

BOUND IN STONE: A LANDSCAPE AND ARCHITECTURAL ANALYSIS OF THE
EASTERN PEQUOT TRIBAL NATION RESERVATION, CONNECTICUT

A Thesis Presented

by

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ABSTRACT

BOUND IN STONE: A LANDSCAPE AND ARCHITECTURAL ANALYSIS OF THE EASTERN PEQUOT TRIBAL NATION RESERVATION, CONNECTICUT

August 2012

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Stone walls, piles, and other architectural features are spread throughout the New England landscape, including the Eastern Pequot Tribal Nation reservation in North Stonington, Connecticut. When found associated with Native American land, these features have often been cited as European constructions that were eventually adopted by neighboring Native American communities as part of growing engagements with bounded landscapes, animal husbandry, intensified agriculture, and private property. To date, analyses of colonialism and its impacts on indigenous people have not focused on these stone features, in part due to their European origins and in part due to their difficulties in dating and interpreting. Yet, these comprise key elements of landscape use on Native American reservations in 17th- through 19th-century southern New England.

This thesis chronicles and interprets the ongoing collection of spatial and built environment data from multiple seasons of field work conducted on the Eastern Pequot reservation by University of Massachusetts Boston researchers. Data from electronic

total station mapping of surface features, shovel test pit survey and excavation units that reveal artifact distributions in and around these features, and previous scholars' typologies of stone features are combined to address several dimensions of reservation life. This thesis uses these data to identify spatial relationships between houses and the built environment of the reservation landscape, to sequence as best as possible some of these landscape features with nearby households, and to offer preliminary interpretations of these various extant features of the reservation with respect to property, enclosure, and farming. The results suggest that the Eastern Pequot gradually incorporated these new stone construction practices. These material practices were not imported wholesale upon occupation of various house sites on the reservation. Instead, houses often preceded the creation of extensive stone pile and field wall systems, suggesting that the intensification of agriculture on the reservation may have post-dated the late 18th century for certain households, or more likely, took place after the middle 19th century when several houses in the center of the reservation were no longer occupied. Ultimately, this thesis demonstrates that the changes in the usage, organization, and construction of the landscape and architectural features of the Eastern Pequot reservation are the result of the active decision-making processes of Pequot people and must be accorded archaeological and historical attention.

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CHAPTER 1

INTRODUCTION

The Eastern Pequot have occupied their reservation lands in southeastern Connecticut, specifically in what is now North Stonington, since it was granted to them in 1683 by English colonists (Fig. 1.1). Since this time, the Pequot people, as well as other Native American communities in New England, have been faced with environmental and social pressures to accept, reject, or use European and subsequent EuroAmerican practices and beliefs that were introduced and imposed upon them by colonists and settlers. The decisions that the Eastern Pequot people made in the face of these pressures subsequently resulted in some changes in their economic and dietary practices, landscape organization, and overall lifestyle.

Evidence of these social and physical interactions and experiences are visible in the subsurface archaeological record and in the stone walls, piles, foundations, root cellars, and various other forms that stretch across the New England landscape, especially those on reservation lands. These latter architectural forms reflect the people that conceived of and constructed them and sometimes the intersections of different cultures. The analyses of these stone features and their overall relation to the surrounding

landscape and environment of the Eastern Pequot reservation provide insight into the way that this community used and conceptualized their environment during certain periods with what some may consider European-based construction and landscaping methods (Allport 1994; Anderson 1994; Carroll 1969; Cronon 1983; Danhof 1944; Hood 1996; Gardner and Allport 2003; Silverman 2003; Springer 1986; Thomas 1976; Thorson 2002, 2005).

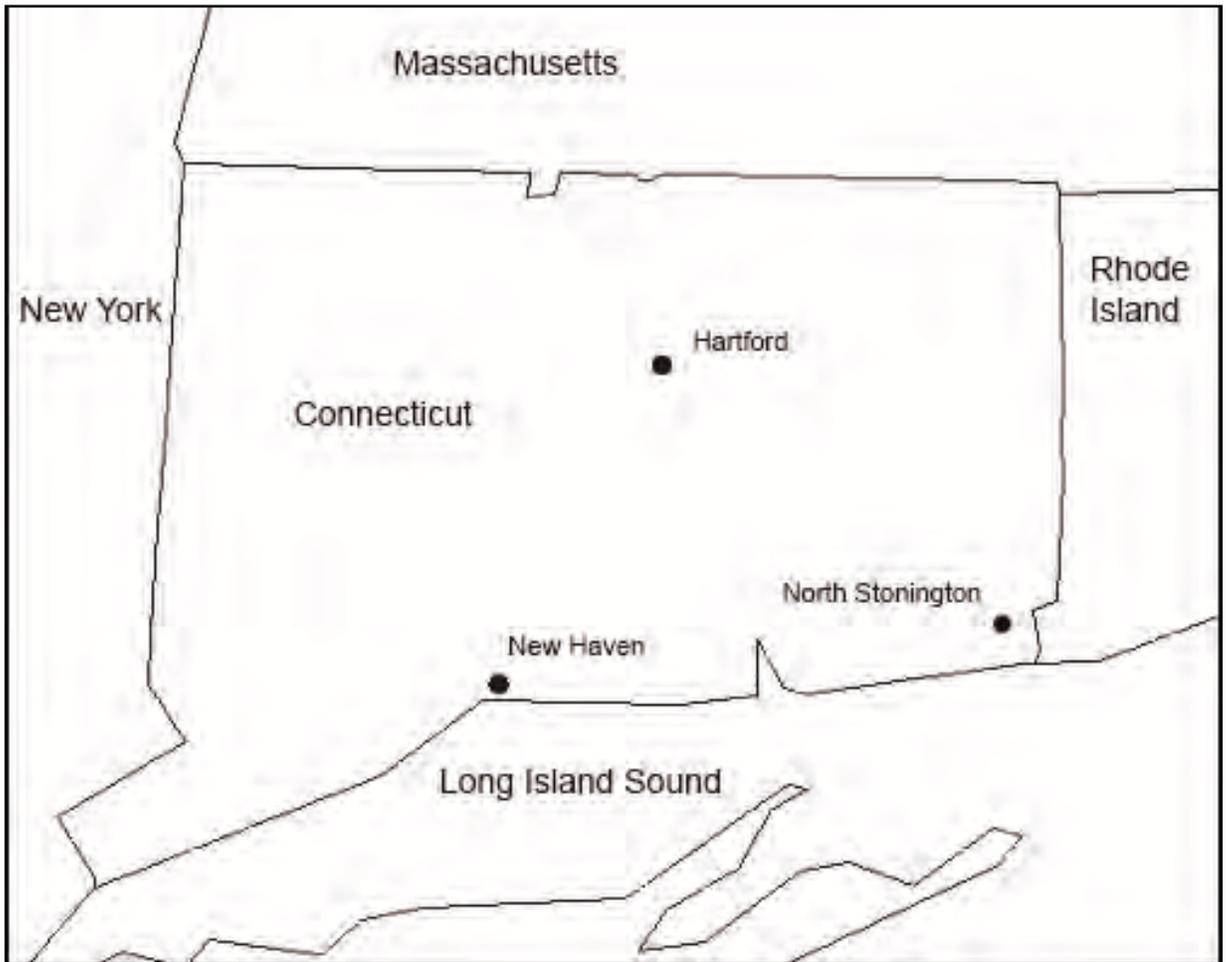


Figure 1.1 Map of Connecticut

Approach

This thesis broadly examines some of the ways that the Eastern Pequot people negotiated colonial changes within the context of the uses and formations of their built environment. The study of the landscape and architecture of the reservation offers new insight into how colonization and the introduction of new ideas, practices, goods, and peoples are represented and expressed in the built landscape of stone features. Landscape studies like this one provide information regarding the uses, conceptualization, and organization of the places that people occupied.

Changes in the landscape, settlement patterns, and subsequent dietary practices of residents on the Eastern Pequot reservation are complex given the long occupation of the area and the reservation system itself that altered the previous lifeways of Indigenous communities in southern New England (Silliman 2009). The official bounding of a once open land base restricted the movement and economic and dietary activities of a previously seasonally mobile people. Living within the context of a restricted and governmentally controlled area of land, the people of the Eastern Pequot community reshaped their relationship with the land and left physical evidence of their newly altered practices. As a result of these dramatic lifestyle shifts, as well as other changes to their needs and expectations of their land, the Eastern Pequot adapted and implemented new techniques and practices, some of which reflected practices of land use that paralleled neighboring EuroAmericans. The architectural remains that form the primary area of focus in this thesis are the stone walls, piles, foundations, and root cellars on the Eastern Pequot reservation. This is particularly important in a Native American reservation context since evidence of noticeable stone constructions and piles for New England's

Indigenous people point toward a more recent addition of these to their cultural repertoire.

According to an 1871 survey of fences conducted by the U.S. Department of Agriculture, “the best fences are of stone” (Washington Government Printing Office 1872:509). This statement is clearly exemplified by the fact that stone was reported to be the building material for one-third of the fences in Connecticut, and New London County, specifically, was reported as having 70% of their walls constructed of stone (Washington Government Printing Office 1872:500). The stone walls that litter the forests of New England were constructed for a variety of purposes. Some act as boundary markers to separate privately owned lands, some are “ornaments” for aesthetic purposes or to display wealth, others simply hold the waste stone that once littered farm fields, and some were built to keep animals enclosed in pens or out of agricultural fields (Thorson 2002:6). These “fossilized ideas” represent some of the cultural ideals of an era and impose order on the physical space (Lanier and Herman 1997:4; Pauls 2006:68), and they constitute not only colonial and settler approaches to landscape, but also those of the Eastern Pequot. As a result, these cultural and physical markers of the landscape provide a great deal of data for archaeologists and other scholars to study changes in Native cultural practices and notions of landscape uses and organization during the colonial period in New England. Architectural studies allow us to understand the stone features not only as artifacts themselves, but also as the context in which other material culture is used, placed, and understood (Buchli 2002:207).

By comparing the locations of stone formations to known houses and structures across certain sections of the reservation and through the interpretation of their general

sequences of construction, this research provides insights about the overall landscape of the reservation and how the uses or formations of stone walls and piles changed over time. This kind of spatial analysis has yet to be conducted on Eastern Pequot materials, and by conducting this new methodological approach on hard-to-study features, such as stone walls and piles, this research complements the household-based studies that have already been completed (Cipolla 2005; Fedore 2008; Hayden 2012; Hunter 2012; Silliman 2009; Silliman and Witt 2010; Witt 2007).

I also intend to use the established stone wall methodologies of previous scholars' works as a framework to reinterpret and determine a useful methodology for studying a Native American context in New England. Many scholars attribute the use of stone walls and piles to the influence of increased agricultural practices, influences from Puritan religious beliefs, shifting changes from communal to privatized land ownership, and various other European ideologies of land use (Allport 1994; Anderson 1994; Carroll 1969; Cronon 1983; Danhof 1944; Hood 1996; Gardner and Allport 2003; Silverman 2003; Springer 1986; Thomas 1976; Thorson 2002, 2005). How these play out in Native American contexts is not yet fully understood. Therefore, this study offers an exploratory investigation of hard-to-study historic features, aids in the documentation of the chronology of architectural construction efforts in areas of the reservation, and further develops landscape methodologies for interpreting Native American colonial communities.

Colonialism Studies

Colonization and its effects on Indigenous populations is a frequently studied topic in archaeological research, especially in North America. Topics related to economic practices, diets, consumer goods, settlement patterns, and landscape uses are a few of the types of archaeological studies that provide information about the adjustments made by colonists and Indians as they came into contact with new people, ideas, and goods during the colonial period. While the influence of Europeans on Native American communities has been studied in a variety of contexts in the past, not all of these studies identify Native peoples as active agents in the difficult choices that they made regarding the adoption, rejection, or modification of new technologies and practices. The changes and continuity of cultural identities and practices are often emphasized as the dichotomized outcomes of colonialism. This narrow perspective fails to take into consideration the interrelated variable forms of change that may have taken place in colonial contexts (Ferris 2009; Loren 2008; Silliman 2005, 2009). It has become increasingly important, especially in the wake of many tribes' attempts to gain federal recognition, to understand the diverse ways that Native peoples actively and thoughtfully used new materials and ideas to redefine their roles in this changing society and in light of their own histories (Loren 2008; Mrozowski et al. 2009; Silliman 2005, 2009; Sluyter 2001).

A new wave of colonialism and culture contact studies have led researchers to shed light on the varied ways in which Indigenous communities adjusted their ways of life to accommodate new technologies and practices while still maintaining a sense of their cultural practices and beliefs and upholding communities and identities (Harrison

2004; Loren 2008; Mrozowski et al. 2009; Silliman 2005, 2009; Silverman 2003; Sluyter 2001). The colonialism and culture contact studies of landscapes and built environments are important tools in understanding how Native Americans adapted to life within the confines of a reservation system. However, not enough studies have focused on the landscape and the built environment (beyond simply studying houses) in these colonial contexts (Harrison 2004). This is particularly important in light of the reservation system itself as it develops in Anglo North America. According to Den Ouden, the creation of the reservation system is “directly linked to the colonial construction of racial hierarchy, ultimately inscribing it upon the landscape” (Den Ouden 2004:17). Other scholars have referred to it as a system of “complete submission and obedience,” (Warner 1935:256) and as a way for colonial officials to “control [Indians] more effectively and free more land for English settlement” (Miles 1994:48). At the same time, though, it became a reservoir of persistence, a defensible place, and a traditional locale (Den Ouden 2004).

Material culture studies have traditionally produced dichotomized results that assigned either “European” or “Native American” character to goods and practices. A growing shift in archaeological practice, however, has recognized that this split between European and Native as material identifiers is not so clearly differentiated and that more attention must be given to the choices and agency of Native participants in the adoption and reconfiguration of goods and practices (Loren 2008; Silliman 2009). Although goods of European origin are common at historical Native American sites, this does not necessarily indicate a complete acceptance and assimilation to European culture. Instead, material culture choices must be examined to determine the purposes behind why certain goods may have been sought, what the items were used for, and if this use differed from

its intended purpose in both Native and non-Native contexts. As colonists and Natives were first encountering each other, whether physically, materially, spatially, or ideologically, both groups were forced to clearly define their identities “so as to make sense of Self and Other” (Loren 2008:3). While some acceptance and adoption of European goods and beliefs occurred among Native groups, the motives behind such behaviors and the culturally specific ways in which tribes, such as the Eastern Pequot, adopted European practices and beliefs are not always properly understood in their own context. For instance, archaeological and documentary research has concluded that even as the Pequots and others took up certain aspects of English farming, “wetus continued to sit behind framed structures, sweat lodges stood next to animal pens, and traditional gardens and middens lay just beyond cleared pastures and stone walls” (Silverman 2003:543).

Landscape and Architecture Studies

The definitions of landscapes are often as varied as the researchers who study them. While some scholars emphasize topography and terrain, others address the social actions that occur within these spaces. A key uniting factor in many of these definitions of landscapes, however, is the human involvement in how it is experienced, created, and altered. Incorporating the definitions of scholars such as Cronon (1983, 1996), Preucel and Meskell (2007), Holtorf and Williams (2006), Pauls (2006), and Thomas (2001) within the context of this thesis, I define a landscape as an inhabited environment that is comprised of natural and artificial elements of human social and physical interactions and experiences.

Archaeologists tend to conduct landscape studies in two ways. The first type of landscape study primarily contributes to our understanding of physical spaces of nature and the biological and ecological changes of the landscape. In this method, “space is usually defined as a natural science concept, the physical setting within which everything occurs” (Preucel and Meskell 2007:215). Changes to plant and animal populations, the spread of pathogens and epidemics, and changes in the diets and cultivation practices are the lead topics in studies of colonialism. The second trend in landscape studies focuses on humanized social spaces with regard to the relationships between people that structured the use of the biological environment, the ways that disease spread, the biocultural context for health, the choices surrounding diet, and the outcome of the social process of valuing space (Holtorf and Williams 2006:235; Pauls 2006:66; Preucel and Meskell 2007:219; Silliman 2005:280; Thomas 2001:166). A primary difference between these two perspectives is a focus on the influence of humans and the choices and motivations in the changes to their environments.

