increases, perhaps related to a cooling trend.

By the arrival of Europeans in the 17th century, many of these tree species were already beginning to show decline, particularly hemlock. By the end of the 19th century, vegetation had been significantly modified by human disturbances. These disturbances resulted from numerous activities, namely logging, agriculture and transmission line construction. While agriculture, commerce and industry played a role along Penobscot and Mattawamkeag Rivers, logging, appears to have been (and continues to be) the major economic activity pursued over most of the Project area.

Due to the extensive history of intensive logging in most parts of the Project area, the character of vegetation today may not well reflect the forest resources that were available to precontact people. In general, the Project crosses through stands of mixed coniferous and deciduous forest of variable age. Currently vegetation in the Project area includes grasses, ferns, and a mix of immature pine, maple, beech, birch, spruce, and fir in variable composition. Large areas of wetlands are also present throughout the Project area usually associated with minor and major drainages.

Soils. Soil development in the Project area is the result of a long, continuous process involving the interaction of a variety of dynamic natural forces. The variability of these forces in the Project area is ultimately reflected in the variable types of soils observed. Factors influencing the development are inevitably related to climate, parent material, relief, organic activity, time, and disturbance. Some broad generalizations of soil characteristics observed in the Project area are directly related to parent materials and disturbance.

Better drained sediments such as sand, gravel, and some till show typical northern forest soil sequences that display a surface organic mat, overlying albic (leached) and spodic (enriched with sesquioxides) horizons. These horizons are diagnostic of a soil type referred to as "spodosols." Poorer drained materials such as silts, clay, and some till show very little alteration of the parent material and fit a category of soil types known as "entisols."

In most parts of Maine, disturbance to soils is primarily related to the formation of an agricultural plow zone horizon that extends 20-30 cm below ground surface. However, plow zones were not presence within the areas where subsurface testing was conducted. The most common disturbances to soils observed (and thus to archaeological materials contained in them) occurs in the form of natural processes such as wind throw of trees, and those associated with logging and recreational/sporting activities (ATVs) in the Project area. These most commonly result in scoured and mixed surface soil horizons.

Cultural Context

The Precontact period archaeological record of Maine is long and complex dating back more than 11,000 years. The following is an overview of the three major periods that archaeologists use as a framework for identification of prehistoric cultural resources discovered in Maine. These three periods are known as the Paleoindian, Archaic, and Ceramic cultural periods (Table 1). Further subdivisions within these periods are based on similarities in artifact forms and cultural adaptations over broad regions (Spiess 1990). It is important to note that these divisions are archaeological constructs, and that their boundaries represent changes perceived as culturally significant by archaeologists in the region. Future research may further refine some of these divisions, or find they are not as significant as originally suspected.

Paleoindian Period (ca. 11,500-9,500 years ago). The earliest prehistoric inhabitants in the region, and throughout North America, are referred to as Paleoindians. Paleoindians are believed to be the first people to migrate into North America and, in their pursuit of large game, rapidly colonized the continent (Martin 1973). The hallmark of Paleoindian peoples is the fluted spear point, which was presumably used to hunt large game species, some of which are now extinct. These spear points are lanceolate in shape and possess a long, groove-like flake scar struck from their base on both faces. In Maine, the Paleoindian period dates from approximately 11,500 to 9,500 years ago when much of the landscape was still vegetated in tundra and/or woodlands. Paleoindian peoples living in the region are characterized as highly mobile hunter and gatherers reliant mainly on caribou that presumably were abundant in the environment of that time (Spiess, Wilson, and Bradley 1998). They crafted their tools out of very fine-grained, colorful rocks obtained from a limited number of sources in the region, and they camped in locations typically removed from present day water bodies (Spiess, Wilson, and Bradley 1998). These locations were rarely occupied during later cultural periods and are often strategically located above some form of low-lying terrain that may have been suitable habitat for

caribou and other game animals. Their campsites are typically indicative of short-term habitations by small groups, perhaps in some cases by even a single, extended family.

The end of the Paleoindian period, and subsequent transition into the Early Archaic period is poorly understood. Some evidence indicates that during the later Paleoindian period, fluted spear points became less desirable and were replaced by smaller, unfluted points. Other point styles also emerge in the region, most notable of which are long, slender, lanceolate points with a distinctive parallel flaking technology (Doyle et. al. 1985; Cox and Petersen 1997; Will and Moore 2002). These cultural changes coincide with the transformation of the forests from more open, woodland

Table 1. Comprehensive planning archaeological study units.

Time Period	Study Unit
11,500 - 10,000 RCYPB	Fluted Point Paleoindian Tradition
10,200 - 9,500 RCYBP	Late Paleoindian Tradition
10,000- 6,000 RCYBP	Early and Middle Archaic Traditions
6,000 - 4,200 RCYBP	Late Archaic: Laurentian Tradition
6,000 - 4,000 RCYBP	Late Archaic: Small-stemmed Point Tradition
4,500 - 3,700 RCYBP	Late Archaic: Moorehead Phase
3,900 - 3,000 RCYBP	Late Archaic: Susquehanna Tradition
3,000 RCYBP – AD 1500	Ceramic Period
AD 1500 – AD 1675	Early Contact
AD 1675 – AD 1760	Late Contact
AD 1760 – AD 1940	Integration with Euro-American Life

Note: RCYBC equals radiocarbon years before present; AD equals calendar years. All dates are estimates. Sources: Spiess (1990:104) and Spiess (pers. comm. 1999)

environments to closed forests. By the Early Archaic period, the archaeological record contains a dramatically different material culture than recovered from sites dating to the preceding Paleoindian period.

Archaic Period (ca. 9,500-3,000 years ago). The Archaic period represents the longest cultural period in the region, spanning around 6,500 years. This time frame is indicative of persistent cultural adaptations, as inferred from artifact assemblages, which lasted over several millennia. Although Early and Middle Archaic populations probably continued a nomadic hunter and gatherer lifestyle, their subsistence and settlement patterns were different than those of the Paleoindians. This is suggested by the location of most Early and Middle Archaic sites along present day water bodies, and the presence of food remains of aquatic species, particularly beaver, muskrat, and fish.

Archaeological assemblages dating to the Early and Middle Archaic periods in Maine are different than their Paleoindian predecessors, and somewhat unique to the Maine region, particularly with respect to the Early Archaic. Tools were typically made from local stone, often collected in cobble form, and assemblages lack the finely crafted, chipped stone spear points of the Paleoindian period. Rather, flakes and crudely fashioned unifacial tools dominate the assemblages. In addition, a new technology using pecking and grinding techniques appears for the first time in the archaeological

record (Robinson 1992). This new technology produced a suite of groundstone tools that became more elaborate through time. By the Middle Archaic, chipped stone spear points become increasingly more abundant and the first cemetery sites occur. These cemetery sites reveal mortuary practices that included the sprinkling of graves with red ochre, and the offering of grave goods, such as wood working gouges, slate spear points, and stone rods (Moorehead 1922; Robinson 1992). This component, commonly referred to as the "Red Paint People," sites dating to their tradition are best know from Maine east of the Kennebec River.

The close of the Late Archaic period is characterized by another archaeological tradition known as the Susquehanna tradition (Sanger 1979; Borstel 1982; Bourque 1995). It is widespread in Maine and New England. The people of the Susquehanna Tradition appear to have been more focused on a terrestrial economy than a marine economy. They largely abandoned the use of red ochre in their graves, and often cremated their corpses rather than buried them intact. Diagnostic tool forms include large, broad-bladed chipped stone spear points.

The relationships between the perceived Late Archaic cultural groups continue to be a source of debate among Maine archaeologists. At the root of the argument is whether the various archaeological assemblages of the Late Archaic reflect local, long-term cultural adaptation or movement of people into the region, bringing with them a different culture and way of life. Whatever the origins of the cultural changes observed, they again roughly coincide with increasing changes in the environment that provided more favorable habitat for deer populations, and possibly other more modern species as well.

Ceramic Period (ca. 3,000-450 years ago). The introduction of pottery manufacture and use in Maine defines the onset of what Maine archaeologists call the Ceramic period (Sanger 1979). In other parts of the Northeast, this cultural period is referred to as the Woodland period. The differences between these two terms is mainly that hunting and gathering for food remained the primary means of subsistence throughout much of Maine and the Maritimes, while a reliance on horticulture and a tendency toward larger, more permanent settlements developed in other regions during the same time period. Ceramics first appear in the archaeological record of Maine around 3,000 years ago and they persist until contact with Europeans when clay pots were replaced in favor of iron and copper kettles that were traded for beaver pelts and other animal furs.

Ceramic period sites are abundant in Maine, along both the coast and in the Maine interior (Sanger 1979). Along the coast, they are most visible in the form of shell middens, which have attracted the attention of professional and amateur archaeologists since the late 19th century (e.g., Mercer 1897). Shell midden sites are found all along the Maine coast and contain discarded shells of clams, oysters, mussels, and quahogs, bones of both terrestrial and marine animals, as well as broken pottery sherds and discarded stone and bone tools. Sites in the interior are most common along waterways, ponds, and lakes (Sanger 1979). Assemblages from the interior differ from coastal sites in that the bone assemblages are poorly represented due to differences in preservation. The picture that emerges from Ceramic period sites is one showing a long-standing cultural adaptation to the diversified use of local resources. In addition, the nature of artifact forms present and certain types of stone recovered from Ceramic period sites indicate trade and communication with peoples to the far north, south, and west. By the end of the period, historical and archaeological evidence suggests horticulture was practiced in southern Maine. The Ceramic period ends with European contact around 450 years ago. At this time, most of the artifacts attributable to prehistoric inhabitants of Maine disappear from the archaeological record so that tracing specific cultural connections between present-day Maine Indians and their prehistoric ancestors is not possible.

Previously Discovered Sites and Archaeological Studies

Review of Maine Historic Preservation Commission files identified only one archaeological site potentially within the right-of-way. This site (123.9) is located on MHPC map 123C at the Penobscot

River crossing. The site is described in a journal written by Joseph Treat in 1820 as the location of an Indian campsite (Pawling 2007). Dr. Arthur Spiess of the MHPC scaled Treat's map to overlay it onto the Mattaseunk Lake topographic 7.5 minute topographic sheet to estimate the site's location. Very few Precontact period sites have been documented within the region surrounding the Project area.

Most of the archaeological investigations in Penobscot and Aroostook County and eastern Maine in general, when they have not been mandated by cultural resource management objectives, have concentrated on the reporting of artifact collections and artifact "spot finds," or identifying and occasionally investigating in some detail, coastal prehistoric archaeological sites. East of the project area near the coast, a fluted projectile point from the Grand Lake area was reported by Kopec (1985) and several fluted projectile points and unifaces found on a hillside in the Moosehorn National Wildlife Refuge in Baring, Maine (Bonnichsen, Bourque, and Young 1983). These specimens belong to the Fluted Point Paleoindian Tradition and would likely date to more than 10,000 RCYBP. However, significant doubt remains regarding the provenience of these artifacts (Spiess and Wilson 1987:198-201). Significant lithic quarries and related sites are located north and west of the project area on Moosehead Lake and in the Munsungun Lake area.

The lower portion of the transmission line in located in eastern Penobscot County and crosses the both the Mattawamkeag and Penobscot Rivers. A great deal is known about the Precontact period cultural history of the Penobscot River drainage. The Penobscot River drainage has been the focus of research by both professional and amateur archaeologists for more than a century. Early interest in the region was sparked by the discovery of "Red Paint" sites, Late Archaic Period cemeteries with ochre-stained burial objects. Charles C. Willoughby, of Harvard's Peabody Museum, examined some of these sites in the lower Penobscot drainage and published his findings in 1935. A local geologist and antiquarian, Walter B. Smith, excavated the Eddington Bend Site located less than 500 m from the proposed BHE Project route in the 1920s (Moorehead 1922:134-143). Some of his collection is now in the Maine State Museum, although many of the diagnostic artifacts are missing (Sanger 1984).

The work by Willoughby, Smith, and others in Penobscot Bay and on Moosehead Lake, as well as the expeditions in Ohio, Georgia, and the southwest carried out by his own institution, Phillips Academy, encouraged Warren K. Moorehead to conduct an archaeological survey of New England. Between 1912 and 1918, Moorehead's crews excavated a number of "Red Paint" cemeteries in the region, including the Godfrey's Cemetery in Old Town and the Sandy Point Site, eight miles north of Bucksport near Project route's western terminus in Orrington. The results of his work appear in the well-illustrated *Report on the Archaeology of Maine* (1922).

Moorehead (1922:220) knew about several sites on the Penobscot River between Bangor and the Milford-Old Town dam, but only Eddington Bend, excavated by Smith, is mentioned. Upriver of Eddington, Moorehead's crews dug at the Hathaway Cemetery in Passadumkeag (Moorehead 1922:48-56) and surveyed unsuccessfully for burials along Olamon Stream.

Following the publications of Moorehead and Willoughby in the early 1920s and 30s, professional archaeological investigations in the lower Penobscot River Valley were not conducted until the late 1960s. In 1968, Dean Snow followed up on Moorehead's work at the Hathaway Cemetery (Snow 1969) and supervised test excavations on the south end of Indian Island in Old Town (Belcher and Sanger 1988).

A decade after Snow's work at the Hathaway Site, David Sanger and Robert MacKay of the University of Maine began interdisciplinary research at the Hirundo and Young Sites in Alton (Sanger et. al. 1977; Borstel 1982). The Hirundo Site includes important Moorehead Tradition and Late Archaic, Laurentian Tradition-related zones. The basal stratum may have been used during Middle Archaic times. The Young Site contains largely intact Susquehanna Tradition and Ceramic Period occupations.

In the 1990s, large-scale archaeological surveys of the Lower Penobscot Valley were mandated by cultural resource management legislation. The University of Maine at Orono conducted a number of surveys in the central Penobscot River drainage, from Bangor to Howland. These include (from south to north) the Bangor dam to the Veazie Dam, the Veazie Reservoir, the Basin Mills Project, the Milford Reservoir Project, and the Howland Project. An important aspect of these projects has been the documentation of known artifact collectors and their collections, and the assessment of important sites that have been subject to amateur excavations. Unfortunately, many of these sites have been heavily collected over the years, thus reducing their scientific value significantly.

The Bangor dam to Veazie dam project was undertaken in 1983 under the direction of David Sanger. Three areas were tested, including Eaton Brook and the Eddington Bend Site (74.8), and five new sites were discovered. Of these, the Eddington Bend Site has received the most attention (Moorehead 1922; Smith 1926; Sanger 1984; Petersen and Sanger 1986, 1987). Recent work by University of Maine archaeologists has demonstrated that much of the site, including Susquehanna Tradition and Ceramic Period occupations, is still intact.

Fieldwork for the Basin Mills Project (Sanger 1984; Belcher and Sanger 1988) began in 1983. It resulted in the discovery of eight new prehistoric sites between Ayers Rapids and the Great Works dam. One of the most important sites is the Blackman Stream Site, which includes Moorehead Phase burials, Early and/or Middle Archaic component(s), and a Late Paleoindian component (Sanger 1984; Sanger, Belcher and Kellogg 1992). Another significant site is Ayers Rapids (74.22), a single-component, Middle Ceramic Period site (Belcher and Sanger 1989). Many of the other sites, including the well-known Bradley Cemetery Site (74.1), have been destroyed by collecting, farming, and lumbering; by the construction of highways and railroads; and by erosion.

In the northern Penobscot River drainage, intensive CRM survey has documented extensive and long-standing use of the waterway by prehistoric peoples beginning in the Late Paleoindian period through the Ceramic period. Fieldwork along the West Branch and its headwaters related to dam relicensing has been undertaken from Millinocket, Pemadumcook and Ambejejus Lakes up the drainage through Chesuncook and Seboomook Lakes. The result of this work over 20 years has been the documentation of hundreds of small scale sites which demonstrate a sustained pattern of land and resource utilization centered on the waterways that persisted throughout the Precontact period.

Most recently, an intensive Phase I archaeological survey was conducted in advance of the Maritimes & Northeast Natural Gas Pipeline Project. The M&N Phase II pipeline originally planned a lateral pipeline that would have extended northward from Brewer along the Penobscot River to Medway and then west to the mills in East Millinocket and Millinocket. This route was surveyed for potential archaeological resources in 1999 by ARC, Inc. of Ellsworth, Maine. Using a predictive sampling design similar to the one implemented for the SMWP, numerous locations were tested, including all major and minor stream and river crossings. One Precontact period archaeological site was discovered and subsequently investigated on the Medunkeunk Stream in Chester near the substation where the SMWP transmission line will terminate (see Will et. al. 1998). Phase II investigation resulted in a determination that the site was not eligible for listing in the National Register of Historic Places. In addition, CRM work associated with Bangor Hydro Electric's (BHE)Transmission Line 64 Rebuild project lead to further investigations of the Eddington Bend site and the identification of two new sites in the region (Mack and Clark 2009, Mack et. al. 2010).

Phase I Archaeological Resource Sensitivity

Linear projects that extend for great distances across the landscape like underground pipelines and above-ground electric transmission lines offer a good potential to locate archaeological remains simply because they cover large areas and encounter a variety of environmental settings along the way.

The probability is thus good that archaeologically-sensitive areas will be encountered. These types of projects also help us corroborate models that attempt to predict the location of archaeological sites based on a variety of natural and cultural attributes.

Completion of cultural resource assessment on Maine's first, cross-state natural gas pipeline project, the M&N Phase II Pipeline, which was constructed in the late 1990's, provided the model for how precontact cultural resources are evaluated on linear projects that cover great distances through a variety of environments. The M&N survey was undertaken beginning in 1996 and involved Phase I and Phase II archaeological resource review along one side of what is defined here as the Project APE (Clark et. al. 1999, Will et. al. 1999). The M&N archaeological resource sensitivity model was reviewed and it provided a basis for the identification of archaeological sensitivity and testing locations on the present Project APE resource study.

The M&N Pipeline Project represented one of the first in a growing number of "linear" studies that are characterized by comparatively narrow areas of potential impact (APE) that extend over long horizontal distances and traverse widely diverse environments. Examples of other recent linear projects that have required precontact archaeological resource survey include Bangor Hydroelectric Company's (BHE) Northeast Reliability Project (Clark and Moore 2004), BHE's Line 64 Rebuild Project (Mack and Clark 2009), the Downeast LNG Project (Clark et. al. 2006), Central Maine Power's Maine Power Reliability Project (Mack et. al. 2009 and Clark et. al. 2010), and various other transmission line surveys for small windpower and gas pipeline projects. Because of their geographical extent, these types of survey have permitted archaeologists in Maine and elsewhere to sample a broad cross section of landforms and settings for the presence of Precontact period cultural resources. These surveys enable archaeologists to test models regarding the nature of Precontact period human land use in Maine and have resulted in the discovery of hundreds of new archaeological sites (see Spiess 1994; Will et. al. 2002).

Archaeological Survey Design and Methods

Prior to the completion of Phase I survey for the Project, an archaeological sensitivity study was completed that helped to specify locations where Precontact period cultural materials and sites would be most likely found based in part on natural and cultural criteria outlined above. An ever-increasing body of literature assists the decision-making process for evaluating the archaeological potential of any given project area. But despite a consideration of a number of other influencing attributes, evidence for Precontact period human activity in the interior of Maine has almost exclusively been located on level, reasonably well-drained land surfaces near the shores of rivers, lakes, and streams. Additionally, though less frequently, archaeological sites have been found to overlook marshes and wetlands. While there are exceptions to this rule, as in the case of special use sites, major bodies of water would have been preeminently important as resource areas and transportation routes for Native people.

A determination of the archaeological resource sensitivity for the Project route involved two basic steps. First, documents and maps related to the two previous archaeological surveys and site records on file at MHPC were reviewed. This provided the basis for determining the resource sensitivity in those locations where the transmission line corresponds spatially with previous projects. Second, in locations where no prior archaeological investigation had been undertaken, 7 ½ minute U.S.G.S. quad sheets were examined. Variables considered in determining locations for testing were intentionally weighted to emphasize proximity to previous identified sites and proximity to water and wetland areas. Based on map analysis 26 areas along the Project route were determined to possess medium to high archaeological sensitivity and therefore require walkover survey. Access to some areas within along the Project were not accessible due to high water levels, therefore the total number

of test areas reviewed was reduced to 20, of the 20 observed 13 were designated as needing subsurface testing. This testing was completed in July 2010.

All fieldwork undertaken conformed to the SHPO Standards for Archaeological Work in Maine (27 MRSA S.509). Subsurface testing was accomplished using shovel testholes placed on linear transects to provide adequate sampling of specific landforms. In this report, transects represent a series of shovel testholes generally organized in a line at regular intervals. Transects are intended to systematically sample a landform, such as along a break in slope, and may vary in the number of testholes and orientation depending on the nature of the landform. In some cases, more than one transect may be used within a testing area either due to the presence of more than one archaeologically sensitive landform, or to provide broader sampling of a particular landform. Testholes were typically excavated at 10 m intervals. Transects were usually placed within 10 m of the edges of eroding banks, terrace landforms, or breaks in slope. Shovel testholes measured 50 cm^2—a size that facilitated observation of soil profiles and subsurface features to depths up to 1 m.

Typically, a two-person team was the most efficient method of shovel testing with one person excavating and one person screening. All soil removed from testholes and test units was screened through 1/4 inch (6.4 mm) mesh that provided for recovery of small stone flakes, bones, or other cultural materials that might otherwise be missed without screening. Relevant documentation of each testhole and test unit excavated, including a soil description was made on a standardized recording form. Copies of testhole records recorded in the field are included in Appendix I of this report. A field sketch of each test area was made and photographs were taken to document the area as tested. Finally, spatial data regarding the location of testholes relative to significant landscape features was collected using a hand-held, Trimble Geo-XT GPS receiver. These data were post-processed and corrected using Trimble GPS Pathfinder Office software (v. 3.0).

Fieldwork on the Project was completed from July 5 - 20, 2010. Project directors James Clark and Karen Mack conducted walkover survey of 20 locations. Subsurface testing was conducted at 13 of these locations or test areas. This testing of entailed the excavation of 215 50 cm^2 testholes along 30 transects within the APE. No precontact cultural material was recovered during this investigation. Each of these test areas is described below in the section titled, “Negative Test Areas.”

Phase I Testing Results

Walk over survey was conducted at 20 locations or test areas (TA) within the Project area. Thirteen TAs were designated for subsurface archaeological testing. Subsurface testing of these test areas entailed the excavation of 215 50 cm^2 testholes along 30 transects within the APE. No cultural material was recovered from this testing and no archaeological sites were identified. Table 2 lists the TAs within the project area.

Table2. Summary of areas tested for Precontact archaeological resources during Phase I survey of the Oakfield Phase II.

Testing Area	Location	Approximate Coordinates UTM Zone 19N NAD 83 meters*		Archaeological Assessment and Fieldwork	Recommendation
		E	N		
1	Two tributaries to Medunkeunk Stream and Medunkeunk Stream in the town of Chester	537180	5031075	Moderate resource sensitivity; 3 transects; 32 testholes	No further resource assessment
3	Unnamed tributary to Penobscot River in the town of Woodville	545665	5043670	Moderate resource sensitivity; 2 transects;13 testholes	No further resource assessment
4S	South side of Penobscot River in the town of Woodville	546245	5046185	Moderate resource sensitivity; 2 transects;16 testholes	No further resource assessment
4N	North side Penobscot River in the town of Mattawamkeag	546490	5046315	Moderate resource sensitivity; 2 transects;20 testholes	No further resource assessment
7	East and west sides of Molunkas Stream in Macwahoc Plt	556740	5055890	Moderate resource sensitivity; 4 transects;22 testholes	No further resource assessment
8	East side of Macwahoc Stream in Macwahoc Plt	560385	5057300	Moderate resource sensitivity; 2 transects;16 testholes	No further resource assessment
9	East side of Wytopitlock Stream in the town of Reed	565478	5062885	Moderate resource sensitivity; 2 transects; 12 testholes	No further resource assessment
14S	South side of West Branch Mattamwamkeag River in T3 R3 Wels	574850	5078782	Moderate resource sensitivity; 2 transect; 20 testholes	No further resource assessment
14N	North side of West Branch Mattamwamkeag River in the town of Haynesville	574850	5078845	Moderate resource sensitivity; 1 transect; 10 testholes	No further resource assessment
15S	South side of East Branch Mattamwamkeag River in T3 R3 Wels	574468	5083590	Moderate resource sensitivity; 2 transect;19 testholes	No further resource assessment
15N	North side of West Branch Mattamwamkeag River in T3 R3 Wels	574555	5083712	Moderate resource sensitivity; 2 transect; 18 testholes	No further resource assessment
16	South side of Beaver Brook in T3 R3 Wels	574610	5084740	Moderate resource sensitivity; 1 transect; 5 testholes	No further resource assessment
20	North and south sides of Moose Brook in the town of Oakfield	566035	5100975	Moderate resource sensitivity; 5 transects; 11 testholes	No further resource assessment

Negative Test Area

This report presents information on the 13 test areas that did not yield Precontact period cultural material. No further archaeological testing is recommended for these areas within the Project APE. The information for each test area is presented below in a table describing location of the test area, environmental setting, and configuration of archaeological testing, ground disturbance and results of testing. This table is followed by a graphic showing typical soil profile recorded for the test area. In addition to this information a topographic map and aerial image with testhole locations is provided.

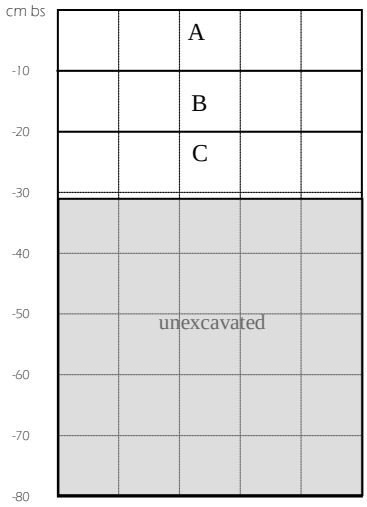
Maine GenLead, LLC Transmission Line: Phase I Archaeological Survey
Test Area Report: TA 1

LOCATION INFORMATION:	
Test area designation	1
Coordinate (UTM Z19 NAD 83) (Geographic center of tested area)	Z19 E537180 N503107
General location	Two tributaries to Medunkeunk Stream and Medunkeunk Stream in Chester
Results of Testing:	
Number of testhole transects	3
Testing configuration/area	Three linear transect: TR1 is located on an esker and runs adjacent to a tributary to Medunkeunk Stream, TR2 is located on a terrace along tributary to Medunkeunk Stream, TR3 parallel to edge of Medunkeunk Stream.cross the ROW.
50 cm^2 test pits excavated	32
Test units/deep tests excavated	0
Average depth	35 cm bs
Recommendation:	No Further Archaeological Investigation

ENVIRONMENTAL DESCRIPTION	
Setting/Landform type	Esker and terraces along tributaries to Medunkeunk Stream and Medunkeunk Stream.
Vegetation	Mature mixed forest with mixed understory
Surface	Smooth to undulating with pockets or cradles of wetland.
Disturbances	None noted
Comments	

TYPICAL STRATIGRAPHIC PROFILE

TR_2__ TH__14____



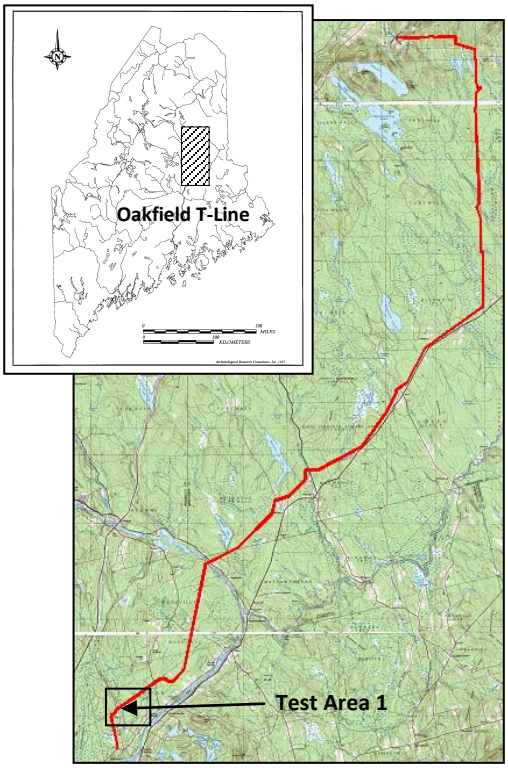
Max. depth ___31_____cm bs

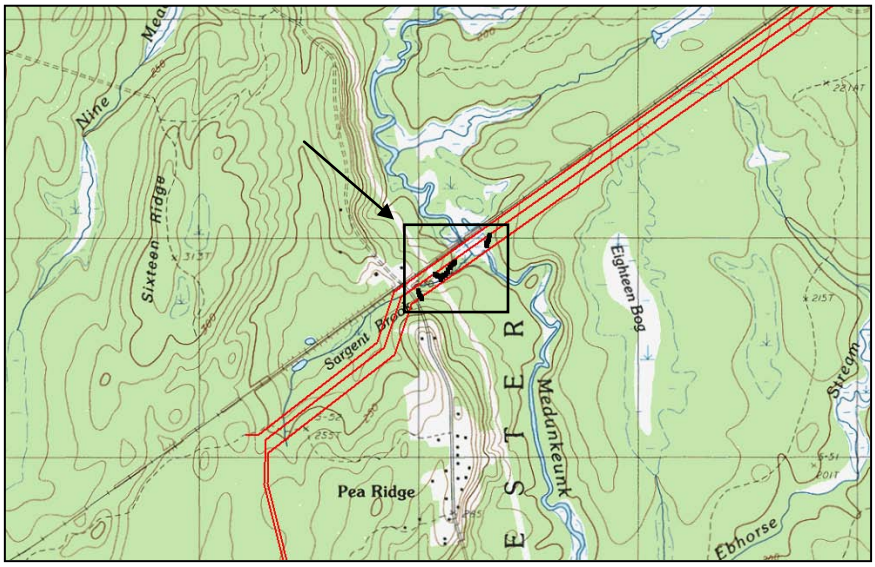
Unit/ Horizon	Color	Texture
A	7	VFS, Si
B	3/7	VFS, Si
C	Lt6/7	VFS, Si

Soil Texture: *S – sand Si – silt Cl – clay L – loam VF – very fine F – fine M – medium C – coarse*

Inclusions: *Gr – gravel Cb – cobbles Pb – pebbles ● – roots Cnc – concretions Ch – charcoal*

Color Key: *1 – gray 2 – black 3 – orange 4 – red 5 – yellow 6 – olive 7 – brown Lt – light D – dark Mx – mixed*





Test Area 1 shown on USGS 7-1/2 minute, Nine Meadows Ridge, Maine quadrangle

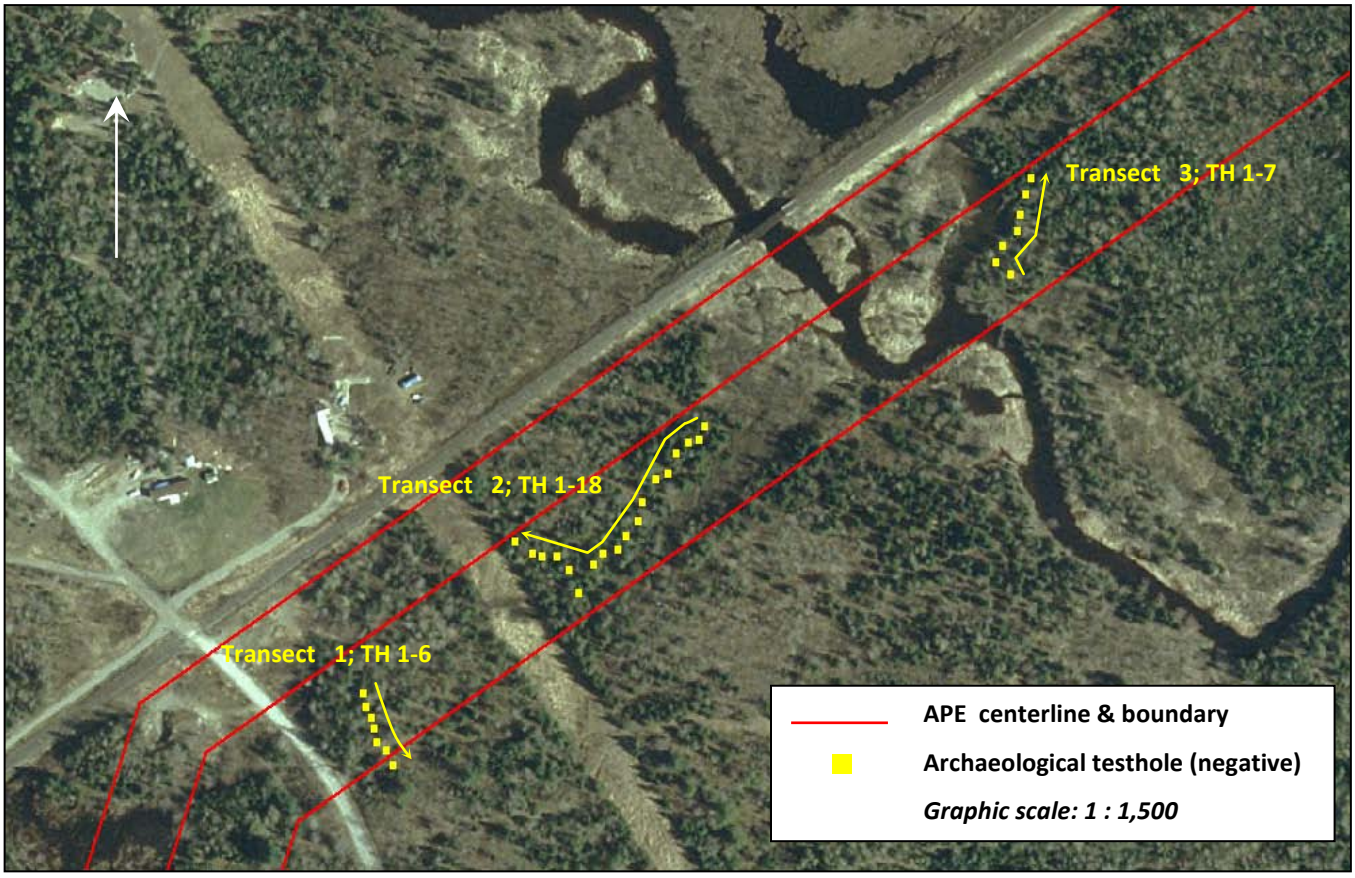


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Figure 3. Location of Test Area 1 within the Oakfield Transmission Line Project and GPS data showing the testhole configuration used to sample the landform.

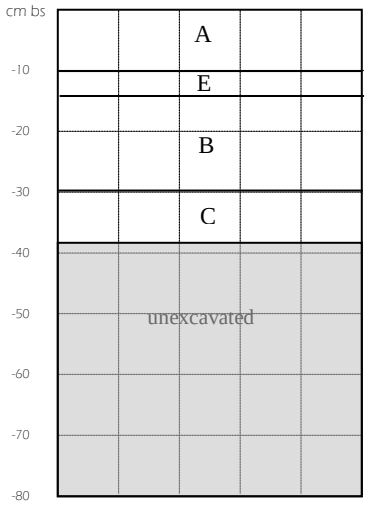
Maine GenLead, LLC Transmission Line: Phase I Archaeological Survey
Test Area Report: TA 3

LOCATION INFORMATION:	
Test area designation	3
Coordinate (UTM Z19 NAD 83) (Geographic center of tested area)	Z19 E 545665 N5043670
General location	North and south sides of unnamed tributary to Penobscot River in Woodville
Results of Testing:	
Number of testhole transects	2
Testing configuration/area	Two linear transects that run parallel to the north side and the south side of the stream.
50 cm^2 test pits excavated	13
Test units/deep tests excavated	0
Average depth	33 cm bs
Recommendation:	No Further Archaeological Investigation

ENVIRONMENTAL DESCRIPTION	
Setting/Landform type	Low marginal terraces on the north and south side of an unnamed tributary to the Penobscot River.
Vegetation	Mature mixed forest with very little understory.
Surface	Hummocky with some exposed boulders and numerous tree throws.
Disturbances	None noted
Comments	

TYPICAL STRATIGRAPHIC PROFILE

TR_1__ TH__3____



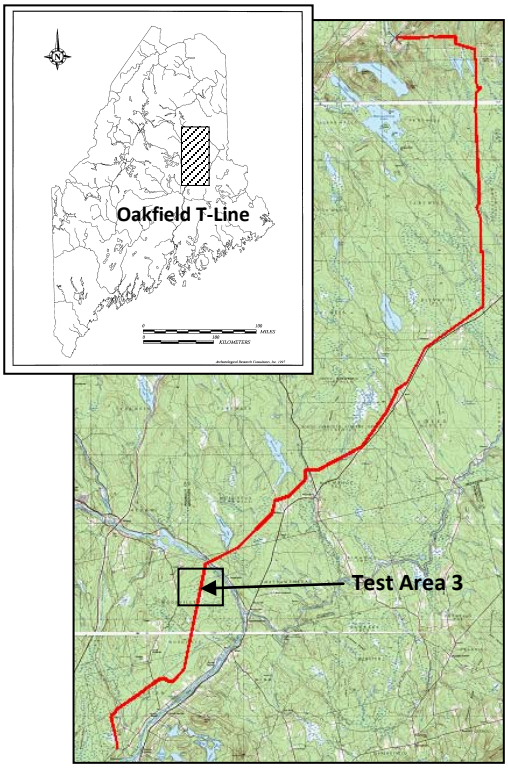
Max. depth ___39_____cm bs

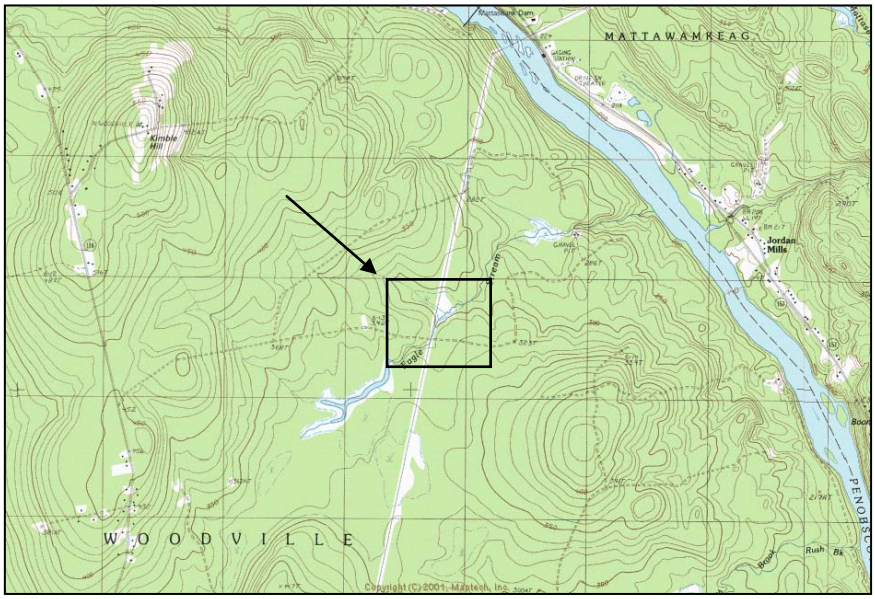
Unit/ Horizon	Color	Texture
A	D7	SiL
B	3/7	FS, Si
E	Lt1	FS, Si
C	Lt6/7	FS, Si

Soil Texture: *S – sand Si – silt Cl – clay L – loam VF – very fine F – fine M – medium C – coarse*

Inclusions: *Gr – gravel Cb – cobbles Pb – pebbles ● – roots Cnc – concretions Ch – charcoal*

Color Key: *1 – gray 2 – black 3 – orange 4 – red 5 – yellow 6 – olive 7 – brown Lt – light D – dark Mx – mixed*





Test Area 3 shown on USGS 7-1/2 minute, Mattaseunk Lake, Maine quadrangle

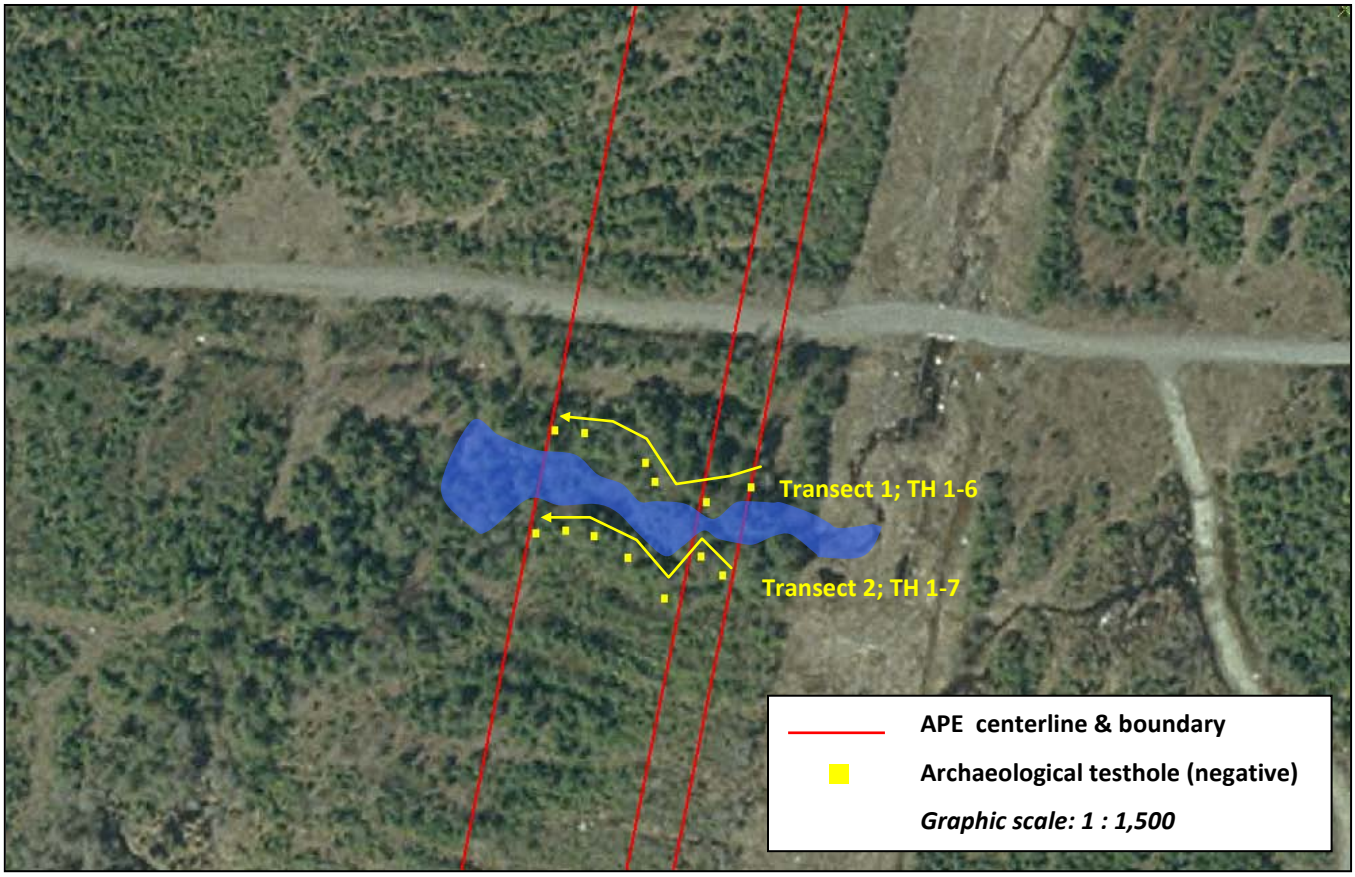


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Figure 4. Location of Test Area 3 within the Oakfield Transmission Line Project and GPS data showing the testhole configuration used to sample the landform.

