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PHASE I CULTURAL RESOURCES RECONNAISSANCE SURVEY OF PROPOSED CELLULAR COMMUNICATIONS FACILITY CT33XC019, HADDAM, CONNECTICUT

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1.0 Introduction

This report summarizes the results of a Phase I cultural resources reconnaissance survey of proposed telecommunications facility CT33XC019 located off of Cove Road in Haddam, Connecticut. Heritage Consultants, LLC, completed the field investigation portion of this project, performed on behalf of Vanasse Hangen Brustlin, Inc., in December of 2006. All work was conducted in accordance with the National Historic Preservation Act of 1966, as amended; the National Environmental Policy Act of 1969, as amended; and the *Environmental Review Primer for Connecticut's Archaeological Resources* (Poirier 1987). The remainder of this document presents a description of the Areas of Potential Effect, information used as project context, the methods by which the current Phase I cultural resources reconnaissance survey was completed, results of the investigation, and management recommendations for the project.

2.0 Project Description

As mentioned above, the proposed cellular communications facility, which has been assigned Project Number CT33XC019, will be located in Haddam, Connecticut (Figure 1). The Areas of Potential Effect are situated at an approximate elevation of 95.4 m (315 ft) NGVD; they are bounded to the north, south, east, and west by mixed deciduous forest. The Areas of Potential Effect consist of a single proposed lease area measuring 25.7 x 25.7 m (85 x 85 ft) in size, and consist of underground electric and Telco routing cables, a transformer, a proposed telephone cabinet and a 54.5 m (180 ft) lattice type tower; all of these items will be enclosed within a chain link fence (Figure 2). The proposed telecommunications facility will be accessed via a 3.6 m (12 ft.) wide gravel access road. Due to the sloping topography and previous disturbance of the northern part of the access road, that portion was not subjected to subsurface shovel testing.

At the time of survey, the Areas of Potential Effect were characterized by woodland, with low to moderate sloping topography (Figure 3 through 6). Despite the fact that the planned facilities are located in close proximity to areas that have been previously impacted by construction (e.g., roads, houses, etc.) the Areas of Potential Effect were surveyed using close interval shovel testing (15 m [49.5 ft] intervals) in an effort to identify evidence of intact soil strata and cultural deposits. Field methodologies employed during the current investigation consisted of pedestrian survey, mapping, photo-documentation, and subsurface testing throughout the Areas of Potential Effect. The details of the field methods, as well as the results of this field effort, are reviewed below.

3.0 Background Research

The current Phase I cultural resources reconnaissance survey was completed using a three-step approach. The first step consisted of historic research and records review that focused on the area of Haddam encompassing the Areas of Potential Effect. This was followed by a review of all previously recorded archeological sites situated within the vicinity of the project area in an effort to determine the archeological context of the region. Finally, this approach entailed the completion of the current Phase I cultural resources reconnaissance survey.

Background research included analysis of readily available historic maps and aerial imagery depicting the area encompassing proposed project area; an examination of the pertinent USGS 7.5' series topographic quadrangle; and a review of all archeological and historic standing structure data maintained by the Connecticut State Historic Preservation Office and digital records archived by Heritage Consultants, LLC. The intent of this review was to identify all previously recorded cultural resources situated within and/or immediately adjacent to the Areas of Potential Effect. This information was used to develop the archeological context for assessing cultural resources that may be identified during survey.

4.0 Project Context: Previous Investigations, Natural & Prehistoric Settings, and Historic Overview

The following sections provide an overview of the region's natural and prehistoric settings, historic backdrop, as well previously identified archaeological sites located within the vicinity of the Areas of Potential Effect. These brief discussions are included in an effort to provide contextual information relative to the location of the Areas of Potential Effect, its natural characteristics, and its prehistoric and historic use and occupation. It concludes with an overview of the previous cultural resources investigations that have taken place in the area and a discussion of their results.

4.1 Natural Setting

The Areas of Potential Effect are situated within the Southeast Hills ecoregion of Connecticut. The Southeast Hills ecoregion consists of "a near-coastal upland, lying within 30 miles of eastern Long Island Sound, characterized by low, rolling hills, moderately broad and level upland and valley bottoms and, locally, by steep and rugged topography" (Dowhan and Craig 1976:36). Elevations in the Southeast Hills ecoregion range from generally 45.4 m (150 ft) to 151.5 m (500 ft) above sea level (Dowhan and Craig 1976). The bedrock of the region is metamorphic in origin, with Paleozoic gneisses and schists. (Dowhan and Craig 1976). Soils in this ecoregion have developed on top of glacial till in upland locales, and on extensive deposits of stratified sand, gravel, and silt in the valleys and river bottoms (Dowhan and Craig 1976). Vegetation located within the immediate vicinity of the Areas of Potential Effect consists of manicured lawns and patches of mixed deciduous forests. Finally, local fauna include rainbow trout, largemouth bass, sucker, rabbit, fox, raccoon, opossum, squirrel, white tailed deer, and a wide variety of terrestrial and aquatic bird species.

4.2 Prehistory of Connecticut

The earliest inhabitants of Connecticut, referred to as Paleo-Indians, probably arrived in the area after ca. 14,000 B.P. (Gramly and Funk 1990; Snow 1980). While there have been numerous finds of Paleo-Indian projectile points throughout Connecticut, only two sites, the Templeton Site (6-LF-21) and the Hidden Creek Site (72-163), have been studied in detail (Jones 1997; Moeller 1980). The Templeton Site (6-LF-21) is located in Washington, Connecticut on a terrace overlooking the Shepaug River. Carbon samples recovered during excavation of the site area produced a radiocarbon date of 10,190±300 B.P., for the occupation. In addition to a single large and two small fluted points, the Templeton Site produced gravers, drills, core fragments, scrapers, and channel flakes, indicating that the full range of lithic reduction took place within the site area (Moeller 1980). Moreover, use of both exotic and local raw materials was documented in the recovered lithic assemblage, suggesting that not only did the site's occupants spend some time in the area, but they also had access to distant lithic sources.

The only other Paleo-Indian site studied in detail is the Hidden Creek Site (72-163) (Jones 1997). Paleo-Indian artifacts recovered from this site include bifaces, side scrapers, a fluted preform, gravers, and end scrapers. While no direct date for the Paleo-Indian assemblage yet has been obtained, Jones (1997:76) argues that based on typological considerations the artifacts likely date from ca., 10,000 to 9,500 years ago. Further, based on the types and number of tools present, Jones (1997:77) has hypothesized that the Hidden Creek Site represents a short-term occupation. Excavation of both sites suggest that the Paleo-Indian settlement pattern consisted of a high degree of mobility, with groups moving regionally in search of seasonal food resources, as well as for high quality lithic materials.

The Archaic Period began by ca., 10,000 B.P. (Ritchie and Funk 1973; Snow 1980). Later, Griffin (1967) and Snow (1980) divided the Archaic Period into three subperiods: the Early Archaic (10,000 to 8,000 B.P.), Middle Archaic (8,000 to 6,000 B.P.), and Late Archaic (6,000 to 3,400 B.P.). To date, very few Early Archaic sites have been identified in southern New England. Like Paleo-Indian sites, Early Archaic sites tend to be very small and produce few artifacts, most of which are not diagnostic. Sites of this age are identified based on the recovery of a series of ill-defined bifurcate-based projectile points. These

projectile points are identified by their characteristic bifurcated base, and they generally are made from high quality lithics, though some quartz and quartzite specimens have been recovered. Current archeological evidence suggests that Early Archaic groups became more focused on locally available and smaller game species. Occupations of this time period are represented by camps that were moved periodically to take advantage of seasonal resources (McBride 1984).

By the onset of the Middle Archaic Period, increased numbers and types of sites are noted in the region (McBride 1984). The most well known Middle Archaic site in New England is the Neville Site (Dincauze 1976). Analysis of the Neville Site indicated that the Middle Archaic occupation dated from between ca., 7,700 and 6,000 years ago. These sites are associated with the recovery of Neville, Stark, and Merrimac projectile points. McBride (1984) noted that Middle Archaic sites in the lower Connecticut River Valley tend to be represented by moderate density artifact scatters representing a "diversity of site types, with both large-scale occupations and small special purpose present" (McBride 1984:96). Thus, based on the available archeological evidence, the Middle Archaic Period is characterized by continued increases in diversification of resources exploited, as well as by sophisticated changes in the settlement pattern to include different site types, including both base camps and task-specific sites (McBride 1984:96).

The Late Archaic Period in southern New England is divided into two major cultural traditions: the Laurentian and Narrow-Stemmed Traditions (Funk 1976 McBride 1984; Ritchie 1969a and b). Laurentian artifacts include ground stone axes, adzes, gouges, ulus (semi-lunar knives), pestles, atlatl weights and scrapers. The diagnostic projectile point forms of this time period include the Brewerton Eared-Notched, Brewerton Eared and Brewerton Side-Notched varieties (McBride 1984; Ritchie 1969a). Current archeological evidence suggests that Laurentian populations consisted of groups of mobile hunter-gatherers. While a few large Laurentian Tradition occupations have been identified and studied, they generally encompass less than 500 m^2 in area. These base camps reflect frequent movements by small groups of people in search of seasonally abundant resources. The overall settlement pattern of the Laurentian Tradition was dispersed in nature, with base camps located in a wide range of microenvironments, including riverine as well as upland zones (McBride 1984:252).