According to Cronon (1996:25), “nature is not nearly so natural as it seems. Instead, it is a profoundly human construction.” Given this rationale, one can assume that studies of ecological histories cannot be understood without regard to the impact and influence of humans. Floral and faunal studies as well as studies of built features on the landscape must be understood in their relation with human interaction. “Environment may initially shape the range of choices available to a people at a given moment, but then culture reshapes environment in responding to those choices” (Cronon 1983:13). Cronon also states that the “changes in the way people create and re-create their livelihood must be analyzed in terms of changes not only in their social relations but in their ecological

ones as well” (Cronon 1983:13). This thesis agrees: the changes in the landscape of the Eastern Pequot reservation must be understood both in terms of the effect of social interactions with colonists as well as the changes in the ecological needs and choices of the Pequot people (see also Jacobucci 2006).

Architectural remains and surface constructions, such as those found on the Eastern Pequot reservation, can be revealing indicators of the ideas and values of the people who once built and occupied them. According to Blake (2007:236), “As the purposeful characterization of a space, architecture shapes human practices and contributes to one’s perceptions of self in relation to the world.” Although often reserved for the study of architectural historians as opposed to historical archaeologists, the remains of built structures “represent a significant part of the material remains of the past five hundred years, the study of which deserves to be integrated with the analysis of sites, artifacts and landscapes” (Hicks and Horning 2006:273). In what Hicks and Horning refer to as “buildings archaeology”, a focus on domestic houses, industrial buildings, agricultural structures, gardens, and a variety of other forms of architectural remains provides opportunities for archaeologists to understand how architectural forms simultaneously reflect and shape the people and cultures that build them (Hicks and Horning 2006:280; Pauls 2006:29).

The built environment of stones found on the Eastern Pequot reservation is characteristic of the architecture of colonial New England. At the same time that these landscapes appear familiar with their connections to settler landscapes across the region, they also remain understudied in a distinctly Native American context. Using the analysis of select sites, artifacts and the stone architecture of the reservation, this thesis

will examine how the landscape and its built features reflected and constituted the Eastern Pequot people during this time period.

CHAPTER 2

BACKGROUND

Southern New England and Pequot History

Scholars have estimated that settlement of the area now known as New England began about 11,000 to 12,000 years ago after the melting of the last glaciers (Dincauze 1990:19). Ecological and cultural changes slowly transformed the landscape of New England over the next few thousand years. Maize cultivation was introduced around A.D. 800 and during the Late Woodland period (A.D. 1000-1600), and the Algonquian people who inhabited New England lived as “mobile farmers” or “foraging horticulturalists” who practiced a mixed hunting, gathering, and horticultural subsistence strategy that involved seasonal movement (Chilton 2005:143-144; Cronon 1983; Dincauze 1990; Loren 2008; McBride 1994).

The archaeological record of precolonial New England during the Late Woodland can be difficult to interpret as it does not fit the characteristics of large, sedentary farming villages. A lack of evidence for sedentism, craft specialization and permanent architecture for the Algonquian peoples instead indicates communities that practiced seasonal mobility and monitored ecological diversity (Chilton 1999, 2005:140; Cronon

1983:37; Hasenstab 1999; Starna 1990). While permanent settlements are typically not found in the archaeological record of the Late Woodland period, postmold patterns from short-term wigwams indicate the settlement patterns of these mobile peoples (Chilton 2005:145). Temporarily framed houses were easily taken apart and moved elsewhere, and the overlapping patterns left by these structures and other features indicates repeated seasonal use of site locations over time (Chilton 2005:145). The shapes and sizes of these houses varied from small wigwams housing one or two families in the summer to extended houses that lodged multiple families in the winter (Cronon 1983:38; Starna 1990).

Ceramic data also contribute to our understanding of the mobility and fluidity of the Algonquian people. According to Chilton's (1999) study of ceramics from western Massachusetts, she suggests that native peoples were making utilitarian choices in the temper, wall thickness, and surface treatments of their ceramics. Thicker walled pots with denser temper were better able to withstand the stresses of these highly mobile peoples, but they were not ideal maize cooking pots. Instead, it appears that they were used for the transport, storage, and cooking of a wide variety of foods and materials, thus reflecting the greater mobility and fluidity of social and physical boundaries the Algonquian peoples were allowed (Chilton 1999:110, 2005:147).

As seasonally mobile people, Algonquians utilized the diversity of their environment and exploited a wide variety of land, air, and aquatic resources. Those communities with access to the sea were able to utilize the vast fish and shellfish resources. The spring and summer months were a time of plenty – providing migratory birds, coastal mammals, fruits, berries, and nuts. In the fall, as populations moved further

inland, small family bands subsisted on larger game consisting of beaver, caribou, moose, deer, and bear, depending on latitude. Indians that occupied the southern portion of New England, in addition to their annual hunting and fishing activities, supplemented their diets in the winter months with maize, beans, and squash from their crops (Cronon 1983:43; Starna 1990).

The arrival of maize in coastal southern New England has been called a “non-event” in the sense that it had little immediate effect on settlement patterns or on previously established subsistence practices that included the storage and “encouragement” of Indigenous plants (Bragdon 1999:83). While scholars agree that New England Indians participated in horticulture, this practice may not have consumed a great deal of their time. Instead, after planting their crops, people would have left them to grow for a few months while they hunted or gathered elsewhere (Chilton 2005:143-144; Cronon 1983:45). According to McBride, archaeological research of precolonial Pequot settlements indicates that “where there are villages there are cornfields, but cornfields were also placed away from villages, perhaps wherever good soil was found” (McBride 1990:102). In addition to this assertion McBride concludes that perhaps as many as 200 acres of fields were associated with each Pequot village (McBride 1990:102).

Historical records and analyses of Algonquian calendar systems corroborate the mobility of the Algonquian people and their hunting, gathering, and farming practices. Ethnographic studies of Native calendar systems have indicated an emphasis on maize horticulture and fishing and on the timing of gardening activities. Comparatively little reference is made to hunting activities, signaling the growing importance of agriculture

and the secondary nature of terrestrial game resources (Cronon 1983:43; Dincauze 1990:30; Hasenstab 1999:139; Thomas 1976:6). Additionally, the newly arrived European colonists observed and reported on Indian communities, stating, “Towns they have none, being always removing from one place to another for conveniency of food...” and “In the middle of summer...they will flie and remove on a sudden from one part of the field to a fresh place...Sometimes they remove to a hunting house in the end of the year...but their great remove is from their Summer fields to a warme and thick woodie bottoms where they winter” (Josselyn 1833[1674]); Williams 1963[1643]).

The evidence gained from the archaeological and historical records demonstrate that Native American communities of precolonial New England lived in a society that utilized many aspects of their environments. Unrestricted by rigid boundaries, these communities were relatively free to move to resources and to maintain a mobile lifestyle that changed with the seasons and that respected neighboring communities. The changes brought by colonization would alter the mobility and use of the landscape by Pequot peoples. This thesis examines how the implementation of the reservation system in the 17th century and the changes to Pequot lifeways then and two centuries thereafter were expressed in the built landscape through construction of stone walls and piles along with houses of various degrees of permanence on the landscape. These gradual changes and decisions made by the Eastern Pequot people in the desired uses of the landscape resulted in a bounded space that changed, or represented some of the changes and continuities of, Pequot social, economic, and ecological relationships.

Early contact with Europeans, beginning with the Dutch and soon including the English and French, was initiated by the trade of beaver pelts and wampum (shell beads). This interest in trade and economic profit led European colonists to establish colonies in North America in the 17th century, which brought devastating changes for the Indigenous populations of the area. Within twenty years of the founding of Plymouth Colony, the Pequot and other southeastern New England Native groups had been decimated by virgin soil epidemics such as smallpox, and by 1636 had left behind an estimated 4,000 people, down from 13,000 people just before contact (Starna 1990:46). However, the Pequot War (1636-1638), the first major conflict between colonists and an Indigenous New England people, would have an even more devastating impact on the larger Pequot aggregate at the time (Hauptman and Wherry 1990; McBride 1990:104; Starna 1990).

In 1637, long-standing tensions between the Puritan English of Connecticut and Massachusetts Bay colonies and the Pequot escalated into open warfare. Tensions from efforts to control the fur trade, as well as divisions between the Pequot and Mohegan and their trade alliances, reached a breaking point after a series of vengeful battles and raids between the English and select tribes. The traditional enemies of the Pequot, the Mohegan and the Narragansett, openly sided with the English, and on May 26, 1637, set fire to and attacked the Pequot palisade in Mystic, Connecticut. Some estimates indicate that up to 1,500 Pequot were killed that day (Hauptman and Wherry 1990; McBride 1990:104; Starna 1990).

In compliance with the 1638 Treaty of Hartford, a formal signal of the English military conquest of the Pequot, the survivors of the Pequot Massacre were captured, and some were distributed to Mohegan and Narragansett communities as payment for their

service, thus initiating what would become the distinction between the Western (Mashantucket) and Eastern Pequot tribes, respectively. The Treaty of Hartford further attempted to solidify the extinguishment of the Pequots' existence by forbidding the use of their tribal name and granting their lands to the English as a prize for a so-called "just war." With these actions the English government attempted to rid the Connecticut landscape of a Pequot presence (Den Ouden 2004:12; McBride 1993; Silliman and Sebastian Dring 2008:68). Despite these efforts, the Pequot people could not be ignored, and they pushed for cultural persistence. In 1651 the Connecticut government reserved land at Noank and in 1666 granted a reservation near Ledyard for the Mashantucket Pequot. In 1683 a reservation was created in what would become North Stonington for the Eastern Pequot. This further solidified the division between these once united Pequot groups, although intermarriage and familial relations would crosscut those boundaries for centuries thereafter.

Stone Walls and Other Rock Features in New England

A 1680 Connecticut law set a precise definition of Native rights to reservation land which stipulated the following:

What land is allotted or set apart for any parcels of Indians within the bownds of any plantation, it shall be recorded to them and shall remain to them and their heirs for ever; and it shall not be in the power of any such Indian or Indians to make any alienation thereof; and whatsoever Englishmen shall purchases any such lands layd out or allotted to the sayd Indians, he shall forfeit treble the value of what he so purchases to the publique treasure, and the bargain shall be voyed and null (Public Records in the Colony of Connecticut, 3:56-57).

Laws such as these were established in various New England towns to forbid the purchase of lands from Indians, except in the name of, and for the use of, the colony. Despite this law and the establishment of the Pequot reservations, European colonists continued to encroach upon Indian lands (Den Ouden 2004). Additional laws were created stipulating the appropriate methods of land ownership and use through the bounding of farm lands. These laws encouraged European practices of seizing “waste land” from Indian populations so that a Christian people could till it to honor God’s will to be fruitful and multiply. It was the belief of early explorers and settlers that the landscape of the Eastern Woodlands was a “howling wilderness” that required “improvement” to bring it from a state of nature to one of productivity (Hood 1996:123). It was their perception that because Native groups did not “improve” the land, they did not have property rights comparable to that of their “civilized” European conquerors (Carroll 1969:182; Cronon 1983: 56; Den Ouden 2004:3; Hood 1996; Loren 2008:61; Silverman 2003; Springer 1986; Thomas 1976). The Indians’ savage and barbarous economy, as perceived by the English, combined with their lack of written deeds to the land, made their possession of the surrounding country illegitimate by English standards. It has been surmised that Indians quickly realized that so long as they did not put their land to what colonists deemed proper use, they were at risk of losing it (Silverman 2003:512-513).

Through the removal and relocation of tribes to reservation communities, colonists were able to make space for their economic and cultural expansion while simultaneously relocating the Native presence to less desired land. The construction of stone walls throughout the New England landscape during colonization demonstrates the

European ideal that an abundance of adequate fences was an indispensable adjunct to good and successful farming (Danhof 1944:169; Silverman 2003; Thomas 1976).

Religious beliefs, a shift from communal to individual ownership, an increase in the importance of animal husbandry, and strict fencing laws were all factors that contributed to the dramatic increase in stone wall construction for European settlers. One estimate claims that the majority of stone walls in New England were built from 1775-1825 (Allport 1994:89). Another estimate suggests that the period from 1810-1840 was the most active period of wall building (Gardner and Allport 2003:10). If so, these constructions reveal that this type of landscape modification occurs well past the first establishment of colonies and reservations. Earlier walls may have been constructed less commonly or with the use of alternate materials such as wood.

According to English belief, animal husbandry encouraged civilized living with its requirement of enclosed private property and sedentism. Although the practice of animal husbandry would ultimately disrupt accustomed lifestyles of Native Americans who had previously made no use of domesticated animals other than dogs, scholars state that Indians began adopting animal livestock husbandry as a broad pattern of intercultural borrowing and because they understood that they had to make some difficult concessions to the English in order to protect their homelands (Anderson 1994:602, 611; Silverman 2003:514). While many Indian tribes adopted pigs, as they were most like dogs and easier to care for, sheep were also important to the later developments in the landscape that resulted from animal husbandry. Due to the nature of sheep, extra enclosures were needed to keep them contained. Furthermore, expanding flocks damaged the topsoil, thus yielding a large stock of stones that were just under the surface of their fields (Thorson

2002:102-105). While this estimation of the adoption of sheep may be accurate for other Native American communities, previous research has determined that on the Eastern Pequot reservation, cattle and pigs were the primary domesticated animals, with very little evidence of sheep found in the faunal assemblages (Cipolla 2005:97; Fedore 2008:46). As a result, small enclosures found on the reservation may not be associated with the use of domesticated sheep.

To the English, animal husbandry signified the reward of hard work with private gain. To the Indians, animal husbandry was a means of expanding their food base while demonstrating an acceptance of colonial ways and further establishing their distinctly native communal values and priorities in protecting their collective territory (Silverman 2003:515). Although other New England Indian tribes adopted animal husbandry earlier, Connecticut tribes did not begin to partake in this practice until after King Philip's War (1675). According to McBride (1990), archaeological research at Mashantucket Pequot sites has indicated evidence of animal husbandry in the later eighteenth- and nineteenth-century sites. "Evidence for cattle is rarely found, but the remains of young sheep and pigs are fairly common. Hunted foods, including deer and raccoon, are also common at most Pequot sites, even through the early twentieth century" (McBride 1990:108). Prior to this period there was no need for husbandry as there was generally an absence of missionaries to enforce the practice, allowing tribes to continue their traditional hunting practices (Silverman 2003:540). Despite Native American acceptance of this European practice, the introduction of livestock led to problems between Europeans and Indians in relation to subsistence practices, land use, property rights, and political authority (Anderson 1994:602).

English colonists not only brought livestock with them to the Northeast, but some of them also brought along their Puritan religion. The use of land and the marking of boundaries among Indians and Puritans differed and caused a great deal of tension (Allport 1994:89; Cronon 1983:66; Springer 1986:32). Citing Biblical instructions, Puritans used walls to surround their people and assure them that the Lord would not forsake them. Such boundaries distinguished the righteousness of one farm and the sinful chaos of another, while fulfilling God's will to be fruitful and multiply (Thorson 2002:87). According to one colonist, "Colonies have their warrant from God's direction and command...to replenish the earth, and to subdue it," thus, transforming the virgin forest into habitable areas (Carroll 1969:181). Although these practices stemmed from European ideals of land use and a shift from the notion of communal lands to individual property rights, Native Americans were subject to the enforcement of similar practices through fencing laws and regulations.

