

**STAGE IA CULTURAL RESOURCES SURVEY  
FINESVILLE DAM  
POHATCONG TOWNSHIP, WARREN COUNTY AND  
HOLLAND TOWNSHIP, HUNTERDON COUNTY  
NEW JERSEY**

**CONTRACT No. AG-2B29-C-09-0002**

**SEPTEMBER 2009**

**RICHARD GRUBB & ASSOCIATES, INC.  
Cultural Resource Consultants**



**Stage IA Cultural Resources Survey  
Finesville Dam  
Pohatcong Township, Warren County and  
Holland Township, Hunterdon County  
New Jersey**

**Contract No. AG-2B29-C-09-0002**

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**Date:** September 11, 2009



## **EXECUTIVE SUMMARY**

Richard Grubb & Associates, Inc. (RGA) of Cranbury, New Jersey performed this Stage IA cultural resources survey within the Area of Potential Effects (APE) for the Finesville Dam project in the Finesville village section of Pohatcong Township, Warren County and the Seigletown village section of Holland Township, Hunterdon County, New Jersey for the United States Department of Agriculture, Natural Resources Conservation Service of Somerset, New Jersey. The APE consists of a 0.55-acre area within and along the banks of the Musconetcong River. Three alternatives are proposed within the APE, including a no action alternative, partial dam removal, and full dam removal. In the latter two, a staging area is proposed along the south side of the river. The APE is located within the Finesville Historic District, which is eligible for listing on the National Register of Historic Places (SHPO Opinion 11/1/2006; COE 10/21/2004). A recent National Register of Historic Places nomination form, which was expanded and renamed the Finesville-Seigletown Historic District, is pending approval by the Historic Preservation Office. The Stage IA cultural resources survey assessed the potential for significant archaeological resources within the APE for the proposed project. The Stage IA survey was performed as a requirement of Section 106 of the National Historic Preservation Act of 1966, as amended, and meets the reporting standards of the New Jersey Historic Preservation Office.

Based on a review of historic documents and a site visit, conducted on August 11, 2009, the southern portion of the APE along the south bank of the Musconetcong has a high potential to contain prehistoric archaeological resources. It also has a high probability of containing remains of a mill race, portions of which are intact southwest of the APE, a nineteenth-century mill building, and traces of the southern edge of an earlier mill dam associated with the c. 1807 Fine Woolen Mill. The northern portion of the APE along the north bank of the Musconetcong River has a high potential to contain prehistoric and historic archaeological resources. The portion of the Musconetcong River within the APE has a high potential to contain remains of the earlier 1807 woolen mill dam and pre-1951 timber cribbing dam east of the current post-1952 dam. These three dams also have the potential to provide information about dam construction and contribute to the eligibility of the Finesville Historic District. Consequently, if proposed project related impacts within the APE cannot be avoided, Richard Grubb & Associates recommends that a Stage IB cultural resources survey be conducted along the north and south banks of the Musconetcong River. Richard Grubb & Associates also recommends that archaeological monitoring be carried out within the portion of the APE in the Musconetcong River during partial breach or full removal of the existing dam to document the post-1952 dam's construction and document remnants of the 1807 woolen mill dam and pre-1951 timber cribbing dam, if present.

Richard Grubb & Associates, Inc. feels that of the two alternatives, the partial dam removal option would have the lesser impact on the Finesville Historic District and meet the needs of the project. The remains of much of the dam would be left in place and the overall feel and setting of the district would be retained. The full removal alternative would eliminate an element that potentially contributes to the district. In addition, full dam removal would have a greater potential to impact abutments, and archaeological resources in adjacent areas. Depending upon the water levels after dam improvements, submerged remnants of earlier wooden dams within the APE could be left exposed which would affect their integrity and preservation.



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## **SECTION 1.0 INTRODUCTION**

The following report presents the results of a Stage IA cultural resources survey conducted for the Finesville Dam project in the Finesville village section of Pohatcong Township, Warren County and the Seigletown village section of Holland Township, Hunterdon County, New Jersey (Figures 1.1-1.3). The survey was performed from July to September 2009 by Richard Grubb & Associates of Cranbury, New Jersey for the United States Department of Agriculture (USDA), Natural Resources Conservation Service of Somerset, New Jersey. The scope of work for the Stage IA survey included a program of background research, a site visit, a probability assessment, and the formulation of management recommendations. At the request of the USDA, the scope of work was confined to a cultural resources reconnaissance-level survey that included no subsurface archaeological testing (ShayMaria Silvestri, email communication, June 5, 2009). This project was completed under Contract No. AG-2B29-C-09-0002, dated July 14, 2009.

The Area of Potential Effects (APE) for the project consisted of a 0.55-acre area within and along the banks of the Musconetcong River at Finesville (see Figure 1.3; ShayMaria Silvestri, email communication, June 5, 2009). The project involves assessing the potential impacts of various alternatives to improving the Finesville Dam, which measures 5.5 feet in height and 109 feet long (Princeton Hydro, LLC 2009). Three alternatives are proposed within the APE. The first is no alteration, the second consists of a partial dam breach, and the third is a complete removal of the dam structure. The alternatives are proposed due to a drowning that has occurred in recent years as a result of the hydrology along the downstream side of the dam and structural deficiencies that have been identified. Another goal of the project is to restore this portion of the Musconetcong River to a free flowing state (Princeton Hydro LLC 2009). A staging area will be located on the river bank on the south side of the dam. No ground disturbance will be conducted along the north bank of the Musconetcong River (Personal Communication, ShayMaria Silvestri, August 11, 2009).

The APE is located within the Finesville Historic District, which is eligible for listing on the National Register of Historic Places (SHPO Opinion 11/1/2006; COE 10/21/2004). A recent National Register of Historic Places nomination form for this district, the boundaries of which were expanded and renamed the Finesville-Seigletown Historic District, is pending approval at the HPO (see Dennis Bertland Associates 2009). In 2009, the United States Department of Agriculture Natural Conservation Service conducted an environmental assessment (USDA 2009). Preparation of the document entailed a public scoping meeting. Interested parties expressed concern that the project would impact the Finesville dam, which some considered to represent a significant aspect the village (USDA 2009).

The Stage IA cultural resources survey assessed the potential for significant archaeological resources within the APE for the proposed project. The Stage IA cultural resources survey satisfies the requirements of the New Jersey Department of Environmental Protection-Historic Preservation Office (HPO) and was performed in accordance with Section 106 of the National Historic Preservation Act of 1966 and 36 CFR Part 800-Protection of Historic Properties (incorporating amendments effective August 5, 2004). This report was also prepared to satisfy the environmental review process under the National Environmental Policy Act (NEPA). All field notes and photographs for this project are on file at the offices of Richard Grubb & Associates in Cranbury, New Jersey. This project was completed by an archaeologist meeting the qualifications of 36 CFR 61 (Appendix A).

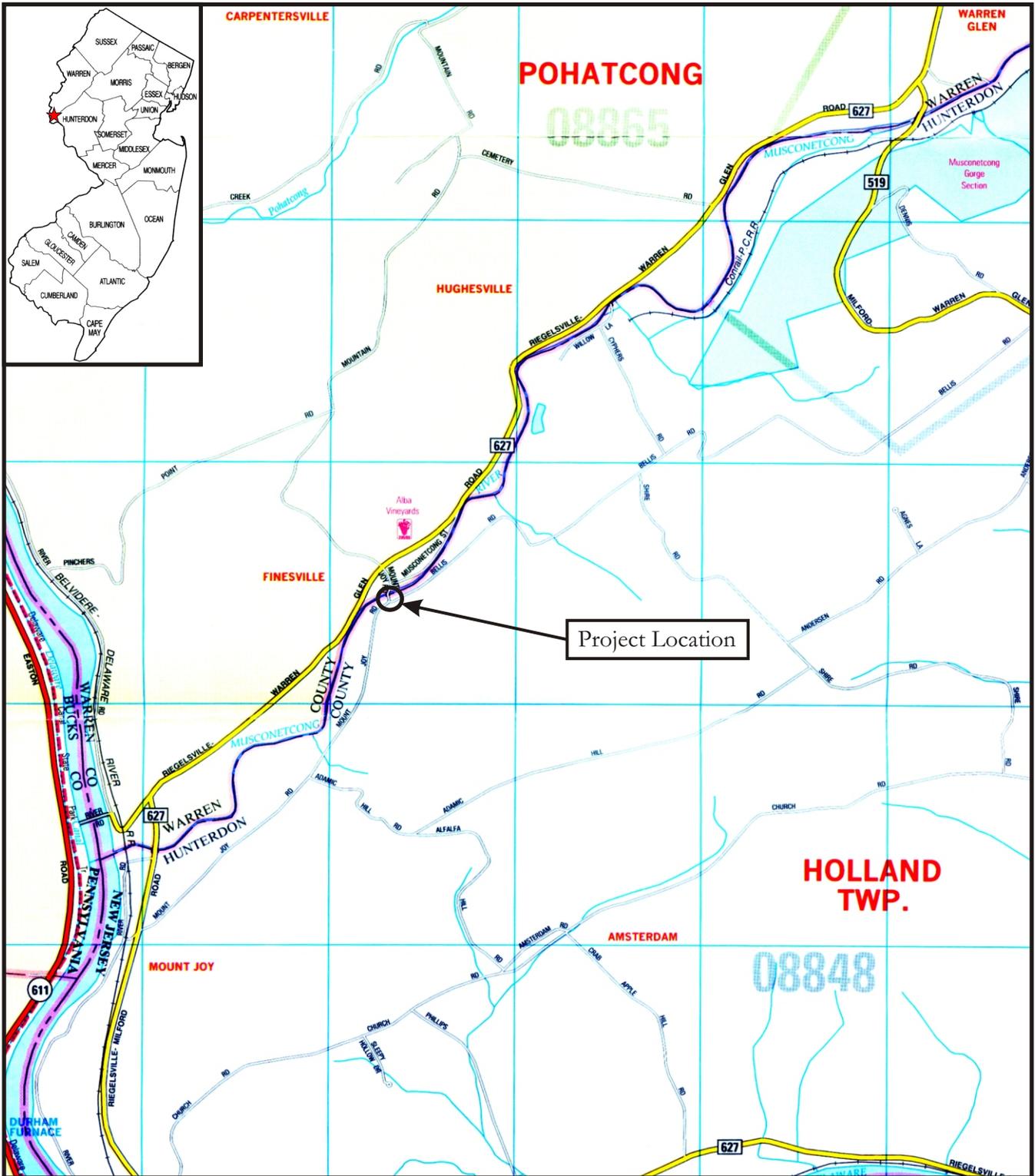
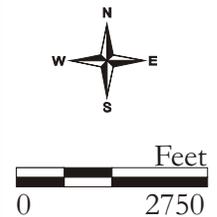


Figure 1.1:

County Map  
 (from 2005 Hagstrom Map Company, Inc.,  
 Street Map of Hunterdon County, New Jersey).



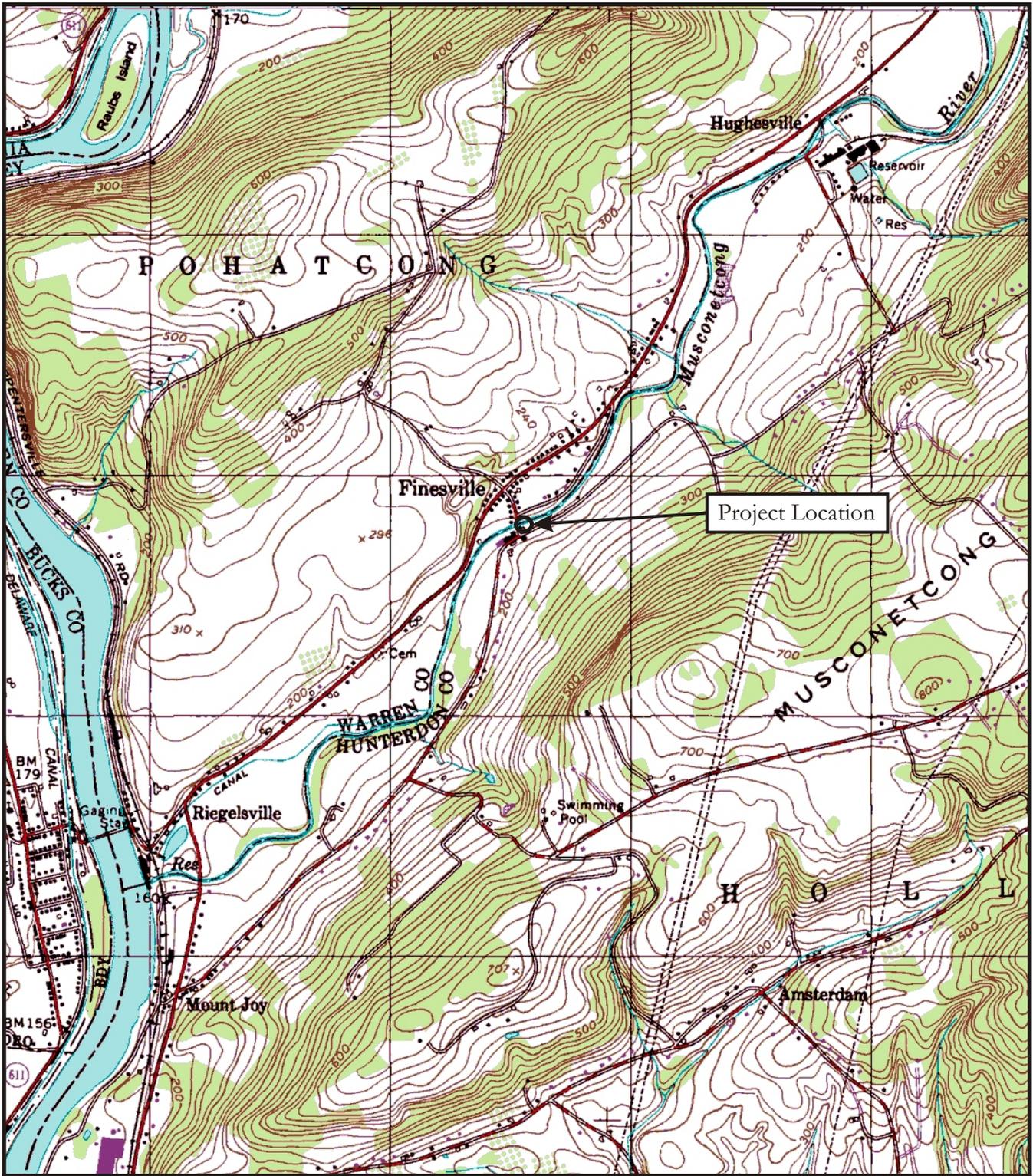
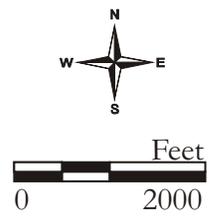


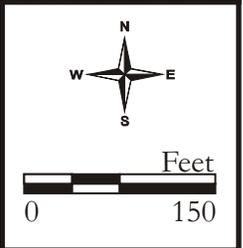
Figure 1.2:

U.S.G.S. Map  
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**Figure 1.3:**  
Aerial Map  
(from U.S.G.S. New Jersey Digital Ortho Quarter Quad  
Aerial Photography, 2002: Tile Number C7D16).





