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Vernacular Architecture:
Pre-Columbian Households of the Middle Chamelecón Drainage, Northwest Honduras

A Dissertation submitted in partial satisfaction
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Doctor of Philosophy

in

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by

Lauren Elizabeth Schwartz

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Dissertation Committee:
Dr. Wendy Ashmore, Chairperson
Dr. Scott L. Fedick
Dr. Karl Taube

The Dissertation of Lauren Elizabeth Schwartz is approved:

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Committee Chairperson

University of California, Riverside

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To Mom

ABSTRACT OF THE DISSERTATION

Vernacular Architecture:
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by

Lauren Elizabeth Schwartz

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Dr. Wendy Ashmore, Chairperson

Architectural designs and site-planning principles have been well studied within Mesoamerica, however, predominantly informed from large urban polities, monumental styles, and elite-associated contexts. A standardization of the architectural designs of domestic, rural, or household milieus remain underexplored, especially within Southeast Mesoamerica (eastern Guatemala, western Honduras, and El Salvador). The approach of evaluating vernacular architectural traits from this particular region of the Pre-Columbian Americas is a promising application to initiate deciphering and systematizing of construction similarities and variations from “everyday” settings.

Therefore, this dissertation analyzes the vernacular architecture of household settings from the Late (AD 600-800) and Terminal Classic (AD 800-950) site of PVN647, located near the border between the Naco and Cacaulapa Valleys in northwest Honduras. Vernacular architecture is defined here as a building practice that makes use of immediately available resources to address immediate needs and can serve as a translation into physical form of a cultural expression or display of group affiliation. Of particular focus is the assessment of architectural arrangement design, location, construction quality, temporal order, and function. These aspects are examined within a household patio group and the larger hamlet-center plaza group, which includes residences, work areas, and storage facilities. Results of full structure clearing excavations indicate similar building practices were occurring in both settings, though on differing social scales, representative of a most site-specific identity expression.

Additionally, intra-regional (within the Naco and Cacaulapa Valleys) and inter-regional comparisons reveal the extent of architectural design correlations with other settings of northwest Honduras, which includes the Classic period Maya site of Copán. Results contribute to understanding the vernacular architectural practices at the archaeological site level, as well as the valley and regional levels and advance our understanding of the elasticity of shared identity expression to meet local ideals, as interpreted from the fixed material record, as well as the cultural diversity from this region of Southeast Mesoamerica.

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The physical environment of man, especially the built environment, has not been, and still is not, controlled by the designer. This environment is the result of vernacular architecture, and has been largely ignored in architectural history and theory. Yet it has been the environment of the Athens of the Acropolis, of the Maya cities and the towns next to Egyptian temples and tombs…- as it has been of remote villages and islands… High style buildings usually must be seen in relation to, and in the context of, the vernacular matrix, and are in fact incomprehensible outside that context, especially as it existed at the time they were designed and built [Rapoport 1969:1].

Chapter 1

Introduction

What does your house say about you? This question may seem to originate from a home improvement store advertisement or an interior design consulting firm. However, within the scholarly studies of vernacular architecture, this inquiry lies at the heart of understanding how the human built environment plays a role in the structure and expression of shared social identity. More specifically, how one's personal dwelling communicates customs, beliefs, and kinship or culturally-communal affiliations. As such, it provides a useful means by which to examine archaeologically everyday residential settings from prehistoric contexts in order to reveal evidence of social organization and cultural expression.

Thus, this dissertation provides initial examination of household architectural assemblages from northwest Honduras during the Late Classic (AD 600-800) and Terminal Classic (AD 800-950) in order to assess the nature of vernacular architectural expression within this particular region of Mesoamerica, which includes both Maya and 'non-Maya' peoples. This dissertation is designed as a three-fold study: first to examine

architectural arrangements at the archaeological site level; the precise subject is site PVN647, situated near the border between the Naco and Cacaulapa Valleys within the middle Rio Chamelecón drainage. Site PVN647 is considered as a 'control sample', analyzed for a variety of architectural observations, and representative of a most local building practice.

The second component of this dissertation is to examine recurring building arrangements from PVN647 to test their applicability as vernacular forms at other sites of analogous size and occupation period within the Naco and Cacaulapa Valleys. The intent of this comparative analysis is to reveal the extent of shared construction practices within a particular regional setting. Finally, in order to gauge the broader extent of vernacular sharing, the third component is the consideration of architectural assemblages from surrounding settlements, namely from the Cuyumapa, lower and middle Ulua Valleys, as well as the hinterland regions of the Classic period (AD 400-950) Maya site of Copán, all within what is now western Honduras. By means of this three-fold approach, the goal of this dissertation is to demonstrate how examinations of architectural arrangements at the site, region, and inter-regional levels reveal common building characteristics as well as variations. Moreover, the systematic evaluation of shared construction techniques and building practices contributes to the understanding of prehistoric household social dynamics and expression of group affiliation within northwest Honduras.

Unquestionably, architectural analysis has played a significant role in archaeological interpretations of ancient social organization, political structures, and religious practices in Mesoamerica and elsewhere (Ashmore 1992; Houston 1998;

Schortman and Urban 1994; Sharer et al. 1999). By studying the building materials, construction styles and arrangements of architecture we can begin to infer the use and meaning of constructed spaces. Architectural designs and spatial arrangements of many ancient Mesoamerican political centers have been well documented (Andrews 1975; Kowalski 1999; Marcus 1983). In addition, architecture at major sites within Southeast Mesoamerica (eastern Guatemala, western Honduras, and El Salvador) has been extensively investigated (Agurcia and Fash 2005; Fash 1998; Ahlfeldt 2004a, 2004b; Leventhal and Baxter 1988; von Scherwin 2010, 2011). While knowledge and insight of the Classic period lowland Maya has matured and flourished over the past century and more, the archaeology of neighboring peoples in the southeast, aside from Copán, has shown significant growth mainly within the last 30 years (Schortman and Urban 2008; Schortman et al. 1986) (**Figure 1.1**).

Figure 1.1: Map of Mesoamerica with Southeast Mesoamierca (in green) and location of research area in northwest Honduras (in blue) (adapted from www.latinamericanstudies.org).

Perhaps not surprising, relatively little is known about the architectural arrangements and spatial norms for household contexts from the southeast region. Although ancient households have been examined at Copán (Gerstle 1988; Gonlin 1993; Hendon 1987; Johnston and Gonlin 1998; Webster and Gonlin 1988), Cerén (Sheets 1992, 2002; Sheets et al. 1990), and other locales of northwest Honduras (Douglass 1999, 2002; Ellison 2006; Fung 1995; Hendon 1996, 2000, 2002, 2010; Joyce 2000; Lopiparo 2003), vernacular building styles and architectural arrangements from these types of

contexts remain underdeveloped. This area has been recognized for its cultural diversity, and the best known group – the Maya – represent only one of many in the region. What are the vernacular architectural principles of the full range of ancient societies in this region? What are the construction differences between culturally categorized 'Maya' households versus household contexts in other regions of northwest Honduras?

Why Vernacular Architecture?

The utility of vernacular architecture in this examination lies in its ability to incorporate the socio-cultural, environmental, and technological components that shape architectural manifestations (Rapoport 1969). Most briefly, vernacular architecture refers to a building practice that makes use of immediately available resources to meet immediate needs. However, vernacular outcomes are not exclusively environmentally determined. Indeed, it is the cultural milieu (the customs, beliefs, kinship-based organization, etc.) that most greatly impact vernacular traditions, as the construction's builder is also its owner and occupant (Oliver 1997b). Furthermore, vernacular arrangements are open to adaptation and shifts in design patterns reflect the utility and desire for a particular building practice. Therefore, elements of shared social affiliations are expressed in the configurations of the built environment; and of the most widespread social setting of the built environment in that of the household.

In point of fact, analyses of vernacular architecture also aid interpreting structure forms and functions. The initial analysis of quantifiable data such as structure height or interior occupation area, as well as qualitative descriptions of built-in furniture or

construction techniques, are the foundations of vernacular study, especially when accompanied by associated artifact assemblages. Archaeological studies of prehistoric households are already methodologically and theoretically structured to include these types of analysis. Briefly, households are identified following Wilk and Rathje (1982) to be an activity group, comprised of three elements: the social, material, and behavioral. Examinations of household settings aim to reconstruct the social organization and domestic strategies exercised by household members by means of the dwellings in which they lived and performed. As such, select archaeological researchers of the Pre-Columbian Americas have conducted investigations that I argue already incorporate aspects of a vernacular framework, though they do not always explicitly claim to do so (see Aldenderfer 1993; Bermann 1994; Douglass 1999, 2002; Gonlin 1993, 1994; Hendon 1987, 1991; Nash 2002; Reycraft 1994). Therefore, I contend, and this dissertation demonstrates, that archaeological examinations of vernacular architecture enhance methods and theories for reconstructing the comprehensive social histories of ancient Pre-Columbian household contexts.

Furthermore, by means of comparative studies, the extent of architectural vernacular forms and their functional interpretations can be revealed for a given regional setting, whether the latter is environmental or cultural. If extensive datasets exist within a given study area, patterns of vernacular manifestations can be tracked both across the region or landscape and through time. Observations of vernacular patterns can include construction technique, assemblage sequence, and preference of building materials, among many others. However, perhaps most crucially are observations of variations or

modifications in identifiable vernacular designs. Most generally, the persistence of certain architectural designs or building methods are indicators of a valued process, whether for practical reasons or cultural inclinations, or more likely, a combination of both. Additionally, by closely evaluating structure construction histories, recognized designs can be distinguished as being either intentional from the outset or adaptations into a different building form over time. Shifts in building arrangements into or out of identified vernacular patterns signal shared concepts of proper architectural configurations and their association with shared cultural practice, expressed by means of the built environment. When comparatively traced across a region, architectural markers can indicate 'in-group' or 'out-group' identity-based membership.

Of course, parallel examinations have been attempted by archaeologists studying a different form of material culture: the artifact record. For example, within ancient Mesoamerica, ceramic assemblages have been utilized to understand structure function (Leventhal and Baxter 1988), reconstruct household organization (Garber et al. 1998; Lopiparo 2003), and elucidate processes of identity formation (Bartlett and McAnany 2000; Ellison 2006; Lopiparo et al. 2005; Stockett 2005a and 2007; Yaeger 2000). In these and other household studies, generalized architectural elements are cited and analyzed in conjunction with artifact assemblages to interpret building function (Gonlin 2004; Hendon 1987), family composition and size (Henderson 2012; Tourtellot 1983, 1988; Wilk 1988), and overall household wealth or status (Blackmore 2008; Douglass 1999; 2002; McAnany 1992 and 1993). However, detailed accounts of the architectural characteristics from these investigations considered within either an intra- or inter-

regional comparative perspective have seldom been attempted. As a result, valuable information from vernacular architectural observations indicating household affiliations or autonomy remain underexplored.

Once again, the aim of this dissertation is to show that by analyzing the characteristics and designs of vernacular architecture, in conjunction with the associated artifact record, within a generalized culture area, this approach maximizes the interpretation of prehistoric Mesoamerican household contexts. Furthermore, I contend that this application is most advantageous in northwest Honduras where an assortment of differing cultural material expressions are observed, yet decipherment of distinct identity-based associations remain unresolved.

Northwest Honduras in Southeast Mesoamerica: A Setting of Varying Identities

The vast majority of archaeological attention within Southeast Mesoamerica, and specifically northwest Honduras, has been focused on the Classic period Maya site of Copán, and to a certain degree, understandably so (**Figure 1.2**). For some of the earliest Mesoamerican scholars, large monumental political centers dominated archaeological inquires, which included Copán (Gordon 1898, 1902; Longyear 1952; Morley 1920). Therefore, early and extensive investigations at the site reasonably sought to situate the history of the Copán kingdom within the framework of other known Maya monumental centers, as well as define the southern-most extent of the Maya culture area. Over time, archaeologists explored other regions of northwest Honduras, though still with the

research agenda of documenting linkages to culturally Maya peoples (Canby 1949, 1951; Longyear 1947; Popenoe 1934; Stone 1941, 1957; Strong et al. 1938).

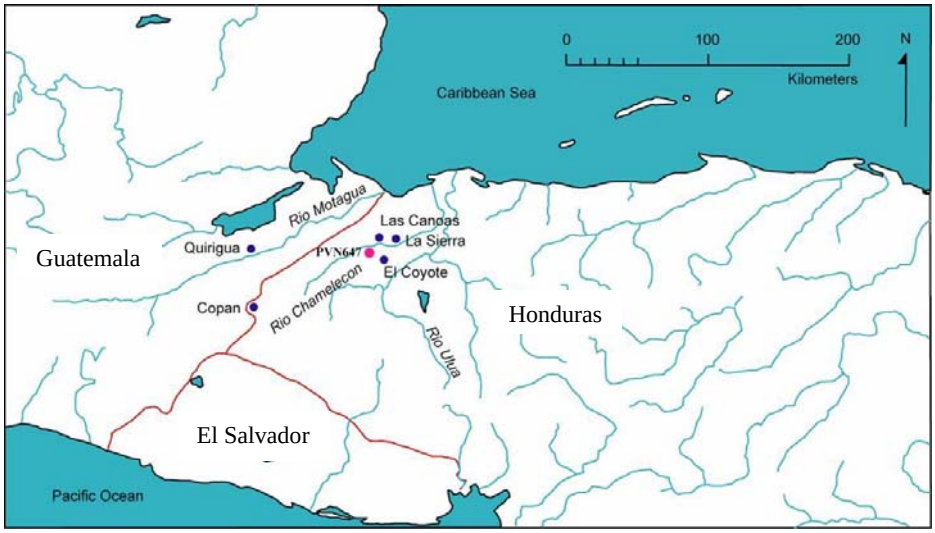


Figure 1.2: Map of Northwest Honduras and the location of Copán and site PVN647.

Beginning in the late twentieth century, several archaeological projects have documented the settlement patterns of select valley regions beyond the Copán Valley within northwest Honduras (Ashmore et al. 1987; Agurcia 1986; Benyo and Melchionne 1987; Dixon 1989; Robinson 1987; Schortman et al. 1986; Urban 1986a, 1986b). Furthermore, valley polity centers have been investigated to varying degrees (Ashmore 1987; Henderson 1977; Henderson et al. 1979; Joyce 1991; McFarlane 2005; Schortman and Urban 1994, 1995; Wells 2002; Wonderley 1981, 1986), as have rural, household, and hinterland settings (Douglass 1999, 2002; Ellison 2006; Fung 1995; Lopiparo 2003; Schortman and Urban 1987).

Most generally, the results of archaeological research of prehistoric contexts suggest that Late and Terminal Classic inhabitants of northwest Honduras were organized

in ranked, complex societies and mostly affiliated with a non-Maya cultural milieu. Indeed, Mesoamerican elite characteristics have been documented in specific locales, such as monumental constructions made from cut block with plaster floors (Ashmore 1987); the placement and orientation of ball courts and evidence for associated stone markers (Schortman and Urban 2011; Urban and Schortman 1994); and 'Mayoid' polychrome ceramics (Joyce 1993a). However, Urban and Schortman argue that the presence of the cited construction styles and material culture within the Naco Valley stem from local rulers appropriating particular elite Maya markers in order to establish their authority and validity as sovereigns over immediate hinterland settlements, as opposed to being forced upon them by Maya monarchs from Copán (1987, 1988, 1994; Schortman 1989; Schortman and Urban 2011). Furthermore, Joyce (1991, 1993a, 1993b) contends that stylistic similarities between foreign polychromes from lowland Maya and as far as Costa Rica, jointly with locally produced 'imitation' polychromes were intentional to establish a pan-elite identity across a single region. As such, interpretations have focused on a variety of implications regarding the degree of interaction and influence indicated by the recovery of these generalized Maya or Mesoamerican characteristics.

Likewise, more distinctive Maya hallmarks such as "elaborate carved-stone monuments and coherent inscriptions using the Maya hieroglyphic text" (Fung 1995:48) are notably lacking within settlements of northwest Honduras. Therefore, as evidence contradicts the idea that all occupied regions beyond the Copán settlement were culturally Maya, the label of 'non-Maya' has often been applied. However, as settlements experienced specific, local histories and often mutually distinct construction styles, the

area has not been homogenized as representing one unified cultural system. Indeed, investigated polity centers witness select commonalities with regard to including monumental architectural forms, spatial organization patterns of plaza formations, and even the incorporation of ball court facilities. However, variations do exist and relate to polity size and spatial distribution of structure groupings (compare Joyce 1991:36-44 and Urban and Schortman 2011:9); site-planning layouts of main plaza arrangements (compare Schortman and Urban 2011:11 and Wells 2002:72-73); and the frequency and physical prominence of ball courts (compare Joyce and Hendon 2000:148-153 and Schortman and Urban 2011:11). These observed differences are attributed to varying socio-political practices and the means and intensities of interregional interaction; all of which privileges elite-level concerns about social relations and displays of power.

Households Across the Region

In contrast, relatively little scholarly attention has focused on comparing the architectural arrangements, site-planning principles, uses of space, or degree of autonomy from the pressures of local ruling elite on rural or hinterland household settlements that surround polity centers. Examinations of Late and Terminal Classic household contexts have occurred in various portions of northwest Honduras and for an assortment of scholarly intentions (e.g. Douglass 1991, 2002; Ellison 2005; Fung 1995; Hendon 2007, 2010; Lopiparo 2003, 2007; Joyce 2000; Stockett 2001). Not surprising, multiple studies have overlapped. For example, Ellison (2005) has modeled the possible motivations for rural ceramic production within the middle Chamelecón-Cacaulapa region; while Lopiparo (2003) has examined household ceramic production in the lower Ulua Valley

(see Chapters 3, 7, and 8 for further descriptions of these regions). Each has offered interpretive models for valley setting-specific practices and social implications of household-level craft production. What conclusions can be formed from comparing analogous crafting activities between valley settlements? How do motivational dynamics for household production differ across northwest Honduras? While questions of craft manufacture are not the focus here, the underlying inquiry of identifying corresponding social practices as interpreted from the material record, specifically the fixed material record, adheres to the overall goal of this dissertation, particularly by means of an inter-regional examination.

Generalized architectural accounts from numerous studies indicate that northwest Honduras household settings of non-elite or 'commoners' were most frequently arranged in patio groups (3-5 structures arranged around and facing toward a shared small plaza or courtyard configurations), amassed from locally available and unmodified construction materials, and assembled into platform substructures with perishable superstructures. I argue these descriptions, though very generic, are representative of a most common vernacular portrayal of architectural assemblages in northwest Honduras. I contend as well that these basic characterizations and deviations are amenable to and worthy of examination to reveal even refined vernacular interpretations within northwest Honduras.

Households over Time: The Late and Terminal Classic

Lastly of note regarding the variety of social occurrences during the prehistory of northwest Honduras is in relation to the occupation history (**Table 1.1**). The periods with the greatest population densities in antiquity are the Late and Terminal Classic.

Therefore, the greatest comparison possibilities *and* greatest amount of archaeological investigation involve settlements from these periods. However, while many archaeological sites investigated remained inhabited and largely unchanged through the transition between these two periods, socio-political shifts affected different regions of northwest Honduras in different ways.

Time Period Designation	**Relative Date Range**
Early Preclassic	1500 – 800 BC
Middle Preclassic	800 – 400 BC
Late Preclassic/Protoclassic	400 BC – AD 200
Early Classic	AD 200 – 600
Late Classic	AD 600 –800
Terminal Classic	AD 800 – 950
Early Postclassic	AD 950 – 1200
Late Postclassic	AD 1200 – 1522

Table 1.1: Chronology of Mesoamerican time periods (adapted from Evans 2004).

For example, the ruling elite at the site of La Sierra in the Naco Valley witnessed the pinnacle of their political authority over valley residents during the Late Classic. Archaeological evidence points to the intentional dismantling and burial of several monumental buildings and the ball court in the La Sierra civic core simultaneously during the Terminal Classic, signaling the loss of authority of the Late Classic sovereigns (Schortman and Urban 2011). A new site core of monumental structures was erected

during the Terminal Classic and immediately to the east of the Late Classic core at La Sierra. This new construction demonstrates that not all power was lost and that the site was not abandoned wholesale. However, shifting socio-political strategies at La Sierra during the Terminal Classic represent a more welcoming and less-controlling form of governance. Indeed, roughly a dozen other sites within the Naco Valley are identified as being political centers during the Terminal Classic, albeit smaller in settlement size than La Sierra, which indicates that power was more widely dispersed than during the Late Classic (Schortman and Urban 2004).

The settlement history of the lower Ulua Valley, however, depicts a shift in political tactics during the transition from the Late to Terminal Classic that contradicts observations in the Naco Valley. Late Classic settlements are fairly evenly distributed across the lower Ulua Valley. This seeming uniformity is hypothesized to represent a number of competing polity settlements of relatively equal size and influential abilities (Joyce 1991). However, at the start of the Terminal Classic, the site of Cerro Palenque became the centralized polity center for likely the entire valley (Joyce 1986, 1991). The growth of smaller patio group clusters within the immediate site core of Cerro Palenque resulted in its being much larger than its Late Classic version. Joyce (1991:151) contends that "Terminal Classic Cerro Palenque is at the top of a hierarchy, while Late Classic Cerro Palenque is a subordinate center". This depiction of centralizing authority at one site is seemingly a counter situation than is observed in the adjacent Naco Valley during the same time period. However, to be clear, no other Terminal Classic site in the Naco

Valley is known to be greater in size and possibly stronger in political potency than La Sierra, even though the power of its ruling class diminished greatly.

The relevance of these differing settlement patterns and socio-political strategies is that variations in material culture can be observed over time during this transitional period. Furthermore, though it is recognized that shifting elite social relations were occurring at polity centers, it is unclear how these conditions impacted non-elite households or other valley inhabitants. Therefore, an additional goal of this dissertation is to account for variations in observed vernacular architectural assemblages that may be associated with these particular time periods. With that goal in mind, the site of PVN647 was selected for examination due to its positioning within a border area between the Naco and Cacaulapa Valleys and to its having been continuously occupied from the Late Classic period into Terminal Classic times.

Site PVN647, Middle Chamelecón-Cacaulapa Region, Northwest Honduras

Positioned along the southern banks of the Rio Chamelecón, the site of PVN647 is located across that river from the previously investigated Late Classic municipal center of Las Canoas (Stockett 2005a, 2005b, 2007) and the large household settlement of site PVN598 (Ellison 2006) (see **Figure 1.2**). Comprised of 46 structures, arranged in three distinct plaza groups, site PVN647 is identified as a moderately-sized settlement within the Middle Chamelecón-Cacaulapa region. Evidence from one structure grouping and buried fill beneath other buildings indicate that the earliest occupation at the site occurred during the Middle Preclassic (see Urban and Schortman 2013). However, the primary

periods of habitation span the Late and Terminal Classic, as indicated by the majority of buildings being raised and maintained during this time, as well as artifact markers. Furthermore, the structure composition from these time periods match the descriptions from other valley settlements of northwest Honduras. PVN647 buildings are slightly raised platform substructures, assembled from unmodified river cobbles, and likely finished with a perishable, wattle-and-daub superstructure. Therefore, site PVN647 was selected for examination due to its size, location, periods of occupation, and greatest relevance for studying vernacular architecture, its commonly-observed construction technique and use of locally available building materials.

Extensive excavations of eight structures from the two best-preserved plaza groupings at PVN647 occurred between February and June of 2008. The two studied plaza groups (the Site Core Plaza Group and the Southeast Plaza Group) represent varying settlement sizes, though both organized as plaza arrangements with relative spacing between distinct structures. The relative extent and height of structures within the each group suggests social variation between the two. The Site Core Plaza Group contains the most structures of any group at PVN647 and includes at least one monumental building (taller than 1.5m in height) within the main plaza and a smaller patio group immediately adjacent to the southeast. At first glance, this main group suggests a mixture of public-serving buildings, as well as residential and storage facilities, and likely inhabited by multiple, extended kin-based and non-related residents. In contrast, the Southeast Plaza Group suggests a patio group that might have been home to one or more family units.

Consequently, site PVN647 is regarded as an ideal setting by which to examine vernacular architecture within northwest Honduras. Aside from Las Canoas and PVN598, several other household settlements within the Middle Chamelecón-Cacaulapa region have been investigated. Furthermore, the Late Classic valley center of El Coyote (see **Figure 1.2**) roughly 10km to the southeast within the Cacaulapa Valley and other surrounding sites have also been examined (McFarlane 2005; Urban 2007; Wells 2002). Perhaps most importantly, extensive investigations have occurred within the Naco Valley and at a range of household contexts dating to the Late and Terminal Classic. Therefore, an ample amount of comparative datasets exist from these most immediate settings surrounding site PVN647 in order to assess vernacular architectural formations.

Outline of Dissertation and Conclusion

In summary, the purpose of this dissertation is to assess the degree of similarity and variation of vernacular architecture occurring within Late and Terminal Classic household contexts of northwest Honduras. After identifying vernacular assemblages at site PVN647, intra-regional and inter-regional comparisons reveal the extent of regional construction variation and shared cultural material expression.

However, before data from PVN647 and the descriptions of vernacular architecture are presented, several definitions and histories of research need to be clarified. Therefore, Chapters 2, 3, and 4 collectively supply the background to the theoretical and methodological approaches to identifying and interpreting vernacular

architecture, as well as situate the prehistoric setting of northwest Honduras. More specifically, Chapter 2 leads with a definition and brief history of vernacular architecture study, which distinguishes examinations of vernacular expressions from other types of architectural evaluations. Additionally, the study of prehistoric architecture is contextualized within the history of Mesoamerican household archaeology and the theoretical underpinnings of practice theory are explained in association with interpretations of identity expression from prehistoric material culture.

Chapter 3 positions site PVN647 within the environmental, ethnohistoric, and prehistoric culture history of northwest Honduras. Next, the history of archaeological research and scholarly outcomes within the Naco and Cacaulapa Valleys and the *Proyectos Valle de Naco* (PVN) and *Cacaulapa* (PVC) are presented in detail. The chapter concludes with a complete site description and history of research at PVN647, and the case for the suitably of this site for examining vernacular architecture. In order to observe architectural assemblages and interpret vernacular form and function, complete structure excavations and artifact analysis are required. Therefore, an overview of the research design, and excavation and laboratory investigation methods utilized in studying PVN647, and other comparative datasets, comprise Chapter 4. The conclusion to this chapter establishes the differing 'scales' of vernacular manifestations and how I have identified them from the archaeological record.

The original archaeological research findings in field seasons from 2008 to 2009 are presented in Chapters 5 and 6. The structure descriptions and architectural analysis of each building from both investigated plaza group settings from PVN647 comprise the

content of Chapter 5. Thorough examination reveals construction practices categorized into variations of platform configurations, interior compartmentalization, and exterior modifications in the form of later appendages. These three scales of evaluating complete structure arrangements establish the framework for all comparative discussions in the dissertation. As such, comparisons are discussed between the two plaza groups and center on architectural commonalities, plaza designs, and overall accessibility into common plaza spaces. The result yields the architectural arrangements with promising comparative potential that are advanced for testing of their appearance within other regions of northwest Honduras. Chapter 6 summarizes artifact assemblages encountered, and for each structure, combines architecture with artifacts to propose structure functions and household practices within each group. Once again, comparisons of structure function, overall group cohesiveness, and forms of interaction between each grouping are considered and conclude the presentation of research results from PVN647.

Chapters 7 and 8 introduce the framework for observing vernacular architecture from other sites and settlements beyond PVN647 within northwest Honduras. Beginning with an intra-regional, qualitative comparative examination, Chapter 7 presents site and building descriptions from previously investigated household settings from the Late and Terminal Classic periods within the Naco and Cacaulapa Valley regions because site PVN647 is located at the border between the two. At the outset, the chapter presents criteria regarding the sample site selection process. Narrative moves to comparisons involving two specific vernacular arrangements identified at PVN647 and one that has been documented elsewhere in PVN and PVC investigations. The frequency and

variation in each of the three hypothesized vernacular arrangements points to the degree of shared building practices and social identity within the Naco and Cacaulapa Valleys.

The second evaluation of vernacular architecture is an inter-regional examination, considering other, surrounding valley regions of northwest Honduras. Therefore, Chapter 8 includes brief valley and site descriptions of household contexts from the Cuyumapa, middle and lower Ulua Valleys, as well as the rural areas of Copán. Access to preexisting datasets from household contexts, as well as degree of excavation intensity shaping those datasets varies greatly from valley to valley. As a result, select valleys include more detailed descriptions than others with regard to architectural assemblages. However, analysis of observable arrangements are presented and contextualized for their vernacular meaning regarding commonalities and differences amongst known non-Maya settlement areas. Lastly, the architectural descriptions from rural households in the Copán Valley are considered and indicate generalized vernacular resemblance, though none that are deemed to represent shared social identity.

Finally, Chapter 9 summarizes the evidence for vernacular architectural patterns observed within the selected settlements of northwest Honduras. Most specifically, architectural arrangements revealed from PVN647, the support for vernacular structure forms occurring within the Naco and Cacaulapa Valleys, and implications regarding location and time period are reviewed. Discussion also includes the evaluation of the success of the dissertation framework to compare vernacular arrangements from considered valley settlements for revealing insight into shared social identity. Lastly, future applications to this particular dataset are reviewed, as well as the implications for

the utility of vernacular architectural examinations in household archaeology and studies of Mesoamerican prehistory.

In summary, this dissertation asserts that the architectural configuration of one's residence holds the potential to communicate not only aspects of common building practices, but also shared forms of social organization and identity-based affiliation. By merging the fields of vernacular architecture, household archaeology, and examinations of social identity by means of a non-movable form of material culture, a new theoretical and methodological approach to examining prehistoric contexts is now tested. When coupled with a comparative analysis of vernacular architecture from northwest Honduras, this dissertation demonstrates that the framework can effectively further our understanding of ancient identity expression and the degree to which it is shared within this region of Southeast Mesoamerica.

Chapter 2

Vernacular Architecture, Household Contexts, and Identity Expression

The investigation of Pre-Columbian vernacular architecture in the Naco and Cacaulapa Valleys and other regions of northwest Honduras draws from household archaeology, architectural studies of domestic social settings, and elements of "practice theory", which collectively seek to gauge most generally, how ancient peoples invoked proper ways to construct their worlds. Therefore, the purpose of this chapter is to situate various scholarly fields and articulate how the joining of certain aspects from each establishes a framework by which to analyze vernacularly constituted architectural assemblages from the prehistoric record.

This chapter begins with a definition and summary of the history of vernacular architecture. This is proceeded by an outline of components that characterize vernacular architecture for this dissertation; in addition to presenting differing scholarly approaches, which highlight how archaeological methodologies enable studying the forms and patterns of vernacular architecture from prehistoric settings. Next is a brief review of household archaeology, particularly within reference to northwest Honduras, and emphasizing the importance of architectural scale. Lastly, the chapter illustrates how a practice-grounded analysis of vernacular architecture furthers understanding of the material expression of cultural affiliation and shared identity, generally and within this region of northwest Honduras.

Vernacular Architecture Defined

Examinations of vernacular architecture have been the pursuit of architects, historians, art historians, ethnographers, historical archaeologists, and many other scholars interested in the built environment. Indeed, the concept has found particular usefulness within differing disciplines, especially when issues of space and time of human history are considered. One result of the abundant, interdisciplinary scholarship has been the continual re-defining of vernacular architecture. "To seek a single definition of vernacular architecture is probably ill-advised, for it attempts to reduce the richness and diversity of these traditions to a simplistic description, inevitably diminishing them in the process" (Oliver 1997b:xxii). Therefore, this discussion foregoes coverage of vernacular architecture put forth by other scholars of differing disciplines and simply offers a definition provided by Oliver, deemed most fitting for this study.

> Vernacular architecture comprises the dwellings and all other buildings of the people. Related to their environmental contexts and available resources, they are customarily owner- or community-built, utilizing traditional technologies. All forms of vernacular architecture are built to meet specific needs, accommodating the values, economies and ways of living of the culture that produce them [Oliver 1997b:xxxiii].

This description is viewed as a foundation upon which vernacular architecture is characterized in this dissertation. However, additional elements from other researchers are also incorporated, which are specific to examinations of prehistoric peoples.

Vernacular Architecture – Brief History

For this dissertation, examination of vernacularism within the Naco Valley of northwestern Honduras is closely related to the writings of Rapoport, most notably the brief volume *House Form and Culture* (1969). This work has been foundational for comprehensively understanding the building of a house, by evaluating the socio-cultural, environmental, and technological factors that impact its architectural scheme. However, other works, including those of Oliver (1987, 1997a, 2003, 2006), Noble (1984, 2007), and Blier (2006), figure importantly in this dissertation, as well.