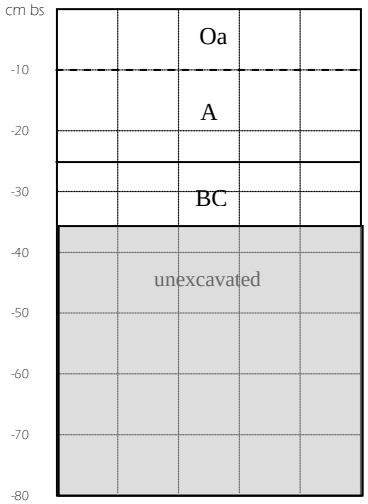
Maine GenLead, LLC Transmission Line: Phase I Archaeological Survey
Test Area Report: TA 4S

LOCATION INFORMATION:	
Test area designation	4S
Coordinate (UTM Z19 NAD 83) (Geographic center of tested area)	Z19 E 546245 N 5046185
General location	South side of Penobscot River in Woodville
Results of Testing:	
Number of testhole transects	2
Testing configuration/area	Two linear transects that run parallel to the river, one along the low terrace and one along the upper terrace.
50 cm^2 test pits excavated	16
Test units/deep tests excavated	0
Average depth	33 cm bs
Recommendation:	No Further Archaeological Investigation

ENVIRONMENTAL DESCRIPTION	
Setting/Landform type	Lower and upper riverine terraces.
Vegetation	Mature mixed forest with sparse wetland understory.
Surface	Very hummocky with exposed boulders and scoured areas.
Disturbances	Downstream of dam terrace appears to be frequently flooded.
Comments	

TYPICAL STRATIGRAPHIC PROFILE

TR__2__ TH__4____



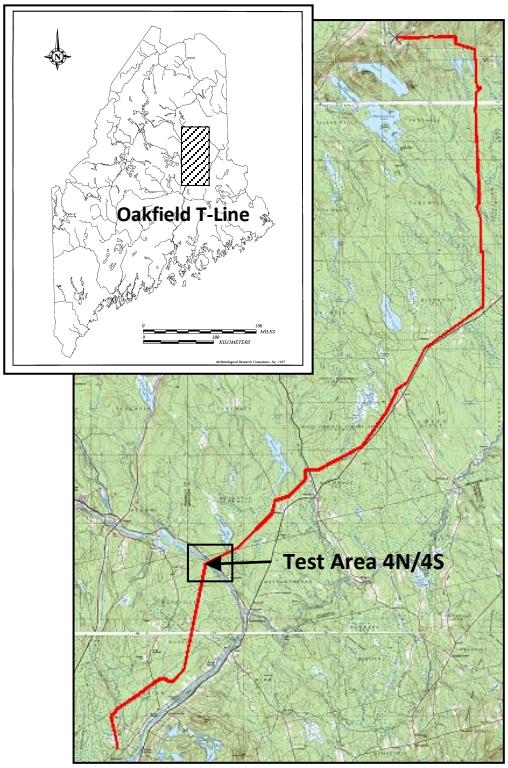
Max. depth ___36_____cm bs

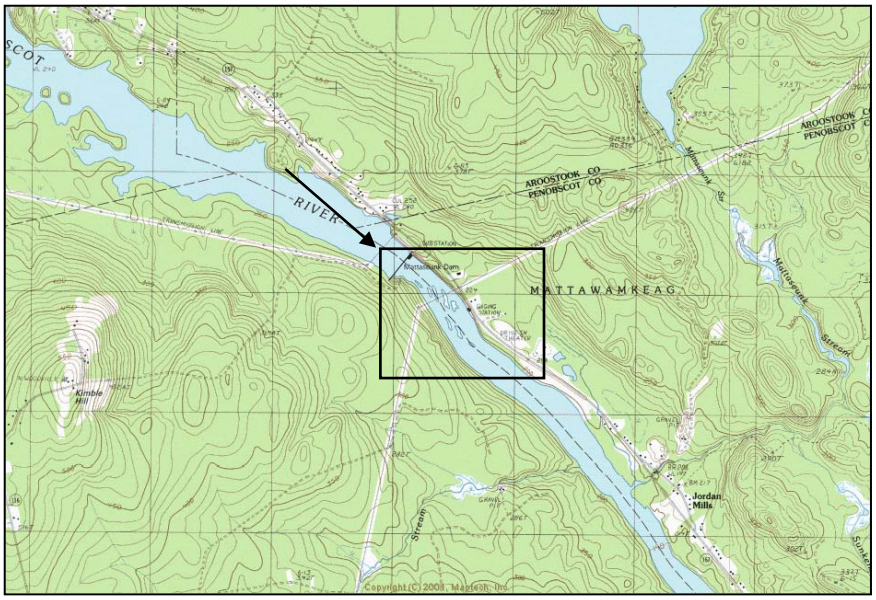
Unit/ Horizon	Color	Texture
Oa	D7	organic root mat
A	D7	SiL
BC	6/1	Si, MS

Soil Texture: *S – sand Si – silt Cl – clay L – loam VF – very fine F – fine M – medium C – coarse*

Inclusions: *Gr – gravel Cb – cobbles Pb – pebbles ● – roots Cnc – concretions Ch – charcoal*

Color Key: *1 – gray 2 – black 3 – orange 4 – red 5 – yellow 6 – olive 7 – brown Lt – light D – dark Mx – mixed*





Test Area 4N & 4S shown on USGS 7-1/2 minute, Mattaseunk Lake, Maine quadrangle

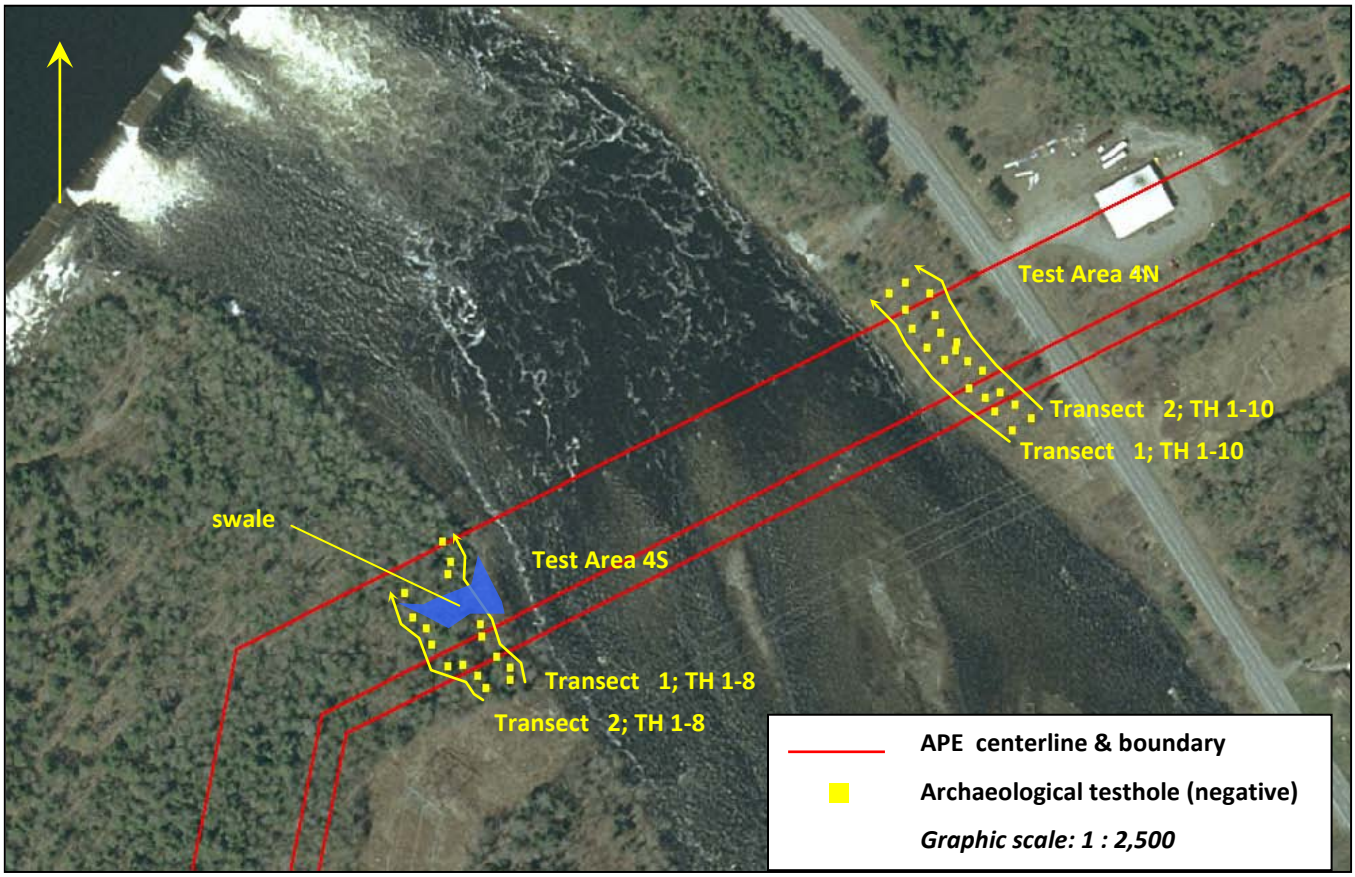


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Figure 5. Location of Test Areas 4S & 4N within the Oakfield Transmission Line Project and GPS data showing the testhole configuration used to sample the landform.

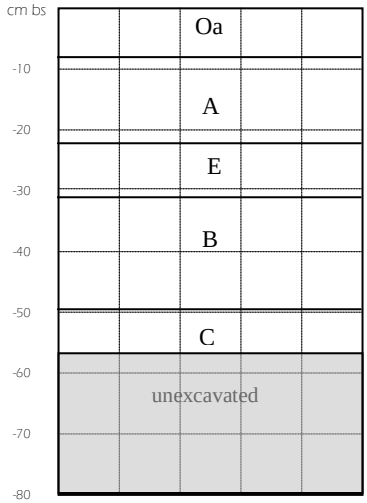
Maine GenLead, LLC Transmission Line: Phase I Archaeological Survey
Test Area Report: TA 4N

LOCATION INFORMATION:	
Test area designation	4N
Coordinate (UTM Z19 NAD 83) (Geographic center of tested area)	Z19 E 546490 N 5046315
General location	North side Penobscot River in Mattawamkeag
Results of Testing:	
Number of testhole transects	2
Testing configuration/area	Two linear transects placed parallel to river on the high terrace
50 cm^2 test pits excavated	20
Test units/deep tests excavated	0
Average depth	55 cm bs
Recommendation:	No Further Archaeological Investigation

ENVIRONMENTAL DESCRIPTION	
Setting/Landform type	High Pleistocene terrace composed of gravel and sandy sediments.
Vegetation	Mature pine and mixed hardwood understory.
Surface	Smooth level with some tree throws.
Disturbances	None noted
Comments	

TYPICAL STRATIGRAPHIC PROFILE

TR_1__ TH__3____



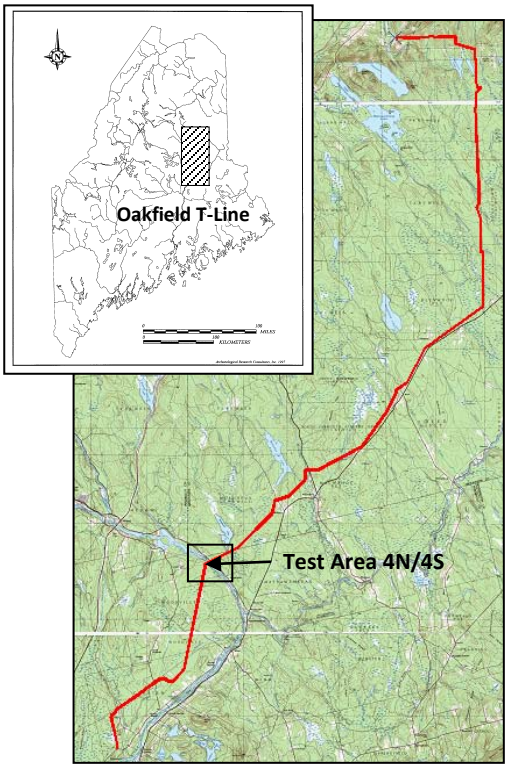
Max. depth ___57_____cm bs

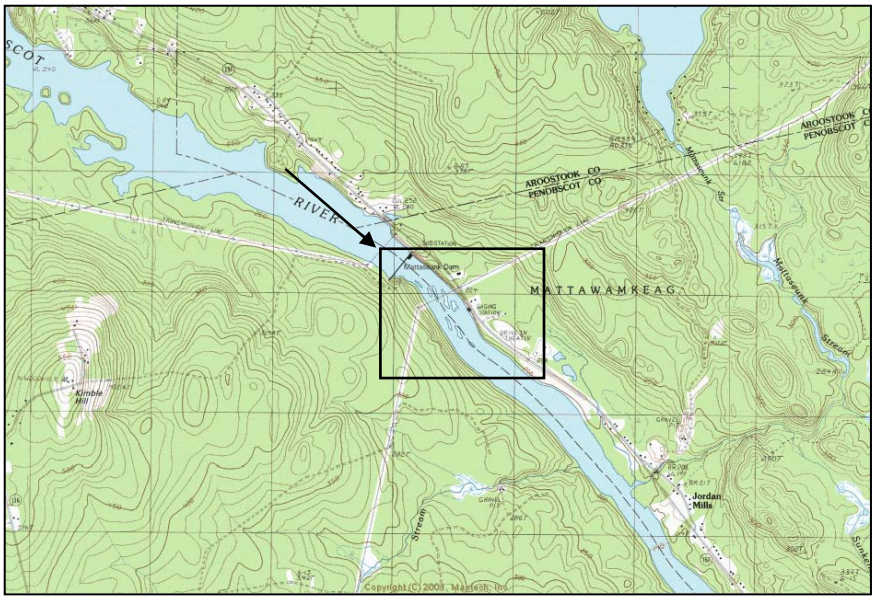
Unit/ Horizon	Color	Texture
Oa	D7	Organic root mat
A	7	FVS, Si
E	1	FVS, Si
B	5/7 to 3/7	FVS, Si
C	Lt 6/7	FVS, Si

Soil Texture: *S – sand Si – silt Cl – clay L – loam VF – very fine F – fine M – medium C – coarse*

Inclusions: *Gr – gravel Cb – cobbles Pb – pebbles ● – roots Cnc – concretions Ch – charcoal*

Color Key: *1 – gray 2 – black 3 – orange 4 – red 5 – yellow 6 – olive 7 – brown Lt – light D – dark Mx – mixed*





Test Area 4N & 4S shown on USGS 7-1/2 minute, Mattaseunk Lake, Maine quadrangle

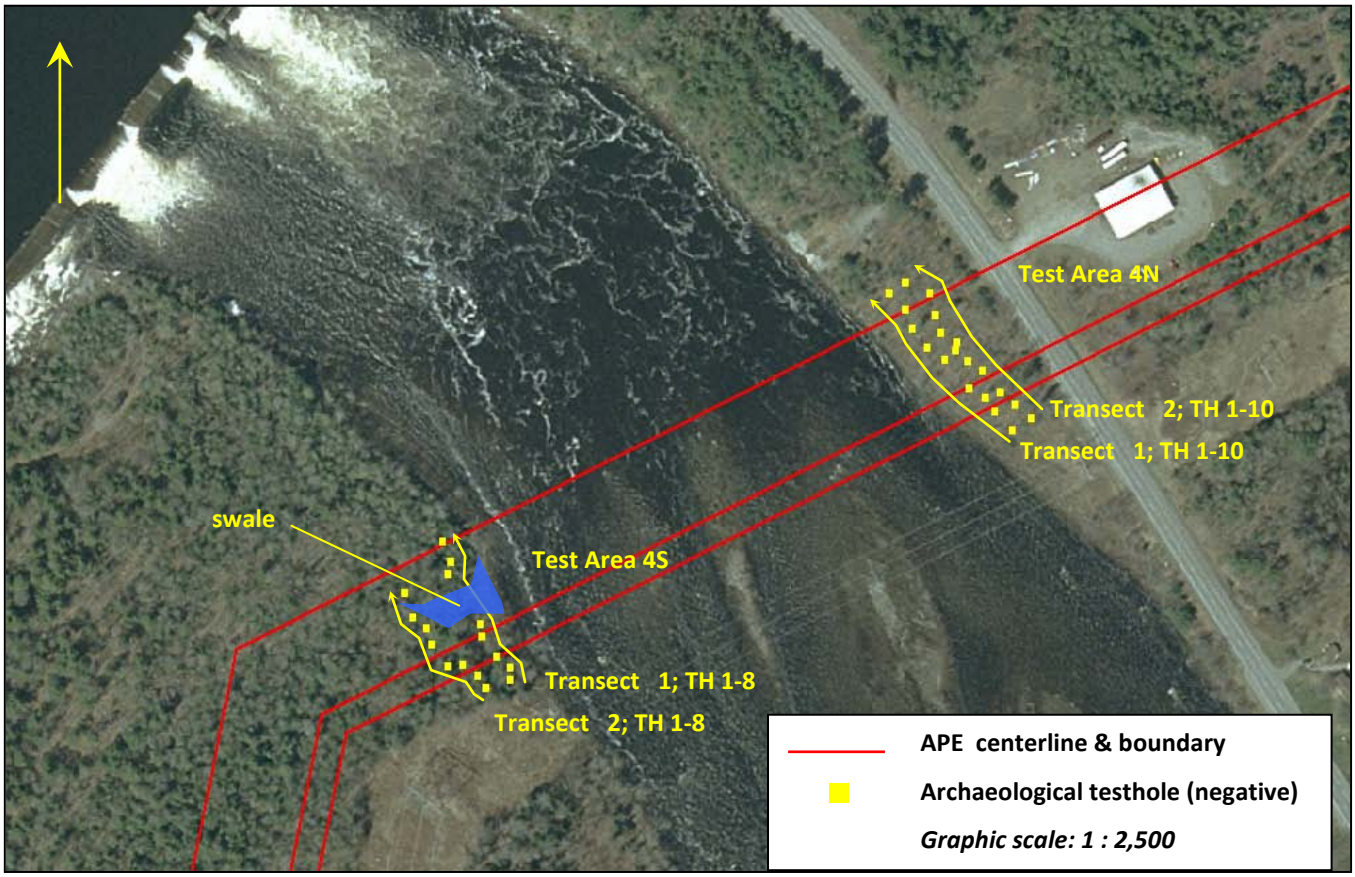


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Figure 6. Location of Test Areas 4S & 4N within the Oakfield Transmission Line Project and GPS data showing the testhole configuration used to sample the landform.

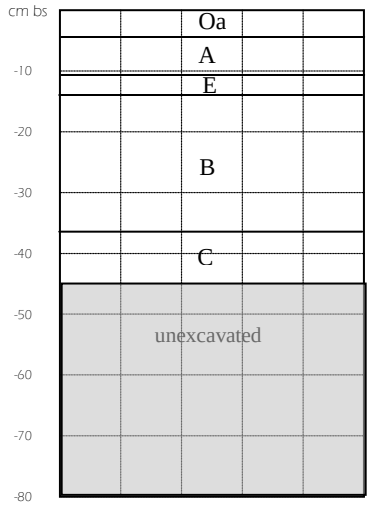
Maine GenLead, LLC Transmission Line: Phase I Archaeological Survey
Test Area Report: TA 7

LOCATION INFORMATION:	
Test area designation	7
Coordinate (UTM Z19 NAD 83) (Geographic center of tested area)	Z19 E 556740 N 5055890
General location	East and west sides of Molunkas Stream in Macwahoc Plt
Results of Testing:	
Number of testhole transects	4
Testing configuration/area	Two transects parallel to the stream on both the east and west sides for a total of four transects
50 cm^2 test pits excavated	22
Test units/deep tests excavated	0
Average depth	45 cm bs (overall); 54 cm bs (on the east side)
Recommendation:	No Further Archaeological Investigation

ENVIRONMENTAL DESCRIPTION	
Setting/Landform type	Terrace along the stream edge on both sides
Vegetation	Mature mixed forest with very little understory
Surface	Very hummocky
Disturbances	None noted
Comments	

TYPICAL STRATIGRAPHIC PROFILE

TR__2__ TH__3____



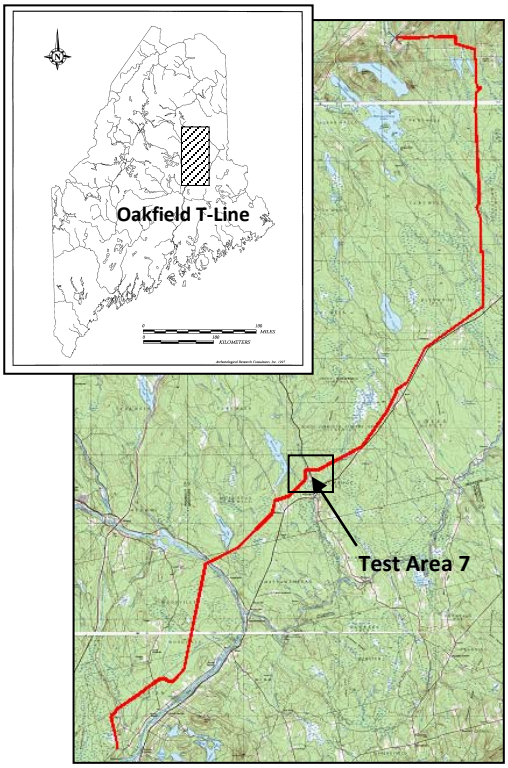
Max. depth ___46_____cm bs

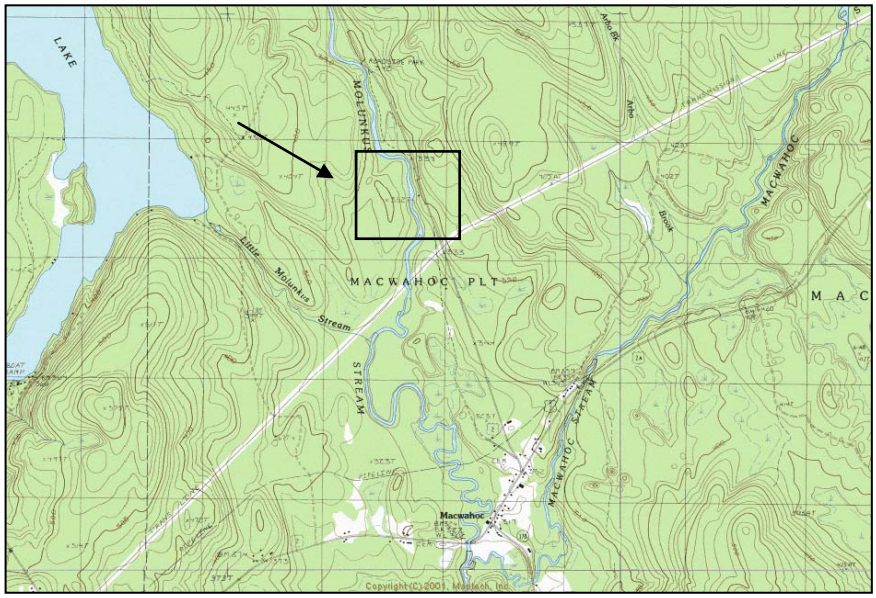
Unit/ Horizon	Color	Texture
Oa	7	organic root mat
A	7	FS, Si
E	Lt 1	FS, Si
B	3/7	FS, Si
C	6/7	FS, Si

Soil Texture: *S – sand Si – silt Cl – clay L – loam VF – very fine F – fine M – medium C – coarse*

Inclusions: *Gr – gravel Cb – cobbles Pb – pebbles ● – roots Cnc – concretions Ch – charcoal*

Color Key: *1 – gray 2 – black 3 – orange 4 – red 5 – yellow 6 – olive 7 – brown Lt – light D – dark Mx – mixed*





Test Area 7 shown on USGS 7-1/2 minute, Molunkus Lake, Maine quadrangle

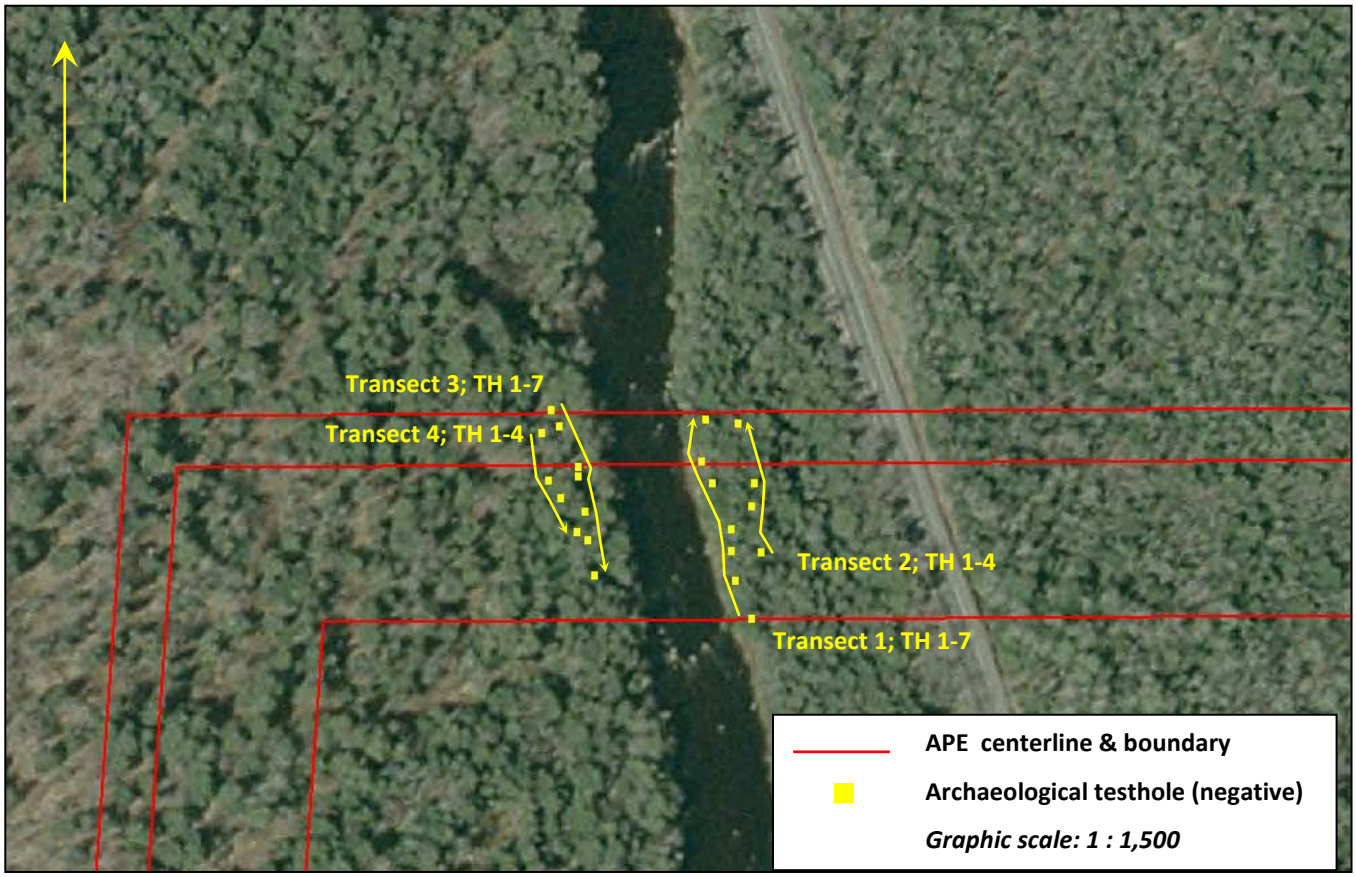


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Figure 7. Location of Test Area 7 within the Oakfield Transmission Line Project and GPS data showing the testhole configuration used to sample the landform.

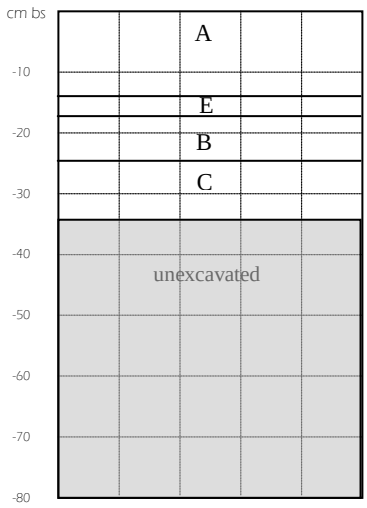
Maine GenLead, LLC Transmission Line: Phase I Archaeological Survey
Test Area Report: TA 8

LOCATION INFORMATION:	
Test area designation	8
Coordinate (UTM Z19 NAD 83) (Geographic center of tested area)	Z19 E 560385 N 5057300
General location	East side of Macwahoc Stream in Macwahoc Plt
Results of Testing:	
Number of testhole transects	2
Testing configuration/area	Two transects parallel with brook along terrace
50 cm^2 test pits excavated	16
Test units/deep tests excavated	0
Average depth	28 cm bs
Recommendation:	No Further Archaeological Investigation

ENVIRONMENTAL DESCRIPTION	
Setting/Landform type	Edge of stream poorly defined terrace.
Vegetation	Mixed forest with little understaory and some wetland vegetation
Surface	Slightly hummocky with exposed boulders and bedrock.
Disturbances	None noted
Comments	

TYPICAL STRATIGRAPHIC PROFILE

TR_1__ TH__5____



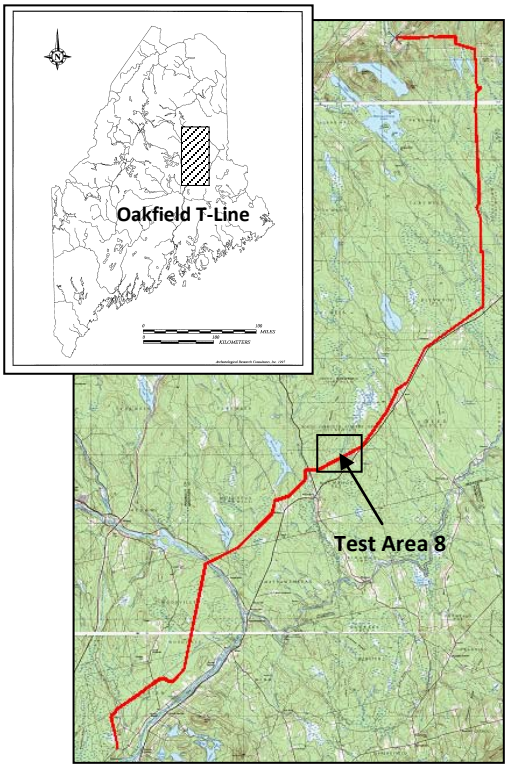
Max. depth ___35_____cm bs

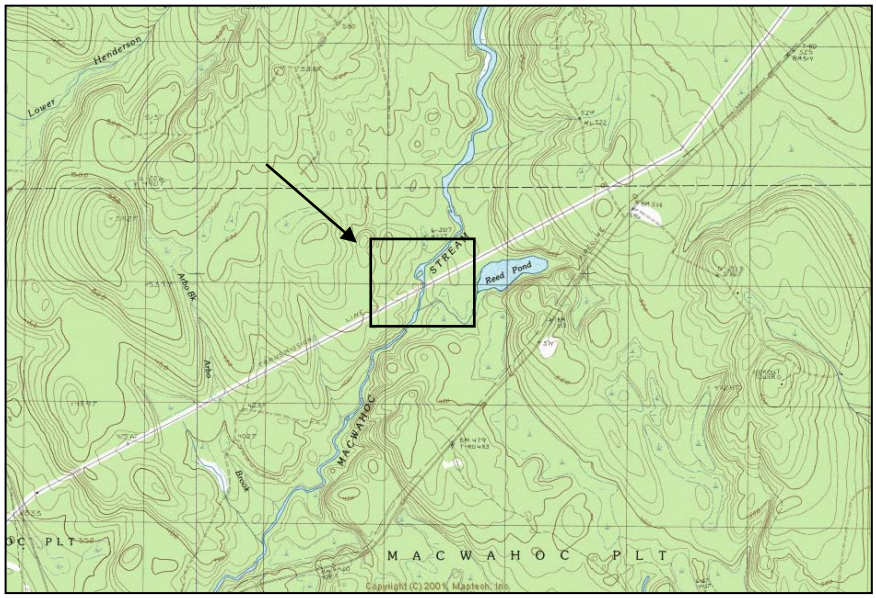
Unit/ Horizon	Color	Texture
A	7	Si, Bf
E	Lt1	Si, Bf
B	3/7	Si, Bf
C	Lt6/7	Si, Bf

Soil Texture: *S – sand Si – silt Cl – clay L – loam VF – very fine F – fine M – medium C – coarse*

Inclusions: *Gr – gravel Cb – cobbles Pb – pebbles ● – roots Cnc – concretions Ch – charcoal Bf – bedrock fragmenst*

Color Key: *1 – gray 2 – black 3 – orange 4 – red 5 – yellow 6 – olive 7 – brown Lt – light D – dark Mx – mixed*





Test Area 8 shown on USGS 7-1/2 minute, Reed Pond, Maine quadrangle

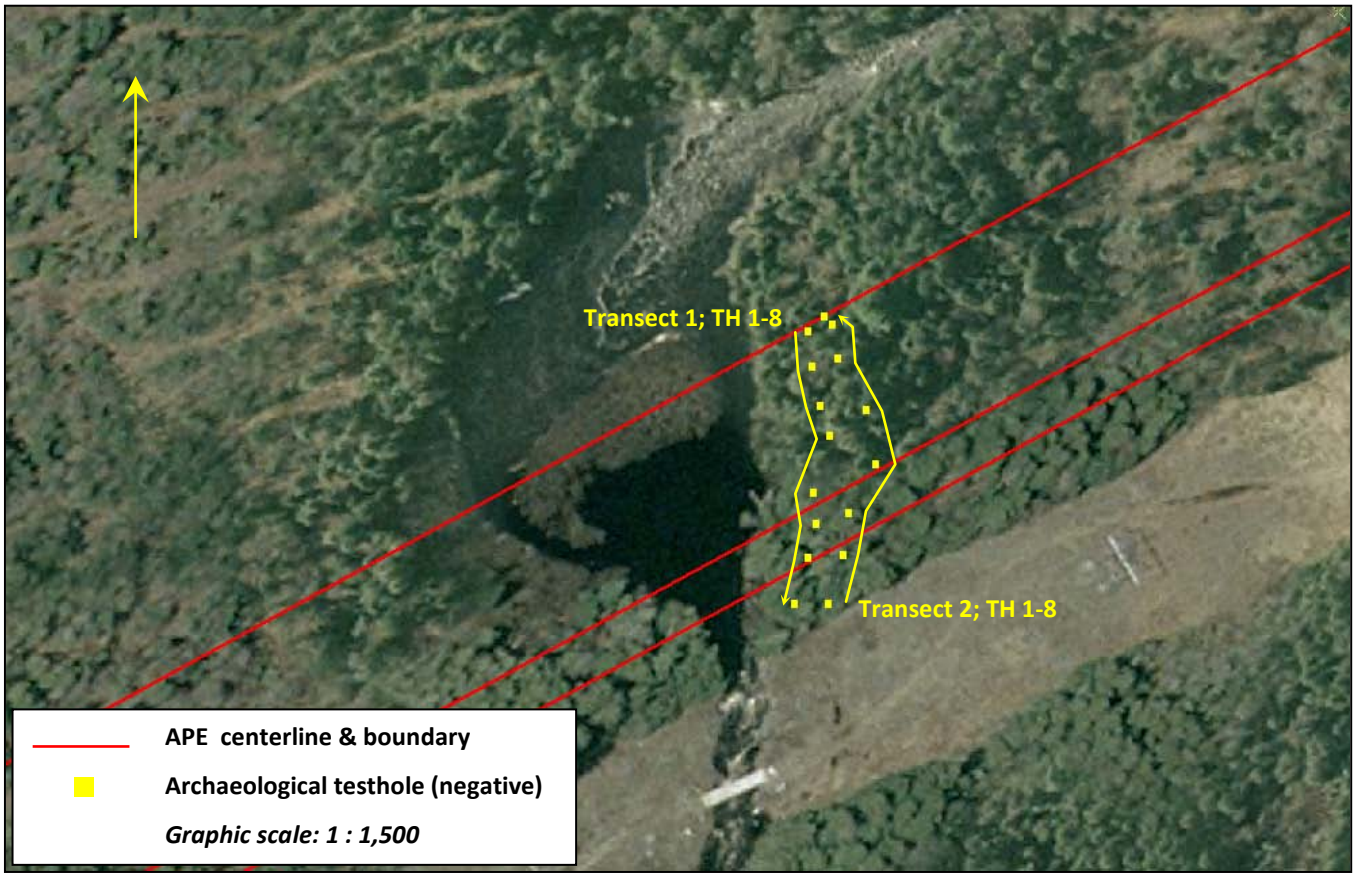


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Figure 8. Location of Test Area 8 within the Oakfield Transmission Line Project and GPS data showing the testhole configuration used to sample the landform.