## **SECTION 2.0 DESCRIPTION OF THE AREA OF POTENTIAL EFFECTS**

### **2.1 Area of Potential Effects**

The APE contains 0.55 acres. It is located along the Musconetcong River and is bounded to the south by Bellis Road (see Figures 1.1-1.3). The APE partially extends onto the north side of the Musconetcong River. Mount Joy Road is located roughly 30 feet west of the APE. The majority of the APE is situated within the Musconetcong River. The southern portion of the APE extends onto the bank of the Musconetcong River, and currently consists of a staging area associated with repairs made to the Mount Joy Road Bridge (SI&A#10XX64) (COE 2/11/1999). There, vegetation consists of mature oak and maple trees, and a briar understory. Elevation of the APE ranges from 157 to 161 feet above mean sea level.

### **2.2 Environmental Setting**

The APE is located in the southwestern portion of the New Jersey Highlands Physiographic Province (Figure 2.1). Geologic formations of Precambrian and Cambrian Age predominate in the area of the Highlands in which the APE is located (see Drake et al. 1996). Great thrust sheets have moved Precambrian formations in the Highlands great distances from their original site of formation. Thrust faults have been mapped within the province and along its northern and southern borders (Wolfe 1977:33-34). The APE lies south of the Musconetcong thrust fault, which is located one-third of a mile northwest of the Borough of Hampton. Lithologic boundaries along the faults trend in a northeasterly direction and dip to the southeast. Precambrian rocks are located east of the Musconetcong Fault. These deposits are of igneous and sedimentary derivation and consist of micropertthite alaskite, amphibolite migmatite, pyroxene granite, hornblende granite, and pyroxene gneiss. Geologic formations of Cambrian Age are located west of the Musconetcong Fault outside of the APE. The Hardyston Formation, composed of poorly sorted, angular, arkosic material and orthoquartzite conglomerates, and the Leithsville Formation, composed of coarse-grained dolomite and calcitic dolomite, are located west of the fault line.

The great thickness of metasedimentary rocks in the New Jersey Highlands province is indicative of early erosion and deposition cycles in the Precambrian. The original older metamorphic sequence consisted of interbedded limestone and dolomite (now marble and dark gneiss), shale and sandstone (now quartzofeldspathic gneisses), and dark basaltic lava flows and intrusive igneous sheets. The metasedimentary rocks that were derived from sandstones, shales, limestones, and dolomites are related to ancient seas or a geosynclinal basin similar to the continental shelf deposit off the present-day New Jersey coast, and deeper parts of the continental slope and deep-sea basin

on which a thick wedge of sediments is being deposited. On the basis of modern sedimentary deposition along continental margins, it can be surmised that erosion, mass wasting, and weathering of a low-lying landmass adjacent to the Precambrian geosyncline, furnished the fine-grained sediments that were later lithified and metamorphosed into the metasedimentary rocks of the Highlands. Extensive lava flows in the New Jersey Highlands indicate that volcanic activity occurred during the Precambrian. Large-scale igneous intrusions accompanied this volcanism between 840 and 1,160 million years ago; these intrusive granites, gneisses, and pegmatites comprise a part of the modern Highland lithology (Wolfe 1977:30-31).

Sometime after the beginning of the Cambrian era, North America began to separate slowly from Africa as the Proto-Atlantic Basin opened through sea-floor spreading. As this basin opened, a shallow-shelf sea (miogeosyncline) encroached upon low-lying Precambrian igneous and metamorphic rock terrain. Erosion of adjacent land masses and the accumulation of this material on the shelf zone resulted in the deposition of the Hardyston Formation. These deposits in turn were partially reworked and became part of the better sorted orthoquartzite marine deposits of an advancing sea. The orthoquartzites of the Hardyston Formation represent supratidal, shallow, neritic, continuous shelf deposits. Deposition in intertidal and supratidal environments followed this period of sediment accumulation, resulting in the deposition of the Leithsville Formation.

The Leithsville Formation is a roughly 243-meter-thick (800-foot) deposit of dolomites. Mudcracks, ripple marks, graded beds, and other features common to a shallow-water environment are common throughout this formation (Wolfe 1977:43-46; see also Drake et al. 1996). A portion of the APE is also underlain by Allentown dolomite (Drake et al. 1996). Surficial deposits include Alluvium (Holocene and Late Wisconsinan) and Gneiss-clast-silty-sand colluvium (Late Wisconsinan to Middle Pleistocene) (Stone et al. 2002).

The APE lies several miles south of the terminal moraine that marks the southernmost limit of the Wisconsin ice sheet. Unlike most of the Valley and Ridge Province, which lies north of the moraine, the lower Kittatinny Valley was not scoured by glacial action and covered by till. Nevertheless, the lower valley (including the APE) was affected by the Wisconsin glaciation, mainly as a result of the deposition of glacial outwash. Therefore, as would be expected, most of the soils in this portion of Hunterdon County are derived from this material.

A review of the Hunterdon and Warren County soil surveys indicates that Edneyville gravelly loam soil (EdC2) with 8 to 15 percent slopes, is present in the southern portion of the APE and Hazen gravelly loam (HfA) with 0 to 3 percent slopes (Figure 2.2). Edneyville soils in the APE are eroded, with a thin Ap-horizon surface layer consisting of a dark brown (10YR 4/3) gravelly loam, underlain

by a fifteen-inch thick Bt-horizon of yellowish brown (10YR 5/4) sandy clay loam. The substratum begins at twenty-eight inches below ground surface, and measures fourteen-inches thick before it terminates on bedrock. The substratum consists of a brownish yellow (10YR 6/6) gravelly sandy loam (Jablonski 1988). Hazen soils are present on the north bank of the Musconetcong River and consist of an eight-inch thick dark brown gravelly loam surface layer, followed by a twenty-two-inch thick yellowish brown and dark brown gravelly loam subsoil. The substratum consists of stratified layers of dark brown gravelly sand and very gravelly sand, terminating at a depth of seventy inches below ground surface (Fletcher 1979).

The topography of the Highlands is one of considerable relief (Wacker 1968). The Pequannock, Wanaque, Rockaway and Musconetcong Rivers, and the South and North Branches of the Raritan River, as well as many smaller tributaries, have carved deep valleys in the basins between the ranges. The APE is located in the Central Highlands in the Musconetcong Valley.

The most common type of forest in the Highlands of northern New Jersey is the Mixed Oak. Within the APE, the Mixed Oak forest is found on gneissic slopes and hilltops. Trees found in the upland Mixed Oak forest of North Jersey include the red oak, white oak, and black oak, with the chestnut oak and scarlet oak also represented. Other large trees that may be present include several types of hickories, red maple, sugar maple, white ash, tulip tree (yellow poplar), beech, black cherry, sweet birch, black gum, and elm. Growing below the tops of the larger trees, an understory of dogwood, hop hornbeam, sassafras, and ironwood trees can be found. Throughout most of the North Jersey uplands, the dogwood is the most abundant understory tree. Below the two tree layers, the Mixed Oak forest usually has a lower shrub layer. In this layer the maple-leaved viburnum may be most abundant, but other common shrubs include the black haw and arrowwood; heath shrubs, including several species of blueberries, huckleberry, and pinxter flower, may grow in areas of very acidic soils. Poison ivy, Virginia creeper, Japanese honeysuckle, and wild grape are common vines of this type of forest (Robichaud and Buell 1973:175-76).

The Hemlock-Mixed Hardwoods forest can also be found on gneissic slopes of the Highlands, typically occurring on cooler and moister sites located in ravines or on the steep lower, north-facing slopes leading to ravines and valleys. In this type of forest, more than half the trees are evergreen hemlock. Other trees more typical of northern regions, such as sweet birch, yellow birch, sugar maple, and basswood, are also present in this forest type. Also common in the hemlock forest are the beech, red oak, white ash, and red maple. Extremely acidic soil conditions preclude the formation of dense undergrowth in hemlock forests (Robichaud and Buell 1973:180-81).

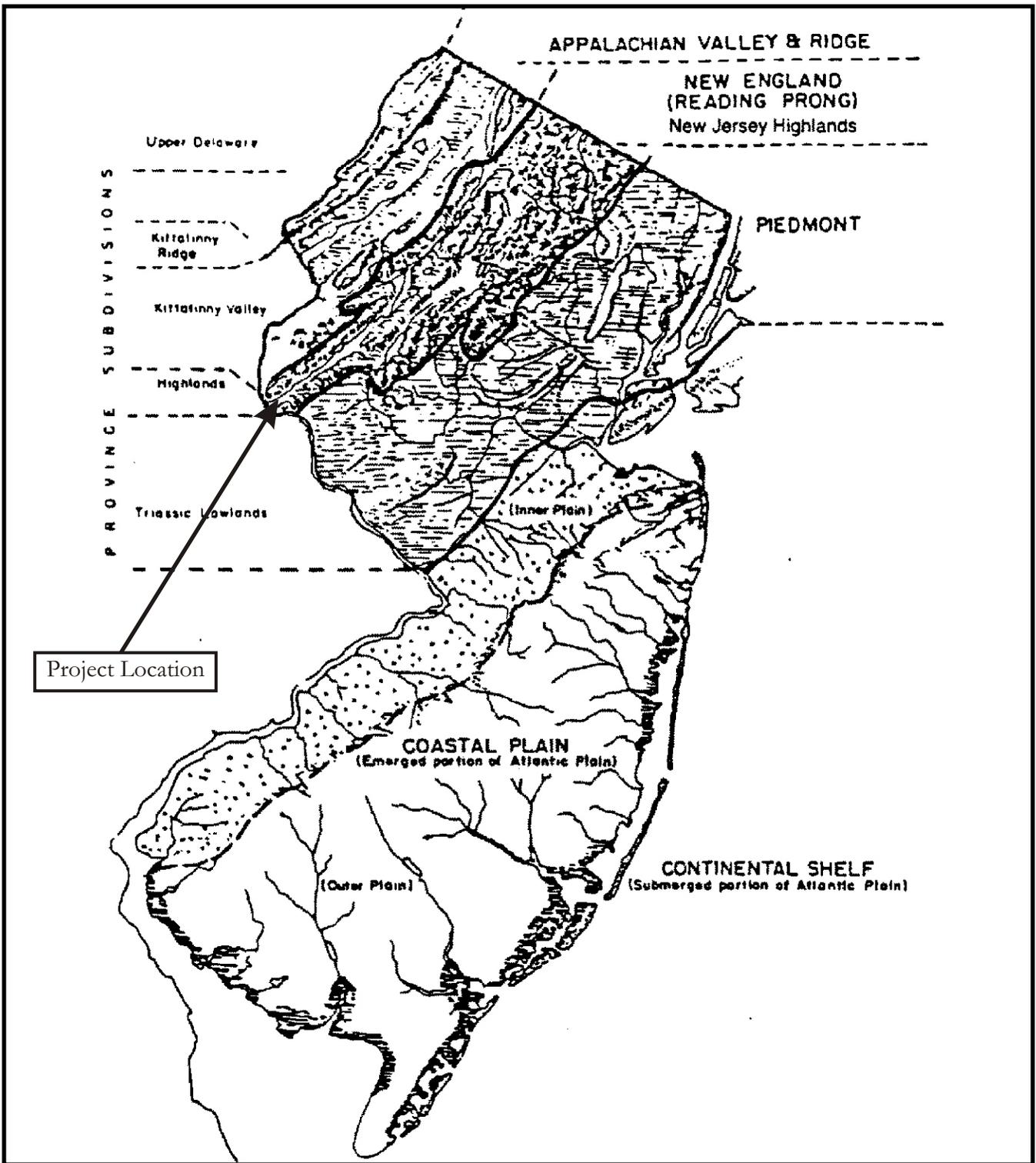


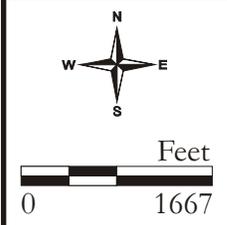
Figure 2.1:  
 Physiographic Provinces Map  
 (from Wolfe 1977).





**Figure 2.2:**

Soils Map  
 (from 1988 C.F. Jablonski, *Soil Survey of Huntedon County, New Jersey*,  
 Sheet Number 19 and 1979 Sylvester J. Fletcher,  
*Soil Survey of Warren County, New Jersey*, Sheet Number 48).





## **SECTION 3.0 RESEARCH GOALS AND DESIGN**

The primary goal of this Stage IA cultural resources survey was to assess the probability for significant cultural resources in the APE and the potential impacts on known historic properties. The research design includes preliminary background research and visual inspection of existing conditions within the APE. Background research was conducted prior to the field investigation to determine whether any cultural resources have been documented within the APE and to assess the area's potential to contain undocumented significant prehistoric or historic cultural resources. In the event that there is a high probability for significant archaeological deposits, a field testing strategy is devised to locate such deposits and further work (Stage IB or archaeological monitoring) is recommended.

Determinations of significance or potential significance are based on the National Register of Historic Places criteria of historic and/or archaeological significance.