Enclosed private property and sedentism were key characteristics of civilized living to colonists (Silverman 2003:513). The shift from communal to individual land ownership and from densely populated villages to more isolated farmsteads was a critical influence behind the spread of stone walls over the landscape for settlers (Thorson 2002:84). A similar pattern may have affected Native American households and farmsteads as well. Without enclosed fields, Indian gardens were the regular victims of wandering colonial livestock. As a result of numerous legal complaints and claims of destroyed farms, English law mandated farmers to protect their crops by confining livestock within fenced or hedged enclosures. Furthermore, in 1648, a Massachusetts Bay code regulated that Indians must fence in their fields to protect them, or they would

face having to pay for any damages to them themselves (Anderson 1994:611; Springer 1986:51). By the 1850s, enclosing practices were no longer merely matters of custom, but were instead imbedded in the law of agricultural practices with stone being the primary building material in New England (Washington Government Printing Office 1872; Danhof 1944:173).

Europeans and Indigenous peoples had very different beliefs about how the land should be worked. Europeans brought roaming livestock with them and concepts of private property and single-crop plow agriculture, while many Native Americans in New England cultivated many crops, practiced seasonal fishing and hunting grounds, had no domestic animals other than dogs, and lived in semi-permanent settlements (Bragdon 1996; Loren 2008:60). As these new technologies, ideas, and goods were made available to Native American communities, tribes such as the Eastern Pequot were faced with new choices. They had to decide which strategies, technologies, and goods they wanted to adopt or incorporate into their lifestyles. Although restricted within the limits of the reservation system, the Pequot people, as well as other Native communities of New England, actively participated in their changing lifeways, which is an important counterpoint to the assumption that the otherwise harsh reservation system left them passive or victimized beyond recognition. The formation and organization of the reservation as well as the changes in the landscape over time, as indicated by the stone walls, piles and other built structures, tell how the Pequot valued their land and how they conceived of notions of property ownership, space and landscape, household activities, and agricultural practices.

As a result of these colonial histories of enclosure, agriculture, and animal husbandry, stone walls and the physical boundaries of the landscape of colonial New England have been frequent subjects of research in terms of their methods of construction, conservation, and historical importance. The thorough classification of these stone constructs throughout New England has been conducted for conservation purposes, and many articles and books focus on these issues (Allport 1994; Cronon 1983; Gage and Gage 2006; Gardner and Allport 2003; Noble and Gerb 1984; Thorson 2002, 2005). However, many of these studies focus heavily on European and EuroAmerican practices and make little mention of the agricultural practices of Native Americans and the relation of stone fences and rock piles to Native American sites and landscapes. The incorporation of European farming and land use techniques by Native Americans are frequently misinterpreted as signs of acculturation and a loss of Native cultural practices. Little attention is given to the ways in which Native groups implemented these landscape practices within their own cultural context as a means to maintain ownership of their lands, as an agriculturally adaptive strategy to their reduced land base, or as other currently unrecognized meaningful practices.

When Native Americans are mentioned in stone wall studies, they are typically characterized as workers or slaves who constructed walls to pay off debts to colonists. According to Thorson, in comparison to the tribes of the West and Southwest that constructed pueblos, monuments, pyramids, and irrigated fields, the Native Americans of the Northeastern woodlands, prior to European contact, did not have a stone-building tradition (Thorson 2002:61). He goes on to state that while they might have moved stones from agricultural fields, buried their dead underneath piles, made soup with hot

stones, and stacked piles of stones to perhaps sit on, tribes such as the Pequot of New England had limited use of stone due to their relatively small populations and migratory lifestyles (Thorson 2002:62). After this migratory lifestyle was dramatically altered by the creation of the reservation system and subsequent sedentism resulted in a limited land base from which to hunt and gather, Native communities slowly and consciously found alternative dietary practices in the form of increased agriculture and more permanent building practices for their homes and fields.

A prevalent theme in stone wall studies is an emphasis on their identification and categorization. Many of the books and articles that address stone walls include definitions and terminology for the reader to participate in their identification. The nuanced differences between the various types of stone piles, cairns, single walls, double walls, stiles, and other features is not the same across all scholars. Although there is some consistency in definitions, the purposes and meanings behind these constructs vary between authors. While some researchers such as Robert Thorson, Kevin Gardner, and Susan Allport (Allport 1994; Gardner and Allport 2003; Thorson 2002, 2005) focus on scientific and precise definitions of the various stone constructs based on their measurements, others, like Mary and James Gage and Constance Crosby, define stone markers based on their ceremonial and cultural purposes (Crosby 1993; Gage and Gage 2006). In the colonial context of New England, stone piles are typified as being property boundary markers, trail markers, and the end result of stones being removed from a field prior to or during plowing. While archaeologists who have studied them at similar sites have concluded that stone piles and walls may have been built by colonists and Natives for the aforementioned purposes, some alternative perspectives propose that stone

constructs functioned on the landscape as indicators of more ancient Native cultural practices. This has happened, in part, due to the difficulties in dating these stone walls and piles.

Mary and James Gage's (2006) *Guide to New England Stone Structures* describes the forms, functions, and proposed historical meanings behind the known stone structures on the New England landscape. According to this guide, European-built and Native American-built stone features are differentiated by their form and are categorized as property boundary markers, trail cairns, field clearing stone piles, stone wall building piles, and Native American cairns. Furthermore, Gage and Gage assert that stone piles were built for ritual or sacred purposes or to memorialize some significant event or occurrence and have existed on the landscape for thousands of years (Crosby 1993; Gage and Gage 2006). These remain hotly contested interpretations that I address only peripherally as this thesis focus on reservation-period stone construction and use and attempts to find some useful intersection of co-existing typologies and more careful dating.

CHAPTER 3

METHODS

Project Background

Archaeological excavations have been conducted at the Eastern Pequot reservation since 2003 by Dr. Stephen Silliman through collaboration between the University of Massachusetts Boston and the Eastern Pequot Tribal Nation (Silliman and Sebastian Dring 2008). This fieldwork was prompted by the Eastern Pequot Tribal Nation to document Eastern Pequot history and practices as vital links to present day culture and practices, while simultaneously offering an important case for studying the negotiations of colonialism by Native Americans in southern New England. This research was further prompted by a larger goal of cultural and historic preservation as part of the petitioning for Federal Acknowledgement through the U.S. federal government, which to date has not been granted (Silliman and Sebastian Dring 2008:71). The primary objectives of this project are to assist the tribal community in locating, documenting, and managing their cultural and archaeological sites on their reservation land, to better understand the material and social complexities of colonialism in the 17th – 19th centuries, and to provide a means for students, including University of Massachusetts

Boston graduate and undergraduate students, Eastern Pequot Tribal Nation interns, and other student participants from across the country, to collaboratively train in the methods and theories of historical archaeology.

The ongoing field research, conducted in five week intervals during the summer, at the Eastern Pequot reservation has resulted in an expanded understanding of the lifeways of the Eastern Pequot people and the material and social complexities of colonialism in the 18th and 19th centuries (Cipolla 2005; Cipolla et al. 2007; Silliman 2009; Silliman and Witt 2010). Multiple M.A. theses have been produced from the recovered data from the reservation and from documentary research. Many of these theses have examined site specific studies of topics such as ethnobotanical remains, zooarchaeological analyses, ceramic studies, and studies of the Eastern Pequot role in the colonial economy (Cipolla 2005; Fedore 2008; Hunter 2012; Jacobucci 2006; McNeil 2005; Patton 2007; Witt 2007).

Involved in all of these field seasons, but not yet incorporated into thesis projects, has been full surface mapping of all sites and near-site areas to record stone walls, piles, and other features. The stone walls, piles, and house sites were mapped by an electronic total station. Walls were mapped by sequentially taking a trio of measurements (one side, top, other side) perpendicular to the course of stone at varying intervals, which were chosen to best represent the variations in the wall's size and direction. Stone piles were typically mapped with four points – three around the perimeter of the pile to obtain the general size of it and one on top of it to measure its height.

Using data from these excavations and mapping efforts and a variety of methodologies employed by other scholars, I analyzed known and mapped sites on the

Eastern Pequot Tribal Nation reservation using a tripartite approach. For this sample of the reservation, the analysis of (1) spatial structures and relative proximities of stone landscapes, (2) artifact distributions, and (3) the construction types and sizes of walls and piles were all employed to determine the forms, functions, and general sequences of construction of the built stone structures located across the Eastern Pequot Tribal Nation reservation. In order to help clarify site structure and provide a full scale analysis of the methods of landscape alteration, I employed ArcGIS as a primary tool in spatial analysis. With these maps I was able inspect how the known walls, buildings, features and excavated areas were related to better understand what these stone walls actually enclosed – whether homesteads, cemeteries, or farm lands – and what additional functions the other stone features might have served.

In addition to the spatial information gathered from these regular field season maps, specific field methods were implemented during the 2009 summer field season and an additional fall 2010 investigation to answer targeted questions. Simply put, we excavated beneath carefully selected sections of rock walls and rock piles to determine if they were built on top of pre-existing cultural materials known to be in the immediate vicinity or if they were artifact-free beneath them as a sign of their existence before the artifactual materials had been deposited around them. Admittedly, this method offers only a rough guide to sequence as it provides only a relative dating method since the amount of time between artifact deposition and rock construction cannot be established, but this *terminus post quem* approach to rock features provides helpful temporal information. This type of under-rock sampling has not been widely used in New England archaeology in what seems to be a tradition of not disturbing these extant features, but

such investigations are necessary to understand sequences of construction and the temporal and spatial relations between built features on the landscape. General reconstructions of these rock features after such sampling suffice as well for conservation purposes since many of the component stones have already shifted due to gravity, weather, and human activity to add to or scavenge from them. These potential reconfigurations have perhaps happened several times in the past, which already compromise any fine-scale chronologies of their post-construction modifications.

Terminology

The use of various scholars' works as general templates and guides for this research requires some clarification and definition of terminology within this context. A great deal of stone wall research has been done in the context of EuroAmerican settlements and agricultural practices; therefore, clarification and recontextualization of terms are necessary to relate these methods and theories to a Native American context. This is especially true since many of the classification systems hardly apply to some reservation stone constructions, and if they do, the range of categories is greatly diminished and can only be rather ambiguously applied.

According to Thorson's *Field Guide to New England's Stone Walls*, a stone wall connotes a structure serving to enclose, divide, support, or protect whereas a stone fence's function is to prevent entry or egress (Thorson 2005:59). Additionally, based on his distinctions, long, continuous constructs that are typically chest height are usually considered fences while shorter segments of any height are not considered fences because they were not built to control access either into or out of a piece of land. Although these

distinctions in stone wall classification might be relevant in certain contexts, in the context of the Eastern Pequot reservation we are still attempting to determine the purposes of the walls. Furthermore, while Thorson's definition might be appropriate in contexts where stone walls are better preserved, in many locations on the Eastern Pequot reservation these walls have fallen and their original height or purpose may not be discernable. Therefore, for purposes of this thesis and for consistency, I refer to all stone constructs that form a perceived boundary as a wall. Instead of adopting Thorson's or anyone else's definitions of walls and fences, I attempt to incorporate his and other scholars classifications as a means to better understand, on a case by case instance, what function a wall might have served and when it was built in relation to other known structures on the reservation.

Stone cairns are human-made mounds of stone that compactly fit together around the edges. Stone piles, on the other hand, refer to mounds of stone that were dumped, rather than purposefully built (Gage and Gage 2006:1). The purposes and uses of cairns vary over time, space, and cultural affiliation; however, many scholars agree that stone piles were the end result of the removal of stones from a field (Cronon 1983:120; Gage and Gage 2006; Thorson 2002:6, 2005:59). Stones from clearing efforts were sometimes dumped along the edge of a field or down a steep hillside, were incorporated into the creation of a wall around a field, or were left where they continue to occupy space throughout the New England forests. On the other hand, Gage and Gage's (2006) definitions of stone cairns within a Native American context seemingly encompass all potential possibilities. Their stone handbook describes the differences between cairns that are built on the ground, on boulders, and into walls, as well as those in both small

and large groupings, randomly placed cairns, varying types of cairns, cairns that are enclosed by walls and those without any clear boundaries. According to their guide, Native American enclosures exist as a means to define a sacred space in which a ceremony could be held. Furthermore, they conclude that enclosures of various shapes and sizes continue to be built by Native Americans as a part of vision quests and other shamanistic ceremonies and that these modern enclosures are distinguished “by the newness of their construction...the presence of scraps of black plastic, string, or other modern artifacts” (Gage and Gage 2006:21).

Gage and Gage’s assertions are problematic for multiple reasons. First, while they suggest that ancient practices may have resulted in the construction of walls and piles, they offer no conclusive characterization of what these might look like for identification purposes, nor do they consider how one might date these, problems that also confound others who propose similar ideas (e.g., Mavor and Dix 1989).

Additionally they assume based on the definition of European farms that Native Americans were not using materials like bricks, mortar, concrete and other historical artifacts until more modern times when we know archaeologically that this assumption is untrue. Finally they assume that all stone-building settlers had access to and used brick or mortar, which is also untrue. While there may be a clear distinction between stone cairns and stone piles in some contexts, this is rather ambiguous in many contexts, especially those on the Eastern Pequot reservation. Therefore, unless otherwise indicated, I refer to all small, circular groupings of stone as piles in this thesis. I would rather that the name of the feature itself not necessarily convey pre-made interpretations,

so I opt for a simplified nomenclature that might permit more sophisticated analyses. Besides, unambiguous cairn-like structures have not yet been mapped on the reservation.

In addition, I use the term “gate” or “gateway” to describe areas where there are intentional breaks in a wall where there could have been passage. Some of these gates are simply areas where the walls briefly stopped to allow passage while others are more elaborate in their form and construction, fanning out to mark the entry. All areas where there appears to be an intentional break in the wall to allow access will be referred to as a gate.

Artifact Distributions

I compiled artifact counts from excavation units and shovel test pits from the 2003-2009 field seasons into a distribution table with artifact categories and tabulations. To insure comparability and render an area-adjusted value for each excavated area, I adjusted the counts of total artifacts to a unit standard of 1.0-x-1.0 m in size, which meant multiplying artifact counts in units that measured 1.0-x-0.5 m by two and units that measured 0.5-x-0.5 m by four. These total adjusted artifact counts were then displayed in ArcGIS in a graduated color renderer to generate color-coded maps that could differentiate varying densities of artifacts based on the total artifact count from each unit. The locations of the excavation units and STPs are displayed in figures herein that specifically reference artifact distributions to avoid clutter in other discussions.

The graduated color renderer represents quantitative values as grouped ordered classes where all features within a class are drawn with the same color. Each class is assigned a graduated color based on standardized counts from smallest to largest. In this

particular case, I divided the data into the default classification method of 5 classes of natural breaks where the classes were based on natural groupings of data values. In this method, data values are arranged in order. The class breaks are determined statistically by an ArcGIS algorithm that finds adjacent count pairs between which a relatively large difference in data values exists. In this particular case, the classes of artifact counts fall within the following ranges: 0-120 (Class 1), 121-403 (Class 2), 404-986 (Class 3), 987-2560 (Class 4), and 2561-4378 (Class 5). This classification permits more resolved division of lower artifact counts (<986) and more aggregation of very high artifact count values (987-4378).

These graduated colors helpfully display value classes and their variance from the median value level. Therefore, these maps offer a visual representation of the distributions of total artifact counts from each unit as they related to the stone features across the landscape. From these data, wider scale observations and interpretations could be made regarding the use of space on the reservation and the sequences of construction of features across the landscape. By correlating artifact scatter and deposits with the locations of stone walls and features, I was able to make interpretations regarding the associations between occupied areas and neighboring stone constructions.