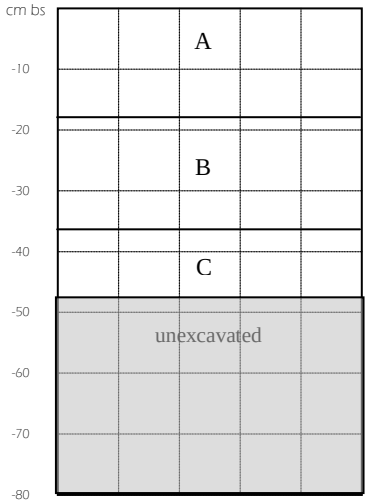
Maine GenLead, LLC Transmission Line: Phase I Archaeological Survey
Test Area Report: TA 9

LOCATION INFORMATION:	
Test area designation	9
Coordinate (UTM Z19 NAD 83) (Geographic center of tested area)	Z19 E 565478 N 5062885
General location	East side of Wytopitlock Stream in Reed
Results of Testing:	
Number of testhole transects	2
Testing configuration/area	One transect place along break in slope at stream edge.
50 cm^2 test pits excavated	12
Test units/deep tests excavated	0
Average depth	46 cm bs
Recommendation:	No Further Archaeological Investigation

ENVIRONMENTAL DESCRIPTION	
Setting/Landform type	High and low terrace along eastern edge of Wytopitlock stream.
Vegetation	Upper terrace is covered with mixed forest and little understory, lower terrace is covered with alders and wetland vegetation
Surface	Moderately hummocky with tree throws on both terraces
Disturbances	Upper terrace was recently logged
Comments	

TYPICAL STRATIGRAPHIC PROFILE

TR_2__ TH__4____



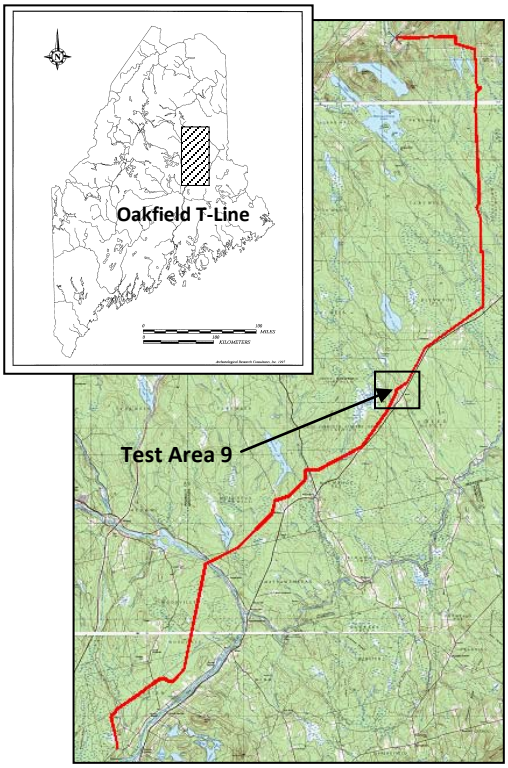
Max. depth ___48_____cm bs

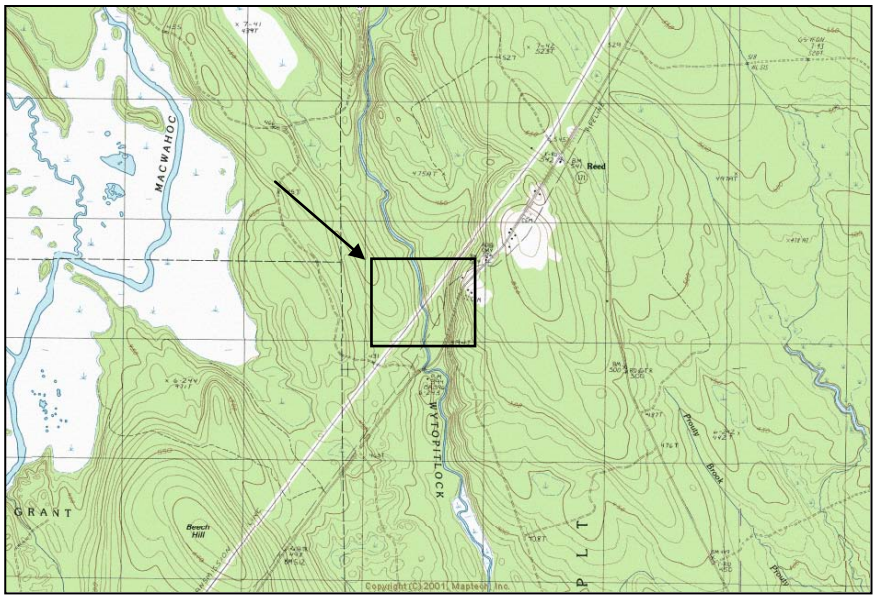
Unit/ Horizon	Color	Texture
A	D7	FVSL
B	3/7-5/7	FS, Sil
C	6/7	FS, Si

Soil Texture: *S – sand Si – silt Cl – clay L – loam VF – very fine F – fine M – medium C – coarse*

Inclusions: *Gr – gravel Cb – cobbles Pb – pebbles ● – roots Cnc – concretions Ch – charcoal*

Color Key: *1 – gray 2 – black 3 – orange 4 – red 5 – yellow 6 – olive 7 – brown Lt – light D – dark Mx – mixed*





Test Area 9 shown on USGS 7-1/2 minute, Reed Pond, Maine quadrangle

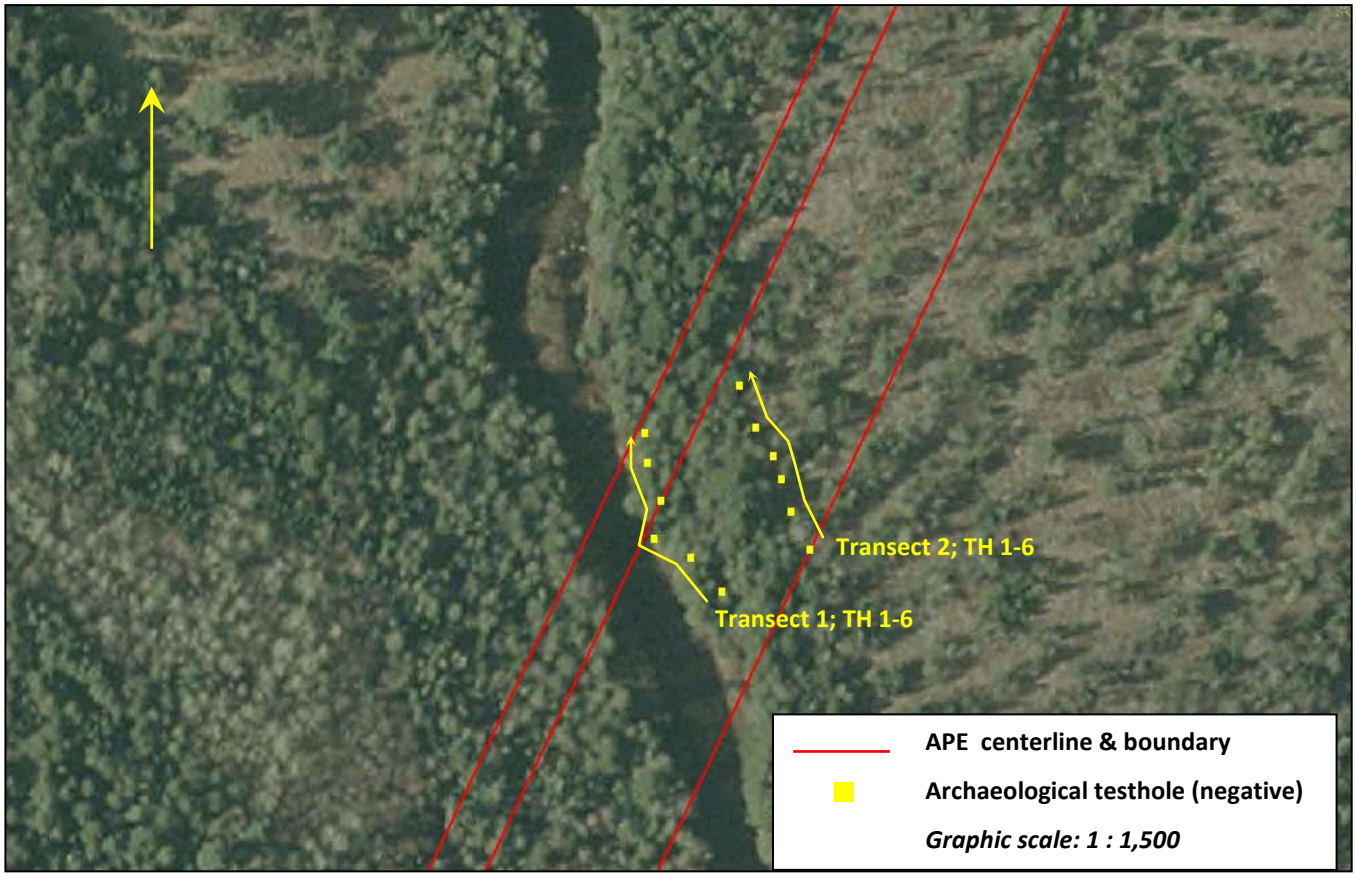


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Figure 9. Location of Test Area 9 within the Oakfield Transmission Line Project and GPS data showing the testhole configuration used to sample the landform.

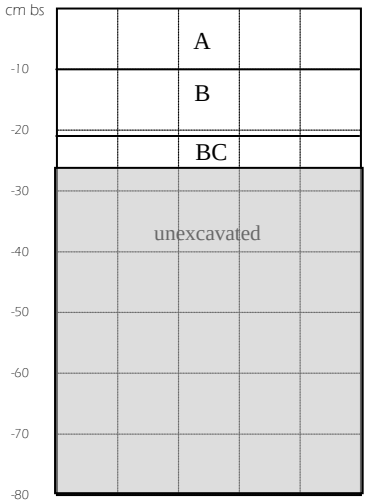
Maine GenLead, LLC Transmission Line: Phase I Archaeological Survey
Test Area Report: TA 14S

LOCATION INFORMATION:	
Test area designation	14S
Coordinate (UTM Z19 NAD 83) (Geographic center of tested area)	Z19 E 574850 N 5078782
General location	South side of West Branch Mattamwamkeag River in T3 R3 Wels
Results of Testing:	
Number of testhole transects	2
Testing configuration/area	Two transects place parallel to the river terrace.
50 cm^2 test pits excavated	20
Test units/deep tests excavated	0
Average depth	33 cm bs
Recommendation:	No Further Archaeological Investigation

ENVIRONMENTAL DESCRIPTION	
Setting/Landform type	Terrace along edge of river.
Vegetation	Mixed forest
Surface	Smooth to undulating
Disturbances	None
Comments	

TYPICAL STRATIGRAPHIC PROFILE

TR_2__ TH__5____



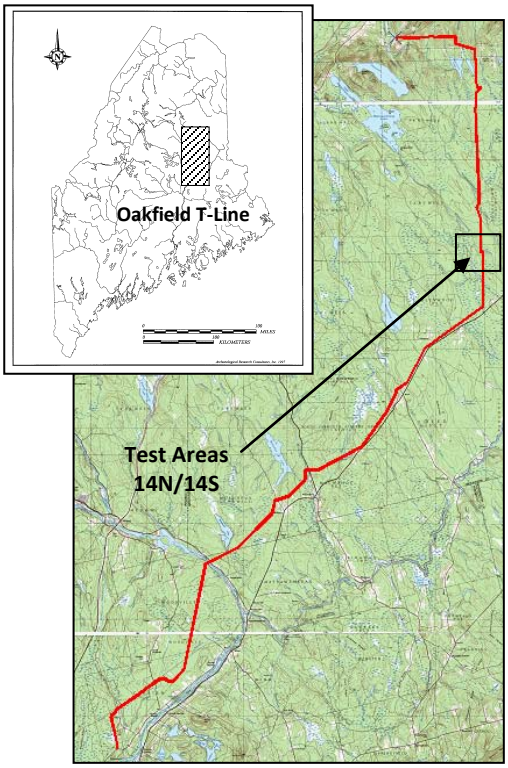
Max. depth ___25_____cm bs

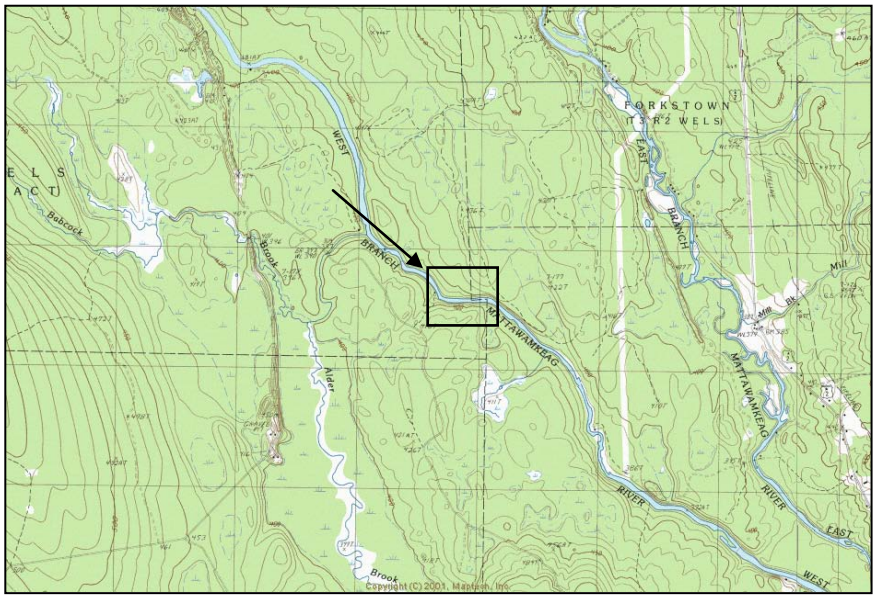
Unit/ Horizon	Color	Texture
A	D7	SiL
B	3/7	Si, Pbl
BC	Lt5/7	Si, Pb

Soil Texture: *S – sand Si – silt Cl – clay L – loam VF – very fine F – fine M – medium C – coarse*

Inclusions: *Gr – gravel Cb – cobbles Pb – pebbles ● – roots Cnc – concretions Ch – charcoal*

Color Key: *1 – gray 2 – black 3 – orange 4 – red 5 – yellow 6 – olive 7 – brown Lt – light D – dark Mx – mixed*





Test Areas 14N & 14S shown on USGS 7-1/2 minute, Alder Brook, Maine quadrangle

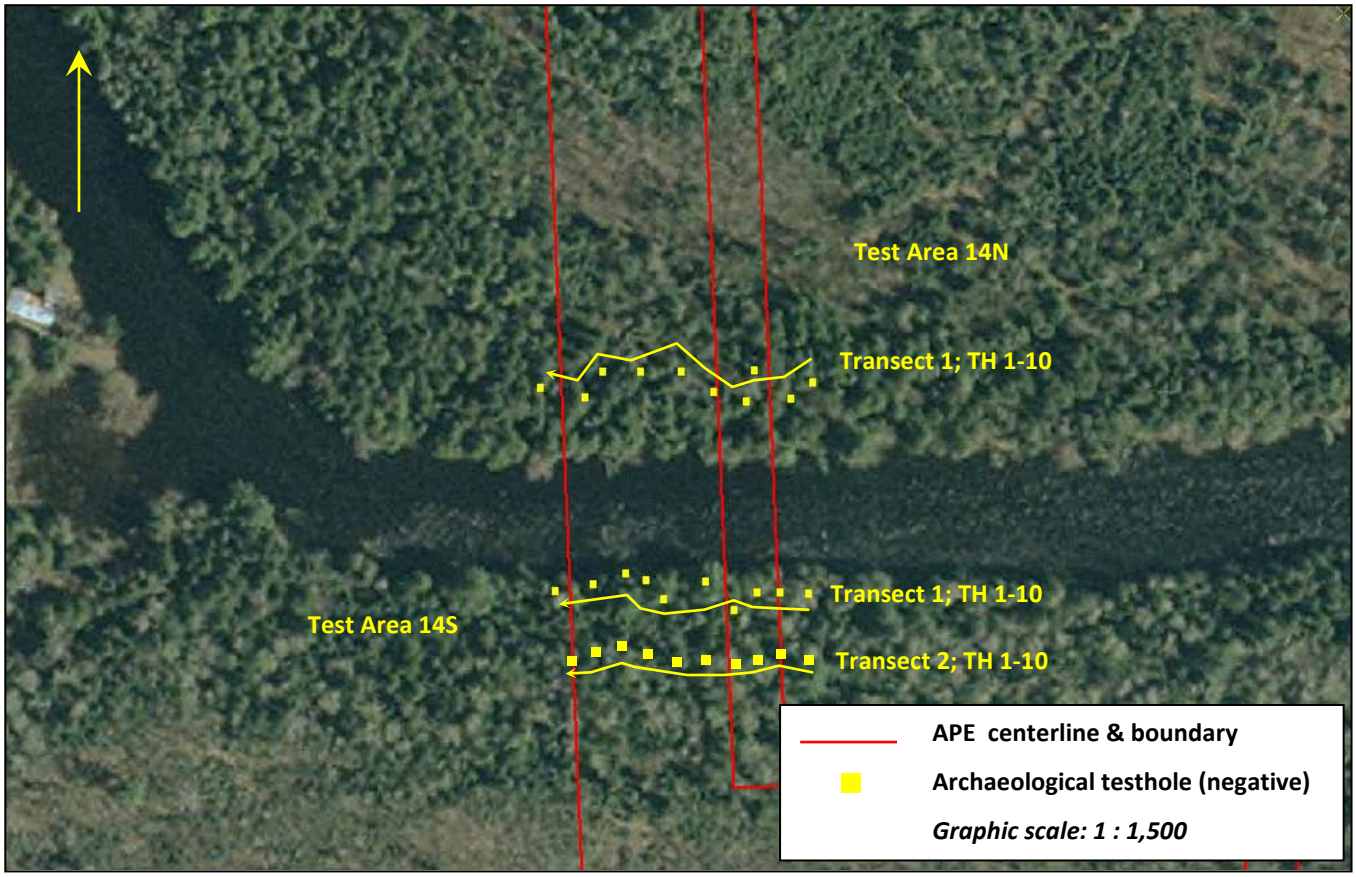


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Figure 10. Location of Test Areas 14N/14S within the Oakfield Transmission Line Project and GPS data showing the testhole configuration used to sample the landform.

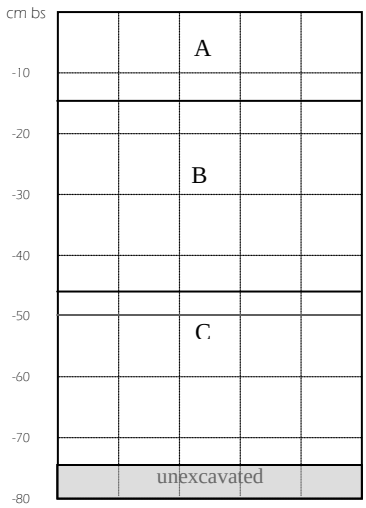
Maine GenLead, LLC Transmission Line: Phase I Archaeological Survey
Test Area Report: TA 14N

LOCATION INFORMATION:	
Test area designation	14N
Coordinate (UTM Z19 NAD 83) (Geographic center of tested area)	Z19 E 574850 N 5078845
General location	North side of West Branch Mattamwamkeag River in Haynesville
Results of Testing:	
Number of testhole transects	1
Testing configuration/area	One linear transect placed immediately along stream edge..
50 cm^2 test pits excavated	10
Test units/deep tests excavated	0
Average depth	66 cm bs
Recommendation:	No Further Archaeological Investigation

ENVIRONMENTAL DESCRIPTION	
Setting/Landform type	Terrace along edge of river.
Vegetation	Mixed forest
Surface	Smooth to undulating
Disturbances	None
Comments	

TYPICAL STRATIGRAPHIC PROFILE

TR_1__ TH__2____



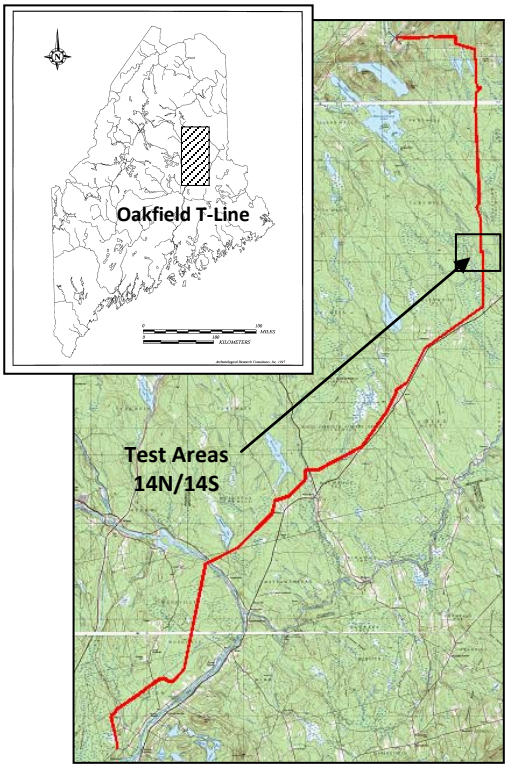
Max. depth ___75_____cm bs

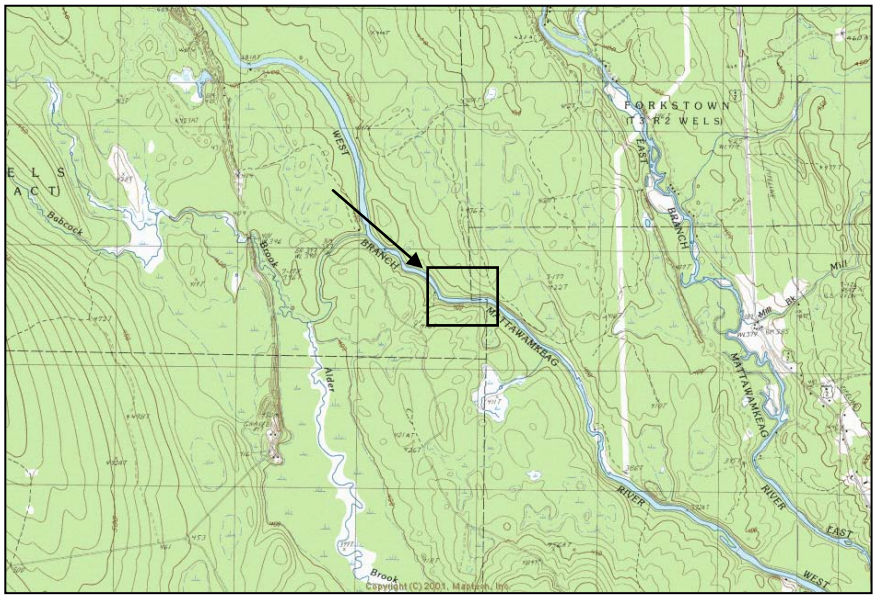
Unit/ Horizon	Color	Texture
A	7	FSL
B	5/7	FS, Si
C	6/7	F-Ms

Soil Texture: *S – sand Si – silt Cl – clay L – loam VF – very fine F – fine M – medium C – coarse*

Inclusions: *Gr – gravel Cb – cobbles Pb – pebbles ● – roots Cnc – concretions Ch – charcoal*

Color Key: *1 – gray 2 – black 3 – orange 4 – red 5 – yellow 6 – olive 7 – brown Lt – light D – dark Mx – mixed*





Test Areas 14N & 14S shown on USGS 7-1/2 minute, Alder Brook, Maine quadrangle

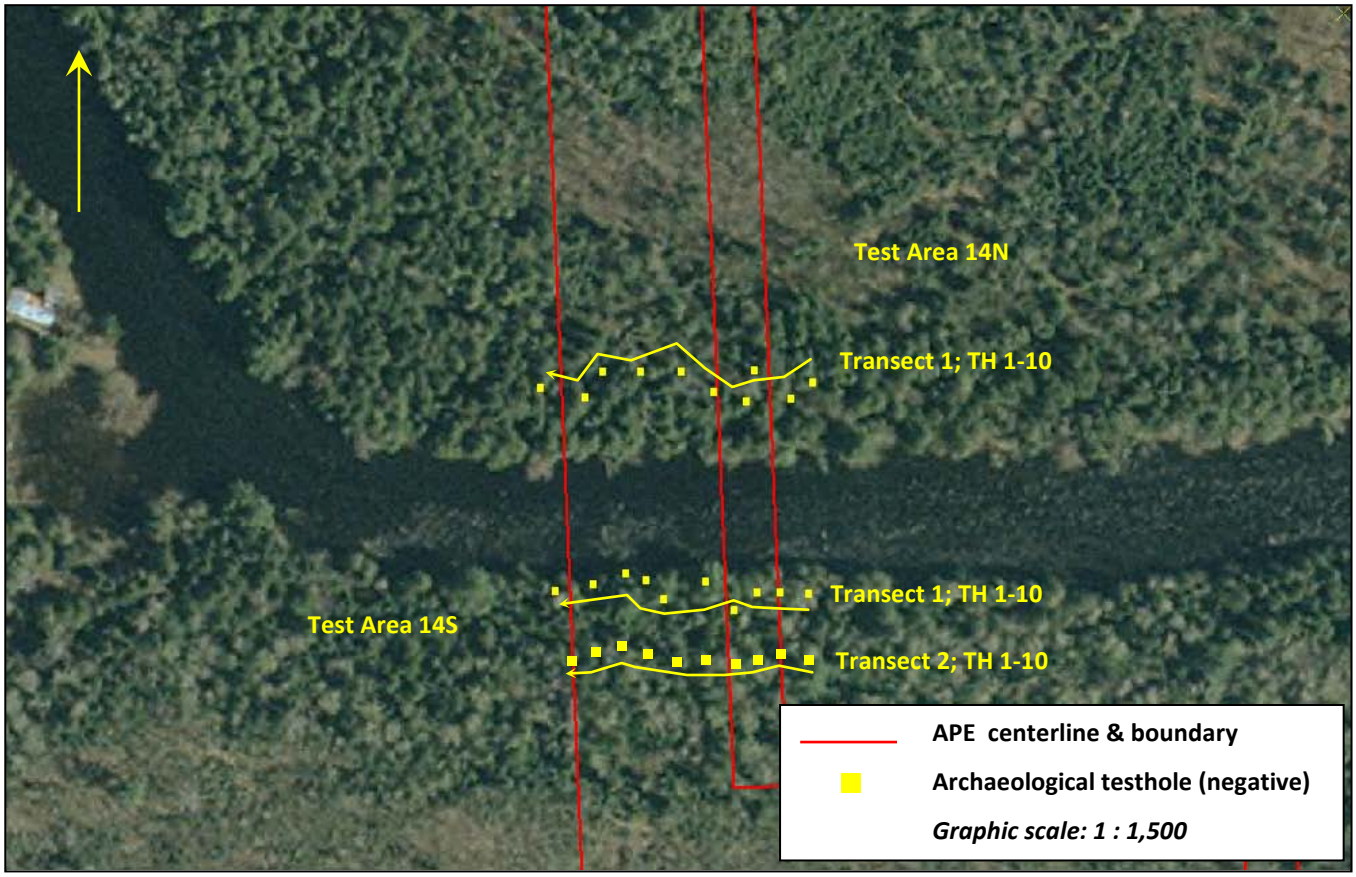


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Figure 11. Location of Test Areas 14N/14S within the Oakfield Transmission Line Project and GPS data showing the testhole configuration used to sample the landform.

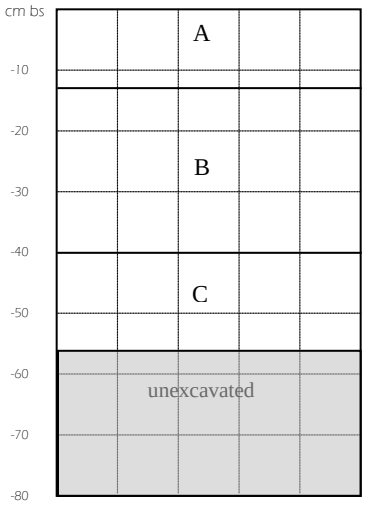
Maine GenLead, LLC Transmission Line: Phase I Archaeological Survey
Test Area Report: TA 15S

LOCATION INFORMATION:	
Test area designation	15S
Coordinate (UTM Z19 NAD 83) (Geographic center of tested area)	Z19 E 574468 N 5083590
General location	South side of East Branch Mattamwamkeag River in T3 R3 Wels
Results of Testing:	
Number of testhole transects	2
Testing configuration/area	One transect running across ROW parallel with stream.
50 cm^2 test pits excavated	19
Test units/deep tests excavated	0
Average depth	41 cm bs
Recommendation:	No Further Archaeological Investigation

ENVIRONMENTAL DESCRIPTION	
Setting/Landform type	Terrace along edge of river.
Vegetation	Mixed forest with wetland vegetations in low swales
Surface	Scoured and eroded, hummocky and uneven,
Disturbances	Frequent flooding
Comments	

TYPICAL STRATIGRAPHIC PROFILE

TR_1__ TH__3____



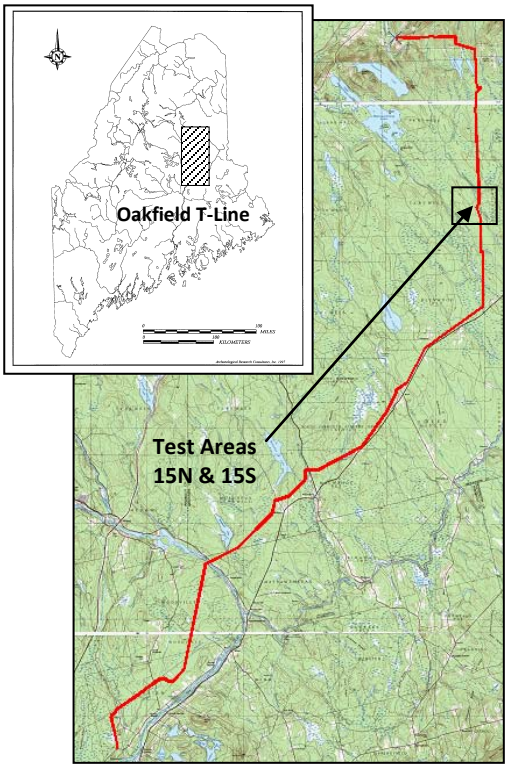
Max. depth ___56_____cm bs

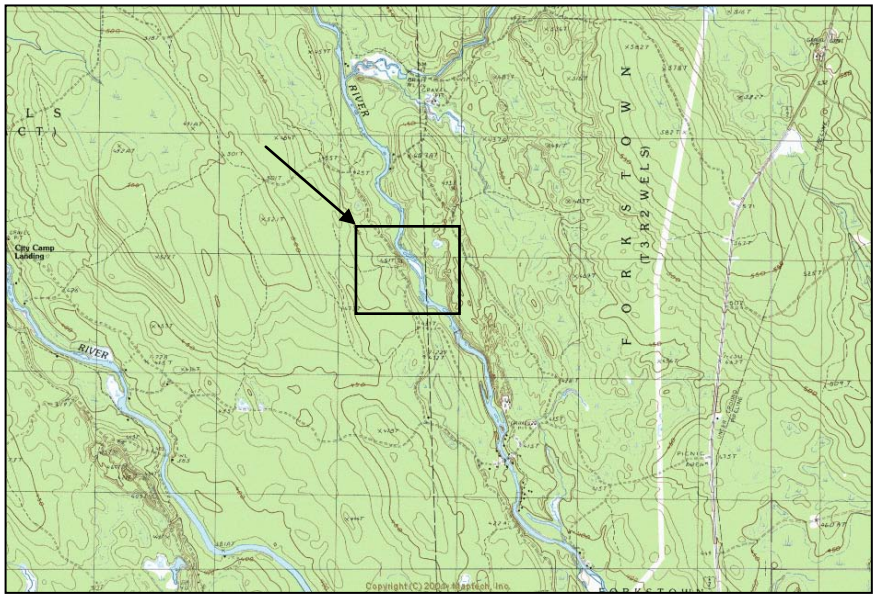
Unit/ Horizon	Color	Texture
A	7	FS, Si
B	5/7	FS, Si
C	6/7	FS, Si, Pb, Cb

Soil Texture: *S – sand Si – silt Cl – clay L – loam VF – very fine F – fine M – medium C – coarse*

Inclusions: *Gr – gravel Cb – cobbles Pb – pebbles ● – roots Cnc – concretions Ch – charcoal*

Color Key: *1 – gray 2 – black 3 – orange 4 – red 5 – yellow 6 – olive 7 – brown Lt – light D – dark Mx – mixed*





Test Areas 15N & 15S shown on USGS 7-1/2 minute, Monument Brook, Maine quadrangle

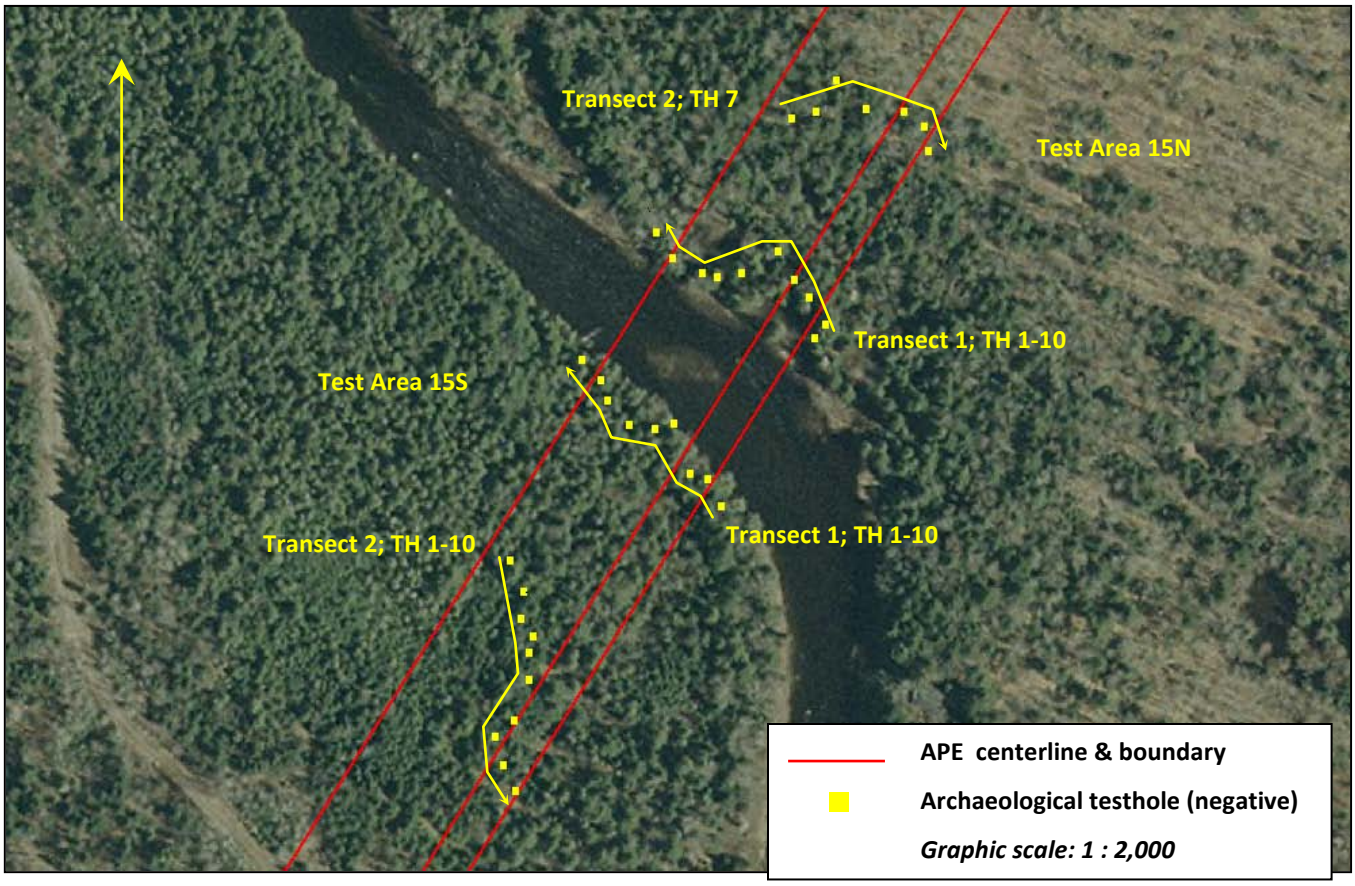


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Figure 12. Location of Test Areas 15N/15S within the Oakfield Transmission Line Project and GPS data showing the testhole configuration used to sample the landform.