The term *vernacular* relates to linguistic studies and is identified as a form of language and most specifically that of a native language or dialect of a country or particular location. Additionally, it is recognized to be distinct from literary language, implying a non-written linguistic system. The etymology of "vernacular" stems from the Latin, *vernaculus*, meaning 'native' or 'domestic' or 'national', and was the root of its usage by linguistic anthropologists. However, current linguists most commonly utilize the terms of *dialect* or *dialect variation* to account for linguistic distinctions both within and between social groups. The usage of "vernacular" within architectural studies originally drew from its potential to express the values a particular group of people (whether identified as "native" or "domestic"), who practice a non-literary form of communication.

Briefly, studies of vernacular architecture have a long history of interest, as detailed by Blier (2006) and Oliver (1997b). As early as the eighteenth century interest in non-classical and non-western buildings was evident (Asquith and Vellinga 2006).

However, it was not until the nineteenth century that formal scholarly investigations focused on non-monumental and non-western buildings (Upton 1990, 1993). Morgan (1965 [1881]) was amongst the first anthropologists who promoted the study of houses and house-life amongst indigenous American groups as a means to understand social organization. However, most of the earliest studies of vernacular architecture came from architectural disciplines within Europe and the United States. Beginning in the 1960's the works of Brunskill (1970), Oliver (1969), Rapoport (1969), and Rudofsky (1964) ushered in new applications, such as studying vernacular within its respective historic and cultural context.

The result has been a seemingly continuous emergence of work from within architectural studies, most prominently Glassie (1975), Oliver (1997a), Upton (1990), Upton and Vlach (1986), and Bourdier and Al Sayyad (1989), among many others. Works by recent anthropologists such as Low (2000; Low and Lawrence-Zuñiga 2003), and archaeologists Kent (1990a), Kowalski, (1999), Moore (1996, 2012), Samson (1990) and Wilk (1983, 1990) are only a sample of scholars who have been influenced by writings on vernacular architecture and have been considered instrumental in evaluations of building forms, uses of space, notions of public and private, and communal values, within the human built environment.

Characteristics of Vernacular Architecture

As previously stated, Oliver's (1997b) definition of vernacular architecture supplies a basic description of the concept. However, I have expanded upon the essential elements from Oliver's identification and devised a total of eight components that characterize vernacular architecture in this dissertation. In essence, these components address the matters of 'who', 'what', and 'how' as they relate to vernacular demonstrations. Additionally, several components are associated with providing a social understanding for 'why' particular architectural manifestations are argued to be vernacularly constituted, and therefore meaningful to study. The following explanations result in the comprehensive way in which vernacular architecture from prehistoric northwest Honduras is referenced in this dissertation.

Customs, Building "Know-How" and Transmission

The first of eight components begins by characterizing vernacular architecture as the practice of building for and by the people (Oliver 2006). Vernacular architecture is recognized to be a construction method, which makes use of immediately available resources to address immediate, structural needs. Oliver (1997b) contends that:

> every building exists in an environmental context, whether it is situated in the depth of the forest or exposed on the plain, clinging to the mountain slope or rising from the desert. Conditioned by the capacity of the land to support a given population, the economy of a culture affects the choice of site. In turn, this has bearing on the structures that are possible, for each building has to be constructed of materials which, in the vernacular, are most frequently obtained locally from the natural resources of a region [xxii].

Though vernacular buildings are linked to a particular environmental context, this understanding does not contend that the ecological setting is the primary factor dictating architectural form or variation. Because vernacular architectural configurations are amassed from locally available materials, similarities of form and function often follow suit. However, modifications or differences in an identified building design from one settlement setting to another, all within the same culture area during the same period of occupation, are not argued to be the result of the natural environment. Most simply, vernacular architectural practices make use of locally accessible building materials, however, it is not the building materials that signal to builders *how* or *what* to build.

Therefore, an additional consideration within this first component is *how* buildings are constructed. Vernacular architecture is built according to local customs and traditions, in concert with environmental conditions, to meet the personal needs and requirements of the occupants. Furthermore, building knowledge is preserved by oral transmission to each successive generation (Oliver 1997b) and is not recorded as text, even in groups who have writing systems. The result of customarily known ways of building is that architecturally vernacular forms are developed. Rapoport refers to this as the "design process" and when evaluated reveals building practices, but crucially, markers of shared customs social organization within built environments (1969:4).

House Buildings

The second component clarifies *what* types of buildings are examined in vernacular architectural studies. House and household-related structures (e.g. storage or workshop facilities) are the focus of vernacular evaluations, as these are identified to be

the most impacted by vernacular tendencies (Rapoport 1969). Additionally, houses and associating constructions best exhibit the correlation between structure form and patterns of daily-life practices and value systems. Non-domestic structures, such as those used exclusively for municipal or religious purposes, tend more often to be held to standards of "high culture" and formally designed by building specialists (Rapoport 1969:10). Archaeological examinations of prehistoric households have demonstrated that evidence for a variety of activities and social meanings are recoverable from within a single building within a given household context, regardless of primary structure function (Blackmore 2008; Douglass and Gonlin 2012; Hendon 1996, 2010; Lopiparo 2003, 2007; among others). Furthermore, categorizations of non-household or supra-household structures (see Hendon 1991; Sheets 1992, 1997), such as ancestral shrines, have been established, however, the identification of these within household settings in northwest Honduras are infrequent. Therefore, as not every building within a household group is labeled to be a house and differing practices can occur within a single building, the comprehensive setting of co-operating constructions are the focus of vernacular studies.

Owner-Builder-Occupier

The third component centers on *who* does the building. The builders of vernacular architecture are usually members of the household or community who use the structures and therefore are categorized as owner-builder-occupier (Oliver 1997b:xxii). However, manifestations of vernacular architecture are not the result of formally trained architects. Local customs and traditions are dictating factors in assemblage designs, though builders are not specialists nor are they known exclusively for building structures.

As all members within a shared cultural milieu are conversant with local practices, everyone possesses knowledge of *what* to build, and *how* to build (Oliver 1997a). This is also explanatory of why customary ways of building do not need to be formally documented and archived.

However, Rapoport (1969:4) contends that buildings assembled by means of a preindustrial vernacular may involve the use of building tradesmen. In this case, knowledge of how to build is still a universal, however, tradesmen are more practiced with the activity. Additionally, the owner is still an active member in the decision-making process and building participant in this situation. Furthermore, the collaborative activity of building most likely involves the immediate family unit and maximally the community as a whole (Oliver 2006). However, when collaborators are used in the building process, all members know the form that is to be built and how to build it.

Functional, not Artistic

The fourth component of vernacular architecture is that it is not meant primarily to impress or make an impact, but uses principles applicable to every building. Rapoport (1969) states that structures of "grand design" with elaborate architectural features are constructed with specific goals in mind to amaze and display qualities of power. Vernacular forms, on the other hand, predominantly meet functional needs and are not preoccupied with artistic displays. Therefore, vernacular architecture represents the built environment as described as the "lack of theoretical or aesthetic pretensions; working *with* the site and micro-climate; [and] respect for other people and *their* houses and hence for the total environment" (1969: 5). Elements of architectural scale, however, are

acknowledged to play into issues of built forms embodying status and/or authority (i.e., Blanton's [1994:10] "indexical" expression in houses), and these examples are present within northwest Honduras.

Permanence

Vernacular architecture can be either permanent or semi-permanent. Examples of the latter include *yurts* and other forms associated with migratory groups (Blier 2006; Moore 2012). It can also include quite temporary constructions, such as those associated with ritual celebrations. However, in this dissertation, only permanent constructions are considered and comprise the fifth component that characterize vernacular manifestations. While less-permanent building designs may convey social significance, it is not known how frequently or abundantly the practice occurred in prehistoric households of northwest Honduras, as evidence for such constructions is rare. Therefore, permanent assemblages are deemed to be most relevant.

Flexible to Change and Modification

When only permanent constructions are considered, modifications and additions can be better examined and are marked as the sixth component of vernacular architecture. Due to vernacular architecture not adhering to a formal, rigid script of how to build, as usually the case with "higher styles", it has the ability to incorporate and accept changes and additions to architectural forms. Variation from the final or formal norm is perceived as threatening and destroying of "high-style" designs (Rapoport 1969:6). Indeed, identified forms exist within vernacular architecture, yet particular aspects or elements within those forms are allowing of modifications. It is exactly this open-nature and

acceptance of variation within vernacular architecture that is examined within the Naco and Cacaulapa Valleys.

Factors Impacting Form

The seventh component critical to identifying vernacular architecture is the set of factors that impact building design. As previously highlighted, climate and ecological resources play a role in observed vernacular architectural outcomes. These factors include: access to suitable terrain for occupation and subsistence practices; nature and availability of building materials and other natural resources; and distance to nearest kin, polity centers, or other social relations. Furthermore, settlement size; construction methods and formations of buildings (particularly scale and elaboration of architectural forms); concepts and uses of space; as well as, available technological innovations may all be affected by the natural setting. However, Rapoport argues that socio-cultural factors have much more impact than does the physical environment (see also Kent 1990a). He argues:

> [the] house form is not simply the result of physical forces or any single casual factor, but is the consequence of a whole range of socio-cultural factors seen in their broadest terms. Form is in turn *modified* by climatic conditions (the physical environment which makes some things impossible and encourages other) and by methods of construction, materials available, and the technology (the tools for achieving the desired environment). I will call the socio-cultural forces primary, and the others secondary or *modifying* [Rapport 1969:47, emphasis added].

Crucial to vernacular architecture is that building a house is recognized as a cultural phenomenon and that resulting forms and configurations are "greatly influenced by the cultural milieu to which it belongs" (ibid:46). This can be illustrated when significant differences in architectural of building materials, arrangements, and concepts of space are

present within a single regional setting over long periods of time. The environment is argued to not alter much, even over centuries, though it is the cultural practices and accepted ways of constructing the built environment that shift. This particular situation takes place within the northwest Honduras.

Cultural Expression

While cultural customs and traditions are the primary influence regarding building form outcomes, they serve as the "direct expression of changing values, images, perceptions, and ways of life, as well as of certain constancies" (Rapoport 1969:6). This attribute is amongst the most meaningful for interpretations of cultural expression from the prehistoric record and comprises the eighth and final component in characterizing vernacular architecture.

Furthermore, the distribution and patterning of seemingly similar vernacular traits across a cultural region or landscape can be traced in order to map the extent of a culture area, and also the network of affiliation. Indeed, Oliver (2006) points out:

> [T]raditions are sustained if they have meaning; they may be practical or they may be symbolic, but they are frequently of fundamental significance for the cultures concerned. In vernacular architecture they may be related to the appropriation, preparation and working of certain building materials and resources, which can require specific knowledge and skills. But the means of transmission can be far more varied; they confirm that vernacular technology is closely related to 'know-how', acquired as efficiency is tested over time. It appears that sustainability is achieved through independence rather than dependence, and that innovation and change result from diffusion and experiment rather than from inducement and intervention. Transmission, whether as technology transfer or interpersonal instruction, is nevertheless, still a seriously under-researched aspect of vernacular architecture [18].

In essence, vernacular architecture embodies community values and thus can reflect and express the material and cultural principles of the builders and occupiers (e.g., Blanton's [1994:9-10]). These expressions of traditions and customs can be traced by comparison within a given region or cultural setting. Determining the pathways of transmission across a landscape, especially within prehistoric contexts, however, is challenging. The lack of identifying the modes of transmission do not diminish the value of the observation of its existence.

The preceding explanations are deemed to identify the characteristics of vernacular architecture and how is to be referenced in evaluating the architectural characteristics within the Naco and Cacaulapa Valleys, as well as other regional settings of northwest Honduras. However, select components share commonalities with investigations of other types of architectural studies. While overlap exists, the usage of 'vernacular architecture' in this dissertation is not meant to be conflated with the identifications of differing architectural studies.

Vernacular Architecture – Distinctions and Clarifications

The term "vernacular architecture" has been associated with diverse studies, such as folk, traditional, domestic, or popular architecture. Additionally, it is has been linked with fields identified as "ethnic" and even "primitive" architecture. Perhaps the result of vernacular architecture associated with the architecture of 'ordinary' people, numerous architectural labels have developed. However, in an effort to better clarify how vernacular is relevant within the prehistoric northwest region of Honduras, some of the

other bodies of architectural studies mentioned above need to be distinguished, as they are not argued here to be synonymous in identifying vernacular architecture.

"Primitive" Architecture

Though founded in earlier studies, the concept of a "primitive" architecture most prominently appeared in the mid-twentieth century. Rudofsky (1964), an architect, made use of the term but more frequently identified it as non-pedigreed or communal architecture. Evaluations of primitive architecture highlighted the lack of attention paid to architecture unassociated with what was identified to be only a few select culture areas, namely Europe, Egypt and Anatoloia. However, Guidoni's (1975) more directly and intentionally made use of the phrase. His identification did not summon Rudofsky's use of non-pedigreed, but differentiated "primitive" from vernacular.

> The frequently used terms 'primitive,' 'vernacular,' and 'popular' are by no means equivalent. 'Primitive' refers to cultures and cultural products that are essentially different from ours and technologically less advanced than those of the Western countries and the great civilizations of the Orient. 'Vernacular' is usually taken to comprise all architecture thought of as 'uncultivated' – without a conscious style and unrelated to what we think of as 'official' architecture – in its spectrum of regional variants. 'Popular' is applied to the architecture of the lowest social classes within a highly stratified system [Guidoni 1975:16].

This evaluation of "primitive" reflects a specific period and assigning the term to groups of peoples seemingly isolated from the cultural characteristics Guidoni deems as "ours". Its identification is reminiscent of Redfield's (1941, 1953, 1955, and 1956) classifications of folk societies and his critique of anthropologists at the time for associating "primitive" with being "closed" and of an impenetrable little tradition. To

clarify, Rapoport (1969) declares that primitive buildings are simply constructions that are defined “primitive” by anthropologists. This reference carries with it understandings of economic and technological levels of development, as well as social organization. Redfield contends that knowledge of community life is diffuse within primitive societies, and as such, Rapoport extrapolates that everyone is knowledgeable of constructing their own buildings, and do so without the guide of specialists (Rapoport 1969:3).

Overall, the identification of “primitive” architecture marks a specific historical context in scholarship, in which architects appropriate a term advanced by anthropologists, amongst other social scholars of the time. Therefore, it does not figure any further into this discussion, though included as an element in the development of how vernacular is defined. Finally, popular architecture, as outlined by Guidoni, is not cited any further either, as a stratified social organization within northwest Honduras is not a main focus of this study.

“Ethnic” Architecture

An additional label linked to vernacular is that of “ethnic” architecture. The latter is described as architecture related to the expression of what is identified to be ethnic identity in architectural canons. Therefore, constructions within this field of study are not limited to the house or accompanying domestic structures. This may also include more public and specialized buildings, such as civic centers, religious sanctuaries, and schools. Furthermore, originating from and utilized more exclusively by scholars of architecture, such studies have focused primarily on historic or modern ethnic groups.

For example, Upton (1985), an architectural historian adheres to a generic socio-

cultural identification of ethnicity: “the shared cultural patterns that unite one group and distinguish it from others in the larger society. It is an expression of common experience based on race, nation, language, or religion, or more often some combination of these” (1985:7). From this definition, ethnic architecture is viewed as the expression of ethnic heritage on the built environment, as it is deciphered ethnographically and historically across a landscape.

Moreover, Ruan (2006) highlights the benefit of engaging with the builders, owners, and occupiers of vernacular architectural canons, in his studies of the resurgence of architecture amongst the small indigenous group of southern China, the Dong, since the Chinese Cultural Revolution of the 1980’s. The Dong example is particularly interesting in the case of deciphering the expression of identity by means of architectural styles, due to the fact that the Dong are not known to have a formal, written language.

> They do not have historically recorded textual protocols to follow when building and rebuilding their habitat. Oral traditions, handed down via storytelling, singing, and dancing, are inevitably playful and inventive [Ruan 2006:172].

This similarly applies well to the areas of focus within northwest Honduras and specifically the Naco Valley, as evidence for written language remains absent. This example highlights a unique element of how vernacular is orally transmitted and sustained over time.

Finally, select works from archaeologists’ investigations in various regions of the ancient Andes of South America, while are not explicitly titled as ethnic architecture, are amongst the most relevant to this discussion from the Pre-Columbian Americas. First,

Reycraft (2005) highlights the variety of archaeological methods and theories employed in assessing ancient ethnic expression and variation throughout the Andes. Of most particular interest from this volume is Vaughn's (2005) contribution for investigating the architecture of household and domestic settings, as an approach to understanding ethnic expression within early Nasca society. Additionally, Aldenderfer (1993) focuses on the identifying ethnicity from the archaeological record, and more specifically, holding domestic architecture as a reflection or conveyor of ethnic identity. These works represent the closest examples of archaeological studies of ethnicity from the Pre-Columbian Americas and include reference to the examination of architectural forms and styles.

To conclude, the examination of what is labeled as ethnic architecture is primarily conducted from an architectural historian perspective and of historic or contemporary groups of ethnically similar people. Furthermore, these examinations are most successful for claiming an architectural style to be "ethnic architecture" when particular historic records and/or the people themselves are available. These are often unobtainable resources to serve as supplements to prehistoric archaeological material datasets. Furthermore, the identification of ethnic architecture includes construction forms beyond the house and domestic setting. In the examination of vernacular architecture from northwest Honduras, identified structures associated with non-residential aims are not considered, for the most part. Therefore, a formal labeling of ethnic architecture is not considered useful or appropriate to the study of architectural assemblages and patterns from the chosen social settings within northwest Honduras.

Domestic Architecture

From an archaeological perspective, the label “domestic architecture” is the most prominent form of architectural study differentiated from vernacular architecture. That is, it is a phrase commonly used by archaeologists of both historic and prehistoric peoples, as opposed to “primitive”, “ethnic”, and folk or “traditional” architectural studies. Therefore, the defining characteristics are more challenging to distinguish.

The term “domestic” evokes the notion of the house or home, “the site where domesticity is formed and recognized through personal experiences and associations” (Rice 2007:4). As Morgan (1965 [1881]) recognized in the late nineteenth century, the social complexity of the house and other associated domestic settings is observed to differ and be transformative through space and time. Furthermore, Kent (1990a) takes great care in explaining how interpretations of the built environment, and architecture in general, can be generated when the interplay between “the direct influence of culture on space use and space use on architecture” (Kent 1990b:2) are of focus amongst archaeologists. Her cross-cultural study of space segmentation reinforces the notion from Morgan and others that domestic architectural forms can map changes in social complexity (Kent 1990c).

However, while Kent dedicates considerable attention to a comprehensive analysis of spatial relationships and architectural assemblages, less is mentioned of the builder-occupier relationship of a given domestic cultural context; let alone the possibility that those entities may be the same and how that speaks to the social organization and understanding of space of a given society. The contribution by Kus and Raharijaona

(1990:32) in the volume does call attention to the importance of non-specialists in maintaining traditions of house building. And the contribution by economic anthropologist Wilk, however, is effective in presenting the Kekchi Maya house, and household, as well as articulating that when the labor of building and modifying a house is invested, it cannot be spent doing other activities; implying that the occupants are also the builders. He deems this a result of "allocation decisions" within a consumption behavior or consumer decision-making economic framework, which treats the house as a consumer good (Wilk 1990: 35). In general, Kent's volume focuses on the culturally inscribed domestic use of space and the arrangement of associated architectural elements, though does not clearly acknowledge that architectural scales and understandings of space can vary even within social settings deemed to be "domestic".

An additional archaeological examination of domestic architecture is offered by Jamieson (2000) in his work entitled: *Domestic Architecture and Power: the Historical Archaeology of Colonial Ecuador*. Jamieson is clear in presenting architecture as material culture and arguing that it should be studied along with other excavated objects as evidence of the relationships between different groups and asserted ideals of Spanish colonial rationality and order. The focus of study is Cuenca, a colonial center in southern Ecuador, and the domestic architectural make-up of colonial houses within the urban core, as well as in rural hinterlands that surround the "gridiron" town. Again, Jamieson does not present a clear definition of domestic architecture, but contextualizes his examination within studies of the house and the meaning of colonial houses. The result is a detailed assessment of how domestic architecture varies within urban and rural

contexts, and how colonial rule and power are reflected in the Spanish and pan-European architectural canons prevalent in the colonial houses in Cuenca.

Furthermore, Jamieson addresses vernacular versus formal domestic architecture within the urban core of Cuenca by differentiating that colonial domestic architecture was built by carpenters and masons, while larger public works such as churches were directed by foreman or master architects (2000: 56). Therefore, while some aspects of urban core domestic architecture in Cuenca followed known and accepted building forms and arrangements, which reflect the "classical" European world, much of the detailing decorations did not. However, the regions outside of the urban core of the "grid" are identified as urban neighborhoods and were predominantly the commissioned expanses for Native Andeans living in the urban zone. Jamieson notes that less is known architecturally of these peripheral neighborhoods, other than the description that they were "disorganized and rustic" (2000:72).

In contrast, rural domestic architecture and house building from regions surrounding Cuenca are described as an expression of Native Andean ideals. The vernacularism of domestic buildings is identified not only in the placement, form, and process of construction, but also the communal importance of the act. "Houses are built by co-operative work groups, led by a local expert without any institutionalized training but with extensive expertise in designing and building houses" (ibid 95). This identification is highly relevant in the formal discussion on vernacular architecture still to come. Yet, at present, it is argued to be valuable for acknowledging the degree to which architecture identified as "domestic" varies between urban and rural, and crucially

between differing social and cultural settings. Overall, Jamieson's use and evaluation of domestic architecture is presented here to illustrate the detailed analysis that can occur within studies of historical archaeology. Moreover, it is equally highlighted for its formal inclusion and use of vernacular architecture, whether intended or not.

The final illustration of the use of domestic architecture is from the previously mentioned edited volume by Aldenderfer (1993) and the collection of various prehistoric Andean cases. In contrast to the previous two examples, Aldenderfer and Stanish (1993) offer a clear description of how domestic architecture is defined.

> Domestic, or residential, architecture is here defined as those structures, facilities, activity and work areas, and artifacts that are associated with the anthropological household... Domestic architecture is the seat of the household, although it is clear that other individuals not a part of the household may live there, or that household members may maintain residence elsewhere… At the minimum, domestic architecture is simply shelter, but it is obvious that it can be much more, depending on the size and range of economic functions performed by that household [1993:2].

Plainly, the identification of the household as a social unit of measure is deeply intertwined in this representation of domestic architecture. This likely reflects the volume's overall aim to identify the relationships between architectural styles and expression of social identity, namely ethnicity. The concept and history of the household and household archaeological studies have yet to be presented here, though Aldenderfer, Stanish, and colleagues define a mostly social analysis of the domestic built environment. At the same time, the evaluation of domestic architecture is presented to be a quantifiable category of investigation.

> Domestic architecture is a distinct and independent class of data useful in testing archaeological models as fineware pottery, decorated textiles, and the like. Domestic architectural styles can be analyzed in a similar manner. Styles, for instance, can be grouped into types, statistically manipulated, and compared with other classes of data for goodness of fit with proposed models or hypotheses [5].

Overall, this comprehensive depiction of domestic architecture adheres most closely to the approach taken in this dissertation for investigating vernacular architecture within pre-Columbian northwest Honduras. Aldenderfer and colleagues do not explicitly address vernacular architecture in their contributions, though I declare it to be a silently utilized component. The vernacular works of Rapoport are even cited in discussing domestic architectural house form and variability, but the term is not overtly stated (Aldenderfer and Stanish 1993:6). Therefore, their particular usage of "domestic architecture" encompasses amongst the most pertinent parts of vernacular considerations, both acknowledged and unacknowledged, and as such is amongst the most distinctive and useful archaeological analyses from pre-Columbian contexts.

To conclude, for this assessment, domestic architecture is argued to address the structural and utilitarian needs as it relates to the house. At a bare minimum, a house is loosely identified as a place of shelter and a space for sleeping, preparing, cooking, and eating of food and select forms of work. (*House* is further clarified with respect to *household* later in this chapter.) Spaces for storage and perhaps even compartmentalized sectors designated for socializing, with house members or visitors, may also be included. Furthermore, more specialized constructed spaces associated with agriculture or animal welfare, as in the case of outbuildings (e.g., a barn), as they relate to the welfare of the occupants of the house itself, may be viewed under the scope of domestic architecture.

However, these mark only the outline for the expectation of what one would find in a domestic setting, and not the social analysis of the spatial arrangement or compartmentalization that goes along with the spaces. It is argued that these variations have been evaluated under the scope of "domestic architecture" though are not contended to be compulsory with the field of study.

Furthermore, domestic architecture may span multiple levels of social status within any given society. Within a prehistoric archaeological context, domestic architecture does not inherently convey concepts regarding structure form, size, or spatial complexity, let alone quality of construction materials. Therefore, it does not automatically account for variation in architectural scale, a typical marker for varying function, and social status or house wealth.

Domestic architecture describes a particular activity space associated with the broader evaluation of the human built environment. And as such, this particular labeling alone is deemed to fall short with the aims of evaluating architectural forms and patterns within northwest Honduras. However, combined with other architectural, social, and theoretical applications, the usefulness of domestic architecture is markedly elevated.

"Traditional" and Folk Architecture

Though "domestic architecture" is used often by archaeologists, and even unconsciously incorporating elements of vernacularity, the identifications of "traditional" and folk architecture are even more challenging to parse from an understanding of vernacular architecture. This is the result of the combination (folk, traditional, and vernacular) of these approaches having been founded and developed concurrently within

architectural historic and theoretical realms since the mid-nineteenth century. Traditional and folk architecture are relevant to the inferred origins of vernacular architecture, though not as directly useful to prehistoric archaeological study. Regardless, the distinction clearly needs to be established in order to best articulate how vernacular is applied within Pre-Columbian northwest Honduras.

Firstly, "traditional" and "folk" architecture are not completely synonymous, though they are similar enough to justify simultaneous discussion here. The use of *traditional* in architectural studies is often with reference to a *traditional building*. This is evocative of a simple structure or even to the concept of "traditional societies" in the writings of Durkheim, Bourdieu, or Levi-Strauss. This is evident in the description by Tuan (1989), a humanistic geographer, when he states that in traditional societies, "people have to make do with whatever is at hand. The form and arrangement of dwellings, for example, are constrained by the availability of local materials, the nature of the local climate and the socioeconomic facts of life" (1989:28). This description, similar to usages of "primitive" implies that societies labeled "traditional" are heavily determined by their local environments and perhaps do not change, or at least not much. This perceived socio-cultural stagnation may be problematic when studying human societies, however, Noble (2007) contends that traditional refers to the:

> procedures and material objects that have become accepted as a norm in a society, and whose elements are passed on from generation to generation, usually orally, or more rarely by documents that have codified orally transmitted knowledge, instructions, and procedures. This is not to imply that traditional processes and objects do not change over time [2007:1].

Noble's identification is a great deal more accommodating of changes over time, while at the same time close to an understanding of vernacular. He goes on to distinguish folk architecture as the "practices or structures which are the products of persons not professionally trained in building arts, but who produce structures or follow techniques which basically have been accepted by a society as a correct or 'best' way" (2007:5). Noble has spliced an identification of traditional from folk architecture as seemingly a potential issue of training when it comes to building.

However, folk architecture can be further refined by emphasizing its specific roots in studies of folk-life or folklore, yielding the label. Folklore scholars study:

> not only the fabric of the building, its materials, construction and plan, as well as the archaeological and architectural evidence of change, but also the folkways of those who inhabited it, their customs, superstitions, habits of work and play, their music, literature, and oral traditions [Meirion-Jones 1983:3 cited by Noble 2007:6].

Therefore, folk architecture can be understood as not only the product of non-trained builders, but also the reflection of a particular group's oral history, proverbs, stories, or traditions as they take place within but are also inscribed on their buildings and built environment (see also Kus and Raharijaona 1990). In this sense, traditional architecture seems a generic allusion of the structures of non-specialized builders, while folk architecture incorporates the specific scholarly approach of folklore as a method to observe architectural forms and patterns. (More is discussed of folklore as an approach to studying vernacular architecture later in this chapter.)

However, like "ethnic" architecture, traditional and folk architecture does not necessarily regulate the forms of social spaces and places that are the result of

architectural constructions. The range of public to private, sacred to secular, and domestic to ceremonial buildings, are all included in both traditional and folk architecture. Furthermore, monumentality or simply architectural scale can also vary. It is for these reasons that neither "traditional" nor "folk" architecture is immediately useful for studying architectural patterns from prehistoric northwest Honduras. However, similar to "domestic" architecture, these terms provide insights useful toward modeling how building practices were developed and diffused within prehistoric contexts.

Vernacular Architecture – Scholarly Approaches

As the previous description of architectural studies demonstrates, there is no single manner with which to study architecture. This section briefly outlines a selection of these approaches, as adapted from Oliver (1997a). The chosen approaches span the humanistic, social, environmental, theoretical, and cultural, accounting for prehistoric through contemporary human built environments. The last approach discussed, archaeological, articulates not only how vernacular architecture can be studied from the prehistoric record, but also how it informs our understandings of past built environments, social organization and identity expression.

Folklore Approach

As described earlier, folklore and folk-life studies focus on expressive human traditions from folk cultural groups. The traditions may include oral history, music and song, material texts, among others. In this approach, architecture is viewed as a material "text," as material culture that is tangible and interpretive of cultural lifestyles, and value

and belief systems (Bronner 1997). However, as customs and "common knowledge" of how to construct buildings may not always be formally documented within a group, it is examination of the architecture itself, along with the ethnographic methods of folklorists, that reveals aspects of the greater social traditions of the group.

Specifically with respect to houses within folklore studies, various aspects of folk life are considered in order to understand the full spectrum of traditions expressed and how they are maintained within a larger society. One level of examination is regional and spatial. This approach attempts to account for the architectural tendencies or patterns as they relate to understanding aspects of diffusion and adaptation of traditions across time and space. These can include the spreading of traditions and the modifications due to environmental or cultural factors. Shifts in architectural forms, styles, and spatial arrangements can encompass changing customs and beliefs. Additionally, aspects of religious and ethnic identity can be interpreted architecturally (as also highlighted with the study of "ethnic" architecture). Within folkloristic examinations these focus on permanent housing, but also temporary constructions, assembled for specific spiritual or ethnic ceremonies and customary functions. Lastly, scalar understandings between community traditions and small group or individual folk values can be examined. This can occur from both the assembling and occupation of a building, but also with respect the overall private or public-nature of a structure within the community (Bronner: 40-41).

Overall, the combination of the aspects mentioned above within a folklore approach reveal the development and alterations of expressive traditions by means of architectural "texts". They are not only descriptive of architectural forms, but "make use

of the folklore of architecture – the transmitted traditional knowledge incorporating narratives, beliefs and customs pertaining to material culture – to give an overall view of everyday life, or 'folk-life'" (Bronner:40). This approach is recognized to be a counterpart to the formal study of folk or traditional architecture.

Behavioral Approach

A behavioral approach to studying vernacular architecture originates from architectural evaluations of the forms of interaction and subsequent relationships between humans and their built environments. Again, Rapoport is referenced in this field that is often referred to as environmental-psychology. Various forms of human behavior can be noted with respect to interaction with the environment, most prominent here are the behaviors involved in *creating* vernacular environments as it relates to the process, and the behaviors that take place *within* the vernacular environment (Rapoport 1990, 1997). Both entail what Rapoport describes as systems of activities and systems of settings.

In short, behavioral approaches to the *creation* of vernacular environments consider the range of physical and organizational activities, but also the motivations and development behind their creation. These require knowledge of the identity of the builder(s), aspects of the customs and traditions, explicitness of designs, and many others factors. The second consideration of behaviors *within* the constructed vernacular environments incorporates not only the social practices of daily living and dwelling, but added aspects that relate to different settings, for example, indoor vs. outdoor. Additionally considered are behavioral observations as they relate to concepts of public

versus private spaces and how those are formally created and dictated by constructions or are practiced by means of cultural understandings of how to behave within a given space.

To conclude, behavioral approaches to vernacular architecture not only examine the human experience and behavioral interaction with the general built environment, but the specific setting that is deemed to be "of the people". Rapoport claims that this is significant when contrasted with behavioral patterns from what are referenced as high-style architectural designs, which can coexist with vernacular environments. Connecting systems of activities with systems of settings, as articulated in behavioral approaches, holds the potential to further understandings of vernacular environments on cultural landscapes (Rapoport 1997:17).

Ecological Approach

As vernacular architectural forms are deemed to be open to *modification* as a result of the natural environment (Rapoport 1969), an ecological approach to studying vernacular only seems appropriate to consider. While ecology may be generically identified as the relationships between organisms and their immediate environment, 'human ecology' emphasizes people and the interrelationships with their immediate landscapes. Therefore it is deemed a social approach, which accounts for "uses of land and material resources for sustenance and human settlements, including the construction of vernacular buildings" (Lawrence 1997a:31). This is predicated on the fact that vernacular constructions are reflections of builders knowing not only *how* to build, but also knowing *what* materials to use in order to build, acquired from their immediate environments.