### **3.1 National Register of Historic Places Criteria**

Potentially significant historic properties include districts, structures, objects, or sites which are at least 50 years old and which meet at least one National Register criterion. Criteria used in the evaluation process are specified in the Code of Federal Regulations, Title 36, Part 60, National Register of Historic Places (36 CFR 60.4). To be eligible for inclusion in the National Register of Historic Places, a historic property(s) must possess:

the quality of significance in American History, architecture, archaeology, engineering, and culture [that] is 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 lack individual distinction, or
- (d) that have yielded, or may be likely to yield, information important in prehistory or history (36 CFR 60.4).

There are several criteria considerations. Ordinarily, cemeteries, birthplaces, or graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance within the past 50 years shall not be considered eligible for the National Register of Historic Places. However, such properties will qualify if they are integral parts of districts that do meet the criteria or if they fall within the following categories:

- (a) a religious property deriving primary significance from architectural or artistic distinction or historical importance, or
- (b) a building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event, or
- (c) a birthplace or grave of a historical figure of outstanding importance if there is no other appropriate site or building directly associated with his/her productive life, or
- (d) a cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events, or
- (e) a reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived, or
- (f) a property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own historic significance, or
- (g) a property achieving significance within the past 50 years if it is of exceptional importance. (36 CFR 60.4)

The physical characteristics and historic significance of the overall property are examined when conducting National Register evaluations. While a property in its entirety may be considered eligible based on Criteria A, B, C, and/or D, specific data is also required for individual components therein based on date, function, history, and physical characteristics, and other information. Resources that do not relate in a significant way to the overall property may contribute if they independently meet the National Register criteria.

A contributing building, site, structure, or object adds to the historic architectural qualities, historic associations, or archeological values for which a property is significant because a) it was present during the period of significance, and possesses historic integrity reflecting its character at that time

or is capable of yielding important information about the period, or b) it independently meets the National Register criteria. A non-contributing building, site, structure, or object does not add to the historic architectural qualities, historic associations, or archeological values for which a property is significant because a) it was not present during the period of significance, b) due to alterations, disturbances, additions, or other changes, it no longer possesses historic integrity reflecting its character at that time or is incapable of yielding important information about the period, or c) it does not independently meet the National Register criteria.



## **SECTION 4.0 BACKGROUND RESEARCH**

The Stage IA cultural resources survey included a literature and map search to provide a context for the evaluation of potentially significant prehistoric and historic archaeological resources in the APE and vicinity. Background research was conducted at the HPO in Trenton, the New Jersey State Library and Museum in Trenton, and the Alexander Library at Rutgers University in New Brunswick. Original research was conducted by Richard Grubb & Associates staff to obtain data presented in this section. Further, background information compiled for the Finesville/Seigletown Historic District National Register of Historic Places Nomination form prepared by Dennis Bertland Associates (2009) was utilized.

A search of the archaeological site files at the New Jersey State Museum indicated that there are no registered prehistoric or historic sites in the APE. However, six archaeological sites lie within a one-mile radius of the APE (Table 4.1). The moderate frequency and proximity of prehistoric sites near the APE reflects extensive use by Native Americans of the terraces and upland areas along the Musconetcong River. The Finesville sites (28-Wa-427; 28-Wa-428) are located approximately 3,200 feet north of the APE. The Riegelsville site (28-Wa-429) is situated 3,000 feet southwest of the APE along a broad terrace overlooking the Musconetcong River. Both the Clifford's Island to Mt. Joy sites (28-Wa-356; 28-Wa-357) were found on upland terraces near the bank of the Delaware River. No further information is available in the NJSM site files. The Hughesville Mill site (28-Hu-355) is located just over one mile northeast of the APE and consisted of a prehistoric lithic scatter and a cluster of eighteenth through twentieth-century domestic artifacts identified during a Phase IB archaeological survey (Richard Grubb & Associates, Inc. 2007a).

**Table 4.1:** Registered archaeological sites in the vicinity of the APE.

Site #	Site Type	Location	Period	Reference
28-Hu-355 Hughesville Mill	Domestic/Campsite	West side of Musconetcong River	18 <sup>th</sup> -20 <sup>th</sup> century/ Prehistoric	Richard Grubb & Associates, Inc. 2007a
28-Wa-427 Finesville	N/A	West side of the Musconetcong River	Prehistoric	NJSM; Schrabisch 1917: 77
28-Wa-428 Finesville	N/A	West side of the Musconetcong River	Prehistoric	NJSM; Schrabisch 1917: 77
28-Wa-429 Riegelsville	N/A	West side of the Musconetcong River	Prehistoric	NJSM; Schrabisch 1917:77
28-Wa-356 Clifford's Island to Mt. Joy	N/A	East side of the Delaware River	Prehistoric	NJSM; Schrabisch 1917:73
28-Wa-357	N/A	East side of the Delaware River	Prehistoric	NJSM; Schrabisch 1917:73

NJSM--New Jersey State Museum

A review of early archaeological surveys was undertaken in order to collect additional information about prehistoric sites in Hunterdon and Warren Counties. Of the 49 prehistoric archaeological

sites identified during Schrabish's (1917) survey, all but seven were clustered along the Delaware River. The remaining sites were located at the base or along the slope of the Pohatcong and Musconetcong Mountains. Schrabisch described these sites as "camping grounds" or "workshops" with no evidence of permanent habitation sites (Schrabisch 1917:26). The nearby Warren Paper Mill site was described by Schrabisch as "a camp site...on the floodplain on the west side of the river" (Skinner and Schrabisch 1913:65). During a recent Stage IB archaeological survey, Richard Grubb & Associates (2007b) identified prehistoric and historic archaeological resources (28-Wa-647) on the Warren Glen Mill property. Schrabisch (1917:65) also mentions another camp site about one-mile east, a prehistoric burial ground one-mile to the south, and petroglyphs in the vicinity of all three sites.

The Indian Sites Survey, conducted between 1936 and 1940, was designed to locate and investigate prehistoric sites in various regions of New Jersey. Of the Hunterdon and Warren County sites reported during the survey of the Delaware River drainage, none were located in the immediate vicinity of the APE (Cross 1941). Site excavation occurred on several sites in each county, totaling 14 in Hunterdon County and 13 in Warren County. These sites were generally small to large encampments yielding a wide variety of chipped and groundstone tools and pottery on elevated locations adjacent to major tributaries of the Delaware, in rock shelters, or near the base of area mountains (Cross 1941). No Indian Site Survey sites were identified in proximity to the APE.

Two cultural resources surveys have been previously conducted within a one mile radius of the APE. Conducted by Richard Grubb & Associates, Inc. (2006, 2007a), both were associated with the Hughesville Mill project. The first was a Stage IA cultural resources survey, which recommended the project site to have a high potential to contain significant prehistoric and historic archaeological resources. The second consisted of a Stage IB archaeological survey. During this survey a discrete concentration of potentially significant prehistoric artifacts and eighteenth through twentieth-century domestic artifacts were identified. The site was designated at the Hughesville Mill site and given the Smithsonian designation 28-Hu-355. A Phase II archaeological survey was recommended to evaluate the significance of the site.

A review of files at the HPO indicated the APE is situated within the Finesville Historic District (COE 10/21/2004; SHPO Opinion 9/22/2006), which is eligible for inclusion on the New Jersey and National Registers of Historic Places (see Figure 4.1). The district was considered eligible for the National Register under Criterion A for its association with the late-eighteenth and early-nineteenth-century settlement and development of Warren County and under Criterion C for its structures, which individually and collectively embody the distinctive characteristics of a type, period, and method of construction. (MAAR Associates, Inc. 1991). A National Register of Historic Places nomination form, prepared by Dennis Bertland Associates (2009) extended the boundaries of and

renamed the district as the Finesville-Seigletown Historic District. The nomination is pending. The revised form states that the period of significance ranges from 1756 to 1930, its areas of significance include exploration, settlement, architecture, industry, and engineering. The revised nomination includes the existing dam within the APE, and the abutting late nineteenth-century Mount Joy Road Bridge, nineteenth-century mill race related to the Taylor Stiles and Company, and an early twentieth-century frame outbuilding, all of which are proposed as contributing elements to the district.

The Mount Joy Road Bridge (SI&A#10XX64) (COE 2/11/1999), a single-span eight-panel pin-connected Pratt thru truss bridge with stone abutments located immediately west of the APE, is eligible for inclusion on the New Jersey and National Registers of Historic Places as a good example of a GM Rusling bridge. The Chelsea Forge Tavern (COE 10/21/2004), located roughly 50 feet south of the APE, was considered to represent a key contributing element to the Finesville Historic District and is individually eligible for listing on the New Jersey and National Registers of Historic Places under Criterion A for its association with the Chelsea Forge and the early settlement of the village of Finesville. The Seigle Homestead (SR 1/10/1977; NR-11/7/1977), located 2,400 feet north of the APE, is listed on the State and National Registers of Historic Places under Criterion C as being the only surviving example of an eighteenth-century log dwelling in Warren County, and also for its association with the early settlement of the Finesville village, originally known as Seigletown. The Rieglesville Company Town Historic District (SHPO Opinion 4/22/1998), which bounds the Musconetcong River 1,800 feet southwest of the APE is eligible for the National Register of Historic Places under Criteria A and C and has a high potential for Criterion D as a mill town associated with saw and grist milling, and paper and rope production. The period of significance ranges from the 1770s to the 1980s (Dennis Bertland Associates 2009). The George Hunt House (SR 7/5/1979; NR 9/12/1979) is located within the abovementioned district and is situated 4,200 feet southwest of the APE. The house, built by George Hunt, is significant for its association with the early development of the Delaware Valley and the mill town known as Rieglesville. Its period of significance ranges from 1800 to 1899 and it is significant for its architecture.

#### **4.1 Prehistoric Period**

Due largely to the effects of time and changes in the natural environment, prehistoric period archaeological resources are highly ephemeral, and often difficult to locate. In order to organize information from the archaeological record about the pre-European occupants of the New World, archaeologists have devised a three-stage framework. This culture history is constantly changing and undergoing re-organization whenever new evidence is unearthed. The culture history of the pre-Contact Period Native inhabitants in New Jersey is divided into three broad time periods: Paleo-

Indian 10,000-6000 B.C., Archaic 6000-1000 B.C., and Woodland 1000 B.C.-A.D. 1600 (Chesler 1982). Much synthesis of these periods has been undertaken and need not be repeated here. Basic information for each time period is provided in Table 4.2. Further details on New Jersey prehistory can be accessed in the following sources: Chesler (1982), Grossman-Bailey (2001), Kraft (1986, 2001) and Mounier (2003).

**Table 4.2:** Northern New Jersey prehistory.

Time Frame	Period	Characteristics
A.D. 1550/1600 to A.D. 1750	Contact	-European contact and initial colonization -Continuity of aspects of Algonkian ideology
A.D. 900 to A.D. 1600	Late Woodland	-triangular projectile points- bow and arrow -unfortified hamlets, camps, smaller territories -territories of the proto-Lenape/Unami, Algonkian ideology -foraging, limited agriculture in portions of southern NJ -cord-decorated and incised ceramics -use of cobble cherts and jasper -Climate: modern- Sea level rise remains a factor
A.D. 0 to A.D. 900	Middle Woodland	-hunter-gatherers, seasonal fission/fusion of social groups -large and small camps -more kinds of ceramics -mortuary ceremonialism -large scale exploitation of seasonal resources
1000 B.C. to A.D. 0	Early Woodland	-band level society with first evidence of community identity -mortuary ceremonialism -extensive trade networks for exotic raw materials -shellfish exploitation -experimentation and early use of ceramics -Climate: cool and wet
1000 B.C. to 3000 B.C.	Late Archaic	-broadspear, narrow-stemmed, fishtail points - mortuary ceremonialism -extensive trade networks for exotic raw materials -intensive use of local materials -social differentiation -increased sedentism -change in vessel technology- soapstone bowls -Climate: warmer & dryer than present, sea level rise slows
3000 B.C. to 6500 B.C.	Middle Archaic	-bifurcate points, stemmed points -hunter-gatherers with increasing intensification of resource use -use of shell fish documented in the region -use of more varied lithic materials and tool categories -large and small camps, stratified riverine settlement system -band level society -Climate: warm and wet
6500 B.C. to 8000 B.C.	Early Archaic	-corner-notched and stemmed point types -spear- thrower technology -use of more types of stone for tools -exploitation of more kinds of food resources? -very similar to Paleo-Indian Period -Climate: cold and drier than present, rapid sea level rise
8000 B.C. to 9500 B.C.	Paleo-Indian	-highly mobile -large game hunting followed by generalized foraging patterns -fluted projectile points usually made of jasper or chert -band level society -Climate: cold and wet, mosaic of mixed grasslands, extremely rapid sea level rise

## 4.2 Historic Period

The following narrative draws upon the recently completed historical study by Dennis Bertland and Janice Armstrong for the nomination of the Finesville-Seigletown Historic District to the National Register of Historic Places. During this study, Bertland and Armstrong conducted extensive research using both primary and secondary resources and developed a detailed land use history of the Finesville area (Dennis Bertland Associates 2009).

The first European settlement within the vicinity of the APE occurred during the mid-eighteenth century with the establishment of an iron forge by the Morris family. By 1763, the property, situated on the north bank of the Musconetcong River, also contained a sawmill and a dwelling house. The exact location of these improvements has not been determined with certainty but early land records suggest the mill dam, used to generate waterpower to operate the mill and forge, was located approximately 300 feet upstream from the present Finesville Dam or approximately 150 feet to the northeast of the APE (Figure 4.2) (Dennis Bertland Associates 2009:8:5). Generally mills are sited within a short distance downstream from a mill dam.

During the early 1770s, the forge was being leased by Moses Yamans, Christian Butts and William Butts and by 1780, a small community had been established around what was known as Chelsea Forge. In addition to the sawmill, it contained three dwelling houses (one which functioned as a tavern), a blacksmith shop, a store, and a number of workers housing (Dennis Bertland Associates 2009:8:4-7). George Ross owned the forge from 1781 to 1785 during which period he leased the place to various tenants (Dennis Bertland Associates 2009:8:7). John Anderson appears to have been the last to manage the forge which operated until at least the late 1780s. It is believed to have ceased operating around 1793 at which time the property containing the forge was divided by court order (Dennis Bertland Associates 2009:8:4-8).