The latter portion of the Late Archaic is represented the Narrow-Stemmed Tradition. It is recognized by the presence of quartz and quartzite narrow stemmed projectile points, triangular quartz Squibnocket projectile points, and a bipolar lithic reduction strategy (McBride 1984). In general, the Narrow-Stemmed Tradition corresponds to when Late Archaic populations in southern New England began to "settle into" well-defined territories. Further, Narrow-Stemmed Tradition settlement patterns are marked by an increase in the types of sites utilized. That is, the Narrow-Stemmed Tradition witnessed the introduction of large base camps supported by small task-specific sites and temporary camps. The increased number of Narrow Stemmed Traditions temporary and task specific sites indicates frequent movements out of and back into base camps for the purpose of resource procurement; however, the base camps were relocated seasonally to position groups near frequently used, but dispersed, resources (McBride 1984:262).

The Terminal Archaic, which lasted from ca., 3,700 to 2,700 B.P., is represented by the Susquehanna Tradition (McBride 1984; Ritchie 1969b). The Susquehanna Tradition is based on the classification of several Broadspear projectile point types and associated artifacts. Temporally diagnostic projectile points of this tradition include the Snook Kill, Susquehanna Broad, Mansion Inn, and Orient Fishtail types (Lavin 1984; McBride 1984; Pfeiffer 1984). In addition, the material culture of the Terminal Archaic includes soapstone vessels, chipped and ground stone adzes, atlatl weights, drills, net sinkers, plummets and gorgets (Lavin 1984; McBride 1984; Ritchie 1969a and 1969b; Snow 1980). Susquehanna Tradition settlement patterns are centered around large base camps located in on terrace edges overlooking floodplains. Acting as support facilities for the large Terminal Archaic base camps were numerous task specific sites and temporary camps. Such sites were used as extraction points for the procurement of resources not found in the immediate vicinity of the base camps, and they generally were located adjacent

to upland streams and wetlands (McBride 1984:282). Finally, there also are a large number of Terminal Archaic cremation cemeteries with burials that have produced broadspear points and radiocarbon dates between 3,700 and 2,700 B.P. (Pfeiffer 1990). Among the grave goods are ritually "killed" (intentionally broken) steatite vessels, as well as ground stone and flaked stone tools (Snow 1980:240); however, this represents an important continuation of traditions from the Late Archaic and it should not be regarded as a cultural trait unique to the Susquehanna Tradition (Snow 1980:244).

Traditionally, the advent of the Woodland Period in southern New England has been associated with the introduction of pottery (Ritchie 1969a; McBride 1984). Like the Archaic Period, the Woodland Period has been commonly divided into three subperiods: Early, Middle, and Late Woodland. The Early Woodland period of the northeastern United States dates from ca., 2,700 to 2,000 B.P. In his study of the lower Connecticut River Valley, McBride (1984) described Early Woodland sites as "characterized by a quartz cobble lithic industry, narrow-stemmed points, an occasional Meadowood projectile point, thick, cord-marked ceramics, and perhaps human cremations" (McBride and Soulsby 1989:50). Early Woodland sites tend to be located in a variety of different ecozones; however, the largest settlements associated with this period were focused on floodplain, terrace, and lacustrine environments (McBride 1984:300), suggesting "population aggregations along major rivers, interior lakes, and wetlands" (McBride and Soulsby 1989:50). In sum, archeological evidence indicates that Early Woodland populations consisted a mobile hunter/gatherers that moved seasonally throughout a diversity of environmental zones in search of available plant and animal resources.

The Middle Woodland Period of southern New England prehistory is marked by an increase in the number of ceramic types and forms utilized (Lizee 1994a), as well as an increase in the amount of exotic lithic raw material used in stone tool manufacture (McBride 1984). In Connecticut, the Middle Woodland Period is represented archeologically by the use of narrow stemmed and Jack's Reef projectile points; increased amounts of exotic raw materials in recovered lithic assemblages, including chert, argillite, jasper, and hornfels; and conoidal ceramic vessels decorated with dentate stamping. Ceramic types indicative of the Middle Woodland period include Linear Dentate, Rocker Dentate, Windsor Cord Marked, Windsor Brushed, Windsor Plain, and Hollister Stamped (Lizee 1994a: 200). In terms of settlement patterns, the Middle Woodland period is characterized by the occupation of village sites by large co-residential groups. These sites were the principal place of occupation, and they were positioned in close proximity to major river valleys, tidal marshes, estuaries, and the nearby coastline, all of which would have supplied an abundance of plant and animal resources (McBride 1984:309). In addition to villages, numerous temporary and task-specific sites were utilized in the surrounding upland areas, as well as in closer ecozones such as wetlands, estuaries, and floodplains.

The Late Woodland period in southern New England dates from ca., 1,200 to 350 B.P., and it is characterized by the earliest evidence for the use of maize in the lower Connecticut River Valley (Bendremer 1993; Bendremer and Dewar 1993; Bendremer et al. 1991; George 1997; McBride 1984); an increase in the frequency of exchange of non-local lithics (Feder 1984; George and Tryon 1996; McBride 1984; Lavin 1984); increased variability in ceramic form, function, surface treatment, and decoration (Lavin 1980, 1986, 1987; Lizee 1994a, 1994b); and a continuation of a trend towards larger, more permanent settlements in riverine, estuarine, and coastal ecozones (Dincauze 1973, 1974; McBride 1984; Snow 1980). Late Woodland lithic assemblages typically contain up to 60 to 70 percent exotic lithics. Finished stone tools include Levanna and Madison projectile points; drills; side-, end-, and thumbnail scrapers; mortars and pestles; nutting stones; netsinkers; and celts, adzes, axes, and digging tools (McBride 1984; Snow 1980). In addition, ceramic assemblages recovered from Late Woodland sites include Windsor Fabric Impressed, Windsor Brushed, Windsor Cord Marked, Windsor Plain, Clearview Stamped, Sebonac Stamped, Selden Island, Hollister Plain, Hollister Stamped, and Shantok Cove Incised types (Lavin 1980; Lizee 1994a; Pope 1953; Rouse 1947; Salwen and Ottesen 1972; Smith 1947).

Finally, McBride (1984:323-329) characterized Late Woodland settlement patterns as more nucleated than the preceding Middle Woodland ones, with fewer, larger sites situated in estuarine and riverine ecozones. Both river confluences and coastal zones were favored areas for the establishment of large village sites that contain numerous hearths, storage pits, refuse pits, ceramic production areas, house floors, and human and dog burials (Lavin 1988b; McBride 1984). McBride (1984:326) has argued that these sites certainly reflect multi-season use, and were perhaps occupied on a year-round basis (see also Bellantoni 1987). In addition to large village sites, McBride (1984:326) identified numerous temporary and task-specific sites in the uplands of the lower Connecticut River Valley and along the coastline. These sites likely were employed for the collection of resources such as plant, animal, and lithic raw materials. These sites tend to be very small, lack internal organizational structure, and usually contain a limited artifact assemblage and few cultural features, suggesting that they were occupied from only a few hours to perhaps overnight. Temporary camps, on the other hand reflect a longer stay than task-specific camps, perhaps on the order of a few days to a week, and they contain a more diverse artifact assemblage indicative of more on-site activities, as well as more features (McBride 1984:328-329). In sum, settlement patterns of the Late Woodland period are characterized by "1) aggregation in coastal/riverine areas; 2) increasing sedentism, and; 3) use of upland areas by small task groups of individuals organized for specific tasks" (McBride 1984:326).

In sum, the prehistory of Connecticut spans from ca., 12,000 to 350 B.P., and it is characterized by numerous changes in tool types, subsistence pattern, and land use strategies. For the majority of the prehistoric era, local Native American groups practiced a subsistence pattern based on a mixed economy of hunting and gathering wild plant and animal resources. It is not until the Late Woodland period that incontrovertible evidence for the use of maize horticulture as an important subsistence pursuit is available. Further, settlement patterns throughout the prehistoric era shifted from seasonal occupations of small co-residential groups to large aggregations of people in riverine, estuarine, and coastal ecozones. In terms of the region containing the proposed project parcel, a variety of prehistoric site types may be expected. These range from seasonal camps utilized by Archaic populations to temporary and task-specific sites of the Woodland era.

4.3 Historic Setting

The Area of Potential Effect is located in the portion of Haddam known as Haddam Neck, so called because it is bounded on the west by the Connecticut River and on the east by the Salmon River. Its location on the Connecticut River meant that Haddam was one of the towns founded during the first phase of the colonization of Connecticut, between 1635 and 1675 (Daniels 1979). There are two islands in the Connecticut River in this area; they were originally called Twenty Mile Island and Thirty Mile Island for their distance from the mouth of the river. They were later became known as Lord's Island and Haddam Island. In 1652, a Captain John Cullick, who had previously extinguished the Indian title, received a confirming grant of Twenty Mile Island and some land on the east bank of the Connecticut River from the colony legislature. In 1660, the legislature appointed a committee to look into purchasing the Thirty Mile Island area from the Native Americans, which they accomplished in 1662 (Bayles 1884). Tradition states that the purchase was made from "four Indian kings and two queens," including land from the southern bound of Middletown – formerly including both Haddam and East Haddam (Crofut 1937, 483). The deed itself stated that it included "all the land from Mattabezett mill River to the lower end of pattaquounk meadow on both sides of ye River six miles bradth into the country of each side the great River the whole length aforesaid except thirtie mile Iland and fourtye acres of land att Pataquounk which they doe reserve of the aforesaid bounds," and it was signed by the men Turramuggus, Uncuas, Nabahuit, and Chiamugg, and the women Sepunnomoe and Towkishke, who also signed on behalf of their children (Clark 1808, 170).