Spatial Structures, Proximities, and Sequences

To add to the growing literature and research of the Eastern Pequot reservation, I analyzed the data from the mapping efforts of seven summer field seasons (2003-2009) in ArcGIS. By mapping the sites and their surface features and assessing the proximities of stone structures to one another and to other features on the landscape, I was able to

identify areas of potential spatial and temporal relations between features. This approach led to the identification and sample testing of areas where there were noted inconsistencies in the anticipated locations of stone features – for instance, having potential field clearing stone piles within just a couple of meters of houses. The identification of these spatial and temporal relationships through the use of ArcGIS maps and field observations provides answers to questions regarding the approximate sequences of construction of the built landscape as well as their proposed functions on the reservation.

Excavation units (1.0-x-1.0 m and 1.0-x-0.5 m) and shovel test pits (0.5-x-0.5 m), the latter both on systematic grid intervals across sites and judgmentally placed beneath rock piles and wall segments, were also integral tools in the identification and interpretation of areas with information regarding spatiality, temporality, and sequences of construction. The identification of areas with stone features that had unexpected or potentially revealing spatial relations was a focus of the field methods of 2009 and 2010. Because determining clear dates of construction of stone walls is difficult, it was important to define the boundaries of known artifact scatter in relation to the stone walls and stone piles. Then, we could isolate stone piles and wall sections in those areas for under-rock sampling. The expectation was simple superposition: If artifacts were widely scattered around stone piles and walls, then these piles and walls should have no artifacts beneath them if they preceded the distribution, or they should have some materials beneath them if they succeeded them or were at least generally contemporary with the artifact-producing activities already documented. This has proven to be one of the only

ways to date these features, even though the sequence offers only relative chronologies rather than anything close to absolute dating.

Construction Types and Sizes

The final method of analysis used in this thesis focuses on the construction types and sizes of the stone features found on the reservation. Many studies of stone structures in New England place heavy emphasis on measurable features as a means of identifying their intended uses. The height, width, tract, and other measurable characteristics aid these scholars in defining walls that were built as animal pens, as boundary lines, or as part of cultural ceremonies. Across the multiple scholars in the field, there are generally two schools of thought pertaining to the typologies, construction methods, and intended purposes behind stone construction. Both define the various forms, heights, widths, and stages of property usage of stone features as they relate to their intended functions.

One general group of scholars, prominently led by the works of Thorson, interprets stone features as having been constructed in response to factors such as agriculture, land encroachment, and increased herding practices. These offer valuable insights that may account for much of the variability of these landscape features (Allport 1994; Cronon 1983; Gardner and Allport 2003; Noble and Gerb 1984; Thorson 2002, 2005). A second school of thought generally attributes the stone features as religious and spiritual landscape markers constructed by Native Americans, often projecting them into periods that preceded European presence on the landscape (Crosby 1993; Gage and Gage 2006). Archaeologists have probably underestimated Native American dimensions of rock use, and more attention should be paid to stone constructions after A.D. 1600 in

light of not only religion and spirituality but also social and practical aspects of Native American life on reservations. These are not just European overlays. We must be cautious, though, to avoid extending the interpretations of Native American stone pile constructions into pre-1600 New England without consistent and reliable ways to date them and associate them with Native American site use.

My investigations focused on the reservation period, so I was able to engage with both of these options for understanding rock features across the Eastern Pequot's historic and contemporary landscape. Extracting rock piles and walls from their European/EuroAmerican cultural anchor does not deny their likely origins therein, but rather frees them for interpretation in specifically Native American contexts and practices. It recognizes that these are Eastern Pequot constructions without having to project their traditions any further back than the 17th, or more likely 18th century. The dating techniques described above also help to situate these rock constructions in their proper chronological era. The results presented below demonstrate that the vast majority of the Eastern Pequot rock features, by extension from the sampling techniques, post-date the establishment of the reservation, which prevents any ambiguous projections of these features into more ancient times. These results also firmly situate these stone features in Eastern Pequot negotiations of life on a New England reservation.

CHAPTER 4

RESULTS

To begin the process of determining the structure and functions of the stone features on the mapped portions (roughly 25% in various clusters) of the Eastern Pequot reservation, I first examined the various walls and structures as semi-arbitrary groupings based on the maps produced with ArcGIS and the associated field sampling and excavation. I determined that there were approximately seven large stone wall enclosures, each with multiple smaller enclosures, house foundations, occasional burials, stone piles, and associated features in their proximity. In referring to these areas of the reservation, I do not imply that the associated walls, enclosures, features, and structures are temporally related to each other. Instead I use these arbitrary groupings as a means of spatially organizing the known built landscape to better analyze and understand their proposed functions. It is also important to note when reading the maps that points that are labeled foundations do not quite represent a foundation as an individual square, but rather as points within the overall foundation areas. This is also true when reading the walls and piles to note that multiple points were taken to measure and individual pile or place along a wall tract as previously mentioned.

It should also be noted that isolated wall segments, distanced in the map from nearby stone walls, do not necessarily imply that no intervening stones actually connect them into longer stretches of walls. Some simply reflect the end of mapping efforts for any given field season due to scheduling, and others reflect the mapping of walls only in the vicinity of house sites being investigated. This is not a problem within bounded and named enclosures that form the core of my analysis, nor with the stone pile concentrations that were mapped in their entirety, but it does apply to some detached segments and to the large sections of reservation boundary wall that have not been mapped relative to archaeological sites. In other words, readers should not view these maps as complete representations of all reservation stone walls, but rather partial views of targeted areas. Finally, although a map showing all enclosures relative to one other would be standard archaeological practice and would offer a broader picture of reservation geography, I have chosen to exclude that in order to adhere to the wishes of the Eastern Pequot Tribal Council to protect site locations and since its absence does not compromise any interpretation presented herein.

Feature Identification

The northernmost enclosure (Enclosure A) mapped in 2004 is approximately 240x70m (fig. 4.1). It contains one smaller enclosure along the perimeter, two small enclosures within the bounds of the larger one, a centrally located house excavated in 2004 (Site 102-113), and a small root cellar and house cellar out of its bounds and just to its west. Based on the large size of this isolated root cellar and house cellar we approximated that they date to the 19th century. An offshoot of the primary wall extends

southward into the enclosure, creating a “U” shape. A cluster of 44 stone piles congregates around the eastern portion of the enclosure. These piles surround what has been identified through excavations as a house with collapsed chimney, trash pit, and subfloor storage area, which has also been dated to the early to middle 19th century based on the ceramic assemblage (Cipolla 2005). Two separate stone piles are located in the western half of the enclosure and are seemingly unrelated to the previously mentioned cluster.

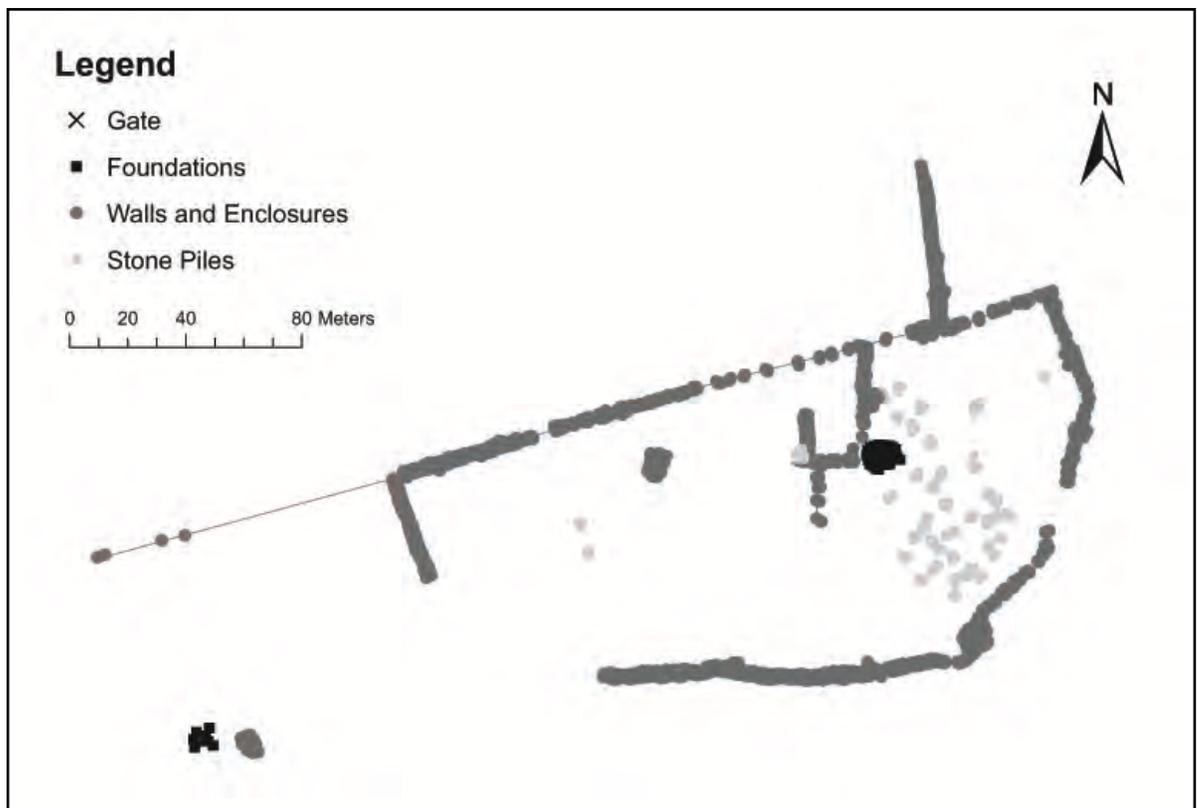


Figure 4.1 Enclosure A with lines indicating connecting stone walls

Approximately 50 m from the southern wall of Enclosure A is another enclosure (Enclosure B), mapped in 2003, that surrounds a house site, one three-sided walled

enclosure, one low rectangular wall enclosure, one root cellar type of structure built into part of the wall, and a cemetery (fig. 4.2). In order to maintain privacy, the locations of burials throughout the reservation will be excluded from all maps. This 150x100m enclosure is filled with 32 stone piles, a smaller enclosure, evidence of a house with hardly any stone on the surface (Site 102-116), and another stone feature centrally located within the enclosure. An additional root cellar is located directly north of the southern tract of the wall, sharing a border with the wall itself, and is a few meters east of a clearly marked stone gateway in the wall.

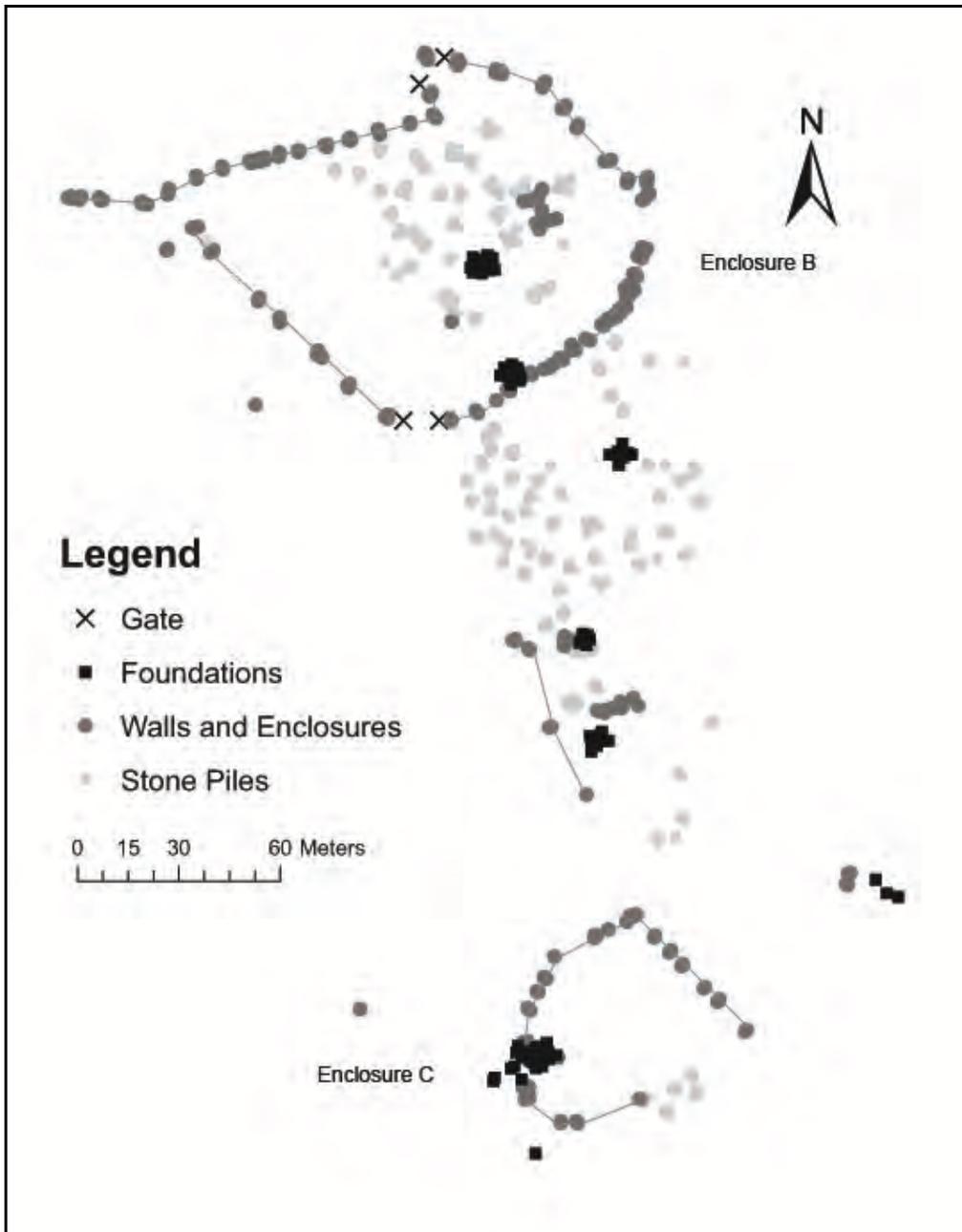


Figure 4.2 Enclosures B and C with lines indicating connecting stone walls

Enclosure C, also mapped in 2003, is located south of Enclosure B, following a large cluster of 55 piles and 3 additional foundations. This admittedly partial enclosure measures approximately 65x55m. While the interior of this area is seemingly void of stone constructions and features, five stone piles are located along the southern portion of

the wall. Another foundation (Site 102-121) is mapped at the western side of the wall, dating past the midpoint of the 19th century, and a large late 19th- to early 20th-century foundation has been identified about 50m east of Enclosure C, which will be further considered in the discussion of Enclosures D and E.

The next two enclosures were identified and mapped in the 2009 field season (fig. 4.3). These two enclosures are adjacent to each other and share a wall. The northern enclosure (Enclosure D) is about 110x90m and encloses 88 stone piles, a stone-lined cellar of a long-gone house (Site 102-127), a house foundation with chimney fall and a wall running through it (Site 102-128), and a root cellar, the latter of which actually lies just outside of the enclosure proper. Initial artifact analysis has led us to believe that the root cellar and the house foundations were occupied sometime into and perhaps slightly beyond the second quarter of the 19th century (Hayden 2012).