In 1796, a portion of the former forge property located in the vicinity of the APE was acquired by Philip Fine. By the late 1790s, Fine had also purchased a large tract of land located on the opposite side of the river. Fine came to Hunterdon County around 1767 and by the turn of the century had erected a saw and gristmill on the south bank of the Musconetcong River. The mill is purported to have been located on the southwest side of present-day Mt. Joy Road near its intersection with Bellis Road (Dennis Bertland Associates 2009:8:11). It is speculated that as part of his improvements Fine erected a new dam located in the vicinity of the present Finesville Dam. In 1803, he conveyed the gristmill property to his son, Philip Fine, Jr. (Dennis Bertland Associates 2009:8:12). Four years later, Philip, Jr. purchased a one-acre tract of land on the opposite side of the river near the southeast corner of the present intersection of Mt. Joy Road and Musconetcong Street. On this property he constructed a woolen mill (Dennis Bertland Associates 2009:8:18).

By the early 1830s, a small mill-based community had developed around Fine's Mills known as Finesville. In 1834, Finesville was described as a small village containing a gristmill, sawmill, oil mill, a woolen manufactory, a tavern, a store, and between 15 and 20 dwellings (Dennis Bertland Associates 2009:8:15). By this time, Philip Fine, Jr., had conveyed his mill properties to his three sons, Philip, III, Christopher, and Henry M. Fine. The three formed a partnership under which the mills operated for the next 15 years (Dennis Bertland Associates 2009:8:15).

In 1845, both Philip, III and Christopher Fine passed away and in 1849, the mill properties were acquired by Philip's sons, John S., Isaac C., and Jacob Y. Fine. Isaac C. assumed the operation of the woolen factory, which at the time was known as the "Finesville Satinett Factory." He gained full title to the place in 1851 (Dennis Bertland Associates 2009:8:17-18). The mills are depicted on both the Cornell map of 1851 and McCarty map of 1852 (Figures 4.3 and 4.4). The map of 1851 also shows a building at the northeast corner of Mt. Joy Road and Bellis Road within the vicinity of the APE (see Figure 4.2).

In 1855, Isaac C. Fine experienced financial difficulties and was forced to sell the woolen mill property to cover debts he owed. In that year, the mill was acquired by Alexander Wilson, who owned it until 1871 (Dennis Bertland Associates 2009:8:18). The Map of Finesville in 1860 (Figure 4.5) suggests that by this time, Wilson had formed a business relationship with A. Fine and Thomas Moore.

By 1860, the Fine's gristmill property had also ceased to be owned by the family. Around this time the mill was damaged by a fire. Afterward, the property was acquired by John L. Riegel and Amos Davis, who rebuilt the mill as a paper mill in 1862. The new venture, which operated under the name of Amos Davis & Company, was short lived. Four years later, the mill was closed and all of the machinery was moved to a new paper mill in Riegelsville (Dennis Bertland Associates 2009: 7:3-4, 8:18-19). In 1871, the firm of Taylor, Stiles and Company acquired the former paper mill and outfitted the place for their cutlery manufacturing business. By the early 1870s, the company also gained ownership the former woolen mill (Figures 4.6-4.8).

The Beers Map of Finesville in 1874 (see Figure 4.8) is the first map to show details concerning the configuration of the hydro-power system utilized by the Finesville Mills. The map shows that at this time the mill dam was located upstream from the bridge and in line with the eastern elevation of the woolen mill placing it a short distance above the existing Finesville Dam. The headrace for the Cutlery Factory began at the southern end of the dam and traveled along the south bank of the river crossing beneath Mt. Joy Road before it entered the far northern section of the mill where a waterwheel or turbine is likely to have been located. Exiting the building, the tailrace extended along the north side of the mill before emptying back into the river a short distance downstream from the

mill. The map does not show details of the raceway system for the former woolen factory suggesting that the building was no longer being used as a mill. No buildings are shown within the APE. In addition, the building depicted on the 1851 map (see Figure 4.3) at the northeast corner of Mt. Joy Road and Bellis Road, just southeast of the APE, is also not depicted.

Taylor, Stiles and Company continued to manufacture cutlery into at least the early 1890s. In 1894, the firm was making machine knives. Sometime during the early twentieth century, the company refitted the cutlery works for the production of paper mill machinery. The company continued to be headquartered in Finesville until 1970. During this period additional improvements were undertaken to the building as their product line changed overtime. The building itself appears to have been remodeled around 1940.

The present one-story frame building located at the northeast corner of Mt. Joy Road and Bellis Road and to the southwest of the APE was constructed during the early twentieth century and may have functioned as a gate house (Dennis Bertland Associates 2009:7:12; LaFevre 2009: Personal Communication) (Appendix B). Access to the gate that controlled the water entering the headrace is gained from the rear or eastern section of the building. The headrace runs below the building.

During the early twentieth century the former woolen mill building was utilized in connection with a blacksmith and wheelwright shop operated by Robert Butler and Jacob Seyler and possibly a tinsmith operated by Charles Gano. By 1910, these shops were closed and in 1919, the building was acquired by a fraternal organization, the Order of the Red Men. The former mill building (present 182 Mt. Joy Road) was later converted to a residence (Dennis Bertland Associates 2009:7:15, 8:20).

In 1951, the Finesville dam, which was situated immediately east of the existing dam, failed in a flood event (Princeton Hydro, LLC 2009) (see Figure 4.2). The construction date for the pre-1951 dam is unclear. However, based on cartographic data, it does not appear to be the woolen dam depicted on the 1874 map of Finesville, which was situated roughly 50 feet upstream and east of the existing dam. It is possible that at some point between 1874 and the first or second quarter of the twentieth century that the woolen mill dam failed and a new dam was constructed downstream. In fact, construction of the dam may have coincided with the construction of the ca. 1890 Pratt thru truss bridge which carries Mount Joy Road over the Musconetcong River just west of the APE.

Immediately following the failure of the pre-1951 dam, a new dam was reconstructed between August 10, 1951 and October 15, 1952. This new dam used part of the pre-1951 dam as a form. This dam exists today and is situated within the APE. Records indicate that the previous dam was constructed of wooden cribbing and a rubble masonry wall (Appendix C). The wooden cribbing consisted of long, horizontal timbers, spaced ten to fifteen feet apart, and oriented with the flow of

water. These were placed on a rock rubble surface. Additional rock rubble was placed on these timbers, which were capped with logs positioned horizontally along the dam's long axis on its upstream side. During construction of the new dam, portions of downstream side of the previous dam were removed. A trench along the downstream side of the dam was excavated to bedrock, which served as a base for a cyclopean poured concrete footing for the cut-off wall under the toe of the new dam. The remaining section of the previous dam was used as form for the new poured concrete dam (Princeton Hydro, LLC 2009:3).

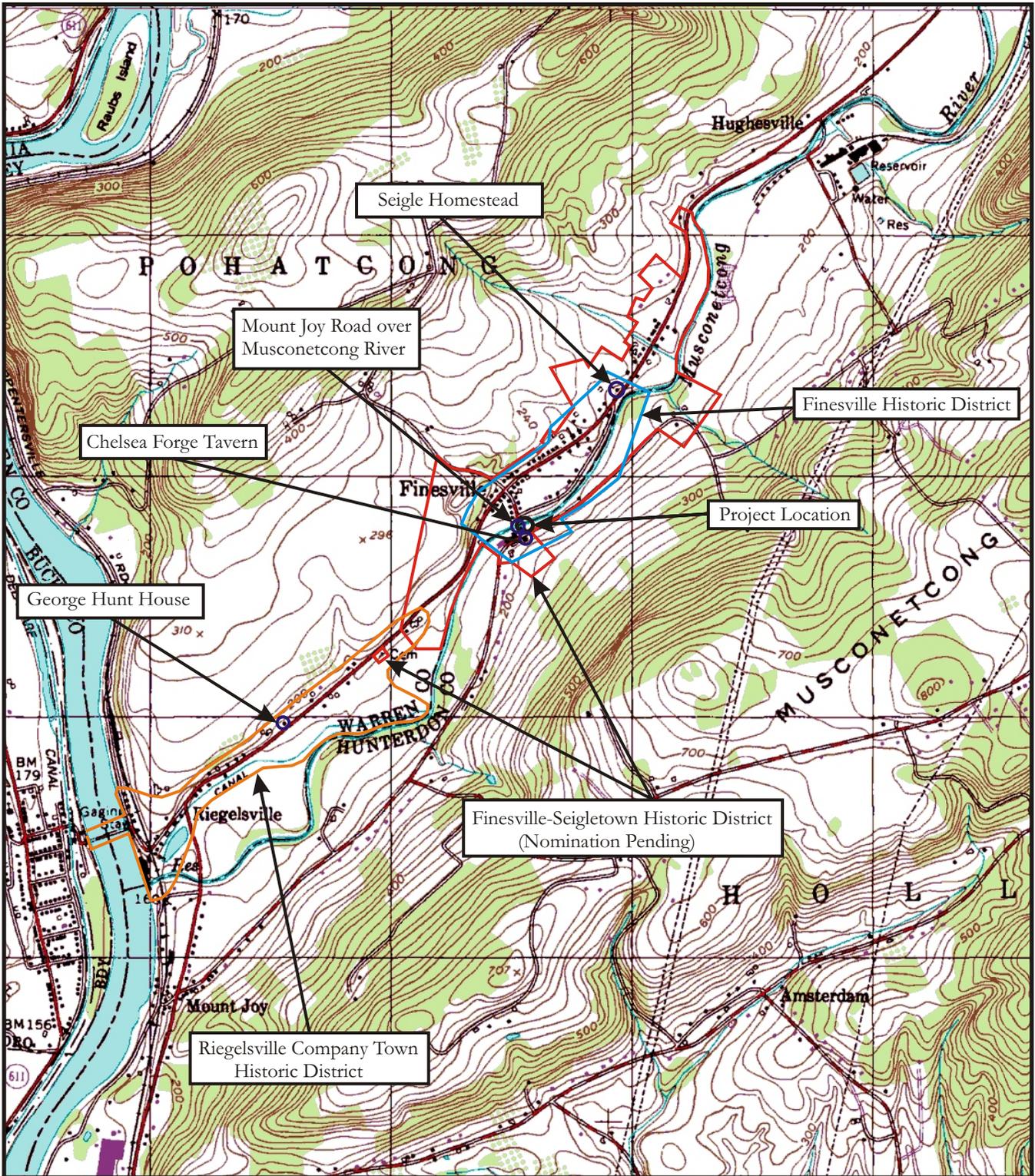
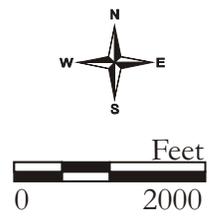


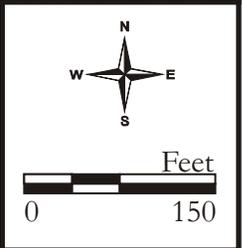
Figure 4.1:

Historic properties within one mile of the project location  
 (from 1997 U.S.G.S. 7.5' Quadrangle: Riegelsville, PA-NJ).





**Figure 4.2:**  
 Historic mill dams and mill related buildings  
 (from U.S.G.S. New Jersey Digital Ortho Quarter Quad Aerial  
 Photography, 2002: Tile Number C7D16).



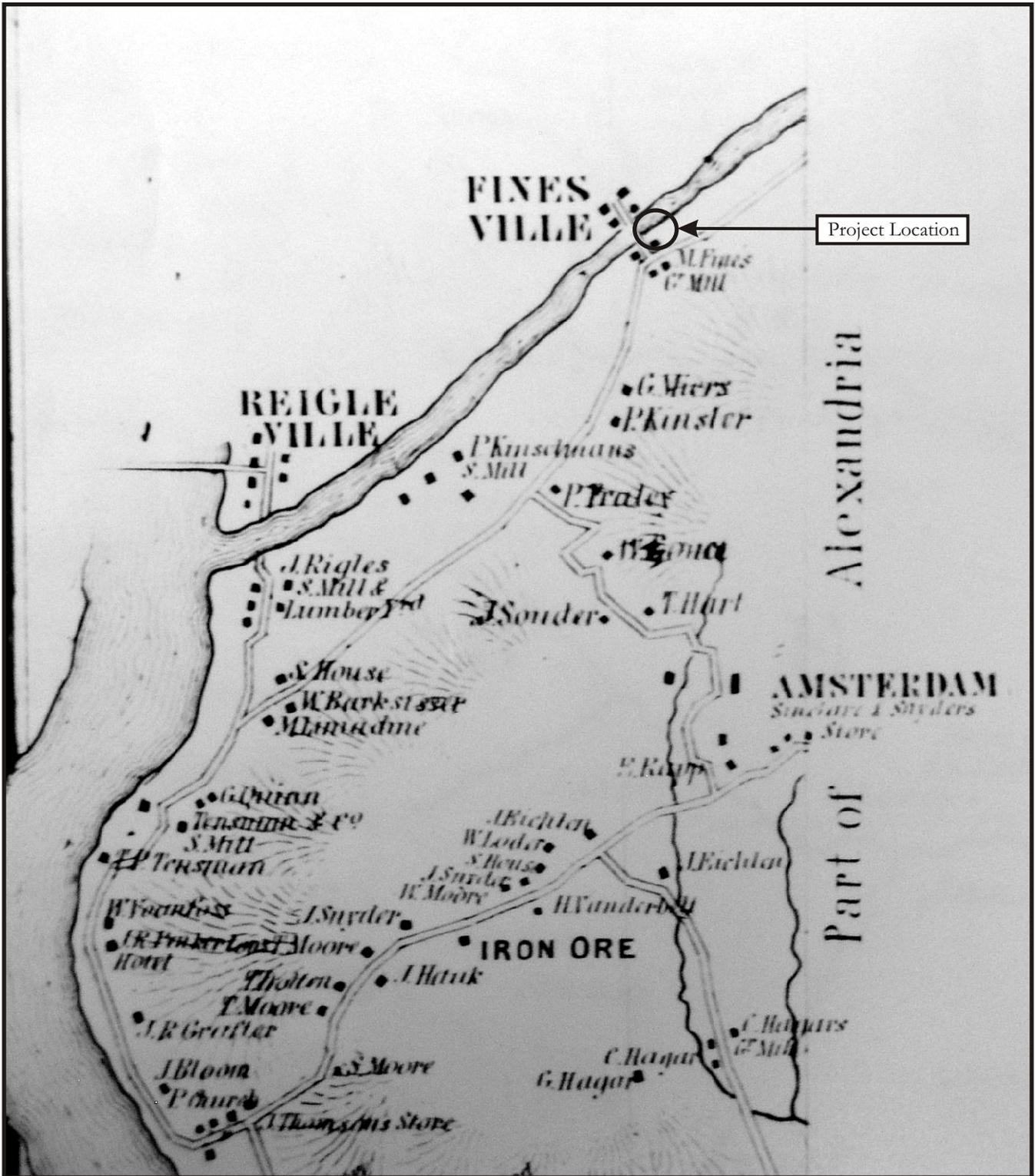
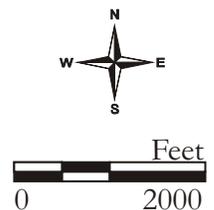