De Forest (1852) asserts that these Indians were a remnant of the Wangunks, once a great tribe in the Connecticut and Farmington river valleys, while Speiss (1934) says that the Wangunk, Mattabesec, and Machamoodus clans were actually sub-groups of the Wangunk tribe, occupying land on both sides of the

Connecticut River below Hartford. The Pattyquounck region was in the present town of Chester, south of Haddam, and they also had reservations in Middletown. There were 30 or 40 members of the tribe in 1764, though they were living in different places around the colony. In that year, the colony began selling off the tribe's lands, so that by 1785 it was all sold and the money distributed to the scattered survivors (De Forest 1852). According to another account, there were "a few" on Thirty Mile Island "within the memory of persons living; and had a place of resort in a deep hollow on Haddam-Neck, to the northeast, which is still known by the name of Indian hollow" (Field 1819, 198). At one time, this hollow was on the land of William C. and Henry M. Selden (Bayles 1884). The modern road to the west of the Area of Potential Effect is known as Injun Hollow Road, but no other information on the location of this hollow has been found.

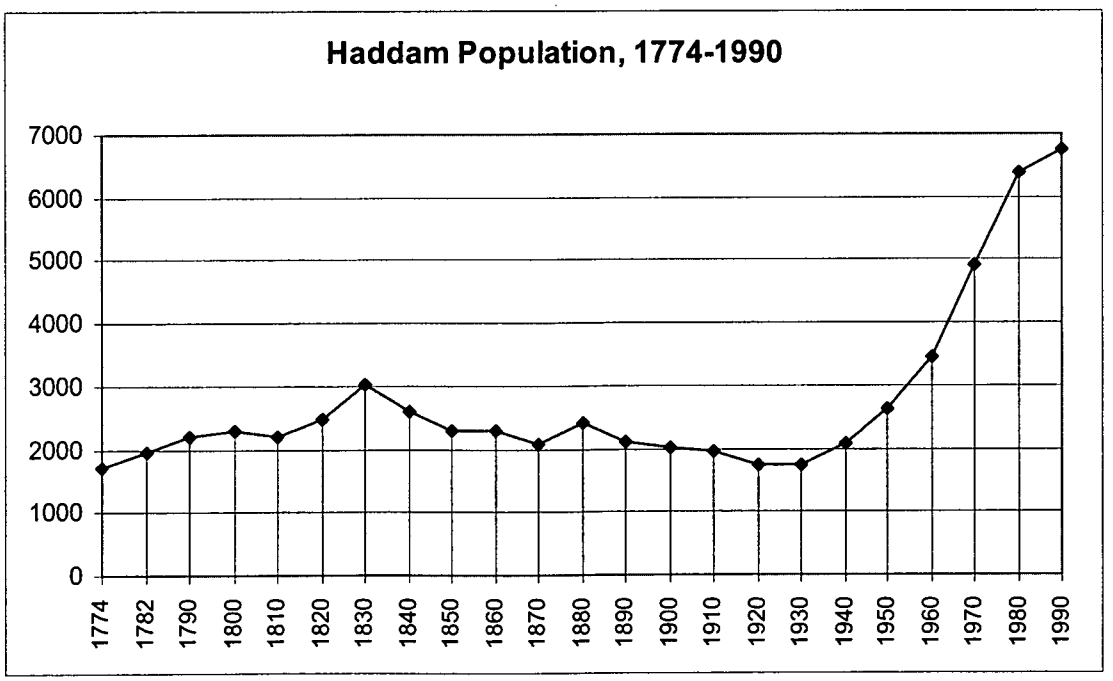
Twenty Eight men, many accompanied by their families, soon moved to what they called Thirty Mile Island. By 1668, it was well enough established that the settlement received from the legislature the legal status of a town and the name of Haddam. The first settlement was at what is now called Walkely Hill, on the west side of the Connecticut River opposite Thirty Mile Island. Also on the river but about a mile downstream from the first settlement, a second was soon established, known as the Lower Plantation or Lower Town Plot, which eventually became the village of Haddam, while the first location was largely abandoned. On Haddam Neck, the first settlement did not occur until about 1712, including William Brainerd, who built his house at the foot of Quarry Hill. As in other towns, Congregationalist religious services were held from the first, though initially in private houses. In 1674 the townspeople built a separate meetinghouse (Bayles 1884). In 1700, the East Haddam ecclesiastical society was formed, and in 1734 that town separated from Haddam (Barber 1836). A new meetinghouse was built in 1718, and in 1758 another on a new site (Bayles 1884). As of 1808, the religious life of the town had been expanded by the presence of some Baptists and Methodists who had built churches in the southern and western part of the town, respectively. A notable point is that at the time, Haddam Neck was part of the Middle Haddam Congregational ecclesiastical society centered in East Hampton, no doubt because of the difficulties posed by crossing the Connecticut River in the absence of a bridge (Clark 1808). In 1874, the members of the Middle Haddam church dedicated a new building on Haddam Neck, a short distance north and west of the Area of Potential Effect, having worked at the project from about 1868 (Bayles 1884). This building still stands.

Haddam Neck also was the residence of the African-American Venture Smith, who had been born in Guinea, Africa, and transported to New England in the 1730s. He arrived at Fisher's Island by way of Rhode Island, and after fourteen years was bought by Thomas Stanton of Stonington Point. His third Stonington owner, Col. Oliver Smith, gave Venture permission to work for others for money (though he had to pay some of it to Col. Smith). After five years, at the age of about 36, he was able to pay Col. Smith £71 and 2 shillings. He then worked to buy the freedom of his wife, his children, and three other men, as well as some real estate on Long Island. In about 1778, when he was 49, he moved to East Haddam and bought land on the west side of Haddam Neck, opposite the mouth of the Moodus River. Eventually he owned 100 acres and three dwelling houses there, as well as a variety of boats, and his autobiography had made him famous. He died in 1805 at the age of 77, and was buried at the Congregational church on the Neck (Bayles 1884). The location of his lands was southeast of the Area of Potential Effect.

Through the years, Haddam has been well supplied with transportation routes, though none of them directly affected Haddam Neck. One of the earliest efforts at providing this infrastructure in the state was the incorporation of companies that undertook to build and improve roads, called turnpikes, in exchange for the right to collect tolls on them. The Middlesex Turnpike Company, incorporated in 1802, built a road from just below Hartford to Saybrook, keeping on the west side of the river. It continued in business for a very long time, not being discontinued as a toll road until 1876. The Killingworth and Haddam Turnpike, which went northeastward from Killingworth and met the Middlesex Turnpike at Higganum, was chartered in 1813, with an additional branch road to meet the Middlesex Turnpike south of the first

being authorized in 1815. The branch road was known in Haddam as the Beaver Brook Turnpike; both were discontinued as toll roads in 1850. The Haddam and Durham Turnpike, incorporated in 1815, was a short road that connected Higganum with Durham, the neighboring town on the west (Wood 1919). The latter turnpike was abandoned in the 1830s (Bayles 1884).

The Middlesex Turnpike probably lasted so long because a competing railroad, the Connecticut Valley, was not built until 1871. Running along a single track between Hartford and Fenwick Point in Saybrook, this was a project that had been contemplated since 1853. It was not essential to state transport, as the Hartford & New Haven line, which left the Connecticut River shortly after leaving Hartford, had been opened in 1839. As a minor railroad serving Hartford and the string of small towns down to Saybrook, the Hartford & Connecticut Valley had trouble paying its own construction costs, and in 1876 it went into receivership. It reorganized in 1879 as the Hartford & Connecticut Valley Railroad. The new director made improvements and courted buyout offers from larger roads, eventually being leased for 99 years by the New Haven Railroad. Never wildly successful, the road abandoned its southernmost portions in the early twentieth century, gave up passenger service in 1933, and was abandoned entirely in 1967. In 1971, the portion between Essex and Chester was revived as a steam-engine tourist attraction, but it no longer serves as a transportation link (Turner and Jacobus 1989). It has been supplanted by the limited-access highway system, represented in Haddam by Connecticut Route 9. This route began its existence as part of New England Interstate Highway 10, under a numbering system that was introduced in 1922 and superceded by the federal numbering system in 1926. This route ran from Granby to Old Saybrook, on the west side of the Connecticut River. In 1932, a new numbering system established Route 9 along the path of the old NE 10. Plans for an expressway were first laid in 1953, but it did not actually appear until the late 1960s. The section from Essex to Higganum opened in 1968, but the Route 9 expressway was not connected to Interstate 91 at Cromwell until 1989 (Oglesby 2004).