Within studies of human ecology, the environment is treated as multidimensional and complex, thus requiring an integrated approach. For this reason, it is labeled to be a holistic interpretation by accounting for the "bio-logic", the biological forms (people, plants, and animals); the "eco-logic", or the inorganic elements (air, water, soil and the sun); and the "anthropologic", the uniquely humanistic traits of culture, customs, beliefs, and values (Lawrence 1997a). The benefit of this evaluation is that material elements can be quantified and the cultural aspects can be qualitatively addressed, simultaneously. Furthermore, when a historical analysis is coupled with an ecological approach, vernacular practices can be traced for evidence of retention, modification (ibid: 33), or even the abandonment of particular forms and styles within a given ecological or cultural setting.

Structuralist Approach

Structuralist approaches to vernacular architecture hold that in order to understand human society and culture comprehensibly, the examination of material culture, namely vernacular architecture, must be accompanied by an assessment of implicit and explicit effects by social, political, economic, and ideological systems (Lawrence 1997b). However, no single body of structuralism accomplishes this and varying forms of the approach are presented.

Within a structuralist approach to vernacular architecture, Glassie's (1975) classification of housetypes represents a quantification of how differing forms exist together and include reciprocal relations. However, Lawrence (1997b:63) and others

argue that such an approach does not account for the reasons behind the development of the types, nor the origin of their meanings.

Cognitive structuralism attempts to explain how the human built environment reflects the social systems of customs and order specific within a given cultural group. Analysis of vernacular architecture can convey social understandings of public vs. private; sacred vs. secular; or even identity-based (gender, status) concepts of space within a given site. This approach is beneficial for illustrating the explicit and implicit meanings and uses of spaces and architectural realms; it does not account, however, for the "formation or regulation of societal rules", which impact how and why they develop and persist. (Lawrence 1997b).

Lastly, a structural Marxist approach has been applied mostly to industrialized societies, within capitalist and socialistic studies. However, it is contended to be useful for examinations of non-industrialized societies, as well. As Marxists are interested in products and processes, within a supply and demand framework, aspects of vernacular architecture are examined by means of economic, political and ideological systems. Therefore, this approach contemplates variables impacting the production of the built environment, while the built form and social and functional importance of buildings receive less consideration (Lawrence 1997b).

Overall, a generalized structuralist approach to vernacular architecture does not account for a unique and significance element of vernacular architecture: its variability within accepted forms of building traditions. It is widely critiqued as ahistorical, such that structural change is harder to accommodate. A structuralist analysis contends that

social meaning conveyed by vernacular buildings is not by means of their quality or makeup but by the variance amongst them.

Anthropological Approach

Initially, an anthropological approach to studying vernacular architecture developed from architects with an interest in anthropology and wanting to examine houses and dwellings from within their cultural context. Anthropologists have typically included references to the built environment of the cultural groups in which they study, though rarely were these focused studies on the architecture itself. However, once anthropologists focused more on sociocultural factors and how these shape cultural values and worldview, examinations of built forms, as expressions of those values, become more popular (Schefold 1997).

Anthropological approaches have included focusing on economic, political, and various sociocultural factors as impacting on vernacular built forms. However, when cultural-historical applications are factored in, understandings regarding the origin and development behind these forms can take place. This is predicated on the observation that socio-cultural values are rooted in social relationships and handed down by ancestors or spread by means of contemporaries (neighbors, associates, etc.) (ibid:7). However, not all studies take on historical considerations and focus on symbolic meanings of buildings. These symbolic meanings can represent spiritual connections, by recreating a form of the cosmos on the human built environment, or “inscribing” the cultural, social, and political customs in architectural canons in order to preserve and transmit them within non-literate

societies. The latter aspect is of particular relevance to the examination of vernacular architecture from prehistoric northwest Honduras.

Archaeological Approach

The final approach to studying vernacular architecture comes from archaeology. Clearly, this holds the most importance in this discussion as it accounts for examinations of the prehistoric record from an archaeological perspective. Archaeological approaches to examining vernacular architecture are classified with studies of settlement patterns (Fedick 1997), which seek to describe the character, distribution, and spatial nature of buildings and groupings of buildings across a landscape.

The study of households developed from the establishment of settlement pattern understandings of buildings. Within settlement archaeology, the desire to focus on the basic social unit of human organization is in order to identify "the redundant sets of activity areas and facilities that constitute individual households, and to link changes or variation in these pattern to socioeconomic differentiation and change" (*ibid*: 9). The study of households initially documented functions of buildings by means of associated artifacts; however, examinations of architecture, directly, amplified interpretations in order to achieve a most comprehensive understanding of house buildings. This includes aspects of residential patterning, house size, use-life, and assessments of relative wealth or status (ibid: 10; Blanton 1994; Flannery 1982; Moore 2012).

An additional consideration of social relations within archaeological studies is that of communities. The community is identified as socially flexible, able to account for a single household grouping or a collection of households identified by "shared facilities

and services" (Fedick 1997) within a given area or defined region. As the concept of community in-and-of-itself represents an intangible result of social relations, architectural assemblages are analyzed in order to reconstruct former community networks (e.g., Yaeger and Canuto 2000).

Archaeologists also examine vernacular architecture within a regional context. The identification of a region can be established by cultural, functional, or environmental criteria (Fedick 1997). The value of evaluating vernacular architecture within a regional archaeological approach is that aspects of political and economic organizations and relations; in addition to settlement distribution and shifts in demographic concentrations over time (*ibid*: 11). Patterns of vernacular architecture within a regional perspective may also be addressed by means of site catchment analysis, which posits that human settlements are located to offer the most convenient access to natural resources, such as water or suitable land for farming and in the case of vernacular architecture, the most desired sorts of building materials. Therefore, variations in vernacular patterns may be tracked "by relating architectural differences to economic functions of sites associated with different resources. Once the associations between architectural types and resource distributions are understood (or hypothesized), predictive models of site distributions can be developed and tested within regions" (ibid). The design of this model to identify vernacular consistency places a significant value on the environmental setting as determining vernacular outcomes. This may be less pertinent within frameworks where the cultural phenomenon of building houses places greater influence on socio-cultural factors, than environmental.

Overall, vernacular architecture is positioned to be helpful in comprehensibly addressing the social organization and maintenance of prehistoric households, communities, and regions; just as each facet can advance the understandings of the development and variation of vernacular architectural forms. In order to explore these possibilities further, the archaeological examination of varying architectural scale and household contexts need to be considered.

Household Archaeology and Architectural Studies

The body of literature on prehistoric households has been mounting within archaeological studies of architecture, especially rapidly in the past three decades. Of course, household studies are not exclusively architectural. In essence the aim of household studies is to understand ordinary people by comprehensively examining the ancient house and household as materialized social units (Flannery 1982; Morgan 1965 [1881]). Within Mesoamerican archaeology, this is deemed to be the remedy for historically little attention being paid to the investigation of prehistoric households, at least those relating to "commoner," "producer," or simply non-elite levels (Webster and Gonlin 1988).

For this discussion, the *household* is identified in accordance with Wilk and Rathje (1982:618) and as an activity group of co-residing people (the social), the dwelling and spaces they occupy (the material), and the activities they carry out (the behavioral). Furthermore, *house* is distinguished from household as indicating a building that is often used for shelter, sleeping, socializing, and other day-to-day maintenance

activities. The concept of the household includes this space, in addition to the structures that might have other specialized functions, such as kitchens, workshops, and storage facilities.

As such, the remnants of buildings (houses and supplemental), and associated artifact assemblages can be archaeologically investigated. However, households are not defined as only physical material remains but "need to be viewed as spheres of activities" (Douglass 2002:2; Rapoport 1990). It is what households do that make the study of them significant (Wilk and Netting 1984; Ashmore and Wilk 1988). Understanding households to be an activity group based on behavior requires the explanation of what those activities are and attempting to identify their fulfillment of functions of households. Netting, Wilk, and Arnould (1984) and Wilk and Rathje (1982) identify five main functions of the household: production, distribution, transmission, reproduction, and co-residence. As vernacular architecture is viewed as being reflective of traditions and customs, elements of household functions, namely transmission and reproduction of cultural values, are positioned to be decipherable from the architectural arrangements of households.

The results of household archaeology throughout the Pre-Columbian Americas have been multifaceted. Within Mesoamerican studies of households, investigations have focused on: *architecture* (Abrams 1994; Gonlin 1993; Hendon 1987); *commoner* contexts (Blackmore 2008; Lohse and Valdez 2004; Robin 2002a, 2002c); *communities* (Canuto and Yaeger 2000; Wilk and Ashmore 1988); *elite residences* (Eaton 1987; Haviland 1985; Inomata et al. 2002; Webster et al. 1998); *food/diet* (Gerry and Chesson 2000); *functions* (Houston 1998); *gender* (Fung 1995; Gerry and Chesson 2000; Hendon 2002; Robin

2002b; Tringham 1991); *status* (Blackmore 2008); *labor* (Hendon 1996); *house wealth* (Douglass 2002; Smith 1987); *memory* (Joyce 2000; Hendon 2010); *ritual* (Gillespie 2001; Halperin 2007); *kinship* (Garber et al. 1998; Gillespie 2000a; 2000b); *rural houses* (Douglass 2002; Gonlin 1993, 1994; Iannone and Connell 2003), among many other worthy endeavors.

Clearly, various aspects of ancient social life are reconstructed from household contexts. With respect to architectural evaluations of households listed above, however, some of the most meaningful to this discussion are from contexts recognized to be within northwest Honduras and are now considered in that context. Notably, though the majority of these works include architectural descriptions, none have previously been evaluated within a vernacular framework in order to elicit other social practices or patterns.

Importance of Architectural Evaluations and Studies of Space

Analyzing architecture from archaeological contexts has been a longstanding approach to studying past peoples. In some parts of the world, architectural remains are the best evidence by which to reconstruct ancient settlements. One reason for this is the unique characteristic of architecture compared to any other form of material culture: its immobility. Rapoport (1982), who based his ideas from Hall (1976), describes architecture as a "fixed" or immobile feature, while furniture and other ornaments, such as chairs and serving ware, are considered "semi-fixed". Semi-fixed elements are movable, but typically not moved out of the space in which they are used. Non-fixed features are in reference to people moving through the space. From an archaeological

perspective, fixed features, theoretically, have not moved from the time when they were originally constructed and therefore hold the potential for representing the expressions of the people who created them. This conceptualization is in contrast to pottery or any other type of archaeological semi-fixed feature, which can move from one site to another, or one cultural group to another. From a spatial analysis perspective, an archaeology of architecture seeks to "address the 'hidden dimensions' embodied in the architecture itself, using the portable material record as supportive rather than primary evidence" (Steadman 1996:63). As architecture does not travel, the ideas on how and what to build moves by means of humans forms of transmission.

Moreover, architecture creates boundaries from unbounded spaces (Kent 1990b). Therefore, by studying the composition and patterns of architecture, interpretations can be formed regarding the use, meaning, and social and functional organization of those created spaces and assemblages. Furthermore, architecture is interpreted as a reflection of human behavior, which in turn is a reflection of human culture and expression (ibid: 3). These perspectives are offered as the grounds for inquiries into architecture and space such as: environment-behavior studies or EBS (Rapoport 2006), semiotics (Preziosi 1983), proxemics (Hall 1968, 1974), access analysis (Sanders 1990), and space syntax (Hillier and Hanson, 1984; Hillier et al, 1976, 1987).

However, returning to spatial analysis of architecture, activity area analysis can be thought of as spatial analysis on a microscale (Flannery 1982; Kent 1987). These forms of investigations typically focus on rooms within buildings (Reid and Whittlesey 1982) though emphasis on the semi-fixed artifacts and architecture is secondary. Clarke (1977)

remarks that some of the early spatial analysis approaches do not account for working systems or other structuring principles and that models that can be cross-culturally applied are needed (ibid: 28). Arguably, Kent's (1987; 1990c, 1991) studies of segmentation and partitioning within structures answered Clarke's request, at least in part. Kent's cross-cultural analysis modeling the relationship between space and the degree of segmentation and partitioning, and a society's level of complexity, concluded that as social and political complexity increased, so too did the segmentation of built spaces (1990c). Archaeological applications can be made working from this model. Furthermore, vernacular architectural forms are positioned to be valuable for analyzing house spaces.

Architectural Scale and Households in Northwest Honduras

The history of archaeological studies in northwest Honduras, and more generally Southeast Mesoamerica, has embodied multiple binaries for conceptualizing the past peoples of these settings. These have ranged from *core-periphery analyses*, which address forms of social networks and socio-political interactions (McFarlane 2005; Schortman and Urban 1994a; Urban and Schortman 2002, 2004, 2013); to *Maya/Non-Maya*, which address cultural/ethnic identity variations (Canuto and Bell 2013; Gerstle 1988; Henderson 1977; Robin 2003; Schortman 1986; Wells and Davis-Salazar 2008); and *elite/non-elite*, which address status, power, and social identity variations (Douglass 2002; Ellison 2006; Gonlin 1993, 1994; Henderson 1993; Joyce 1991; Novotny 2007; Schortman and Urban 1994b, 2011; Stockett 2005a, 2007; Wells 2003). These works represent only a sample of studies and are considered to be a combination of perpetuating

these forms of analysis, though most are advancing beyond these frameworks of duality. Furthermore, as the more recent works are ever more socially multidimensional, many deserve to be cross-referenced as relating to other analyses.

An additional binary, which is an element of focus within some of the works previously outlined, is that of monumental and non-monumental. Variations in scale between monumental and non-monumental apply to architecture, sculpture, and other forms of art, within Mesoamerican studies and other examinations of Pre-Columbian peoples, though the emphasis is typically on the *monumental* (Boone 1985; Burger and Rosenswig 2012; Isbell and McEwen 1991; Parrington 2011). With regard to architecture, the distinction is usually obvious, as monumental architecture is most often easily detectable due to its notable size (Webster 1998), and intentionally so. Trigger (1990) argues that impressive size, and elaboration that goes beyond functional practicality, are markers of monumental architecture. However, contextualized definitions of 'monumental' are more subjective.

In Honduras, outside of Copán and its immediate environs, "monumental" is used to describe relative size, though is not always uniform in northwest Honduras. Its architectural usage within the Naco Valley is as any building construction greater than 1.5m in height; though in the Yoro region, for example, "high" or "tall" structures are identified as edifices greater than 1.25m in height (Joyce and Hendon 2000). The difference of only 0.25m between these identifications may seem trivial; however, when only height is used as a marker to identify monumentality, this impacts other social interpretations that may be associated with the overall physical scale of a particular

building. Nevertheless, the usage of high/tall and low/small building elevation, along with general parameters of basal area, is argued to be a more efficient assignment of architectural scale, especially when considering views such as Trigger's (1990).

The importance of architectural scale within this discussion is that it is typically the most influential factor when initially labeling a setting to be domestic or a household, at least within northwest Honduras (Schortman, personal communication 2008). From a purely settlement survey perspective, household settings are generally described as groupings of small or low cobble mounds. If spatially separate from larger settlements, especially those thought to be political centers, household groupings typically include some formal arrangement, ranging from loosely clustered to discernibly rounded or rectilinear patios. When associated with residential or 'peripheral' sectors within large centers, household contexts may vary with regard to settlement size and spatial arrangement (Schlechter et al. 2003).

The study by Douglass (2002) within the Late Classic Naco Valley, holds particular relevance with regard to evaluations of households from this region. By means of a comparative analysis, Douglass assesses household production and wealth, as they relate to soil productivity, by means of soil qualities and access to natural materials, with respect to settlement location, along with artifact assemblages and architectural descriptions (compare Fedick 1995, 1996, Ford and Fedick 1990, and Lucero et al. 2004 for Belize). Rural households (located in "hinterland" regions of the valley and likely not directly influenced by elites at the valley political center of La Sierra) are distinguished

from urban households (located near La Sierra). The results conclude that household wealth variation held correlates with location to natural resources (Douglass 2002:157).

Of particular relevance are Douglass' descriptions of construction technique, assignment of structure function, and observations of relative building scale within household settings in the Naco Valley. The majority of household buildings in the valley during the Late Classic are erected by the construction technique of platform substructures, with an earth and/or cobble cores**,** faced by river cobble, and surmounted with perishable superstructures made from sticks, mud, and smaller stones. Interior walls are typically narrower and arranged in single cobble lines. The result of the considerable use of stones in construction equates to greater tumble debris to process via excavations (ibid: 50-51). Douglass claims that the majority of buildings are amassed as these elevated platforms, though I argue this assessment mostly accounts for the final-phase version of a structure. Earlier architectural stages may indicate that a building was created as a surface-level shelter before undergoing additions and modifications, which resulted in a platform configuration. Therefore, construction histories of buildings are significant, especially when assigning structure function, as use can shift over time, let alone personal attachment or social significance of a structure.

With regard to structure function, Douglass (2002) offers three distinct types as occurring within the Naco Valley, which he models from Gonlin (1993, 1994), Hendon (1991), Sheets (1992), Webster and Gonlin (1988) and Webster et al (1997). The first function is residential, likely providing primary dwelling for sleeping and generalized socializing by household members. Residential functions are architecturally assigned by

the presence of cobble-constructed benches or shelves, though Douglass acknowledges (2002:52) that “perishable furniture” or semi-fixed features (such as hanging hammocks or sleeping maps) may function in place of fixed benches and shelves. Therefore, I contend that ascribing residential labeling is problematic by means of only the detectable presence or absence of built-in or fixed furniture. Internal occupational area, as well as types and frequencies of artifacts may also suggest structure function (see Chapter 6 for examples from site PVN647). Although, it is acknowledged that evidence supporting the use of perishable furnishings is largely unrecoverable from most prehistoric household contexts within northwest Honduras.

The second and third structure functions are assigned as ancillary and supra-household structures, respectfully. Ancillary buildings are “typically defined by a lack of permanent furniture, primarily benches” and are the sites for food-related activities, crafting production, and storage” (Douglass 2002:52). Supra-household buildings are recognized as special-function structures for activities such as household-level ritual practices and can vary with architectural and artifact assemblages. Overall, placing a heavy emphasis on architectural components as dictating building function is constraining. What if no built-in or fixed furniture is present within any building deemed to comprise a household grouping? Undoubtedly, the identification of structure function and what *types* and the *intensities* of activities occurring within and around structures are best assessed by a combination of artifact and architectural analysis.

With regard to architectural scale within the Naco Valley, Douglass (2002) highlights how building size can vary within a household group and one structure is

typically and notably larger or more elaborate than the rest. The largest structure often functions as a residence, though it can serve alternatively (or simultaneously) as a place for ancestor worship (2002:51). Placement within a patio grouping, when coupled with large size, often marks relevant importance (or status) and can be what Hendon (1991) references as a 'dominant structure'.

Overall, construction history and final phase architectural form and size, along with artifact assemblages must be assessed collectively in order to assign overall building function. Douglass (2002) distinguishes small households (fewer than 9 structures) from large households (more than 9 structures) based upon a "bimodality of Late Classic settlement-pattern size on classified soils" (ibid: 67), in relation to categorically-assigned soil quality valuations. This design is deemed suitable for assessing household wealth based upon location of desirable natural resources; however, elaboration of architectural assemblages are not accounted for between the varying household sizes, beyond ascribing function based upon architectural features and supplemented with artifact observations. If expanded architectural comparisons had been assessed, it would have become apparent that similar interior summit arrangements exist between sampled households (as further discussed in Chapter 7). Recognition of these architectural patterns may have supplemented comparisons of house wealth and shared building characteristics between household groups.

To conclude, a variety of the household investigations that have been conducted within other Mesoamerican realms have also taken place within northwest Honduras, for example: crafting productions (Ellison 2006; Lopiparo 2003; Stockett 2005a);

community studies (Canuto 2002; Joyce and Hendon 2000); identity (Hendon et al. 2014; Lopiparo 2003, 2007; Schortman and Nakamura 1991; Stockett 2005a); memory (Hendon 2010); and spatial analysis (Stockett 2005b). Additionally household settings have been examined in the greater Copán area (Gerstle 1988; Hendon 2010). While the vast majority of these works required extensive architectural investigations, conclusions were largely based on artifact assemblages, and secondarily on architectural observations, with the exception of Stockett (2005b). Therefore, vernacular architecture is positioned to contribute as both a methodology and theoretical consideration to addressing the studies listed above and even more. The following discussion bridges an archaeological approach to examining the vernacular architecture from prehistoric household contexts with the goal of furthering our understanding of the extent of shared values occurring within a given regional setting.

Vernacular Architecture, Practice Theory, and Identity Expression

Assessing how vernacular architecture can contribute to understanding the extent of shared building practices as indicators of identity expression requires specification of how identity expression can be recognized from the archaeological record. Most simply, social identity is referred to here as a collective form of group identification, based on components of human association (culture, ethnicity, community, gender, class, religion, etc.) that are subject to change, are multiple (Meskell 1999), and are perpetuated by practice. As such, social identity is a generalizing concept comprised of other sub-sets of social life. The goal of identifying patterns in vernacular architecture is to illustrate that

shared building styles within a regional setting are intentional and indicative of a commonality, perhaps as a marker of an ethnic or communal variety, though other particular aspects of social identity (such as socio-political status or socio-economic wealth) are also considered to be related to vernacular outcomes.

The identification of designs or styles from the material record of archaeological contexts has been amongst the most recurrent means of illustrating a shared group identity. Ashmore (1987) claims a household's architecture can emphasis a certain "rightness" regarding social order and that the "style of the statements can potentially inform further, about the self-proclaimed identity of those who directed the building projects" (1987:30). Therefore, vernacular architecture is well positioned to serve as a materialization of shared customs and traditions. Knowledge of how to amass buildings of certain vernacular styles or *forms*, as they are labeled here (see Chapter 4), marks group identity transmitted from group to group, community to community, as well as across generations.

Due to the claim that vernacular architecture is established by the owner, builder, and occupier (the co-residing household members) and can accommodate variation, this lends to the autonomy of the people who inhabit the household and household site setting. Therefore, the degree of variation in building forms may be an indication of a social order, which operates in a system of agency and structure. Indeed, some of the earliest scholars of vernacular architecture (or "primitive") did not account for outside influences or powers, as some viewed building customs of 'ordinary' people to be from 'closed' societies and impenetrable to outside pressures, whether explicit or implicit,

intentional or inadvertent. However, no group, culture, or identity system of affiliation is impervious to change and is fluid with regard to transformation, whether internally or externally, or individually or collectively occurring.

However, the component of vernacular architecture referring to *how* to build or building "know-how" is argued to be intuitively or simply accepted as the proper way to build. Replicating a vernacular form is a form of practice. Indeed, it can be associated with a routine manifestation and reflective of the existence of *habitus* (Bourdieu 1977, 1990) on the part of household members who engage a particular vernacular architectural idiom. Bourdieu's application of practice theory and identification of *habitus* encompasses larger systems of social power and interest-oriented strategies, associated with class dynamics. While concepts of power strategies are not necessarily of primary focus in this dissertation, the reference to symbolic materialization of social practice is relevant. Most significant, is Bourdieu's positioning of actors as being unconsciously-knowing and that the enactment of practice is guided by social norms. With respect to vernacular architectural outcomes, this assessment would associate the building of vernacular forms as being a process of socialization that is tacitly shared amongst members of a social group.

While some vernacular architectural forms may be the result of genuinely implicit ways of knowing how and what to build, akin to a concept of *habitus*, I contend that not all are generated in such a manner. The aim of this dissertation is to examine the existence of vernacularly constituted building designs and practices at the site level and attempt to systemically track the occurrence of them across a regional landscape,

identified as the Naco and Cacaulapa Valleys. This exercise is intended as an experiment to evaluate *if* the fixed prehistoric material record of household contexts can be interpreted to reveal expressions of a shared identity affiliation. Therefore, the potential motivations (spiritual, socio-political, status-related, or otherwise) for why household members were erecting the vernacular forms that they did are not explicitly explored here. (However, cursory interpretations are posed in Chapters 7 and 9.)

It is acknowledged that certain vernacular outcomes are likely the result of a purely practical utility and achieved by widely (i.e. cross-regionally or cross-culturally) observed construction techniques. To what degree are these occurrences ascribed as being the result of the social or cultural practice of a particular group? Indeed, this question is central to conceptualizing the degree of architectural complexity of vernacular configurations, as well as the implications that intricacy, or lack thereof, has for expressing social identity, whether consciously or not. A means to address this enquiry is presented in Chapter 4 and is founded upon these considerations of social practices, or practice theory, as observable expressions of a shared identity from the built environment.

To conclude, the goal of this chapter has been to articulate the correspondence between the scholarly studies of vernacular architecture, household archaeology, and considerations of social identity expression by means of the prehistoric material record. The significance of this synthesis is the establishment of how vernacular architecture is identified in this dissertation and how previous examinations of household contexts and architectural scale have been methodologically and theoretically framed in the Naco Valley, northwest Honduras, and in other locales of the Pre-Columbian Americas.

Finally, this chapter has positioned the concept of vernacular architecture as a viable means by which to investigate the fixed material culture from site PVN647 in the Middle Chamelecón-Cacaulapa region and compare vernacular configurations across the Naco and Cacaulapa Valleys, which are presented in the following chapter.

Chapter 3

Northwest Honduras and the Middle Chamelecón-Cacaulapa

Environmental and Cultural Setting

The purpose of this discussion is to describe the location and surroundings of site PVN647 and to highlight the most immediate settlements, and environmental and cultural settings and histories. Therefore, this account situates site PVN647 within a Southeast Mesoamerican prehistoric framework, which includes portions of southern Guatemala and El Salvador, but most specifically within northwest Honduras. As several accounts have already described the ethnographic and ethnohistoric facets (Stone 1941, 1948; Weeks et al. 1987), as well as prehistory of northwest Honduras (Healy 1984; Hirth 1988; and more recently see Wells 2002; Stockett 2005a), this discussion is not intended to duplicate all that has been previously summarized of the region. Indeed, the following is only an overview of the modern setting, ecological composition, and history of pertinent ethnic and linguistic groups within the region. This is proceeded by a report of the prehistoric culture history of select sites and valley settlements, ending with a description of the Naco Valley and the investigation history and scholarly accomplishments of the *Proyecto Valle de Naco*. Finally, the previous research endeavors within the Middle Chamelecón-Cacaulapa region, where site PVN647 is located, are summarized and a full site description and explanation for selection of PVN647 for investigation are provided. Situating research at site PVN647 is important for understanding the architectural and

site-planning practices witnessed at the site and the ways in which it can be compared and contrasted with neighboring settlements within the Middle Chamelecón-Cacaulapa (MC-C) region, the Naco and Cacaulapa Valleys, but also within northwest Honduras and Southeast Mesoamerica.

Northwest Honduras: Modern and Environmental Setting

Northwest Honduras is delimited by modern political boundaries, as well as the environmental landscape. The Caribbean Sea to the north and Guatemala to the west bound the northwest, which includes the modern political Departments of Cortés, Santa Barbara, Copán, and portions of Lempira, Intibuca, and Comayagua. Site PVN647 is located in border region of the Naco and Cacaulapa Valleys, which span between the two Departments of Santa Barbara and Cortés. Similar to many of Honduras' departments, these two regions are completely landlocked. However, the predominant mountainous departments include two of the larger rivers within the country; the Rio Ulua originating from the south and flowing to the northeast, and the Rio Chamelecón originating from the west in the Department of Copán and flowing to the northeast, as well. Both rivers flow into the Department of Cortés (the Chamelecón flowing through the Naco Valley) and eventually parallel each other through the flat and fertile Sula Plain and on to the North Coast to the Caribbean Ocean.

In general, northwest Honduras is a fairly mountainous landscape resulting in numerous, narrow to moderate-sized inland river valleys, and the extensive Sula floodplain to the north. Before reaching the Sula plain, the Sierra de Omoa mountain

range (roughly 1000km above sea level) spans from the border with Guatemala to the southeast and into the Department of Cortés. This range is rich in geological resources, namely limestone, vesicular basalt, chert, and schist (Urban 1986 and see Anderson 1993). Further to the south is located the Sierra de Pija range, which establishes the southeastern boundary of the general area of northwest Honduras. To the west, beyond the modern political border of Honduras, in Guatemala and El Salvador are active volcanoes, which largely do not impact daily life in northwest Honduras. However, eruption events occurring since the Tertiary geologic period (roughly 65 to 1.8 million years ago, or during the Cenozoic Era) (Pope 1985) have greatly impacted local soil composition for agricultural purposes, from antiquity through to the present (West 1964; Williams and McBirney 1969).

The climate of northwest Honduras is consistent with a sub-tropical rainforest environment, with the peak of the dry season from March to April, followed by a rainy season, which spans from May to January. The majority of precipitation occurs from June to late September (Pope 1985). Average rainfall is approximately 32 inches a year, humidity levels range 70-90%, and temperatures rarely dip below 55-60 degrees Fahrenheit (Pope 1985); therefore, large river systems (the Chamelecón and the Ulua) flow heavily year-round, as well as numerous other tributary streams or *quebradas*. The result is that moist, tropical grasslands and savannas dominate the lowland regions (Urban 1986a, 1986b), while drier yet still tropical forests of pine and cedar comprise the highlands. Currently, valley lowlands are predominantly cleared of naturally occurring vegetation for agricultural endeavors and cattle ranches, as well as expanding human

settlements. Highland areas are conducive for coffee cultivation and select ranges are protected by the Honduran government as natural reserves or parks.

Finally, the environment can sustain a wide range of fauna and flora and likely did so in antiquity. Prehistoric forests and savanna landscapes could have supported deer, peccary, small birds, and rabbits; while continuously flowing rivers and streams supply fish and snail (Stockett 2005a); all ideal for human subsistence. The majority of these species are not uncommon in select regions of northwest Honduras today. Furthermore, the fertile and well-hydrated soils of valley floors could support a range of cultivation, including maize, cacao, and various cacti species (see Lentz et al. 1997). Ceiba, pine, and oak trees could be used as construction materials, as well as fuel for cooking fires (Stockett 2005); while various tree species could be utilized as thatch for roofs of sheltered spaces. It is unclear if beans or root crops were grown by pre-Columbian peoples in the region, however are hypothesized to have been present (Ellison 2006). Overall, the climatic conditions and the ecological settings of northwest Honduras are reliably favorable for human habitation and supportive of extensive settlement, which the preserved prehistoric archaeological record indicates was the case in antiquity.

Ethnographic and Historic Record of Linguistic Groups of Northwest Honduras

Ethnographic and ethnohistoric study suggests that several linguistic groups occupied the region of northwest Honduras during the 16th century and the arrival of Spanish conquistadors (Campbell 1979). The primary languages associated with the area

of the middle Chamelecón drainage, in particular, are Lenca and Jicaque, although forms of evidence from these time periods are sparse. The lack of information is mostly due to both language systems being deemed to be exclusively oral, as no evidence of written records has been recovered to date – the prehistoric Maya of Copán serving as an exception.

Although ethnographic inquiry situates the western extent of the Jicaque to be in portions of the middle Ulua valley (roughly present-day Santa Barbara) (Stone 1941), most accounts place the densest occupation in the lower Ulua or Sula Plain (von Hagen 1943). With reference to the Lenca, historical accounts situate the group within southern and western Honduras and El Salvador (Weeks et al. 1987). As a result, pre-Columbian Lenca-speaking people are positioned to have also occupied portions of central Honduras, including the research area of focus in this dissertation. The ethnographic and ethnohistoric accounts of both groups support the postulation of prehistoric 'non-Maya' inhabiting the area, however, does little to better our understanding beyond this label.

A potential clarifier is in the form of ethnographic descriptions of Lenca household constructions. Stone (1943) describes early 20th century Lenca houses as wattle and daub assemblages with thatch roofs and arranged in loose patio configurations. This account matches well with descriptions of prehistoric household groups from the middle Chamelecón, however, also with several other settled valley systems in northwest Honduras. Indeed, it is recognized as being of the most generalizing of architectural descriptions (see Chapter 4 for detailed discussion of architectural scales of observations).

Consequently, it is unclear how informative ethnographic architectural observations are for better understanding the linguistic or ethnic affiliations of prehistoric peoples along the middle Rio Chamelecón. Furthermore, ascribing a known linguistic or ethnic assignment does not further archaeological understandings of social organization of prehistoric populations. As such, at this particular point in time, the Lenca may be highlighted as residing along the middle Rio Chamelecón in antiquity, although significantly greater linkages are necessary between the ethnographic, ethnohistoric, and archaeological records from throughout northwest Honduras before this claim can be firmly made.

Archaeological Prehistory of Southeast Mesoamerica and Northwest Honduras

Northwest Honduras is included within the prehistoric cultural area deemed Southeast Mesoamerica or the Southeast Mesoamerican Periphery, which also includes parts of southeastern Guatemala and El Salvador. Culturally and socially, this region was home to multiple pre-Columbian valley-based polities of diverse community and linguistic affiliations. Hence, the usage of the term 'periphery' has greatly fallen out of favor amongst many archaeologists who study within the region, due to the extensive cultural expression and complex socio-political systems (Dixon 1992) that once flourished. Though situated in close proximity to the lowland Classic period Maya centers of Copán and Quirigua, the vast majority of prehistoric northwest Honduran inhabitants are concluded to share in a non-Maya tradition. However, interaction is likely

to have occurred, as select ‘Maya’ characteristics are observed to appear in certain northwest settlements, though, systematic or forced influence is not presumed.