Figure 4.3:

1851 Samuel C. Cornell, Map of Hunterdon County, New Jersey.



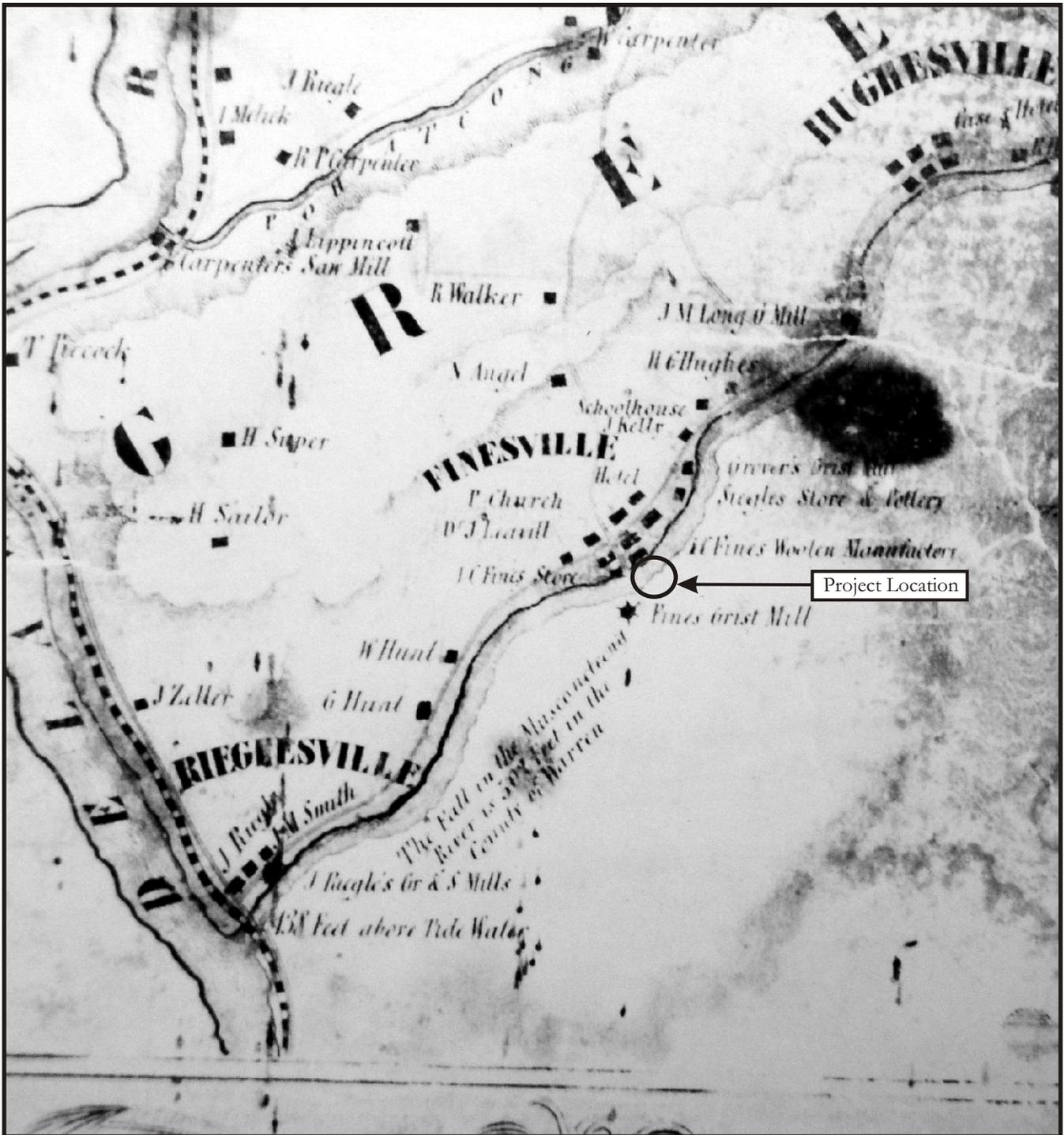
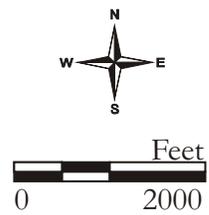


Figure 4.4:

1852 D. McCarty, Map of Warren County, New Jersey.



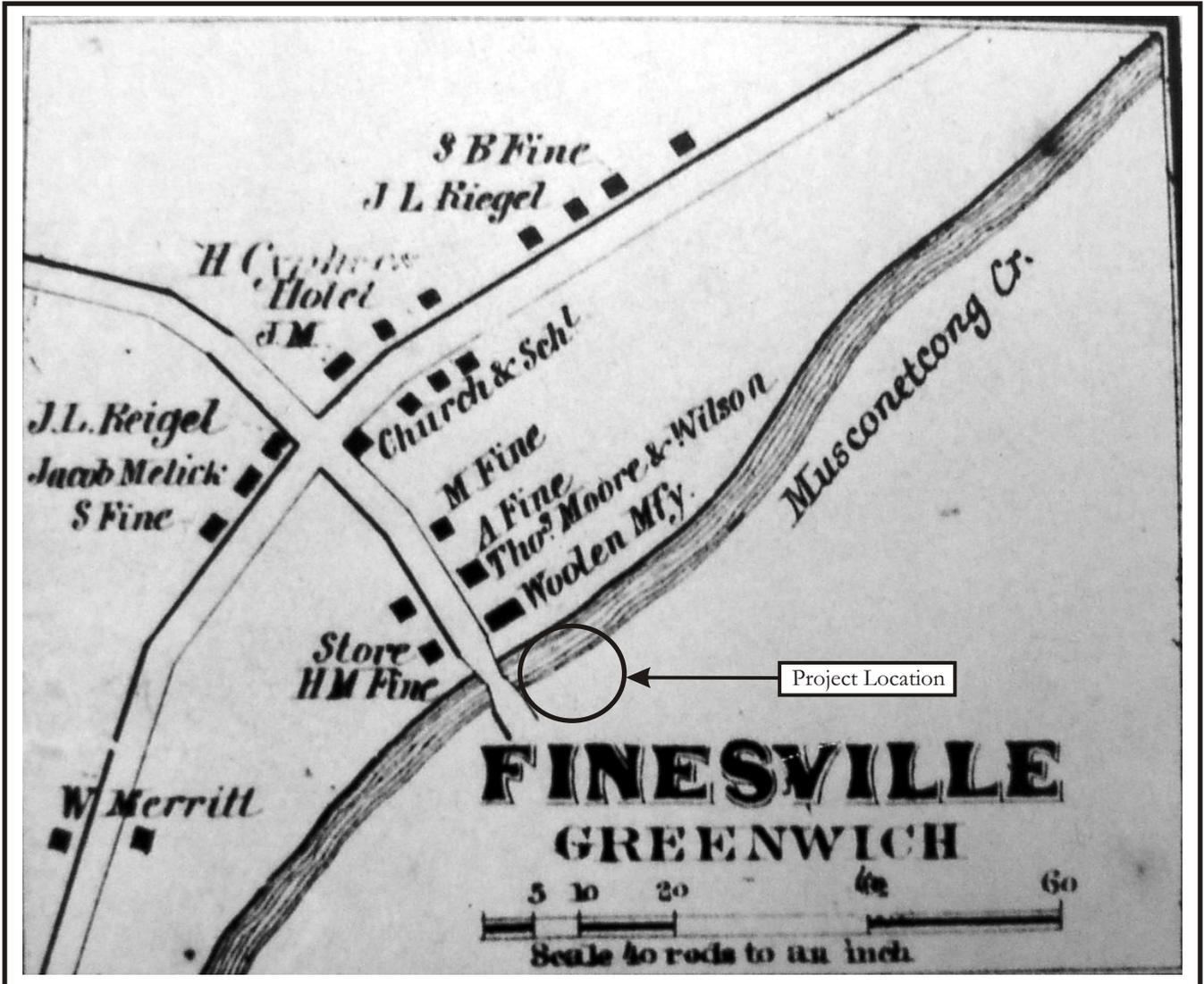
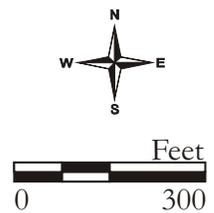


Figure 4.5:

1860 H.F. Walling, Map of Finesville, Greenwich Township.



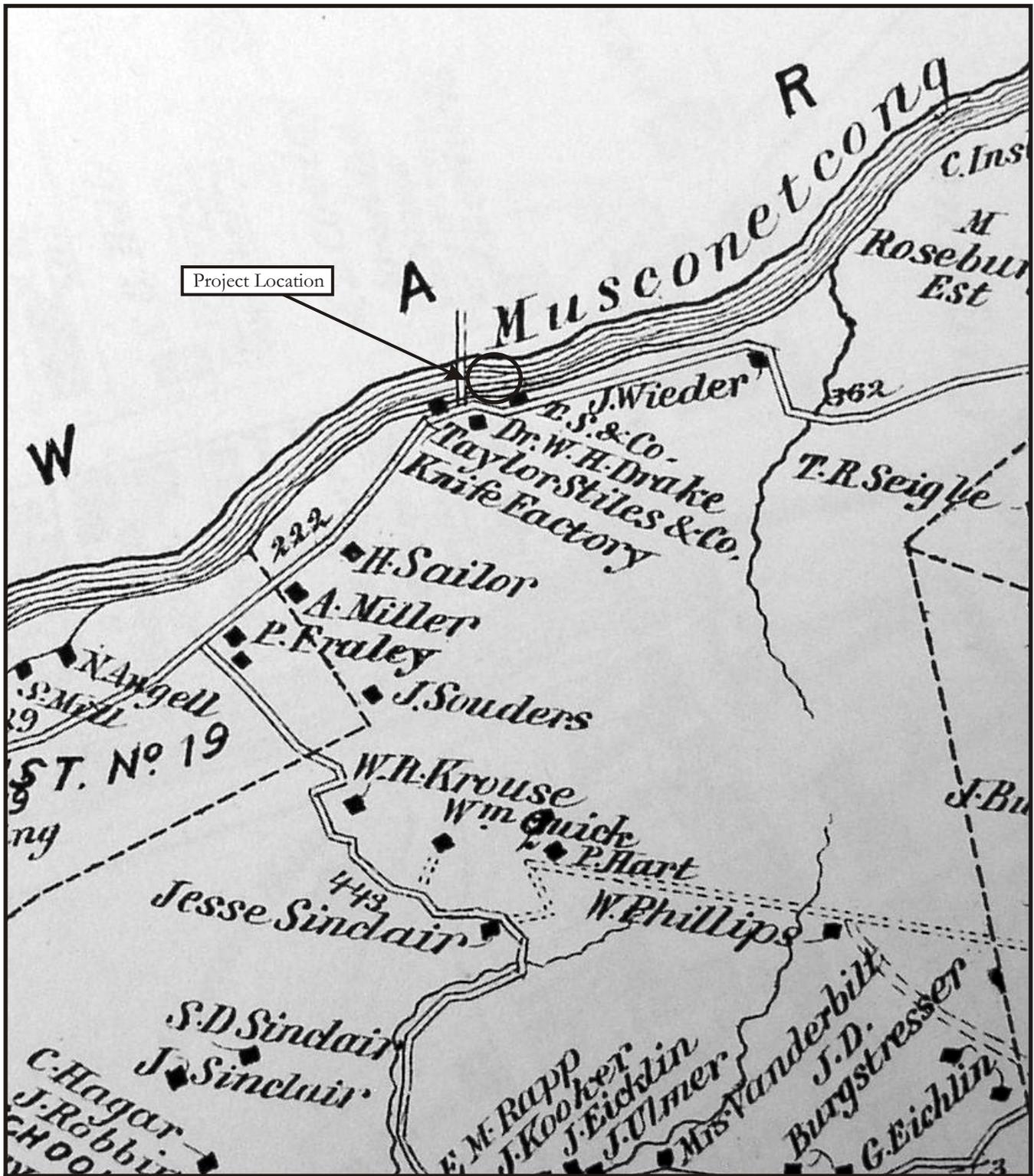
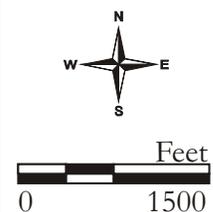


Figure 4.6:

1873 F.W. Beers, *Atlas of Hunterdon County, New Jersey.*



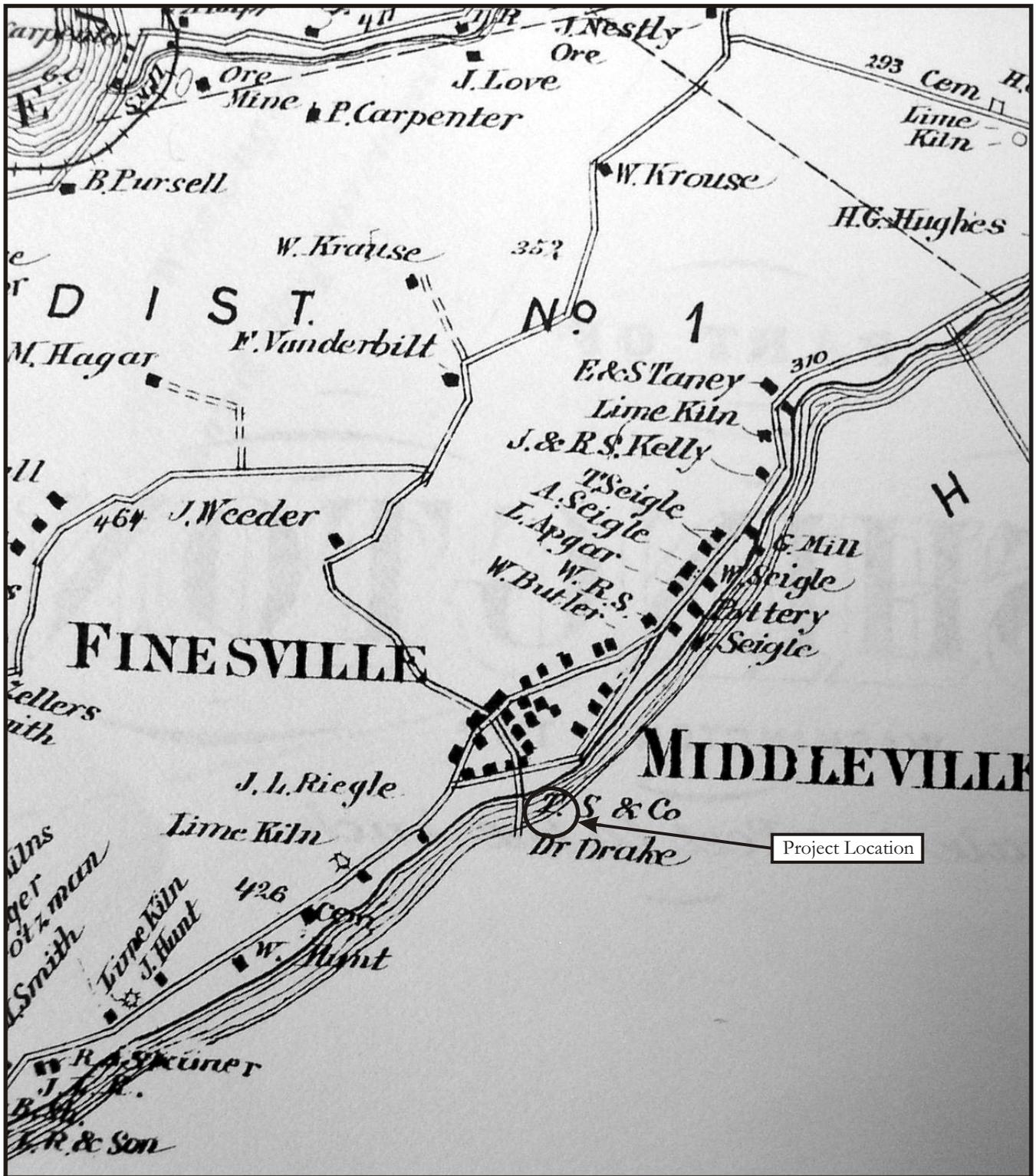
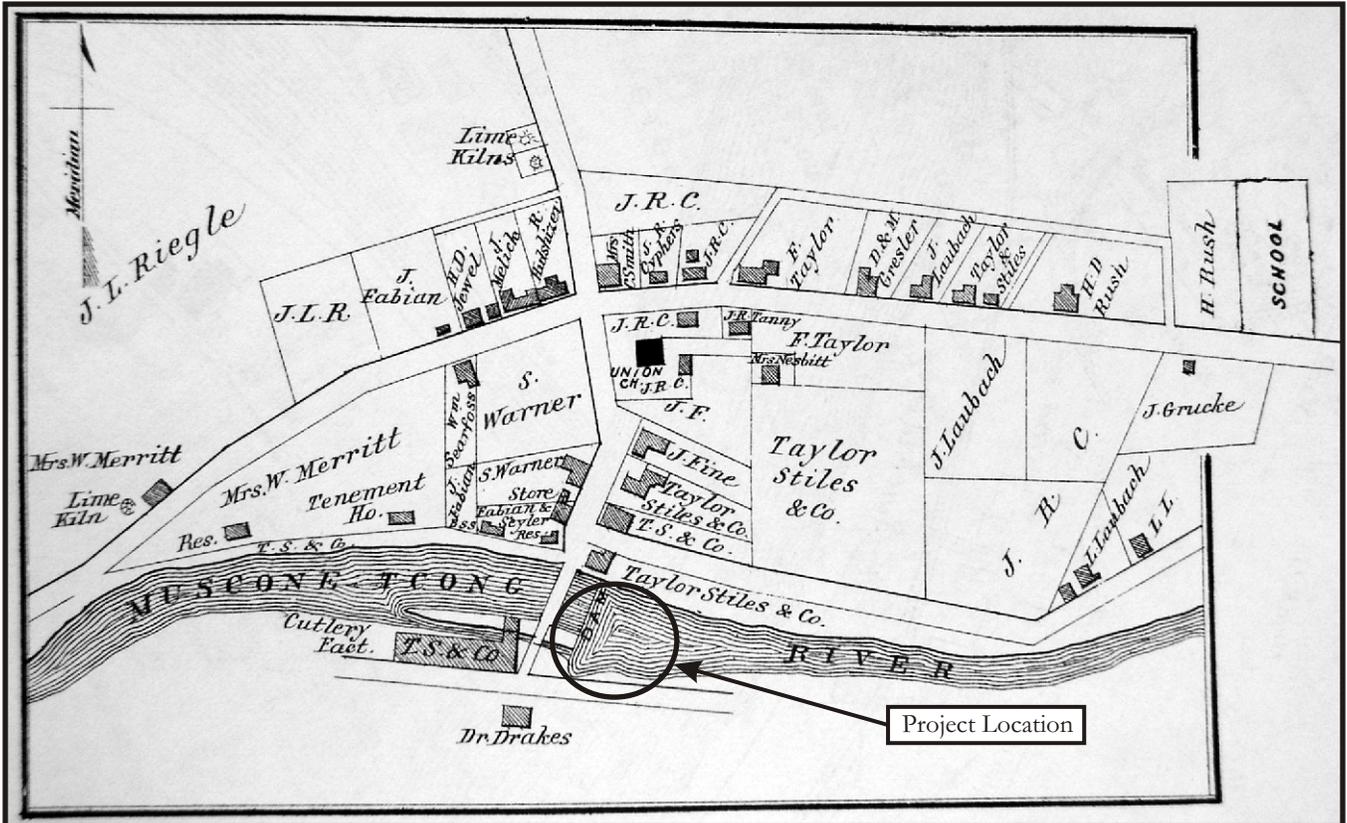


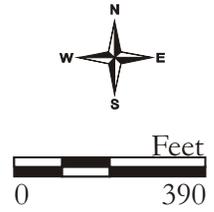
Figure 4.7:

1874 F.W. Beers, *Atlas of Warren County, New Jersey.*





**Figure 4.8:**  
 1874 F.W. Beers, Map of Finesville, Greenwich Township,  
 from *Atlas of Warren County, New Jersey*.



## **SECTION 5.0 RESULTS**

The Stage IA cultural resources survey assessed the probability for significant documented and undocumented prehistoric and historic archaeological resources within the APE. Background research and a site visit were used to assess the potential for the presence or absence of significant archaeological sites, and recommendations made for further investigation, if warranted.

In order to assess the overall sensitivity of the APE for the presence of prehistoric cultural resources, it was necessary to review the results of several studies that have been conducted to formulate predictive models of archaeological site location. While none of these studies has been performed within the immediate vicinity of the APE, they have resulted in the formulation of empirical generalizations that have proven useful outside of the study area (Pagoulatos 1998).

A sensitivity assessment for historic archaeological resources is dependent on the examination of historic maps and local inventories of historic resources to identify whether a site may have been present in the vicinity of the APE.

### **5.1 Assessment of Cultural Resources Sensitivity**

#### **Prehistoric Archaeological Resources**

Archaeological evidence indicates that the Highlands Region was occupied from at least the Paleoindian Period to the present (Kraft 1973; Mounier 2003: 194; Wacker 1968). Available data suggests that the majority of prehistoric sites in the area consist of open-air campsites usually situated in close proximity to water and rockshelters in some of the more mountainous regions of North Jersey (Lenik 1985; Mounier 2003:134). In addition, large numbers of glacially-deposited cobbles in the Highlands region and outcroppings of argillite located within the neighboring Piedmont region provided an attractive source of raw materials for prehistoric tool production.

Based on the background research, topographic setting, and distance to a watercourse, the APE has a high potential for prehistoric resources. Background research indicates that early archaeological surveys have found prehistoric sites along the Musconetcong River. The APE lies adjacent to and within the Musconetcong River. Background research suggests that most prehistoric sites fall on the well-drained upland settings beside perennial water.

## Historic Archaeological Resources

The review of historic maps and background information indicated that the APE has a high probability to contain the remains of late eighteenth through twentieth-century structures associated with Finesville's industrial past. These include: a mill building erected by Philip Fine or his son Philip, Jr., built sometime between the 1790s and 1850s, an extension to an existing raceway on the south bank of the Musconetcong River, the submerged remains of a nineteenth-century dam associated with a circa 1807 woolen mill built by Philip Fine, Jr. on the north side of the river, the remains of a timber cribbing dam constructed sometime between 1874 and 1951, possibly during the 1890s, and later, and an existing post 1952 dam associated with a knife factory on the south side of the river. These resources may contribute to the eligibility of the Finesville Historic District. Both the woolen mill and knife factory are located outside of the APE.

## **5.2 Fieldwork**

The Stage IA cultural resources survey included a visual examination of the APE by Michael J. Gall, RPA, the Principal Investigator, on August 11, 2009. The APE consists of a low, narrow terrace, slope, and a portion of Bellis Road on the south side of the Musconetcong River, west of the Mount Joy Bridge (Figure 5.1; Plate 5.1). It also consists of a section of the Musconetcong River which starts at and extends roughly 150 feet east of the east side of Mount Joy Road bridge (see Figure 5.1; Plates 5.2-5.5). This area is characterized by oak and maple trees and has an understory of briars. Much of narrow ledge on the south side of the Musconetcong River in the APE is currently being utilized as a staging area associated with repair work to the Mount Joy Road bridge (see Figure 5.1; Plate 5.6). Little to no surficial disturbance was observed in the current staging area. Terrain outside of the staging area on the south bank of the river appeared intact. This portion of the APE was bounded to the south and west by a stone retaining wall and the remains of a nineteenth-century mill race, formerly associated with a nineteenth century grist mill paper factory, and a knife factory, and later during the early-twentieth century a paper mill machinery manufactory (see Figure 5.1; see Plates 5.4-5.5; Plate 5.7). An early-twentieth-century wood frame shed rests on top of the mill race (see Figure 5.1; see Plate 5.4). The mill race, shed, and factory building are all included as contributing elements to the Finesville-Seigletown Historic District in a recent National Register of Historic Places nomination form (Dennis Bertland Associates 2009).

The portion of the APE within the Musconetcong River contains an existing poured concrete mill dam, constructed between 1951 and 1952 (Dennis Bertland Associates 2009:8.19; USDA Natural Resources Conservation Service 2009:8; Princeton Hydro LLC 2009:3). The mill dam spans from the north to south bank of the river (see Figure 5.1; see Plates 5.2-5.5). This dam was also included as a contributing element to the Finesville-Seigletown Historic District in the nomination form

(Dennis Bertland Associates 2009). No remains of earlier dams within the APE were observed on the banks of the Musconetcong River within the APE. Visibility within the river was low due to the murky nature of the water, which prevented an attempt to visually identify remains of earlier dams upstream from the existing dam from the river bank. However, photographic documentation conducted by Princeton Hydro, LLC (2009:3) depicts a linear rock rubble mass that stretches along the upstream side of the existing dam. This linear rubble form represents the remains of the pre-1951 wooden cribbing and rock rubble dam. The APE abuts the north side of the Musconetcong River, and does not include the stone retaining wall on the south side of the early-nineteenth-century woolen mill (Personal Communication, ShayMaria Silvestri, August 11, 2009).

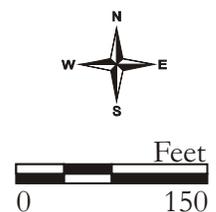
Based on a review of historic documents and a site visit, the southern portion of the APE along the south bank of the Musconetcong has a high potential to contain potentially significant prehistoric archaeological resources. It also has a high sensitivity to contain potentially significant remains of a mill race, portions of which are intact southwest of the APE, a nineteenth-century mill building, and traces of the earlier 1807 woolen mill dam east of the post-1952 dam, and pre-1951 timber cribbing dam. The northern section of the APE along the north bank of the Musconetcong River has a high potential to contain potentially significant historic and prehistoric archaeological resources. The current dam also has the potential to provide information about mid twentieth-century dam construction and could contribute to the eligibility of the Finesville-Seigletown Historic District (pending). Consequently, if proposed project related impacts within the APE cannot be avoided, Richard Grubb & Associates recommends that a Stage IB cultural resources survey be conducted along the south bank of the Musconetcong River. Richard Grubb & Associates also recommends that archaeological monitoring be carried out within the portion of the APE in the Musconetcong River during partial breach or full removal of the existing dam to document the dam's construction and document remnants of earlier dams in the APE, if present. This approach has been successful for mitigating impacts to dams in previous projects, including the breaching of the Mendham Reservoir Dam in Morris County (Richard Grubb & Associates, Inc. 2005).

In the opinion of RGA, the partial dam replacement alternative is the most prudent alternative as it meets the needs of the project, and minimizes the potential impacts on the Finesville Historic District.



**Figure 5.1:**

Aerial Map showing the project location and the photo locations and directions.  
 (from U.S.G.S. New Jersey Digital Ortho Quarter Quad Aerial Photography, 2002: Tile Number C7D16).