The chart shown above illustrates the relative lack of effect of the turnpikes' and railroad's presence on what was, and until the latter half of the twentieth century remained, a relatively small town (Chart 1; CT-DEP 1996). In about 1750, one account indicates, there were 150 families in Haddam, 20 of them on Haddam Neck. In 1814, there were 340 houses in the main part of the town, holding 1,951 inhabitants,

while on Haddam Neck there were another 47 houses, holding 349 inhabitants in 62 families (Bayles 1884). That was just prior to the town's nineteenth-century peak of population, just over 3,000. A population of between 2,000 and 3,000 meant that Haddam was not among the state's smallest towns, but neither was it among the urbanizing areas in the state (CT-DEP 1996). According to Barber's account in the 1830s, Haddam's terrain was "considerably rough and broken, being hilly and stony," with only a small alluvial floodplain, the rest of the soil being "a gravelly loam, hard and dry," and much of the town still profitably forested (Barber 1836, 515). A substantial portion of the best land, known as the Great Meadow, was located on the west side of Haddam Neck, while the Salmon River provided another section of meadowland called Cove Meadow on the east (Bayles 1884). The fact that the Connecticut River was not navigable to the larger ships that would have needed to use it once the industrial age began meant that relatively little industry developed in the early period, and the late arrival of the railroad did not help to foster any significant growth; the jump in population between 1870 and 1880 quickly dropped off again (Turner and Jacobus 1989; CT-DEP 1996). In contrast, the increasing use of the automobile after 1930, and eventually the construction of Route 9, made Haddam both more accessible and more attractive to people looking for suburban residences.

Historically, the economy of Haddam relied on primary-sector activities. The quarrying of granite was an early activity in Haddam, the first such quarry having been opened on Quarry Hill on Haddam Neck around the year 1762, followed by a number of others, all located some 800 to 1,000 feet from the Connecticut river. In the 1830s, some 150 men worked at the quarries, and up to $70,000 worth of stone was exported annually (Barber 1836). The Quarry Hill quarries were, in fact, in or near the Area of Potential Effect, as the 1859 map of the county shows (Walling 1859; Figure 7). Stone from the quarries was loaded onto boats at a place known as Rock Landing, near the north end of Haddam Island (Hughes and Allen 1976). Although the first quarry went out of business around 1812, others continued or were founded later (Bayles 1884). The rocks of the area also contain semi-precious stones such as beryl, garnet, and black tourmaline, although there is no evidence of commercial rather than scientific exploitation of these resources (Bayles 1884). Haddam Island, located not far from the Area of Potential Effect, was an important fishing station through the late nineteenth century, as the fishing companies at each end exploited the narrow, deep channel on the east side of the island (Bayles 1884). In 1808, there were fisheries all along both banks of the river, using 30 seines during the spring shad run, though the salmon run had disappeared. The western side of the town was still wooded, the timber used in shipbuilding (Clark 1808). In 1819, Haddam produced more wood than any other town in the county, with some 2,500 to 3,000 cords of wood being exported, primarily to New York (Field 1819).

Shipbuilding began at Higganum Landing in about 1752, northwest of the Area of Potential Effect near the Middletown border, and continued at least through the early nineteenth century, when two yards were usually in business (Barber 1836, Field 1819). The year 1815 saw the launch of four brigs and a schooner, but between the 1860s and 1884 none were built in town. Otherwise, "[a] gin distillery was set up in 1813, and about that time the manufacture of gun barrels was begun by Hezekiah SCOVIL, at Candlewood Hill. USHER's Mills stood one-fourth of a mile west from Higganum Landing. A clothier's works and carding machine were here in 1814, the former fulling and dressing 4,500 years of woolen cloth and dressing 1,000 yards of women's wear per annum, while the latter carded 3,000 pounds of wool. One spinning machine was connected with them. There were also in 1814, besides the above, one clothier's works, two carding machines, five grist mills, nine saw mills, seven tanneries, two cider distilleries, and one brick yard." It was at Higganum that an increase in population because of manufacturing appeared in the late nineteenth century. In 1867, the Higganum Manufacturing Corporation was established and began making agricultural implements; it was still in business as of 1884, as was a factory for making small tools, and a large cotton mill. On Haddam Neck, near its north end, a number of businesses clustered on Pine Brook. A paper mill operated there between 1847 and 1871, and above it was a sword factory that produced weapons during the War of 1812, and later became a scythe factory that was soon abandoned (Bayles 1884). In 1932, the town's main industries were

agriculture and the manufacture of agricultural implements, and it was on a jitney route between Saybrook and Middletown (Connecticut 1932).

In 1859, according to the county map, the residence nearest to the Area of Potential Effect was that of E. B. Young, while just north of it were houses belonging to D. Brainard and W. F. Brainard. To the west, by the river at the foot of the hill, was a string of other houses belonging to members of the Smith and Brainard families (Walling 1859; Figure 7). According to the map, most of the southern end of Haddam Neck was uninhabited, except for the residence of a J. Brainard not far from the tip. This situation did not change between 1859 and 1874, except that J. Brainard was replaced by W. Andrews and J. B. Lord (Beers 1874; Figure 8). According to the 1870 census, and Enos B. Young in the right location was a 48-year-old farmer who owned $1,500 in real estate and $350 in personal estate. His household consisted of Electa S. (44, presumably his wife); Hezekiah (21), who worked as a paper maker; and two young children, Julia E. (6) and Frank S. (1) (U. S. Census, 1870, Series: M593 Roll: 107 Page: 190). Hezekiah's employment as a paper-maker suggests that he worked at the paper mill that can be seen near the northeast corner of the town in Figure 8). The family's immediate neighbors, according to the schedule, were mostly farmers and farm laborers, except for one book agent and one teacher. A USGS topographic map from the 1890s shows that the Area of Potential Effect is near the relatively level summit of the hill, and that the road (Cove Road) still had houses on it (Figure 9). The 1934 aerial photograph shows that at that time, the Area of Potential Effect and most of the surrounding area was forested. Some of the forestation looks relatively light, but that may be an artifact of the time of year or of the steepness of the terrain (Figure 10).

The 1944 USGS map indicates that Cove Road continued past the Area of Potential Effect, unlike the previous maps, but in an unimproved state. Near the Area of Potential Effect there was still just the one house, but no others on Cove Road, while to the northwest a string of houses had appeared on the bank of Salmon River (Figure 11). By 1970, the Area of Potential Effect was certainly very forested, although the area around where Enos B. Young's house was had been cleared, either for lawns or agriculture. Also visible in the photograph are parts of the Connecticut Yankee nuclear power plant facility, including some buildings to the south of the Area of Potential Effect and a band of cleared land for the power lines to the east (Figure 12). Constructed in 1966 on the site of a former airstrip, the plant has been decommissioned, having been closed in 1997 (Haddam Historical Society 2005). The 2004 aerial photograph shows little change in the immediate vicinity; even the nearby electrical transformer station seems to still be in working order (Figure 13). As of the year 2000, Haddam's population had passed the 7,000 mark by 157, and the vast majority of that population was white. The town's economy still had a large construction and mining component in 2005, employing 10.7 percent of workers; agriculture employed only 2.3 percent, and manufacturing 4.8 percent, with all the rest being employed in some part of the service sector. This shift in economic activity is typical of the region, and the country, during the twentieth century. Also typical of many towns is the fact that most residents of Haddam work outside of the town, with the vast majority of those commuting to neighboring Middletown (CERC 2006). Haddam Neck, with its narrow roads and peninsular geography, has remained primarily rural in appearance and population despite the town's overall growth in population and the presence of the nuclear plant. The Area of Potential Effect itself, located near the top of a relatively flat hill, may have been used for agriculture during the eighteenth and nineteenth centuries, but if so this use did not persist into the twentieth century. Alternatively, the area may have been impacted by the nearby quarrying operations, but based on the available historical records, it is impossible to say whether this is so.

4.4 Previous Investigations

As mentioned above, the current effort also involved an examination of State Historic Preservation Office records as they pertain to archeological sites and National Register Properties situated within 0.8 km (0.5 mi) of the Areas of Potential Effect. In addition, the electronic site files maintained by Heritage Consultants, LLC also were examined during the course of this investigation. The results of this literature

search revealed that numerous cultural resources investigations have been completed within 0.8 km (0.5 mi) of the proposed project parcel. In addition, five previously identified archaeological sites have been recorded within 0.8 km (0.5 mi) of the Areas of Potential Effect. Sites 61-96, 61-102, 61-103, 61-104, 61-105, 61-113, and 61-114 are all encompassed within the immediate vicinity of the Area of Potential Effect (these sites are discussed briefly below).

Site 61-96
Also known as the Sylvester/Hezekiah Brainerd Site, Site 61-96 consists of a historic occupation recorded by American Cultural Specialists. Fieldwork completed at this site resulted in the identification of a historic house foundation dating from the nineteenth through twentieth centuries, as well as numerous examples historic artifacts. Historic cultural material recovered from the site area consisted of domestic assemblages (i.e. ceramics, bottle glass, recreational items, etc), building materials (i.e. window glass, brick fragments, nails, etc.) and modern debris (i.e. buried utility lines, metal fragments, plastics, etc.). In addition to the historic assemblages, numerous prehistoric lithics (i.e. chipping debris, flakes, and projectile points) were also recovered from Site 61-96. This site is currently under investigation by American Cultural Specialists, and to date, it has not been evaluated applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]).