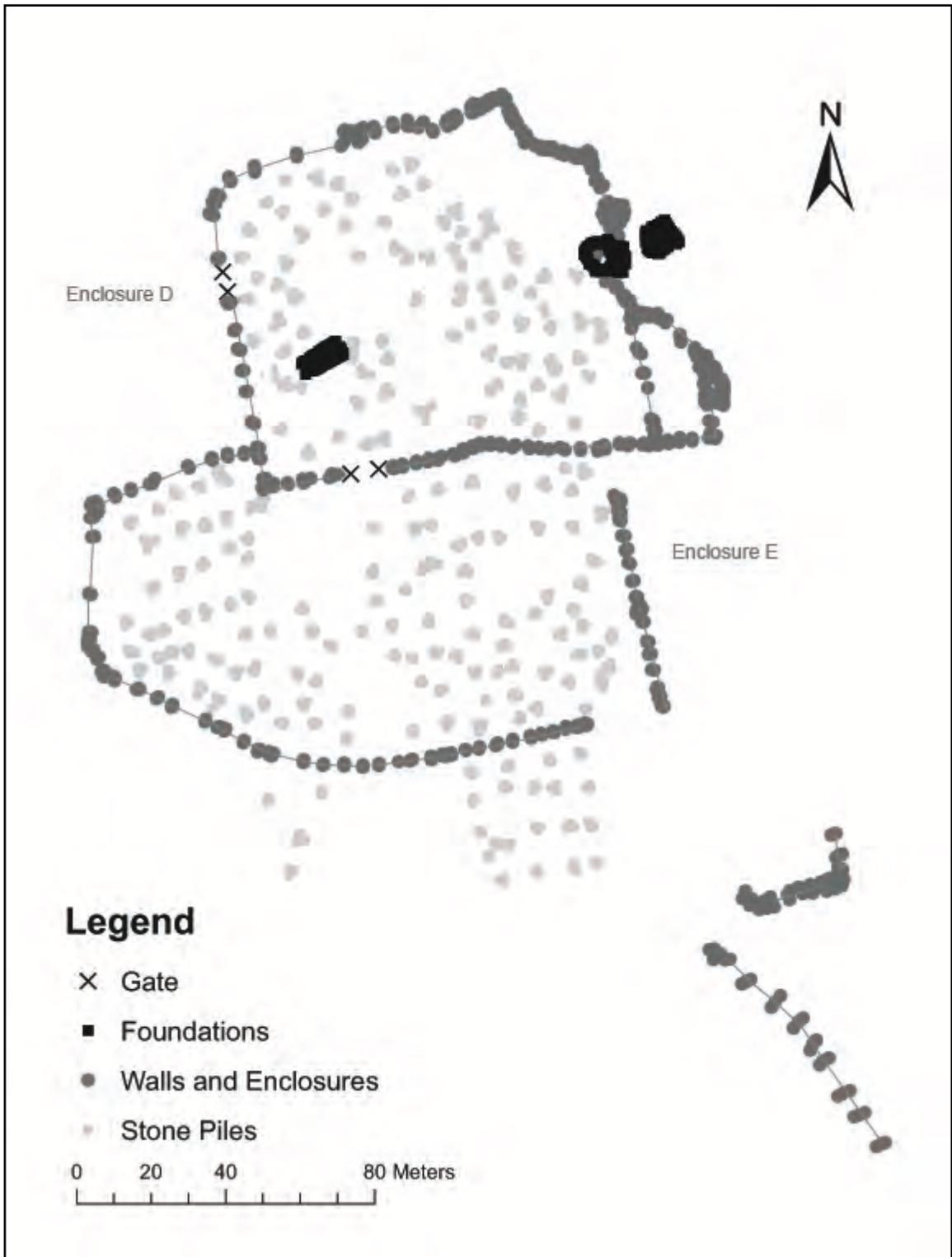


Figure 4.3 Enclosures D and E with lines indicating connecting stone walls

On the western portion of the wall, a gateway or entrance way is clearly defined in stone. The stone-lined shallow house cellar is located just east of the gate in the western portion of the enclosure, which field investigations in 2009 determined had very low artifact density, while the house foundation with substantial chimney fall is located directly in the path of the eastern wall. The root cellar is east of that house foundation, just beyond the bounds of the wall. The location of this house in the direct line of the enclosure wall indicated that there was an inconsistency in the periods of construction and occupation between these two built structures, which prompted the various field techniques to sample beneath the stone walls themselves. Furthermore, the close proximity of the root cellar to the house initially suggested a temporal association with the house itself.

South of the house, two small, “D” shaped enclosures are attached to the primary enclosure wall and to each other, essentially creating nested enclosures. The southern wall of Enclosure D is also part of the northern wall of Enclosure E and a gateway links these two enclosures.

Enclosure E, which is 145x80m, does not contain any known houses or foundations and hardly any artifacts (verified by shovel test pits at 10-m intervals across much of the eastern portion), but does enclose 111 stone piles, many of which appear to have been formed and grouped at regular intervals. Many of these piles are aligned evenly to form rows of piles within the enclosure, especially in the western and southern portions, and others appear to have been piled up along the perimeter of the wall, a pattern that was not prevalent in Enclosure D. An additional 24 stone piles were

identified and mapped outside the bounds of the enclosure and continue in this linear pattern of arrangement.

Enclosures F and G were extensively mapped and excavated during the 2005-2008 field seasons. Enclosure F, located in the southeastern area of the reservation, contains segments of stone wall that run alongside a rock ledge just to the north and west of a potential wigwam site (Site 102-124) (Fig. 4.4). This wigwam site is not represented with stone features; therefore it is not initially apparent on the map. Later discussions show the location and analysis of this site. A very low terrace wall then runs for a short distance along the southern edge of this site. One large stone pile marks the northwest corner of the stone wall segment and another portion of wall is lined by three stone piles. Twenty four additional stone piles litter the western side of this wall. It is worth noting here that the limitations mentioned at the outset of this chapter regarding incomplete wall mapping applies to this area, rendering the notion of Enclosure F as a true “enclosure” questionable. I use this designation only to spatially bound this area of reservation space.

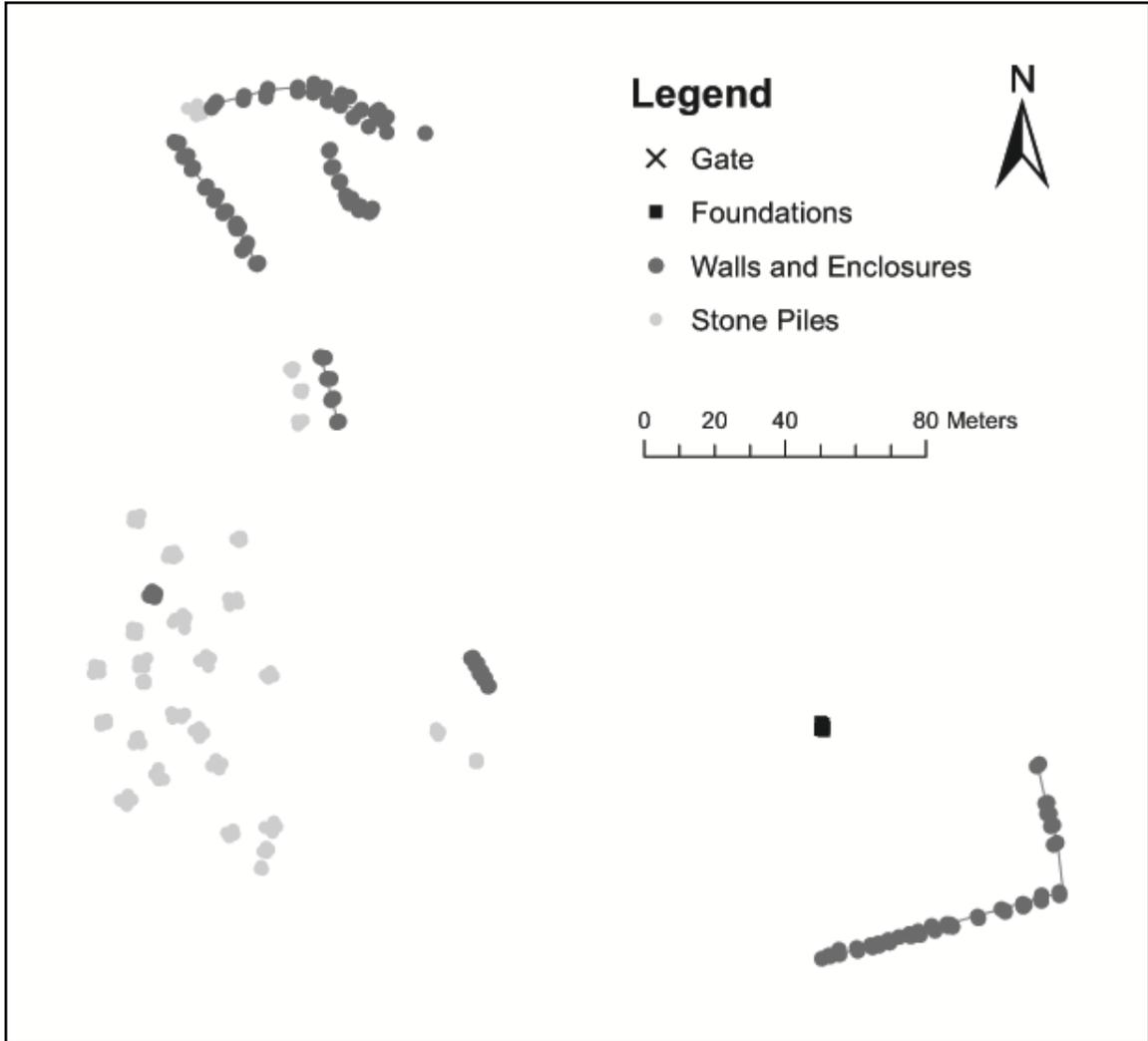


Figure 4.4 Enclosure F with lines indicating connecting stone walls

Although this large area of stone walls shows no indication of additional surficial stone features within its bounds, excavations uncovered a small residential area, north of the low terrace wall shown just inside the upside-down u-shaped section of wall on the north side, characterized as a possible wigwam with some nails, at least one glass window pane and three pits filled with domestic debris (Fedore 2007; Hayden 2012).

This excavated area dates from approximately 1740-1760. South of this area of constructed walls is another known cemetery (not depicted on the map) and a house foundation (Site 102-125) that was excavated in 2008, the latter of which dates around the turn of the 19th century (Hayden 2012).

Enclosure G is the final area of mapped stone features and is located north of the potential wigwam site (Fig. 4.5). Systematic excavations and shovel-test pitting was conducted throughout the area during the 2005 and 2006 field seasons. A large tract of stone wall runs north and south, yet mapping efforts did not identify any area where it closed to form an enclosure. A smaller tract of wall juts out from this primary wall eastward and turns south, but again, it does not appear to reattach anywhere. The known features and built structures in the area include two chimney collapses and hearths, one full cellar, a rock and shell midden, a small trash deposit, a partially-filled depression in the shape of a root cellar, and a small stone enclosure that has been concluded may have served as a base for above-ground storage (Site 102-123). Based on ceramic dating, this site dates to the second half of the eighteenth century, or from the 1760s – 1800 (Silliman 2009:220; Hunter 2012). This feature area has been estimated to either be comprised of two distinct occupations or a major shift in household organization, revealed by the two chimney collapses and the shift from root cellar storage to under-house storage. Despite this extensive presence of stone construction, there is little evidence of stone piles in or around these enclosures.

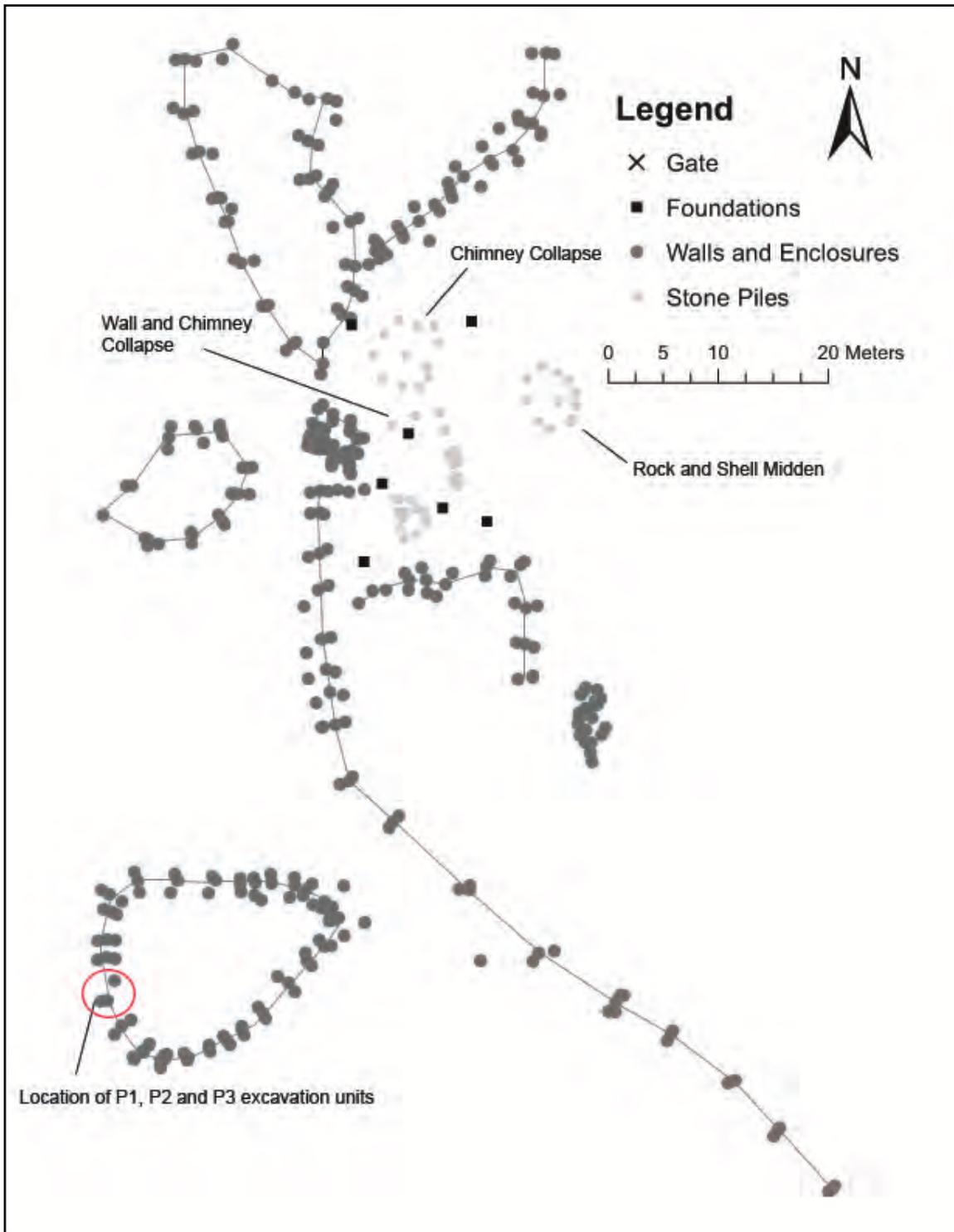


Figure 4.5 Enclosure G with lines indicating connecting stone walls

Artifact Distributions

Artifact data were compiled from excavation units, gridded shovel test pits, and selectively-place test pits beneath standing rock features from the various field seasons to create artifact distribution tables and corresponding color coded maps in ArcGIS. As a means of displaying the spread of artifact densities across the reservation, these maps added to the understanding of the patterns of occupation and the relationships between these occupied areas and the surrounding stone constructions. Through the analysis of these maps I use the artifact densities as indicators of areas of occupation and determine whether or not these correlated with the locations of surrounding stone constructions. Furthermore, these distribution analyses were also useful in adding to an understanding of the sequences of construction of the stone features.

The Relation of Artifact Densities to Stone Features

Judgmentally-selected excavation units and systematically-sampled shovel test pits, usually at 10-m intervals but sometimes 5- or 2.5-m intervals to test interesting areas found during 10-m sampling, were dug in various areas throughout the reservation since field work began in 2003. Field school participants not only excavated those units in close proximity to foundations and root cellars, but field methods have also been tailored to explore those areas of the reservation with no clearly identifiable surface features. While I assumed that artifact densities would be higher as the units neared homesites with evidence of stone construction, I had no preconceived expectations regarding the spread of artifacts across other areas of the reservation. Initial observations of the artifact

distribution maps generally confirmed my first assumption – locations with identified and mapped stone features such as foundations and root cellars showed the highest levels of artifact densities. The most prevalent examples of this were in Enclosures A and D. Both of these enclosures were thoroughly excavated in the areas closest to the stone features. In both of these sites, multiple units had artifact counts that totaled over 1000 and in some cases, 3000-4000 artifacts.