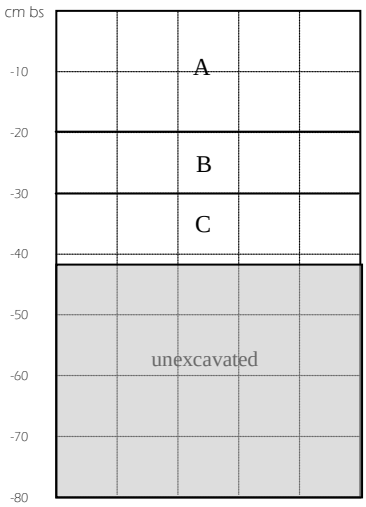
Maine GenLead, LLC Transmission Line: Phase I Archaeological Survey
Test Area Report: TA 15N

LOCATION INFORMATION:	
Test area designation	15N
Coordinate (UTM Z19 NAD 83) (Geographic center of tested area)	Z19 E 574555 N 5083712
General location	North side of West Branch Mattamwamkeag River in T3 R3 Wels
Results of Testing:	
Number of testhole transects	2
Testing configuration/area	Two transects run parallel with stream on terrace edge.
50 cm^2 test pits excavated	18
Test units/deep tests excavated	0
Average depth	42 cm bs
Recommendation:	No Further Archaeological Investigation

ENVIRONMENTAL DESCRIPTION	
Setting/Landform type	Terrace along edge of river.
Vegetation	Mixed forest
Surface	Smooth to undulating
Disturbances	None
Comments	

TYPICAL STRATIGRAPHIC PROFILE

TR_1__ TH__5____



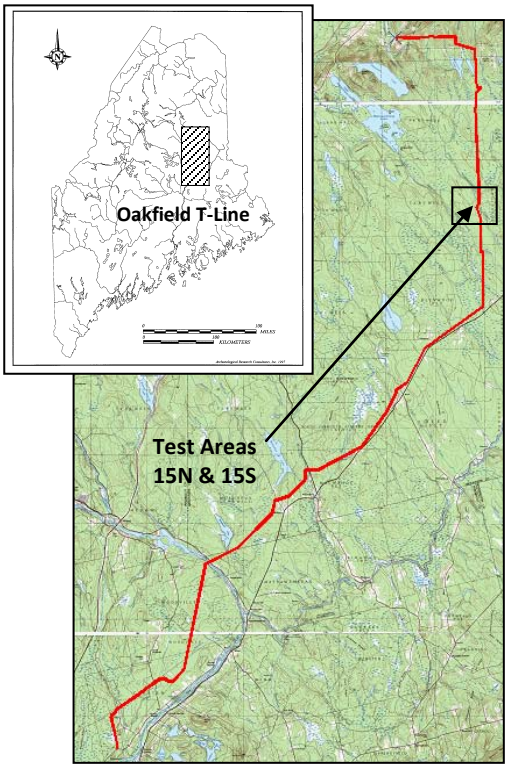
Max. depth ___41_____cm bs

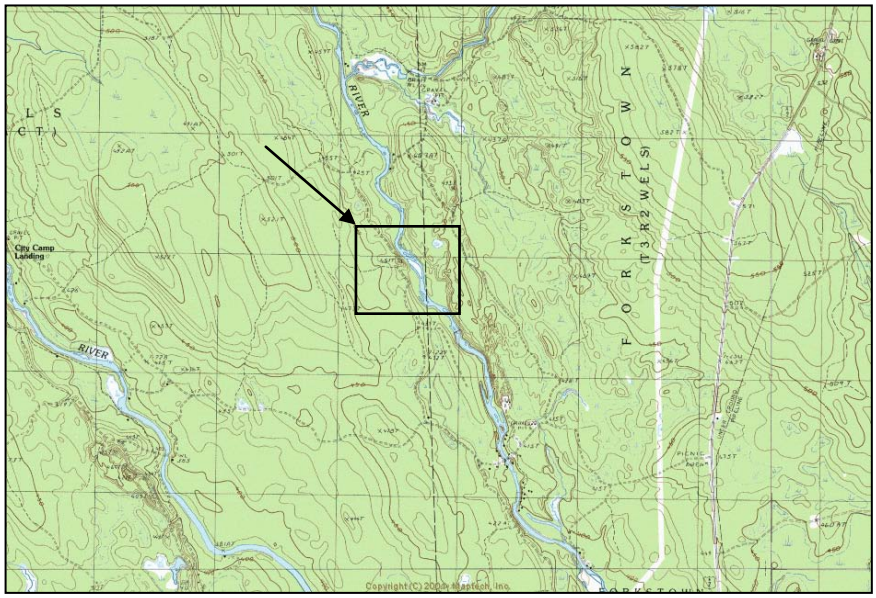
Unit/ Horizon	Color	Texture
A	7	SiL
B	5/7	FS, Si
C	6/1	FS, Si

Soil Texture: *S – sand Si – silt Cl – clay L – loam VF – very fine F – fine M – medium C – coarse*

Inclusions: *Gr – gravel Cb – cobbles Pb – pebbles ● – roots Cnc – concretions Ch – charcoal*

Color Key: *1 – gray 2 – black 3 – orange 4 – red 5 – yellow 6 – olive 7 – brown Lt – light D – dark Mx – mixed*





Test Areas 15N & 15S shown on USGS 7-1/2 minute, Monument Brook, Maine quadrangle

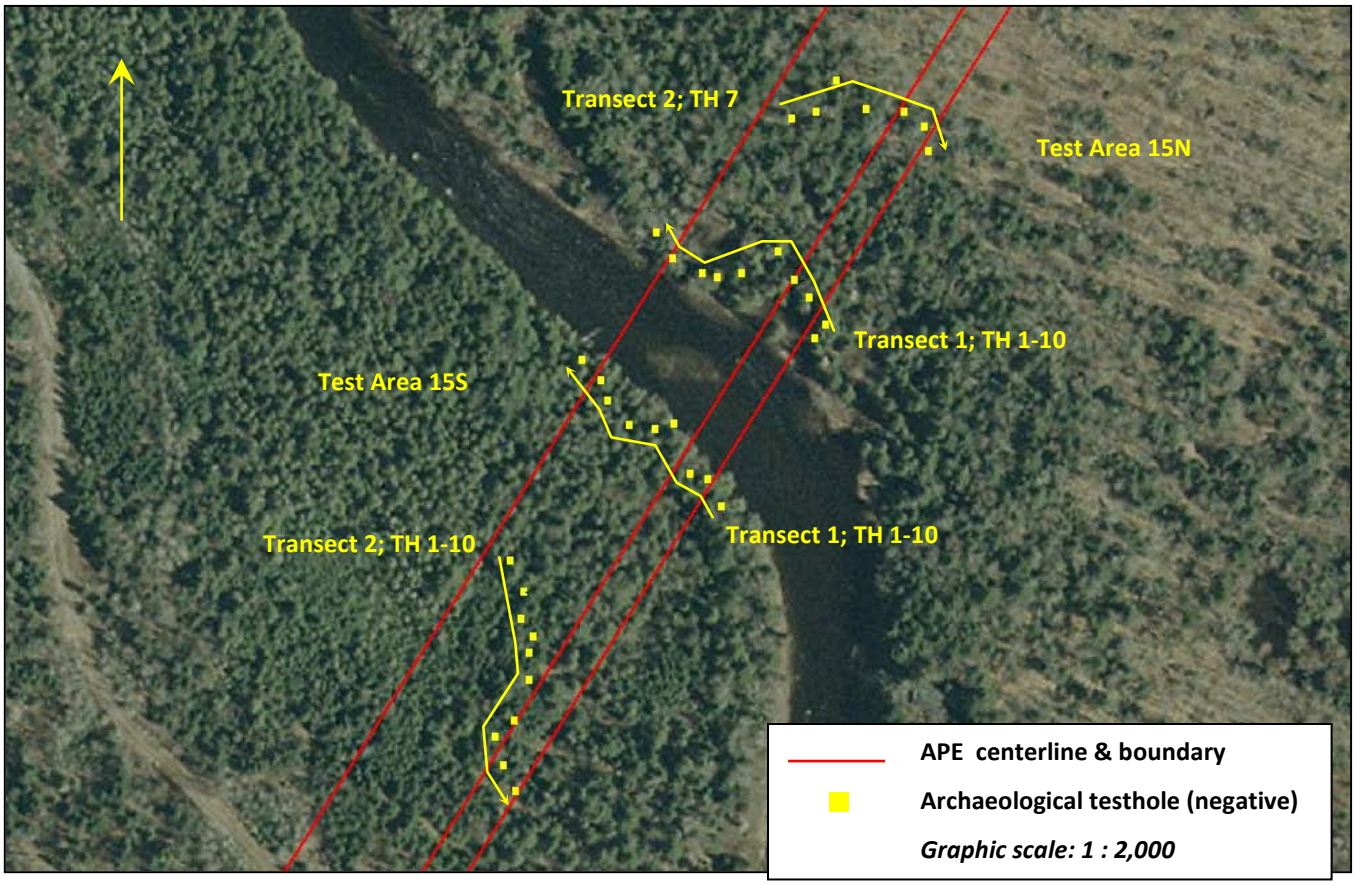


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Figure 13. Location of Test Areas 15N/15S within the Oakfield Transmission Line Project and GPS data showing the testhole configuration used to sample the landform.

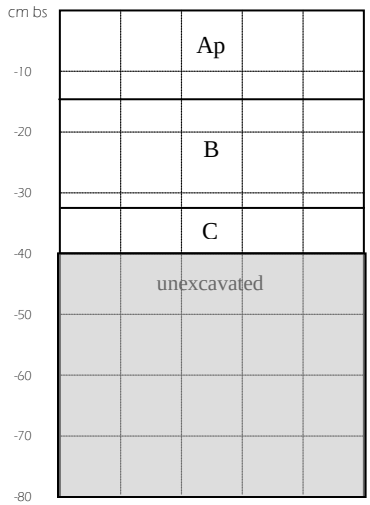
Maine GenLead, LLC Transmission Line: Phase I Archaeological Survey
Test Area Report: TA 16

LOCATION INFORMATION:	
Test area designation	16
Coordinate (UTM Z19 NAD 83) (Geographic center of tested area)	Z19 E 574610 N 5084740
General location	South side of Beaver Brook in T3 R3 Wels
Results of Testing:	
Number of testhole transects	1
Testing configuration/area	On transect placed along stream edge
50 cm^2 test pits excavated	5
Test units/deep tests excavated	0
Average depth	43 cm bs
Recommendation:	No Further Archaeological Investigation

ENVIRONMENTAL DESCRIPTION	
Setting/Landform type	Upper terrace on stream edge, edge of stream bordered by a low wet grassy area.
Vegetation	Mixed forest with moss and fern understory
Surface	Hummocky with tree throws and low wet areas
Disturbances	A logging and ATV road bisects the TA
Comments	

TYPICAL STRATIGRAPHIC PROFILE

TR_1__ TH__4____



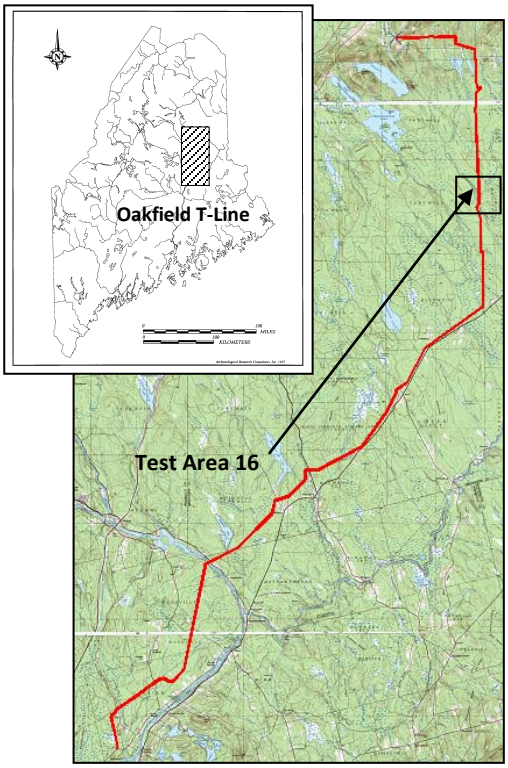
Max. depth ___40_____cm bs

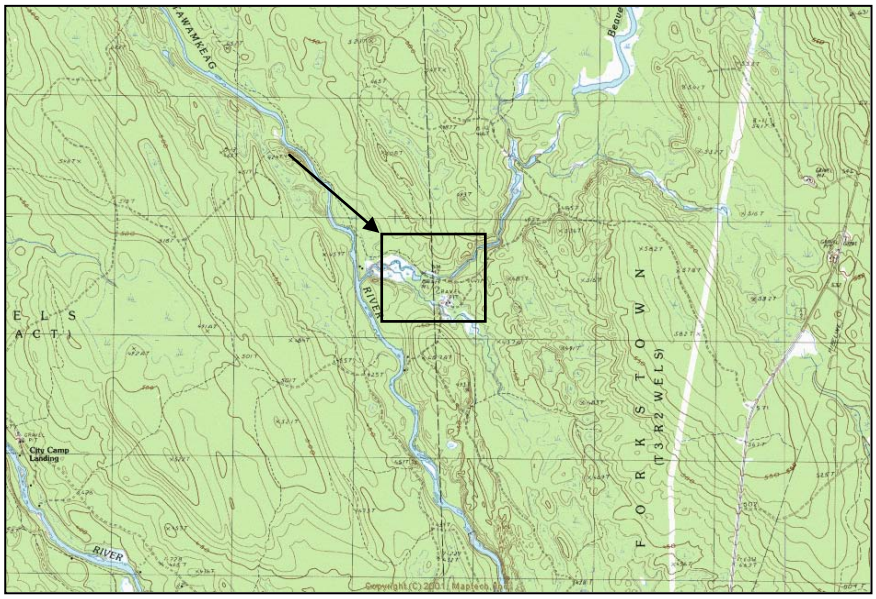
Unit/ Horizon	Color	Texture
Ap	7	Si
B	D5/7	Si
C	6/7	Si

Soil Texture: *S – sand Si – silt Cl – clay L – loam VF – very fine F – fine M – medium C – coarse*

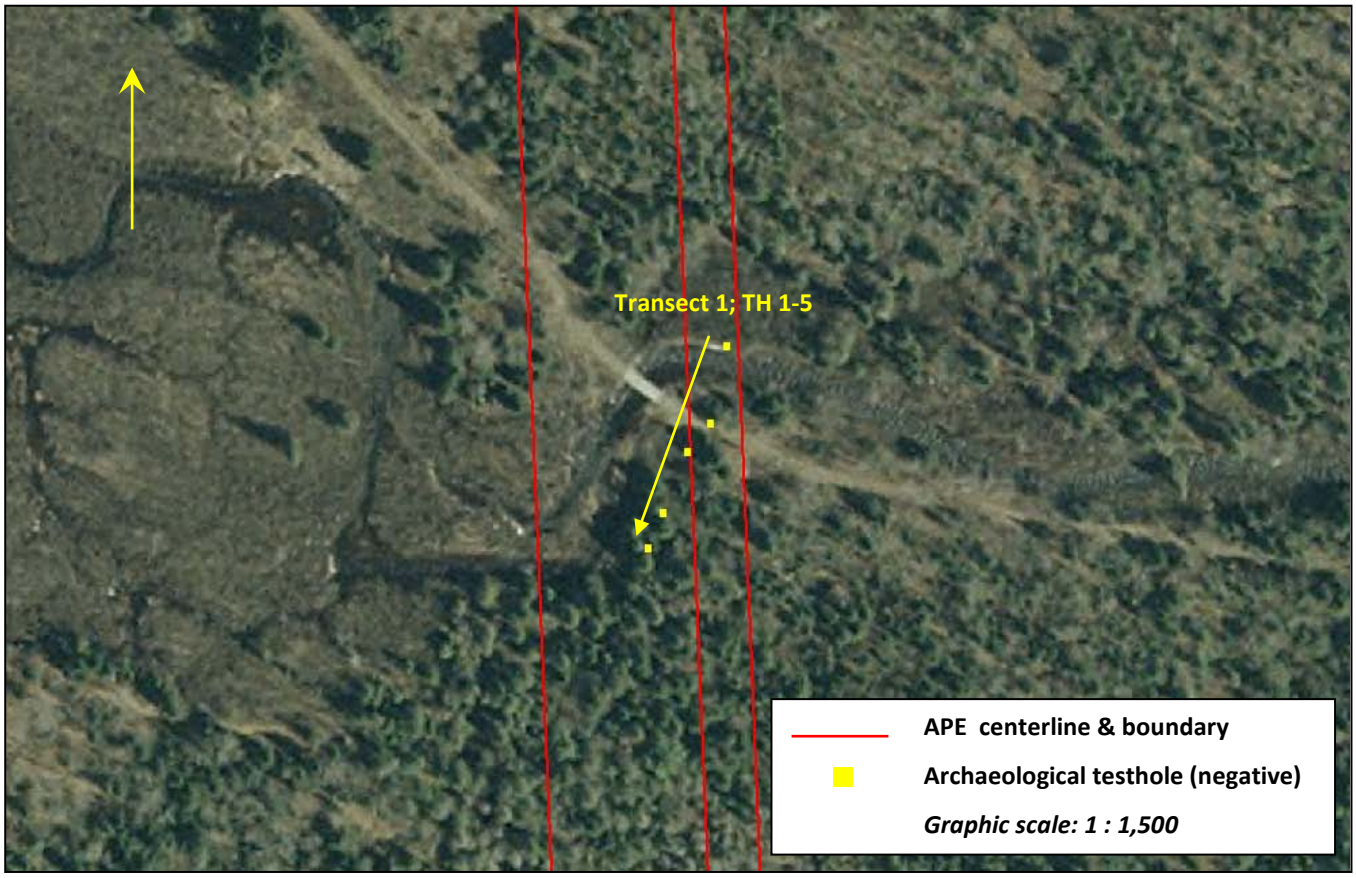
Inclusions: *Gr – gravel Cb – cobbles Pb – pebbles ● – roots Cnc – concretions Ch – charcoal*

Color Key: *1 – gray 2 – black 3 – orange 4 – red 5 – yellow 6 – olive 7 – brown Lt – light D – dark Mx – mixed*





Test Area 16 shown on USGS 7-1/2 minute, Monument Brook, Maine quadrangle



Maine GenLead, LLC
Oakfield Transmission Line Project

TRC
71 Oak Street
Ellsworth, Maine 04605
207-667-4055

Figure 14. Location of Test Area 16 within the Oakfield Transmission Line Project and GPS data showing the testhole configuration used to sample the landform.

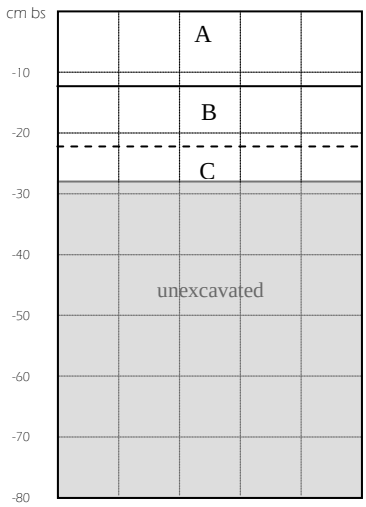
Maine GenLead, LLC Transmission Line: Phase I Archaeological Survey
Test Area Report: TA 20

LOCATION INFORMATION:	
Test area designation	20
Coordinate (UTM Z19 NAD 83) (Geographic center of tested area)	Z19 E 566035 N 5100975
General location	North and south sides of Moose Brook in Oakfield
Results of Testing:	
Number of testhole transects	5
Testing configuration/area	All transects placed parallel to stream along various terrace edges.
50 cm^2 test pits excavated	11
Test units/deep tests excavated	0
Average depth	38 cm bs
Recommendation:	No Further Archaeological Investigation

ENVIRONMENTAL DESCRIPTION	
Setting/Landform type	Series of three small terraces on the west side of stream and a single terrace on the east side.
Vegetation	Grass, moss, ferns, and some mixed hardwood bushes
Surface	Hummocky to smoothed with numerous old stream channels and wet areas.
Disturbances	None noted
Comments	

TYPICAL STRATIGRAPHIC PROFILE

TR_4__ TH__1____



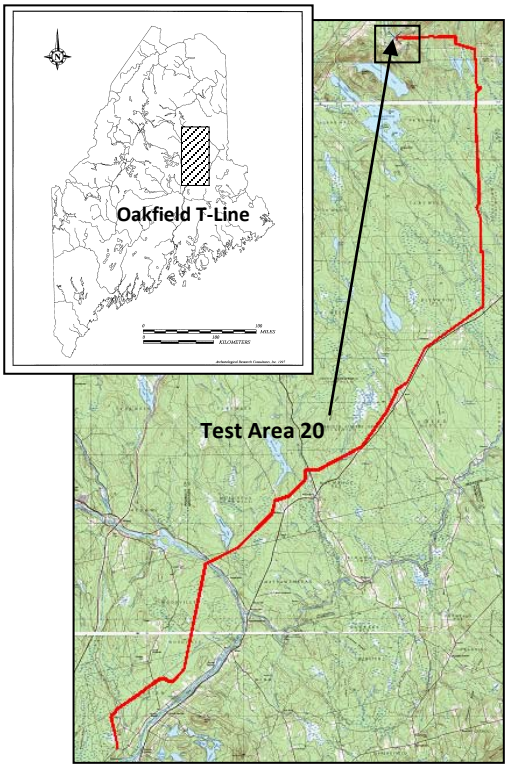
Max. depth ___28_____cm bs

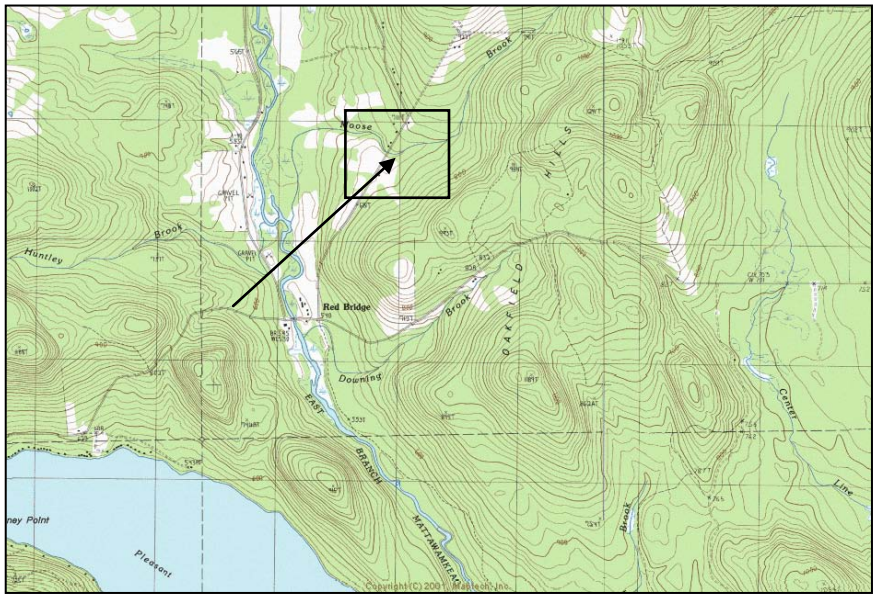
Unit/ Horizon	Color	Texture
A	D7	SiL
B	5/7	CS, Gr
C	D6/7	CS, Gr

Soil Texture: *S – sand Si – silt Cl – clay L – loam VF – very fine F – fine M – medium C – coarse*

Inclusions: *Gr – gravel Cb – cobbles Pb – pebbles ● – roots Cnc – concretions Ch – charcoal*

Color Key: *1 – gray 2 – black 3 – orange 4 – red 5 – yellow 6 – olive 7 – brown Lt – light D – dark Mx – mixed*





Test Area 20 shown on USGS 7-1/2 minute, Oakfield, Maine quadrangle

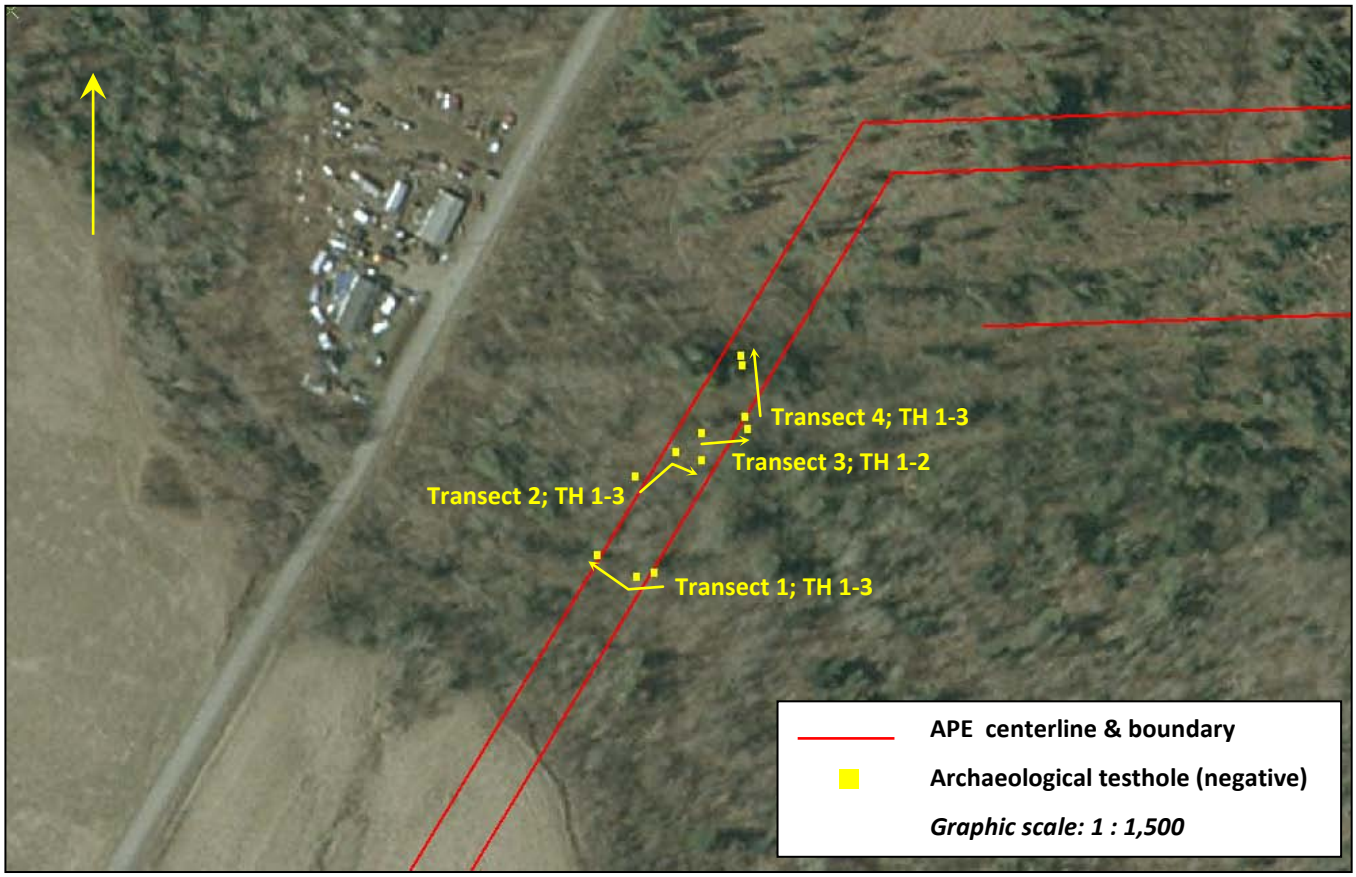


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Figure 15. Location of Test Area 20 within the Oakfield Transmission Line Project and GPS data showing the testhole configuration used to sample the landform.

Conclusions and Recommendations

The majority of the proposed transmission line associated with the Oakfield Wind Farm project does not possess great archaeological sensitivity. The line extends through the town and townships of Chester, Woodville, Mattawamkeag, Molunkus Township, Macwahoc Plantation, North Yarmouth Academy Grant, Reed Plantation, Glenwood Plantation, T3R3 WELS, T4R3 WELS, Linneus, and Oakfield. Through Chester and Woodville, the line is adjacent to the existing Line 56 transmission line corridor for approximately 7 miles to an intersection with the existing 345 kV MEPCO corridor in Woodville. It then follows, with minor deviations, the MEPCO corridor northeast for approximately 33 miles to the Glenwood Plantation/Haynesville town line. From this point, the line runs north along the westerly side of town boundaries for approximately 16.5 miles, to the town of Oakfield, then approximately 2.5 miles to the substation located at the easterly string of wind turbines for the Oakfield Wind Project.

The line crosses numerous brooks, streams, and river, which include moving south to north Medunkeunk Stream, Ebhorse Stream, Eagle Stream, Penobscot River, Mattaseunk Stream, Little Molunkus Stream, Molunknus Stream, Macwahoc Stream, Wytopitloc Stream, Smith Brook, Alder brook, West Branch of Mattawamkeag River, East Branch of Mattawamkeag River, Beaver Brook, Mud Lake Brook, Centerline Brook, and Moose Brook.

This survey included walkover survey of 20 locations and subsurface testing of 13 of those areas. Areas that were selected for sampling generally fell into one or more categories. Most areas exhibit archaeologically sensitive soils and were on landforms adjacent to major streams, drainages, or wetlands. Many locations that were identified as having “moderate to high archaeological sensitivity” based on map inspection were determined to not require testing based on field observation. These areas either border minor or intermittent streams and wetlands, are disturbed by logging activities, or display no marked break in slope or inhabitable surface. Subsurface testing of these test areas entailed the excavation of 215 50 cm^2 testholes along 30 transects within the APE.

No prehistoric cultural materials or sites were discovered during Phase I archaeological survey of the Project. No further survey for prehistoric resources is recommended for the Project as it is presently proposed.

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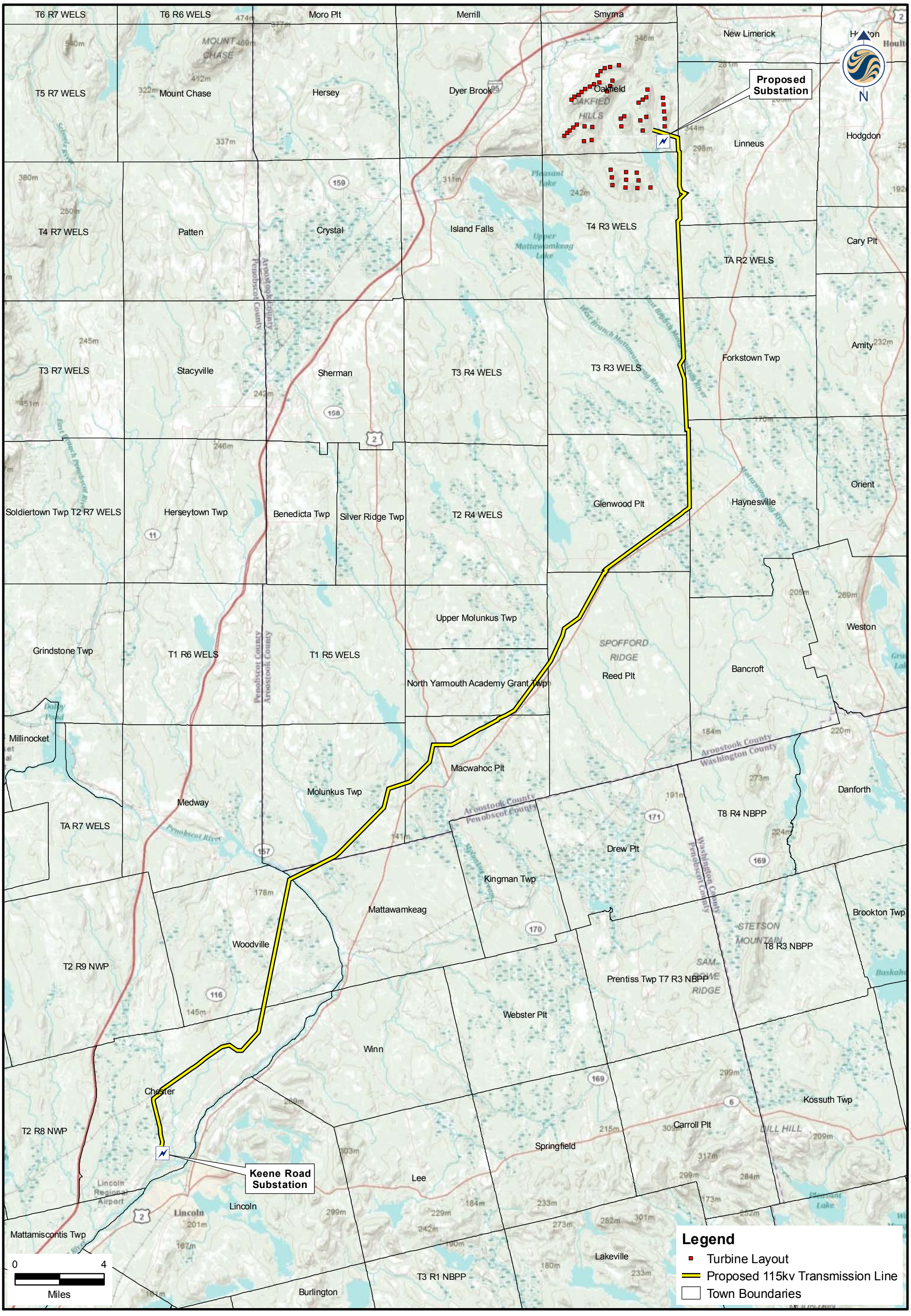

Prepared By:

Stantec

Project:

Revised Oakfield Wind Project
Penobscot and Aroostook Counties

Sheet Title:

Maine GenLead 115kV Generator
Lead Transmission Line Corridor

Date:	May 2011
Scale:	As Shown
Proj. No.:	195600518
Figure:	1

195600518-F001-Tline-11x17.mxd

Appendix 8-2

Phase 0 Archaeological Survey:
Maine GenLead 115kV Generator Lead Transmission Line
Multiple Towns, Aroostook and Penobscot Counties, Maine

Submitted to
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Topsham, Maine 04086

Kathleen Wheeler, Ph. D., Principal Investigator

Prepared by
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INDEPENDENT ARCHAEOLOGICAL CONSULTING, LLC

97 Morning Street
Portsmouth, NH 03801

August 18, 2010

This Report Contains Confidential Information

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INTRODUCTION

Independent Archaeological Consulting, LLC (IAC) of Portsmouth, New Hampshire, has completed a Phase 0 reconnaissance survey for the proposed Maine GenLead 115kV Generator Lead Transmission Line in northern Maine (Figure 1A-C). The present project calls for the construction of 59 miles of transmission line that will traverse 12 towns in Aroostook and Penobscot Counties. The Maine GenLead 115kV Generator Lead transmission line project includes the erection of 46 turbines along with a proposed 34.5 kV collector system, an electrical substation, and an operations and maintenance facility in Oakfield; these components are the subject of a separate report (Wheeler 2010). IAC conducted the Phase 0 sensitivity assessment for Euroamerican archaeological resources on behalf of Stantec Consulting Services, Inc., of Topsham, Maine, and the archaeological work is authorized under Section 106 of the National Historic Preservation Act of 1966, as amended (36 CFR Part 800). Dr. Kathleen Wheeler served as Principal Investigator, and she exceeds the qualifications set forth by the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716, September 29, 1993) and 36 CFR Part 61. Dr. Wheeler is a certified Level-2 Historical Archaeologist in Maine and is permitted to conduct all phases of archaeological survey.

Maine GenLead, LLC proposes to construct an approximately 59-mile 115kV transmission line extending from the Keene Road substation in Chester to a substation servicing the Oakfield Wind Project in Oakfield. The Oakfield Wind Project, DEP #L-24572-A-N and L-24572-TF-B-N (January 21, 2010) is being amended through a separate application to expand its capacity. The purpose of this 115 kV transmission line is to provide a direct interconnect between the Oakfield Wind Project and the ISO New England transmission system to accommodate the energy output of the expanded Oakfield Wind Project.

The design will be primarily single pole structures with double and triple poles, and associated guying, as necessary to support the integrity of the line. The amount of new clearing associated with the corridor will vary from 15 to 30 meters (50 to 100 feet), depending on adjacency to existing infrastructure. The line will extend through 12 towns and townships – Chester, Woodville, Mattawamkeag, Molunkus Township, Macwahoc Plantation, North Yarmouth Academy Grant, Reed Plantation, Glenwood Plantation, T3R3 WELS, T4R3 WELS, Linneus, and Oakfield (Figures 1A, 1B, and 1C). Through Chester and Woodville, the line is adjacent to the existing Line 56 transmission line corridor for approximately seven miles to an intersection with the existing 345 kV MEPCO corridor in Woodville. It then follows, with minor deviations, the MEPCO corridor northeast for approximately 33 miles to the Glenwood Plantation/Haynesville town line. From this point, the line runs north along the westerly side of town boundaries for approximately 16.5 miles, to the town of Oakfield, then approximately 2.5 miles to a substation located at the easterly string of wind turbines for the Oakfield Wind Project. In total, the new transmission line is adjacent to existing transmission corridors for 33 miles, 56% of its total length.

Nineteenth-century maps (Roe & Colby 1877; Comstock & Cline 1875) show much of the project area to have been little developed in the final quarter of the 1800s, and many of the towns continue to be relatively uninhabited to the present day. Towns that show little to no Euroamerican settlement are: T4R3 WELS, T3R3 WELS, Reed Plantation, North Yarmouth Academy Grant, Macwahoc Plantation, and Molunkus. In other towns, such as Oakfield, Linneus, Glenwood Plantation, Mattawamkeag, Woodville, and Chester, the transmission line is located in undeveloped portions. IAC developed a site predictive model based on the presence of documented sites and conducted an inspection of all major road crossings. IAC archaeologist

Wheeler conducted a walkover survey at the north end of the project area on May 26, 2010, while Jacob Tumelaire and Jonathan Douse surveyed southern road crossings on June 4, 2010. Archaeologists found no archaeological resources and find the project area has low sensitivity for Euroamerican archaeological resources. IAC recommends no further archaeological survey for the Maine GenLead 115kV Generator Lead transmission line as it is presently designed.

Scope and Authority

The Maine GenLead 115kV Generator Lead transmission line project will require approvals and permits from both federal and state entities. Among these, the Project will be reviewed under Section 106 of the National Historic Preservation Act (NHPA) (16 US §470f). Section 106 of the NHPA requires federal agencies, including the Army Corps of Engineers (ACOE), to take into account, prior to authorizing an undertaking (e.g., the issuance of a ACOE approval or Certificate), the effect of that undertaking on cultural resources listed or eligible for listing in the National Register of Historic Places (National Register) (36 CFR §60). The agency must also afford the Advisory Council on Historic Preservation the opportunity to comment on the undertaking. The Section 106 process is coordinated at the state level by the State Historic Preservation Officer (SHPO), represented in Maine by the Maine Historic Preservation Commission (MHPC). The issuance of agency certificate or approvals will depend, in part, on obtaining comments from the Maine SHPO.

Figure 1A. Northern section of proposed Maine GenLead 115kV Generator Lead transmission line in Oakfield, Linneus, T4 R3, T3 R3, and Glenwood PLT.

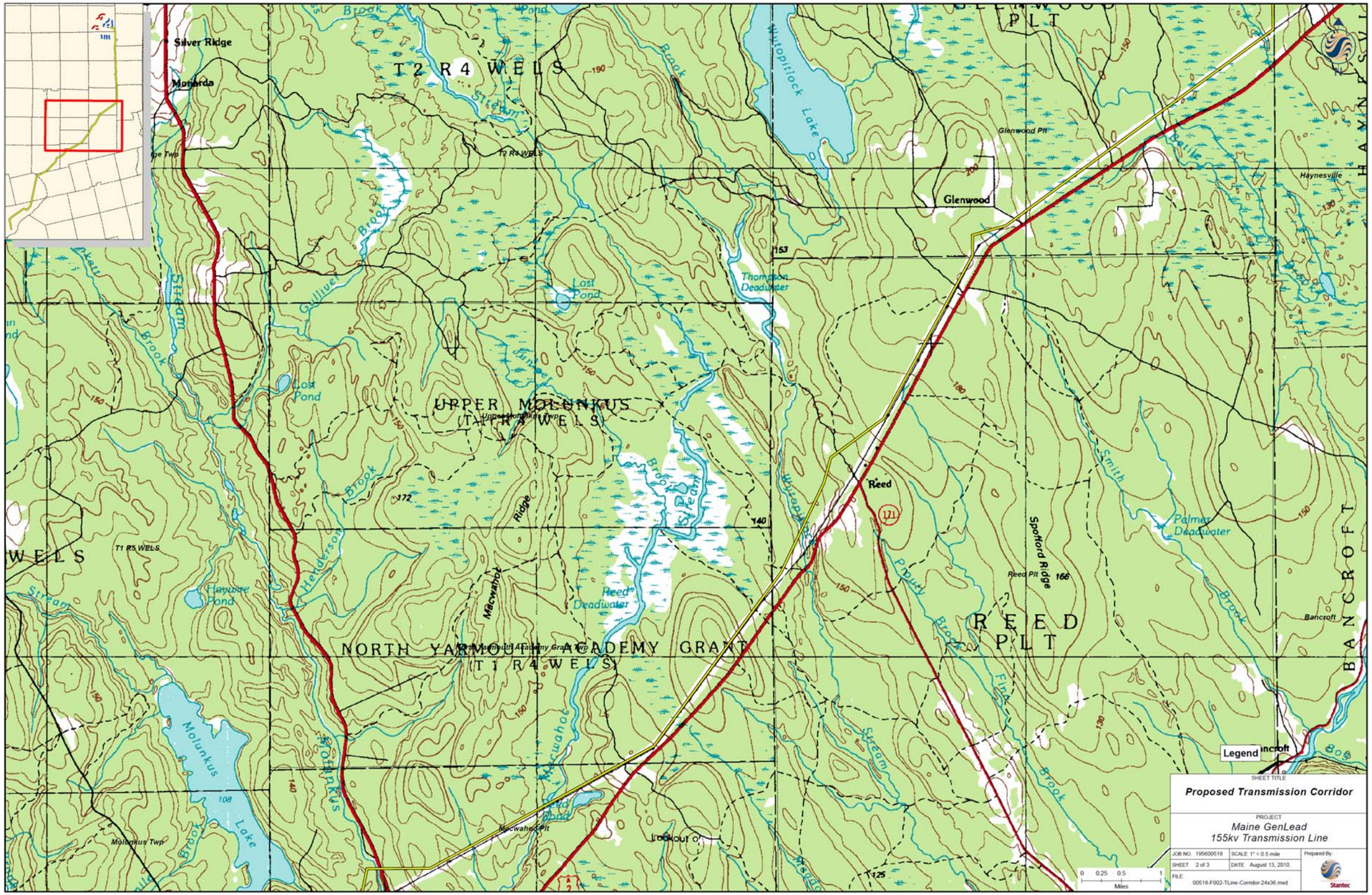

Figure 1B. Central section of proposed Maine GenLead 115kV Generator Lead transmission line in Glenwood PLT, Reed PLT, North Yarmouth Academy Grant, and Macwahok PLT.