Site 61-102
American Cultural Specialists also excavated site 61-102, also known as the Wood Road Site. A Phase II archaeological investigation of the site area resulted in the discovery of a prehistoric camp dating from the Woodland period. Excavation units yielded intact cultural deposits (including temporally diagnostic artifacts), cultural features, and calcined faunal remains. Recovered artifacts included lithic debitage, flakes, projectile points, decorated pottery sherds, and a single utilized anvil stone. In addition, definitive cultural features (such as fire-pits/hearths) contained organic material (i.e. charcoal, and calcined bone). Charcoal recovered from the Wood Road Site was analyzed, and a radiocarbon date of 660 to 880 AD confirms the presence of a Middle Woodland Native American occupation. This site also is currently under investigation by American Cultural Specialists, and to date, it has not been evaluated applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]).

Site 61-103
Site 61-103 is also referred to as the Upper 91 Site. American Cultural Specialists completed a Phase I cultural resources reconnaissance survey of the site area, which has been deemed a prehistoric camp. Due to the lack of temporally diagnostic cultural material and cultural features, a temporal context for the Upper 91 Site has not been determined. Cultural material recovered from the site area consisted of quartz and quartzite debitage, which suggested to American Cultural Specialists that episodes of lithic reduction occurred at Site 61-103. This site also is currently under investigation by American Cultural Specialists, and to date, it has not been evaluated applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]).

Site 61-104
Though the cultural material recovered from this site was prehistoric in origin, Site 61-104 was referred to the Stone Wall Site by American Cultural Specialists. Shovel testing completed throughout the site area coupled with the strategic placement of excavation units resulted in the recovery of numerous prehistoric artifacts. The recovered cultural material consisted of pottery sherds, performs, bifaces, and lithic debitage, which allowed American Cultural Specialists to classify the Stone Wall Site as a prehistoric camp dating from the Woodland period. This site also is currently under investigation by American Cultural Specialists, and to date, it has not been evaluated applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]).

Site 61-105
The Cove Road Rockshelter (also known as Site 61-105) was utilized as a short-term prehistoric shelter. Test pits excavated throughout the site area produced very little in terms of cultural material, and temporally diagnostic artifacts were lacking. The recovery of an incomplete projectile point and quartz debitage were not sufficient to assign a date to this site. The Rockshelter itself was characterized by a large stone outcrop with an overhang large enough for individual(s) to take shelter under. The lack of cultural material and cultural features suggests Site 61-05 was only utilized for a short period of time. This site also is currently under investigation by American Cultural Specialists, and to date, it has not been evaluated applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]).

Site 61-113
American Cultural Specialists, who excavated this site, named Site 61-113 the Hidden Site. Fieldwork completed within the site area resulted in the recovery of a number of prehistoric lithics (though none were temporally diagnostic in nature). The presence of quartz debitage and a single biface were enough to suggest Site 61-113 was once a prehistoric camp. Unfortunately, because temporally diagnostic artifacts and features were lacking, no date for the occupation could be discerned. This site also is currently under investigation by American Cultural Specialists, and to date, it has not been evaluated applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]).

Site 61-114
Finally, Site 61-114 (the Grinding Stone Site) produced very little in terms of cultural material. Only two quartz flakes were recovered from the site area during subsurface shovel testing, which was not sufficient to assign a time period for the site's occupation. American Cultural Specialists has classified the site as a prehistoric camp. Site 61-114 also is currently under investigation by American Cultural Specialists, and to date, it has not been evaluated applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]).

5.0 Field Methods
Following the completion of the background research, the Areas of Potential Effect were subjected to a Phase I cultural resources reconnaissance survey utilizing pedestrian survey, subsurface testing, mapping, and photo-documentation. The sampling strategy was designed to provide thorough coverage of all portions of the Areas of Potential Effect, including the proposed lease area and associated access road. The pedestrian survey portion of this investigation included visual reconnaissance of all areas located within and immediately adjacent to the Areas of Potential Effect, as well as photo-documentation of the proposed project items and their immediate surroundings. The subsurface testing portion of this investigation involved the excavation of shovel tests throughout the Areas of Potential Effect, i.e., within the confines of the proposed lease area, as well as along the proposed access road. Since the proposed project items were spatially confined, the interval between shovel tests was shortened to 15 m (49.5 ft).

During survey, each shovel test measured 50 cm (19.7 in) in diameter and each was excavated to a depth of 50 cmbs (19.7 inbs) or until sterile subsoil, glacial till, or immovable objects (e.g., boulders) were encountered. Each shovel test was excavated in 10 cm (3.9 in) arbitrary levels within natural strata, and the fill from each level was screened separately. All shovel test fill was screened through 0.635 cm (0.25 in) hardware cloth. Soil characteristics were recorded in the field using Munsell Soil Color Charts and standard soils nomenclature. Finally, each shovel test was backfilled immediately upon completion of the archeological recordation process.

6.0 Curation

Following the completion and acceptance of the Final Report of Investigations, all project drawings, maps, photographs, and field notes will be curated with Dr. Nicholas Bellantoni, Office of Connecticut State Archaeology, Box U-1023, University of Connecticut, Storrs, Connecticut 06269.

7.0 Results of the Investigation and Management Recommendations

During survey, 14 of 15 (93 percent) planned shovel tests were excavated successfully throughout the Areas of Potential Effect. These included five shovel tests within the proposed lease area (one in the center of the tower, and one in each of the four corners) and 10 shovel tests along the proposed access driveway (Figure 2). A single shovel test (located in the center of the tower) was not excavated due to previous disturbances (i.e. the placement of a radio tower with buried utility lines). A typical shovel test profile exhibited two strata in profile and it extended to a depth of 45 cmbs (17.7 inbs). Stratum I, which extended from 0 to 20 cmbs (0 to 7.8 inbs), consisted of a layer of dark brown (10YR 3/3) loamy sand. Stratum II reached from 20 to 50 cmbs (7.8 to 17.7 inbs) and it was characterized as a deposit of dark yellowish brown (10YR 4/6) loamy sand. Despite the completion of subsurface testing, no evidence of cultural features was identified within the excavated shovel tests, and no cultural material was recovered. Thus, no impacts to cultural resources are anticipated, and no additional fieldwork is recommended.

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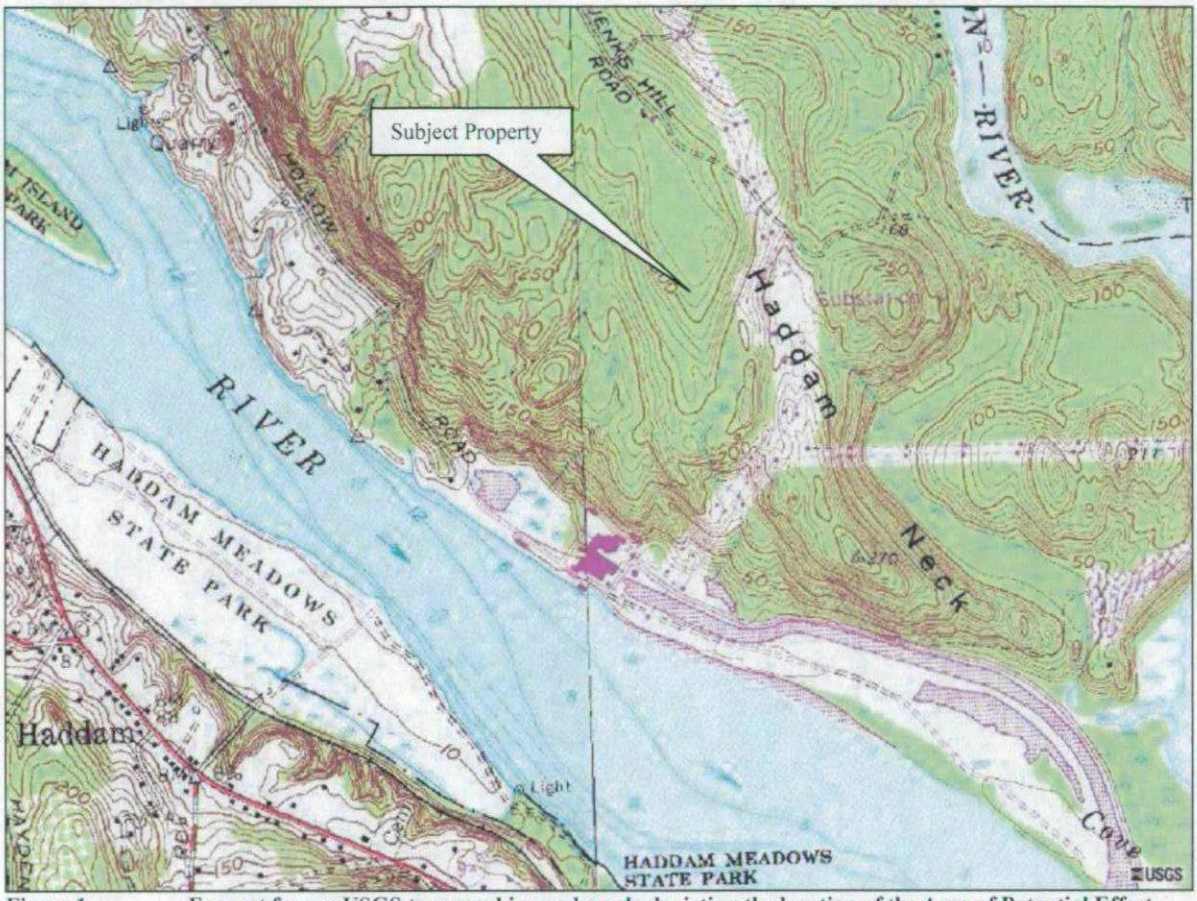