Based on the general patterns of artifact scatter in relation to stone features it appears that there is a strong correlation between the built stone features, at least in terms of collapsed chimney stacks, and evidence of occupation. Areas with artifact counts in the highest class of the distribution range are located within the bounds of an enclosure, and other than the previously identified wigwam site, all artifact scatter is located in the vicinity of an occupation area with stone features. The lacking counts of artifacts in open areas of enclosed land, such as in Enclosure E, correlates with the assumption that these areas were not used as household sites and in some cases may have been used as agricultural fields. It appears that in general, people were staying relatively close to their homesites and leaving little evidence of artifact spread as far as nearby fields. A more in-depth analysis of two enclosures has been conducted to delve more deeply into these results.

Enclosure A

Portions of Enclosure A were analyzed using the artifact distribution map and under-stone sampling efforts in the eastern area surrounding the stone foundation (Fig. 4.6). Three units were placed surrounding this foundation - one in a portion of the stone

wall that extended from the northern wall, creating the “U” shape, and two units in two different stone piles that were located north and south of the foundation. An additional unit was excavated at the juncture of the U-shaped enclosure that did not produce any artifacts. Of the three other units, the unit placed under the pile north of the foundation produced a relatively higher sample of artifact remains than the others. This unit resulted in 60 pieces of brick and 5 pieces of vessel glass. Five pieces of brick were also found in the unit south of the foundation in addition to 5 sherds of stoneware and 9 pieces of vessel glass. The unit that was excavated under the wall did not contain any brick, but instead 10 pieces of vessel glass, 2 sherds of stoneware and 1 unidentified artifact were recovered.

In comparison to the other units that were excavated within Enclosure A, these sub-stone units fell within the 2 lowest classes of the artifact distribution range. Approximately 17 excavation units and STPs were previously excavated in the vicinity of the foundation. These units resulted in some of the highest artifact counts across the entire reservation, with one unit reaching 4378 artifacts excavated. Although these three sub-stone units did not produce artifact counts comparable to the extremely high density of artifacts found within the foundation, this is consistent with the notion that spread of artifacts diminishes as the units are excavated further from the occupation area. Evidence from the excavation of STPs in the area is consistent with this assumption. Furthermore, the comparatively lower artifact counts do not diminish the fact that there was indeed evidence of artifacts deposited prior to the construction of these stone features. In order to more precisely confirm the sequences of construction of the features in this area I analyzed the surrounding excavated units.

Although there was a higher total artifact count excavated underneath the stone pile north of the foundation, the majority of the artifacts found in this area were brick. Past artifact counts from STPs and excavation units from this area did not show any other evidence of brick consistent with these findings. This does not necessarily indicate when this deposit happened in relation to the other stone features in this area; however, it might indicate that this pile, and possibly others in its vicinity, was constructed after the occupation of the house. As a result, the brick that was found under both piles could have been the remnants of the building process of the chimney or foundation within the enclosure (although brick is very rare within the house and chimney collapse) or from a completely separate building event after the occupation of the first house.

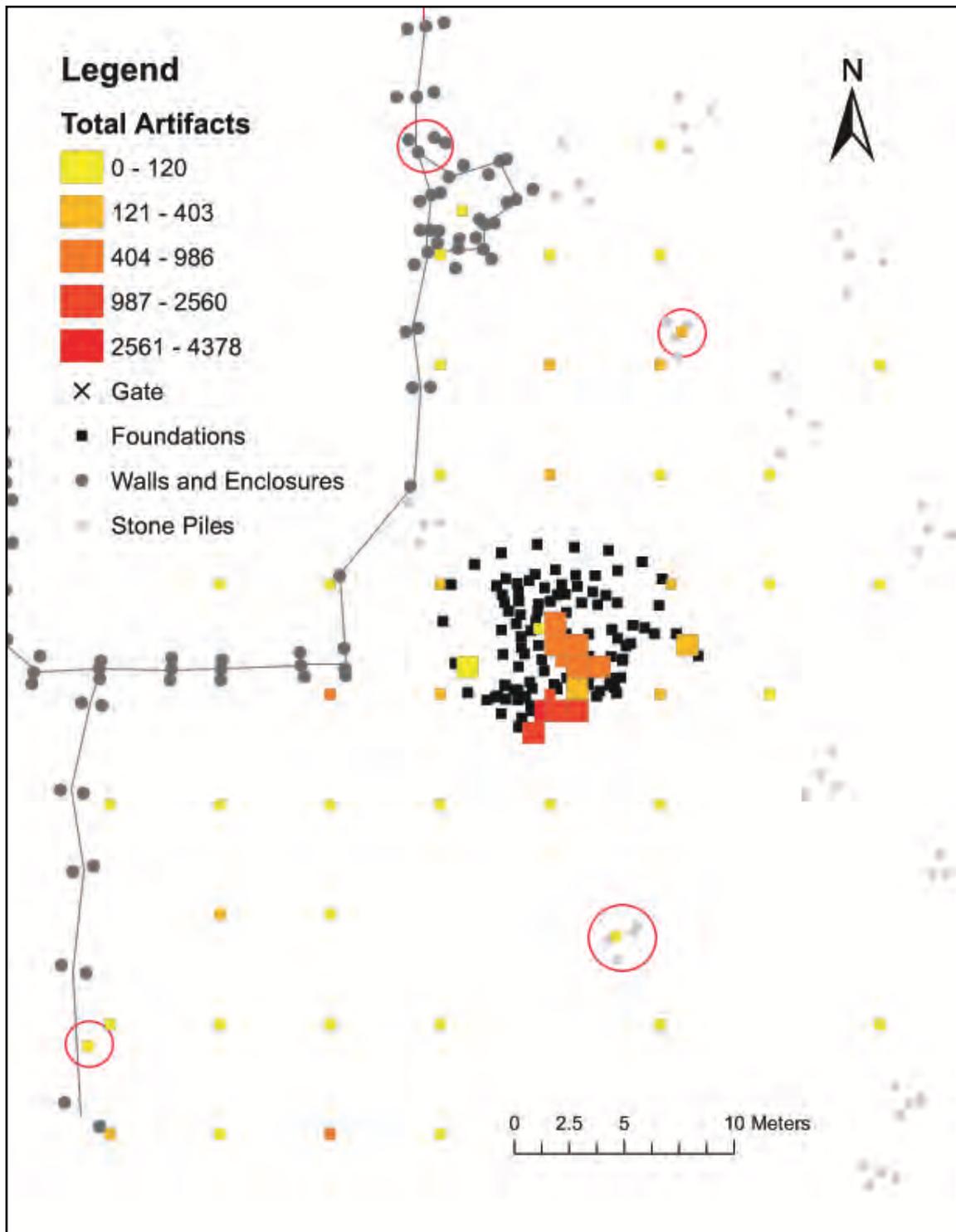


Figure 4.6 Enclosure A artifact distribution map with sub-stone sample units circled and lines connecting mapped segments of longer walls.

Enclosure G

Four units were placed underneath the primary wall and smaller enclosure walls of this area during Fall 2009 (Fig. 4.7). The first of these units was placed in the northernmost enclosure wall and produced one piece of glass and one piece of porcelain ceramic. We placed the second unit underneath the tract of wall comprising the small enclosure that was estimated to have been a base for above-ground storage. This unit yielded 5 artifacts, 4 of which were window glass and 1 piece of vessel glass. We placed the next unit along the larger tract of wall and directly next to the partially-filled depression in the shape of a root cellar. This unit produced 2 sherds of slipware, 3 pieces of faunal remains, and 2 scraps of metal. These first three units all fell under the lowest class, Class 1, of artifact distribution. Finally, we placed the last under-stone sample unit along the tract of stone wall that extends east off of the primary wall. This unit ultimately resulted in the highest number of total artifacts, the majority of which were faunal remains with a count of 27 pieces. Also included were 2 pieces of window and 4 pieces of vessel glass, 4 sherds of redware and 8 sherds of creamware, 2 clay pipes and one piece of metal. Not only did this unit yield the highest quantity of artifacts of the 4 that were sampled, falling under Class 2 of the artifact distribution scale, but it also produced the greatest variety of artifact types in comparison to the other sample units in this area.

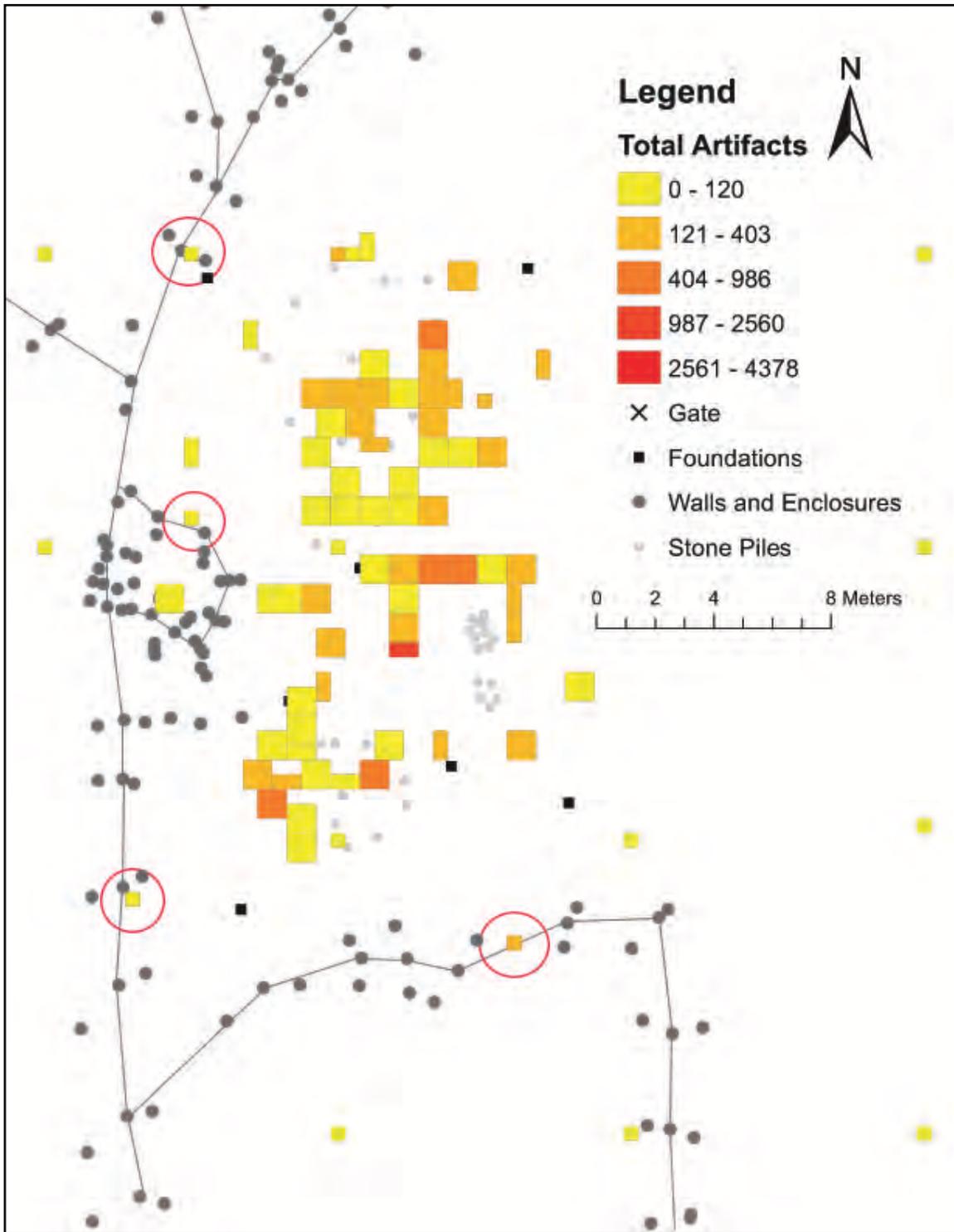


Figure 4.7 Enclosure G artifact distribution map with sub-stone sampling units circled and lines connecting mapped segments of longer walls.

I then compared the total artifact counts from all of the excavated units in the area to get a broader analysis of the distribution of artifact scatter. The area that was excavated most thoroughly and produced the largest concentration of artifacts was located between the shell midden and the enclosure wall where the houses were located. These units had artifact counts that fell within the higher ranges of artifact distribution spread. Additionally, the centrally located units produced higher artifact counts than those units that were farther away from the central occupation area of the features. The diminishing spread of artifacts from a central occupation area is consistent with what I have observed throughout the reservation.

In addition to looking at the artifact counts of units placed underneath stone features and the distribution of artifact scatter, I compared the spread of artifacts from units on opposite sides of a stone wall. This follows the assumption that if a stone wall was built prior to the occupation of a nearby house, then the spread of artifacts would likely stop at the line of the wall. If the density of artifacts remained high on both sides of the wall, it would be assumed that the wall was constructed after the house occupation. In 2006 three 1-x-0.5-m units that stretched a total of 1.5m were excavated on the inside (P1), beneath (P2), and on the outside (P3) of the larger enclosure southwest of the houses (see Figure 4.5). This area was chosen since excavation units and STPs inside the enclosure on the north side recovered a moderate density of residential artifacts. In this early under-rock sampling effort, the highest counts of artifacts came from within the enclosure (P1). These included 3 pieces of redware, 1 piece of porcelain, 69 pieces of faunal remains, a button, 2 pieces of shell and 2 pieces of metal which includes a possible iron coat hook. Only 6 pieces of faunal remains and 1 metal scrap was found beneath or

outside of the stone wall in the P2 and P3 units. These artifact counts gave a very different result than the 2009/2010 under rock sampling at the part of this site around the obvious house and nearby activity areas. Therefore, this enclosure seems to have been built before the artifacts were discarded in that area, which limited their spread beyond the stone wall. This is the only area of the reservation that has so far been sampled with results suggesting early construction of walls or stone features compared to house construction and occupation. However what relationship this enclosure has to the house site is currently uncertain. The excavation units within the enclosure did contain residential materials but in very small sizes that seem to suggest trampling or tertiary refuse disposal and did not contain features.

Spatial Structure and Proximities

The maps created with ArcGIS as well as observations made in the field helped to understand and begin to describe the purposes and intended uses for these walls and piles. The organization of sacred space, the relation of stone piles to agricultural practices and the construction of household spaces were studied through excavations, STPs and under-stone sampling efforts.

The Organization of Sacred Space

There are two areas of the reservation that contain the burials of Eastern Pequot community members that have never been impacted by the archaeological project discussed here. Both of these areas share similarities in their proximities to other built features on the landscape and provide insight into the ways that the Eastern Pequot

people perceived of the spaces that their people's burials occupied. Their exact ages are unknown, but current estimates based on location and surface appearance suggest late 18th or 19th century. Due to the sensitive nature of this topic, the specific locations of these areas will be reserved to protect the privacy of the Eastern Pequot community.

Enclosure B contains Eastern Pequot burials as well as two foundations, 32 stone piles, and one smaller enclosure. The appearance of stone piles which are often indicative of farming practices and foundations in the same enclosure as a cemetery initially appeared counterintuitive to what one would expect in such a sacred and revered space. It was my initial assumption that the entire enclosure was going to relate to the cemetery, but upon further consideration it appears that this is not the case. The large size of this enclosure and the small, concentrated area of burials within it indicated that this was too large of a space to be solely used as a cemetery. Additionally, there are no piles on one side of the burials or anywhere within their direct vicinity. Instead, the closest pile is approximately 10 meters from the burials and the closest foundation is over 30 meters away. Given the nature of the New England forests and the copious amounts of stone that litter the landscape and lie buried just beneath its surface, one might conclude that in order to dig a grave, stones would first have to be removed and placed out of the way. The lack of stone piles near where the burials are located perhaps indicates that this area was reserved by the Eastern Pequot peoples for the sole purpose of burying their loved ones. The excess stone was then placed in piles a distance away from this revered space. Additionally, if the area was later brought into agricultural activity, as I am inclined to believe given other patterns seen on the reservation, active efforts were

made to keep such stone piling and subsequent farming away from the edge of the cemetery.