Most generally, northwest Honduras and Southeast Mesoamerica (**Figure 3.1**) exhibit scant evidence of occupation prior to the Early Preclassic period (roughly before BC 2000). As human settlement is known in other regions of Mesoamerica, it is probable that the southeast area was inhabited, though markers for that existence are poorly preserved and likely reflect limited populations. It is during the Early Preclassic period (1500-400 BC) where northwest Honduras witnesses the establishment of permanent settlements and some of a complex, monumental nature. The Rio Ulua drainage south to Lake Yojoa within central Honduras, includes several Early Preclassic period settlements, namely Puerto Escondido (Joyce and Henderson 2001), Yarumela (Canby 1949, 1951; Dixon 1989; Dixon et al. 1994; Joesink-Mandeville 1987; Lentz et al. 1997), and the Olmec influenced sites of Playa de los Muertos (Kennedy 1981 and 1986; Stone 1972; Popenoe 1934), and Los Naranjos (Baudez and Becquelin 1973). Within the greater Southeast Mesoamerican region, the sites of Kaminaljuyú in highland Guatemala (Cheek 1977; Kidder et al. 1946, Sanders and Michels 1977) and Chalcuapa in the modern El Salvador highlands (Sharer 1969 and 1978; Sharer and Gifford 1970) are well-established by the end of the Early Preclassic, with the latter being an important trade center in the Olmec era (Evans 2004).

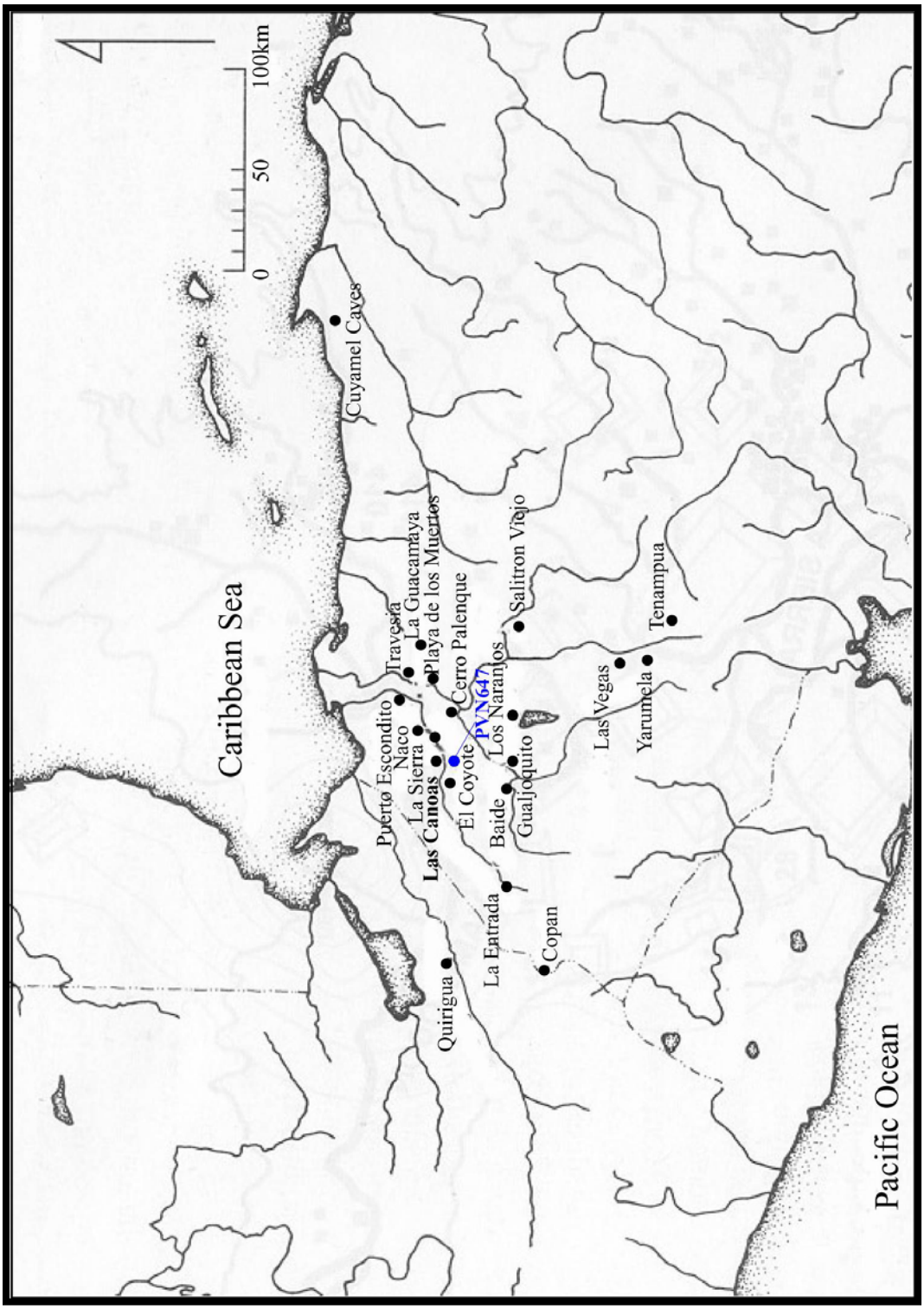


Figure 3.1: Map of Southeast Mesoamerica highlighting select archaeological sites (adapted from Stockett 2005a).

However, during the Preclassic through to the Postclassic periods far more regions of northwest Honduras exhibit evidence for increases in population density, complexity of construction assemblages and social organization, though in varying degrees. Peak occupation is associated with the Late Classic, when the majority of large political valley polities experience their physical and influential climaxes. However, most centers are observed to continue relevance into the Terminal Classic, with some even expanding in size and socio-political potency (see Joyce 1991). Select commonalities exist across the selected valley settings within each time period and are identified as: large monumental centers, supplemented with smaller-scale and/or rural household clusters; building techniques and site-planning principles; and distinct material culture assemblages. However, the following discussion forgoes summarizing the comprehensive histories of all surrounding settlements to the primary regions of focus: the Naco and Cacaulapa Valleys. Summaries of the relevant occupational prehistories of the lower and middle Ulua, Tencoa, Cuyumapa, and Copán Valleys are provided in Chapter 8, in specific reference with architectural comparative considerations.

Naco Valley, Northwest Honduras

Encompassing approximately 96km^2, the Naco Valley is deemed a moderate-sized valley and only 100-200m above sea level. The valley resides approximately 20km to the southwest of San Pedro Sula and is bounded by the Sierra de Omoa mountain range to the north and northwest. The valley includes the Rio Chamelecón, which originates approximately 60km to the southwest near the Cerro Azul mountain range, which skirts

the border with Guatemala. The Chamelecón enters the Naco Valley from the south and exits to the northeast, where it winds to the Sula plain and eventually ends at the Caribbean Ocean, approximately 22km east of modern port city of Puerto Cortés and roughly 45km from the valley. Several other seasonal runoff tributaries and *quebradas* drainages are primarily distributed within the eastern portion of the valley and lead into the Chamelecón, which divide the valley into approximately five segments (**Table 3.1 and Figure 3.2**).

	Rio Manchaguala	Rio San Bartolo & *Quebrada* Agria	*Quebradas* Agua Sucia & Guasma	*Quebrada* Grande	Rio Naco
Setting in Valley	north	north-northwest	southwest	southeast	east-central
~ Area in km^2	2.1	1.7	3.5	5.5	7
Terrain	flat	flat	flat	high terrace – sloping colluvial fan	flat
Geology	granodiorite schist river cobbles	schist river cobbles	volcanic tuff schist perlite chert river cobbles	vesicular basalt limestone andesite river cobbles	river cobbles
Soil quality	moderate	poor shallow rocky	moderate	moderate to good deep	good
Current water flow	year-round	Rio San Bartolo – year-round Quebrada Agria – seasonal	seasonal	year-round	year-round

Table 3.1: Summary of drainage segments of the Naco Valley with relevant geomorphological and soil characteristics (based from Schortman and Urban 1993; Anderson 1993; and Douglass 2002).

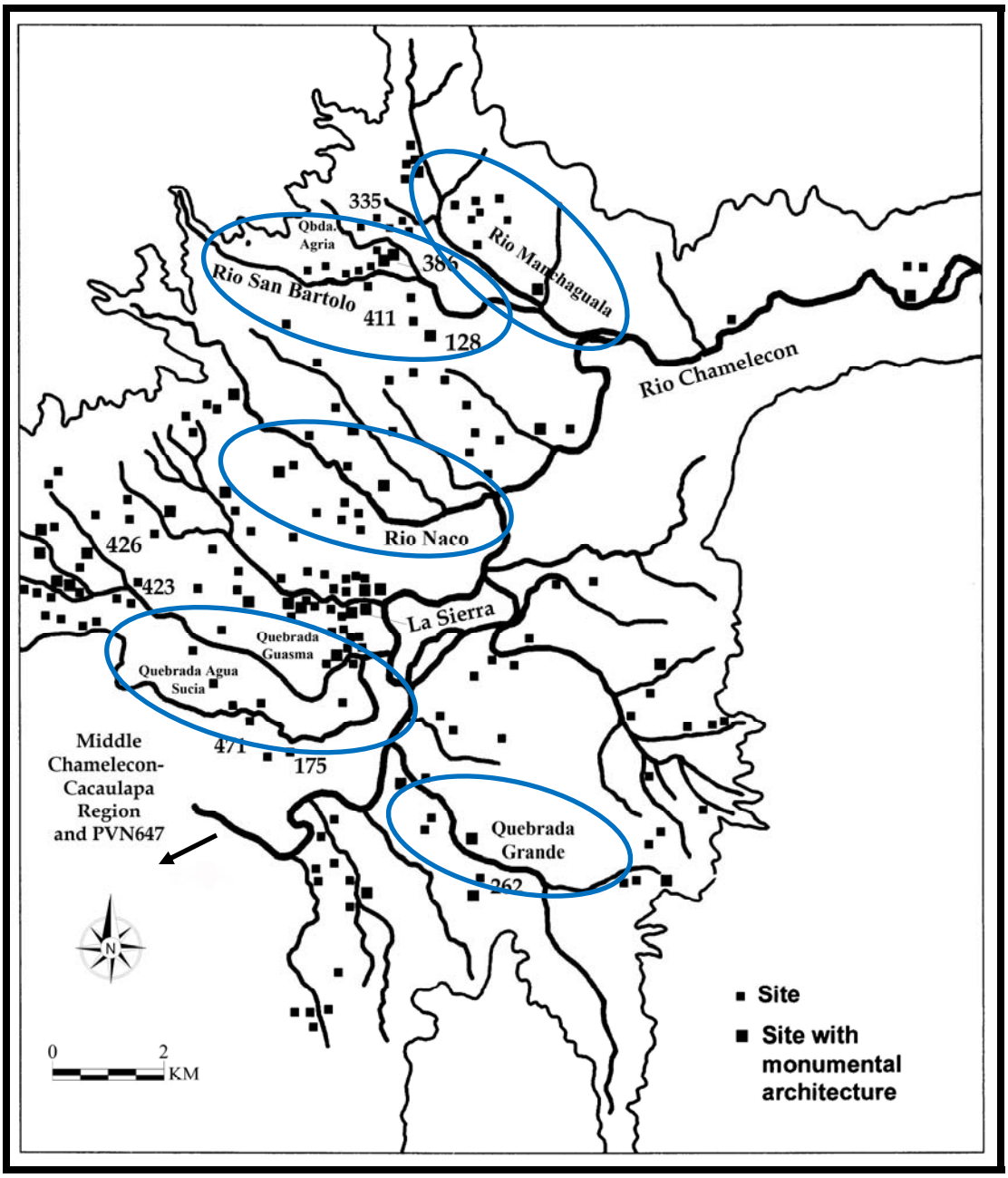


Figure 3.2: Map of the Naco Valley with Late and Terminal Classic sites. Site numbers refer to sites in comparative analysis of this dissertation (Chapter 7) (adapted from Urban and Schortman 2004, after Ross 1997).

Archaeological and Research History in the Naco Valley and at La Sierra

The archaeological history of the Naco Valley did not witness much scholarly interest prior to the 1970's. Although the Late Postclassic site of Naco had been identified and preliminarily investigated as early as the 1930's (Strong et al. 1938), it was not until 1974 when John S. Henderson from Cornell University directed a team to initiate survey reconnaissance and mapping endeavors of the valley (Henderson 1979; Henderson et al. 1979). At the time, the project was titled the Naco Valley Archaeological Project (NVAP) and preliminary excavations were focused at the Late Classic valley center of La Sierra. The site of La Sierra and its environs were revisited during the 1980's and 90's and have underwent extensive investigation.

Additionally, Anthony Wonderley, also of Cornell University, returned to the site of Naco in 1975 and identified it as a principal commercial center for the region and that interaction of variegated cultural groups likely occurred and played a role in the functioning of the area (Wonderley 1981, 1986). However, settlement survey investigations of the Naco Valley was taken over in 1978 by then doctoral candidate Patricia A. Urban and continued for dissertation purposes (Urban 1986a and 1986b). Urban's goal was to survey as close to a 100% coverage of the valley as possible, which excluded the previously documented archaeological zones of the Naco and La Sierra sites.

Even though recent research may support that La Sierra did not have complete control over all regions of the Naco Valley during the Late and Terminal Classic periods

(see Stockett 2005; Douglass 1999, 2002), what maintains as accurate is that La Sierra was the largest and most powerful political unit documented during the prehistoric occupation of the Naco Valley. La Sierra is located in the center of the valley and along the western bank of Rio Chamelecón. It contains 468 surface-visible constructions, ranging in size and architectural complexity, and all compacted within 0.7km^2. Approximately, one-third of structures identified to have been occupied during the Late and Terminal Classic in the Naco Valley are located at La Sierra and within a 1km radius of the site. Due to a lack of known prestige physical resources as a draw to warrant such a concentration of occupation, Urban and Schortman (1994) claim the density was related to elite's strategies of centralized control at the political center.

Furthermore, La Sierra is evidenced to have supported a large number of workshops processing both local and imported, and highly desired, raw materials. Manufacturing activities occurring within the limits of La Sierra included prismatic obsidian blades (Ross 1997), pottery censers, and kiln-fired ceramics (Urban et al. 1997) were widely distributed, even found within household contexts throughout the valley. Furthermore, evidence supports possible exchange of obsidian for marine shell artifacts between the Maya center of Copán and the Naco Valley center (Schortman and Urban 1994). However, a few La Sierra contexts have yielded ceramic samples identified to be of styles from the Lower Motagua Valley, yet it remains unknown if they originated from Quirigua or from sites in its immediate environs. Additionally, ceramic styles characteristic of Copanec pottery are rare. Overall, the view is that the trade networks associated with the site of La Sierra, and the Naco Valley in general, were not dominated

by any outside entities and that the ruler's at La Sierra "enjoyed great freedom in manipulating extra-societal exchanges for their own benefit" (*ibid*: 410).

History of the *Proyecto Valle de Naco* (PVN) and the *Proyecto Valle de Cacaulapa* (PVC)

Intensive archaeological research has continued in the Naco Valley since Urban's extensive settlement survey concluded in 1979. Archaeological investigation resumed in 1988 and has been on-going to the present under the auspices of the *Proyecto Valle de Naco* (PVN) directed by Drs. Urban and Edward M. Schortman of Kenyon College. PVN is the continuation of the NVAP and research was primarily focused at the site of La Sierra and its immediate surroundings until 1996. Urban and Schortman resumed research in the southern region of the Naco Valley in 1999, while simultaneously initiating settlement survey and archaeological investigations of the Cacaulapa Valley, approximately 9m to the southwest of the Naco Valley and resulting in the *Proyecto Valle de Cacaulapa* (PVC). Primary focus of PVC investigations has been at the valley's largest settlement and polity center, the site of El Coyote. During this time their staff and field school students have recorded approximately 215 Late and Terminal Classic sites within the Naco sequence and 35 within Cacaulapa. Of these, roughly 13 within Naco, and 24 within Cacaulapa have been sampled or extensively investigated at a variety of settlement sizes, including: rural, administrative, and urban sites, including various sectors of La Sierra and El Coyote.

PVN/PVC Research Objectives

Generalized and early motivations for intensive investigations of the Naco Valley were allied with the intentions of other Southeast Mesoamerican archaeologists to further define the limits of "culture areas" in the region. Identified to be the major cultural group within the Southeast zone, the prehistoric Maya, and more specifically at the Classic period lowland Maya capital of Copán, received the greatest scholarly attention. Furthermore, as it was recognized that the sustainability of such a large state settlement likely necessitated contact and trade for essential commodities with neighboring areas, the Naco Valley exhibited relevance as a potential source or pathway of foreign goods. Finally, the primary period of fluorescence within the Naco Valley coincides with that of not only the Copán Valley, but other regions occupied during the Classic period, namely the neighboring lower and middle Ulua Valleys. Therefore, Urban and Schortman's overarching research goals have been to document the history and operation of the Late and Terminal Classic political economies operating within specific segments of northwestern Honduras, predominately focused at the site of La Sierra, and the manners in which these systems of power, production, distribution, and consumption were linked through the actions of their agents (Schortman and Urban 1993, 1994, 2011a, 2011b, 2012; Urban and Schortman 1988, 1995, 2002, 2004, 2013).

Of the more particular research objectives within the Naco Valley, which have developed over the past three decades, have centered on the pervasive evidence for craft manufacturing and observations of site planning principles and other architectural arrangements. Research initiatives directed at craft production have been specifically

focused at the site of La Sierra and developing models to account for the diversity of ceramic specialization and distribution that is witnessed to have been orchestrated from the site (Schortman and Urban 2004; Urban 1993; Urban and Schortman 1987; Urban et al. 1997). More recently, investigations at the site of Las Canoas (PVN202) and some of its neighboring settlements within the southern region of the Naco Valley, serve as further indications for the frequency of expertise with ceramic manufacturing occurring within the valley (see Stockett 2005a; Ellison 2006). Additionally, a goal of PVN inquiries relating to site-sampling objectives from identified archaeological settlements distributed throughout the valley has been to document any patterns of structure arrangements and other nuanced architectural observations. This distinct aim is of extreme relevance to the presented dissertation research project, as these observations are beneficial to supplement the identification of architectural similarities or variations occurring within the valley.

Site of El Coyote, Cacaulapa Valley

In the late 1990's, Urban and Schortman, at the request of *Instituto Hondureño de Antropología e Historia* (I.H.A.H.) officials, shifted their research focus onto the Cacaulapa Valley and PVC goals were aligned with investigating the large site of El Coyote and how the narrow and meandering 7km^2 valley could support a political capital of any size. Intensive investigations were initiated in the year 2000 to elicit how a site with a total of 340 densely-packed structures, complete with a plaster-floored main plaza enclosed by 12 monumental structures, a ballcourt, and distinct elite and non-elite residential areas, flourished from as early as the Late Preclassic through the Early Postclassic (McFarlane 2005; Wells 2002, 2004) (**Figure 3.3 and 3.4**).

Most recent research objectives have focused on the interval from the Terminal Classic to the Early Postclassic and how rulers at El Coyote maintained power when other dominate centers are observed to fragment and decline, most immediately the Naco Valley center of La Sierra, but other realms throughout southern Mesoamerica. Due to the enigma of how El Coyote leaders were not only able to persist longer within the valley than those in neighboring and more spacious settings, examination within the middle Chamelecón was designed to link the prehistoric settlements of the Naco and Cacaulapa Valleys. In each area, the histories of development are distinctly local and tied to each other in complex ways. Therefore, the goals of investigating the cultural, political, and economic processes within the corridor in which the inhabitants of these two zones most likely maintained contact, have been to further the understanding of the social complexity within each region and the means by which they interacted.

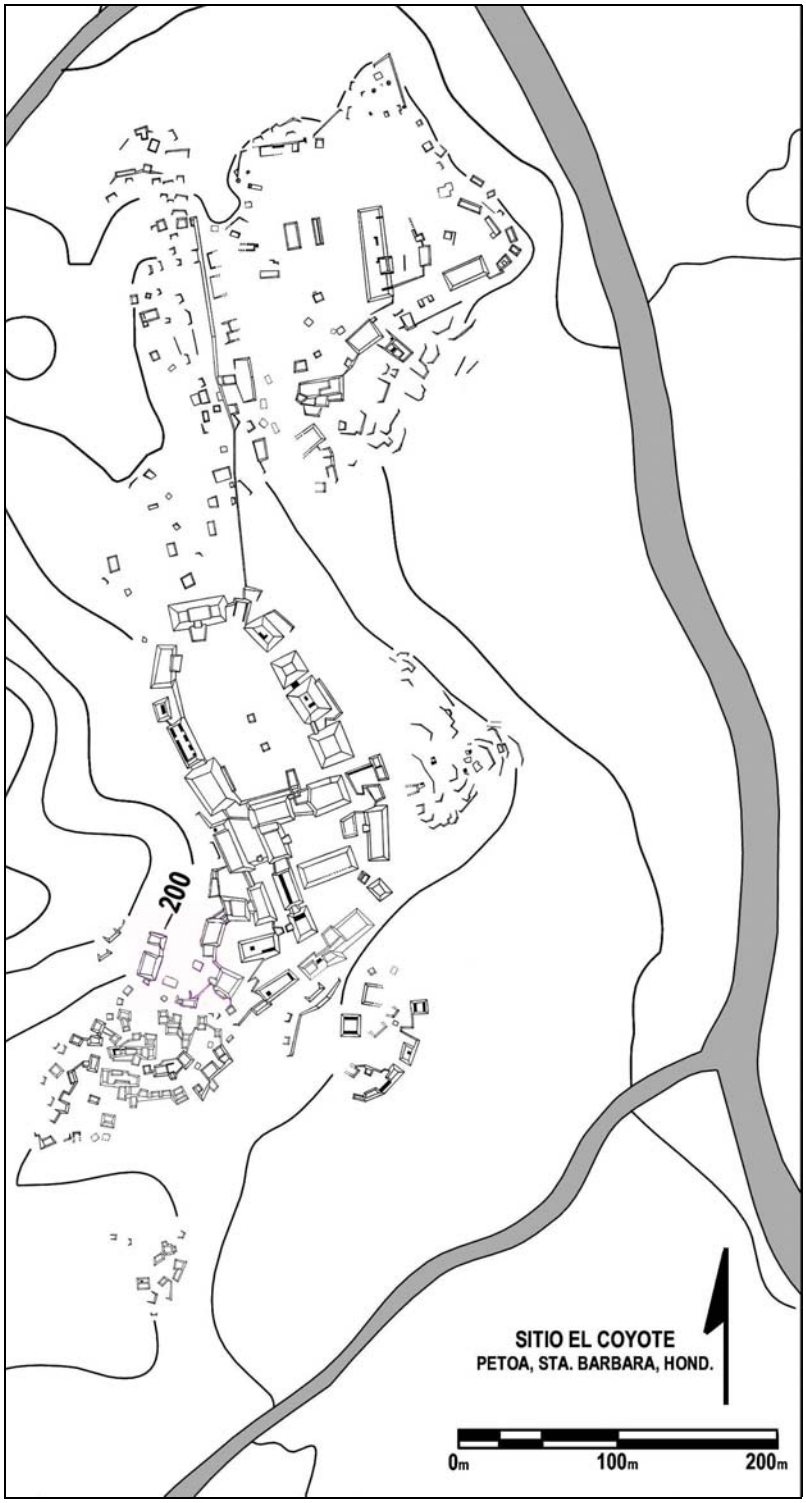


Figure 3.3: Site Map of El Coyote, Cacaulapa Valley (courtesy of Urban and Schortman).

Figure 3.4: Map of Middle Chamelecón-Cacaulapa (MC-C) region with sites Las Canoas (PVN202), PVN647, and El Coyote in the Cacaulapa Valley (adapted from Urban 2007).

Finally, the generalized or the more explicit objectives of PVN and PVC investigations could not be carried out if it were not for its symbiotic relationship with the Kenyon-Honduras Anthropology and Archaeology Program, directed by Urban and Schortman. Since 1988, the semester abroad program offered by Kenyon College has been integrated with PVN/PVC research endeavors and serves as a unique pedagogical tool for exposing undergraduate students to the ethical and responsible practices of archaeological investigations. As a result, the outcome of archaeological investigations and the proposed directions for future ambitions has been equally dictated by the research questions modeled by students, as well as Urban and Schortman.

PVN/PVC Outcomes and Scholarly Contributions

Consequently, the accomplishments of PVN and PVC studies have revealed numerous and significant insights, which have both logistically and fundamentally contributed to a better understanding of the prehistoric social complexity of this region of Southeast Mesoamerica. Only few of the many achievements are mentioned in this discussion and include: the chronology of occupation for the valley; the standardization of site size, organization, and distribution across the landscape; and the degree of inter and intra-regional relations associated with the valley. These specific contributions are highlighted due to their relational significance with the investigative goals at PVN647.

Primarily from PVN investigations, Urban and Schortman have established that the occupation of the Naco Valley occurred as early as the Middle Preclassic period (Urban and Schortman 2002, 2013) and continued through to the Spanish conquest

during the 16th century (Schortman and Urban 1994, 2011). It had been previously established from Spanish accounts that the site of Naco likely had a population of approximately 10,000 occupants (Henderson 1979), and PVN findings have identified additional contexts dating to various Postclassic periods up to Spanish contact, yet none as vast and complex as the Naco site zone. Additionally, during this long period of occupation, the valley experienced three distinct periods of political centralization. The first episode is the sporadic evidence of Middle Preclassic settlements (Urban and Schortman 2002, 2013); the third is the Late Postclassic occupations mainly occurring at and around the site of Naco. However, the greatest political complexly and population density occurred during the Late and Terminal Classic periods, when large portions of the valley are hypothesized to have been under the control of rulers living at La Sierra (Schortman and Urban 1994).

Due to the period of greatest occupation and therefore the most structures and overall sites dating to the Late and Terminal Classic in this region, Urban and Schortman developed a five-level settlement hierarchy to logistically reference all sites dating to this period. The hierarchy establishes categorical groups, based upon observed criteria. The criteria include site size and the existence, number, arrangement, and complexity of monumental buildings (taller than 1.5m) (Urban et al. 1990). Within the hierarchy, a Tier 1 designation accounts for sites with more than 400 surface-visible structures. The Naco Valley capital of La Sierra is the only site included in this tier. Tier 2 sites are centers with 41-44 surface-visible buildings, contain monumental platforms organized into formal plaza groups, and are considered to be secondary administrative centers.

Regarded to be smaller versions of Tier 2 sites, Tier 3 settlements consist of 16-26 surface-visible structures. Tier 4 sites are defined to include 13-18 buildings, small amounts of monumental construction, and slightly discernible patio group arrangements. Larger structures (i.e. monumental structures) found in Tier 1-4 sites likely represent settings for ceremonial and/or administrative activities, or high ranking residents within a structure group or site. Finally, the Tier 5 level represents archaeological sites that are defined by only a few structures, with no monumental construction and little-to-no defined patio groups, and any other forms of surface-visible evidence for prehistoric occupation (i.e. artifact scatters and/or rock concentrations). While Tier 5 designations are the most numerous, the overall majority of settlements documented within the Naco Valley containing traces of intentional constructions, fall within the ranking of Tiers 3-4. These loci range from mid-sized sites of less than 40 buildings with structures clustered and roughly organized into plaza groupings, to small household settlements with less than 10 buildings. Overall, this settlement hierarchy model implies a ranking of centralized power and decision-making capacities, which are reflected in the size and arrangement of buildings, relative to each level and has proven logistically valuable for comparative purposes.

Urban and Schortman have also accomplished the articulation of the Naco Valley region to other surrounding areas by means of analyzing the development and composition of interregional interactions and core/periphery relationships. Results from PVN/PVC research undermines certain previously held archaeological assumptions that during antiquity the cultural makeup of the southeast region was homogenous and that

the most socially complex locales and their rulers dominated and controlled the forms of inter-societal interaction (see Urban and Schortman 1986). Various inquiries and publications affirm that the Naco Valley engaged in select forms of interaction with neighboring Maya regions of the Copán and Lower Motagua Valleys, based upon the examination of artifact assemblages and other lowland Maya or Mesoamerican symbolic intrusions, such as the presence of ball courts. However, no evidence indicates that the Late or Terminal Classic Naco and Cacaulapa Valleys experienced economic or political exploitation from or vulnerability to the sites of Copán, Quiriguá, or any other polity in which the region engaged in exchange networks.

Furthermore, PVN/PVC investigations have demonstrated how a core/periphery framework may not be the most suitable evaluation for understanding the political, economic, demographic, and cultural patterns observed from this region of Mesoamerica. Within the Late Classic Naco Valley, Urban and Schortman have established that selective adoption of lowland Maya identity characteristics were likely incorporated by those ruling from the valley center of La Sierra to strategically enhance their power over their local subordinates. However, these attributes were not forced upon them from outside realms, yet intentionally implemented due to elite-associations, which could best serve their local political interests. Therefore, PVN/PVC results have established that since the residents of the Naco Valley and immediate areas were not passive, dependent upon, or governed by other "core" sites, the region was not economically impoverished or socially or politically underdeveloped, as core/periphery distinctions would make them out to be. Conclusions have deconstructed the notion that the Naco Valley and

surrounding areas are a “cultural backwater”, as it is revealed to be a socially, economically, and politically diverse region, which developed autonomously from other dominating authorities (Schortman and Urban 1994, 2011a, 2012; Urban and Schortman 1988, 2004).

Lastly, PVN/PVC research has substantially contributed to the archaeological study of households, communities, and social identity. Too often evaluations of shifting social relations are assessed from a top-down approach and focus on how rulers conspire to establish hierarchies, regulate power, and concentrate wealth and resources. As a result, typically greater emphasis is placed upon examinations of more elite contexts, such as monumental site cores and administrative buildings. Though PVN and PVC investigations have included inquiries of large valley capitals, the domestic and residential sectors at these administrative centers have not been overlooked. Quite the contrary, the majority of intensive and extensive structure clearing excavations have occurred in and around household settings of various sizes (Douglass 1999, 2002; Ellison 2006; Schortman and Urban 2011a, 2011b, 2012; Stockett 2001; Urban 2007; Urban and Schortman 2004). Over the years, investigations of these contexts and from varied locations throughout the Naco Valley have revealed the spectrum of social interactions that occurred within the region. It has been revealed that people played active roles in shaping the political structures in which they lived by either resisting the policy strategies of their local elites, cooperating with those schemes, or, more often, some combination of both.

Moreover, student-directed investigations within PVN and PVC research have contributed more nuanced conclusions and are predominately organized in the form of undergraduate honors theses. Student projects have focused on such topics as ceramic production by means of intensive investigations of a stone-lined kiln and surrounding areas for clay sources; analysis of stone implements with the goal of examining manufacturing techniques, implement functions, and patterns of distribution within the valley; and reconstructing the role of copper processing at El Coyote during the Late Postclassic and how this industry fit within trade networks that spanned Mexico to Ecuador. Various theoretical considerations, such as Central Place Theory and World Systems Theory, have been utilized to articulate how administrators subordinate to local rulers maintained power and how rural farmers were exploited by local rulers. Lastly, several student analyses have traced changes in household form and function over time in tightly nucleated clusters of buildings at various sites. However, no examination of this sort has investigated cross-valley architectural attributes in order to assess similarity and variation of identified forms.

What was initiated as an undergraduate student project and has developed into a doctoral dissertation is that of charting variations in certain motifs commonly painted on locally made Late Classic pottery vessels. This study, carried out by doctoral candidate Marne Ausec from the University of Massachusetts, Amherst, examines the manner in which painted decorations might have demarcated social units occupying different portions of the Naco Valley. This approach, which explores the communication potential of pottery motifs, is one method by which social groups, from household contexts to

administrative centers, can be recognized. An examination of ceramic designs and styles across the valley is immensely valuable for revealing shared and varied characteristics of group representation. However, when results evaluating the movable and non-movable cultural material record from throughout the valley are analyzed in tandem, a more comprehensive depiction of Naco Valley identity expression will be rendered.

Naco Valley as a setting to evaluate Vernacular Architecture

In conclusion, the result from more than three decades of PVN and PVC research is that a considerable amount of data have been collected from these valley regions. While investigations include a range of site sizes, locations, and larger reconstructions of social solidarity and inter-polity independence have been articulated, a comprehensive evaluation of architectural designs and forms from non-administrative, household settings remains absent. General patterns of architectural forms and planning have been observed and informally referenced. One such observation within the Naco Valley is described by Schortman as a tripartite room arrangement within a single structure. This occurrence is distinguished by containing one room space in the back region of a building and the front portion (typically, plaza-facing) separated into three separate rooms (Schortman, personal communication 2013). Though this interior structure organization has been observed at multiple sites, it has not been systematically analyzed or quantified. Architectural interpretations have been made at mostly the site level and have not engaged in inter-site or intra-valley discussions. Therefore, the full potential of this architectural occurrence has not been assessed but has been initiated here (see Chapter 7).