Figure 1C. Southern portion of proposed Maine GenLead 115kV Generator Lead transmission line in Macwahoc PLT, Molunkus, Mattawamkeag, Woodville, and Chester.

CULTURAL RESOURCE ASSESSMENT AND SURVEY METHODS

Predicting the location of Euroamerican archaeological resources is built primarily from cartographic evidence from nineteenth- and twentieth-century maps (e. g., Roe & Colby 1877; Comstock & Cline 1875; and United States Geological Survey topographical maps). These cartographic resources pinpoint the location of dwellings, schools, mills, churches, and cemeteries, providing the archaeologist with a ready point of comparison between past and present landscapes. In this, the sensitivity assessment differs greatly from those conducted for pre-Contact-period archaeological resources. Historical archaeologists can also review secondary sources such as town histories, genealogies, photographs, and newspapers to provide a larger historical context for a project area. The sensitivity assessment also includes a site file search for known archaeological sites within the project area, or sites that might serve as analogs for the project area. Using known site types and distributions, historical archaeologists develop settlement models to make predictive statements about where to anticipate finding sites.

High archaeological sensitivity for Euroamerican resources is associated with the following variables:

- documented existence of sites (e. g., homesteads, farmsteads, schools, churches, town halls, cemeteries) through primary, secondary, or cartographic resources
- presence of known sites (whether extant, aboveground representations of early architecture, or documented archaeological site)
- proximity to transportation systems (roads, railroads, major rivers and streams) and potable water sources
- linkage to other resources (such as stone for quarrying, clay sources for brick or ceramics, or metal ores)
- High sensitivity is defined as lying ***within 100 m (330 ft)*** of documented or known sites, transportation systems, or sources of potential hydropower

Moderate sensitivity was assigned to areas between 100 m to 200 m (330 ft to 650 ft) of an historic road, standing architectural feature, or potable water source, in areas with minimal to moderate disturbance. Low sensitivity areas are those more than 200 m (650 ft) from documented sites, roadways, natural resources, or water sources. Low sensitivity is also assigned to areas with excessive ground disturbance, such as along railroad grades, where extensive cutting and filling are typically involved in the creation of the railroad bed. Table 1 summarizes the fundamental criteria for ranking sensitivity for Euroamerican archaeological resources.

Table 1. Summary of criteria for evaluating Euroamerican archaeological sensitivity.

Sensitivity	Criteria
High	within 100 m of transportation systems and/or sites known from maps
Moderate	within 100-200 m (330-650 ft) of roads or known sites
Low	more than 200 m from roads or known sites; or excessive disturbance

Euroamerican archaeological resources typically exist along transportation corridors, specifically roads and rivers. Environmental conditions, such as water power and land suitable for agriculture, also affect site location. Nineteenth- and twentieth-century maps of the project area confirm that most buildings and structures were located along roads, which followed streams, rivers, or ponds, because these areas were the most level and easiest to access. Euroamerican

archaeological resources are commonly found where former buildings or structures stood, where people lived and have left a trace of their lives in the form of artifacts and features.

As noted above, our site prediction model anticipates that most resources will be found within 100 m (330 ft) of transportation corridors. In applying this model to the siting of the transmission corridor for the Oakfield II Wind Project, we note the presence of several historic roads in the 12 towns along the APE; these include present-day jeep trails that were formerly historic roads. All areas of documented past habitation are considered sensitive for Euroamerican archaeological resources, wherever these cross the proposed transmission line.

While the single most important tool in reconstructing Euroamerican settlement is the study of cartographic resources (especially nineteenth-century maps), historical archaeologists are aware of the flaw of relying too heavily on this single source of evidence. In the 1850s and 1870s, wall maps and atlases were published for most Maine Counties (e. g., Walling 1859; Comstock & Cline 1875). These atlases provide data on settlement patterns of the second half of the nineteenth century but do not include abandoned sites from earlier periods of occupation, especially those of seventeenth-century forts and trading posts, as described in Brain (1995, 1997), Camp (1975), Cranmer (1990); Faulkner and Faulkner (1987, 1994) or the farmsteads, schools, and mills from the eighteenth century, abandoned by the time the nineteenth-century maps were drafted. Ultimately, the very earliest of Maine's Euroamerican archaeological resources may not appear on the nineteenth-century maps consulted for the project. Even using archival data, archaeologists cannot always predict the location of Euroamerican sites without conducting walkover surveys to ground-truth the presence or absence of resources.

In addition to maps, secondary sources were reviewed for pertinent information on early settlement, major industries, potential for hydropower development and the local economic base (e. g., Varney 1881; Wells 1869). Landscape characteristics, including soil types, topography, and slope, can also indicate whether Euroamerican sites may be present or absent. Frontier settlement in rural Maine depended on subsistence farming, so early sites are typically associated with arable land. The converse of this is that swamp or marshlands will probably not be selected for settlement; the disclaimer, however, is that archaeologists must be certain that wetlands are a feature of long standing and that they have not been created recently. Multiple wetlands were created during the construction of railroads in the nineteenth century, and our modern highways continue to create "stranded" wetlands. Sources of potable water are critical components of Euroamerican settlement (as they were for pre-Contact times), and sites may be located near wells, springs, or fresh water rivers.

Likewise, early Euroamerican industries were water-powered, so natural features such as waterfalls were regarded as important landscape features. Land deed research of New England towns will often demonstrate that the first pieces of land bought, sold, and contested were lots with water rights. Water has powered sawmills, gristmills, and other industries in Maine from the 1640s to the present day. Where the project area intersects sources of hydropower (as compiled by Wells 1869), IAC inspected the area to see if millworks were present.

Background Research/Information Sources

The initial phase of archaeological investigation (Phase 0 sensitivity assessment) provides the information required to stratify the project into ranked zones of Euroamerican archaeological sensitivity. This sensitivity is defined as the likelihood for Euroamerican cultural resources to be

present within project area boundaries based on different categories of information. The following methodology was utilized to complete the archaeological resources assessment:

- identification of known Euroamerican sites through background research and MHPC site file searches; data pertaining to the known sites, including their locational, functional, and temporal characteristics, were reviewed where applicable;
- review of recent cultural resource management (CRM) surveys performed in the towns and townships where the transmission corridor traverses and
- review of primary and secondary historic information (e.g., maps, atlases, town histories) to learn of areas where sites were potentially located.

Assessing the potential for the presence of cultural resources begins with the examination of primary and secondary documentary sources: written and cartographic documents relating both to past and present environmental conditions and to Euroamerican resources in or close to the project area. This background data assists in the formulation of predictive models or statements about the project area and is an integral part of any assessment. Variables within each category of background data are used to define the overall archaeological and historical context of the project area.

MHPC maintains an archaeological site file database recording the location and relevant information of each recorded Euroamerican site. Included in the MHPC files are CRM reports completed by several private CRM firms and some by Maine municipalities under the Maine SHPO Certified Local Government program. Based on the principal investigator experience's on similar projects in Maine, only CRM survey reports that were germane to the research goals and needs of this project were reviewed, including the Maritimes Phase I and II Pipeline Project CRM reports (Will et al. 1998; Wheeler et al. 1999), and reports filed for the recently filed Maritimes Phase IV project.

In addition to identifying known sites within a project APE, the sensitivity assessment seeks to predict the location of sites not currently known. For the Euroamerican time period, written records, maps, and photographs are valuable research tools in assessing where sites may have once been in a project area. Using maps, town histories, oral history, photographs, the historic archaeologist attempts to reconstruct settlement patterns for times past. These settlement patterns are compared with present-day layouts of roads, houses, schools, and farms, to see which of the past resources are absent from the present landscape. If resources appear to absent from the present landscape, then these might be as yet undiscovered archaeological resources.

The MHPC curates a complete collection of mid-nineteenth century wall maps for each Maine County in existence at that time. These maps, as well as similar county atlases from the 1870s, were consulted to predict the possible location of resources (e. g., homesteads, farmsteads, and mills) in relation to the path of the transmission corridor. Secondary sources at the Maine State Library and Maine State Archives provided background context for each town.

Walkover Survey/Site Inspection

Using the results of archival research, the archaeologists compiled a list of road crossings or locations where nineteenth-century maps and atlases indicate dwellings, farms, or other Euroamerican resources. This list forms the basis for walkover survey strategy and was the primary guide for archaeological inspection.

Since Euroamerican sensitivity can be briefly described as all areas along roadways or other transportation corridors, IAC archaeologists conducted site inspections of each road crossing intersecting the proposed transmission line corridor. IAC archaeologists did not conduct 100 percent walkover of the project area, but focused on roadways, road crossings, stream crossings (where mills and dams might be present), and sites shown in archives (i. e., where locations were given on nineteenth- and twentieth-century maps of dwellings, schools, churches, or cemeteries). Segments with low sensitivity were generally not inspected, as it is common practice in Maine archaeology to focus on moderate- and high-sensitivity areas.

Following the map review, IAC archaeologist Dr. Kathleen Wheeler conducted an inspection of the northern end of the project area in Oakfield and T4R3 on May 26, 2010, to confirm the absence of any new archaeological sites in the project APE. Mr. Jacob Tumelaire and Mr. Jonathan Douse conducted an inspection of road crossings on June 4, 2010, with follow-up survey to examine changes in the route on August 2, 2010. Archaeologists did not identify any new archaeological resources along any section of the 59-mile transmission line.

EUROAMERICAN CULTURAL CONTEXT FOR MAINE GENLEAD 115KV TRANSMISSION LINE

The following section articulates the general outline of settlement for the towns traversed by the proposed transmission line. From north to south, these towns include Oakfield, Linneus, T4R3 WELS, T3R3 WELS, Glenwood Plantation, Reed Plantation (PLT), North Yarmouth Academy Grant Township (Twp), Macwahoc PLT, Molunkus Twp in Aroostook County; and Mattawamkeag, Woodville, and Chester, in Penobscot County (Table 2). Each town is considered individually below. Also presented are maps produced in the 1870s (Comstock & Cline, 1875) showing the approximate route of the transmission corridor.

Table 2. List of towns intersected by proposed Maine GenLead 115kV transmission line.

Town	**County**	**Modern USGS Quadrangle**
Oakfield	Aroostook	Oakfield
Linneus	Aroostook	Oakfield & Meduxnekeag Lake
T4 R3 WELS	Aroostook	Meduxnekeag Lake
T3 R3 WELS	Aroostook	Meduxnekeag Lake
Glenwood PLT	Aroostook	Alder Brook
Reed PLT	Aroostook	Reed Pond
North Yarmouth Academy Grant	Aroostook	Reed Pond
Macwahoc	Aroostook	Molunkus lake
Molunkus	Aroostook	Mattawamkeag
Mattawamkeag	Penobscot	Mattaseunk Lake
Woodville	Penobscot	Lincoln City
Chester	Penobscot	Lincoln City & Meadow Ridge

Oakfield, Aroostook County

Oakfield is a small town nestled in the hills of south-central Aroostook County, Maine. The town is bounded to the east by Linneus and New Limerick, north by Smyrna, west by Dyer Brook Plantation, and south by the unnamed Township No. 4 in Range 3, all in Aroostook County. The hilly terrain is also crossed by a number of waterways, which drain into Spaulding and Long Lakes as well as the east branch of the Mattawamkeag River (Varney 1881: 406).

The area was first settled as early as 1833, but went without official organization until the year 1866. In that year, the area was organized for tax assessing purposes as Township No. 5, in Range 3. The town was officially incorporated under its present name on February 24, 1897 (Maine State Government).

Oakfield's forest tracts provided ample raw material for the town's small lumbering industry. A single lumber mill situated near the mouth of Thomas Brook utilized the waterway's excellent power for its operation (Varney 1881: 407).

By the time of the 1870 U.S. Census, Oakfield's population had reached 559 inhabitants; exceeding most peaks that would later be experienced by neighboring towns. For the next 5 decades Oakfield grew steadily, attaining 1,016 residents by 1920. The following 30 years brought fluctuation before the population dropped to 848 in 1960 (Figure 2). The number of residents lingered around this mark until 1990 before dropping again to 732 in the year 2000.

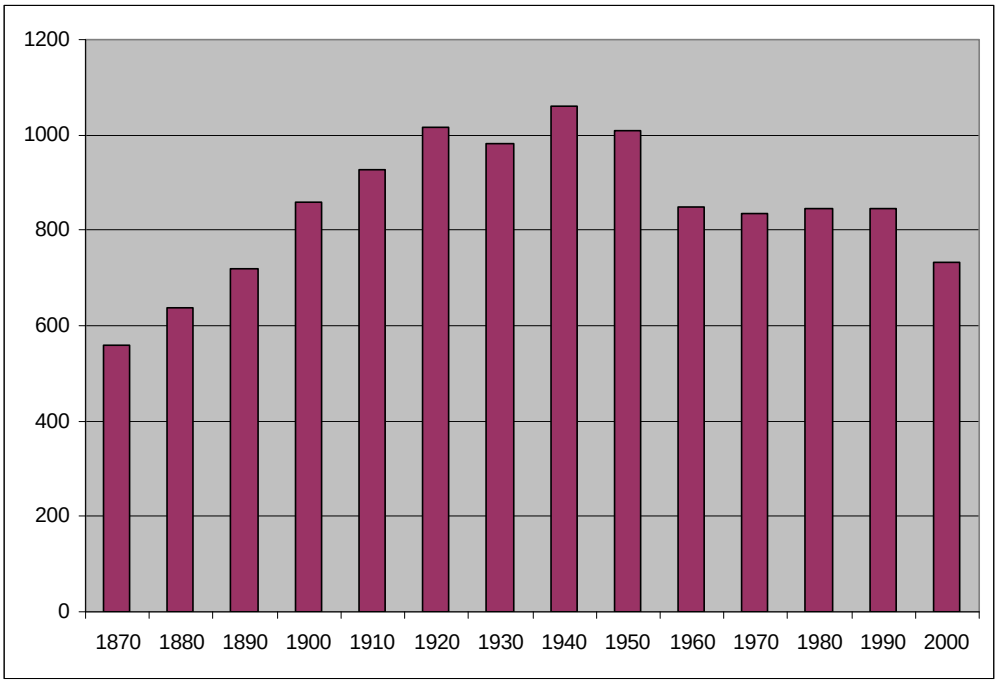

Figure 2. Population change in Oakfield (from U.S. Bureau of the Census).

Linneus, Aroostook County

Linneus is situated in the southeastern portion of Aroostook County, Maine. The town is bordered by New Limerick to the north, Hodgdon to the east, Township A in Range 2 to the south, and Oakfield and Township No. 4 in Range 3 to the west. Linneus has two primary watercourses; the South Branch of the Meduxnekeag River and Beaver Brook, which runs south to the Mattawamkeag (Varney 1881:332). A number of smaller streams and ponds also lie within the town boundaries.

The area was originally granted to Harvard College by the Commonwealth of Massachusetts in 1804. Intended to endow a botany professorship, the land was named for celebrated Swedish botanist Carolus Linnaeus (Maine State Government). In 1826, Daniel Neal of New Brunswick became the first inhabitant of Linneus Township. Following the establishment of a military outpost in nearby Houlton, others settled in the area by 1830; among them, Colonel Moses Burleigh, a captain in the Maine militia during the War or 1812 (Varney 1881: 332). The township was officially incorporated in the year 1836.

The soil in Linneus is an excellent quality loam that supported the town's agricultural and pastoral industries. The farming community primarily produced potatoes, hay and wheat, but occasionally produced good crops of corn. In addition, Linneus supported two saw-mills, a grist-mill, and a small iron mining industry (Varney 1881: 332).

In 1840, when first U.S. Census was taken in Linneus, the town had 311 inhabitants (Figure 3). This number surged to 1,008 over the next 30 years. Following this peak, the population fluctuated with a general trend of decline until reaching a low of 607 residents in 1960. Linneus has since experienced a turnaround, and, as of the year 2000, boasted 892 permanent residents.

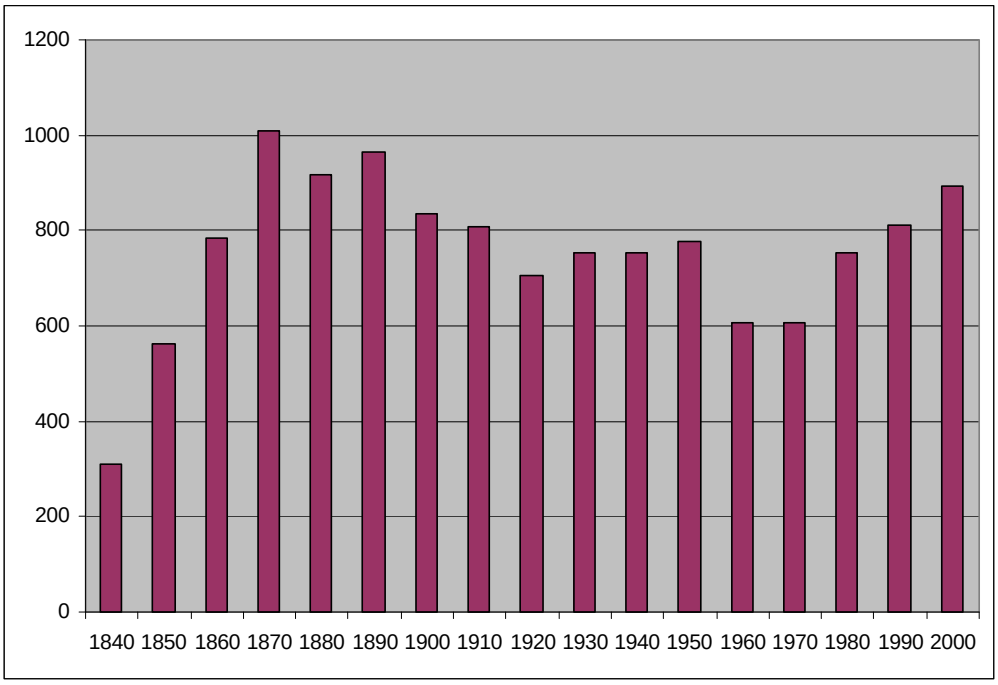

Figure 3. Population change in Linneus (from U.S. Bureau of the Census).

Township Number 4 in Range 3 WELS, Aroostook County

Township No. 4 in Range 3 WELS (hereafter T4 R3) is one of the unnamed townships located near the center of southern Aroostook County, Maine. It is situated south of Oakfield, west of Linneus and Township A in Range 2, North of Township 3 in Range 3, and east of Island Falls. T4 R3 encompasses portions of several bodies of water, including Pleasant Lake and Mattawamkeag Lake in the west, and Skitacook and Mud Lakes in the northeast corner. The East Branch of the Mattawamkeag River runs across the township from southeast to northwest.

Like many unnamed townships, T4 R3 suffers from a deficit of available records. The (Roe & Colby) 1877 map of Aroostook County indicates that T4 R3 had been parceled to a degree, but remained largely undeveloped as of that year. Similarly, there are only three decades in which the population of the unnamed township was documented (Table 3). In 1870, 46 people resided in T4 R3, but ten years later only two remained. By 1920, that number had climbed back up to 37. With such large gaps in the public record, inferences about the data are difficult to make.

Table 3. Population change in T4 R3 (from U. S. Bureau of the Census).

Year	Population	Change	%Change
1870	46		
1880	2	-44	-2200%
1920	37	35	95%

Township Number 3 in Range 3 WELS, Aroostook County

Township No. 3 in Range 3 WELS (hereafter T3 R3) is situated in south central Aroostook County, Maine. It is located west of Forkstown Township, north of Glenwood Plantation, east of Township No. 3 in Range 4, and south of Township No. 4 in Range 3. The West Branch of the Mattawamkeag River runs from the southeast corner of T3 R3 to the northwest, while the East Branch of the same river crosses through the township's northeast corner.

A survey and plan of T3 R3 was completed by Mr. David Hayes in the year 1852. This plan established 24 lots of equal size in the southern two-thirds of the township while leaving the northern third unlotted (Maine Bureau of Taxation 1910: 318). The (Roe & Colby) 1877 map of Aroostook County illustrates this system of lots. The same map also depicts a total lack of structures or dwellings within the boundaries of T3 R3 (Roe & Colby, 1877). Even 33 years later, an annual report generated by the Maine Bureau of Taxation for the year 1910 lists the township as part of the "Aroostook County Wild Lands" (Maine Bureau of Taxation 1910: 318).

To substantiate this classification, one needs only to look at the U.S. Census taken in 1910. In that year, only two residents were recorded in T3R3 (Table 4). Ten years later the population had risen to 15. Unfortunately no further census records for the area are available, but maps produced by the United States Geological Survey in the 1940s depict only a handful of structures in T3R3, which indicates that the population remained low.

Table 4. Population change in T3 R3 (from U. S. Bureau of the Census).

Year	Population	Change	%Change
1910	2		
1920	15	13	87%

Glenwood Plantation, Aroostook County

Glenwood Plantation is a small community in south-central Aroostook County, Maine. The town is bounded by Haynesville to the east, Reed Plantation to the south, Township No. 2 in Range 4 to the west, and Township No. 3 in Range 3 to the north. The plantation encompasses most of Wytopitlock Lake and a number of small streams (Varney 1881: 253).

The community was originally organized as Glenwood Plantation in 1863 for election purposes, and was incorporated simply as Glenwood on February 14, 1867. However, after only one year, Glenwood surrendered its status as a town. In 1877, the community was again formally organized as Glenwood Plantation (Maine State Government).

Glenwood Plantation's primary industry was lumbering. The town's sole saw-mill, situated on a tributary to Wytopitlock Lake, produced both long and short lumber from the ample spruce and hemlock forests. Agriculture served as another major industry in Glenwood Plantation; wheat and potatoes providing farmers with the best yields (Varney 1881: 253).

Historically a low population density community, Glenwood Plantation essentially disappeared in the last decades of the twentieth century. At its peak in 1880, 13 years after incorporation, the community was comprised of only 198 inhabitants (Figure 4). The population has only declined since, likely coinciding with the waning lumber industry and growth of nearby towns. Only eight persons resided within Glenwood's boundaries in 1990, and, as of 2000, the town had not a single resident.

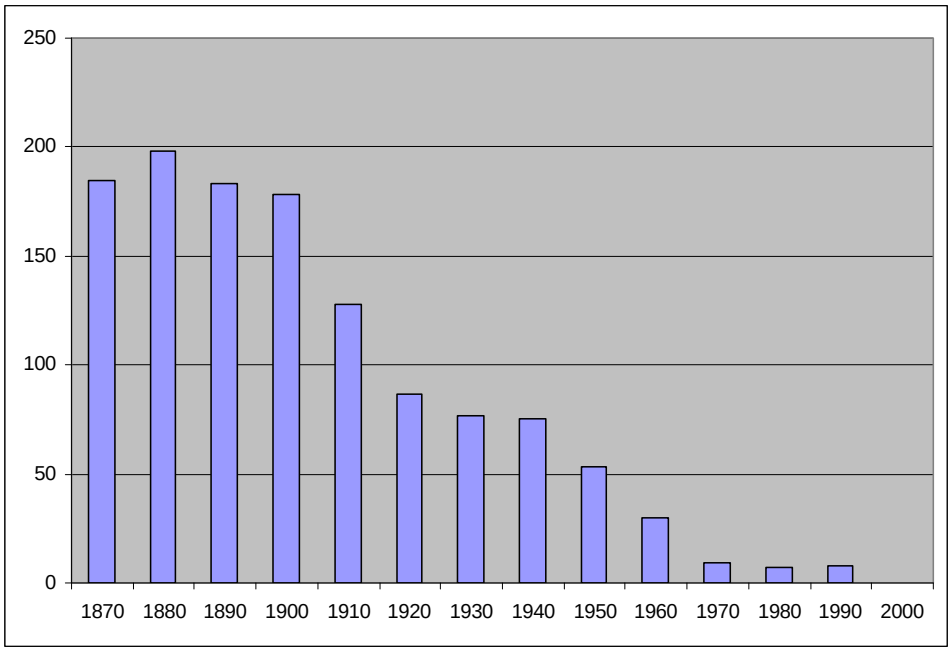

Figure 4. Population change in Glenwood (from U. S. Bureau of the Census).

Reed Plantation, Aroostook County

Reed Plantation is a small town situated in the south eastern part of Aroostook County, Maine. It is bounded by Glenwood to the north, Haynesville and Bancroft to the east, and Macwahoc Plantation and the North Yarmouth Academy Grant (Township No. 1 in Range 4) to the west. To the south, Reed Plantation abuts Drew Plantation in Penobscot County. The principal watercourses are Wytopitlock Stream in the western part of town, and Mattawamkeag River in the east (Varney 1881: 476).

According to George Varney, Reed Plantation's first settler, Mr. John Clifford of Dover, arrived in 1830 (Varney 1881: 477). Another source, however, indicates that the area may have been settled as early as 1804 (Maine State Government). Reed Plantation was first organized as a township in 1843, and was re-organized at least four more times before the end of the 19th Century (Maine State Government).

Wytopitlock Village, located alongside the European and North American Railway in the south eastern portion of town, accommodated the majority of Reed Plantation's population. The village maintained a railroad station which served as one of the line's many stopping points. In the northeastern part of Reed Plantation, a second settlement of relative population density grew up along the stage-line from Mattawamkeag to Haynesville (Varney 1881: 447).

In the year 1870, Reed Plantation had 54 residents. This number doubled in the following decade and continued a pattern of continuous growth for another 40 years (Figure 5). In 1920, the town witnessed its peak at 639 inhabitants before beginning to decline steadily. The population experienced a small increase in 1990 but then fell 43%. As of 2000, Reed Plantation had only 207 residents, its lowest number in a century.

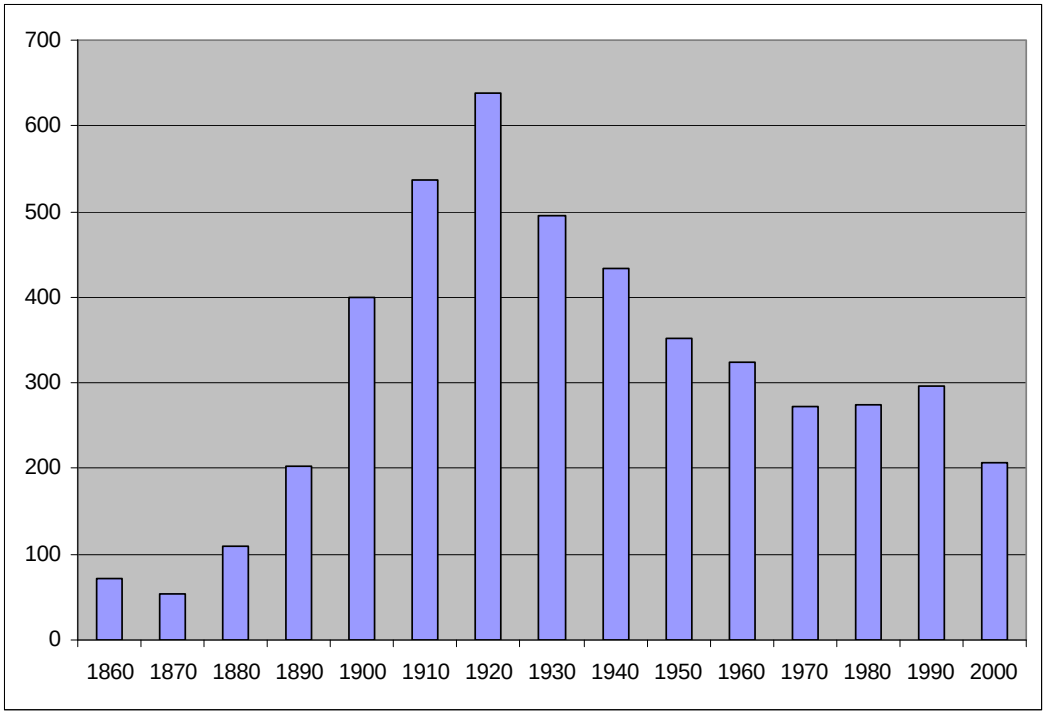

Figure 5. Population change in Reed Plantation (from U. S. Bureau of the Census).

North Yarmouth Academy Grant, Aroostook County

The North Yarmouth Academy Grant, formerly the central portion of Township No. 1 in Range 4, is situated in southwestern Aroostook County, Maine. The township is bounded to the south by Macwahoc Plantation, once the southern portion of the same unnamed township. To the north, east, and west, the township abuts Upper Molunkus Township, Reed Plantation, and Township No. 1 in Range 5, respectively. Molunkus Stream runs through the west portion of the North Yarmouth Academy Grant while Macwahoc Stream traverses the eastern half.

The origins of the North Yarmouth Academy Grant are obscure, but one reference affirms its existence by the middle of the 19th century. The *Twentieth Annual Report of the Board of State Assessors of the State of Maine* states that a survey and plan of the land grant were completed by Mr. Daniel Barker in the year 1850 (Maine Bureau of Taxation 1910: 21).

Due to the ambiguity surrounding the North Yarmouth Academy Grant little can be said about its population fluctuations although the number of inhabitants was recorded intermittently throughout the nineteenth and early twentieth centuries (Figure 6). The earliest record, dating to the year 1840, indicates 69 residents. When the area was next surveyed in 1870 only six inhabitants were recorded. The most recent survey, taken in 1950, again recorded only 7 residents.

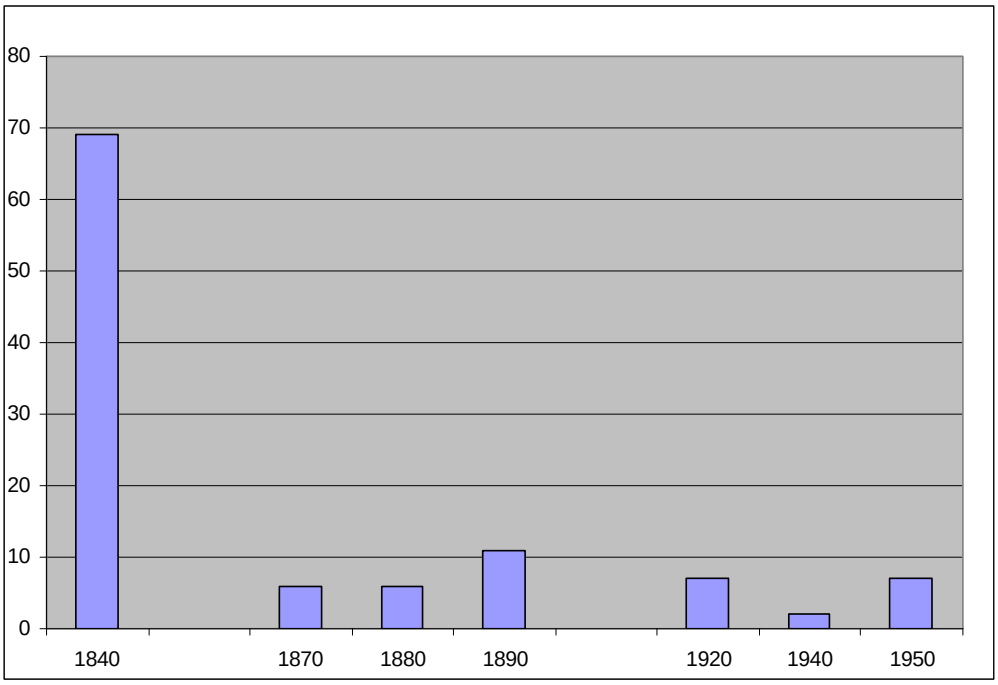

Figure 6. Population change in North Yarmouth Academy Grant (from U. S. Bureau of the Census).

Macwahoc Plantation, Aroostook County

Macwahoc Plantation in southeastern Aroostook County, Maine, is comprised of the southern portion of what was originally Township No. 1 in Range 4. It is bounded north by the North Yarmouth Academy Grant Township (the central section of Township No. 1 in Range 4), west by Molunkus Plantation, and east by Reed Plantation. To the south, Macwahoc Plantation abuts Mattawamkeag and Kingman Township, both in Penobscot County. The two primary waterways are the Molunkus and Macwahoc Streams which join together in the southwestern portion of town, and Macwahoc Plantation's largest settlement lies at this junction (Varney 1881: 349).

The first settlers arrived in the area as early as 1830. In 1844, Township No. 1 in Range 4 and Township A in Range 5 were organized for election purposes as Molunkus Plantation. The name was then changed to Macwahoc (a Native American term that described the wet ground on which the main village was situated) on December 16, 1851 (Maine State Government). By 1860, the area that was originally Township A in Range 5 had separated from Macwahoc to become Molunkus Township (Maine Genealogy Network).

Fertile soils in the area of Macwahoc Plantation produced bountiful crops and ample woodlands in the nineteenth century. Agriculture and lumbering thus provided a means of life for most of the township's residents (Varney 1881: 348).

Macwahoc Plantation has experienced heavy population fluctuation since 1860 when its number of residents was first recorded by the U.S. Census (Figure 7). In 1940, the township witnessed its peak at 242 inhabitants, but then experienced an 85% decline over the next ten years. Since 1980, Macwahoc's population has declined at a low but steady rate, leaving only 98 residents at the time of the 2000 Census.

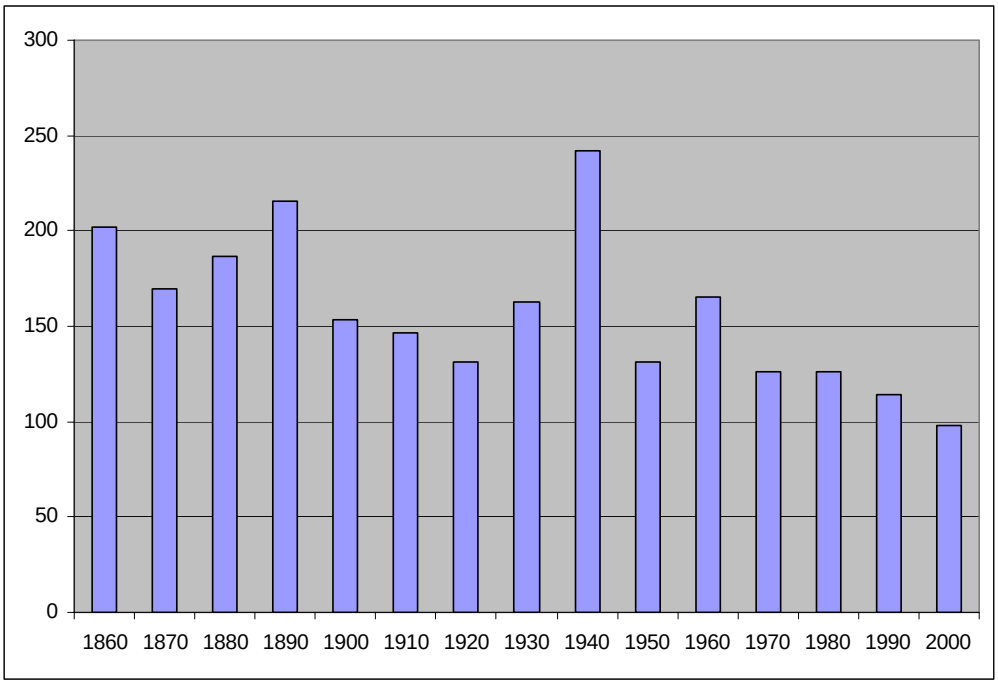

Figure 7. Population change in Macwahoc Plantation (from U. S. Bureau of the Census).

Molunkus, Aroostook County

Molunkus Township is situated in the most southwesterly corner of Aroostook County, Maine. It is bounded north by the unnamed Township No. 1 in Range 5, and east by Macwahoc Plantation. To the west Molunkus abuts Medway, and Mattawamkeag and Woodville, all of Penobscot County, to the south. The township encompasses Mattaseunk Lake in the southwest, and part of Molunkus Lake in the northeast corner. A number of small streams crisscross the area and deposit into the two lakes.

Modern Molunkus was originally the unnamed Township A in Range 5. In 1844 this area was organized along with its neighbor to the east, Township 1 in Range 4, to form Molunkus Plantation, and, six years later, the name was changed to Macwahoc Plantation. By 1860, the original Township A area had separated from Macwahoc Plantation and organized under its present name, Molunkus Township (Maine Genealogy Network).

In 1850, Molunkus, though still presumably part of Macwahoc Plantation, had 199 residents. This number plummeted to 61 following the separation of the townships in 1860 (Figure 8). For the next six decades, the population of Molunkus slowly grew, but peaked at only 102 in the year 1920. Ten years later the number of inhabitants had again decreased dramatically to 47. After 1930 there is no available record of Molunkus Township's population.

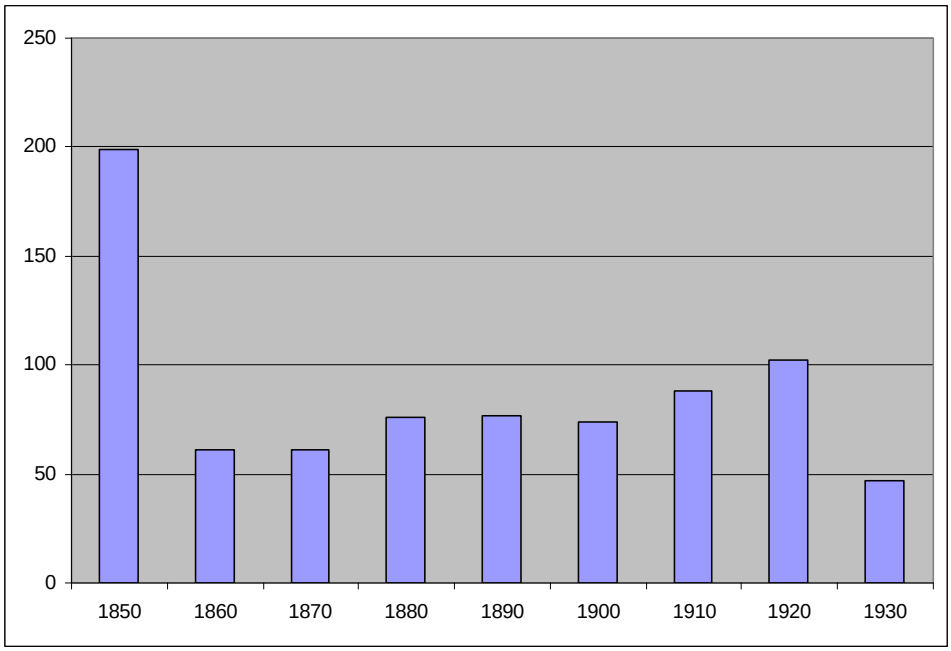

Figure 8. Population change in Molunkus (from U. S. Bureau of the Census).

Mattawamkeag, Penobscot County

The town of Mattawamkeag is nestled on the eastern bank of the Penobscot River in Penobscot County, Maine. It is bounded by Kingman Township to the east, Webster Plantation and Winn to the south, and Woodville to the west. To the north, Mattawamkeag abuts Molunkus and Macwahoc Plantation, both in Aroostook County. The Mattawamkeag River runs westerly through town until it joins the Penobscot, the natural boarder between Mattawamkeag and Woodville. A number of smaller tributaries to both the Penobscot and Mattawamkeag Rivers also flow through this town (Varney 1881: 357).

Once the site of a Native American village, Mattawamkeag had been settled by white colonists by the year 1820. Though no U.S. census was taken in Mattawamkeag prior to 1860, the settlement likely developed as the railway and stage-lines were introduced. On February 14, 1860 Mattawamkeag was officially incorporated as a town (Maine State Government).

Agriculture and lumbering were the primary occupations in Mattwamkeag. Though rocky, the soil was fertile and produced solid crops of hay, grain and potatoes. Stock-raising was also considered a lucrative endeavor. Abundant woodlands provided the raw material for a profitable lumber trade, and a board, shingle, and lath mill as well as a planer operated on the Mattawamkeag River near Gordon Falls. Other small scale manufactures were centered primarily at the mouth of the Mattwamkeag in close proximity to the European and American Railway station (Varney 1881: 357).

Mattawamkeag has faced heavy population fluctuations since the first 7 residents were recorded in 1820. In 1830, the town had 16 inhabitants, but no records are available regarding the next two decades (Figure 9). Following its incorporation in 1860, Mattwamkeag witnessed steady population growth for about 30 years, peaking at 633 residents. This was followed by a period of variable decline until 1930. The following decade brought a 45% surge in the number of

inhabitants. At its peak in 1980, the town boasted 1,000 residents. As of 2000, Mattawamkeag still had 825 permanent residents, thanks, in part, to the expansion of area tourism.