**Plate 5.1:**

Overview of the south bank of the Musconetcong River.

Photo view: West

Photographer: Michael J. Gall

Date: August 11, 2009



**Plate 5.2:**

Overview of the existing dam showing the Mount Joy Road bridge at left and the Fines woolen mill in the background.

Photo view: North

Photographer: Michael J. Gall

Date: August 11, 2009



**Plate 5.3:**

Overview of the Musconetcong River showing the former woolen mill dam location.

Photo view: Northeast

Photographer: Michael J. Gall

Date: August 11, 2009



**Plate 5.4:**

Overview of the existing dam showing the south bank of the Musconetcong River.

Photo view: South

Photographer: Michael J. Gall

Date: August 11, 2009



**Plate 5.5:**

Overview of the existing dam showing the south bank of the Musconetcong River.

Photo view: Southeast

Photographer: Michael J. Gall

Date: August 11, 2009



**Plate 5.6:**

Overview of an existing staging area.

Photo view: East

Photographer: Michael J. Gall

Date: August 11, 2009



**Plate 5.7:**

Overview of the extant raceway opening.

Photo view: West

Photographer: Michael J. Gall

Date: August 11, 2009



## **SECTION 6.0    MANAGEMENT RECOMMENDATIONS**

Richard Grubb & Associates, Inc. (RGA) of Cranbury, New Jersey performed a Stage IA cultural resources survey within the Area of Potential Effects (APE) for the Finesville Dam project in the Finesville village section of Pohatcong Township, Warren County and the Seigletown village section of Holland Township, Hunterdon County, New Jersey for the United States Department of Agriculture, Natural Resources Conservation Service of Somerset, New Jersey. The APE consists of a 0.55-acre area within and along the banks of the Musconetcong River. Three alternatives are proposed within the APE. The first is no alteration, the second consists of a partial dam breach, and the third is a complete removal of the dam structure. A staging area will be located on the river bank on the south side of the dam. The Stage IA cultural resources survey assessed the potential for significant archaeological resources within the APE for the proposed project. The Stage IA survey was performed as a requirement of Section 106 of the National Historic Preservation Act of 1966, as amended, and meets the standards of the New Jersey Historic Preservation Office.

The primary goal of this Stage IA survey was to determine whether the APE has sensitivity for significant prehistoric or historic archaeological resources. Background research indicated an evolution in dam construction in and near the APE. The existing dam replaced a previous dam that was likely constructed between 1874 and the early twentieth century, which sat at or adjacent to the footprint of the current dam structure. The late nineteenth or early-twentieth-century dam replaced an earlier dam associated with the former woolen and grist mills owned by the Fine family that was situated within the APE roughly 50 feet upstream from the existing dam. The woolen mill dam replaced an earlier wooden cribbing dam constructed prior to 1752 roughly 150 feet east of the APE in association with a former iron forge that stood on the north bank of the river. Further, historic maps indicate that a nineteenth-century mill building owned by the Fine family and later Taylor, Stiles & Company, and a raceway were situated in the southwestern portion of the APE, part of the latter of which abuts the southwestern side of the APE. The existing 1807 woolen mill building, now a residence, and former iron forge stood on the north side of the river outside of the APE. There is moderate to high potential that the remains of the earlier woolen mill dam, late-nineteenth to early-twentieth-century dam, raceway, and nineteenth-century Fine and Taylor, Stiles & Company mill building could be present within the APE, and could contribute to the significance of the Finesville Historic District (COE 10/21/2004; SHPO Opinion 9/22/2006), within which the APE is situated.

A site visit was conducted on August 11, 2009. The existing concrete dam stretches between the north and south banks of the Musconetcong River and abuts a stone arched raceway associated with an existing nineteenth-century mill on the south side of the river, west of the APE and is currently

capped with a shed structure. This raceway may have initially extended into the southwestern portion of the APE during the nineteenth century. Disturbance within the APE was superficial and was confined to an area in the southwestern portion of the APE, currently used as a staging area in association with repair work to the abutting Mount Joy Road Bridge (SI&A#10XX64) (COE 2/11/1999).

Based on background research and a site visit, the APE has a high potential to contain intact archaeological resources associated with the early industrial history of Finesville. Consequently, if alternatives of partial breach and complete dam removal are preferred, Richard Grubb & Associates recommends a State IB cultural resources survey to identify remains of the former mill race and Fine mill building, and earlier mill dams in the southern portion of the APE. In the event that below ground project related impacts are proposed along the north bank of the Musconetcong River, Stage IB archaeological testing is recommended.

Upon consideration, Richard Grubb & Associates, Inc. feels that of the two alternatives, the partial dam removal option would have the lesser impact on the Finesville Historic District and meet the needs of the project. The remains of much of the dam would be left in place and the overall feel and setting of the district would be retained. The full removal alternative would eliminate an element that potentially contributes to the district and have a greater potential to impact abutments, and archaeological resources in adjacent areas. Depending upon the water levels after dam improvements, submerged remnants of earlier wooden dams within the APE, if present, could be left exposed which would affect their integrity and preservation. Archaeological monitoring during construction is recommended to document the existing dam, and document the remains of the earlier, pre-1951 wooden cribbing dam, if present.

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Richard Grubb & Associates, Inc.

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**APPENDICES**

**APPENDIX A: QUALIFICATIONS OF THE PRINCIPAL INVESTIGATOR**





## Richard Grubb & Associates, Inc. Cultural Resource Consultants

email: [mail@richardgrubb.com](mailto:mail@richardgrubb.com) • [www.richardgrubb.com](http://www.richardgrubb.com)

### Michael J. Gall, RPA, Principal Investigator/Senior Archaeologist

#### *Years of Experience*

12

#### *Education*

MA 2004  
Monmouth University:  
American History

BA 2001  
Monmouth University:  
History

BA 2001  
Monmouth University  
Anthropology

#### *Professional Certification*

HAZMAT

Register of Professional  
Archaeologists (RPA)

#### *Professional Societies*

Council for Northeast  
Historical Archaeology

Society for Historical  
Archaeology

Archaeological Society  
of New Jersey

#### *Professional Training*

C.R.M. Essentials,  
Trenton, New Jersey,  
October 2007

#### **Professional Experience Summary:**

Michael J. Gall is a Senior Archaeologist at RGA. Mr. Gall has extensive experience in applying Section 106 of the National Historic Preservation Act, as amended, the New Jersey Register of Historic Places Act, and other relevant state and municipal laws. Mr. Gall has served as a Principal Investigator on Phase IA, I, II, and III archaeological investigations and archaeological monitoring, and specializes in historic archaeology. He has experience working on archaeological sites in Pennsylvania, New Jersey, Delaware, Massachusetts, and New York:

#### **Representative Project Experience:**

##### **Phase I-III Archaeological Investigations, Villages at Manalapan**, Monmouth County, NJ

Archaeologist for Phase I-III archaeological investigations in Manalapan Township. Mr. Gall oversaw Phase I and II excavations of four archaeological sites including an eighteenth-century farmstead (28-Mo-349), a nineteenth and twentieth-century farmstead (28-Mo-348), and a Contact period Native American site (28-Mo-355). His work constituted the identification, mapping, and excavation of several eighteenth and nineteenth-century archaeological features, and the analysis of approximately 8,380 historic and prehistoric artifacts.

##### **Phase II Archaeological Evaluation, Mosele Road Site**, Morris County, NJ

Crew Chief and Archaeologist for Phase II archaeological evaluation project in Mendham Township. Mr. Gall oversaw Phase II excavations of a late-eighteenth-century bloomery forge site (28-Mr-302) along the North Branch of the Raritan River. A report was produced presenting the results of the investigation to NJDEP standards.

##### **Archaeological Monitoring, Mosele Road Site**, Morris County, NJ

Principal Investigator for archaeological monitoring during bridge replacement of an eighteenth-century wooden ford beneath the bridge abutment as well as the recovery of a pair of wrought iron eighteenth-century bloomery forge tongs. Mr. Gall oversaw monitoring activities, documented archaeological features, performed dendrochronology of ford timbers, consulted with local historians, and produced a report presenting the results of the investigation to NJDEP standards.

##### **Phase I-III Archaeological Investigations, Great Road and Cherry Valley Road Intersection Improvements**, Somerset and Mercer Counties, NJ

Principal Investigator for a Phase I to III archaeological investigation. Mr. Gall identified one Late Woodland Site (28-Me-304) and one early to mid-nineteenth-century tenant farmstead (28-Me-305). Both were considered eligible for listing on the National Register of Historic Places under Criterion D. A report was produced presenting the results of the investigation to NJDEP standards.

##### **Stage III Cultural Resources Survey, Singer House**, Burlington County, NJ

Principal Investigator for a Stage III cultural resources survey at the Singer House Site, a Pinelands Designated archaeological site in Medford Township, Burlington County, New Jersey. Mr. Gall mitigated the area of potential effects associated with a restoration effort to the house. A report was written according to the New Jersey Pinelands standards, which presented the results of the survey.

**New Jersey, Headquarters**  
30 North Main Street • P.O. Box 434  
Cranbury, NJ 08512  
609-655-0692 • fax: 609-655-3050

**Pennsylvania**  
PMB 166 • 420 West Emaus Avenue  
Allentown, Pennsylvania 18103  
610-435-4525 • fax: 610-821-7988

**Maryland**  
#1 • 5 Bel Air South Parkway • Suite 109  
Bel Air, Maryland 21015  
410-420-7422 • fax: 410-420-7423

**Illinois**  
13400 South Route 59 • Suite G #180  
Plainfield, Illinois 60585  
815-439-3501 • fax: 815-439-1628



**APPENDIX B: COMMUNICATION LOG**



## Telephone Log

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**Date:** August 20, 2009

**Project No./Name:** 2009-161 Finesville Dam

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**Staff Name:** Michael Tomkins

---

**Contact:** Lawrence LaFevre, Chairman

**Contact Organization:** Holland Township Historical Commission

**Contact Phone No.:** 908-994-2180

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Contacted Mr. LaFerve for his knowledge of any early photographs showing the location(s) of the mill dam. He was not aware of any. He believed that the one-story building that is sited near the headrace and at the northeast corner of Mt. Joy Road and Bellis Road was utilized as a gatehouse.

## Telephone Log

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**Date:** August 20, 2009

**Project No./Name:** 2009-161 Finesville Dam

---

**Staff Name:** Michael Tomkins

---

**Contact:** Michael Margulies, President

**Contact Organization:** Pohatcong History and Heritage Society

**Contact Phone No.:** 908-387-8630

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Left a voicemail with Mr. Margulies concerning his knowledge of the existence of early photographs showing the location(s) of the mill dam and other historic resources in the vicinity of the mill dam.

**APPENDIX C: FINESVILLE DAM RECONSTRUCTION DOCUMENTS  
(FROM PRINCETON HYDRO, LLC 2009: APPENDIX B)**



Report on Dam Inspection

FINESVILLE DAM

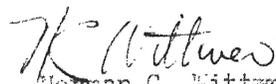
MUSCONETCONG RIVER, HUNTERDON COUNTY

DAM NO. 24-2

At the request of Mr. Edward H. Apgar, Secretary of Taylor, Stiles & Company, Riegelsville, New Jersey, an inspection was made of the subject dam on May 29, 1951 in company with Messrs. Sanborne and Griffin of the company, and Fred Hess, a local contractor. The inspection disclosed that a large section of the rock fill in the center of the spillway has washed away, although what appears to be a masonry wall in the center of the rock fill is still holding fast, thereby enabling Taylor, Stiles and Company to still use this pond for water power. (axis)

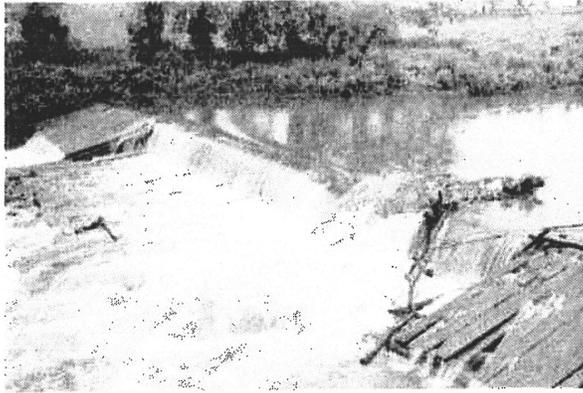
(axis) The company apparently is willing to repair this dam in a substantial manner and after some discussion it was agreed by all parties concerned, including the writer, that the most substantial repair job would be to pour a solid masonry wall downstream of the existing masonry wall in the center of the dam, using the existing wall as an upstream form. The writer suggested that a cut-off wall be placed at the downstream toe of the new spillway and also suggested that the right spillway end wall be raised to not less than 6 feet above the spillway crest. The existing end wall at the left side of the spillway is approximately 7 feet above the crest. According to information furnished by Mr. Apgar, who has lived in this vicinity for over fifty years, the underclearance of the bridge immediately downstream of the dam has been submerged on several occasions, notably the 1936, 1940, and 1945 floods. Therefore it seems evident that free discharge over the spillway will be submerged by back-water since the crest of the spillway is 75.9 feet below the bridge underclearance. 5.9

It is not practicable to increase the length of the spillway as this is fixed by existing structures and existing channel conditions between the spillway and the bridge. Therefore it is recommended that the spillway be reviewed for the maximum flood of record, the flood of March 15, 1940. This flood was slightly less than Central Jersey Curve run-off.

  
Norman C. Wittwer  
Principal Hydraulic Engineer

  
June 5, 1951

FINESTILLIE FALL



Spillway from left end of bridge.

Application No. 451  
Susquehanna River  
Baltimore-Harper Counties  
May 29, 1951

520 E. State St.

~~XXXXXXXXXXXXXXXXXXXX~~

x 9

June 6, 1951

Mr. Edward H. Apgar, Secretary  
Taylor, Stiles & Company  
Riegelsville, New Jersey

*File*

Re: Dam No. 24-2 - Hunterdon-Warren Counties

Dear Mr. Apgar:

This will confirm the inspection and conference held on May 29, 1951 between your Messrs. Sanborn, Griffin, and Hess and our Mr. Wittwer relative to the reconstruction of your dam across the Musconetcong River at Pinesville.