Other Archaeological Research within the Naco Valley

Additional archaeological investigations within the Naco Valley have been conducted and results have been scholarly disseminated, which are significant to highlight. Of particular note are the research endeavors of Dr. John Douglass, which is also discussed in Chapter 2. Carried out under the auspices of the PVN infrastructure, the examination of household contexts within the valley by Douglass are noteworthy to the current discussion of social diversity and vernacular architecture. For Ph.D. dissertation purposes, then doctoral student at the University of Pittsburgh, Douglass evaluated the variability of wealth, composition, and craft production within agrarian households. This study resulted in a single volume, comparing various-sized household contexts throughout the Naco Valley and made use of previously generated, yet unpublished datasets. Douglass' examination includes a comparative analysis of comprehensive household settings within the valley; however, little focus is placed upon the patterns of architectural attributes, beyond ascribing a ranking of overall wealth based upon artifact assemblages, soil quality for subsistence, and architectural complexity. Therefore, select PVN sites discussed by Douglass (1999, 2002) are reexamined for evidence of vernacular characteristics and compared with other previously generated, yet unexamined datasets.

Middle Rio Chamelecón-Cacaulapa (MC-C) Region

The region located in the southwestern-most portion of the Naco Valley is identified as the Middle Chamelecón-Cacaulapa region (**Figure 3.5**). The name is derived from the region being within the middle drainage zone of the Rio Chamelecón,

which flows through the middle of the MC-C, and a small portion of the Cacaulapa Valley to the southwest. The research area is only identified to be approximately 15km^2, (~7km east-west, straddling the river, and ~2.5km north-south) most of which is steep slopes leading to the river and other tributary *quebradas*. Less than a one-third of the region is assessed to be moderately habitable on low river terraces or *vegas* and flat areas in small, narrow mountain pockets (Urban and Schortman 2013).

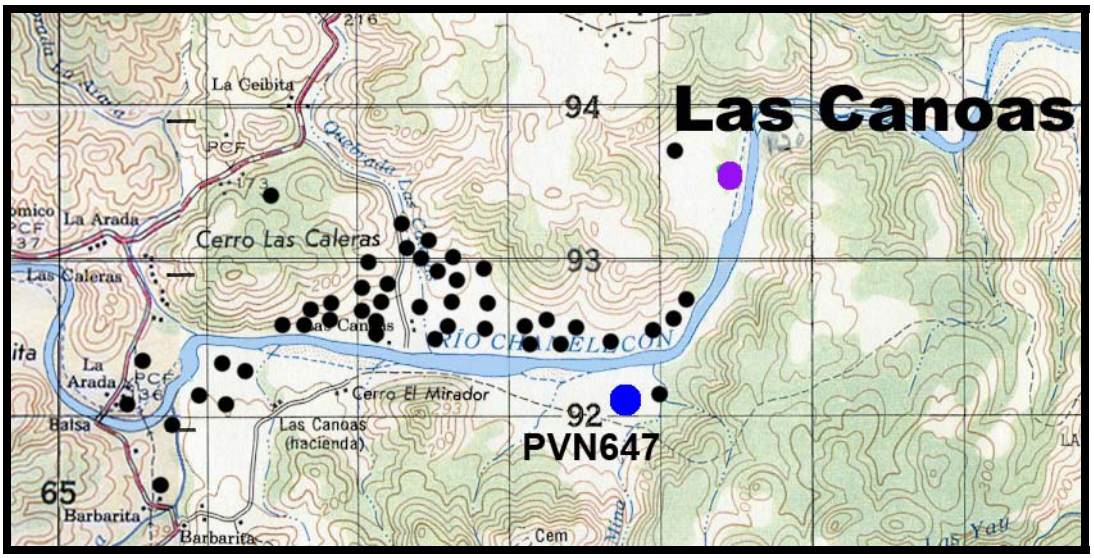


Figure 3.5: Map of archaeological sites in the Middle Chamelecón-Cacaulapa (MC-C) Region (adapted from Rogoff 2006).

Beginning in the summer of 1999, and nearly every subsequent year since until 2008, PVN work within the MC-C has focused on the Vega de Las Canoas, which is situated immediately along the Rio Chamelecón. Extensive investigations in this region were initiated to expand the understanding of the settlement distribution patterns and construction arrangements within the southern region of the valley. Furthermore, the intent was to bridge the evolving comprehension of the southern neighboring Late Classic

center of El Coyote and to investigate possible connections or linkages between the Cacaulapa Valley and the southern regions of the Naco Valley. The main focus of research in the MC-C has been at the site of Las Canoas (PVN202); however, several other sites have been investigated, ranging in examination intensity from preliminary test excavations to extensive horizontal exposure of entire structures, which includes PVN647.

Initiated in 2005 by Schortman and David Rogoff, then an undergraduate of Kenyon College conducting honors thesis research, and continuing to 2008, an extensive settlement survey project has brought the total number of identified sites within the defined MC-C region to 85. Of these, approximately 18 sites have been formally sampled by various field staff and students and the results have been disseminated in various publications and at professional conferences; as well as in the form of undergraduate honors theses and as graduate Masters and Doctoral research projects (Ellison 2006; Stockett 2001, 2005a).

Archaeological Investigations in the Middle Chamelecón-Cacaulapa (MC-C) Valley

Las Canoas (PVN202)

As previously mentioned, the majority of PVN research efforts over the past decade within this southern region of the Naco Valley have centered at the site of Las Canoas (PVN202) (**Figure 3.6**). Comprised of nearly 119 surface-visible structures, Las Canoas is situated between a Tier 1 and 2 settlement size positioning, and is the largest preserved settlement in this region of the Chamelecón. Known to most locals and aptly

named due to its prominent location on one of the largest and flattest *vegas*, Las Canoas was first visited by Urban and Schortman in 1988 and then later systematically mapped and surface samples were collected in 1991. Active interest in Las Canoas and the surrounding area resumed in 1999 and formal investigations were conducted by then doctoral student Miranda Stockett during the summers of 1999 and 2000 and for approximately 6 consecutive months in 2002. Stockett's endeavors were for Master's and doctoral dissertation intentions (Stockett 2001 and 2005a, respectfully). Research has continued at Las Canoas and has been primarily carried out by a mixture of field school students and PVN staff members for various months during 2004, 2006, and 2008.

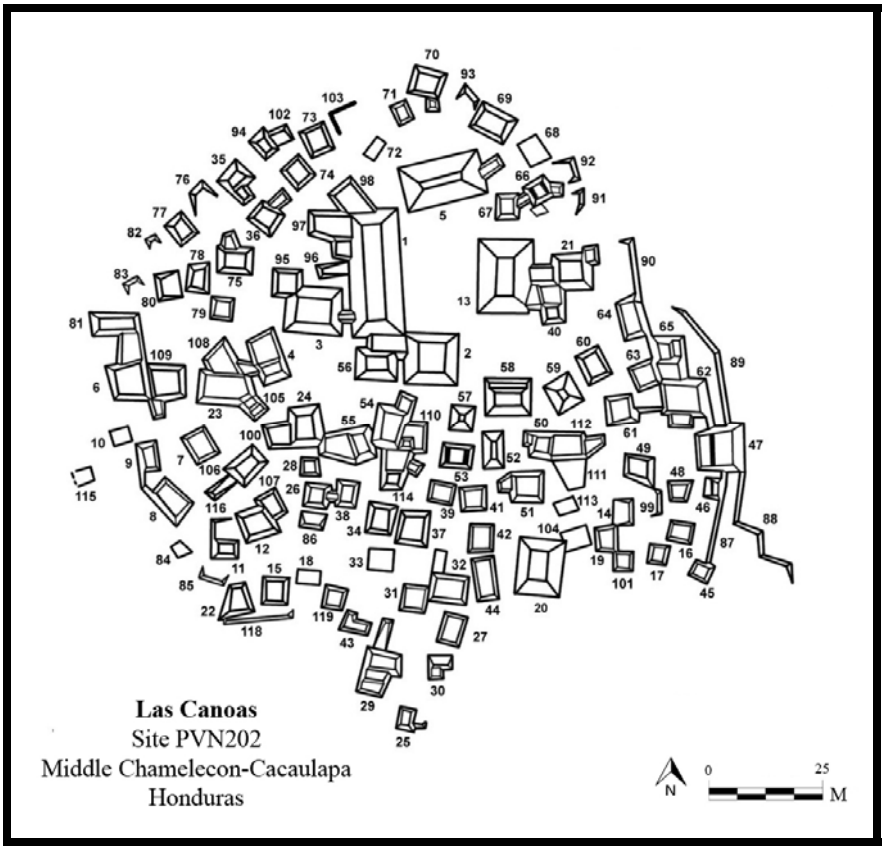


Figure 3.6: Site map of Las Canoas (PVN202) (adapted from Stockett 2005a).

The initial research questions guiding the investigations at Las Canoas were based on Stockett's doctoral studies and how social identity shapes the ways in which people perceive themselves and structure their interactions with others. To be specific, she employed a "practices of affiliation" approach, which sought to conceptualize identity as the repeated performance of affiliative sentiments that shape, and are shaped by, social life and the material world. As it was Stockett's investigative endeavors that initially revealed Las Canoas to be a center consisting of an extensive network of artisans all involved in various aspects of pottery manufacture, her dissertation concludes that social identities at the site were shaped by an overlapping of affilative practices tied to craft production. Stockett poses that Las Canoans negotiated their socio-political position within the valley by means of specializing in the production of pottery for export. Therefore, this form of external interaction is exposed as contributing to the shaping of identity that not only involved practices of affiliation at the site-level, but by their role in a regional exchange system (Stockett 2005a and 2007).

Stockett's doctoral studies contribute to the cumulative results from nearly a decade's worth of examination, which support that the site of Las Canoas was the Late Classic center on the Vega de Las Canoas. Furthermore, it has been clarified that Las Canoas was not only the focal point of political activity during the Late Classic, but also the center for large-scale pottery manufacturing. Evidence for ceramic production throughout Las Canoas takes the form of both tools used to fashion containers, such as potstands (Schwartz et al. 2006; and see Chapter 6 for a detailed description and further information regarding the artifact category of potstands), and the byproducts of

manufacture, such as burned and discolored vessel fragments. Soil samples collected in 2004 and 2006 reveal that clay content within the immediate environs to the north, west, and south of Las Canoas were easily accessible as raw source materials for ceramic production witnessed at the site. However, there is no direct proof that these deposits were mined in antiquity. It is posited that Las Canoas's artisans excavated clay from where it is currently exposed all along the banks of the quebrada, which courses west and north of the site. Excavations conducted during the 2008 season reveal evidence indicating a ceramic firing facility within the southwestern region of the site. And finally, overall investigations strongly suggest that many of the surface-visible buildings at the site were built over earlier borrow pits dug into clay layers that underlay what would become the center.

In summary, during various field seasons between the years 2000 and 2008, approximately 50 structures have been formally investigated at Las Canoas. The majority of these structures have been the smaller and non-monumental buildings, which surround the main plaza to the south, southwest, and northwest. As a result, a significant number of domestic dwellings and household patio groups have been examined by means of full horizontal exposure to reveal all architectural attributes. Though immediate research questions have focused on the continued clarification of the craft production activities occurring within different sectors of the site, other structural design and style patterns have been observed and recorded. Therefore, the architectural characteristics from these settings at Las Canoas are examined and analyzed with regard to vernacular similarities and variations observed from PVN647. The overall site planning intentions and in all

probability the social order and intra-site dynamics at Las Canoas and PVN647 differed substantially. However, a comparative analysis between the two sites is of note as they were predominately occupied during the same time periods (Late and Terminal Classic) and are located in very close proximity to each other.

Site PVN598

An additional site within the Middle Chamelecón-Cacaulapa region that has been extensively investigated and analyzed for the purpose of a Master's thesis is the site of PVN598 (**Figure 3.7**). Located approximately 2.5km to the southwest of Las Canoas, PVN598 was researched by then Master's student Leigh Anne Ellison from Northern Arizona University over the course of several months during the summers of 2004 and 2005. PVN598 is composed of 18 structures, formed in two patio spaces, which are positioned roughly 20m from the northern banks of the Rio Chamelecón. It is labeled as Tier 4 site and representative of an extended household grouping. Test excavations in 2004 revealed the site to predominately date to the Late Classic period and that the inhabitants of PVN598 were engaged in their own processes of pottery production. This observation posed to be curious due to PVN598 being amongst the largest preserved sites in close proximity to the ceramic manufacturing neighbor and simultaneously occupied site of Las Canoas.

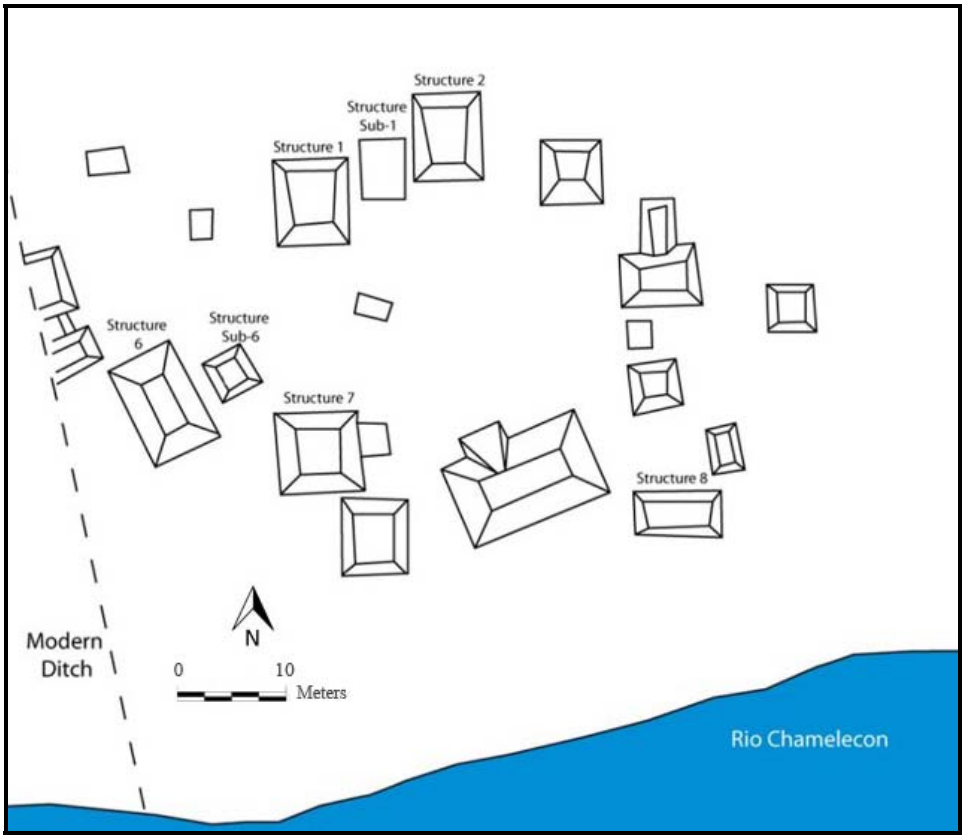


Figure 3.7: Site map of PVN598 (adapted from Ellison 2006).

Therefore, Ellison's research interests at PVN598 focused on examining the political and economic motivations associated with rural craft production. Specific research questions sought to address what crafts were produced, the quantities and qualities of specialized production, and whether activities were controlled by a local elite class or were the residents of the site producing on their own initiatives. By means of complete horizontal excavations of six structures and thorough analysis of the recovered artifact assemblage, Ellison offers several conclusions regarding the pottery manufacturing occurring at PVN598. Based on calculated output levels, Ellison claims that it is unlikely that potters at PVN598 were producing purely for personal use or to

meet any possible tribute obligations imposed upon them, for example from Las Canoas elites. Furthermore, since very little evidence indicating an accumulation of exotic goods was recovered, it is unlikely that the residents at PVN598 were producing ceramics with the intention of meeting any hierarchical (but non-elite controlled) demands. Finally, as the limitations of the immediate *vega* area provided little access to good agricultural lands, the potting community may have been settled with the intent to rely on self-sufficiency through ceramic production for exchange of goods for other necessary subsistence items (Ellison 2006).

Overall, though Ellison's research was carried out to address craft production inquiries, the architectural observations from the six investigated structures are beneficial for immediate comparative purposes within this region along the Chamelecón. PVN598 includes structures of similar size and arrangement to those at PVN647, is contemporaneously occupied, and utilizes analogous and immediately available construction materials, among other characteristics.

Las Caleras (PVC187)

The final archaeological site within this region and in close proximity to the Rio Chamelecón that has undergone extensive investigation is the site of Las Caleras or PVC187 (**Figure 3.8**). Initially documented in 2005 by then undergraduate David Rogoff, the site is aptly named due to its location within a valley in the low hills of the Cerro Las Caleras range, which is located north of the Rio Chamelecón. Las Caleras is positioned approximately 4km to the west of Las Canoas and less than 1km west of the seasonal quebrada of the same name as the mountain range and site. Though the site of

Las Caleras is relatively close to the site of Las Canoas, PVN598 and other sites labeled within the PVN sequence, the boundary that distinguishes between the two site recording systems is along the low mountain range. Therefore, Las Caleras is documented as part of the PVC site sequence.

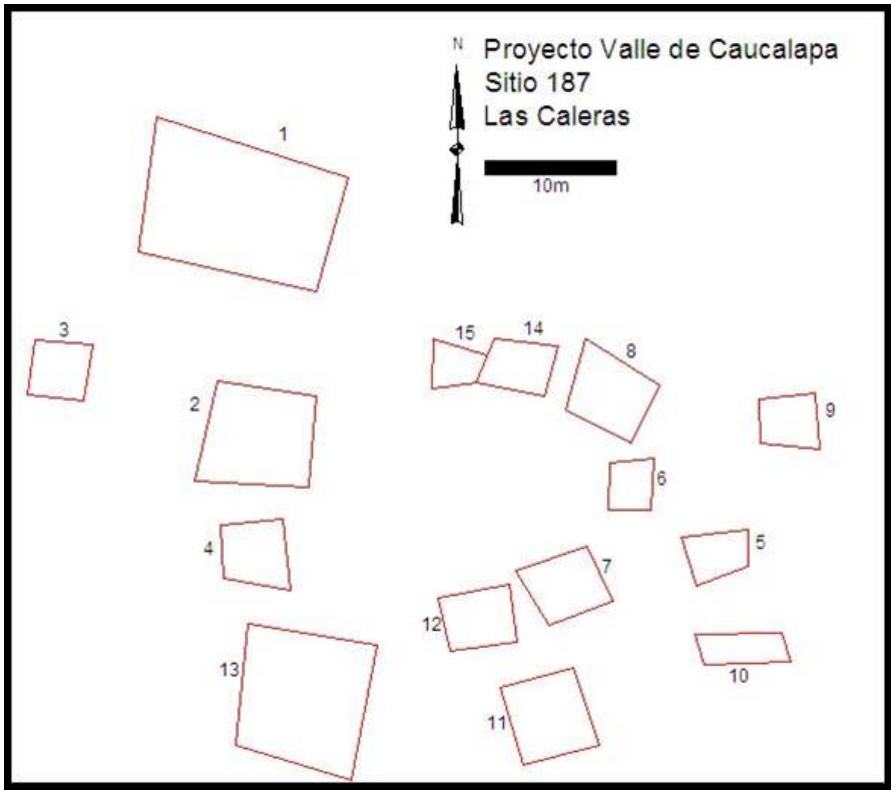


Figure 3.8: Site map of Las Caleras (PVC 187) (courtesy of Esqueda).

Investigations at Las Caleras have been solely carried out by Marcela J. Esqueda, a doctoral student at the University of Pittsburgh. Esqueda's preliminary interest in the site was to determine what role the residents at Las Caleras played within the regional political economy and what sources of power they wielded to establish a site in this hilly setting and of its observed size. The site consists of 15 surface-visible structures, two of

which are monumental in scale, and are loosely arranged in a linear alignment, in confluence with the topography of the brief valley terrain (approximately 3,900m^2). The size of the site and scale of certain structures are deemed to be out of proportion to the small amount of arable land in its immediate vicinity. A pilot excavation season during the summer of 2006 revealed that the site predominately dated to the Late Classic to Terminal Classic periods, with possibly some occupation into the Early Postclassic. Unexpectedly, it was also revealed that the residents of Las Caleras participated in activities of ceramic production, despite the site being distant from a constant source of water and no known access to clay and temper deposits.

Esqueda returned to Las Caleras for various months during the years of 2008 and 2009 to carry out investigations for Ph.D. dissertation purposes. Research questions sough to further reveal how activities of ceramic production transpired at Las Caleras and how those manifested in such close proximity to the network of potters in the Las Canoas zone within the *vega* regions along the Rio Chamelecón. Through the examination of eight structures, five of which were fully exposed, and the analysis of the artifact assemblage, preliminary results suggest that pottery making by Las Caleras inhabitants began experimentally and that residents either refined manufacturing techniques to produce their own pottery or obtained it elsewhere. Several fill deposits of defectively manufactured ceramics, some with firing errors and others disfigured from poor formation, were recovered in contexts associated with architectural additions and modifications to buildings. Based on the abundance of sherds found throughout the site,

it appears that some manufacturing adjustments were made, yet it remains unclear if or to what degree of production proficiency was ever achieved.

To conclude, Esqueda's investigations have exposed yet another setting in this middle Chamelecón region with overwhelming evidence for ceramic tinkering and possibly production. Highlighting the existence of Las Caleras in this discussion is significant, as it is the second-largest site (after Las Canoas) to undergo extensive excavation and analysis within this region. Furthermore, it is revealed to have been primarily occupied during the same period as PVN647. However, though five structures were fully investigated, it remains unclear how meaningful architectural comparisons may be, as buildings at Las Caleras are uncovered to be amassed using differing construction materials than those witnessed at PVN647. Constructions are observed to be fashioned from limestone blocks, some modified, and minimal use of chinking stones. This poses a significant variation from architectural observations at PVN647 and other lower MC-C sites. Yet, the experimental crafting pursuits occurring at Las Caleras are informative for understanding the full range of activities and expressions of shared or varied building practices within this area along the Rio Chamelecón.

Site PVN648

The final archaeological site to be featured is the site of PVN648. Though PVN648 has only undergone test excavations in the form of axial trenching, the site represents the only other investigated setting along the southern bank of the Rio Chamelecón, aside from PVN647. Located within dense and thorny vegetation approximately 300m to the northeast of PVN647, PVN648 was initially surveyed during

the summer of 2005 by Rogoff and Schortman and documented to contain 15 surface-visible structures. In 2008, Rogoff and field school student Zac Lee from Kenyon College returned to PVN648 and upon closer examination amended the structure total to 22 individual buildings and commenced test excavations at Structures 8 and 22. Investigations concluded that though the preservation of observed basal constructions was extremely poor, the temporal occupation of PVN648 is preliminarily identified to have been during the Late Classic. No other excavations have occurred at PVN648 and therefore the structural designs and arrangements remain unknown. PVN648 is not selected for architectural comparison, yet highlighted due to its existence, likely simultaneous period of occupation, and close proximity to PVN647.

Conclusions thus far about the Middle Chamelecón-Cacaulapa Region

The results of investigations conducted within this southern portion of the Naco Valley have confirmed previously postulated conclusions and revealed numerous new insights. The primary assessment, in correspondence with previously established information from other PVN investigations, is that settlement grew rapidly within the Middle Chamelecón-Cacaulapa Valley during the Late Classic. This is concluded from pedestrian survey activities and intensive excavations that the best-drained and well-watered river terraces bordering the Chamelecón were intensively occupied during this period. It may be that the earliest Late Classic residents occupied the most elevated and favorable *vegas* immediately along the river and then spread out to other portions of the river and quebrada systems from these nodes. At present, there is no strong sign of

occupation along this portion of the Rio Chamelecón between the Middle Preclassic and Late Classic or after the end of the Terminal Classic. Furthermore, recovery of several ceramic sherds diagnostic of the Early Postclassic period from Las Caleras and from an adjacent site, PVC193, less than 1km to the south, and a chert biface from the hills immediately above both locales indicate a scant occupation in the area after the Late Classic demographic apogee (Rogoff 2009). However, evidence in hand strongly suggests that the Middle Chamelecón-Cacaulapa region was largely abandoned by the 10th century AD. This period of predominate occupation is consistent with conclusions for the settlement history of the rest of the Naco Valley.

However, observations that are specific to this region along the Rio Chamelecón that were not previously known are in reference to the range of settlement densities and crafting activities. The results from survey data indicate that the Late Classic social landscape within the Middle Chamelecón was divided among three, very broadly defined social levels, based upon site size and organizational complexity. The vast majority of documented sites consist of small hamlets of eight modest buildings or fewer (ranging from a Tier 4-5 positioning within the PVN/PVC settlement classification system). The second level, which are a significant minority, are settlements that were able to attract a relatively larger number of people to these settlements and contain 15-25 structures (roughly Tier 3-4 settlements). The residents at this level were able to command the resources necessary to erect at least one monumental platform and arrange structures in some form of a discernible plaza formation. Finally, regional elites who likely ruled at

least some stretches of the Middle Chamelecón from the administrative center of Las Canoas comprise the most exclusive social sphere in the region.

The final conclusion from the Middle Chamelecón-Cacaulapa region is directly related to the abundant evidence of craft production and from multiple archaeological sites. It has been demonstrated that the inhabitants of Las Canoas, Las Caleras, PVN598, and possibly other locations, participated in the manufacture of pottery vessels employing locally diagnostic tools; most notably potstands (see Chapter 6 for a detailed description and further information regarding the artifact category of potstands). The vast majority of output from these locations likely consisted of utilitarian wares and of similar ceramic typology categories, possibly implying that each settlement was self-sufficient in the fashioning of basic and widely needed pottery forms. Lastly, the residents from these sites shared basic artifact styles, suggesting a participation in a common cultural system. Whether this cultural sphere was influenced or regulated by a realm focused at Las Canoas is not clear.

In summary, certain aspects of the prehistory of the Middle Chamelecón-Cacaulapa region have been reconstructed, and some with a certain degree of confidence. The unanticipated discovery of the prolific amount of craft production within the region has dictated much of the research agenda. Of particular, the focus has been on the forms and techniques of the ceramic manufacturing practices and the extent and social organization of the concomitant networks. As a result of these investigations, a wide-ranging scale of settlements has undergone archaeological examination. Though some of these studies included horizontal clearing excavations of complete structures, none were

explicitly seeking to evaluate the degree of architectural variation and focusing on vernacular attributes. Therefore, the noteworthy amount of systematically sampled sites within this region makes it a promising location for assessing the degree of architectural correspondence or distinction occurring within the region. Furthermore, a comparative appraisal of architectural attributes and formations in concert with established conclusions based from the movable material record holds the potential to further expose aspects of shared cultural identity. Motivated by this potential, investigations at PVN647 sought to test the success of such an examination and to reveal a more comprehensive depiction of the identity expression occurring within this region of the Naco Valley.

Site PVN647

Location and Modern Setting of PVN647

Site PVN647 is located less than 1km south of the Rio Chamelecón and across that river from the sites of Las Canoas and PVN598 (**Figure 3.9**). It resides on a floodplain *vega* between the river and a mountain range roughly 1.5km to the south locally referred to as El Mirador. To the southeast of PVN647 lies a seasonal *quebrada* tributary (Quebrada La Mina) of runoff rainwater from the mountains, which flows to the northeast and eventually merges with the Rio Chamelecón. Site PVN648 is located approximately 300m to the northeast but still on the western side of the *quebrada*.

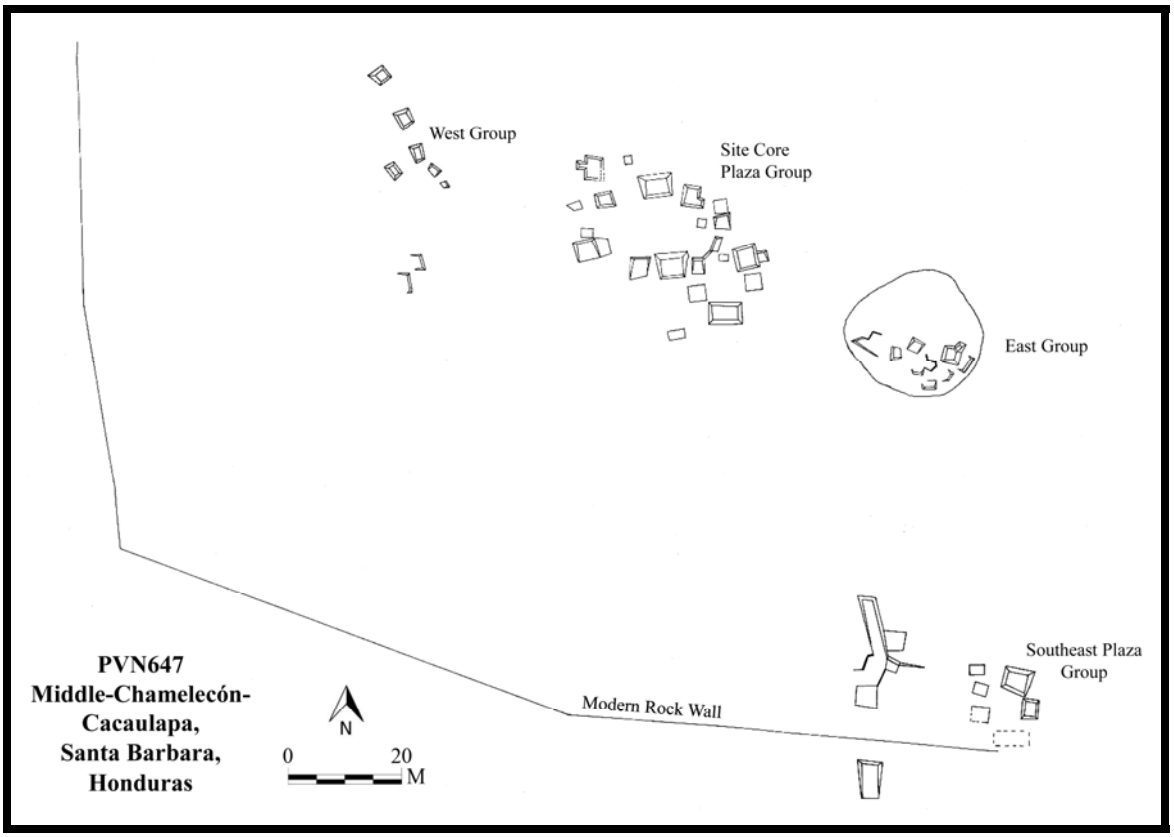


Figure 3.9: Site Map of PVN647 highlighting each structure group.

The current landowner of much of the property along the south bank of the Rio Chamelecón and east of the main highway is Betin Peña. Formal access to Peña's property is 2km south from where the main highway crosses the river and approximately 2km along a single-lane dirt road to the main house and barn facilities of the property. Site PVN647 is an additional 3km to the east following a path immediately along the river. Due to the slender east-west nature of the *vega*, the land is predominantly used for cattle farming. The most recent use of the land in which PVN647 resides is that of a pasture field and the site is located within one of the fenced-off pasture sectors for rotational grazing. Due to the severe overgrowth observed during the initial

archaeological exploration of the region in 2005, it appeared that the particular sector in which PVN647 is located had remained fallow for possibly a decade. Overall, the property and the immediate location of PVN647 are quite secluded and free from regular pedestrian traffic. Aside from livestock grazing, occasional fishing and other hunting and foraging activities occur in the region along the river; however, it is not likely that the existence of PVN647 is known to many casual passerbys. The landowner and his farm operators were aware of the presence of some structures, yet did not know how expansive the site was due to the vast and dense vegetation.

Site Discovery and Description of PVN647

Permission was first granted to survey PVN647 and the immediate environs along the southern side of the Rio Chamelecón in 2005. Due to the close proximity and abundance of archaeological evidence and formalized sites on the northern side of the river, the goal of this survey was to continue the documentation of settlements along the river within the MC-C region. Additionally, due to strong evidence for ceramic production accumulated from Las Canoas and select surrounding sites, at the time a generalized inquiry of whether similar forms of craft manufacturing were occurring on the other side of the river, was speculated.

Preliminary survey and mapping of the area south of the Chamelecón was carried out between June and July of 2005 by David Rogoff. At that time, Rogoff identified and documented four separate sites, PVN642, 643, 645, and 646, in accordance with standardized PVN/PVC protocols for defining an archaeological site. (A distinct site

designation is established when structure groupings are separated by more than 100m of construction or cultural-free space. See Chapter 4 for further explanation on site defining procedures.) During the 2006 field season, under the direction of the author and Schortman, the vegetation was cleared and several more structures were uncovered than previously mapped by Rogoff. It was established that Sites PVN642, 643, 645, and 646, because of their proximity and the continuous distribution of structures between them, would be combined and labeled PVN647, and at the time, comprised 32 structures. During the 2008 field season, the entire modern pasture segment containing PVN647 was cleared of all vegetation and further clarification of structure attributes and sizes was attained. As a result, previously unknown buildings were identified, to bring the current total to 46 structures, and the site map was recreated once again. The current boundaries of the pasture enclosure provide for the approximate spatial extent of PVN647's archaeological site limits, approximately $1km^2$.