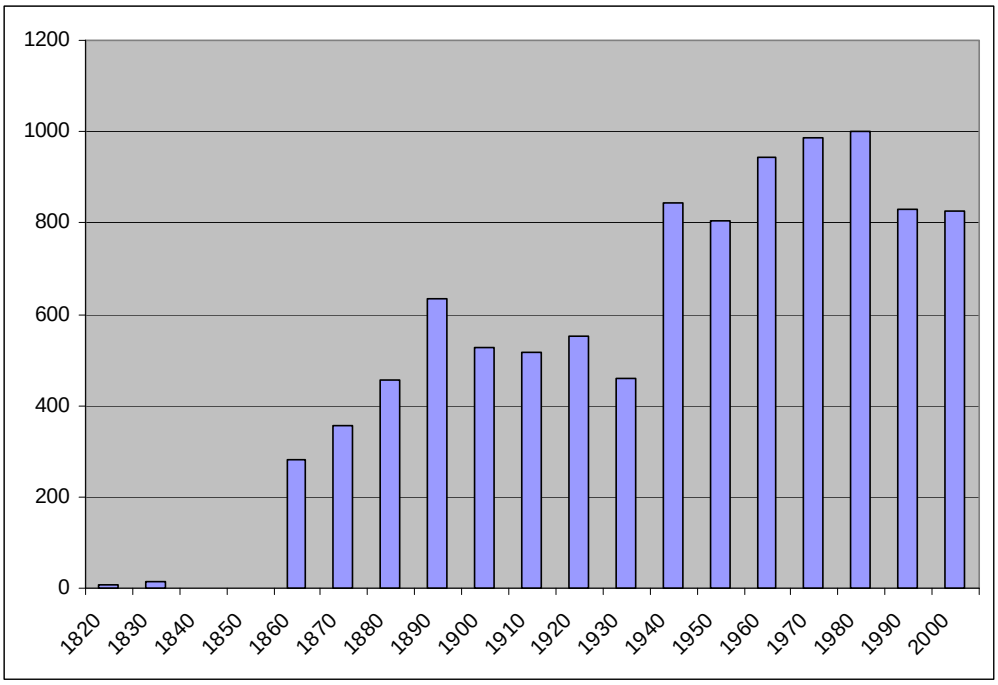

Figure 9. Population change in Mattawamkeag (from U. S. Bureau of the Census).

Woodville, Penobscot County

The town of Woodville in Penobscot County, Maine abuts the extreme southwestern corner of Aroostook County. It is bounded north by Medway, east by Mattawamkeag, south by Chester, and west by Township No. 2 in Range 9. Its principal watercourses include the Pattagumpus River which empties into the Penobscot, the town's natural boundary with Mattawamkeag, as well as the East Branch of the Ebhorse Stream (Varney 1881: 604).

The area that is now Woodville was originally known as Indian Township No. 2. It was organized as Woodville Plantation, a name that reflected the area's dense forests, for election purposes in 1854 and then as a local governing plantation in 1860. On February 28, 1895, the town was officially incorporated under its current name (Maine State Government).

When the first U.S. census of Woodville was taken in 1860, the town had 230 residents. The population has since experienced severe fluctuation, suffering its lowest number, 49, in the year 1960 (Figure 10). The decline of inhabitants may be tied to some degree to the waning lumber industry; Woodville's ample forests were likely an excellent resource at one time. Over the next two decades, Woodville's population surged 78%, perhaps due to an influx of tourism as in the neighboring Mattawamkeag. As of 2000, Woodville boasted 286 inhabitants, its largest number to date.

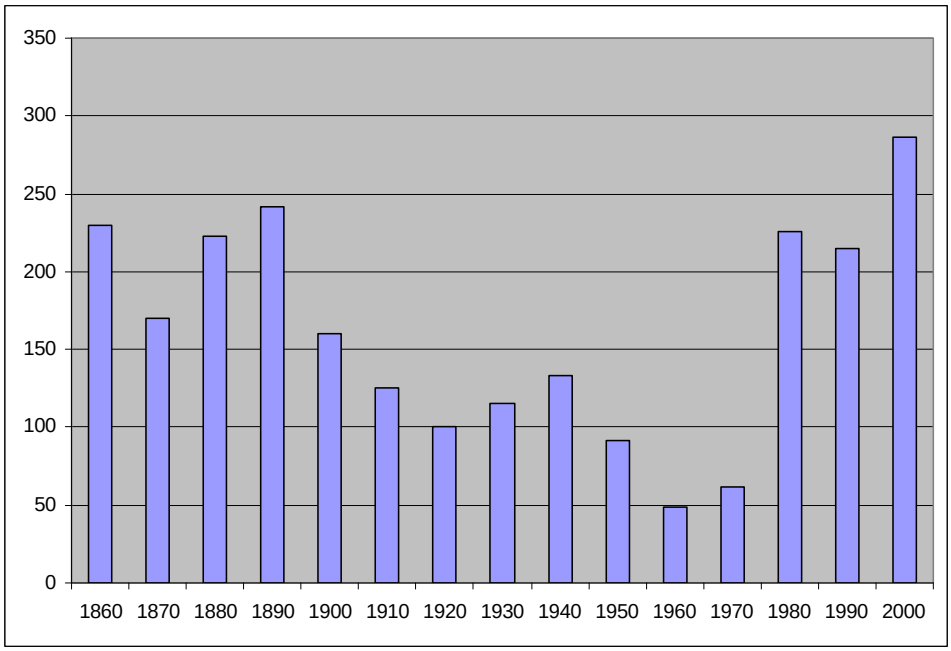

Figure 10. Population change in Woodville (from U. S. Bureau of the Census).

Chester, Penobscot County

Chester, in central Penobscot County, Maine, is a triangular shaped town nestled on the west bank of the Penobscot River. To the east Chester is bound by Winn and Lincoln. The other boarders abut unnamed townships; No. 2 in Range 9 to the north, and No. 2 in Range 8 to the west. The town's principal watercourses are Medunkeunk Stream and its most notable tributary, Ebhorse Stream (Varney 1881: 173).

Originally an unnamed township itself (No. 1 in Range 8), the area was first settled in 1823 by Frank Stratton of Albion. On February 26, 1834, Chester was incorporated. The town's name is credited to Samuel Chesley, an early resident originally from Chester, New Hampshire (Maine State Government).

Like many of the surrounding towns, Chester's primary industries were lumbering and agriculture. The fertile clay loam reliably yielded crops, especially potatoes, while also supporting forests of poplar, white birch, maple, and elm. Mills harnessing the waterpower of both the Medunkeunk and Ebhorse Streams were kept in good supply of raw resources (Varney 1881: 173).

At Chester's first census following incorporation, the town had 277 inhabitants. This number climbed to 368 in 1890 before beginning to decline (Figure 11). Between 1930 and 1970 the population hovered near 255, but then surged 41% in 1980. By the 2000 U.S. Census, Chester boasted 525 permanent residents.

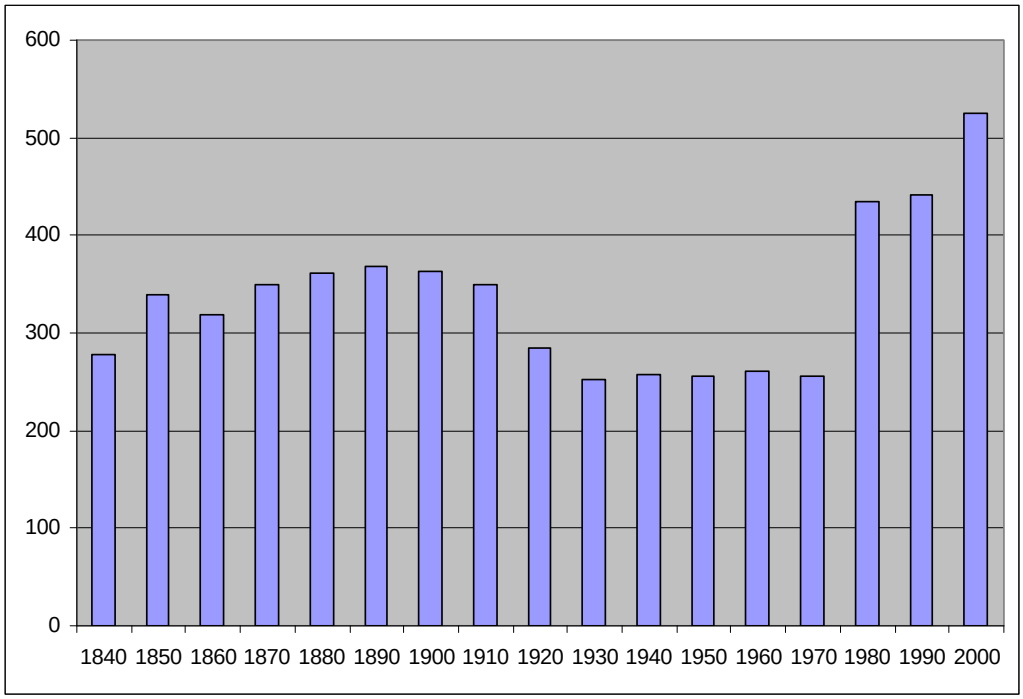

Figure 11. Population change in Chester (from U. S. Bureau of the Census).

RESULTS OF ARCHIVAL RESEARCH AND MAP REVIEW FOR MAINE GENLEAD 115KV TRANSMISSION LINE

The figures following this text show the routes of the proposed Maine GenLead 115kV transmission line superimposed on nineteenth-century maps (Sherman 1875; Roe & Colby 1877). IAC researchers also prepared tables identifying road crossings or other locations where the nineteenth-century maps indicate dwellings, farms, or other Euroamerican resources. This compiled list forms the basis for walkover survey strategy and was the primary guide for archaeological inspection. The results of this archival research are presented by town in the section below.

Oakfield, Aroostook County

The corridor is shown in relation to historic roads in Figure 12. The transmission line begins at the Operations and Maintenance structure in west Oakfield and continues to the east along a straight line that intersects the back end of the lot divisions. In two instances, the transmission line crosses near two dwellings on the 1877 Roe & Colby map, as shown in Table 5. The first of these potential resources is on Lot 125 on the north side of South Oakfield Road, where a single blackened square represents a possible dwelling. On the map, the resource is not labeled, and it could be a cartographer's error. Dr. Wheeler inspected this area on June 4, 2010, followed by a second visit by Misters Tumelaire and Douse on August 2, 2010. No resource was detected in the field in this area.

The second area inspected is at the crossing of South Oakfield Road, near the homestead depicted as A. P. Rogers in Figure 12. Wheeler inspected the area on June 4, 2010, but did not detect any Euroamerican features. No further archaeological survey is needed for the transmission line in Oakfield.

Table 5. List of areas to inspect in Oakfield based on background research.

Town	Road crossing	Historic map review	Field findings
Oakfield	South Oakfield Road	unnamed structure on Lot 125	no cellarhole found
Oakfield	South Oakfield Road	A.P. Rogers, south side of same road at Linneus line	no cellarhole found

Results of State Site File Search for Oakfield

As part of the research conducted for the present project, Dr. Wheeler checked the historic archaeology site files maintained by the Maine Historic Preservation Commission. For the town of Oakfield, 21 sites have been recorded, as a result of Dr. Wheeler's work for previous surveys for the Oakfield I wind project (Wheeler, Marlatt, and Will 2009; Tumelaire 2009). None of these sites are in the transmission line project area.

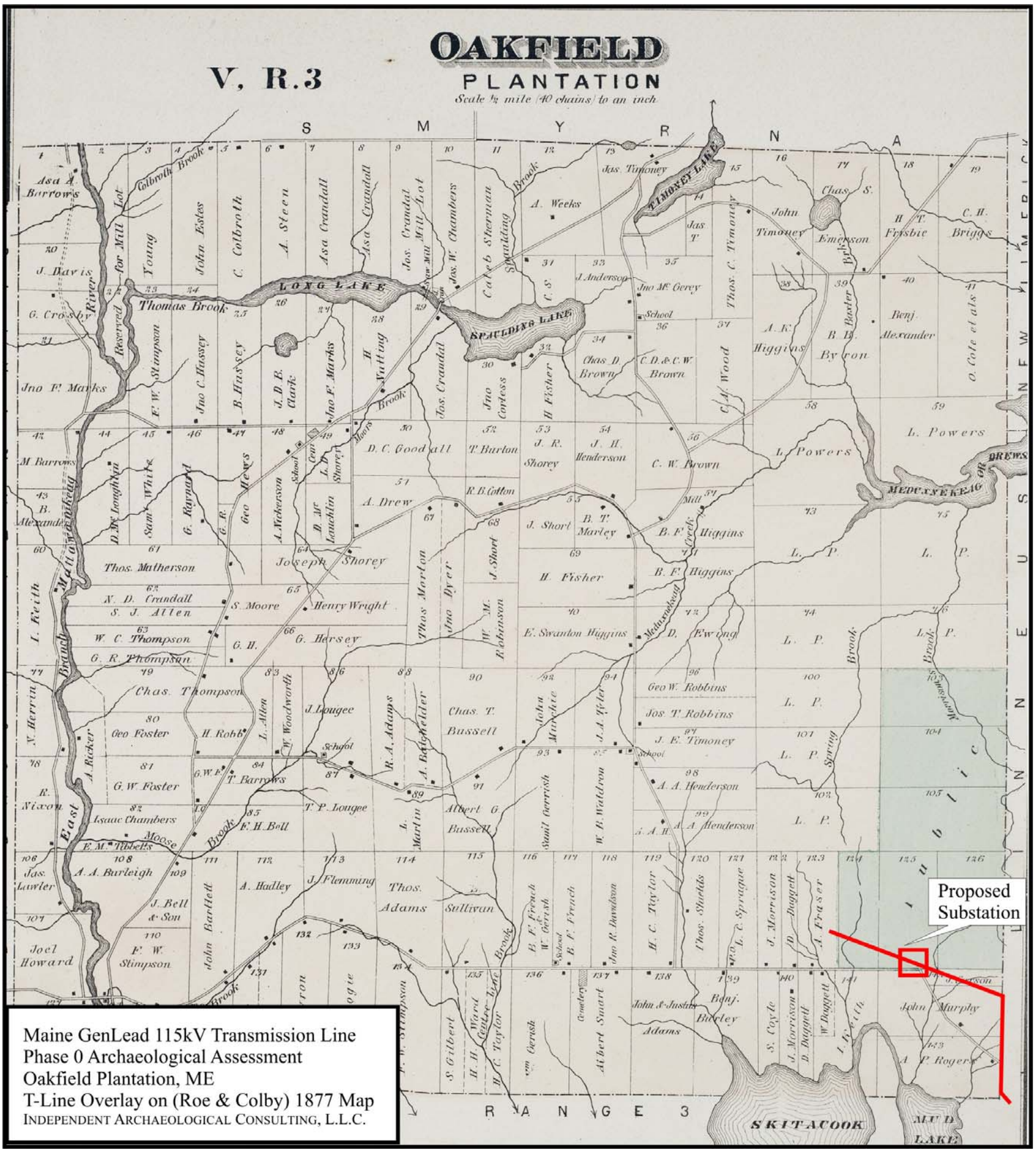

Figure 12. Location of proposed Maine GenLead 115kV transmission line in Oakfield (after Roe & Colby 1877).

Linneus, Aroostook County

All proposed portions of the transmission line in Linneus will be in virgin right-of-way along the west boundary of the town. In reviewing modern USGS quadrangles and aerial views of the project area, archaeologists noted only the presence of ephemeral trails (Table 6). Historic maps do not portray any development in the project area (Figure 13). IAC did not conduct any walkover survey for the town of Linneus.

Table 6. List of areas to inspect in Linneus based on background research.

Town	Road crossing	Historic map review	Field findings
Linneus	no road crossings	no development along west boundary of town.	no inspection

Results of State Site File Search for Linneus

As part of the research conducted for the present project, Dr. Wheeler checked the historic archaeology site files maintained by the Maine Historic Preservation Commission. For the town of Linneus, no archaeological sites have been recorded.

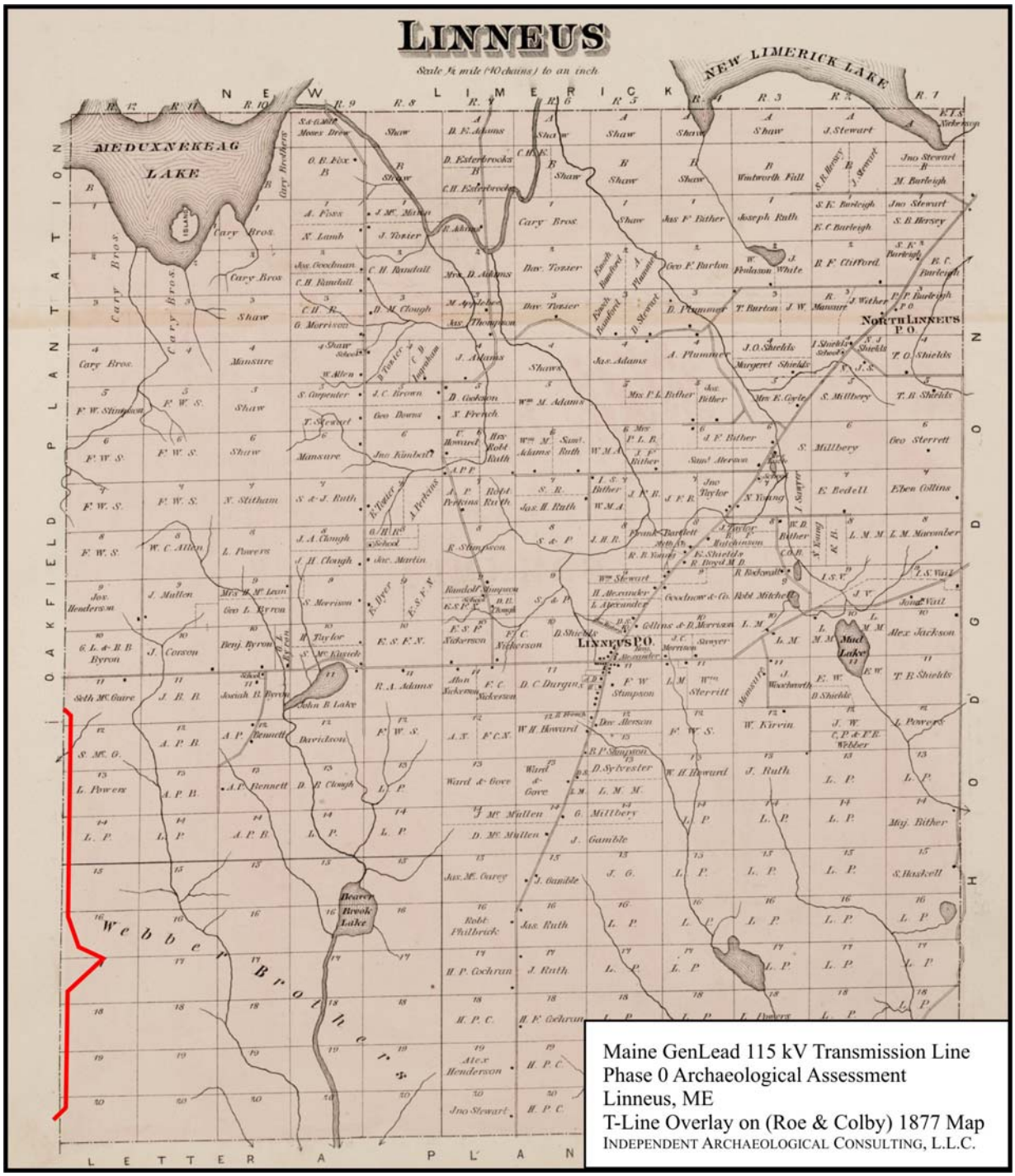

Figure 13. Town of Linneus in 1877 (after Roe & Colby), showing no development of roads or settlement in the project area.

Township Number 4 in Range 3 WELS, Aroostook County

All proposed portions of the transmission line in T4R3 will be in virgin right-of-way along the east boundary of the town. In reviewing modern USGS quadrangles and aerial views of the project area, archaeologists noted only the presence of ephemeral trails (Table 7). Historic maps do not portray any development in the project area (Figure 14). IAC did not conduct any walkover survey for the town of T4R3 WELS.

Table 7. List of areas to inspect in T4R3 based on background research.

Town	Road crossing	Historic map review	Field findings
T4R3 WELS	no road crossings	no development along east boundary of town.	no inspection

Results of State Site File Search for T4R3 WELS

As part of the research conducted for the present project, Dr. Wheeler checked the historic archaeology site files maintained by the Maine Historic Preservation Commission. For the town of T4R3, no archaeological sites have been recorded.

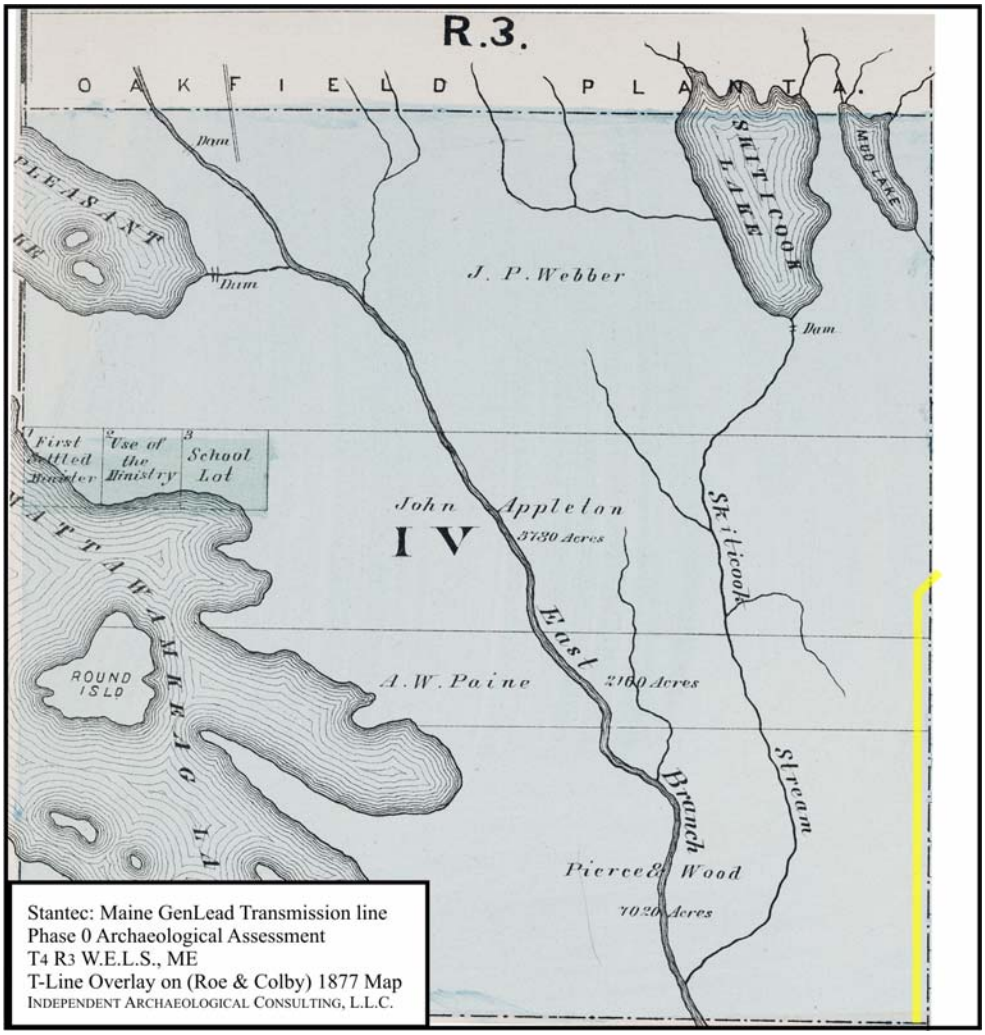

Figure 14. T4R3 WELS in 1877 (after Roe & Colby) showing no development of roads or settlement in the project area.

Township Number 3 in Range 3 WELS, Aroostook County

All proposed portions of the transmission line in T3R3 will be in virgin right-of-way along the east boundary of the town. In reviewing modern USGS quadrangles and aerial views of the project area, archaeologists noted only the presence of ephemeral trails (Table 8). Historic maps do not portray any development in the project area (Figure 15). IAC did not conduct any walkover survey for the town of T3R3 WELS.

Results of State Site File Search for T3R3

As part of the research conducted for the present project, Dr. Wheeler checked the historic archaeology site files maintained by the Maine Historic Preservation Commission. For the town of T3R3, no archaeological sites have been recorded.

Table 8. List of areas to inspect in T3R3 based on background research.

Town	Road crossing	Historic map review	Field findings
T3R3 WELS	no road crossings	no development along east boundary of town.	no inspection

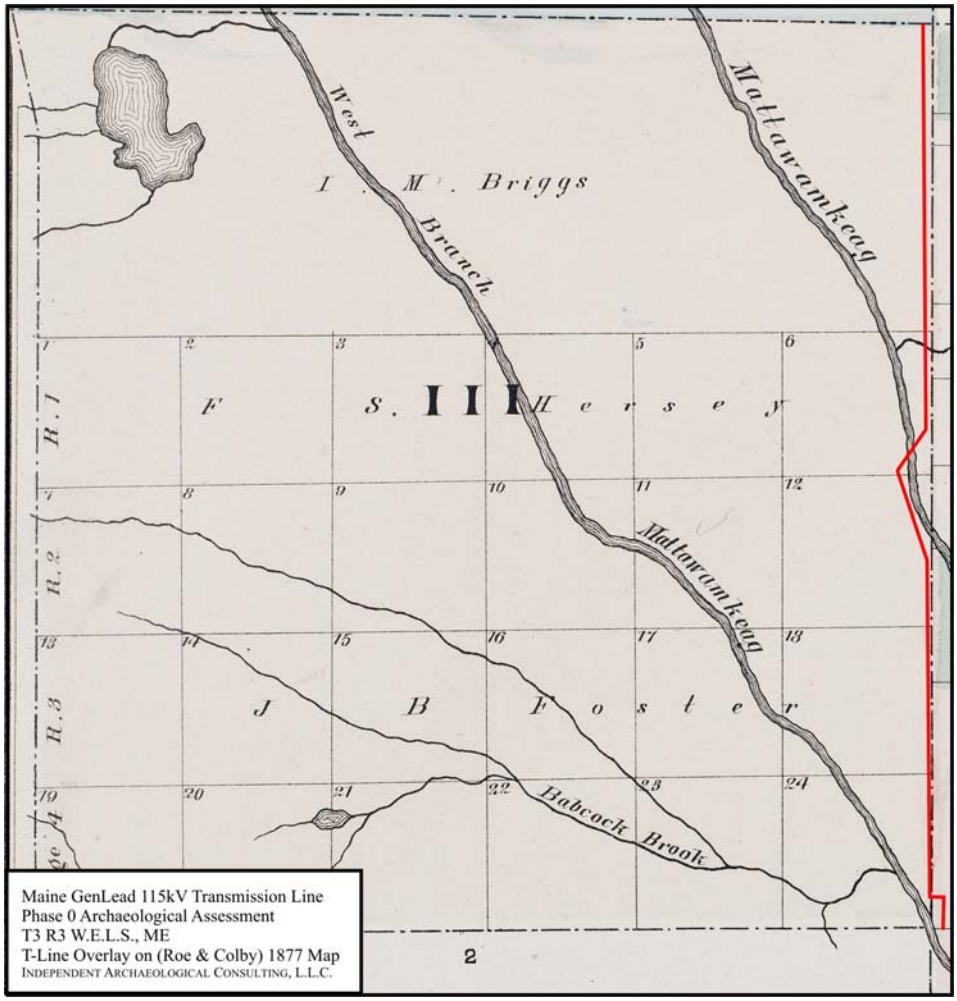

Figure 15. T3R3 WELS in 1877 (after Roe & Colby) showing no development of roads or settlement in the project area.

Glenwood Plantation, Aroostook County

In Glenwood PLT, the northern five km of the transmission line are in virgin right-of-way, but then it converges with the MEPCO powerline as it crosses out of Haynesville into Glenwood PLT. In reviewing modern USGS quadrangles and aerial views of the project area, archaeologists noted one main road crossing where the 1877 map shows the homestead of N. Twombly nearby (Table 9; Figures 16). The transmission line passes behind the Twombly homestead, but in their inspection on June 4, 2010, IAC archaeologists did not find any resources within the APE.

Results of State Site File Search for Glenwood Plantation

As part of the research conducted for the present project, archaeologists checked the historic archaeology site files maintained by the Maine Historic Preservation Commission. For the town of Glenwood PLT, no archaeological sites have been recorded.

Table 9. List of areas to inspect in Glenwood PLT based on background research.

Town	Road crossing	Historic map review	Field findings
Glenwood PLT	Dixie Road	N. Twombly	no resources found

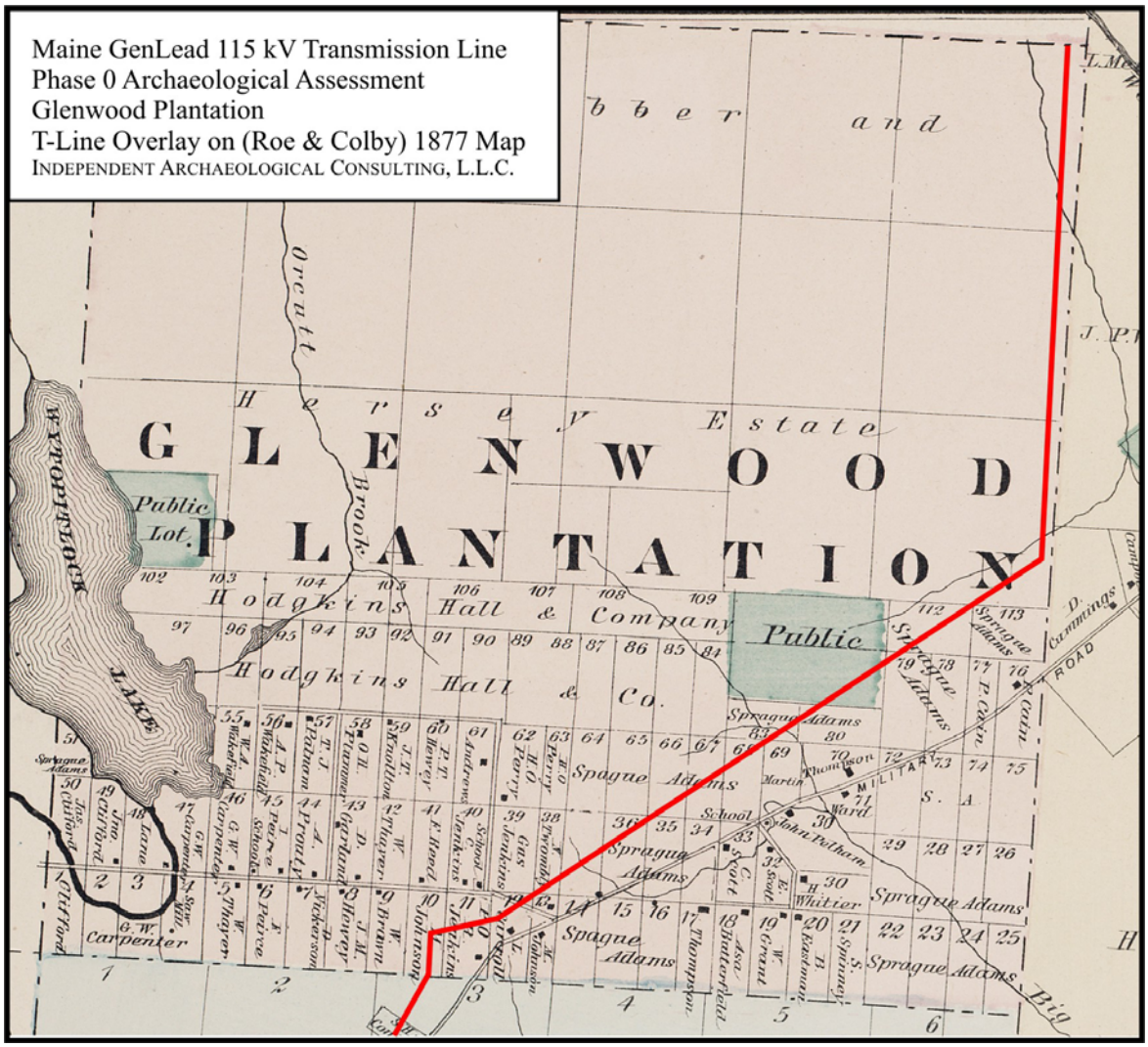

Figure 16. Proposed transmission line in Glenwood Plantation (after Roe & Colby 1877).

Reed Plantation, Aroostook County

In Reed PLT, the transmission line will follow the northwest side of the existing MEPCO powerline as it heads southwest to North Yarmouth Academy Grant. In reviewing modern USGS quadrangles and aerial views of the project area, archaeologists noted only the presence of ephemeral trails (Table 10). Historic maps do not portray any development in the project area (Figure 17). IAC did not conduct any walkover survey for the town of Reed PLT.

Results of State Site File Search for Reed Plantation

As part of the research conducted for the present project, archaeologists checked the historic archaeology site files maintained by the Maine Historic Preservation Commission. For the town of Reed PLT, no archaeological sites have been recorded.

Table 10. List of areas to inspect in Reed PLT based on background research.

Town	Road crossing	Historic map review	Field findings
Reed PLT	parallels SR 2A	many resources along road	no impact from transmission line
Reed PLT	Eastern Road	nothing shown	no inspection

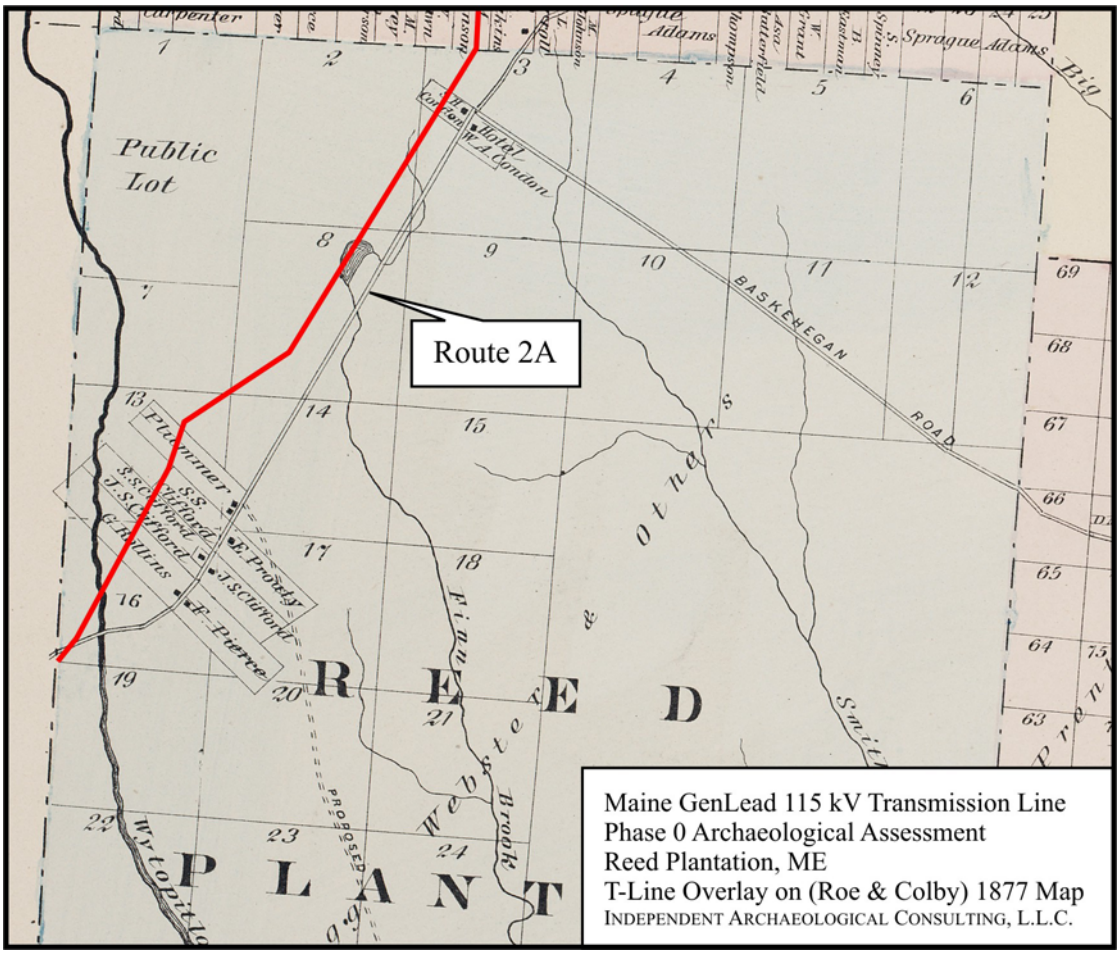

Figure 17. Proposed transmission line in Reed Plantation (after Roe & Colby 1877).

North Yarmouth Academy Grant, Aroostook County

In North Yarmouth Academy Grant, the transmission line will follow the northwest side of the existing MEPCO powerline as it heads southwest to Macwahoc Plantation. In reviewing modern USGS quadrangles and aerial views of the project area, archaeologists noted only the presence of ephemeral trails (Table 11). Historic maps do not portray any development in the project area (Figure 18). IAC did not conduct any walkover survey for the town of North Yarmouth Academy Grant.

Results of State Site File Search for North Yarmouth Academy Grant

As part of the research conducted for the present project, archaeologists checked the historic archaeology site files maintained by the Maine Historic Preservation Commission. For the town of North Yarmouth Academy Grant, no archaeological sites have been recorded.

Table 11. List of areas to inspect in North Yarmouth Academy Grant based on background research.

Town	**Road crossing**	**Historic map review**	**Field findings**
North Yarmouth Academy Grant Twp	no historic road x-ings	nothing shown	no inspection

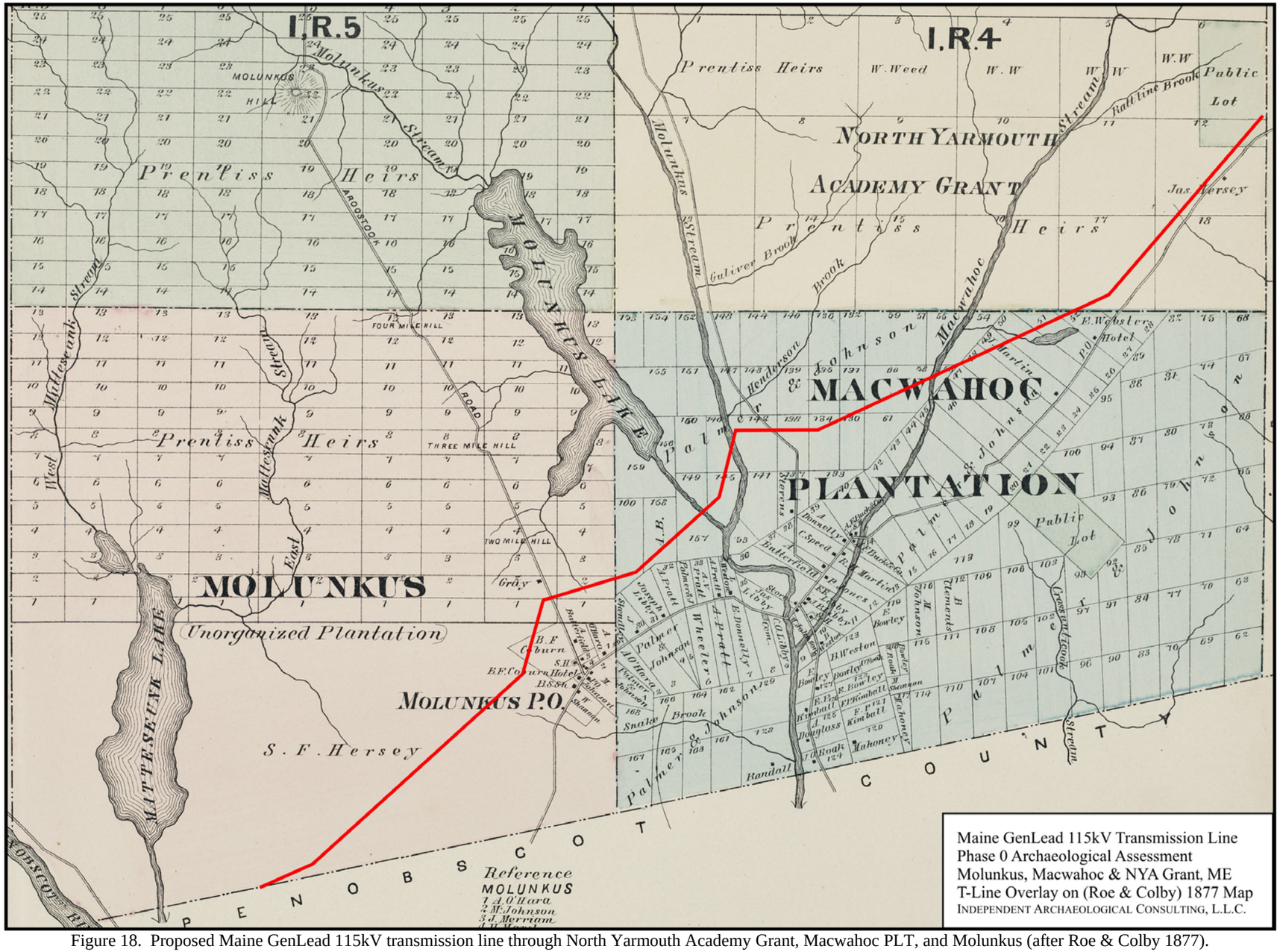

Figure 18. Proposed Maine GenLead 115kV transmission line through North Yarmouth Academy Grant, Macwahoc PLT, and Molunkus (after Roe & Colby 1877).