Another example of a secluded area of burials is also found near Enclosure F. In this area, despite the extensive evidence of other stone construction efforts in the vicinity, the area where the burials are located shows no apparent sign of stone features. Instead, all that is evident is a portion of the stone wall, although this is also located relatively far from the cemetery. It may be concluded that conscious efforts were taken to avoid building stone features in the vicinity of these burials.

In both of these areas, the burials are located along the peripheries of the enclosures and do not appear to be the focal points. In one, the nearby enclosure wall is a part of the reservation boundary wall, possibly indicating that this particular wall was built first as a boundary marker for the reservation. Enclosure B contains an array of stone piles both inside and outside of the bounds of its walls with no apparent disruption to their alignment, perhaps indicating that the wall was constructed following the alignment of the piles, a concept which will be further explored in regards to agricultural practices. Therefore, walled stone enclosures seem related to activities or boundary marking somewhat distinct from the delineation of cemeteries and likely at a different period of time

Stone Piles and Agricultural Practices

Enclosure E, which shares its northern wall with Enclosure D, is a large, open space void of any structural remains yet contains 111 stone piles. Many of these piles, especially along the inside perimeter of the wall, appear to line up with each other,

although not necessarily in particular directions across the entire enclosure. Additional rows of stone piles fill the enclosure, and 24 round piles placed in a linear arrangement are located just on the outside of the southern wall of the enclosure. The lack of known houses and almost complete lack of artifacts, as well as the linear manner in which these stones were placed, indicate that Enclosure E was likely used as an agricultural field.

Although it seems that having stone piles in the middle of a field might interfere with farming activities, Thorson states that, “stone piles in the middle of pastures and fields were common during the first few decades of farming, and many still exist in the woods, especially on farms that were abandoned early on” (Thorson 2002:124). These “linear landfills, built to hold non-biodegradable agricultural refuse” would have been the end result of a labor intensive process of removing stone from fields being plowed (Howard 1982:190; Thorson 2002:6). A shift was eventually made to arrange the excess field stone into piles along the edges of fields, at least among EuroAmerican farmsteads. These piles were often used as the raw material for creating stone wall enclosures. In some instances these piles ultimately turned into what are called tossed walls, as opposed to fitted or laid ones. As these piles grew, walls would emerge until a field was finally enclosed by a wall of stone.

Given this background, the piles in the vicinity of Enclosure E were likely constructed first and eventually as the piles grew and began lining up, the tract of the wall was created, especially considering there is no apparent break or disruption in the arrangement of the piles both inside and outside of the boundary wall. The presence of some piles outside the bounds of the enclosure may be the result of a reduced field size over time or perhaps a separate field outside the main enclosure. An additional example

of this occurrence is found in the southeastern portion of the reservation in Enclosure F. In this area, as previously mentioned, one large stone pile marks the northwest corner of a stone wall segment and the eastern wall is lined by three stone piles. Comparatively, there are far fewer piles here than in Enclosures D and E. Most excavation units on the reservation produce a great deal of rocks, so the density of rock piles probably indicates the intensity of use rather than the result of farming in more or less rocky areas. Following this rationale, the density of stone piles may act as an indicator that there was more extensive farming in Enclosure E than in some other areas of the reservation.

Evidence of other agricultural fields may be determined through the analysis of the aggregation of stone piles in and around other enclosures on the reservation. The identification of linear arrangements of piles as well as a lack of other stone features might indicate open areas that were previously used as agricultural fields. An overall trend across the reservation points to two primary phases of stone construction beginning with the building and occupation of homesites, frequently using rocks for chimneys, and concluding with the arrangement of stone piles as agriculture became more extensive and widespread. In fact, evidence suggests that many of the stone piles may not have only been built after the construction of homes, but also after their abandonment.

Understanding Spatial and Temporal Relations with Under-Stone Sampling

Enclosures D and E were both extensively mapped and excavated during the 2009 summer field season and also in the fall of 2009. Both of these enclosures provide clear examples of inconsistencies in the occupation periods of built stone features. Initial observations of Enclosure D revealed a long tract of stone wall that appeared to run

directly over the remnants of a house foundation and chimney fall. It was apparent given the overlapping stone features that the house was not contemporaneous with the wall, and as a result, we tailored our field methods to determine the sequences of construction. Our initial assumption was that the house was occupied first, and then some time after it was abandoned, the wall was constructed using the remnant stone from the foundation and chimney as evidenced by the fact that the stone wall stood more upright than the chimney fall around it and seemed to make use of it. In fact, the wall running over the top of the house seems to have some cleared areas on both sides of it despite the overall house footprint that is very rocky (fig. 4.8).



Figure 4.8 House foundation and stone wall in Enclosure D with line indicating stretch of wall

In order to test these assumptions, we placed excavation units within the house foundation rubble, in the chimney fall, and around the perimeter of the entire stone feature. Through these efforts we wanted to check the spread of artifact debris in the area, which we had already identified from other STPs. Each of these units resulted in relatively high artifact counts, confirming at least that the house was indeed intensively occupied at some point rather than dismantled mid-construction as may have been the case with the house to the west. We then dug one 0.5-x0.5-m unit – essentially an STP but dug without shovels given the rough work of rock removal – directly underneath a portion of the wall, just south of the house foundation and another one beneath a stone pile located approximately 7 meters west of the house. This unit was placed here because the close proximity of the piles to the house was odd if we were to assume that they correlated with the location of a field. The first unit was placed in an attempt to determine whether or not the artifact scatter from the house occupation continued beneath the wall, an indication that the wall was built after the house was occupied.

A proportionately high count of 424 artifacts including high counts of pearlware, creamware and some Jackfield-type ceramics, window and vessel glass, and faunal remains were found in the unit beneath the wall. These match artifact densities in nearby units clearly associated with the house site itself. In the unit placed beneath the pile were 3 pieces of metal and 1 faunal remain. These results are significantly lower than counts of artifacts uncovered in the previously excavated under wall unit, but this is in line with the overall distribution of residential debris around the adjacent house. Based on these high artifact counts found underneath the stone wall we confirmed part of our original hypothesis and concluded that the wall was constructed after the occupation of the

household and the associated deposited artifacts. Additionally, artifact scatter from the occupation of the house diminished further away from the foundation, but it is still clear that the nearby stone pile was constructed after the house's occupation, thus allowing some artifacts to be deposited in an area that would later be underneath the rocks.

In the western portion of Enclosure D we placed excavation units and shovel test pits inside and around the surrounding area of the open, shallow house cellar. This stone feature was clearly identifiable on the landscape, thus making it an initial focus of excavations in 2009. We placed three excavation units inside the open cellar yet these yielded little to no artifacts. We then conducted under-stone sampling underneath a stone pile at the western side of this structure. This pile, as well as many others in the area, was located next to the cellar which appeared inconsistent with simultaneous usage. From this unit we recovered 1 sherd of redware, 7 sherds of pearlware, 5 sherds of whiteware, 1 piece of window glass and 4 pieces of vessel glass. This effort ultimately yielded more artifacts than were cumulatively found inside the structure.

It appears, based on these combined efforts and the location of the piles compared to the cellar and the nearby house, that these structures were constructed and occupied prior to the piles. These results indicate a sequence of household construction and occupation followed by the arrangement of stone piles and their attendant and likely use as part of agricultural field clearing. This rectifies the confusion that we had regarding the placement of numerous large stone piles, presumably reflecting field preparation for farming, so close to living quarters.

Construction Types and Sizes

The second method employed in this thesis is an examination of the construction types and sizes of built stone features on the landscape and a comparison of these to the proposed typological distinctions made by other scholars who have conducted stone wall research. As previously stated, these other works typically focus on stone construction of European and EuroAmerican origin and do not focus on the stone features found in a Native American context, or they misattribute stone features to more ancient dates than they likely belong. The application of these previously established methods and distinctions on the Eastern Pequot Tribal Nation reservation will be useful in establishing a relevant methodology for a Native American context.

In this analysis I took a closer look at preselected areas of the reservation that I intended to examine to compare to the methodologies of other researchers pertaining to the construction types, sizes and methods. The primary areas that I wanted to explore were the places where stone walls intersected with other walls to determine construction sequences, locations of gates or other gaps in the walls, and the average heights, lengths, and shapes of the walls to assess usage.

Width and Degree of Care

The basic distinctions in stone wall research that many authors establish are the differences between single and double stacked walls and between tossed or dumped walls and laid walls. The degree of care with which a stone wall was built is a measurable factor in these classifications. According to Thorson, “when a wall betrays no apparent sorting of stones, especially if the wall is poorly constructed, that suggests it was built

long ago by a farmer to dispose of stones” (Thorson 2005:40). These tossed walls are considered the result of individuals tossing stones with no prior planning or care until they generally formed a wall. Laid walls on the other hand are clearly identifiable by the faced off sides of the wall that indicate of foresight and careful planning. Other stone wall research has concluded that individuals tended to put more effort into walls that “counted most” or those that were constructed near houses, barns and cemeteries and that these were oftentimes adorned with more elaborate stonework (Allport 1994:103; Thorson 2002:144, 146). While there are varying degrees of tossed and laid walls, it is generally accepted that tossed walls are the most prominent types that are visible on the New England landscape as they were more easily constructed over a shorter period of time. These tossed walls were typically formed as single walls or less frequently, poorly constructed double walls.

A single wall is built when large, often irregularly shaped stones are stacked one upon the other. These walls were most commonly used to clear land of stone or to fence in a pasture. Sometimes referred to as “farmer walls” because of their prominence in bounding agricultural fields, single walls are considered indicators of prolonged use of a site (Thorson 2002:125, 2005:60-61; Gardner and Allport 2003:83). Double walls on the other hand are considered to be more common and occur when stones are slanted inward from two sides. These walls were constructed as a means to dispose of stone, as boundary markers, and as an aesthetic enhancement. Although these walls were oftentimes short lived, the existence of double walls and other wide walls is an indicator of an abundance of stone, time and perhaps wealth (Thorson 2002:125, 2005:60-61).

Overall observations of the reservation conclude that tossed, single walls are the most prevalent type of wall found on the landscape of the Eastern Pequot reservation. There is some variation in the styles and construction methods of all of the walls, but the majority of them were not constructed with a great amount of care, time, or effort as there are few instances of faced-off sides. Also, the stones incorporated into the walls do not appear to have been carefully selected for their shape or size. Instead, the walls may have been built out of necessity or as byproducts of the clearing of fields, thus explaining stones of all shapes and sizes and no signs of apparent sorting were prevalent (fig. 5.1). There are, however, a select few examples of more carefully constructed walls, specifically at portions of walls that separate and form gateways.



Figure 4.9 Single, tossed wall on Eastern Pequot reservation

Gateways

Field observations and associated mapping revealed clear examples of breaks in stone walls where gates were constructed. Two of these gates are located along the tract of wall forming Enclosure D, and the third gateway is located in Enclosure B. These gateways, especially the one on the western wall of Enclosure D, appear to be carefully constructed and indicate more intentionality than some of the other stone features on the reservation. According to Thorson, “walls near...primitive gates were built better...for aesthetic reasons. It was here that the wall was seen most often by passing vehicles, flocks and herds of animals, and people – farmers, peddlers, children, evangelists and strolling lovers” (Thorson 2002:145). These clearly defined gateways signal careful planning and consideration of where people might be passing through as they travel across the reservation and demonstrate a functional importance. They do not, however, show any signs of heightened aesthetic purposes as Thorson suggests. The gateways on the reservation ultimately show an emphasis on function over form. The northernmost gate in Enclosure B, in fact, appears to have an associated linear concavity running through it, as though it had accommodated buggy or vehicular traffic at some point. If so, this further adds a “later” component to the use of this enclosure overall, and it may have provided access to the enclosure, perhaps for farming or for tending the cemetery, for the residents in the currently unexcavated house foundation (with separate root cellar) to the north, that also has the appearance, albeit unconfirmed yet, of being a later 19th century habitation.

Height

In addition to the classifications of the care of construction and width of walls, stone wall studies also focus on the height of walls. In addition to plotting locations of the stone walls using the total station, we also plotted points that measured the height of the walls. According to the cumulative data plotted across the reservation, the height of the walls ranged from 77.6cm to 124.9cm with the lowest points recorded along the north boundary wall of Enclosure A and the highest points recorded along the walls of Enclosure D. The average height recorded was 104.2cm.

The analysis of wall heights does not necessarily rely on specific measurements, but instead many scholars use broad terminology and comparisons to known objects as reference points. In Thorson's studies, comparisons to the human body in terms of ankle, knee, thigh and waist height are the basis for his analysis of stone walls. These intervals of measurements are obviously conditional based on the individual; however, Thorson estimates that an average chest height would measure between 3.5-4.5 feet (Thorson 2005:59). Based on these studies, a wall that is ankle high indicates the early accumulation of stone below the average height of a farmer fence. Knee high walls are classified as being heaps of stone that are the result of prolonged accumulation at the edges of fields, or as the fallen remnants of a once higher wall. Thigh high walls are considered to be most indicative of boundary walls as they are tall enough to stand above the grass. Finally, areas where stone walls stand waist high are defined as places where rolled boulders have been evened off with extra stone (Thorson 2005:59). This definition, however, is rather vague and restrictive and is not used in this analysis.

Based on observations and the electronic total station measurements, the average stone wall reached approximately 3 – 3.5 feet tall, or waist to chest height, indicative of what Thorson would categorize as a boundary walls. However, I am not sure that most of the walls on the reservation served this boundary function unless these enclosures, likely as agricultural fields, were being set apart from other areas or protected from roaming livestock. Admittedly, it was difficult to clearly discern the original heights of many of the walls across the reservation because factors such as weather, human interactions, and the simple passage of gravity over time have led many walls to slump. Oftentimes, it was unclear whether some walls had simply fallen over or if they were the result of less careful construction efforts.

Direction and Form

The examination of the direction and form of stone walls is another common area of study for stone wall researchers. Although walls may take a variety of forms, they are typically categorized as straight walls, zigzag walls, serpentine walls, or straight walls with fence post piles. Zigzag walls are created when a stone wall is built along a wooden zigzag fence line and over time the wooden fence rots away leaving just the stone wall. Serpentine walls, or snake walls, curve in and out. Thorson and Gardner estimate that straight walls are more common as delineations of property divisions and that curved traces of walls usually indicate a natural boundary of some sort with the curve following the contour of the land or a geological transition (Gardner and Allport 2003:82-83; Thorson 2005:78). Additionally, Gage and Gage recognize that while colonial farmers tended to follow grid patterns in bounding their land, atypical farm walls and unusual

dividing lines and angles exist as a result of the division of land from wills and inheritances (Gage and Gage 2006:23).

The stone walls on the Eastern Pequot reservation are straight walls with a mix of right angles and curved tracts. This indicates that these walls were probably not associated with wooden fences. In many places, the walls appear to follow the contours of the landscape as evidenced, for example, in the southeastern section of the reservation where the wall follows and accentuates a rock ledge.

The long stretch of the wall of Enclosure F that was mapped does not appear to connect to another part of wall to finish the enclosure. Short segments of wall that apparently begin and end for no apparent reason are not uncommon in New England. According to Thorson, “crescent-shaped segments of wall curved into the prevailing wind may have been sheep folds, where a huddled flock could wait out a passing storm” (Thorson 2002:147). Although sheep were a domesticated animal commonly used by Indian tribes in New England during this time, previous analyses have found little evidence of their presence on the Eastern Pequot reservation, thus minimizing the probability that this or any other segment of wall was an intended sheep fold (Cipolla 2005; Fedore 2008).