Due to the merging of multiple site designations into one, two chance and unintended representational outcomes from this logistical labeling of PVN647 need to be addressed. To begin, the decision to combine site designations, coupled with the uncovering of more individual structures over multiple field seasons results in PVN647 containing a total of 46 structures and technically, places it closest to a Tier 2 positioning (containing 41-44 edifices) within the site size hierarchy established by Urban and Schortman (1990). However, this labeling is deemed to be circumstantial, as the structure total at PVN647 is a result of a logistical decision for investigating the site. Furthermore, PVN647 may share some similarities with regard to plaza grouping

organization, with certain structures operating as settings for ceremonial/administrative activities, and select artifact features associated with other archaeological sites included in a Tier 2 positioning in the hierarchy. Yet, PVN647 is not identified to contain monumental forms of architecture and it is unclear how similarities of political or economic attributes overlap with other investigated sites of a similar size. Moreover, PVN647 is not preliminarily identified to be a secondary administrative center; therefore, any other complexities of social organization and interaction with other archaeological sites of a Tier 2 designation remain unknown. The greatest density of buildings at PVN647 is within the Site Core Plaza Group, as it contains 20 structures. This particular region of the site could be placed within a Tier 3 level and this positioning is perhaps more accurate, as it matches with containing some large-sized platforms and designed in a clear formal plaza arrangement. Overall, PVN647 likely had more in common with sites designated as Tier 3-4 within the site size hierarchy.

The second inadvertent outcome from the designation of PVN647's site limitations is the perceived haphazard appearance of the spacing of structure groupings. The decision to include all surface-visible constructions observed within the modern pasture sector into one PVN site designation has dictated a certain spatial representation of the distribution of structure groupings. The distribution of the 46 total buildings at PVN647 results in approximately four structure groupings: the Site Core Plaza Group, the East Group, the Southeast Group, and the West Group. However, due to the amount of construction-free space between the Southeast Group and the other northern groups, this particular clustering could have received a distinct site number, representing a

different “site” within the PVN system. In spite of the resulting visual rendering on the site map, with approval from Urban and Schortman, I wanted all buildings to be within the same site domain in order to facilitate easier investigation and documentation of the settlement. An additional element to consider regarding the perceived distribution of structure groupings is that it is not fully known whether all structures were erected and occupied simultaneously. The East Group contained evidence of a significantly earlier occupation (Middle Preclassic), compared to other sampling results from other structure groupings. Furthermore, the six mounds comprising the West Group are circumspect to actually be structures at all. However, regardless if the mounds of the West Group are purposeful constructions or not, the spatial patterning of structure groups may represent changes and growth of the settlement over time, as it is not clear if all structure groupings were actively occupied at the same time. Therefore, any analysis or interpretation of the resulting depiction of the spatial distribution of structures needs to take these factors into consideration.

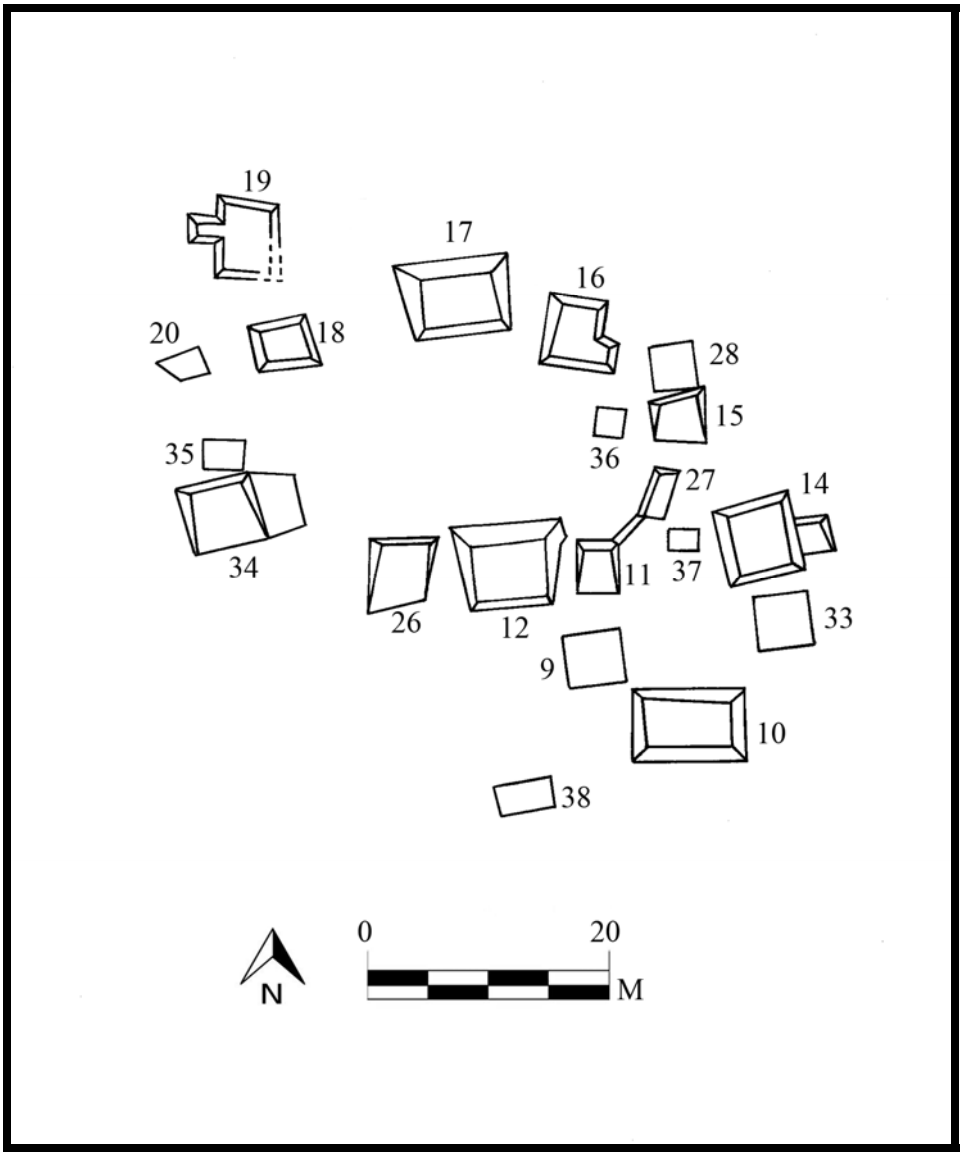


Figure 3.10: Map of Site Core Plaza Group, PVN647.

Aside from the peculiar spatial distribution of structure groupings, within each of the four groups, there exist patterns and potentially reoccurring site planning principles. The primary clustering of structures is the labeled the Site Core Plaza Group and comprises all of the buildings assembled on and around what is identified to be a main plaza at PVN647 (**Figure 3.10**). This group includes the greatest number of individual

buildings, in total 20 structures, and exhibits a generalized north-south orientation, as the two largest structures (17 and 12) are positioned across from each other to the north and south, respectfully. Additionally, Structure 12 represents the tallest construction within the group and for all of PVN647 and may be deemed a monumental structure (possessing a platform 1.5m or higher in height). Approximately 10 structures are located in flanking positions to the two physically dominating buildings and are identified to be immediately on the Main Plaza (Structures 11, 15, 16, 18, 26, 27, 28, 34, 35, and 36). The remaining eight structures are situated within the regions outside of the Main Plaza but in close proximity to other structures located on the plaza. Two structures are located within the northwest region (Structures 19 and 20), while the remaining six buildings are positioned in the southeast region (Structures 9, 10, 14, 33, 37, and 38). This particular concentration of off-plaza structures within the southeast region of the group potentially comprise a smaller patio group of buildings, made up of mostly off-plaza structures and one on-the-main-plaza building (Structures 9, 10, 11, 14, and 33). Overall, the ground surface within the Main Plaza is observed to be uniform and unmodified, with hypothesized access into the plaza likely easiest from the west, although sizeable breaks between certain structures exist within the northwest and southwest regions. Spacing between structures within the eastern region of the group is observed to be more restrictive.

The Southeast Group represents the clustering with the next best identifiable structure organization plan after the Site Core Plaza Group (**Figure 3.11**). This group displays common spatial characteristics of a patio group formation and is comprised of

five buildings (Structures 6, 7, 8, 13, and 46). It is positioned approximately 95m to the southeast from the Site Core Plaza Group and is in the southern-most region of PVN647. This group is bounded to the east by the seasonal *quebrada* approximately 20m away and seven constructions roughly 20m to the west. The building with the largest dimensions, Structure 6 is the northern-most construction and the next largest is positioned to its east, Structure 7. The third largest and the smallest buildings (Structure 8 and 46) displayed evidence of looting or damage. Overall, these five structures assembled around a construction-free patio, likely demonstrate the most predominant arrangement of structure groupings within the Naco Valley for structures of a similar size and organizational pattern.

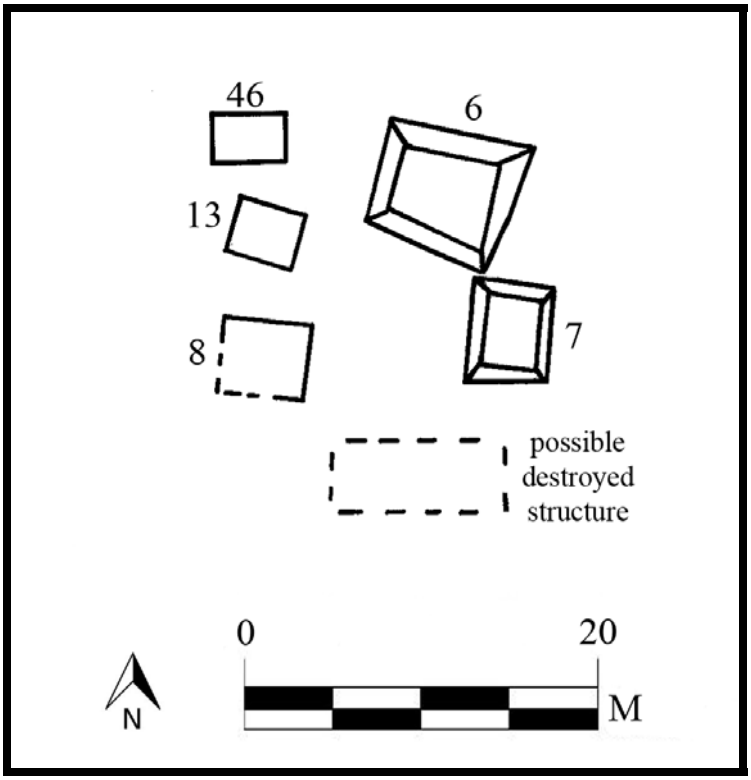


Figure 3.11: Map of Southeast Plaza Group, PVN647.

The East Group is located approximately 45m to the east of the Site Core Plaza Group and includes Structures 1-5 and 41-44 (**Figure 3.12**). This Group is assembled on top of a manufactured 1m earthen mound, approximately 35m in length and width (labeled at "Structure 1"). There is no discernible organizational pattern to these buildings and appear in an irregular arrangement, yet predominantly concentrated within the southern portion of the raised mound. The largest measured building, Structure 5 is positioned to the northeast within the group. Evaluation of collected ceramics from this context preliminarily identifies the mound to have been amassed during the Middle Preclassic. However, the masonry assemblages are hypothesized to have been constructed during the Late Classic.

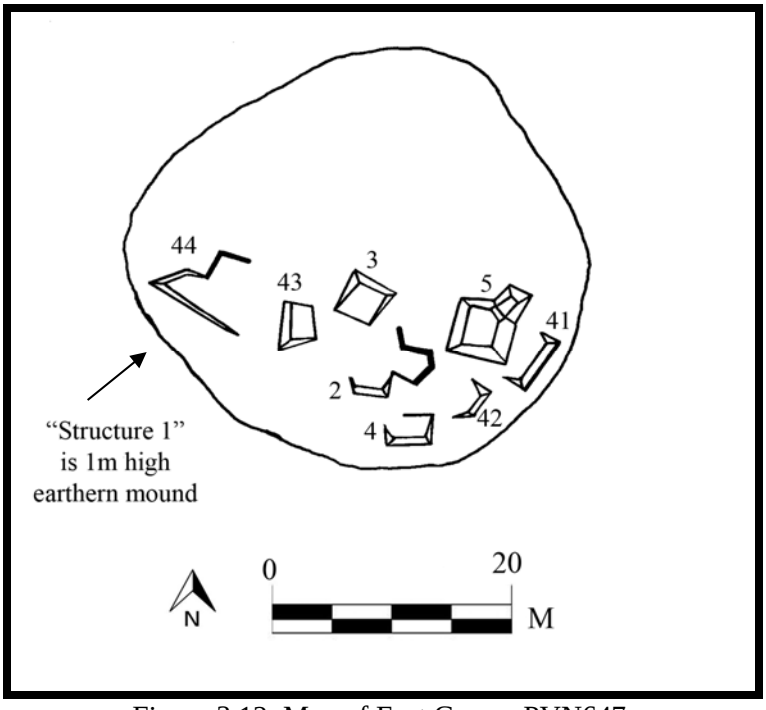


Figure 3.12: Map of East Group, PVN647.

The final grouping is identified as the West Group and is situated roughly 40m to the west of the Site Core Plaza Group (**Figure 3.13**). This clustering includes six mounds (Structures 21, 22, 23, 29, 39, and 40) and displays a roughly northwest-southeast linear formation, with one labeled construction (Structure 21) situated alone to the west of the others. However, it is unclear to what degree these mounds are true constructions. From the ground surface, each labeled structure exhibited evidence of misplaced cobbles and artifact scatters on the sides and highest points of the mound. Yet, there were no clear preserved lines of architecture or construction from the ground surface. Furthermore, excavations from a test pit positioned in the center of Structure 22 resulted in exposing no architectural remains, nor any identifiable stratigraphic representations. Therefore, it is unclear whether these mounds are intentional constructions or the result of more modern activities.

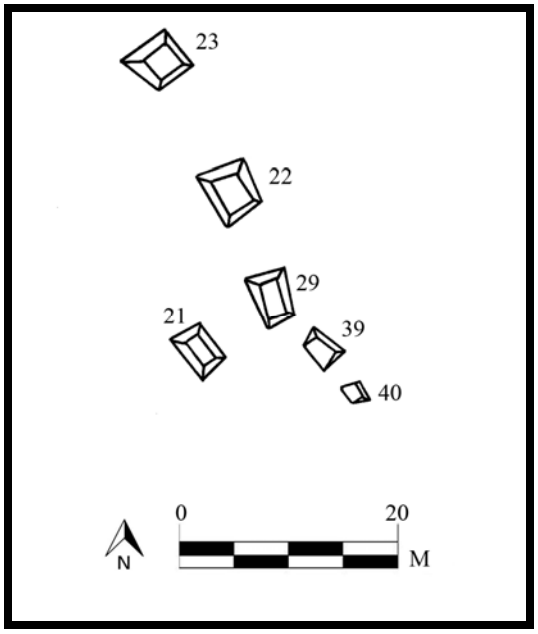


Figure 3.13: Map of West Group, PVN647.

All remaining structures observed from the ground surface at PVN647 are at a distance from and display little to no identifiable spatial pattern or cohesion with the other structure clusters and therefore are not associated with any of the four identified structure groupings. Mostly these constructions (Structures 24A, 24B, 25, 31, 45, 47, and 48) are positioned in the southern region of PVN647 and are observed to be long, continuous assemblages. These structures are situated roughly 20m west of the Southeast Group and their arrangement or intent remains unclear, as no distinguishable spatial organization can be deciphered. Though these seven structures are in close proximity to the Southeast Group, due to their size, orientation, and overall lack of cohesion within the patio group formation, they are not recognized as having immediate spatial affiliation with the Southeast Group.

A final comment in regards to the overall spatial distribution of structure groupings at PVN647 is directly related to the "open" spaces in between the identified structure groupings. As previously stated, the visual representation of the construction-free zones on the site map is an outcome of a logistical decision regarding the defining of the site boundaries. However, an addition observation was noticed upon complete clearing of PVN647. As mentioned earlier, upon first assessment in 2005, the pasture field in which PVN647 is located was overgrown with dense vegetation and had not been in active rotation for several years. Peña has owned the property for approximately the past 20 years and has predominantly only used it for cattle grazing. However, once fully cleared, the ground surface in certain areas in between surface visible structures groupings at PVN647 appears to be undulating in a regular manner. Due to the

normalized uneven pattern of the ground surface, it is speculated that the pasture area has been formally plowed within the last 30 or more years. Furthermore, due to potential plowing, it was hypothesized that archaeological structures were disturbed or destroyed as a result, yielding the current surface-visible structure distribution pattern. A test pitting program was conducted throughout the "open" spaces in between structure groupings and sought to analyze the possibility of destroyed and/or buried structures. In brief, the result of investigations proved inconclusive in exposing any hypothesized plowed or buried structures (see Chapter 4 for a more detailed description of methods and Appendix C for results of the Test Pitting Program).

Investigation History of PVN647

Formal examination of PVN647 was carried out over two excavations seasons. Initial investigations consisted of a test-pitting pilot program from 11-17 July 2006 at three different locations within the site: the East Group (Structure 3), the Southeast Group (Structure 6), and the Site Core Plaza Group (Structure 17). Test units from these locations totaled 16m^2. The goals of these investigations were to determine the preservation of architecture, the date(s) of occupation, and to explore preliminary similarities that linked and differences that distinguished the residents at PVN647 with those occupying Late Classic settlements elsewhere in the middle Chamelecón.

Results from the 2006 excavations revealed PVN647 was apparently first inhabited during the Middle Preclassic when it may have been a small center containing at least one modest earthen mound ca. 1m high, comprising the East Group. This time

period is speculated from the type-variety-mode analysis of ceramics recovered from Structure 3. Pottery examined from this structure are fully commensurate in styles and forms with those recovered from excavations conducted within the much larger earthen constructions at nearby site PVN120, roughly 4km to the west/southwest where the Cacaulapa River junctions with the Chamelecón river (Schortman 2006, personal communication). There is currently no evidence of subsequent occupation until the Late Classic when all of the visible constructions are understood to have been raised.

In addition to establishing dates of occupation, the preservation of architectural remains was assessed in 2006 and deemed to be of a good quality to warrant further investigations. Late Classic contexts were identified to display an assortment of assemblage styles and forms, however, to make use of similar construction materials and building techniques to other neighboring known and researched sites. Therefore, between February and June of 2008, PVN647 was revisited and extensive clearing excavations of complete structures were carried out for comparative purposes. See Chapters 4 and 5 for further explanations on 2008 excavation procedures and results.

Selection of PVN647 for Investigation

To review, the goal of dissertation endeavors seeks to address the manner in which cultural identity can be expressed via variations within and between vernacular architectural and spatial designs of household settings within this particular region of northwest Honduras. As previous research in the region has proved promising in expanding our understanding of local variation in community formation and integration

(Joyce and Hendon 2000), and expression of social identity (Stockett 2005a), none have done so by formally examining the degree to which variations in architectural styles and patterns, specifically those characterized as vernacular, may be indicators of cultural or ethnic expression, composition, and organization within this region. As a result, site PVN647 was chosen for selection to serve as a single representation of architectural qualities within the Naco Valley and upon which to commence comparative analysis with other analogous sites. To be clear, there is nothing innately unique about PVN647 for being chosen as the variable to sample, however, there are five specific criteria, which validate its significance as a candidate for comparative studies within the Naco Valley.

The first of four criteria for the selection of PVN647 are related to various aspects of its location and positioning within the Naco Valley. As previously stated, PVN647 is positioned across the Chamelecón from the previously investigated sites of Las Canoas (PVN202) and PVN598, among a few others. Additionally, these sites are located on a floodplain *vega*, approximately the same distance from the river as PVN647. Therefore, due to the positioning of PVN647 with respect to these other sites it shares the characteristic of being very close to the river and on a small sliver of land on the *vega*. However, as they are on opposites of the river, the environmental "barrier" of the river may present a factor for variation, whether stylistically or socially. Furthermore, although the formal research questions at each of these northern sites varied, all three underwent extensive clearing investigations and revealed the complete architectural arrangements of select structures. As a result, I deemed PVN647 an excellent candidate by which to evaluate building methods and architectural traits witnessed at PVN647 for

immediate comparison of regional construction practices and techniques. The ability to closely examine architectural formations and patterns from various sites within close proximity to each other is advantageous to understanding the degrees of similarity and divergence occurring within this region along the Chamelecón.

If immediate comparisons of PVN647 to neighboring sites within the Middle Chamelecón-Cacaulapa region and from other regions of the Naco Valley are to be valid, the time period of occupation needs to be comparable. Therefore, the date of occupation is the second rationale for selecting PVN647 as a representative sample for comparative reasons. Largely from type-variety-mode pottery analysis, PVN647 is confidently identified to have been predominantly occupied during the Late Classic and Terminal Classic periods. This span of occupation corresponds aptly with the sites previously investigated along the northern bank of the Chamelecón and other sites within the Naco Valley. The Middle Preclassic context is acknowledged to be a unique element contributing to PVN647's occupational history, however it is understood to be localized within a particular region of the site and architectural observations from this region are not the focus of this examination and comparative study. This commonality of occupation during the Late Classic reinforces the validity of selecting PVN647, as architectural variations can be evaluated within a distinct known time frame.

A third factor involved in the selection of PVN647 has to do with the size and spatial organization of the site. Although the total number of documented structures at PVN647 places it within a Tier 2 ranking within the site size hierarchy established for the Naco Valley, it has been stated how the structure total is a consequence of logistical

decisions, and possibly not related to other social or political factors, indicating a secondary administrative center. Furthermore, it has already been outlined how particular structure groupings may have been occupied during different time periods and certain mounds labeled as structures, may actually be something other than purposeful assemblages from antiquity. However, the spatial distribution and arrangement of structure groupings confidently identified within the Late to Terminal Classic periods display patterns of intentional alignment and construction technique. Furthermore, variations are witnessed with regard to structure size, organization, and architectural complexity. As a result, potential scales of interaction, social cohesion, and identity expression can all be observed within one archaeological site. Furthermore, these observations of structure variations and distributions of structure groupings at PVN647 can be compared to architectural patterns and site planning principles from other sites within the Naco Valley. This form of analysis has the potential to reveal a more comprehensive understanding of shared or dissimilar representational cultural expressions across the valley system.

The fourth criteria associated with the selection of PVN647 for study is based upon its quality of preservation. In general, household or constructed occupational contexts deemed to have been assembled by vernacular techniques are predominantly assembled using unmodified building materials. Furthermore, masonry constructions made from unmodified building materials pose a significant challenge when attempting to archaeologically investigate and identify architectural characteristics, as this particular assemblage practice is extremely susceptible to decay and erosion over time. Therefore,

when initiating a study with the goal of evaluating vernacular architectural variations, which chiefly make use of immediate resources to meet immediate needs, it is imperative that the quality of preservation be as best as possible. Observations from initial investigations during the summer of 2006 revealed the quality of preservation at PVN647 to be very good for carrying out investigations to address posed research questions. Due to PVN647's location and the current use of the land immediately surrounding the site, its mostly undisturbed character is believed to be the result of it being far from publically occupied and frequently trafficked areas and far enough away from the river to be immediately noticeable to passing visitors. Additionally, structures at PVN647 do not display excessive damage or decay due to natural processes (i.e. flooding, root systems from large trees, or animal borrowing) or as a result of looting or purposeful dismantling for other modern land-use related purposes. Individual structures identified to be compromised were not investigated, however, of the 46 structures documented at PVN647, approximately four were recognized to have suffered intentional human disturbance.

The fifth and final criteria for the selection of PVN647 for this specific architectural study is directly related to the breadth and depth of the archaeological investigations carried out by the PVN/PVC. The result of more than three decades of systemized research by Urban and Schortman within the Naco Valley situates PVN647 within a framework of straightforward logistical evaluation with other sites of similar size and arrangement, in which structures have been documented, test-pitted, and/or fully excavated. The accomplishments of PVN/PVC inquiries have yielded an immense data-

set for immediate comparison, which is unmatched to other investigated valley systems within this region of Northwest Honduras, or even Southeast Mesoamerica. Therefore, the Naco Valley in-and-of-itself is a promising region in which to center such an intense investigation of architectural styles and designs, due to the extensive history of documentation, investigation, and publication derived mostly from the efforts of Urban and Schortman and their numerous student collaborators.

An additional rationale for investigating PVN647, which was not one of the five scholarly factors relating to comparison potentials, is the result of the current economic investment and infrastructural development occurring within Honduras. Proposed in the late 1990's, a major internationally sponsored hydroelectric dam was slated to be constructed downstream from PVN647 and neighboring archaeological sites and contemporary communities. The result would be that this entire region of the Chamelecón would be flooded and all archaeological sites and contexts would be lost from the research record. Therefore, at the time, investigations at PVN647 also held salvage intentions and, with approval from IHAH, complete exposure of structures for documentation purposes was justified. However, the recent political tensions and conflicts within Honduras have temporarily halted the advancement of the dam project.

To conclude, the location, site size and organization, period of occupation, preservation, and the positioning of PVN647 within the larger PVN/PVC history of investigation within the Naco Valley, presents the site to be a promising candidate to observe and evaluate variations in architectural styles and designs. In brief, the results of investigations at PVN647 reveal an assortment of architectural forms and practices, of

which certain patterns are repeated or slightly modified, while others are witnessed to be completely divergent and unique. Furthermore, these patterns and designs are comparable both within and between structure groupings at PVN647 and with other previously investigated sites within the Naco Valley. Therefore, PVN647 is a successful selection for examining vernacular architectural traits and configurations and can aid in advancing our understanding of the overall identity organization and expression within this region of northwest Honduras.

Chapter 4

Identifying Vernacular Architecture:

Research Design and Investigation Methods at PVN647

The following discussion seeks to outline the research design, excavation and laboratory methods carried out at PVN647, and how vernacular architecture is identified in this dissertation. This review continues from the background and history of PVN647 from Chapter 3 and establishes a foundation for understanding the structure summaries and architectural analysis presented in Chapter 5. Many of the methods and modes of documentation of archaeological excavations and artifact analysis are deeply rooted in the well-established and standardized field protocols from previous PVN/PVC investigation seasons, and were maintained for consistency purposes. However, the described excavation approaches highlight how detailed observations of architectural features and surrounding contexts were achieved and were essential in evaluating vernacular patterns and representations of the social identity of the inhabitants at PVN647. Additionally, archival research of datasets from the 1980's and 1990's PVN field seasons housed at Kenyon College in Gambier, Ohio have been investigated as comparative sources to evaluate the extent of variation and patterning of vernacular architectural designs within and across the Naco Valley. Finally, this chapter concludes by articulating how vernacular architecture is recognized at PVN647 and in other

household contexts from northwest Honduras. The result establishes vernacular architectural determinants and design *forms* within the specific context of the Naco and Cacaulapa Valleys, and sets the stage for the rest of this dissertation.

Research Design for PVN647

A three-fold research strategy of survey, excavation, and laboratory analysis was utilized to detect variations in vernacular architecture within and between structure settlement contexts at PVN647. From intensive survey and mapping endeavors, individual structures from nearly each of the 4 identified plaza groups were selected as samples for examination. In addition to investigating formal structures, regions seemingly identified to be construction-free were also evaluated by means of a stratified-random sampling test pitting program.

Ground Surface Survey and Mapping

The earliest known recorded archaeological survey activities of the south bank of the Chamelecón River were conducted by then Kenyon College undergraduate David Rogoff during the 2005 summer survey season. The pedestrian survey through dense, high thorn scrub vegetation documented approximately 14 structures at what would later be designated as PVN647. Records from these initial findings included sample collections of surface-visible artifact scatters and structures were mapped using a compass and tape measure.

During the summer of 2006, I revisited the same region and evaluated its suitability for addressing proposed research questions regarding the analysis of

vernacular patterns within the Naco Valley. Upon confirmation of the region as the locale for future dissertation investigations, I directed the clearing of vegetation, covering an area of approximately 33,475 m^2. As a result, several more structures were uncovered that were previously undocumented. With the use of a Topcon digital total station, I mapped the entire site, which at this time was labeled PVN647, and comprised 32 surface visible structures. Preliminary test excavations were also conducted in 3 locations at the site from 11-17 July 2006 (as previously described – see Chapter 3).

The final version of the PVN647 site map was produced in April 2008 (**Figure 4.1**). Upon returning to carry out complete excavations for dissertation objectives, the site was once again cleared of all vegetation and beyond the boundaries of 2006 clearing activities. A complete area of approximately $1km^2$ was cleared of all growth and then burned to the ground surface. This extensive clearing effort clarified previously mapped structures, of which two were identified to be erroneous and were eliminated from the site map. (Structure numbers 30 and 32 no longer exist in the structure number sequence at PVN647.) However, 16 new and previously unmapped surface-identified structures were revealed and bring the structure total for PVN647 to the current number of 46. It was after these additional structures were exposed that the entire site was re-mapped using a Topcon digital total station.

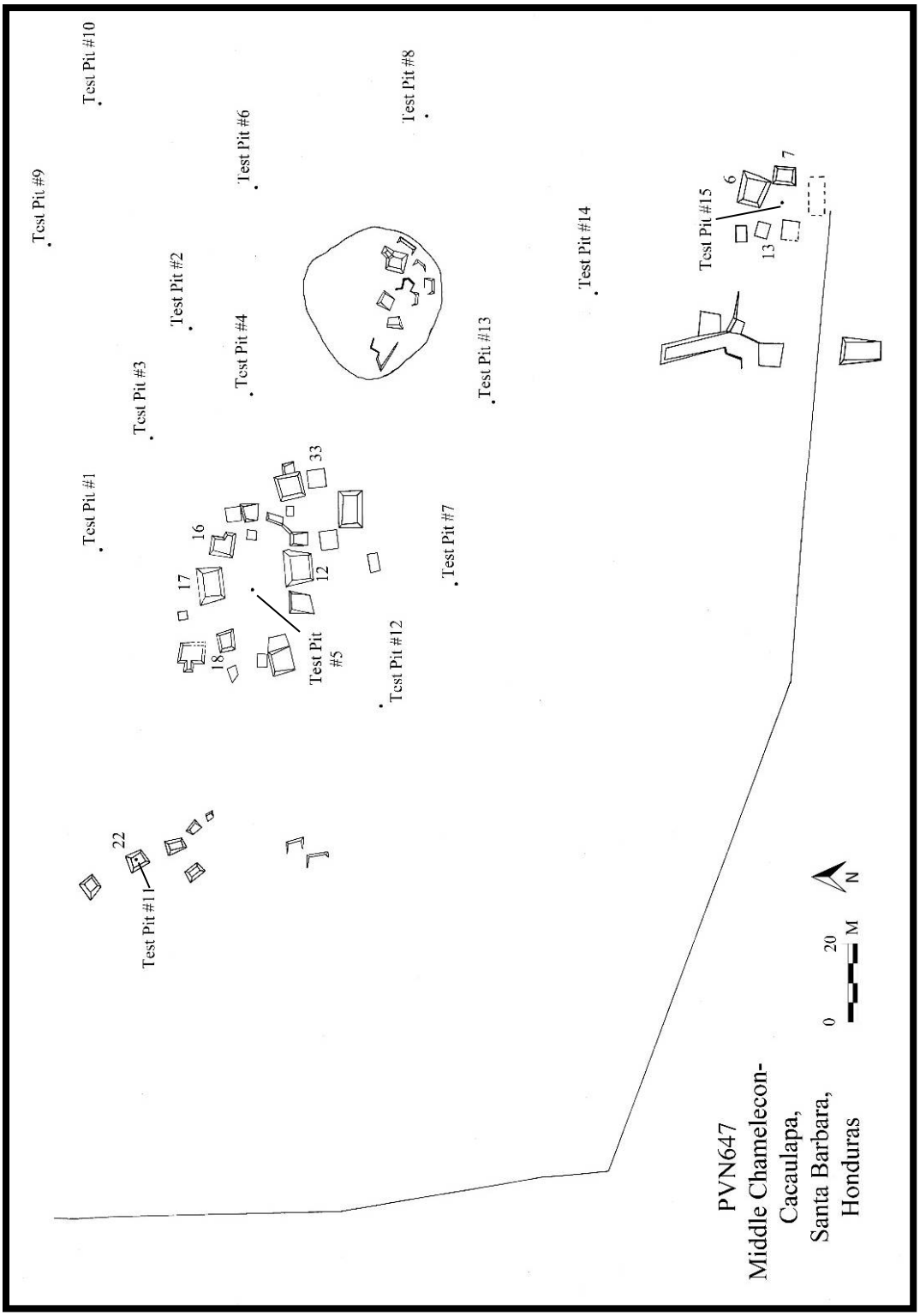


Figure 4.1: Site Map of PVN647 with investigated structures numbered and test pit locations.