Please be advised that it is the opinion of this office that the following repairs will place this dam in a sound physical condition with capacity to withstand any flood up to the magnitude of the floods which have occurred on the Musconetcong River within the past forty years.

(1) The reinforcement of the existing spillway section by the removal of all stones and boulders downstream of the masonry wall which appears to run along the axis of the dam, and the replacement of these stones with a heavy concrete gravity wall poured against the above referred to masonry wall. This wall can be of cyclopean concrete, utilizing the stones and boulders on hand. This wall must be carried to a good firm foundation.

(2) The construction of a cut-off wall not less than 18 inches thick and 3 feet deep below the toe of the concrete gravity wall described in (1) above.

(3) The spillway end wall at the right or north bank of the spillway should be raised to not less than 6 feet above the crest of the spillway in order to prevent flood waters from cutting around the end of the spillway. This wall can be of concrete or stone masonry.

It must be understood that construction work based upon the above recommendations will be subject to change or modification during construction, depending upon the character of the foundation which is uncovered and the character of the interior of the structure of the existing rock fill dam.

Mr. Edward H. Apgar

-2-

June 6, 1951

Application must be submitted for this work accompanied by plans in duplicate prepared by a licensed engineer. It is suggested that your engineer, after preliminary plans or sketches have been prepared, present same to Mr. Wittwer for comment before final plans are completed. This office stands ready to assist you in any way possible with this work.

Yours very truly,



H. T. Critchlow  
Director and Chief Engineer

HCW:LMB

*Application & booklet enclosed.*

*HCW*

Division of Water Policy and Supply

# TAYLOR, STILES & COMPANY

MANUFACTURERS SINCE 1863

## Stock Cutting & Shredding Machinery, MACHINE KNIVES



From	To	Remarks
C	GRS	
	NEW	Att. u

TELEPHONE 2191  
CABLES "TAYSTILES" RIEGELSVILLE · A · B · C · CODE 3TH ED ·  
RIEGLSVILLE · N · J · U · S · A ·

State of New Jersey  
Division of Water Policy and Supply  
Department of Conservation & Economic Development  
520 East State Street  
Trenton 9, New Jersey

July 17, 1951

Attention: Mr. Wittwer

Re: Dam No. 24-2 - Hunterdon-Warren Counties

Gentlemen:

In accordance with the letter of June 6th from Mr. Critchlow, we are sending you preliminary plans prepared by our Engineer, Mr. Richard J. Shively, P. E.

After you have Ok'd these temporary plans or made any other suggestions, we will send you final plans with his seal and also the application.

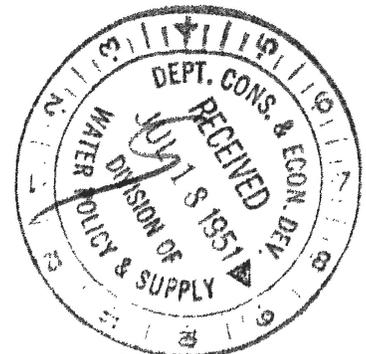
As we would like to get started on this project, your prompt action on this matter would be greatly appreciated.

Yours very truly,

TAYLOR, STILES & COMPANY

Alan H. Griffin, Superintendent

AHG:lmk  
Enclosure



520 E. State St.

~~XXXXXXXXXXXX~~  
x 9

July 24, 1951

Mr. Alan H. Griffin, Superintendent  
Taylor, Stiles & Company  
Riegelsville, New Jersey

Re: Dam No. 24-2 - Hunterdon-Warren Counties

Dear Mr. Griffin:

This will acknowledge receipt of your letter of July 17, 1951 enclosing two sets of preliminary plans covering the reconstruction of your dam across the Musconetcong River at Finesville. Examination of these drawings indicates that the proposed design should insure the reconstruction of this dam to a safe and sound condition. As stated in our letter of June 6, 1951, some changes may be necessary during construction. However, such changes, if required, should not be extensive.

One set of drawings on which some very minor corrections have been indicated in red crayon is returned herewith.

Upon receipt of revised drawings accompanied by application, approval of these drawings can be favorably considered.

Yours very truly,



H. F. Critchlow  
Director and Chief Engineer

MAU

NCW:LMS

Enc.



DAM APPLICATION NO. 451

STATE OF NEW JERSEY  
DIVISION OF WATER POLICY AND SUPPLY



ACCEPTANCE OF PERMIT FOR CONSTRUCTION OR REPAIR OF DAM

Division of Water Policy and Supply  
Trenton, N. J.

Gentlemen:

We hereby acknowledge receipt of your permit issued  
To *Taylor Stiles & Co.* in response to our application for  
.....in response to our application for  
permit for the construction (or repair) of *Dam*.....  
across *Musconetcong River*.....  
Name of Stream  
at (near) *Finesville, N. J.*.....

We hereby accept and agree to abide by and fulfill  
the terms and conditions therein imposed in carrying out the  
construction work therein authorized.

By *Taylor Stiles & Co.*.....  
Name of Applicant  
*Alan H. Suffer, Supt.*  
*Triegelsville, N. J.*  
Address

*August 10*.....1951

Report on Dam Inspections

FINESVILLE MILL

MUSCONETCONG RIVER, HUNTERDON-WARREN COUNTIES

APPLICATION NO. 451

Inspection was made of the subject dam on <sup>Sept.</sup> August 20, 1951 in company with Alan H. Griffin, Superintendent of Taylor, Stiles & Company. A bulkhead had been constructed across the Musconetcong River to divert the water away from the spillway into the headrace through the mill. However, a flash flood occurred, washing away about one-half of the bulkhead, which was the condition of the work at the time of the inspection. Mr. Griffin seemed very much put out by his construction difficulties.

An inspection was made of work in progress on September 27, 1951 in company with Mr. Griffin and Mr. Frank Hess, contractor. The bulkhead referred to above had been rebuilt in front of the entire spillway and preparations were being made to construct the spillway for the right half of the structure. The footing for the cut-off wall under the toe of the spillway was excavated down to bed rock and at the time of the inspection was ready for concrete. The writer gave on-the-spot permission to pour concrete for this footing as time is most important in order to take advantage of good weather. About one-half of the concrete required was placed in the presence of the writer. It appears that the owner and the contractor are leaning heavily on this Division for advice during the progress of the work. In fact, the contractor requested the writer to take over supervision of the work for the rest of the afternoon during the concreting operation. This, of course, the writer refused to do. However, close inspection of this project is in order.

*Frank Hess*

*N. C. Wittwer*  
Norman C. Wittwer  
Principal Hydraulic Engineer

September 28, 1951

5

FT. LEWISVILLE DAM



Trench for concrete cut-off at toe of spillway.

Application No. 451  
Musconetcong River  
Hinterdon-Garren Counties  
September 20, 1951

Report on Dam Inspection

FINESVILLE MILL

MUSCONETCONG RIVER, HUNTERDON-WARREN COUNTIES

APPLICATION NO. 451

Inspection was made of the subject dam on July 31, 1952 in company with Alan H. Griffin, Superintendent of Taylor, Stiles & Company, and Frank Hess, contractor.

The purpose of the inspection was to examine the foundation for the cut-off wall for the left half of the new spillway.

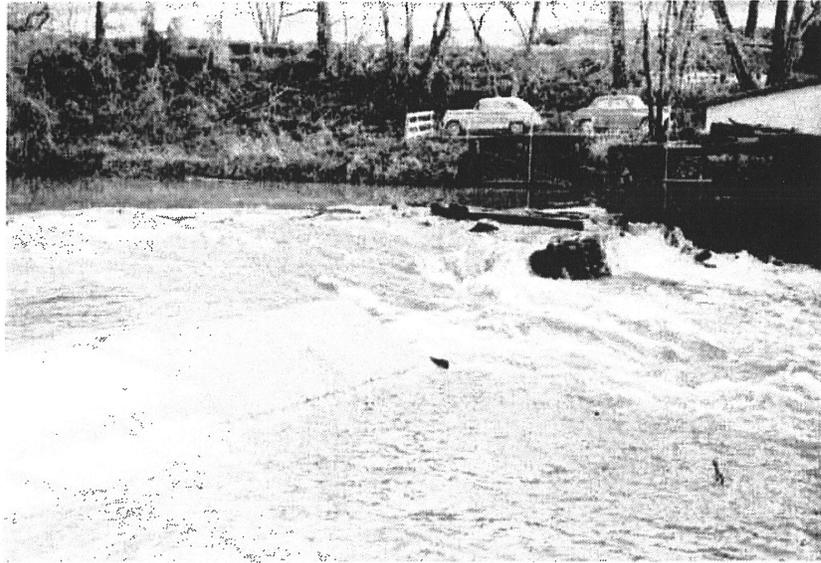
The inspection disclosed that the foundation was on rock, apparently ledge rock, and permission was given to pour concrete. The writer stayed on the job while several loads of concrete were being placed.



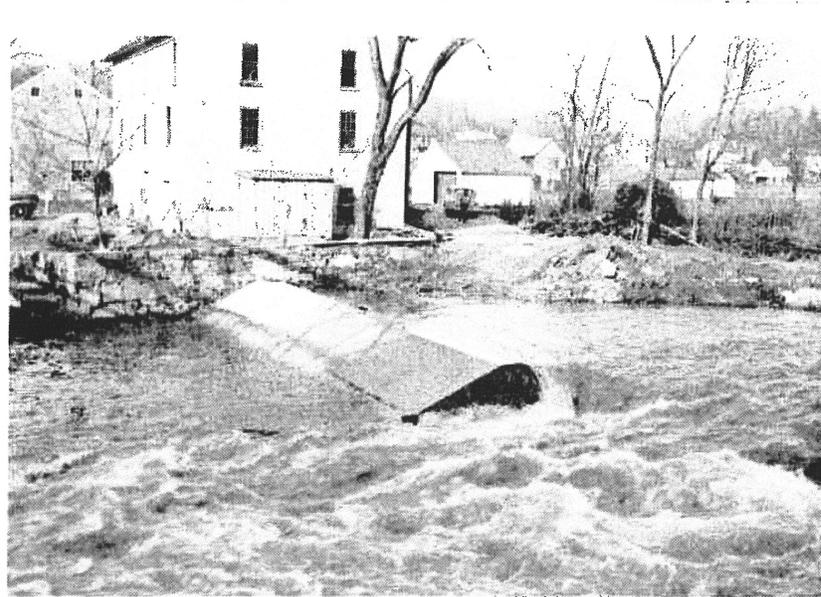
Norman C. Wittwer  
Principal Hydraulic Engineer

August 4, 1952

SPILLWAY



right side of reconstructed spillway



right side of reconstructed spillway

Spillway on the  
upper part of the  
river  
near the town of  
Hudson, N.Y.

Report on Dam Inspection

FINESVILLE MILL

MUSCONETCONG RIVER, HUNTERDON-WARREN COUNTIES

A final inspection was made on September 24, 1952 of the new spillway which has been constructed under the subject application. This inspection was made in company with Mr. Alan H. Griffin, Superintendent of Taylor, Stiles & Company. The inspection disclosed that the reconstruction of this dam has been completed in conformance with the approved drawings, and it is therefore recommended that the dam be accepted.

Mr. Griffin advised that the total cost of reconstruction, not including engineering, was approximately \$3500, which seems extremely low for a spillway of this size. The cost of engineering was approximately \$200.

It is recommended that the attached letter be sent to Taylor, Stiles & Company.

  
Norman C. Wittwer  
Principal Hydraulic Engineer

October 1, 1952



**DAMS IN NEW JERSEY—REFERENCE DATA**  
MUSCONETONG RIVER  
NO. 24-2

Name of Owner Taylor, Stiles & Co. Address Riegelsville, N.J.  
 Name of Lake Finesville Mill County Hunterdon- Marten Location 24.31.1.9.6   
 Stream Musconetong River Tributary to Delaware River  
 Damage Basin: Area 156 sq. mi. Description Mostly rural & woodlands & somewhat hilly  
 Valley below Dam Riegelsville Mill, Dam 24-1, one mile downstream  
 MW: Purpose Power generation  
 Type See spillway below ReConstructed 1952  
 Length 109 ft. Max. Height 9 1/2 to top of left end wall Foundation Rock  
 Upstream Slope — Downstream Slope — Core Wall — ft.  
 Previous Failures Reconstruction required because of deterioration of old spillway  
 Spillway: Type Trapezoidal rock fill with concrete face and top  
 Length 109 ft. Weir Coeff. 3.60 Depth below left end wall 3.25 ft.  
 Capacity See reverse/sec. ft. at — ft. hd. Est. 50-yr. flood 3800 sec. ft.  
 Reservoir: Capacity Small M. G. Area Small acres Normal W. L. El. 157.06 M.S.L. (datum)  
 Outlets Raceway at left end  
 Remarks: Left end wall was not raised to 6.0 ft. above spillway crest as originally  
timed due to impossibility of confining flood waters above the level of the present  
fill - 3'-3".  
 Basis of Data Application No. 451 and final inspection Date 10/15/52

1947



## **APPENDIX D: ANNOTATED BIBLIOGRAPHY**

Authors: Michael J. Gall, RPA and Michael Tomkins  
Title: Stage IA Cultural Resources Survey, Finesville Dam, Holland Township, Hunterdon County, and Pohatcong Township, Warren County, New Jersey  
Date: September 2009  
RGA Database Title: Finesville Dam  
RGA Project No.: 2009-161  
State: New Jersey  
Counties: Hunterdon and Warren  
Municipalities: Holland Township and Pohatcong Township  
Drainage Basin: Musconetcong River, Delaware River, Delaware Bay, Atlantic Ocean  
U.S.G.S. Quad: Riegelsville NJ-PA  
Regulations: Section 106 of the National Historic Preservation Act, NEPA  
Project Type: Dam Removal  
Client: USDA Natural Resources Conservation Service  
Level of Survey: Stage IA, Reconnaissance-level  
Cultural Resources: Potential for prehistoric and/or historic resources; Finesville Historic District (SHPO Opinion: 11-1-2006; COE: 10-21-2004)