Figure 1. **Excerpt from a USGS topographic quadrangle depicting the location of the Area of Potential Effect.**

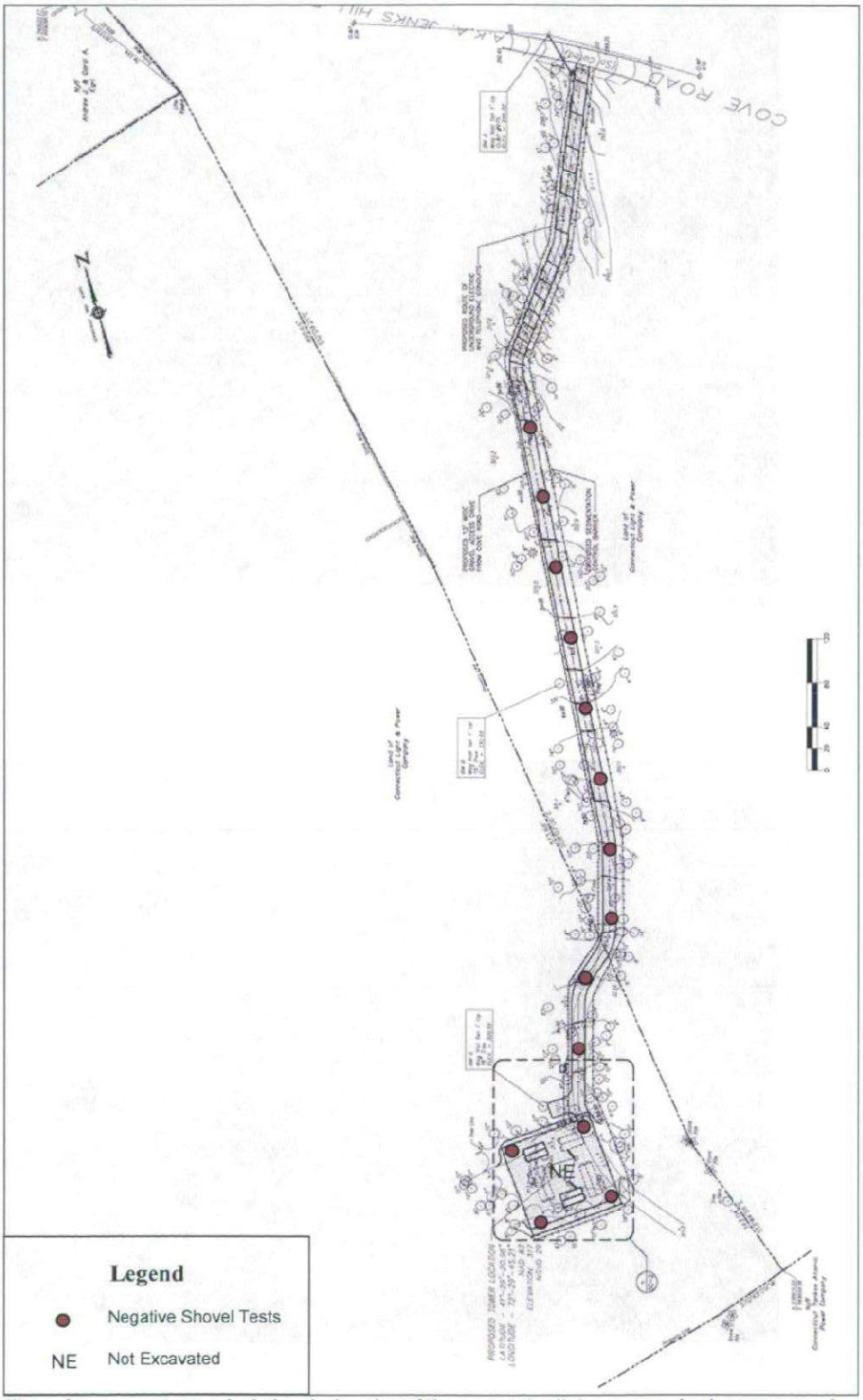

Figure 2. **A map depicting the location of the proposed cellular communications tower, and the location of excavated shovel tests.**

Figure 3. **Overview photo of the proposed cellular communication tower, facing northeast.**

Figure 4. **Overview photo of the proposed cellular communication tower, facing northwest.**