Sample Selection for Structure Investigation

As previously discussed, the results of preliminary archaeological investigations during the summer of 2006 revealed when PVN647 was predominantly occupied, the preservation of architecture, and other initial generalizing structure and site planning similarities and differences between PVN647 and other previously investigated settlements elsewhere in the middle Chamelecón. These findings were concluded from examinations carried out within the Site Core Plaza Group, the East Group and the Southeast Group. Due to the earlier occupation period of the East Group compared to the other locations, further excavations were not conducted in this region of the site. However, due to the results from the other two locales, archaeological investigations carried out between the months of February and June of 2008 revisited and primarily focused on structures within the Site Core Plaza Group and the Southeast Group. This work was conducted by 16 Honduran excavators and supervising duties were aided by then Wellesley College undergraduate and Kenyon-Honduras Anthropology Program field school student Gabriella Soto. A total of 8 structures were selected for complete archaeological study.

The fundamental goal of 2008 research endeavors was to identify vernacular architectural construction designs, elaborations, and materials, including the spatial orientation and arrangement of buildings associated with a household context or function. Therefore, a non-random sample of structures and associated exterior spaces were selected for comprehensive examination from the plaza groups containing the greatest number of preserved structures: the Site Core Plaza Group and the Southeast Plaza

Group. The intent of the selection process was designed to fully investigate as many structures as time and financial resources responsibly allowed, but more importantly, to also extensively explore the architectural patterns within social plaza groupings. Focusing archaeological excavations on structures within plaza groups increases the likelihood of observing analogous or divergent architectural characteristics and allows for comparisons both within and between plaza groups. Finally, by specifically targeting these two plaza groupings, observations can be made in a variety of contexts: in both plaza and presumably more public spaces, and off-plaza and likely more private spaces, as well as at two varied scales of plaza group organization.

Due to the scale and denser concentration of buildings within the Site Core Plaza Group, the greatest number of individual structures selected for examination was from this region of PVN647. In total, five buildings were chosen: Structures 12, 16, 17, 18 and 33. Structure 17 was preliminarily examined during the 2006 pilot season due to its prominence within the main plaza and good preservation condition. It was revealed to contain an elaborate abutting external appendage and was revisited in 2008 and completely investigated. Structure 16 was selected for its moderate size and positioning with respect to the main plaza and for its close proximity to Structure 17. In addition to evaluating any structural or social association between the two buildings, Structure 16 was selected for its potential domestic or household attributes. Similar to Structure 17, Structure 18 was selected due to its moderate size and potential residential function, but also for its slightly marginal positioning on the main plaza and within the overall less construction dense northwest region of this plaza grouping. Structure 12 was chosen for

examination due its prominence on the main plaza, large scale, and possible south flanking association to Structure 17, situated directly across the main plaza. Due to its size and elevated positioning, Structure 12 was not believed to be a potential household context, but was selected as a representative of the architectural variation occurring within PVN647. Finally, Structure 33 was selected for its smaller size, but more importantly for its positioning outside of the main plaza. Though it may be a member of a possible smaller patio group, which abuts the southeast boundary of the main plaza, it is evaluated for architectural traits comparable to those observed from structures immediately positioned on the main plaza. Furthermore, its size and location within the Site Core Plaza Group was initially hypothesized to indicate a household or domestic purpose and was chosen for comparative intentions.

The Southeast Plaza Group is identified as a patio group of only five structures and likely represents its own distinct social and functional unit. Three of the five buildings (Structures 6, 7, and 13) associated with the Southeast Group were chosen for investigation. Structure 6 was also preliminarily studied during 2006 test excavations, due to its location within this group and was revealed to possess a good quality of architectural preservation. Investigation of Structure 6 resumed in 2008 and it was completely excavated. Due to its close positioning to neighboring Structure 6, Structure 7 was also selected for study. Additionally, excavations were conducted in the space in between the two buildings, as they were revealed to be structurally linked. Finally, due to its smaller size and relative minimal architectural complexity observed from the ground surface, Structure 13 was also fully investigated. All three of these structures displayed

good architectural preservation, whereas, Structures 8 and 46, which comprise the other buildings within this patio group, were identified to be damaged or looted and therefore were not archaeologically investigated.

In general, all investigated structures were chosen for their good quality of preservation, surface-visible dimensions, and for their individual spatial positioning with reference to other buildings selected for study. Specifically, within the Site Core Plaza Group, the location of the structure with respect to the Main Plaza was also a contributing factor. Three primary results are yielded from this sample selection process of structures from PVN647. The first result is that nearly the same number of structures was examined with an on-plaza positioning within each investigated group. This outcome establishes a solid foundation upon which to draw comparisons and analyze variations between groups, with respect to an open, communal and shared space. A second result is that disparities in structure size, positioning, and architectural complexity can be evaluated both within and between groups. Finally, a near complete examination of the structures from the Southeast Group can compliment previously investigated patio groups of similar spatial arrangements and site planning principles from other well-documented sites within the Naco Valley. Therefore, a final result is that the extensive investigations of nearly all of the structures in this region of PVN647 further allows for tangible discussions of similarities and differences of architectural styles and patterns observed at PVN647 to other selected comparative sites. Detailed descriptions of excavated structures are available in Appendix A.

Test Pitting Program

An additional goal of 2008 investigations was to examine the spatial distributions of structure groupings at PVN647. Due to the irregular spacing of the plaza groups, a stratified-random sample test pitting program was carried out to investigate regions, which from the ground surface, appeared to be free of masonry constructions. Although the modern ground surface in between groupings reveals a faint pattern of undulating ridges and could be an indicator of contemporary plowing activities in certain areas, test pitting was designed to expose potential construction features just below the ground surface, which may have been completely buried and/or damaged. The rationale for establishing a test unit was based upon spacing from known structures and other test pits; seemingly arbitrary clusters of cobbles; and artifact scatters on the ground surface containing at least 3-4 identifiable artifact fragments. The objective of each test unit was to reveal any potential formal construction and to excavate to a sterile soil context in the absence of any identifiable construction units or features. Test units that contained architectural remains were expanded to clarify construction forms and dimensions. A total of fourteen 1 x 1m test pits were placed throughout PVN647. One test pit was situated in the center of the patio of the Southeast Group and another test pit served as a probe into the center of what is labeled Structure 22. One 2 x 2m test unit was established in the center of the main plaza within the Site Core Plaza Group and exposed a circular masonry construction feature. Detailed descriptions of excavated test pits are available in Appendix C.

Excavation Methods

Operation/Sub-operation/Lot System

The organization of excavation recording procedures at PVN647 followed the PVN/PVC *Operation/Sub-operation/Lot* system. This three-component system was implemented by Urban and Schortman, has been in practice for over three decades, and was maintained for consistency and comparative purposes at PVN647. The intention of this notational system is to ascribe a specific provenance to any construction unit, feature, or artifact from any given study area within the system. The first component of the system, the *operation* number, designates a specific archaeological site (if containing 100 structures or less) or denotes a grouping of structures within a site containing more than 100 structures. Within the PVN/PVC system, an archaeological site is defined by the remains of formal buildings, construction features, or artifact scatters, separated by a distance of 100 meters or more. As a result, the majority of *operation* numbers within the PVN/PVC system represent individual site numbers. The second component in the system, the *sub-operation*, refers to a division within the *operation* and usually represents a trench or excavation unit. The *sub-operation* is always denoted as a letter and is assigned alphabetically, from A to Z. The final component in this notational system is the *lot* (or "level") designation and represents a horizontal and vertical location within the *sub-operation*. The *lot* may refer to an artifact scatter collected from the ground surface or a stratigraphic position within an excavation unit. The *lot* is always denoted as a 3 digit number, beginning with 001, and continuing in sequential order, accounting for all excavations within that *sub-operation*.

As previously explained, the site labeling of PVN647 is the result of consolidating multiple *operation* designations assigned during the 2005 survey of the southern bank of the Chamelecón, into a single site number. Even though particular structure groupings at PVN647 are separated by slightly more than 100 meters of construction-free spaces, an exception to this protocol was granted for logistical research purposes. Furthermore, since the total number of structures assigned to PVN647 is less than 100, only one *operation* designation is utilized. Test excavations at PVN647 conducted in 2006 started with the *sub-operation* letter of A and ended with letter E**.** Within the PVN/PVC system, when a site or *operation* is investigated over multiple field seasons, the second season begins with a double-letter designation, regardless of whether the same structure is being excavated. Therefore, archaeological excavations conducted during the 2008 season started with the *sub-operation* letter designation of AA (AA, AB, AC, etc.). More specifically, the *sub-operation* starting with AA represents structure investigations within the Site Core Plaza Group (except for Structure 18). The *sub-operation* beginning with BA (BA, BB, BC, etc.) represents structure investigations within the Southeast Group. And the *sub-operation* designations of CA-CD represent the investigations of Structure 18, while *sub-operation* designations of CE-CP represent the investigations of the test pitting program. An example of this notational system at PVN647 from excavations conducted during 2008 within the Site Core Plaza Group would be: 647AB/015.

Excavation Procedures

The author was responsible for supervising all formal excavation endeavors and making all research decisions at PVN647 during the 2006 and 2008 field seasons and guidance was continuously provided by Urban and Schortman. During the 2 week excavation season of 2006, I managed a crew of six to eight local and previously trained excavators from Pueblo Nuevo and Petoa and had occasional assistance from PVN project member Mary Hostenske. During both the 2006 and 2008 seasons I also had occasional but critical assistance from Marcela Esqueda. However, during the 2008 season, as previously mentioned, extensive assistance with supervising excavations within the Southeast Plaza Group was provided by field school student Gabriella Soto. In 2008 our excavation crew averaged 16 laborers (many of whom worked at PVN647 in 2006) and worked in teams of two. In this team system, one person primarily carried out excavations while the other removed soil and collected artifact materials. I regularly supervised four teams, while Gabriella started with one team. However, over time and upon gaining more excavation experience and confidence, she increased to at least three teams.

Overall, investigations at PVN647 were without too many hindrances, as most structural remains were close to the surface and excavations rarely extended deeper than 1m below ground surface. The soil was predominantly soft and easy to dig through. The topsoil containing grass or tree roots was typically loosened with a large pick and removed with a shovel. Subsequent levels were usually excavated with trowels and smaller hand picks and dustpans and hand brooms kept excavations clear of accumulating

loose soil. Marked care was taken when exposing features and formal construction units, such as masonry walls or prepared occupational surfaces, so as not to cause any structural damage. Contexts of severe delicacy, such as burials or pot-smashes, were excavated with small brushes and dental picks to ensure accurate and careful removal.

Axial Trenches and Excavation Units

Though the majority of preserved buildings at PVN647 were not considerably tall or elevated on a raised platform (except for Structure 12), tumbled cobbles occasionally presented some difficulty when distinguishing from which closely neighboring structure fallen construction materials originated. However, cobbles tumbled out of place rarely presented too much of a problem when making structure selections. Once buildings were selected for sampling, each structure was evaluated to determine the orientation and probable center of the building. Upon identifying the possible center, an *axial trench* was positioned over the entire building and aligned perpendicular to the orientation of the structure, by use of a compass and long tape measure. Each axial trench was measured to be 1m in width, but varied in length, depending upon the dimension of the structure. Trenches were divided into 1m x 1m *excavation units* and the unit established the farthest from the structure was excavated first. Occasionally, excavation units were expanded larger than the standard 1m x 1m dimensions in order to better clarify construction units. However, units usually maintained measuring within 0.5m or 1m increments. Overall, the goal of an axial trench is to investigate a cross-section of the building and to reveal initial architectural constructions and associated soil contexts. Axial trenching was a paramount excavation approach, because it exposed architectural elements and

established a reliable understanding for carrying out complete horizontal clearing of structures.

Before excavations started in each construction unit, the beginning elevations were measured at the four corners and the center of the unit by means of folding ruler and string with a line level fastened to a fixed datum. Excavations were initiated in arbitrary 10cm *lots* until natural or cultural stratigraphic levels were identified. At the end of each lot, ending depths in the same five locations within the excavation unit were measured to ensure consistency with excavations. Once either form of soil contexts were recognized, lots started in subsequent excavation units were excavated within those known stratigraphy ranges. As previously mentioned, the excavation unit farthest from the building within the axial trench was excavated first. This unit was always excavated to a sterile soil level to establish the absolute extent of occupation before continuing closer to the structure. The rationale for establishing the axial trench several meters away from the anticipated edge of the building, as observed from the ground surface, is to be able to approach the exterior of the structure from the tumbled construction materials first.

Once the tumble was identified and removed, excavations proceeded until formal construction units associated with the structure were revealed. If a formal occupational surface, such as a floor, was encountered, excavations were halted, as IHAH regulations prohibit excavating below the level of prepared living surfaces. However, when masonry architecture, such as a wall, was revealed, excavations proceeded to identify the base of the construction and to the depth of the sterile soil in order to establish a complete stratigraphic chronology associated with the masonry assemblage. Assemblages were

excavated to be as clearly defined as possible before moving to the next excavation unit to expose more of the construction unit. Within the axial trench, excavation units established on opposing sides of the structure were assigned separate *sub-operation* letter designations. This bisecting of the axial trench allowed for observed differences to be documented distinctly. Furthermore, excavations started in the farthest two excavations units and simultaneously worked inward toward the building and met in the middle of the trench, typically within the summit interior. If possible, a *summit probe* was excavated within the axial trench in the interior of the structure in order to reveal a complete stratigraphic chronology associated with the interior of the building.

Lateral Excavations

Upon completion of the excavations within the axial trench, one side of the trench was selected to be drawn (the *section drawing*, see description below). Once the section drawing was completed, excavations were resumed by establishing new excavation units in coordination with known exterior construction elements and excavation units from the axial trench. These *lateral* excavations followed the principle of moving from the known to the unknown with regard to identified construction elements and occupational contexts. Specifically, exterior architecture was followed to reveal basal corners and eventually to expose the complete dimensions of the building. Interior construction elements were also followed laterally from the axial trench to discern the interior arrangements and any additional assemblages within the summit of the structure. If a summit *probe* was not conducted within axial trench, then it was performed along with other summit interior investigations.

All lateral excavations are denoted by separate *sub-operation* letter designations. Usually, excavations expanding in opposite directions from the axial trench along exterior constructions of the structure, received separate sub-operation letters. Therefore, typically four sub-operation letters partitioned the structure into quadrants, aside from the original sub-operations associated with the axial trench. Depending upon the size and possible architectural complexity observed from the ground surface, the summit interior lateral expansions also received separate sub-operation letter designations. The purpose of compartmentalizing excavations in this way aided in recording efforts and clearly established arbitrary, yet specific provenances within the structure.

Test Pits

Excavation units associated with the test pitting program were triangulated in a similar manner as excavation units associated with investigating structures. Several measuring tapes, nails, and string were used to establish the limit of each *test pit*. For consistency and mapping purposes, each unit was oriented in a north-south alignment and included its own datum for measuring excavation depths. A separate *sub-operation* letter designation was assigned to each test unit and as stratigraphy ranges were unknown at each location, *lots* within each unit were excavated in 10cm increments until a sterile soil context was reached. Any revealed construction elements were clarified as best as possible within the initial 1m x 1m unit before additional excavation units were laid out in order to follow the exposed constructions.

Terminology and Naming System

A unique and long-lived tradition within the PVN/PVC excavation system is to choose a theme and assign nonsensical names from within that theme to exposed constructions from each investigated structure. (For example, I used the theme of colors at PVN647 and assigned red, blue, green, etc., as names for excavated constructions.) Therefore, all formally assembled elements, such as walls, floors, benches, or fill deposits were classified as *construction units* and received a nonsensical name for recording and reference purposes. The naming system provided good-humor, yet systemically functioned to promote conceptualization of how certain construction units articulated with each other and therefore aided excavation decisions in the moment. All other contexts of cultural material that were not deemed to have been formally assembled or were re-deposited, such as tumble or burials, were identified as *features* and were not assigned names within the nonsensical theme system.

After all excavations were completed and fully documented, all structures and test pit units were backfilled with the removed soil and cobble materials. Masonry architecture was initially covered by a layer of soil and then removed cobbles were carefully positioned around the assemblages to reinforce the integrity of the constructions and to ensure as little damage was possible once completely buried again. Occasionally, plastic tarps were used to cover fragile, fragmented, or poorly preserved constructions before being backfilled in the attempt to safeguard their preservation further. The remaining soil was then used to cover the cobbles and completely conceal all traces of the cobbles for preservation and safety purposes.

Documentation Procedures

As archaeological investigations are inherently destructive, thorough documentation of all excavations was imperative and records were generated in multiple formats. This section describes the four recording formats that occurred at PVN647, which includes field notes; cards, charts, and tags; drawings; and photographs. Upon completion of all excavations and documenting procedures, *plan points* were taken of all exposed construction units and excavation limits with the use of a Topcon total station. All formats of documentation were maintained by the immediate supervisor of excavations for any given structure and were maintained on a daily basis.

Field Notes

The PVN/PVC recording system is a combination of standardized forms and free-style notes; however, certain documenting methods were essential to compliment other datasets from previous excavation seasons. The primary format of *field notes* was a daily practice and of a free-hand, narrative journal-style. Each morning field notes contained descriptions of the initial conditions at the site, such as the weather, and any possible changes or damage that occurred overnight or over a weekend. Additionally, initial comments would document the research goals for the day and who and how many excavators were going to be working on a particular excavation endeavor. Throughout the day, field notes would contain all records of active individual *lot* excavations, including: specific *operation/sub-operation/lot* proveniences; starting and ending depths; descriptions of identified features or nonsensical named construction units; and

comments regarding collected artifact materials. Furthermore, field notes contained information of soil contexts, described using the Munsell designations, any informal sketches or drawings, and any other generalized interpretations or observations of ongoing investigations. At the conclusion of formal excavations, the final section of field notes contained the *final notes* of all investigations. Final notes were also of a narrative form, however, functioned as an overview and included thorough explanations of the research goals of each investigated structure, test unit, and sub-operation. Furthermore, complete descriptions and summaries of individual construction units; and all interpretations and final comments of structures, spatial arrangements and site depictions were expressed in a comprehensive and concluding manner.

Though the process and practice of field notes is quite free-form, the labeling of each page is standardized and regimented and for consistency purposes within the PVN/PVC system. Each page of field notes contained the notational system to convey the excavator project number, the year of excavations and the page number. Therefore, an example of the system resulted as: P08-19-052. (The "P" referenced the type of record as "page" to indicate field notes; the year (2008); the excavator (19); and the page number (052).) This notational system was cross-referenced with other formats of documentation. Other information that was included on each page but was not in a systematized code included: the date; the site number; and the currently investigated structure and subsequent active *sub-operation* designations.

Cards, Charts, and Tags

The second and more standardized format of documentation procedures within the PVN/PVC system includes the recording of *operation* and *lot cards*, various charts and lists, and bag labels for collected artifacts. At the start of any excavation, a formal *operation (OP) card* documented the goals, objectives, and reasons for beginning a new sub-operation. This card contained standardized provenience information regarding the excavator, the date, site number, and structure/excavation unit(s) associated with the sub-operation. When excavations within the sub-operation were completed, the card was updated to include the final dimensions (length, width, and orientation), number of excavation units, and ending date of excavations carried out within the sub-operation. This card functions to record the research purpose of a specific excavation endeavor and establishes a system of quick reference for certain provenience information.

Slightly similar to operation cards, yet recorded on a daily basis and include more specific data, are *lot cards*. Each excavated lot corresponded to a lot card and functioned as an abbreviated version of documented information from field notes. Lot cards reference the date, excavator number, and all provenience information (including: structure, operation/sub-operation/lot, excavation unit and dimensions, and starting and ending excavation depths). Additionally, Munsell color designations and soil textures are recorded, along with the presence of any construction units, features, artifact content, and the depositional significance (i.e. topsoil, tumble, terminal debris, burial, pot-smash, fill, midden, unclear, or other). Finally, the lot card includes cross-reference information regarding corresponding pages to field notes or formal drawings, and if photographs were

documented of contents from the lot. Both operation and lot cards were filed at the end of the day in the laboratory and eventually entered into the PARADOX database, housing all excavation recordings from PVN/PVC archaeological investigations.

Other standardized formats of documentation include *excavation unit plans, lot lists, and lot inventory charts*. Similar to lot cards, all three of these records were updated daily and supplement narrative descriptions of corresponding information documented in field notes. After beginning an operation card for a newly designated sub-operation, an *excavation unit plan* was generated to document the exact location, orientation, and size of all excavation units from every sub-operation associated with investigations of each structure. Furthermore, starting dates of each excavation unit were recorded and all exposed construction units were added to the plan within the corresponding excavation units as they appeared in excavations. The result is a graphic representation of the complete outline of all excavations, the sizes and locations of individual excavations units, and all associated construction units. Similar to the pagination coding of field notes, excavation unit plans were labeled to include the excavation year, project number, and page. An example of this code would be: UP-08-19-1. (The "UP" referenced the type of record as a "unit plan"; the year (2008); the excavator (19); and the page number (1).) Other information recorded at the top of each excavation unit plan included the site and structure numbers, and all sub-operation designations.

Upon commencing formal excavations, two additional formal records were maintained regarding *lot* information. *Lot lists* were maintained to document complete

provenience information corresponding to each initiated lot from each sub-operation. This information would include, the lot number (always beginning with 001), the location within a numbered excavation unit, and the generalized depth (for example, 10-20cm below ground surface). Typically, this list outlined all excavation units within each sub-operation and functioned as a visual register of where each lot was located and its depth. This form of record keeping proved invaluable since sequential lots were not always excavated within the same or sequential excavation units. An additional coding system was associated with lot lists. An example of this code would be: LL-08-19-1. (The "LL" referenced the type of record as a "lot list"; the year (2008); the excavator (19); and the page number (1).) Other information recorded at the top of each lot list included the site and structure numbers, and sub-operation designation.

The second formal documentation of lot information regarded collected artifact materials from each excavated lot and were maintained with *lot inventory charts*. These charts were designed to itemize exact artifact types that were recovered from each lot. The artifact types included: sherds, chert, obsidian, bajareque, bone, jute, carbon, groundstone, and other/special. Complete lot provenience (op/sub-op/lot, excavation unit, and depth below ground surface) and date of excavation was recorded and exact counts of each artifact type was the intended goal, however, usually due to time constraints, simply marking a "check" or "x" to indicate that a particular artifact type was present was all that was manageable. If no artifact material was recovered, the lot was designated as an empty lot on the chart. Conversely, a notation was included if multiple bags of a particular artifact type were generated from a single lot. This chart functioned

as a preliminary assessment of artifact assemblages from each recorded lot, prior to formal laboratory processing and counting procedures. Finally, lot inventory charts also maintained their own pagination code. An example of this code would be: LI-08-19-1. (The "LI" referenced the type of record as a "lot inventory"; the year (2008); the excavator (19); and the page number (1).) Other information recorded at the top of each lot inventory chart included the site and structure numbers, and sub-operation designation.

Along with the narrative description of the *final notes* section, included in the field notes, two informal charts documented information regarding individual construction units and their corresponding building materials. The first chart recorded the preserved length, width, height, orientation, and coursing (if a wall) of each construction unit. Additionally, comments were added regarding their association to other construction units, quality of preservation, and a hypothesized function. The second chart described the building materials, namely cobbles, associated with each construction unit. Rock types (river cobble, limestone, basalt, etc.); forms (unmodified or modified); dimensions and relative size were all classified. Variations in construction materials of identified prepared surfaces (plaster, bajareque, earthen, etc.) were also measured, described, and briefly evaluated. Overall, these charts supplemented detailed written descriptions in field notes and did not receive formal pagination codes.

The final standardized recording format corresponded to labeling of bag tags for recovered artifact materials. All artifact materials were bagged in similar grouping, based upon the material, size, and quantity of collected artifact types. To maintain fluid records

from the site to the laboratory, each artifact bag label contained the following information: op/sub-op-lot; date; project number; artifact type; and number of bags from that specific lot. Further descriptions of artifact processing and recording procedures are outlined below (see Laboratory Methods).

Drawings

The third format of recording within the PVN/PVC system was that of formal *drawings*. As previously mentioned, a *section drawing* was completed after all excavations within the axial trench ended. This drawing serves to document a cross-section of the entire building and all associating construction units, features, and soil contexts. With the use of a horizontal and stationary string with line level, the horizontal and vertical extents of excavations, stratigraphy ranges, and all formal constructions and features were measured by triangulating their provenience and drawn at a scale of 1:20 on metric graph paper.

Other formal drawing types included *plan drawings*, which provide top-down views of objects and their associated context. This type of drawing does not show stratigraphic relations but illustrates horizontal connections and overall size and dimensions of a construction unit or other elements comprising a deposit. Therefore, plan drawings were completed of burial contexts, pot-smashes or other special artifact deposits, and unique construction units requiring an individual drawing representation and were drawn at a scale of 1:10 on metric graph paper. All formal drawings were paginated within a specific coding system. An example of this code would be: D-08-19-1. (The "D" referenced the type of record as a "drawing"; the year (2008); the excavator

(19); and the page number (1).) This coding system was used as a cross-reference on other documentation formats (namely, field note and lot cards). Other information recorded on each drawing included the site and structure numbers, sub-operation designations, date, scale, and type of drawing (section, plan, etc.). Any other informal drawings or sketches were usually documented in field notes and were impromptu, quick depictions of emerging construction units or artifact finds and were not drawn to scale.

Photographs

The fourth and final format of documentation was that of *photographs*. All photographs of excavations from PVN647 were taken on digital cameras (Nikon CoolPix S4, L11, and 4300). Formal photographs included a proper photo scale (a north arrow or meter stick) oriented to north and a photo board indicating the provenience (operation/sub-operations), structure number, date, and label of the object or purpose of the photo. Formal photographs were taken during excavations when special finds or deposits were exposed, such as pot-smashes, complete vessels, burials, or emerging construction units. Generally, anything that was formally drawn was also extensively photographed.

However, photographs were also taken at the end of all excavations and when final notes and charts were being recorded. During this time, all individual construction units, basal corners, and any other unique architectural articulation or assemblage was documented from various positions and angles from the ground surface. The second form of formal photographs was taken of completely cleared structures and from a plan-view perspective. This was achieved when I designed and constructed an apparatus of

two PVC pipes each measuring 4.5m in length, which when fastened together at the ends with bolts to two small pieces of wood, formed a 45-degree angle. On top of one of the wood platforms holding the two pipes together was mounted a digital camera (specially, the Nikon CoolPix 4300). Two spools of string were fastened to each piece of wood and were oriented perpendicular to the PVC pipes. The string aided in balancing the weight of the pipes when the apparatus was hoisted directly above the target to be the photographed. This photographing method required five people: two people to hold the ends of the PVC pipes and were positioned across from each other; two more people to hold the ends of the string, perpendicular to the pipes but positioned across from each other; and one person to operate the digital camera and help elevate the contraption into the air. The digital camera was set on the timer setting in order to provide enough time to position the apparatus to capture an image that was immediately above the target. By this photographing method, entire structures were documented from above in regularized sections and when compiled in Adobe Photoshop, a complete birds-eye-view digital rendering of each structure was generated.

Finally, during the field season, all formats of documentation were filed and housed in the laboratory in Pueblo Nuevo. All paper documents were scanned and saved as Adobe PDF files and all digital photographs were downloaded, labeled, and saved as JPEG files to project computers and to my personal computer. Subsequently, all digital file formats were archived into PVC/PVN computer databases and burned onto compact disks. Before leaving Honduras, all paper documents were photocopied and originals were delivered to the I.H.A.H. regional office in La Lima, a suburb of San Pedro Sula.

All digital versions of documentation formats were also provided to IHAH on compact disks. All paper copies of documents were transported to Kenyon College and along with digital versions are housed in the archaeology laboratory facility.

Laboratory Methods

Field Collection Procedures

As previously mentioned, artifact materials were collected during excavations and bagged separately according to artifact type. When possible, artifacts were counted in the field; however, time constraints usually prevented complete tallying activities to occur. Locally hired, excavators well-trained in identifying different artifact types were responsible for the majority of separating and bagging. Individual artifact bags were secured with an artifact bag label, which was generated by the excavation supervisor.

Artifacts were identified as best as possible in the field and generically grouped into: ceramic sherds, chipped stone, *bajareque*, *jute*, bone, and ground stone (see Chapter 6 for detailed descriptions of each artifact category). The category of sherds included any form of ceramic, regardless of possible function or decoration. Chipped stone included any forms of identifiable worked, used, or modified stone, which mostly consisted of various types of chert and obsidian. Fragments and chunks of *bajareque* were collected and bagged separately, as it was not intended to be washed. Depending upon the amount and quality of preservation *jute* or shell remains were collected in either plastic or paper bags. Any bone or faunal remains were collected in paper bags or wrapped in aluminum foil and placed in cardboard boxes. Carbon samples were excavated with trowels or

other smaller hand tools and packaged in multiple layers of aluminum foil. Finally, smaller groundstone objects were collected in plastic bags and larger objects were wrapped with string and an artifact tag. If possible, the provenience information was written with white-out ink directly on the groundstone object, but on a non-modified section.

Laboratory Processing

At the end of each day of excavations, all collected and bagged artifacts were transported to the laboratory in Pueblo Nuevo. Locally hired laboratory staff, predominantly women and some older men, was responsible for the initial processing (washing, sorting, and counting) of all artifact materials. This process was on-going from February to July 2008 and was primarily supervised by Milton Gerardo Grajeda and assistance was provided by assigned IHAH representative, Carlos Alberto Acosta.

Washing, Sorting, and Counting

Upon delivery to the laboratory, certain artifact types were washed in buckets of water, rinsed, and dried on screens. They were re-bagged into clean bags once dried and the initial phases of sorting were conducted next. All artifact types were separated based on various criteria. Artifacts generically labeled as “sherds” in the field by excavators were separated into pottery and non-pottery classifications. Objects identified to be complete or fragments of figurines, ocarinas (whistles), incensarios, candeleros, stamps, potstands, beads, earspools, worked or used sherds were classified as non-pottery ceramics, counted separately, and issued an individual catalog number. All other ceramic fragments were classified as sherds and simply counted. Artifacts labeled as “lithics” in

the field were sorted and counted into further classifications of being obsidian, chert, or perlite. Bajareque fragments were simply weighed, but not washed or counted. Jute or shell and carbon samples were counted, but not washed. Lastly, groundstone objects were washed on a case-by-case basis and individual classifications of manos, metates, celts, and grinding and polishing stones were assigned. All of these types of groundstone objects were counted and issued catalog numbers for further analysis. Any other special artifact of various type or material was potentially washed, but processed according to its unique needs and specifications.

Documentation Records: Lot Cards

All artifact classifications, counts, and assigned catalog numbers were recorded on *lot sheets*, which were generated for each lot and corresponded to the field generated *lot cards*. The artifact categories that received catalog numbers were bagged separately and organized by type for later analysis. Bags of ceramics that were deemed as pottery were organized according to sub-operation designation and also temporarily stored until a sampling was selected for further processing within the type-variety-mode system. All lithic and bone remains were also grouped according to sub-operation and saved for further analysis.

Artifact Analysis

Detailed and specialized analysis of certain artifact categories was carried out from 20 June to 28 July in 2008 and from 9-26 July in 2009. During the 2008 season, analysis was conducted in the laboratory, however, in 2009, analysis occurred at a

different location within Pueblo Nuevo. I was responsible for the majority of the analysis, apart from the ceramic typology and lithic analyses. The combination of ceramic analysis, cataloging of special artifacts, drawings and photographs comprised the artifact analysis efforts taken to evaluate the material remains at PVN647 (see Appendix B for detailed artifact analysis).

Ceramic Typology

Samples of pottery from all excavated contexts at PVN647 were selected and analyzed by means of the type-variety-mode system. This well-established ceramic analysis method is geared to provide information on variations in vessel forms, decoration, and manufacturing procedures and has been developed and in operation within the PVN/PVC project of over 3 decades. All pottery analysis was conducted by Urban and Schortman during the summer of 2008 and resulted in the analysis of approximately 13,769 from a total of 128,537 processed pottery fragments from PVN647. This results in a total analyzed sample of approximately 10.7%.

Artifact Cataloging

As previously stated, all non-pottery ceramics, groundstone, and other special items were issued an individual catalog number and are analyzed to document various forms of information for each respective artifact category. Within the PVN/PVC system for analyzing these types of artifacts, each category has a corresponding exclusive and prescribed catalog form. The goal of each catalog form for each artifact category was to record as much information as possible about each object. A standard set of elements recorded about each type of artifact category includes the objects: dimensions and

preserved amount if fragmented; material composition (paste designation for ceramics and rock type and inclusions for stones); manufacturing marks and treatments associated with the formation of the object; use wear patterns; figurative or decorative attributes; and the degree of erosion, preservation, or presence of damage. If an object was worthy of drawing, a sketch was included on the back of the catalog form.