Intersections

Enclosures D and E were the primary focus of the attempt to understand the sequences of construction based upon the intersections of stone wall segments. The intersection between Enclosures D and E occurs on the western side of Enclosure D. Observations confirmed that Enclosure D was built first and that Enclosure E was then

built up against the wall of Enclosure D. It is unclear however, the length of time that might have passed between these two distinct construction phases (fig. 4.10).



Figure 4.10 Intersection of stone walls at Enclosures D and E

The “D”-shaped enclosure that is located adjacent to Enclosure D was also examined to determine if sequences could be observed by the construction methods and how this area might compare to the typologies and methodologies established by other

scholars. Although this portion of wall does not appear to have been constructed with much care as it is falling apart, it appears that these small “D”-shaped enclosures were built after the construction of the primary wall based on the fact that they butted up against the primary wall. The intended purpose behind these small enclosures is not as clearly identifiable. Some scholars state that small enclosures such as these were constructed to enclose small gardens, as pens for smaller animals, or as out-buildings on farms, while others such as Gage and Gage attribute small enclosures built into other walls as having religious and spiritual tendencies. According to Gage and Gage, “there is a strong tendency for Native American enclosures to incorporate boulders, ledge, or even stone walls into their construction” and that these enclosures are “generally small, just big enough for one person to sit inside” (Gage and Gage 2006:20-21). The purpose of these enclosures is to “define a sacred space in which a ceremony could be held”. Furthermore, Gage and Gage state that these types of enclosures are “distinguished by their newness in construction...the presence of scraps of black plastic, string, or other modern artifacts,” none of which were found, at least at surface level, in this context (Gage and Gage 2006:21). While this does not completely rule out the notion that these enclosures were built for ritual purposes, it leads me to assume that these enclosures were potentially built for alternative purposes such as for animal pens or as storage areas. That said, however, they tend to be too small and without an opening, which would have made the keeping of animals (or at least the getting them in and out of the enclosure) a bit of a challenge.

CHAPTER 5

INTERPRETATIONS AND CONCLUSIONS

Through the combined analyses of the spatial structures and relative proximities of stone landscapes, artifact distribution data, and the construction types and sizes of walls and piles, I was able to decipher a broad understanding of the forms, functions, and sequences of construction of the built stone features located across the Eastern Pequot Tribal Nation reservation. These analyses contributed to an understanding of the overall timing and motivations for the introduction of stone construction by the Eastern Pequot. Furthermore, this thesis aids in the further discussions and research pertaining to issues of change and continuity in a Native American context and provides suggestions for future research in these areas of interest.

Timing of Landscape Changes

I previously stated that in other stone wall research, scholars have estimated that the majority of stone walls in New England were built between either 1775-1825 or 1810-1840 (Allport 1994:89; Gardner and Allport 2003:10). Based on the established dates of the houses that have been excavated thus far on the Eastern Pequot reservation,

all of the occupation sites that show framed construction (that is, not wigwams) and their associated stone features were constructed in the middle 18th through 19th centuries. This overlaps with the timeframes quoted above, at least in the sense of providing a *terminus post quem*. The evidence gained from the correlation of artifact scatter to the locations of stone constructs, as well as the under stone sampling of the stone walls and piles, indicates that many of the enclosures and piles post-date the construction and likely the occupation of nearby houses, placing at least some of the construction dates sometime later in the 19th century.

This conclusion is important for two reasons. First, it indicates that we must be cautious when interpreting Eastern Pequot households and landscapes to not assume the rock-heavy house sites necessarily co-exist with rock piles and walls. It is easy to fall into this trap while excavating on these sites or others on nearby reservations, such as the Mashantucket or Mohegan reservations. At the Eastern Pequot reservation, these events are sequential rather than contemporaneous. Second, it establishes that the Eastern Pequot people were relatively selective and conscious of the decision to adopt and implement European building technologies. This is not an example of a group of people who were quickly assimilating to European beliefs and practices but instead were acting as social agents in deciding which strategies, technologies, and goods would be beneficial to adopt or incorporate into their lifestyles. Although some households on the reservations began building homes with wooden planks, nails, window glass, and sturdy rock chimneys, they were not frequently modifying their landscapes with rock walls and stone piles at the same time. These modifications tended to happen after houses were constructed and perhaps even abandoned, given their closeness to and sometimes use of

house rock itself. The following is the estimated sequence of construction and occupations of the various sites on the Eastern Pequot reservation.

The earliest occupation site thus far found and excavated on the reservation is in Enclosure F at the proposed wigwam site. Dating from approximately 1740-1760, this residential area lacks a stone foundation, yet has evidence of some glass and nailed elements (Hayden 2012). This type of architecture is consistent with an assumption that Native American construction evolved from seasonally mobile homes, to a form of a hybrid home with some elements of traditional Native as well as European architecture with features such as glass panes and nails, to ones that more closely resembled European homes with permanent stone foundations. This early site is indicative of a period of time, approximately 60 years after the establishment of their reservation, when the Eastern Pequot people were still utilizing aspects of their traditional home construction methods yet incorporating aspects of European design with windows and nails, features that contributed to a more sedentary lifestyle. Despite these changes in the construction methods of homes, there is little to no evidence of stone moving and building of piles or walls at this time period. In fact, it has the most rock-free matrix of every single other site excavated on the reservation.

The time periods of the two household occupations in Enclosure G follow the occupation of the wigwam site. Ceramic analysis dates Enclosure G's occupations to the second half of the eighteenth century, or from the 1760s to the early 1800s with two distinct occupations, revealed by the two chimney collapses and the shift from root cellar storage to under-house storage (Silliman 2009:220; Silliman and Witt 2010). The results from under-stone sampling indicated that the primary stone wall and the smaller tract of

wall were constructed sometime well into or after the occupation of these sites and corresponding enclosures. These may have been constructed at the same time as the shift in architecture and storage on the site, but the data are currently too coarse grained to state that with any certainty. One thing is certain, though: the rock enclosure well to the south of the site was constructed before the late 18th-century residential trash was deposited within it.

The clearest example of the sequence of construction of the stone features and household occupations are found within Enclosures D and E. As previously stated, under-stone sampling and the data from artifact distribution maps indicated that the main house and likely associated root cellar were built and occupied first, sometime after 1800. After the house was abandoned and the chimney fell, the wall of Enclosure D was built across the foundation and chimney rubble. In fact, the otherwise rather linear trajectory of the stone wall as it approaches the house from the northwest makes a noticeable jog to accommodate going across the chimney stack itself, and it resumes a fairly straight course after that. Also at some period of time after the (at least initial) occupation of the house, the stone piles were constructed, as indicated by their unnaturally close proximity to the house and the evidence of artifacts deposited beneath them. Enclosure E and the small, “D”-shaped enclosures were constructed some length of time following the construction of Enclosure D based on the construction methods of the intersections of these features. Given the assumption that the walls of Enclosure E were constructed as a result of the growing piles of stone that lined the edges of the fields, we can determine that the piles within and just beyond the bounds of Enclosure E predate the actual stone wall. Following the alignment of stone piles, the boundary wall of Enclosure E was

constructed which may be indicated by the continuity of piles that do not seem to be disrupted or redirected by the wall.

The next established sequence of occupation is in Enclosure A. The house foundation dates to the early – middle 19th century (Cipolla 2005; Cipolla et al. 2007). Data from the under-stone excavations as well as the analyses from the units on both sides of the stone wall nearest the site indicate that the walls and piles were built after the occupation of the house. Although the artifact counts were in the lower range of the distribution classes, they still seemed to match units in their proximity. As a result, significant evidence suggests that artifacts from the houses occupation were deposited prior to the construction of the walls and piles.

Finally, the last known occupation area is located near Enclosure C at the site where the mid 19th-century and large 19th - 20th century foundations were identified. This area has been identified as the most recent occupation site on the reservation, other than the numerous 20th- and 21st-century occupations along sections of the reservation's perimeter. The proximity of Enclosure D and E to this late 19th-century home (unmapped) beyond the far eastern edge of the so-called Enclosure C, the overlay of the stone wall on top of a mid-19th-century house remnant that pushes the date later in the 1800s, and the extensive array of stone piles in various alignments suggests that this large-scale bounding and farming effort was associated with that late 19th-century house. Although the gate on the western edge of the enclosure does not face this later home exactly, it is oriented well enough toward it (and the current dirt road through the reservation that dates at least to the early 20th century and likely earlier) and therefore would have permitted those house residents more direct access to the Enclosure D than it

would have done for anyone living at the rocked-over house on the eastern edge. Also, no archaeological evidence exists for any other late 19th-century house – and a later, larger house would have a visible presence on the surface, much like this one does – anywhere in the vicinity of this gate or these enclosures, which further hints at their association with this particular home. These patterns suggest that this level of landscape modification and intensive agriculture did not take place while the two houses within Enclosure D, which helps to situate understanding of reservation land use within its proper time frame.

In sum, I argue for two primary construction phases on the reservation. The construction and occupation of homesites were the primary building practices, followed by an intensification of farming and the bounding of large-scale agricultural fields near abandoned houses from years, if not decades, before. In Enclosures D, E, and likely G, the walls and piles were constructed sometime after 1800, possibly as late as the early 20th century for Enclosure D, and in Enclosure A they were constructed after approximately 1830. These dates fall at the later ranges and outside of the estimates of 1775-1825 or 1810-1840 (Allport 1994:89; Gardner and Allport 2003:10) as the most active periods of stone wall construction. These dates indicate that the Eastern Pequot people were slower to adopt EuroAmerican rock landscaping technologies in their lifestyles compared to what other scholars estimate and compared to the identifiable transformations of household architecture to more European-inspired forms. It also suggests that these later measures may have been taken not to emulate their Anglo neighbors nor to convince them of the rightness of Eastern Pequot farming, but rather to intensify farming in larger fields away from their current homes and in the apparent yards

and perhaps even homes of their immediate ancestors. It is a style of intensive farming that perhaps they had no use for until then.

Landscape Alterations and Activities

In addition to the valuable information that the sequences of construction can provide regarding the timing of the incorporation of European building practices into Eastern Pequot lifestyles, the relationship of landscape alterations and other activities highlight other important aspects. This study allows us to understand not only the timeframe of the uses of these stone features, but also the context in which these materials, practices and ideas of landscape use were understood by the Eastern Pequot people. Through the cumulative data analyzed in this thesis, I identified three broad functions of landscape use on the Eastern Pequot reservation associated with the construction of stone features. These practices include living in homes and depositing trash, plowing fields and raising crops, and burying of the dead.

Multiple homes and foundations have been identified and excavated across the reservation over the years. The occupants of these homesites appeared to keep their debris and refuse within relatively close proximity to their homes (see Hayden 2012). The highest concentrations of artifact debris are found within and directly surrounding these foundations indicating that the Pequot maintained close physical ties to their homesites. Although space was somewhat limited within the confines of the reservation bounds, the Eastern Pequot people did not continuously reoccupy and repurpose the same homes, except in the case of the homesites at Enclosure G.

While we now know that many of the stone features surrounding the houses were constructed beginning in the 19th century and after the occupations of many of the houses, the stone walls and the house foundations correlate in their locations. As demonstrated in Enclosure D, this might be due to the reuse of stone from the foundations in the creation of boundary walls. Instead of reoccupying homes, they were abandoned and in this case, taken apart for its materials to be repurposed to better fit a new set of needs.

It is probable that the occupants of many of the 18th- and early 19th-century houses on the reservation utilized small plots of land and gardens to grow crops to supplement their diets. These small plots were most likely located close to their homes and may or may not have been enclosed by stone or other fencing materials which make them difficult to recognize in the archaeological record. The most obvious evidence of extensive agriculture, however, is found in Enclosure E. Based on the evidence of the sequences of construction I have estimated that this large agricultural field was not bounded by stone until after the occupation of the house and the construction of the wall of Enclosure D, sometime into the 19th century, and may have been associated with the residents of the home in Enclosure C which was occupied into the 20th century. Until this time the Eastern Pequot people did not implement such large large-scale agricultural practices, indicating that although the enforcement of the reservation system limited their range of hunting and gathering and forced them into more intensive gardening, they did not immediately adopt European construction techniques for their fields. This field was probably used for agricultural practices prior to its bounding, but the threat of wandering animals, fencing laws, religious beliefs, and other assumed influences of the incorporation of European construction techniques did not immediately influence the

Eastern Pequot people to enclose their land with stones, at least not universally or extensively. Whether they waited to enclose this field until the piles of stone grew so great that the wall naturally formed or another factor was an influence is uncertain, but it is clear that the Eastern Pequot were not in a rush to adapt to this new technique until it suited their needs. It may have been less of a cultural modification than a fitting of available technologies in the late 19th century to agricultural needs beyond the levels accommodated before.

Although this study could not confirm evidence of the construction of stone features for ceremonial or religious practices similar to what Gage and Gage suggests used to and continues to occur amongst Native peoples, the project did find evidence of a respect and reverence for the deceased. The burials that were identified on the reservation were placed in areas relatively separate from the rest of the architecture and stone features and are free of any excess stone in their immediate areas other than what might mark the graves themselves. They were also somewhat enclosed, possibly to keep away unwanted guests, although circumstantial evidence indicates that these enclosures happened after the burials. It is clear that remembrance of their loved ones was a priority for the Eastern Pequot people as evidenced by the fact that they allotted specific portions of their land for this practice.

Conclusion

The evidence in this thesis indicates that stone wall construction on the Eastern Pequot reservation did not happen as early as some scholars have predicted for other New England Native peoples. The adoption of European stone building techniques on the

Eastern Pequot reservation was a slow and gradual process that began with the incorporation of some glass and nailed elements into traditional Pequot wigwams. Over time, chimney stone and wooden framed walls and structural timbers, but only very occasional bricks, were incorporated into the construction of more permanent homes. The use of stone construction was primarily reserved for household architecture at this point in time. Following the occupation of many of these houses, the formal bounding of large extensive farm lands eventually came into practice sometime in the 1800s or, perhaps with Enclosure G, the tail end of the 1700s. These sequential uses of the sites, once for living and once for piling up rocks for agriculture, demonstrate an increased intensification of farming. Eastern Pequot people were not simply assimilating or succumbing to European practices in order to appease their colonial neighbors or to adapt to Puritan religious beliefs, colonial fencing laws, or notions of the proper uses of land.

Despite these limitations and the potential for additional information from future research, this thesis has provided a substantial compilation of data from years of research in an effort to better understand the significance of stone construction in the lives of the Eastern Pequot Tribal Nation's ancestors. This broad landscape analysis has provided future researchers with a template of the sequences of construction across the reservation. Additionally, data from this research has indicated a two-part construction process beginning with the construction and occupation of homesites and extending to the arrangement of stone piles and subsequent bounding of agricultural fields. The use of stone construction by the Eastern Pequot people is indicative of a conscious decision-making process based on their changing needs as opposed to a unilateral and early acceptance of European-based practices. It is my hope that this research aids in the

growing understanding of Native American peoples such as the Eastern Pequot Tribal Nation, as active and dynamic decision-makers throughout colonization and into modern times.

This project establishes unambiguously that numerous stone walls, fences, and agricultural and architectural stone piles in southern New England, especially on reservation land, were definitely built and used by Native Americans. They are Indigenous labors of construction, place making, boundary assignment, and landscape alteration that began to take form on the Eastern Pequot reservation by the third quarter of the 18th century for house construction and into – often well into – the 19th century for other features and structures made of stone. This perspective offers a helpful antidote to assumptions either that these rock technologies were quite ancient or that they were simply or only European and EuroAmerican. They are made, used, and given meaning by Native American people in their complex colonized and culturally rich landscapes.

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2000 Appendix F. American Indian Areas, Counties, County Subdivisions, and Places - Section

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