Figure 5. **Overview photo of the proposed access road, facing north.**

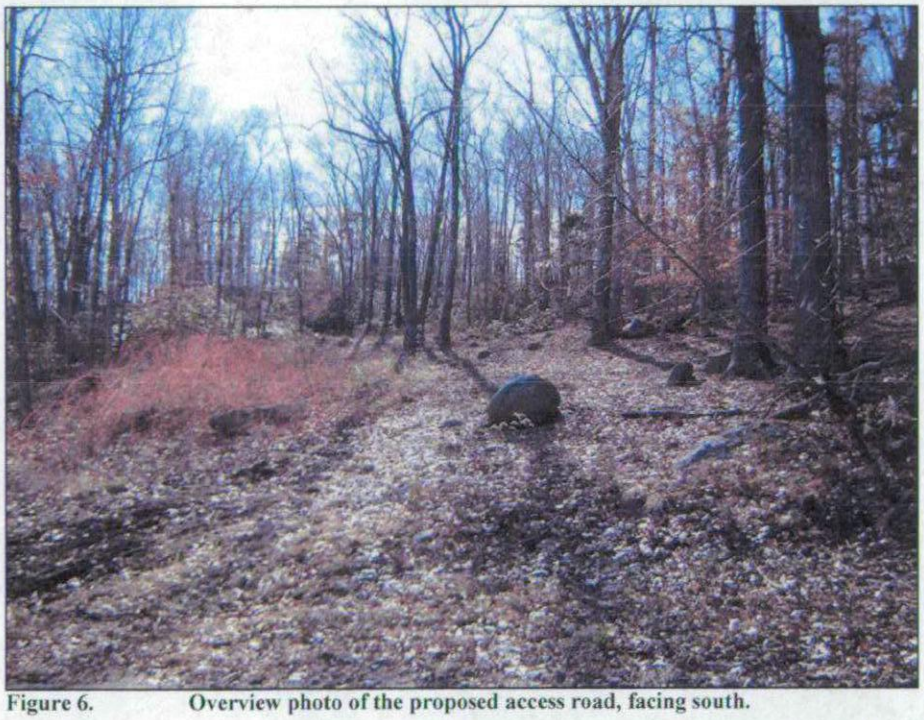

Figure 6. **Overview photo of the proposed access road, facing south.**

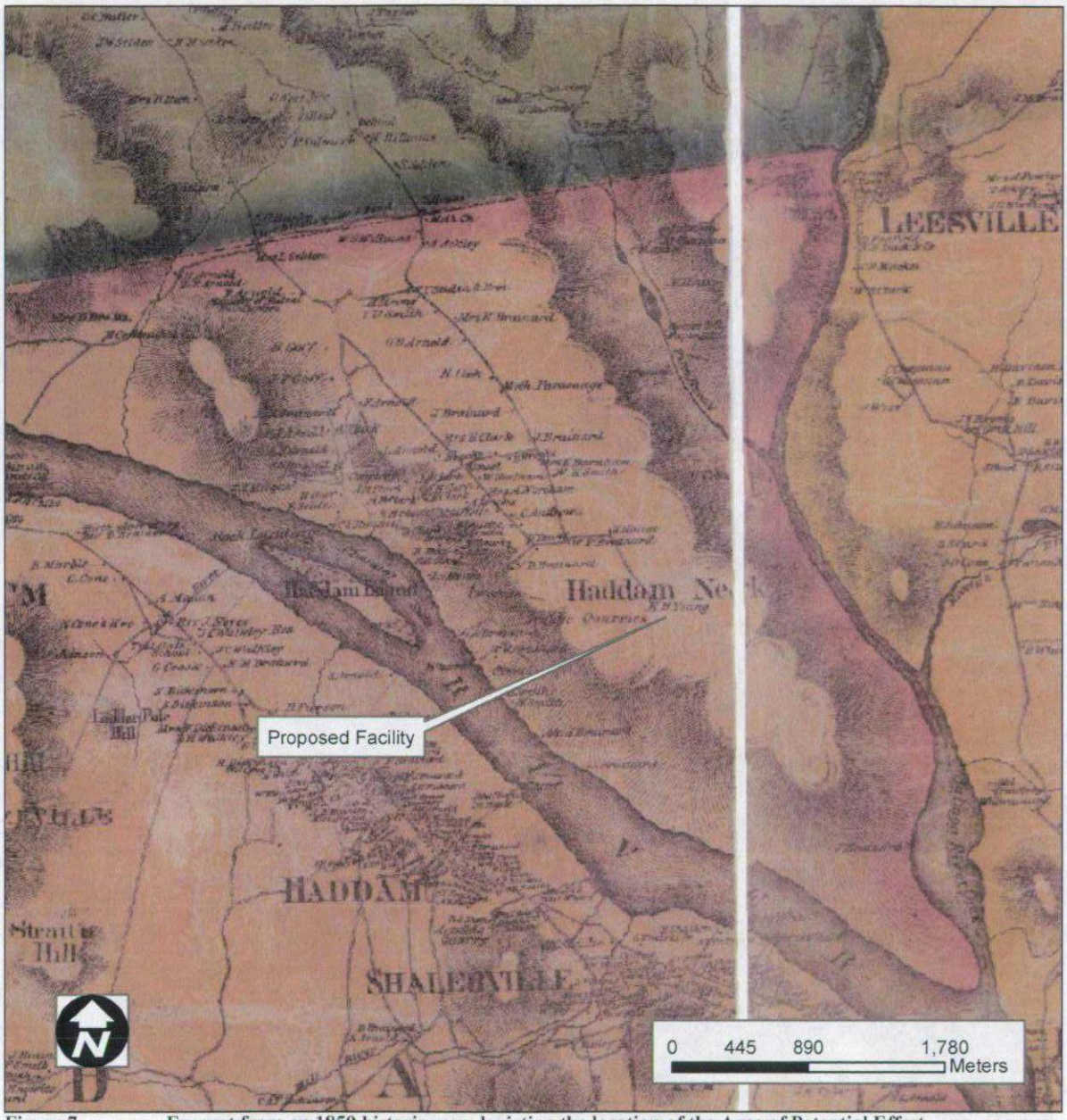

Figure 7. **Excerpt from an 1859 historic map depicting the location of the Area of Potential Effect.**

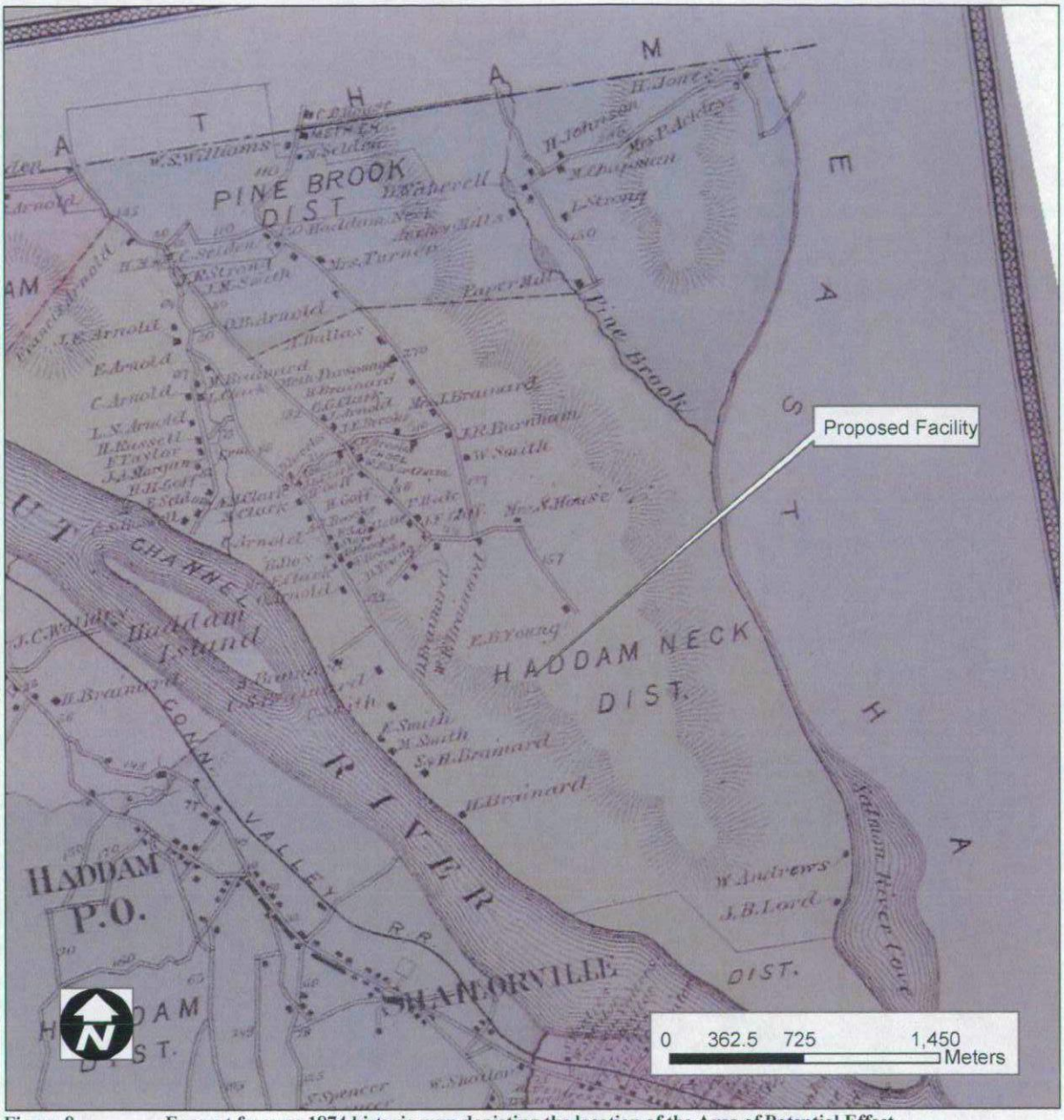

Figure 8. **Excerpt from an 1874 historic map depicting the location of the Area of Potential Effect.**

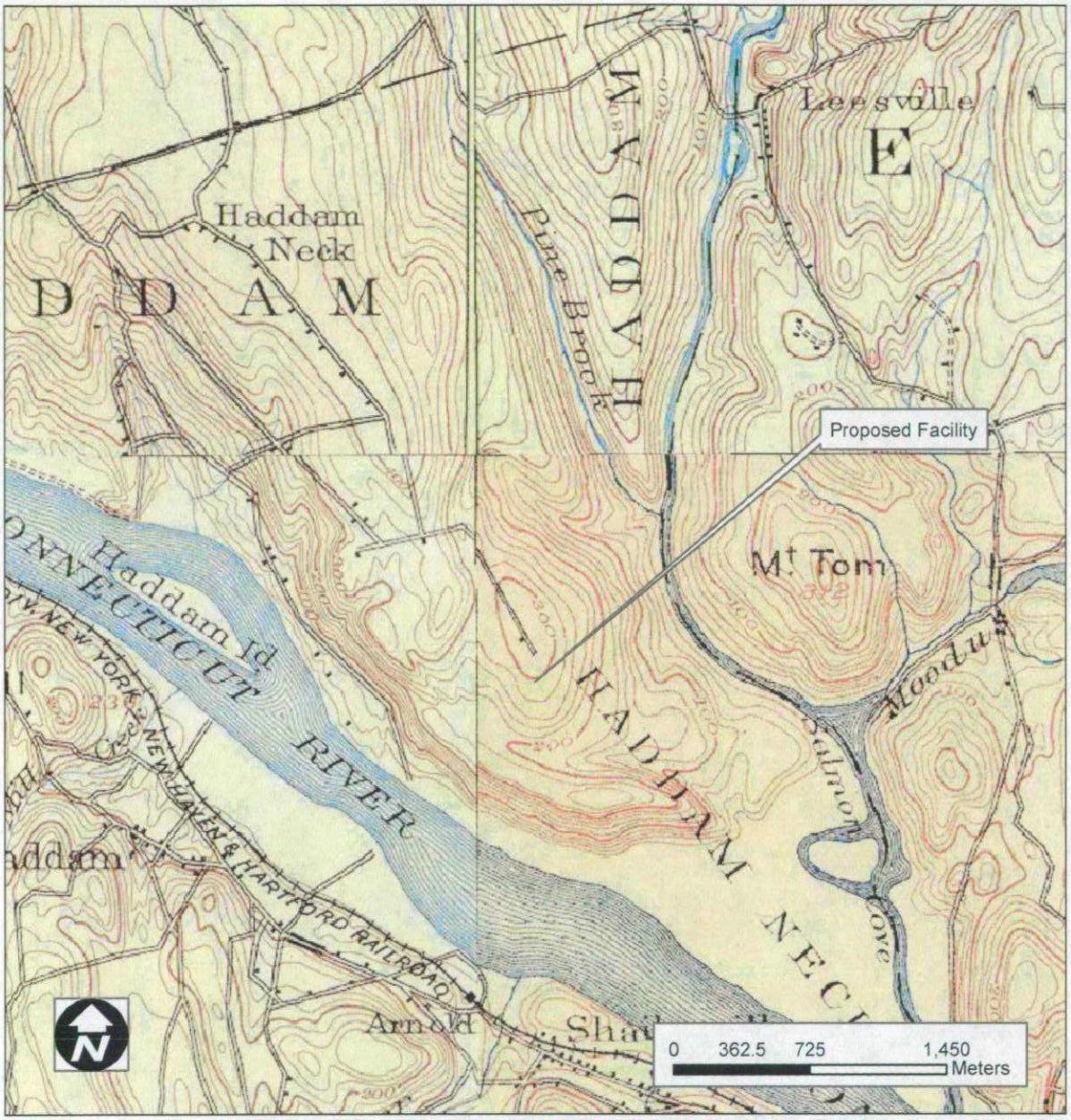

Figure 9. **Excerpt from an 1893 USGS topographic quadrangle depicting the location of the Area of Potential Effect.**