Macwahoc Plantation, Aroostook County

In Macwahoc PLT, the transmission line will follow the northwest side of the existing MEPCO powerline as it heads southwest to Molunkus Twp. In reviewing modern USGS quadrangles and aerial views of the project area, archaeologists noted only the presence of ephemeral trails (Table 12). Historic maps do not portray any development in the project area (see Figure 18). IAC did not conduct any walkover survey for the town of Macwahoc PLT.

Results of State Site File Search for Macwahoc Plantation
As part of the research conducted for the present project, archaeologists checked the historic archaeology site files maintained by the Maine Historic Preservation Commission. For the town of Macwahoc PLT, no archaeological sites have been recorded.

Table 12. List of areas to inspect in Macwahoc PLT based on background research.

Town	**Road crossing**	**Historic map review**	**Field findings**
Macwahoc PLT	check jeep trails	nothing shown	no inspection

Molunkus, Aroostook County

In Molunkus TWP, the transmission line will follow the northwest side of the existing MEPCO powerline as it heads southwest to Mattawamkeag in Penobscot County. In reviewing modern USGS quadrangles and aerial views of the project area, archaeologists noted one main road crossing where the 1877 map depicts multiple home- or farmsteads (Table 13; Figure 19). Mr. Tumelaire and Mr. Douse checked both sides of Aroostook Road at the proposed transmission line crossing but did not find any historic resources.

Results of State Site File Search for Molunkus
As part of the research conducted for the present project, archaeologists checked the historic archaeology site files maintained by the Maine Historic Preservation Commission. For the town of Molunkus, no archaeological sites have been recorded.

Table 13. List of areas to inspect in Molunkus Twp based on background research.

Town	**Road crossing**	**Historic map review**	**Field findings**
Molunkus Twp	Aroostook Road	compact developed area	no resources found

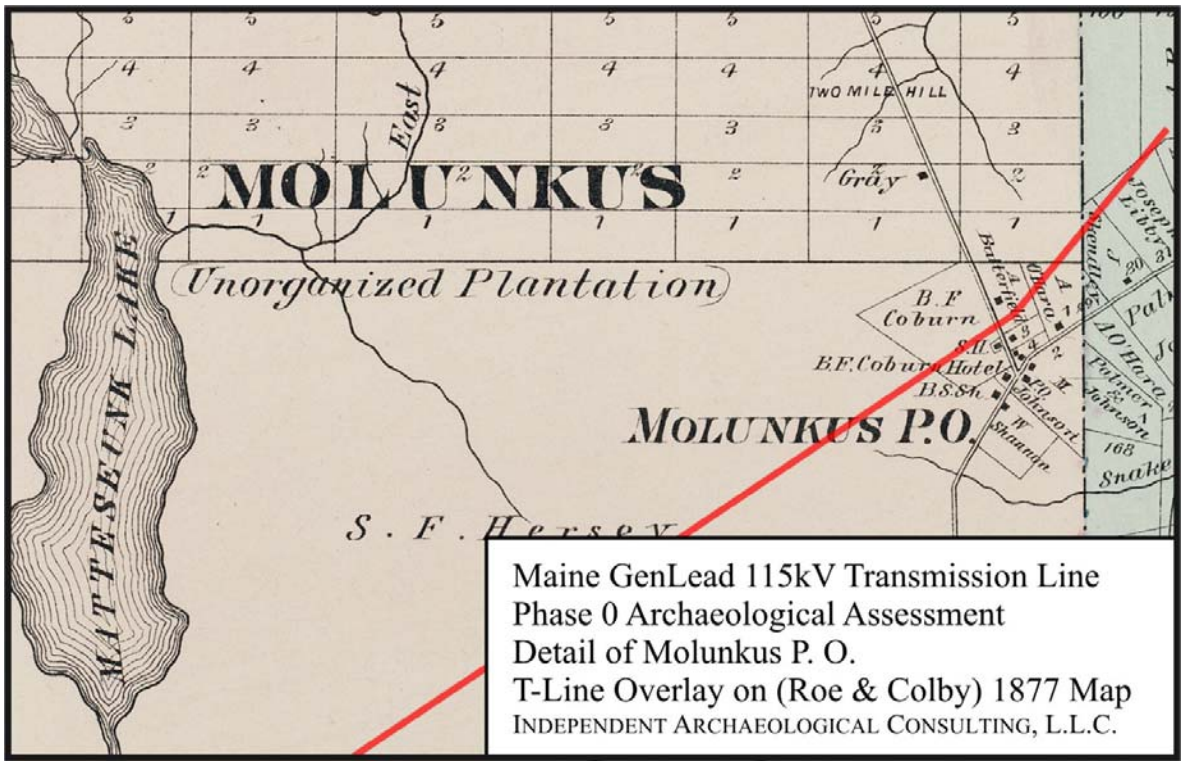

Figure 19. Detail of proposed transmission line as it traverses Molunkus P. O. (after Roe & Colby 1877).

Mattawamkeag, Penobscot County

At the Penobscot River crossing, the transmission line intersects the northwest corner of Mattawamkeag. As with the aforementioned towns, the transmission line parallels the existing MEPCO powerline. In reviewing modern USGS quadrangles and aerial views of the project area, archaeologists noted one main road crossing where the 1877 map depicts multiple home- or farmsteads (Table 14; Figure 20). Mr. Tumelaire and Mr. Douse checked both sides of Aroostook Road at the proposed transmission line crossing but did not find any historic resources.

Results of State Site File Search for Mattawamkeag

As part of the research conducted for the present project, archaeologists checked the historic archaeology site files maintained by the Maine Historic Preservation Commission. For the town of Mattawamkeag, the Mattawamkeag Town and Mission (ME 270-001) have been recorded at the juncture of Mattawamkeag and Penobscot Rivers.

Table 14. List of areas to inspect in Mattawamkeag based on background research.

Town	Road crossing	Historic map review	Field findings
Mattawamkeag	SR 157	near H. Runnells (1875)	no resources found

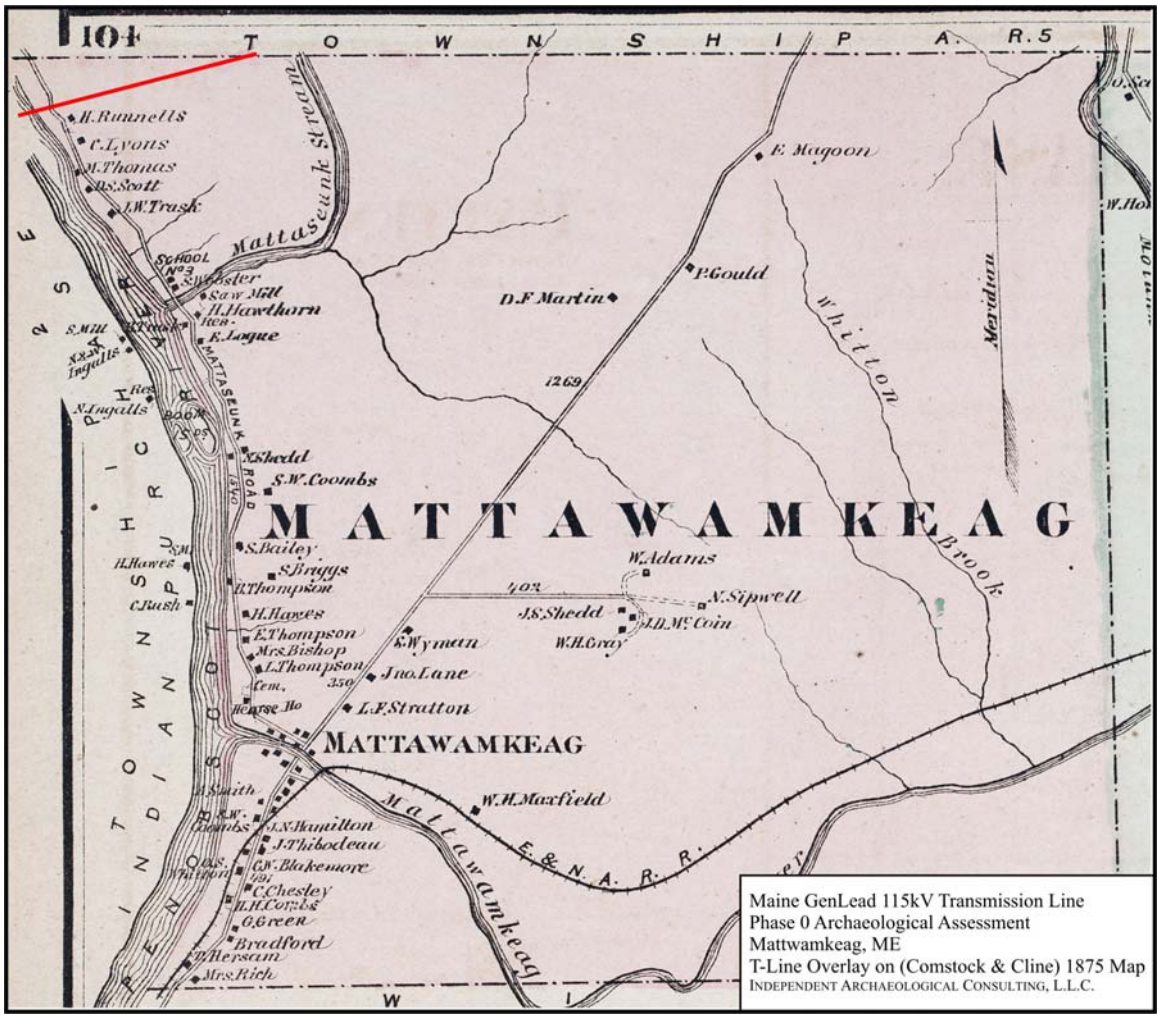

Figure 20. Proposed transmission line as it traverse northwest corner of Mattawamkeag (after Sherman 1875).

Woodville, Penobscot County

In Woodville, the transmission line follows the north and west side of the existing MEPCO powerline as it heads southwest to Chester. Portions of the Maine GenLead 115kV transmission line in Woodville were previously surveyed for the Stetson Wind Project transmission line (Booth and Wheeler 2007). Much of the proposed Maine GenLead 115kV transmission line will follow the same path as the one surveyed for Stetson Wind, so IAC did not conduct additional field survey (Table 15). The 1875 map of Woodville is shown as Figure 21, which shows the project area as undeveloped.

Results of State Site File Search for Woodville

As part of the research conducted for the present project, archaeologists checked the historic archaeology site files maintained by the Maine Historic Preservation Commission. For the town of Woodville, no archaeological sites have been recorded.

Table 15. List of areas to inspect in Woodville based on background research.

Town	Road crossing?	Historic map review	Field findings
Woodville	Butterfield Road	nothing shown	no inspection

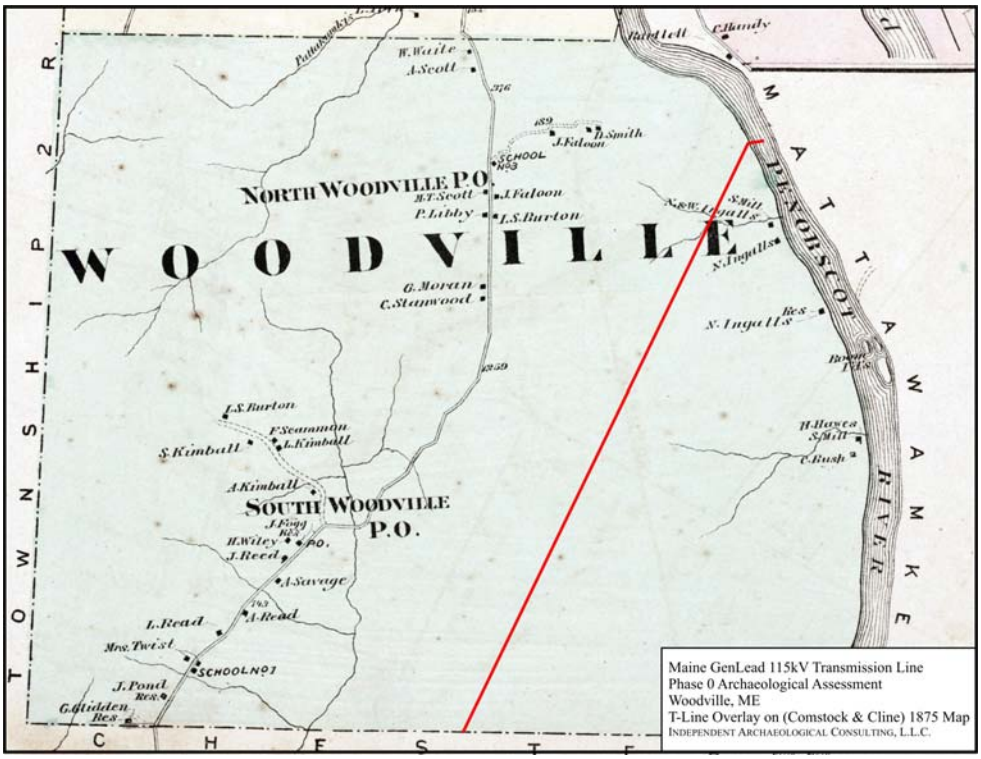

Figure 21. Proposed transmission line as it traverses undeveloped portion of Woodville (after Sherman 1875).

Chester, Penobscot County

In Chester, the transmission line follows the west side of the existing MEPCO powerline and eventually ties in to an historic railroad grade. Much of the Maine GenLead 115kV transmission line in Chester was previously surveyed for the Stetson Wind Project transmission line (Booth and Wheeler 2007), so IAC did not conduct additional field survey (Table 16). The 1875 map of Chester is shown as Figure 22, which shows the project area as undeveloped.

Results of State Site File Search for Chester

In checking site files for the project, archaeologists found two sites recorded for Chester, including the Sylvanus Hatch (formerly Hall) Farmstead (ME 093-002), located on Keene Road, very near the existing substation. The Hatch farmstead consists of a house cellar, a barn foundation, and a family burial ground on a high hill overlooking the farm, but none of these components is in the APE for the Oakfield transmission line, as shown in Figure 23. The second site (ME 093-001) does not fall within the project area.

Table 16. List of areas to inspect in Chester based on background research.

Town	Road crossing	Historic map review	Field findings
Chester	SR 116	nothing shown	no inspection

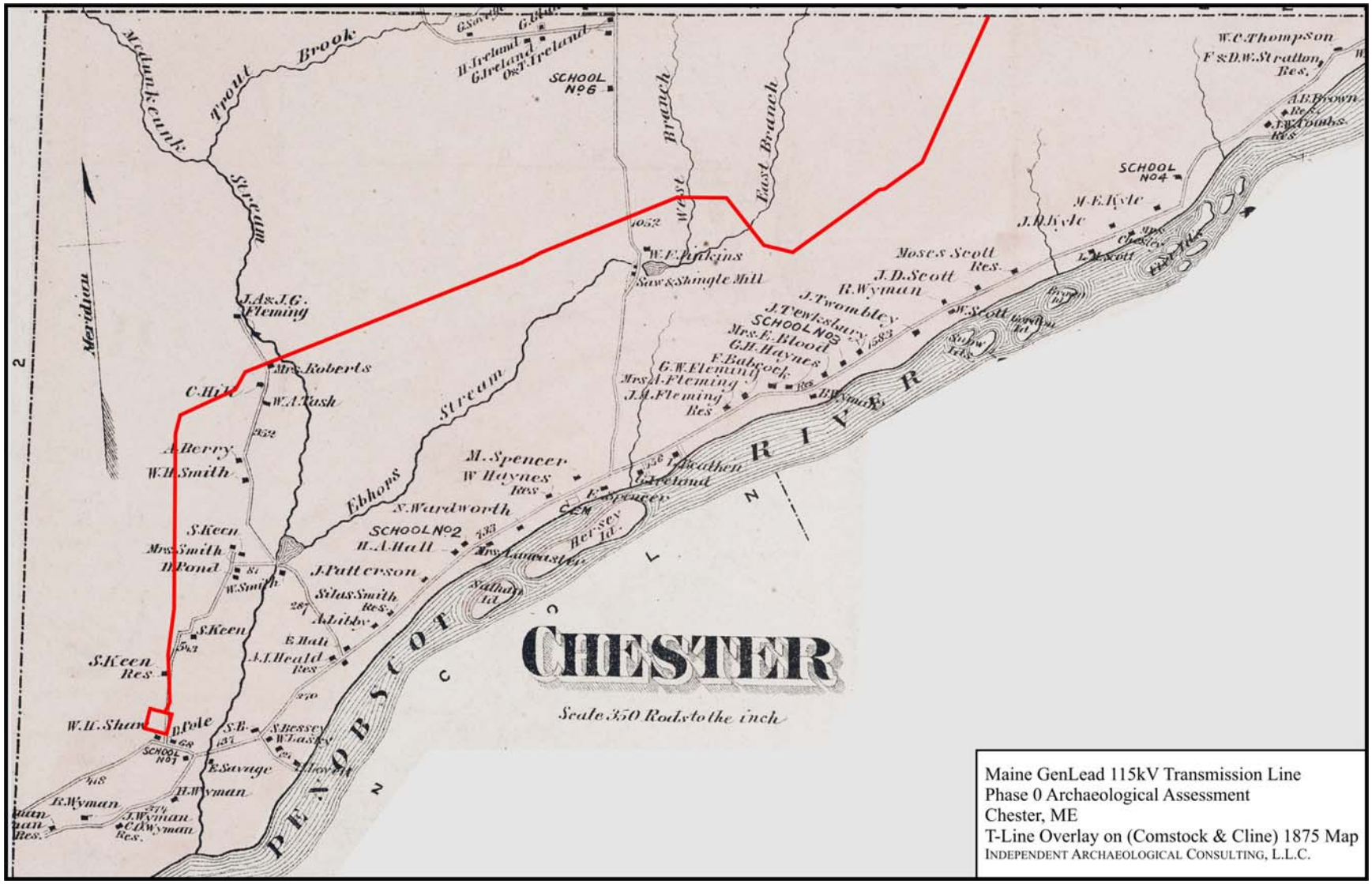

Figure 22. Proposed transmission line as it traverses Chester (after Sherman 1875).

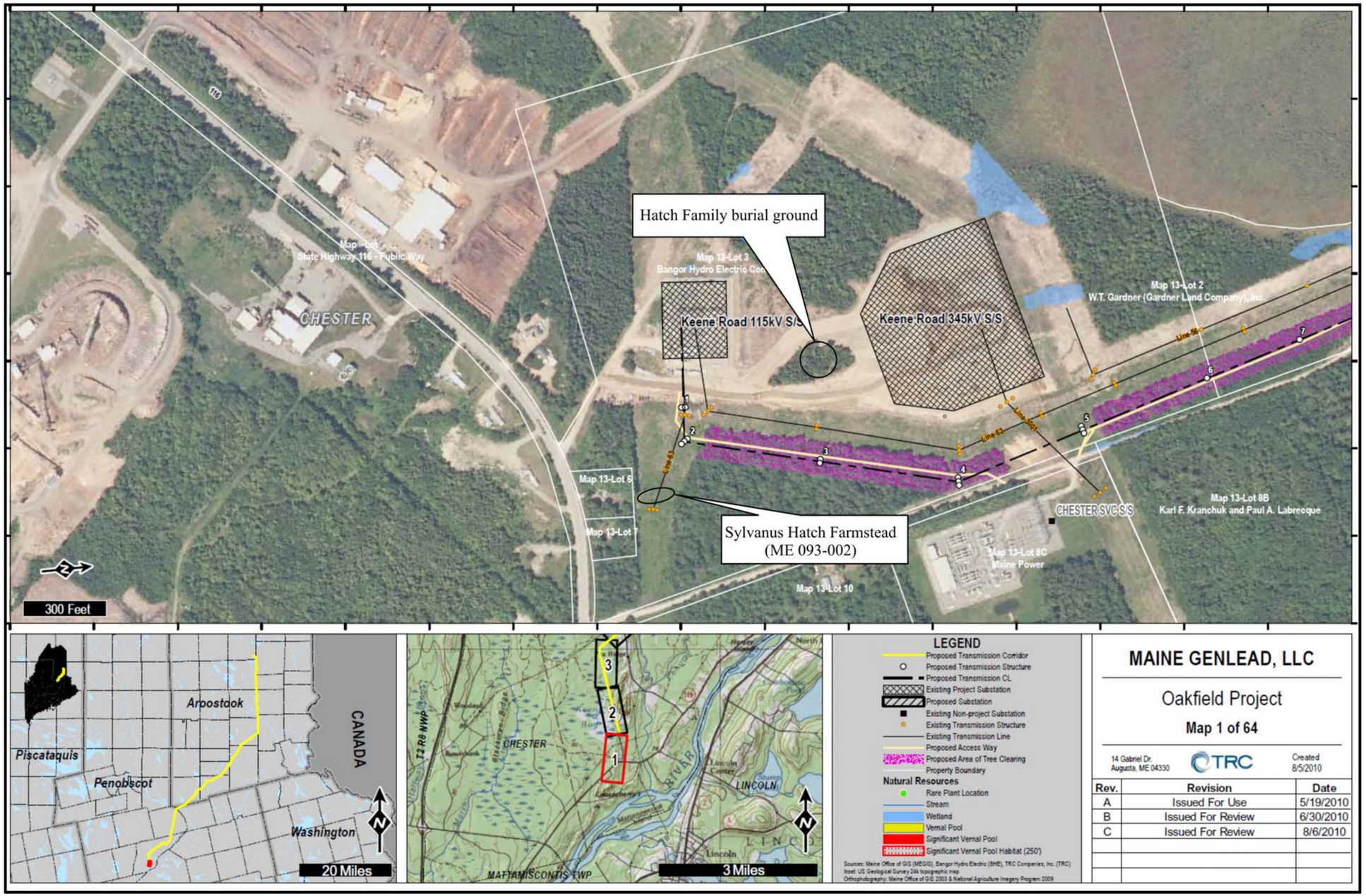

Figure 23. Location of known Euroamerican archaeological resources near Keene Substation in Chester, Maine. Pink shaded area shows proposed Maine GenLead transmission line.

SUMMARY AND RECOMMENDATIONS FOR FURTHER ARCHAEOLOGICAL SURVEY FOR THE MAINE GENLEAD 115KV TRANSMISSION LINE

IAC conducted a Phase 0 review of Maine historic archaeology site files, map resources, and secondary historic sources; created a site predictive model; then completed a site inspection of areas where Euroamerican archaeological resources might be present. The vast majority of the project area falls in sparsely occupied towns, unnamed townships, and plantations. The occupation history of the 12 towns is encapsulated in the population data summarized in Table 17, where even at the height of population, only three towns reached more than 1,000 persons, and in three cases, the number of persons did not exceed two digits. In reviewing the decades of peak population, one does not find a single explanatory factor. In the two southernmost towns – Chester and Woodville – it is only in the latest census count that numbers reached their maximum. For others – North Yarmouth Academy Grant and Molunkus – it is early in their settlement that they are most heavily populated. Taking all 12 towns together with their highest number of inhabitants, we have an average of 441 persons per town. This very low population density means few home- or farmsteads over the long course of time and an overall assessment of the project area as having low sensitivity for Euroamerican archaeological resources.

Table 17. Summary of peak population numbers for the 12 towns along the Maine GenLead transmission line.

No.	Town	Peak Population	Year
1	Oakfield	1059	1940
2	Linneus	1008	1870
3	T4R3	46	1870
4	T3R3	15	1920
5	Glenwood PLT	198	1880
6	Reed PLT	639	1920
7	North Yarmouth Academy Grant	69	1840
8	Macwachoc PLT	242	1940
9	Molunkus Twp	199	1850
10	Mattawamkeag	1006	1970
11	Woodville	286	2000
12	Chester	525	2000
Total		5292	
Average		441	

A second mitigating factor contributing to an assessment of low sensitivity is that more than half of the proposed Maine GenLead 115kV transmission line (33 miles) follows the existing MEPCO transmission. Although the Oakfield transmission line is to one side of the existing cleared right-of-way, it is possible that the construction of the original existing line resulted in the disturbance of adjoining areas. Following the literature review and site inspections of road crossings of possible site location, IAC found no evidence of historic Euroamerican occupation in either the

virgin right-of-way or along the existing MEPCO transmission corridor. IAC recommends no further archaeological survey for the proposed transmission line as presently designed.

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Appendix 8-3

TECHNICAL REPORT

HISTORIC ARCHITECTURAL RECONNAISSANCE SURVEY
MAINE GENLEAD 115KV GENERATOR LEAD PROJECT

Chester, Woodville, Mattawamkeag, Penobscot County

Molunkus, Macwahoc Plantation, North Yarmouth Academy
Grant, Reed, Glenwood, T3R3 WELS, T4R3 WELS, Linneus, Oakfield
Aroostook County, Maine

Carey L. Jones

Prepared for:

Stantec
30 Park Drive
Topsham, Maine 04086

Prepared by:

PAL
210 Lonsdale Avenue
Pawtucket, Rhode Island 02860

PAL Report No. 2383 August 2010

SUMMARY

Name of Survey:	Maine GenLead 115kV Generator Lead Project
Location:	Chester, Woodville, Mattawamkeag, Penobscot County and Molunkus Township, Macwahoc Plantation, North Yarmouth Academy Grant, Reed Plantation, Glenwood Plantation, T3R3 WELS, T4R3 WELS, Linneus, and Oakfield, Aroostook County
Sponsoring Agency or Group:	Maine GenLead, LLC
Survey Dates:	November 17, 2009 to November 19, 2009
Name of Surveyor:	PAL, Inc. 210 Lonsdale Avenue Pawtucket, RI 02860
Level of Survey:	Reconnaissance
Area Surveyed:	A one-half-mile radius from the project area location equal to an 18,935 acre area.
Areas of Potential Effect:	Direct Impact: 2852 acres Indirect Impact: 18,935 acres
Survey Results:	There are no resources in the APE that are listed in the National Register or evaluated as eligible for such listing. There are also no previously identified properties in the APE. The Maine GenLead 115kV Generator Lead Project Architectural Reconnaissance Survey identified 23 individual resources. PAL recommends two properties as potentially eligible for listing in the National Register; the Project will have no effects to these properties.

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INTRODUCTION

This report presents the results of a historic architectural reconnaissance survey conducted for the proposed Maine GenLead 115kV Generator Lead Project (Project) located in Penobscot and Aroostook Counties, Maine (Figure 1). The purpose of the survey was to identify historic architectural properties within the Project's Area of Potential Effect (APE) and to provide information to the Maine Historic Preservation Commission (MHPC) regarding the potential direct or indirect effects on historic architectural properties.

Project Description

Maine GenLead, LLC proposes to construct an approximately 59-mile, 115 kilovolt (kV), overhead generator lead from the Keene Road substation in Chester to a proposed new substation for the Oakfield Wind Project in Oakfield. The generator lead will provide a direct connection between the Oakfield Wind Project and the ISO New England transmission system to accommodate the energy output of the Oakfield Wind Project. The Oakfield Wind Project, DEP #L-24572-A-N and L-24572-TF-B-N (January 21, 2010) is being amended through a separate application to expand its capacity. The Oakfield Wind Project Amendment is addressed in a separate report prepared by PAL.

The design of the generator lead will be primarily single pole structures with double and triple poles, and associated guying, as necessary to support the integrity of the line. The amount of new clearing associated with the corridor will vary from 50 to 100 feet, depending on adjacency to existing infrastructure. The new line will extend through 12 towns and townships: Chester, Woodville, Mattawamkeag, Molunkus Township, Macwahoc Plantation, North Yarmouth Academy Grant, Reed Plantation, Glenwood Plantation, T3R3 WELS, T4R3 WELS, Linneus, and Oakfield (Figure 1). Through Chester, the line is adjacent to the existing Line 56 transmission line corridor for approximately 7.5 miles to an intersection with the existing 345 kV Maine Electric Power Company (MEPCO) corridor in Woodville. The line then parallels, with minor deviations, the existing MEPCO corridor northeast for approximately 33 miles to the Glenwood Plantation/Haynesville town line. From this point, the line runs north along the westerly side of the town boundaries for approximately 16.5 miles, to the town of Oakfield, then approximately 2.5 miles to a proposed new substation located at the easterly string of wind turbines for the Oakfield Wind Project Amendment.

Project Location and Setting

The Maine GenLead 115kV Generator Lead Project is located in a heavily wooded area with tall, dense trees. The area is generally characterized by low rolling hills, numerous streams, dense second growth woodland, and open fields. Development in the area is sparse and primarily limited to small villages and camp sites. The only major topographic feature is the Penobscot River, which the Project crosses near Mattawamkeag. The majority of the forested areas are used for commercial logging. Route 116 in Chester, Route 157 in Mattawamkeag, and Route 2 from Molunkus to Oakfield are the major transportation corridors in the area. There are also numerous unpaved logging roads and recreational trails.

Methodology

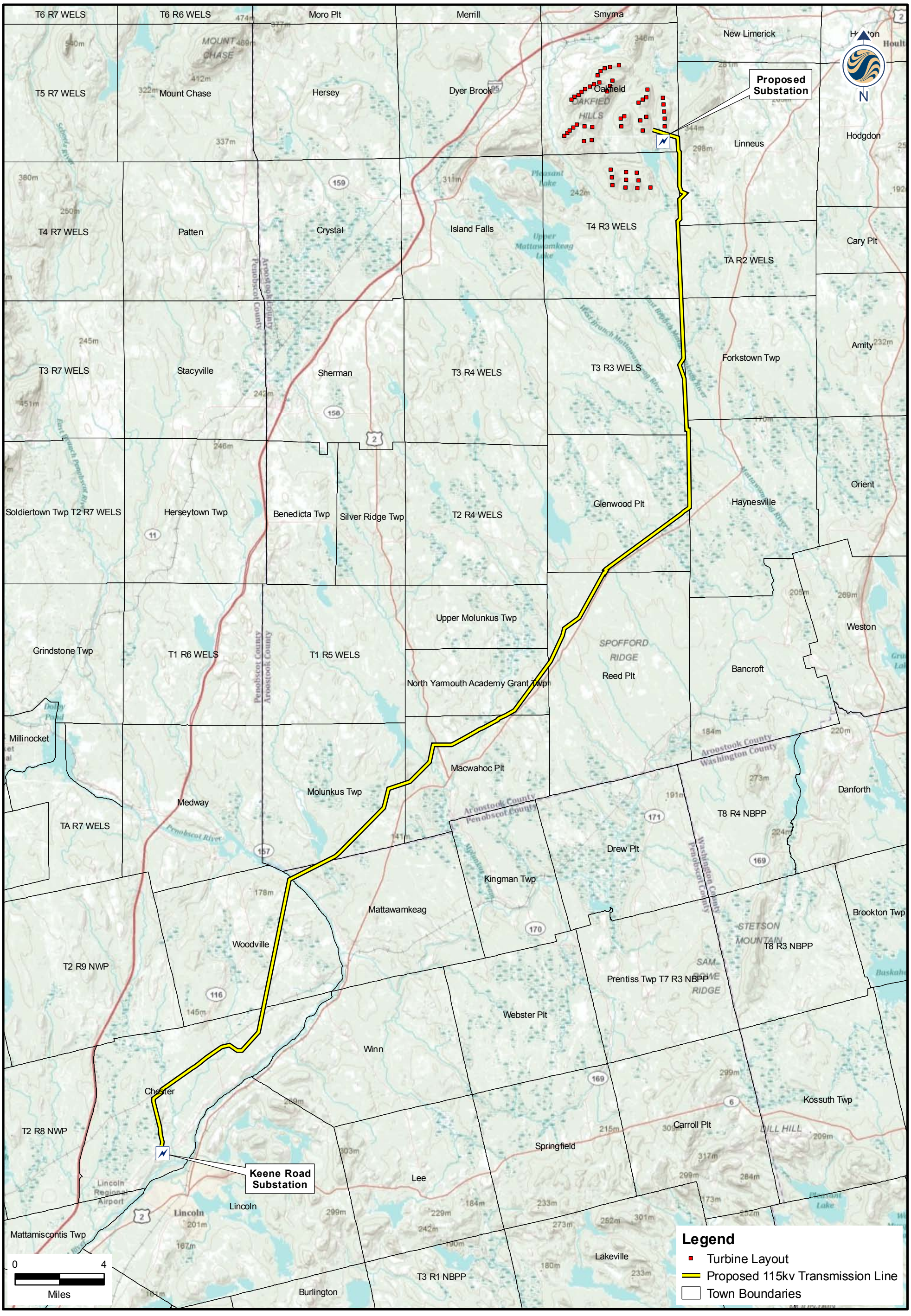
The methodology for the architectural reconnaissance survey was designed to identify all aboveground historic properties, including districts, buildings, structures, objects, and sites within the APE for the Project that are listed, eligible, or potentially eligible for listing in the National Register of Historic Places (National Register). The survey was conducted in accordance with the standards and guidelines established in the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation*, as amended (48 FR 44716), the MHPC's *Above Ground Cultural Resources Survey Manual, Guidelines for Identification: Architecture and Cultural Landscapes, Section 106 Specific* (MHPC 2006), the National Park Service's (NPS) *National Register Bulletin No. 24, Guidelines for Local Survey: A Basis for Preservation Planning* (NPS 1985), and the NPS's *National Register Bulletin No. 15, How to Apply the National Register Criteria for Evaluation* (NPS 1997).

Prior to beginning survey fieldwork, PAL conducted research to identify all previously surveyed properties within or adjacent to the Project area that are listed or eligible for listing in the National Register or have been recorded as part of the MHPC's Maine State Survey Program. PAL had previously visited the MHPC to review and obtain copies of all National Register forms, relevant town files, and inventory forms for properties within the Project location. PAL confirmed with the MHPC that no other properties were recently recorded in the surrounding areas and that PAL had copies of the necessary forms.

Fieldwork for the reconnaissance survey was conducted by two PAL architectural historians from June 22, 2010 to June 24, 2010. The fieldwork involved the identification of all properties within the APE that were at least 50 years old or included in previous inventories. Information regarding the viewsheds from recorded properties toward the Project area was noted during the fieldwork. Each identified property was photographed with black-and-white film using a 35mm SLR camera and with a high-resolution digital camera. Data regarding the current condition and significant characteristics of each resource was recorded, and the information on the inventory forms for previously surveyed properties was verified. In compliance with the MHPC's survey methodology, unique sets of information were collected for individual buildings, barns, and farmsteads. All identified properties were mapped in the field on USGS base maps or detailed aerial images. Site plans depicting farmsteads or other complexes with multiple resources were hand drawn on survey forms.

PAL drove all accessible public roads within the study area, including unmarked, navigable gravel/dirt trails. All properties that met the criteria for inclusion in the survey and were visible from public rights-of-way were recorded. To ensure that no properties were overlooked, PAL made notes on the base maps during the survey, indicating which roads had been covered and which buildings were less than 50 years old. For roads that were gated or otherwise clearly marked as private, topographic maps and aerial images were used to verify the presence or absence of existing structures. Historical topographic maps and atlases were then used to determine whether any of these inaccessible properties contained resources at least 50 years old.

PAL entered the survey data into a database following the completion of the fieldwork. The database was then used to generate MHPC reconnaissance-level survey inventory forms for each of the surveyed properties. Based on the condition, integrity, materials, approximate age, design, and setting of the identified resources observed in the field, PAL made a preliminary assessment regarding the potential National Register eligibility of each property. The preliminary eligibility evaluation of each property and an assessment of potential effects of the Project on properties evaluated as potentially eligible are included in the Recommendations section of this report.



Prepared By:

Stantec

Project:

Revised Oakfield Wind Project
Penobscot and Aroostook Counties

Sheet Title:

Maine GenLead 115kV Generator
Lead Transmission Line Corridor

Date:	May 2011
Scale:	As Shown
Proj. No.:	195600518
Figure:	1

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SURVEY BOUNDARIES

This survey area included all the land and features within a linear corridor of the proposed generator lead in Penobscot and Aroostook Counties, Maine. The survey boundary corresponds to the indirect effects APE boundaries (described below) and is depicted on Figure 2. All properties that met the survey criteria and were located within a one-half-mile wide corridor along the proposed alignment were recorded. The survey area is composed of approximately 18,935 acres. The majority of the properties in the survey area are mid- to late-nineteenth-century houses and agricultural outbuildings and recreational camps.

Area of Potential Effect

The APE is defined in regulations governing Section 106 of the National Historic Preservation Act as the "geographic area or areas within which an undertaking may directly or indirectly cause changes in the character of or use of historic properties, if any such properties exist" (36 CFR 800.1(d)). Typically there are multiple APEs since effects to historic properties can be caused by either a physical taking (direct impacts) or by the introduction of environmental impacts (indirect impacts). The direct impact APE is the geographic area in which properties would be affected by construction activities, including a property taking or physical modification of a historic property. The indirect impact APE consists of a larger area where visual, auditory, pollution, vibration, and/or other types of environmental impacts, might affect the qualities for which a historic property is eligible for or listed in the National Register.

The direct effects APE for the Maine GenLead 115kV Generator Lead Project is approximately 2,852 acres in size and corresponds to a 50- to 100-foot wide corridor along the length of the alignment that accounts for any construction-related activities including land acquisition and laydown areas. The only potential indirect effects for the Project are visual in nature. Based on the potential visibility of the transmission poles, a one-half-mile wide corridor was determined to be the area in which properties could have potential views of the project. This one-half-mile corridor represents one-quarter of a mile on either side of the generator lead. The indirect effects APE corresponds to the survey area boundary and is 18,935 acres in size.