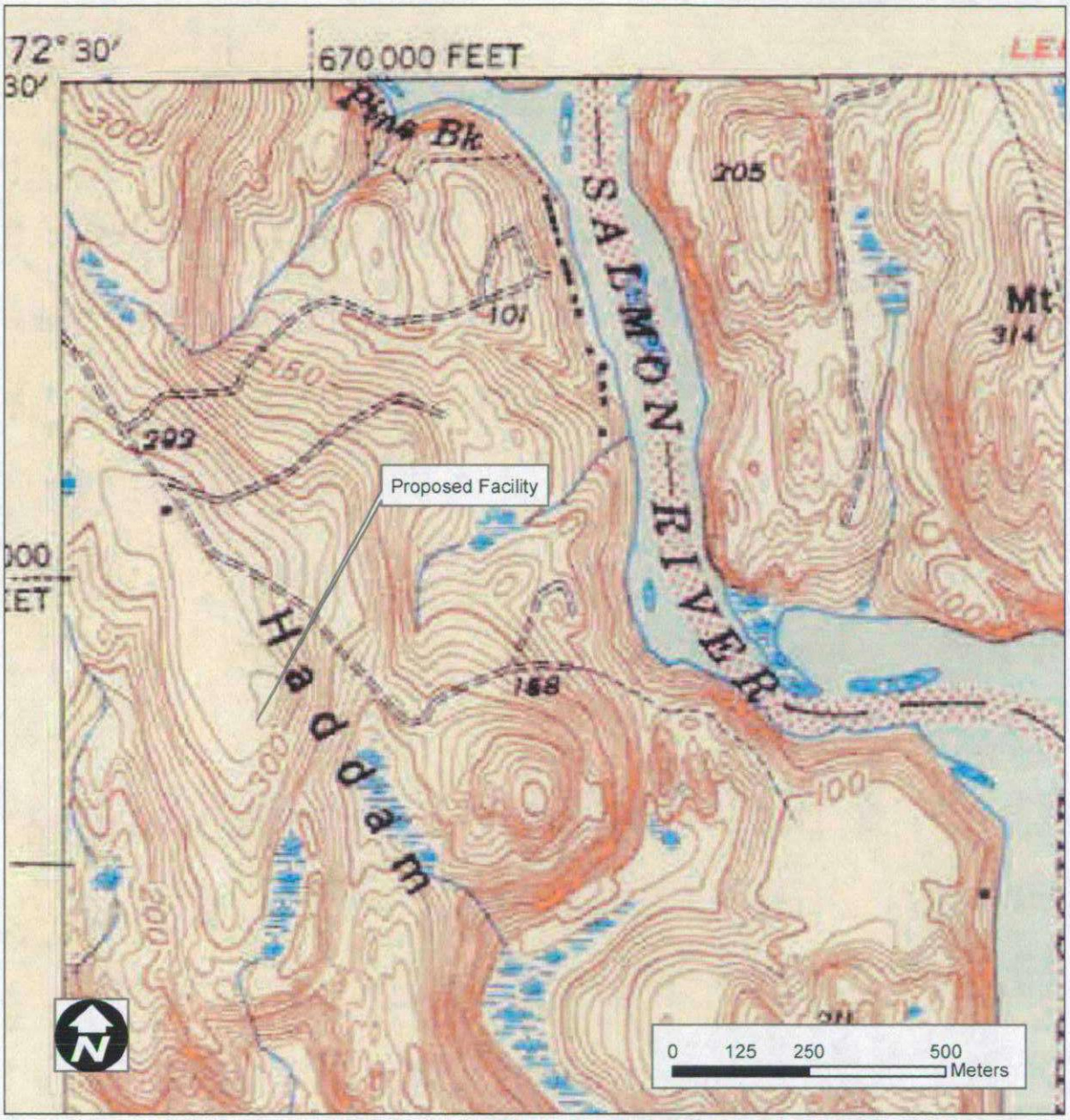

Figure 10. **Excerpt from a 1944 USGS topographic quadrangle depicting the location of the Area of Potential Effect.**

Figure 11. **Excerpt from a 1934 aerial photograph depicting the location of the Area of Potential Effect.**

Figure 12. **Excerpt from a 1970 aerial photograph depicting the location of the Area of Potential Effect.**

Figure 13. **Excerpt from a 1986 aerial photograph depicting the location of the Area of Potential Effect.**

Figure 14. Excerpt from a 2004 aerial photograph depicting the location of the Area of Potential Effect.

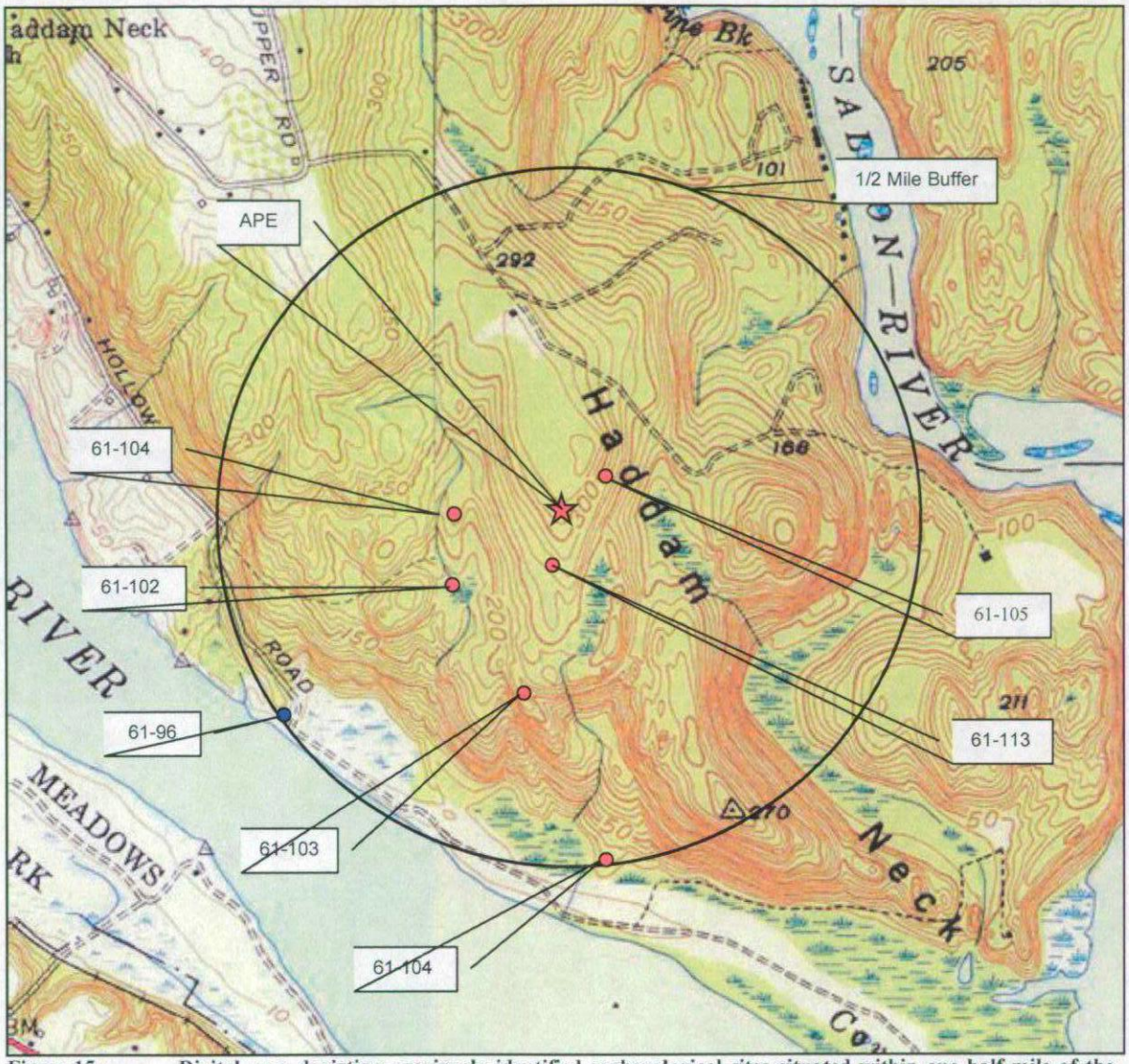

Figure 15. Digital map depicting previously identified archaeological sites situated within one half mile of the Area of Potential Effect.