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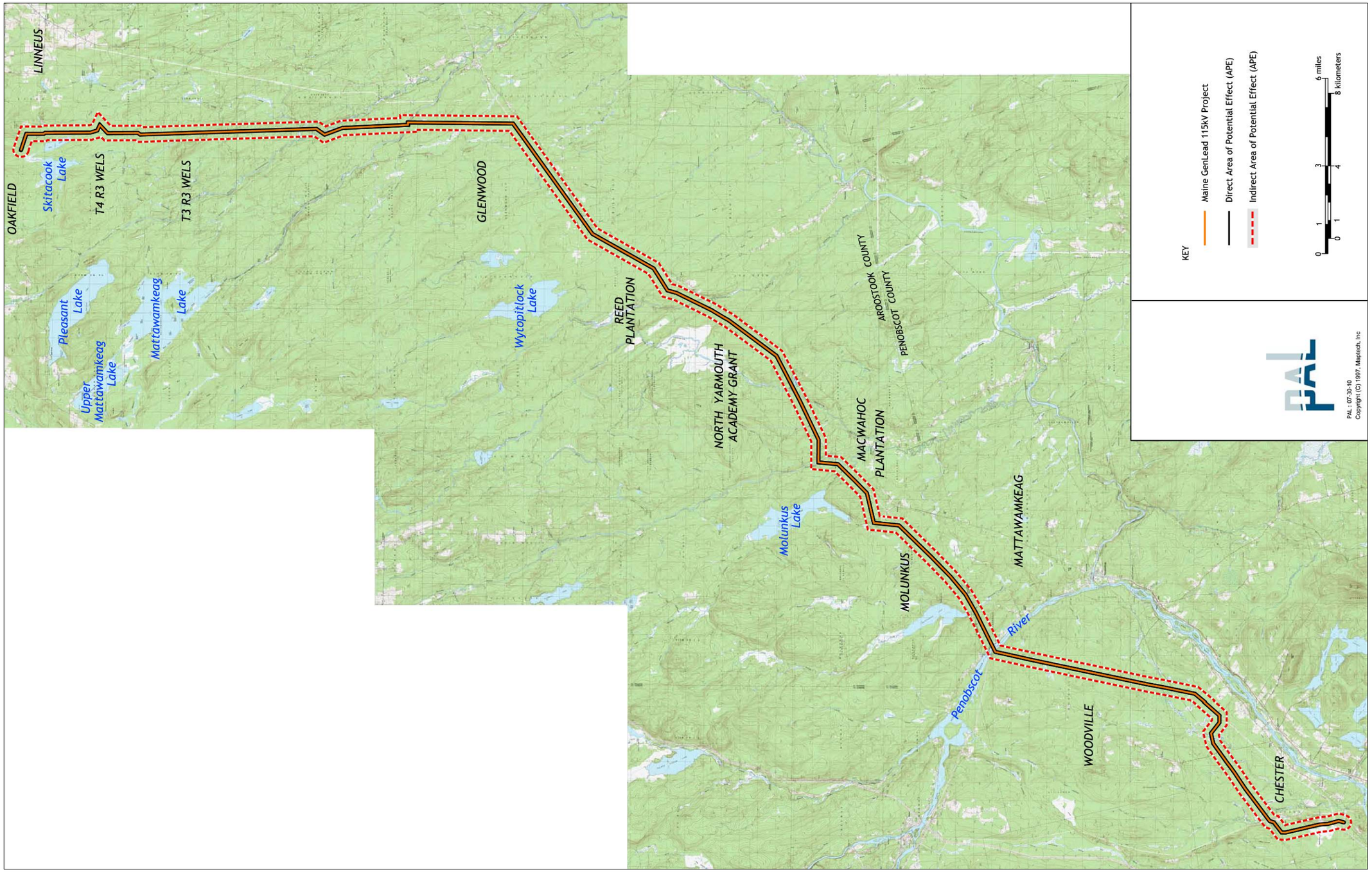

Figure 2. Maine GenLead 115kV Generator Lead Project Areas of Potential Effect.

SURVEY RESULTS

Properties Listed in or Determined Eligible for Listing in the National Register

The preliminary research did not identify any properties in the direct or indirect APE that are either listed in the National Register or determined eligible for such listing.

Previously Inventoried Properties

There are no previously inventoried properties in the direct or indirect APE.

Properties Identified During the Historic Architectural Reconnaissance Survey

Number of Buildings/Structures Recorded and Property Types

The reconnaissance survey of the indirect impact APE identified 23 buildings/structures that are at least 50 years old and retain at least some integrity (Figure 4a-4c, Back Pocket). These resources include five residences, three barns/outbuildings, 10 cottages/summer camps, one civic/social/religious building, one transportation-related structure, two power generating facilities, and one building of unknown use. The majority of the surveyed buildings are camps/cottages built in the early twentieth century. They are vernacular in design and clustered in groups. Most of the residences identified as meeting the survey criteria are mid-nineteenth- to early-twentieth-century vernacular single-family detached houses of one-and-one-half to two stories in height and with a variety of historic and modern alterations. Typical alterations include window and door replacement, vinyl siding, and the addition of rear or side ells.

Appendix A contains Table 1, (survey matrix) which summarizes the properties identified by PAL and provides information about their potential National Register eligibility, and copies of the reconnaissance level MHPC inventory forms for these buildings/structures

RECOMMENDATIONS

National Register Evaluation

All properties identified during the survey were evaluated in accordance with the National Register Criteria for Evaluation. The criteria are defined by the NPS as follows:

Properties eligible for inclusion in the National Register are those whose qualities of significance in American history, architecture, archaeology, engineering, and culture are present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association; and

A. that are associated with events that have made a significant contribution to the broad patterns of our history; or

B. that are associated with the lives of persons significant in our past; or

C. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. that have yielded, or may be likely to yield information important in prehistory or history.

The majority of the properties indentified during the survey were evaluated as ineligible for listing in the National Register either individually or as contributing resources within a historic district. In general, the individual buildings evaluated as ineligible for the National Register are common, vernacular structures that lack architectural significance or apparent significant historical associations. A large number of the properties have lost architectural integrity due to alterations and/or additions, removal of original architectural ornament, replacement of original materials, and replacement of original windows and doors.

Properties Recommended as Potentially Eligible for Listing in the National Register

PAL recommends two properties as potentially eligible for listing in the National Register. The properties are described below and mapped on Figure 3.

Glenwood School Property

The Glenwood School and associated building (Survey Map Nos. 3 and 4), located at 47 Dixie Road, Glenwood approximately one-third of a mile from the existing ROW, is recommended as potentially eligible for listing in the National Register under Criteria A and C (Photograph 1 and 2). Under Criterion A it is potentially eligible in the area of education as one of three schoolhouses built in Glenwood during the mid- to late-nineteenth century (Wiggin 1922:236). One of the other schools has been demolished or moved, the condition of the other is currently unknown.

The Glenwood School and associated building are also potentially eligible under Criterion C in the area of architecture as a relatively rare intact example of a one-room schoolhouse constructed in rural areas

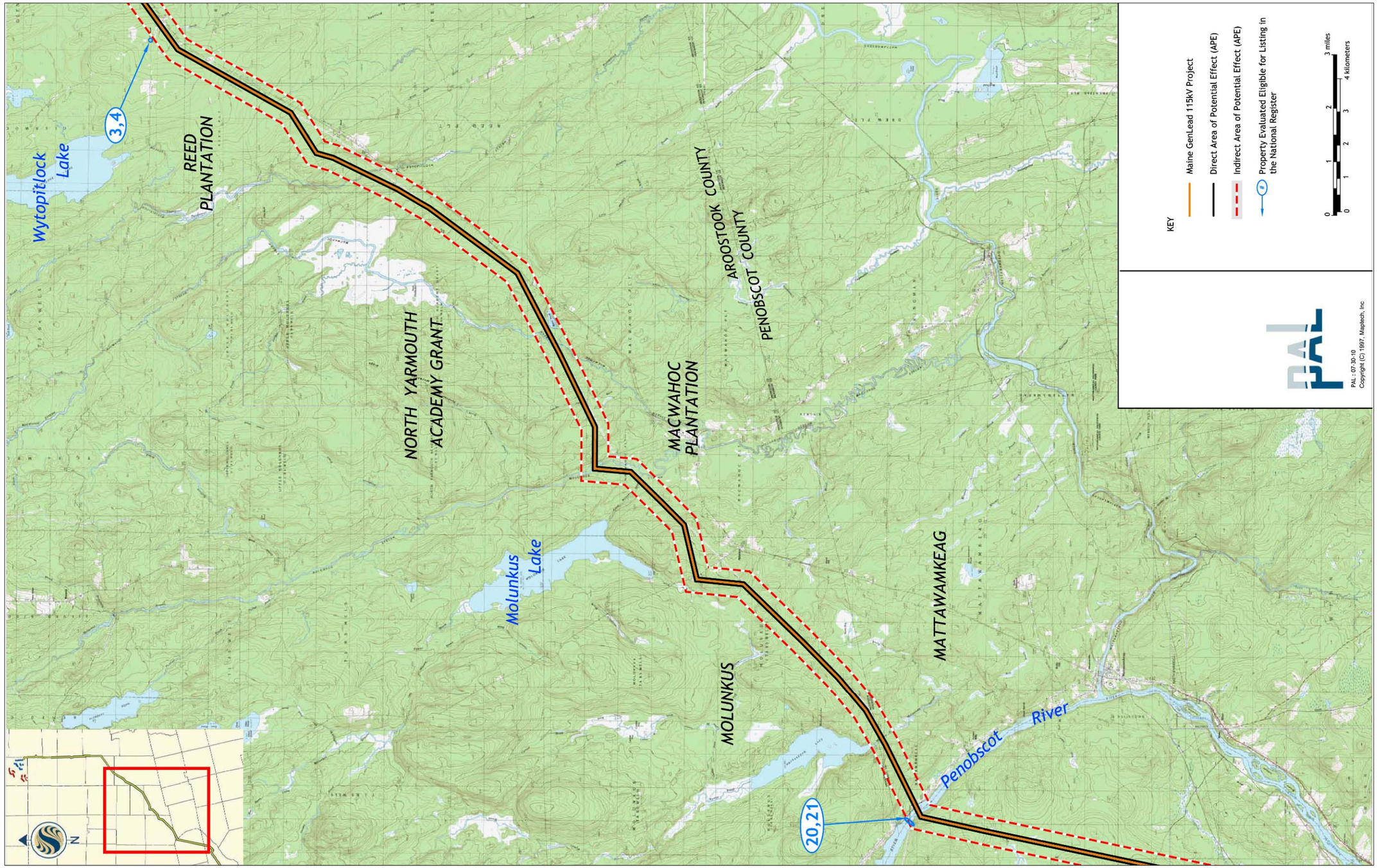

Figure 3. Properties in the Maine GenLead 115kV Generator Lead Project Evaluated Eligible for Listing in the National Register.

Photograph 1. Glenwood School (Survey Map No. 3), 47 Dixie Road, Glenwood.

Photograph 2. Building associated with the Glenwood School (Survey Map No. 4), 47 Dixie Road, Glenwood.

across the country throughout the nineteenth century. It is one story in height, three bays wide, six bays deep with an asphalt shingle hipped roof, and clapboard siding. The foundation is not visible. Appendages include a two-bay by one-bay, hipped roof vestibule on the facade (south elevation) and a full-length, shed roof attachment on the rear (north) elevation. Fenestration includes six-over-six double-hung wood sash windows on the main mass and fixed six-light windows on the appendages. Decorative details include a wide fascia board below the cornice line and simple pilasters on the corners. To the east of the school is a small, rectangular building designed in the same style as the school with a hipped roof and clapboard siding. A single door on the facade (south elevation) appears to be the only opening. On the corners of this buildings are the same simple pilasters as the school building.

Mattaseunk Dam and Weldon Hydroelectric Station

The Mattaseunk Dam and Weldon Hydroelectric Station span the West Branch of the Penobscot River between Mattawamkeag and Woodville. The Mattaseunk Dam (Survey Map No. 20) is recommended eligible for listing in the National Register under Criterion A at the state level in the area of industry and Criterion C for engineering (Photograph 3). The Mattaseunk Dam was constructed in the early to mid-twentieth century and is one of a series of dams located in this section of the Penobscot River. Dams located further upstream in East Millinocket and Medway provided power to local industries, mostly notably paper mills. The Mattaseunk Dam is significant for its association with the development of power-producing facilities on the Penobscot River and their relationship with the important regional industries, most notably paper producing. It remains as a good, representative example of a moderate- to large-scale, early-twentieth-century hydroelectric facility.

The Weldon Hydroelectric Station (Survey Map No. 21) is also recommended eligible for listing in the National Register under Criterion A at the state level in the area of industry and Criterion C in the area of engineering (Photograph 4). It was constructed by the Great Northern Paper Company (originally the Northern Development Company) in the early to mid-twentieth century as one of several hydroelectric facilities on the Penobscot River. Great Northern Paper Company originally located its paper mills in Millinocket in 1899 to take advantage of the tremendous hydroelectric power provided by the Penobscot River and the regions vast forest resources. The Millinocket mill was originally a two-paper machine mill that steadily grew to include several high-speed machines. As the company continued to expand its operations, they built additional mills downriver in East Millinocket. In order to provide power to the East Millinocket facility, the company constructed a dam and substation there. As both mills continued to expand production, their power needs increased and additional damns and hydroelectric stations were built along the Penobscot River. Of the facilities constructed by Great Northern Paper, the Weldon Substation is the most remote and farthest downriver from the original mills in Millinocket and East Millinocket. Starting in the 1980s the plant was upgraded to accommodate the 60 Hz standard for electric power generating and transmission systems (Wiley and Crowell:2005).

Photograph 3. Mattaseunk Dam (Survey Map No. 20) across the Penobscot River, Mattawamkeag.

Photograph 4. Weldon Hydroelectric Station (Survey Map No. 21), Penobscot River, Mattawamkeag.

ASSESSMENT OF PROJECT EFFECTS

The framework used for assessing the effects of the Maine GenLead 115kV Generator Lead Project on historic properties was established by the regulations governing Section 106 of the National Historic Preservation Act. In conducting the assessment, the criteria of adverse effect was applied to each of the properties identified in the survey as listed or eligible for listing in the National Register. An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association (36 CFR 800.5(a)(1)).

Direct Effects

The direct impact APE was established to encompass all Project-related construction activities, including land acquisition and laydown areas. There are no historic properties within the direct impact APE. Therefore, the Project will have no direct effects on historic properties.

Indirect Effects

As described in the methodology, the indirect impact APE was established to include the area where the Maine GenLead 115kV Generator Lead Project has the potential to cause visual impacts on properties that are listed or evaluated as potentially eligible for listing in the National Register. The following is a discussion of the potential effects and an assessment of the Project's potential to cause adverse effects on those properties. Table 2 provides a summary of the findings for each property.

Visual Effects

In order to assess whether the views to or from the constructed Project would have an unreasonable adverse effect, the magnitude, distance, and duration of the potential view, along with the qualities of significance that make the properties eligible for listing in the National Register was taken into account.

For assessing potential visual effects from the proposed Maine GenLead 115kV Generator Lead Project, the concept of distance zones formed the basis of the analysis. This concept is based upon the USDA Forest Service visual analysis criteria for forested landscapes, and on the amount of detail that an observer can differentiate at varying distances. The distance zones for this project are defined as the following:

- *Foreground: 0 to 1/2 mile in distance*. In the foreground, the observer would be able to detect surface textures, details, and a full spectrum of color.

- *Midground: 1/2 mile to 4 miles in distance*. In the midground details found in the landscape become subordinate to the whole. Development patterns are readily apparent, especially where there is noticeable contrast in scale, form, texture, or line. In panoramic views, the midground landscape is the most important element in determining visual impact.

- *Background: greater than 4 miles*. Objects seen at this distance are highly visible only if they present a noticeable contrast in form or line.

Table 2. Effects Assessment for Properties Evaluated as Potentially Eligible for Listing in the National Register.

Survey Map No.	Address	County	Assessment of Visual Effect	Effects Assessment
3	Glenwood School, 47 Dixie Road, Glenwood	Aroostook	The Project will not be visible in views to or from this resource.	No effect
4	Associated building for the Glenwood School, 47 Dixie Road, Glenwood	Aroostook	The Project will not be visible in views to or from this resource.	No effect
20	Mattaseunk Dam, Across the Penobscot River, 230 ft. SW of Medway Road, Mattawamkeag	Penobscot	The Project will be visible in views from the area surrounding this resource. However, the resource itself is a large industrial structure that exists within the context of other power-generating facilities including the Weldon Hydroelectric Station and the Line 56 transmission line.	No adverse effect
21	Weldon Hydroelectric Station, Across the Penobscot River, 230 ft. SW of Medway Road, Mattawamkeag	Penobscot	The Project will be visible in views from the area surrounding this resource. However, the resource itself is a power-generating facility that exists within the context of related facilities including the Mattaseunk Dam and the Line 56 transmission line.	No adverse effect

According to the draft Visual Impact Assessment, prepared by Terrence J. DeWan & Associates (TJD&A) for this project, the generator lead will primarily be visible in the foreground distance zone where the Project crosses public roads, streams, and rivers. In the midground, the Project will only be visible when it crosses the Penobscot River in Mattawamkeag. In the background distance zone, it will be not be visible (TJD&A 2010).

Glenwood School Property

The Glenwood School and associated building (Survey Map Nos. 3 and 4) are surrounded by dense trees that limit views to the immediately surrounding area. The proposed generator lead would not be visible from the property.

Mattaseunk Dam and Weldon Hydroelectric Station

The constructed Project would be visible from the area surrounding the Mattaseunk Dam and Weldon Hydroelectric Station (Survey Map Nos. 20 and 21). The Project will cross the Penobscot River between the existing MEPCO power line and the dam and hydroelectric station. Views of the Mattaseunk Dam and Weldon Hydroelectric Station are possible from a small recreational area located on the east side of the Penobscot River. From this location the existing MEPCO line is also visible (Photograph 5). The overall setting of the area is industrial due the presence of the Mattaseunk Dam, the Weldon Hydroelectric Station, the existing transmission lines and other related buildings located outside the APE. The introduction of a generator lead to the surrounding area will not change the overall setting and feeling of the area. The Project will not affect any of the qualities of significance or the historic integrity for this property.

PAL recommends that the Maine GenLead 115kV Generator Lead Project will have no adverse effects to aboveground historic architectural resources.

Photograph 5. View south from a small recreational area near the Mattaseunk Dam and Weldon Hydroelectric Station. Views from here include the existing MEPCO line, the Project would be visible from this location.

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APPENDIX A

SURVEY MATRIX AND RECONNAISSANCE LEVEL MHPC SURVEY FORMS

Table 1. Survey Matrix for the Maine GenLead 115kV Generator Lead Project.

Maine GenLead 115kV Generator Lead Project Reconnaissance Survey
PAL, Inc. 210 Lonsdale Avenue, Pawtucket RI, 02860
(401) 728-8780/www.palinc.com
Survey Dates: June 22, 2010—June 24, 2010

Survey Map No.	Address	NR Individual	NR District	Criteria	Integrity	Property Type/ Notes
1	2192 Military Road, Route 2A, Glenwood, Aroostook	No	No	N/A	This camp/cottage is not a unique or particularly notable example of a type or style of architecture and has lost architectural integrity. Alterations include new exterior siding and roof materials.	Camp/Cottage
2	2188 Military Road, Route 2A, Glenwood, Aroostook	No	No	N/A	This camp/cottage is not a unique or particularly notable example of a type or style of architecture and has lost architectural integrity. Alterations include new exterior siding and roof materials.	Camp/Cottage
3	47 Dixie Road, Glenwood, Aroostook	Yes	No	A: Education C: Architecture	Property retains integrity of location, design, setting, workmanship, feeling and association. Material integrity is slightly undermined by the use of asphalt shingles on the roof.	This former one-room schoolhouse was one of three schools built in Glenwood during the late nineteenth century.
4	47 Dixie Road, Glenwood, Aroostook	Yes	No	A: Education C: Architecture	Property retains integrity of location, design, setting, workmanship, feeling and association. Material integrity is slightly undermined by the use of asphalt shingles on the roof.	The building appears to be historically associated with the Glenwood School (see above).
5	35 Dixie Road, Glenwood, Aroostook	No	No	N/A	This camp/cottage is not a unique or particularly notable example of a type or style of architecture and has lost architectural integrity. Alterations include new exterior siding and roof materials.	Camp/Cottage
6	35 Dixie Road, Glenwood, Aroostook	No	No	N/A	This garage is not a unique or particularly notable example of a type or style of architecture. Alterations include new exterior siding and roof materials.	Garage

Survey Map No.	Address	NR Individual	NR District	Criteria	Integrity	Property Type/ Notes
7	2036 Military Road, Route 2A, Glenwood, Aroostook	No	No	N/A	This residence is not a unique or particularly notable example of a type or style of architecture and has lost architectural integrity. Alterations include new fenestration, a side ell, and replacement roof materials.	Residence
8	2036 Military Road, Route 2A, Glenwood, Aroostook	No	No	N/A	This garage is not a unique or particularly notable example of a type or style of architecture. Alterations include new openings and replacement materials.	Garage
9	Military Road, Route 2A, NW side, approx. 1.5 mi. S of Wytopitlock Stream, Reed, Aroostook	No	No	N/A	This residence is not a unique or particularly notable example of a type or style of architecture and has lost architectural integrity. Alterations include new fenestration, a side and two rear ells, and replacement materials.	Residence
10	Military Road, Route 2A, NW side, approx. 1.5 mi. S of Wytopitlock Stream, Reed, Aroostook	No	No	N/A	This garage is not a unique or particularly notable example of a type or style of architecture and has lost architectural. Alterations include new openings, and replacement materials.	Garage
11	Harry's Lodge, 293 Aroostook Road, Molunkus, Aroostook	No	No	N/A	This building is not a unique or particularly notable example of a type or style of architecture and has lost architectural integrity. Alterations include new openings, and replacement materials.	Residence
12	Harry's Lodge, 293 Aroostook Road, Molunkus, Aroostook	No	No	N/A	This building is not a unique or particularly notable example of a type or style of architecture and has lost architectural integrity. Alterations include two side ells, and replacement materials.	Camp/Cottage

Survey Map No.	Address	NR Individual	NR District	Criteria	Integrity	Property Type/ Notes
13	Harry's Lodge, 293 Aroostook Road, Molunkus, Aroostook	No	No	N/A	This building is not a unique or particularly notable example of a type or style of architecture and has lost architectural integrity. Alterations include a rear ell and the use of replacement materials.	Camp/Cottage
14	Harry's Lodge, 293 Aroostook Road, Molunkus, Aroostook	No	No	N/A	This building is not a unique or particularly notable example of a type or style of architecture and has lost architectural integrity. Alterations include a rear ell and the use of replacement materials.	Camp/Cottage
15	Harry's Lodge, 293 Aroostook Road, Molunkus, Aroostook	No	No	N/A	This building is not a unique or particularly notable example of a type or style of architecture and has lost architectural integrity. Alterations include new fenestration and the use of replacement materials.	Camp/Cottage
16	Harry's Lodge, 293 Aroostook Road, Molunkus, Aroostook	No	No	N/A	This building is not a unique or particularly notable example of a type or style of architecture.	Camp/Cottage
17	Benedicta Lodge, Aroostook Road, NW side, approx. 3,700 ft. from int. with Route 2A, Molunkus, Aroostook	No	No	N/A	This property is not a unique or particularly notable example of a type or style of architecture and has lost architectural integrity. This property has lost its historic integrity as an early-nineteenth-century homestead, the setting has been altered by the addition of small camps. Integrity of materials and workmanship are undermined by the use of modern replacement materials and additions.	Residence and connected buildings.

Survey Map No.	Address	NR Individual	NR District	Criteria	Integrity	Property Type/ Notes
18	Benedicta Lodge, Aroostook Road, NW side, approx. 3,700 ft. from int. with Route 2A, Molunkus, Aroostook	No	No	N/A	This building is not a unique or particularly notable example of a type or style of architecture and has lost architectural integrity. Alterations include two side ells, and replacement materials.	Camp/Cottage
19	Benedicta Lodge, Aroostook Road, NW side, approx. 3,700 ft. from int. with Route 2A, Molunkus, Aroostook	No	No	N/A	This building is not a unique or particularly notable example of a type or style of architecture and has lost architectural integrity. Alterations include two side ells, and replacement materials.	Camp/Cottage
20	Mattaseunk Dam, Across the Penobscot River, 230 ft. SW of Medway Road, Mattawamkeag, Penobscot	Yes	No	A: Industry C: Engineering	Property maintains its historic integrity of location, design, setting, feeling and association as an early-twentieth-century dam.	Early-twentieth-century dam
21	Weldon Hydroelectric Station, Across the Penobscot River, 230 ft. SW of Medway Road, Mattawamkeag, Penobscot	Yes	No	A: Industry C: Engineering	The Weldon Hydroelectric Station was constructed by the Great Northern Paper Company to supply power to their mills in Millinocket located to the north. Property maintains its historic integrity of location, design, setting, feeling and association as an early-twentieth-century power generating facility.	Hydroelectric Station

Survey Map No.	Address	NR Individual	NR District	Criteria	Integrity	Property Type/ Notes
22	Canadian Pacific Railroad, Pea Ridge Road crossing, 163 ft. NW of Sargent Brook, Chester, Penobscot	No	No	N/A	The railroad tracks are the only structure associated with the railroad line in the immediate vicinity (Mahoney 2000). There are no other buildings or structures associated with the railroad in Chester or the surrounding area that add to the historic context or integrity of the resource.	Railroad tracks
23	330 Pea Ridge Road, Chester, Penobscot	No	No	N/A	Property lacks historic integrity as a mid-nineteenth-century homestead, replacement materials, additions, and non-historic buildings have undermined the design, setting, materials, workmanship, feeling and association of this property.	Residence

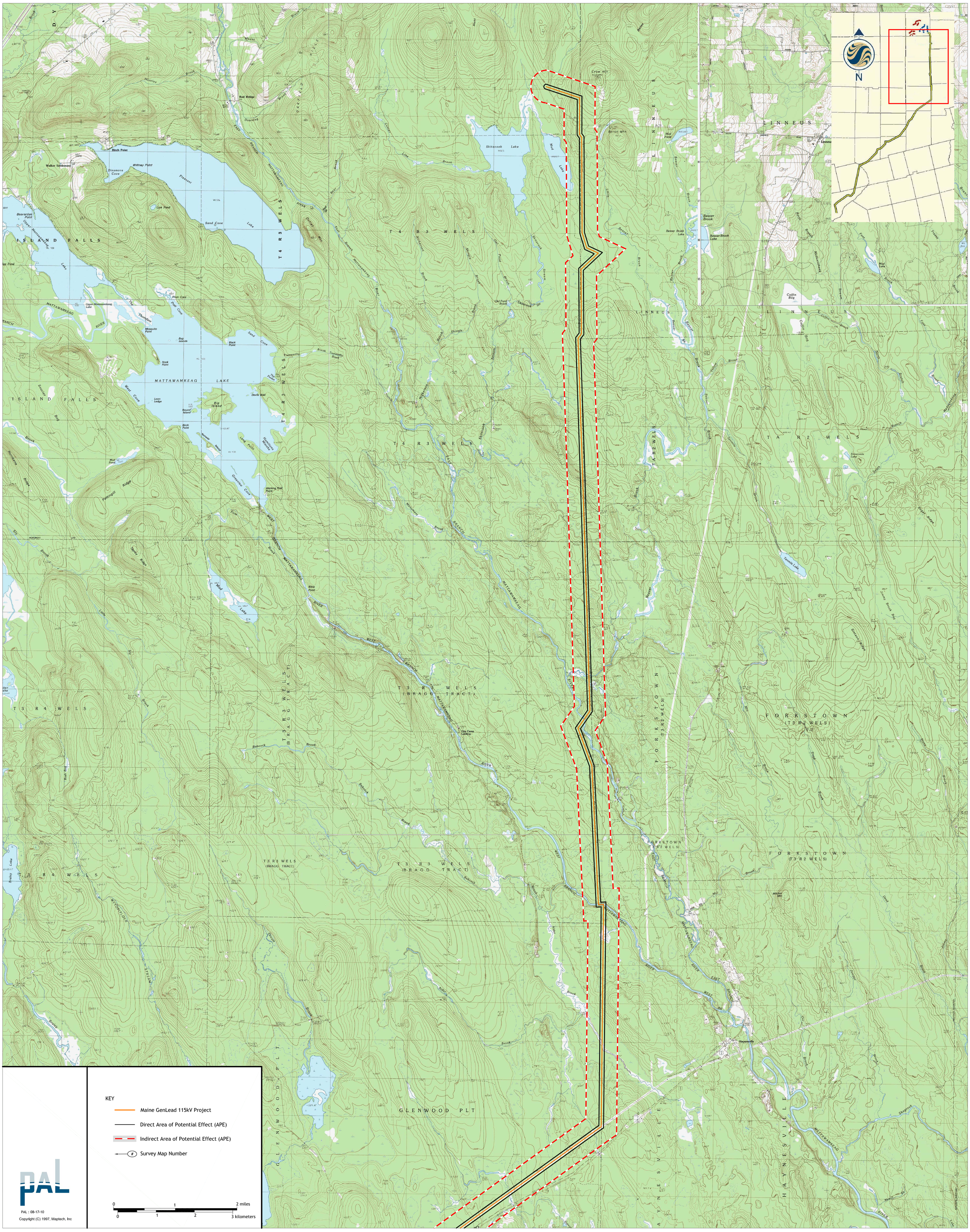

Figure 4a. Maine GenLead 115kV Generator Lead Project Architectural Survey Base Map.

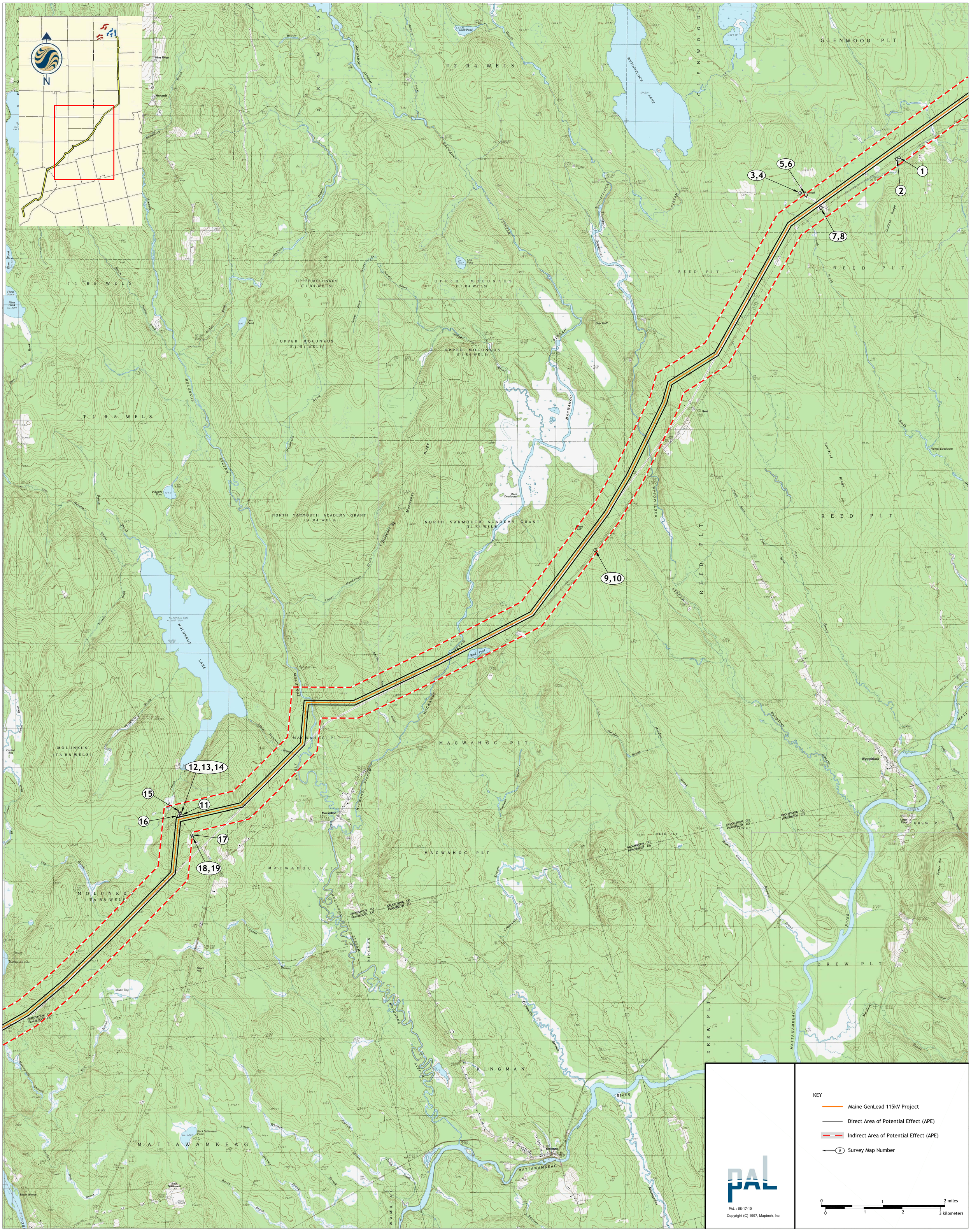

Figure 4b. Maine GenLead 115kV Generator Lead Project Architectural Survey Base Map.

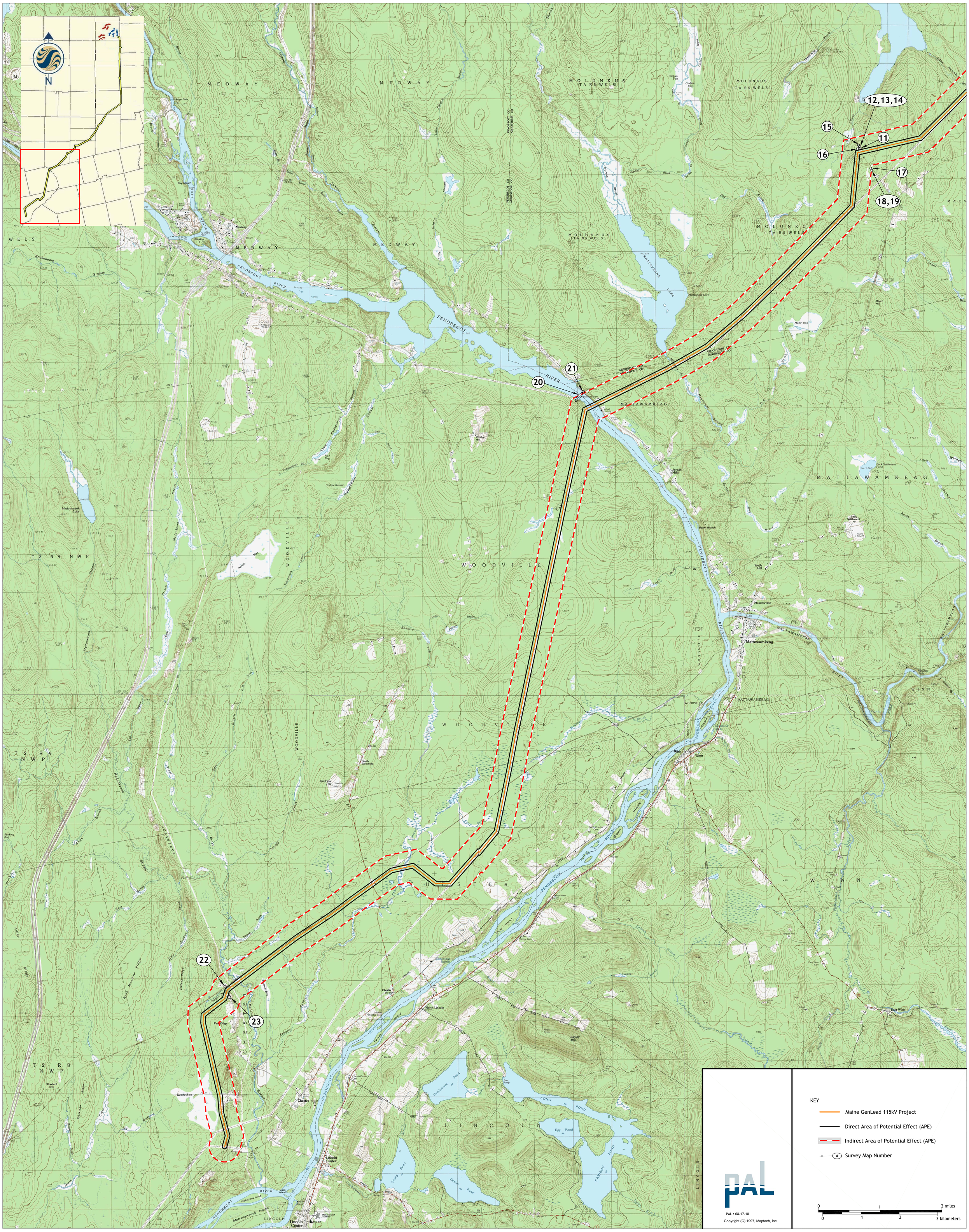

Figure 4c. Maine GenLead 115kV Generator Lead Project Architectural Survey Base Map.

Appendix 8-4

MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

JOHN ELIAS BALDACCI
GOVERNOR

EARLE G. SHETTLEWORTH, JR.
DIRECTOR

November 10, 2010

Brooke E. Barnes
Stantec Consulting
30 Park Drive
Topsham, ME 04086

Project: MHPC #1252-07 – Oakfield Wind Project, Amendment, Historic Architectural Reconnaissance Survey; Maine Genlead 115KV Generator Lead Project, Historic Architectural Reconnaissance Survey and results of prehistoric archaeology survey
Town: Aroostook and Penobscot counties, ME

Dear Mr. Barnes:

In response to your recent request, I have reviewed the additional information received October 12, October 18, and November 10, 2010 to continue consultation on the above referenced undertakings pursuant to Section 106 of the National Historic Preservation Act, as amended, and in accordance with Maine law 35-A MRSA §3452.

Oakfield Wind Project Amendment

Based on the additional information provided to us, the Commission agrees with the conclusion of the architectural survey that the following property is not eligible for listing in the National Register of Historic Places (see Table 3):

- Farmstead, 1807 County Road, Smyrna (Survey Map #s159-159.4)

With regard to the barn at 377 New Limerick Road, Linneus (Survey Map #191.3), we conclude that this building is a representative example of its type, period and method of construction, and retains sufficient integrity to merit listing in the National Register under Criterion C. This is a new finding of eligibility.

Per our telephone discussion on November 10, 2010 with PAL, it is our understanding that the location of the turbines has been modified since we received the Amendment materials discussed above for review. PAL will be revising the map indicating the Area of Potential Effects for this project, their architectural survey report, and their assessment of effects for our review and comment.

Regarding archaeological resources, we will also need to review the new locations to make sure that we have no concerns. Please respond to our Sept. 21, 2010 letter and our concerns about site ME 321-003 (copy enclosed.)

Maine GenLead 115 kV Generator Lead

The Commission concurs with the findings of the Historic Architectural Reconnaissance Survey report that the proposed transmission line will have no adverse effect upon historic properties. We also conclude that given the presence of the existing transmission line in the Canadian Pacific Railway corridor,

and the possibility that historic bridges and culverts also exist in that corridor (the railroad right-of-way itself was not surveyed), that the addition of the new transmission line will have no adverse effect upon such properties.

With regard to archaeological resources, our office has reviewed the October 13, 2010 report "Results of Phase 1 Precontact Archeological Survey of the GenLead LLC Transmission Line, Aroostook and Penobscot Counties, Maine." The report is complete and acceptable as written. There were no sites identified in the report. No further consultation regarding archaeological resources along the transmission line route is necessary unless changes to the route are proposed.

We look forward to continuing consultation with you on this project. If you have any questions regarding our comments, please do not hesitate to contact me.

Sincerely,

Kirk F. Mohney

Kirk F. Mohney
Deputy State Historic Preservation Officer

enc.

cc. Carey Jones, PAL (via fax)

MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

JOHN ELIAS BALDACCI
GOVERNOR

EARLE G. SHETTLEWORTH, JR.
DIRECTOR

September 21, 2010

Brooke Barnes
Stantec Consulting
30 Park Drive
Topsham, ME 04086

Re: Revised Oakfield Wind project, MHPC 1252-07, archaeological comments

Dear Mr. Barnes:

For the *entire 50+ mile powerline*, we accept the results of both the Phase 0 historic archaeological report (Wheeler and Sherman) and the prehistoric archaeology (Phase 0) PreContact Period Archaeological Assessment. No further historic archaeological survey work is required for the entire line. **Phase I archaeological survey work is required at the 26 archaeologially sensitive areas indicated in the PreContact Archaeological Assessment.**

For the *Oakfield Wind Project Amendment* (the wind farm area itself) There are no prehistoric archaeological sites present within the wind farm development area of potential effect.. No further archaeological survey fieldwork necessary for historic archaeology, but site ME 321-003 (L. Sprague farmstead along Old Oakfield Road) must be avoided and protected with fencing (such as snow fence) along South Oakfield Road margin during road reconstruction and use.

Sincerely,

KM

Kirk Mohney
Deputy State Historic Preservation Officer