Nearly all of the cataloged artifacts from PVN647 were cataloged by the author during the summers of 2008 and 2009. Occasionally assistance was provided by Gabriella Soto in 2008 and by Marcela Esqueda during both artifact analysis seasons. Additionally, I was responsible for analyzing all skeletal remains from excavated burial contexts. From the small samples collected at PVN647, bone fragments and preserved teeth were cleaned, counted, analyzed and recorded during the summer of 2009. Finally, lithic analysis was completed by William McFarlane during the summer 2008.

Drawings and Photographs

The final format of documenting recovered artifacts from PVN647 was by drawings and photographs of select artifact types. Certain artifacts were selected to be drawn based upon amount preserved, degree of decoration, or any other stylistic feature that represents a unique pattern or variation. Most drawings were completed by the author, but assistance was provided by Marcela Esqueda and laboratory staff members Allen Morel and Jorge Nolasco. A representative sample of analyzed pottery and non-pottery fragments of various styles, forms, and degrees of processing and use were photographed to document ceramic variations. Furthermore, due to the considerably high volume of recovered manos and metates, nearly all were drawn and photographed.

Similar to documents generated from excavations, all laboratory analysis catalog forms were housed in the laboratory and were entered into PVN/PVC computer databases. Photographs were downloaded, labeled, and saved to project computers and to my personal computer. Furthermore, all paper documents were scanned as and saved as Adobe PDF files and photocopies were made before leaving Honduras. All original records and compact disks of digital versions of forms, drawings, and photographs were delivered to I.H.A.H. at the end of each investigation season. Paper copies were transported back to Kenyon College and are housed in the archaeology laboratory.

Archived Datasets from Previous PVN/PVC Investigations

An ultimate goal of the evaluations of architectural designs and styles documented at PVN647 is to compare and contrast observations to previously investigated sites and settlement contexts of similar size and spatial arrangements within the Naco Valley and neighboring regions. Although, PVN investigations from the 1980's and 1990's gathered a considerable amount of information on architectural variations, they remain largely unanalyzed and mostly only distributed as undergraduate honors theses. Therefore, the final method process associated with my research design was to inspect the archived records from previously investigated archaeological sites and select samples for comparison. In August 2007 and again in August 2008, I traveled to Kenyon College to examine the extent of datasets of other archaeological sites and photocopied

field reports, undergraduate theses, and site maps. Of particular note, approximately 20 theses focus on aspects of architecture and use of space within and between structures at various sites from the Naco Valley.

Identifying Vernacular Architecture

The following discussion describes how vernacular architecture is evaluated at site PVN647 and other household settings in northwest Honduras. In order to assess *form*, this presentation begins from the broadest explanation of vernacular architectural *characteristics* or *traits*, which are described as the products of generalized building practices. Next, vernacular architectural *arrangements* are distinguished as the observable configurations at PVN647. In order to test the viability of observed *arrangements* to be true vernacular *forms*, its persistence by means of replication (with variations) within a regional context, as gauged through comparative analysis, is required. Furthermore, vernacular *functions* are assessed as *applications* and draw attention to a deciphered purpose of particular architectural arrangements or forms. In this case, aspects concerned with *form* and those with *function* are clearly distinguished, as certain terminologies can be conflated to reference both simultaneously.

To begin, in order to observe and categorized vernacular characteristics, complete exposure of house buildings and associated contexts are required. As households are viewed as reflexive of a holistic social unit, with regard to the five functions of a household (Wilk and Rathje 1982), the investigations of household contexts require a comprehensive excavation methodology, as well. This includes a

detailed account of architectural assemblages, construction histories, and artifact analysis. Simply noting relative size and generics of internal compartmentalization are fine for an intra-site architectural analysis, however, for comparative approaches of vernacular potentials, in order to understand household variation, social organization, and community networks, detailed analyses of architectural assemblages are also required. To reiterate, these classifications refer to household contexts, which are mostly considered as non-monumental (less than 1.5m in height) architectural manifestations.

Vernacular Architectural Characteristics *or* Traits

The broadest scale of reference to classify vernacular architecture in this dissertation is that on the level of observable *characteristics* or *traits*. Most generically, these can be referenced as generalized building practices, as they are deemed to be the most widespread and basic level of vernacular architectural similarity. Therefore, characteristics or traits are identified as the comprehensive ways and elements that compose a building. This includes: building materials; techniques of coursing in walls; basal arrangements; and generalized concepts of patio or plaza configurations. With regard to building materials, the majority of observed household sites are deemed to be constructed from a variety of predominantly locally available unmodified river cobbles (though occasionally worked) or limestone; stick and mud for walls, and some form of thatching for a roof. Coursing techniques of walls refer to variations in height, width and overall construction quality; in addition to uses of chinking stones or mud (*bajareque*) filler in foundational walls. Basal arrangements account for the variety of shapes, sizes,

and configurations as an elevated platform or surface-level building. Finally, patio or plaza arrangements are reference to either the existence of them, or not.

The overall vagueness of these descriptions is intentional, as descriptions within each of these categories is known to differ over time within household contexts of northwest Honduras. For example, generalized Middle Preclassic sites are "not commonly marked by enduring architectural features easily visible on the ground surface" (Urban and Schortman 2013: 92). This is due to the fact that household settlements during this period are *characterized* as minimally utilizing cobble building materials, as most evidence indicates earthen or stone-and-earth platforms were preferred. Basal arrangements are a consistent mixture of low-lying platforms and surface-level buildings, neither of which are constructed with elaborate coursing techniques. Lastly, structure arrangements vary and can appear irregular in spacing and distribution, though also loose patio configurations. Overall, though architectural manifestations are considerably modest, locally available building materials are utilized.

Moreover, during the Late and Terminal Classic, the periods of densest human occupation within northwest Honduras, buildings are considerably more complex than their Preclassic predecessors and make use of a greater variety of locally available building materials (various sized stones for various types of constructions). Additionally, Late and Terminal Classic households predominantly are amassed as elevated platforms, though evidence for surface-level buildings exist (see Chapters 5 and 7), and by coursing techniques that can result in preserved walls standing 3-4 courses high (ranging from 0.2m to boarding on monumental size at 1.5m). Though larger in scale and more

architecturally robust, Late and Terminal Classic household builders are more selective of naturally occurring building materials and utilize flat facings and conveniently shaped cobbles to form well-enduring substructure platforms. Lastly, patio arrangements during the Late and Terminal Classic are frequently circular or rectilinear in design, with relatively little space in between structures.

In contrast, during the Postclassic period, architectural characteristics of household contexts from northwest Honduras are observed to be low-lying, broader in basal area, and structures are dispersedly organized within patio arrangements. The technique of cobble coursing is not employed, as elevated platforms are not erected in household settings. This description is somewhat similar to architectural practices during the Preclassic, however, greater use of cobble materials occurs during the Postclassic and earthen mounds are not observed.

In summary, these varying architectural descriptions comprise the most common vernacular building practices and support that resemblance is observable across regional settlements during the same time period within northwest Honduras. As such, these shared vernacular architectural *characteristics* support that regional and cross-regional comparisons are possible.

Vernacular Architectural Arrangements

The second scale of reference of building configurations in this dissertation is identified as vernacular architectural *arrangements*. This intermediate level of vernacular display is defined as architectural designs that are observed to be intentionally erected for

either a functional or expressive purpose, though likely both. In this dissertation, *arrangements* have been categorized into platform configurations, and internal and external modifications. This approach accounts for vernacular manifestations that relate to the construction process of the foundation of the building, as well as the varying ways the internal and external spaces are arranged.

Furthermore, an observed architectural design is advanced to a label of being a vernacular arrangement when the configuration is witnessed to repeat within a limited given context, such as within a defined archaeological site area. For example, architectural configurations from PVN647 are observed to be deliberate in their organization and are replicated at various structures at the site. Variations can occur within identified *arrangements*, however, the basic underlying design theme is still detectable. Therefore, vernacular arrangements are identified to be representative of a site-specific shared building practice, which indicates a most local form of identity expression. The function of a vernacular arrangement may serve a greater practical purpose and not be closely associated with social expression, however, evidence for its replication indicates intention and preference. Therefore, a design scheme being labeled a vernacular arrangement establishes a justification for examining the extent of that configuration more broadly within a given region or cross-regionally.

Vernacular Architectural Forms *or* Formations

The final scale of vernacular appearance identified in this dissertation is that of vernacular architectural *forms* or *formations*. Vernacular *forms* (mostly used to reference

structure designs*)* and *formations* (used to reference more nuanced modifications or appendage designs associated with a building*)* are architectural *arrangements* that are observed to repeat within a given regional context or even cross-regionally. Similar to vernacular arrangements, vernacular forms typically include variations to the building design. However, unlike vernacular arrangements, vernacular forms are charged with being physical displays of greater social importance. Therefore, it is the architectural configurations that are hypothesized to represent an expression of shared identity affiliation that are referenced as vernacular forms.

The measures for elevating a vernacular arrangement to represent a vernacular form include issues of frequency and overall consistency of the design within a determined regional setting. Additionally, the architectural complexity of a vernacular arrangement also factors in, as a rectilinear platform structure, with no internal room compartments represents amongst the most repeated 'design' scheme within northwest Honduras during the Late and Terminal Classic. However, a configuration such as this is deemed to be the most conventional of building practices and does not stand to represent a meaningful form of group identity expression. Indeed, these criteria are recognized to be rather subjective. However, quantifying the replication of a given vernacular arrangement within a regional setting is also linked with the issue of sample size. Therefore, a more precise, or statistically significant, valuation is not offered here, as the labeling of a vernacular form in this initial examination of architectural diversity is deemed to be a qualitative assessment.

However, the question arises if vernacular forms are deemed to be intricate and repeated, how are they understood to be *vernacular* manifestations and not indicative of more formal building practices with rigid rules for construction? In order to confirm a hypothesized form to be vernacularly constituted, the construction history of a given structure must be evaluated. As articulated in Chapter 2, vernacular architecture is defined as being amassed by non-specialists, though the intended outcome can be known by the builders. As such, a vernacular form exhibits variation in the assemblage process when a building is amassed, though the end result may be visually comparable. Furthermore, vernacular forms can arise by means of adaptation or modification from earlier construction configurations to result in the desired form. Construction practices of more rigid building designs exhibit greater consistency not only in appearance, but also in formation process. Furthermore, 'high-style' designs do not incorporate modification and are most consistency originally amassed with the desired formal building style in mind. Therefore, recognized vernacular forms are claimed to be representative of the most socially meaningful architectural manifestations, though potentially the most challenging to successfully detect from the archaeological record.

Identifying Vernacular Function

In this dissertation, terminologies used to describe construction configuration or design are distinguished from interpretations of function. Most generally, structure functions are assigned from thorough architectural analysis of building designs, and interior and exterior configurations, along with artifact assemblages from investigated

buildings at PVN647. As mentioned in Chapter 2, Douglass' (2002) use of residential, ancillary, and supra-household designations for Naco Valley household structures is not faithfully followed here, though referenced where applicable. Generalized structure function is assigned within practices of dwelling, such as food-preparation, ritual practices, production activities, and evidence for storage (see Chapter 6). Although, most structures are witnessed to engage in a combination of these practices.

For assigning function to vernacular architectural *arrangements* or *forms*, a concept of vernacular *application* is referenced. This particular assignment is not very useful when the entire platform configuration of a structure is deemed to be representative of a vernacular *arrangement* or *form*, as the function is still categorized by the practices of dwelling listed above (also see Chapter 6). Furthermore, if the overall configuration of a building is deemed to be vernacularly constituted, typically, greater functional consistency is observed amongst buildings exhibiting the same vernacular platform design arrangement or form.

An assignment of vernacular *application* becomes significant when more nuanced architectural configurations are evaluated, such as external appendages. For example, several external appendage configurations are observed along buildings at PVN647. While these configurations are individually described (see Chapter 5), their practical functions are observed to vary. For this reason, the usage of terms such as terrace, step, or doorway, which are associated with exterior spaces, are not exclusively associated with a particular construction design. Indeed, the labels are descriptions relating to utility and can be erected by a variety of constriction methods, appearing as divergent

architectural designs. Most specifically, in past PVN and PVC investigations, the term of 'terrace' has most often been conflated with the functional intent of the external space, as well as the labeling of architectural configurations that establish the space. In this dissertation, the term of 'terrace' and other exterior occupation spaces are assigned only with a functional description in Chapter 5, in conjunction with the exterior vernacular arrangements observed from structures at PVN647.

In summary, the outline of vernacular 'scales' has been established and remains the language that is referenced throughout this dissertation. Additionally, the distinction has been established that identified architectural configurations (be they vernacular *arrangements* or *forms*) are not intuitively related with a particular functional purpose. However, of brief note, identified external appendages are classified into categories of "forms". The repeated use of the particular phase 'appendage form' is not associated with a specific *vernacular* valuation.

Discussion of Research Design and Investigation Methods

The preceding research design and methodologies resulted in exposing vernacular architectural configurations, construction processes, and spatial arrangements at PVN647. Each phase of investigation produced specific types of data and was essential for understanding the modes and frequencies of architectural variations and occupational histories. Specifically, complete clearing of vegetation and intensive survey and mapping endeavors revealed the spatial distributions of structures and structure groupings. This spatial understanding then aided in the selection process of structures to sample.

Additionally, since observations of surface-visible structure limits were unobstructed and completely cleared of all undergrowth, establishing axial trenches over selected buildings was an unfettered process.

In order to archaeologically identify architectural styles and patterns, extensive horizontal excavations were necessary to expose complete basal platform dimensions and all subsequent architectural components. Therefore, the decision to initiate examinations of structures by means of axial trenching all but assures that any preserved, final phase architecture will be revealed. Furthermore, since unmodified masonry architecture can be amongst the most difficult to archaeologically discern and then clarify, axial trenching remains the best method by which to commence evaluations of this construction form. If oriented perpendicular to a structure, all architectural elements within the trench are approached head-on (presuming a construction is rectilinear in shape) and then can be systematically followed laterally, advancing from the known to the unknown. However, in addition to revealing a "slice" of architectural elements, associated soil contexts and features are also exposed. Though only a representative sample of the entire structure, this method of sectioning aids in reconstructing occupation and construction histories, practices, and methods, which are all essential when evaluating architectural forms and styles.

As previously declared, complete horizontal clearing of structures was vital at PVN647 for this study. Lateral excavations of architecture initially revealed in axial trenches were designed to expose horizontal associations among construction units, features, strata, and artifact remains. Complete uncovering of structures was necessary to

reconstruct building and occupational histories and identify potential patterns and variations between structures and structure groupings. In addition, deep vertical probes to the depth of sterile soil contexts along exteriors and within interiors of buildings functioned to reveal stratigraphic relations among construction units, features, strata and artifact remains. This method was crucial for assessing relative chronological sequences associated with each structure and furthered the understanding of assemblage processes and lengths of occupation.

Aside from investigating architectural elements, the excavation method of test pitting achieved the goal of examining "open" spaces throughout PVN647. The approach of studying regions that appeared from the ground surface to be construction-free by means of several randomly stratified test pits, determined if those particular spaces were intentionally devoid of assemblages or a result of damaged or completely buried constructions. The results from the test pitting program aid in the understanding of the spatial relationships both within and between structure groupings, which were theorized from examining the ground surface alone. Therefore, a certain degree of confirmation can be granted to the representational accuracy of the site map, generated from surface-visible evidence, and that it is likely not misleading with regard to constructions buried below the ground surface. This affirmation provides more confidence in interpretations of the spatial arrangements and design planning principles in operation at PVN647.

Methodically excavated structures and associated contexts convey information about only part of the archaeological narrative. Systematic collection, processing, analysis, and documentation of the material record are fundamental to reconstructing as

complete a story as possible of past settlements. Therefore, extensive and meticulous examinations of collected artifact materials from PVN647 were necessary and required two separate analysis seasons to do so. The described artifact analysis procedures are designed to evaluate nearly every artifact type and in a thorough and standardized manner. In doing so, the artifact record holds the potential to reveal greater information regarding structure function and occupational intent. Insight into shared activities and practices are gained and similarities or divergences can be evaluated between neighboring or closely positioned structures. In general, the artifact record supplements the architectural data to reveal further elements of social cohesiveness and identity expression at PVN647.

Finally, in order to formulate conclusions regarding the individual or common practices associated with vernacular architectural patterns, a comparative analysis of previously investigated archaeological sites also from the Naco Valley and immediate area is essential. Therefore, travel to Kenyon College to examine the archival record of past investigations was necessary. It is not responsible to assign complete uniqueness to the architectural traits at PVN647, and therefore assign absolute distinctive social identity to the inhabitants of PVN647, without a standardized examination of architectural elements from other settlements within the valley system. The compiling and analysis of datasets from other previously investigated sites resulted in the selection of comparative samples to highlight select vernacular patterns observed at PVN647 and in other settings within the valley.

The research design of conducting intensive archaeological investigations of architectural configurations has modeled how vernacular manifestations are identified from northwest Honduras in this dissertation. The established 'scales' of observable vernacular manifestations account for the most common resemblances in building practices, to the most particular. Moreover, I maintain that clarifications of terms, as they relate to structure form and function, are vital to understanding vernacular architectural products and uses and diligently reference each with distinction.

To conclude, the results of this research design and investigation methodology has established a strong foundation upon which to commence drawing broader but more refined conclusions regarding the true extent of architectural variation witnessed at PVN647 to other sites within the Naco Valley. Additionally, this foundation can evaluate the degree to which practices of *vernacular* architecture are responsible for that variation. Results of this standardized architectural analysis include preliminary comparisons of spatial arrangements and site planning principles, but also deepen the understanding of specific architectural characteristics occurring in this region. Finally, these results are discussed with other contexts outside of the Naco Valley and to other better culturally known archaeological sites and regions within southeast Mesoamerica.

Chapter 5

Structure Descriptions and Architectural Analysis at PVN647

Presented here are the structure and architectural descriptions from site PVN647 from the 2006 and 2008 field seasons. Data from the primary researched groups, the Site Core Plaza Group and the Southeast Plaza Group, are summarized. More detailed descriptions of these structures and their complete construction sequences are available in Appendix A. For each group, a brief spatial arrangement overview is provided; followed by a more in-depth description of each individual structure. Next, individual structures are compared and contrasted both within and between the plaza groups based on basal platform design, as well as interior and exterior modifications. Additionally, comparisons regarding overall plaza arrangements and accessibility are evaluated. The goal is to identify, describe, and analyze architectural assemblages that exhibit patterns in order to assess their vernacular significance. The result is a presentation of architectural configurations deemed vernacular *arrangements*.

Site Core Plaza Group

Group Overview

What is labeled the Site Core Plaza Group represents the region with the greatest density of preserved structures observed at PVN647. Consisting of 20 structures, the Site Core Plaza Group contains a large, open central plaza, measuring approximately 15m

north-south and 25m east-west (**Figure 5.1**). The two largest structures measured at PVN647, Structures 12 and 17, are situated along a rough77ly north-south (173/353 degrees) orientation and face each other from opposing sides of this primary plaza. Due to the size and positioning of these two structures specifically, it is believed that this plaza was purposely designed to adhere with the practice of constructing north-south aligned central plazas, serving as a site core. Situated to the east and west from Structures 12 and 17 and arranged in an oblong shape are the remaining 10 structures identified to be positioned immediately on the main plaza (Structures 11, 15, 16, 18, 26-28, and 34-36). Of these 10 structures immediately on the main plaza, only 2 structures (Structures 16 and 18) were investigated. Located in positions deemed to be not on the main plaza, a total of 2 structures are located in the northwest region (Structures 19 and 20) and an additional 6 buildings are located in the southeast region (Structures 9, 10, 14, 33, 37, and 38). Only one structure identified to be located off the main plaza was formally investigated (Structure 33). However, Structure 33 is identified to be a member of a possible smaller patio group, positioned adjacent to the main plaza in this southeast region. In total, approximately 77.5m^3 of matrix was excavated within the Site Core Plaza Group.

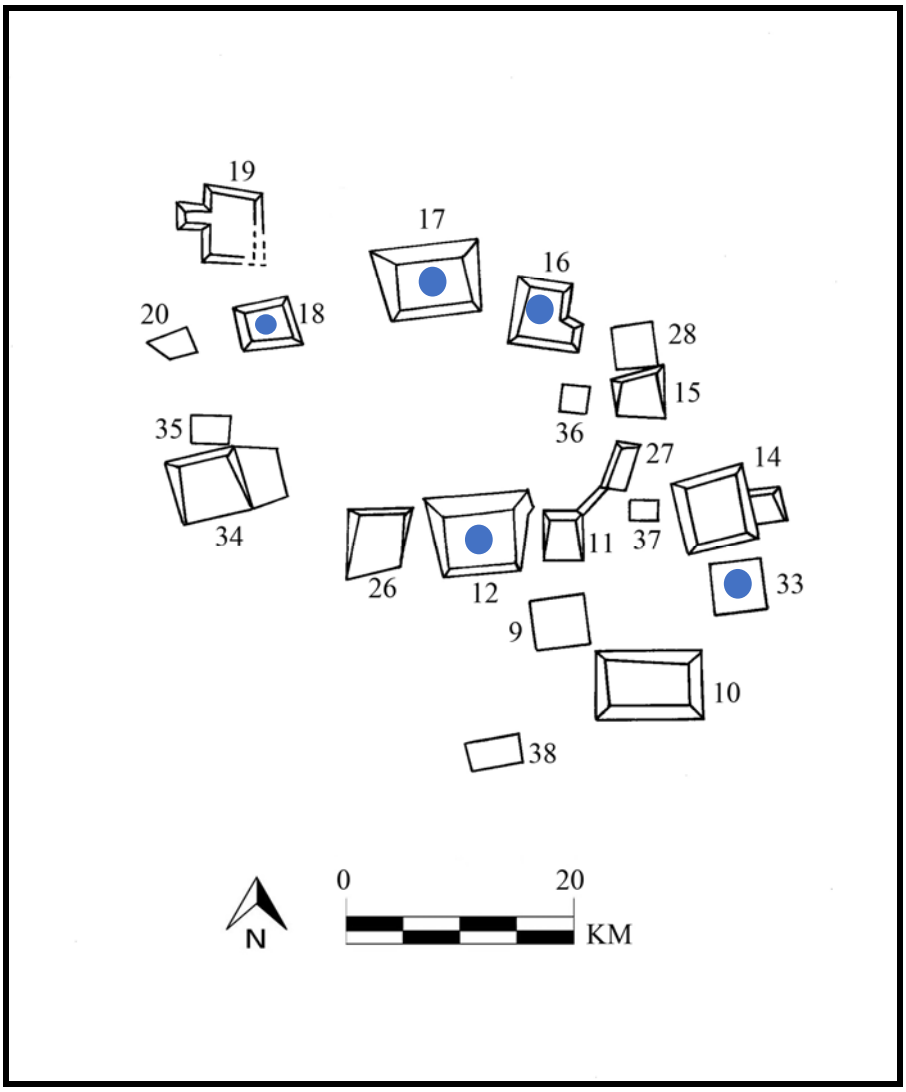


Figure 5.1: Site map of the Site Core Plaza Group at PVN647.
Excavated structures in blue.

Due to various factors, including location, size, quality of preservation, in addition to time and resources, only 5 structures (12, 16, 17, 18, and 33) from the Site Core Plaza Group were selected for complete archaeological investigation during the 2008 field season (Figure 5.2) (see Appendix A for detailed excavation descriptions and construction sequences). Horizontal clearing excavations revealed an assortment of building techniques, architectural styles, and expansion and modification histories over

time. However, all 5 structures were witnessed to be assembled on top of a similar culturally sterile soil, indicating the occupation of the inhabitants in the Site Core Plaza Group area pre-dated any other human activities in this specific region of PVN647. In addition, none of the investigated structures witnessed expansions that neither encroached upon nor architecturally articulated with neighboring buildings (except for Structure 12 and neighboring Structure 26, which was not formally investigated.) Nonetheless, the building designs and transformations over time revealed significant and unique divergences and some likenesses, which may indicate the functions of each structure and their potential to represent the exercising of vernacular architectural practices at PVN647.

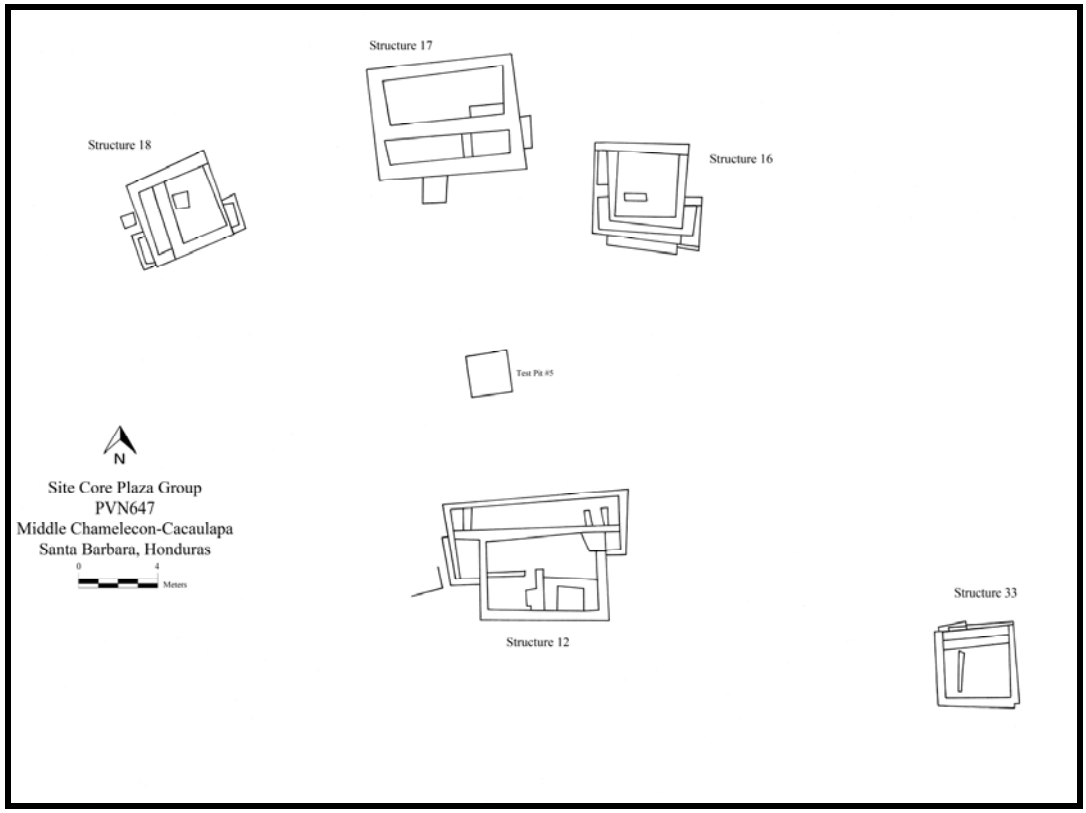


Figure 5.2: Plan-view of excavated structures in Site Core Plaza Group, PVN647.

Structure 12

Structure 12 represents the largest structure in the Site Core Plaza Group and at the entire site of PVN647. It is positioned on the main plaza and lies 16m immediately to the south of Structure 17. Structure 11 is located approximately 7m to the east and Structure 26 is 4m to the west of Structure 12. The natural downward slope from the south to the north, into the main plaza, exacerbated the surface-visible tumbling of construction materials from the plaza-facing, north portion of Structure 12. Additionally, at the onset of investigations, the ground surface along the western side of the structure exhibited building remains that were merging with the decay from neighboring Structure 26. However, the surface-visible construction materials associated with the summit, east, and south regions appeared to be undisturbed and only having suffered slight slippage from their original positions.

Description of Architectural Construction

Structure 12 is arguably the most prominent structure assembled at PVN647. It experienced one of the most complicated and multifarious construction designs in both size and style of all investigated structures within the Site Core Plaza Group. Established on a naturally occurring slope that leads into the main plaza, Structure 12's original platform was assembled on the top of the rise and then later expanded upon to the north, east and west by means of multiple, intricately configured external appendages. A cluster of aligned cobbles and a deposit of burnt earth are witnessed along the southeast exterior and suggestive of an association with neighboring Structure 26. Structure 12 is

associated with a total of 11 sequential time spans, six of which represent construction, modification and expansion episodes (see Appendix A for detailed excavations descriptions and construction sequences). Although Structure 12 was assembled in a reasonable number of construction sequences, the building includes 22 distinct construction units; the most of all investigated structures within the Site Core Plaza Group.

Time Span 11 (TS11) is the earliest time span and is a period of pre-occupation characterized by sterile soil along the exterior regions of where Structure 12 would later be erected. The culture-free stratum is at depths lower than any other recovered evidence of habitation in the area of the Site Core Plaza Group. Time Span 10 (TS10) represents the first period of activity by means of a soil fill deposit on top of the sterile soil observed during the previous time span (TS11). This stratum of fill is similar in composition to the sterile soil but includes cultural debris and was used to prepare a level surface upon which to begin formal construction of Structure 12. Two sequential time spans, Time Spans 1 and 2 (TS1 and TS2) mark the abandonment and decay of the structure by the accumulation of two soil layers through natural processes. Time Spans 9 to 4 (TS9-TS4) represent periods of construction activity directly relating to the raising and expanding of Structure 12. Finally, Time Span 3 (TS3) corresponds to the activities occurring along the southwest exterior and between Structure 12 and Structure 26.

Construction of Platform

Time Span 9 (TS9) represents the first formal construction episode relating to Structure 12 and includes the initial assemblage of the platform foundation (**Figure 5.3**).

This earliest version of the platform is established by the construction of the south (CU1), west (CU2), and east (CU3) basal walls, which created the southwest and southeast corners. The south and west basal walls are established at a deeper depth and are better manufactured, by means of cobble selection and construction technique, than the east basal wall. At the northern-most extent of the west basal wall, it comes to an abrupt end and does not articulate with any other construction unit during this time span. At the northern-most extent of the east basal wall is constructed a flat cobble surface (CU18). The establishing of this cobble surface during this time span is the initial step in forming a possible entrance into Structure 12 in this location.

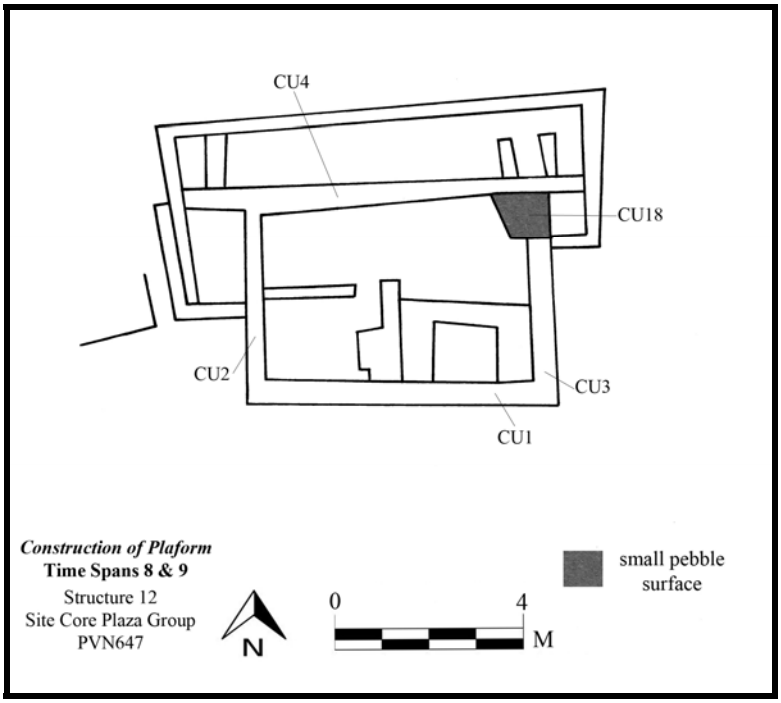


Figure 5.3: Plan-view of excavations of Structure 12 – *Construction of Platform.*

During Time Span 8 (TS8), a north wall (CU4) is assembled and seals the original platform area of Structure 12. The north wall forms a corner by abutting with the north extent of the west basal wall (CU2 – TS9). Additionally, the interior of the north wall abuts the northern extent of the cobble surface established during the previous time span (CU18 – TS9). The summit interior is leveled with soil fill and is an open and undivided space at this stage in the construction sequence. At this point, the platform measures 6.3m east-west and 4.5m north-south and was raised an average 0.3m in height, as the slope from the front (north) to the back (south) is taken into account. It is unknown whether the basal platform would have supported a perishable superstructure of thatch and bajareque during this time span, even though four articulating wall constructions and a surface are established.

Dividing of the Summit

The partitioning and refinement of the summit interior comprises the construction activity during Time Span 7 (TS7). In total, 7 new construction units are added during this building phase and establish one northern summit room and two distinct southern summit rooms **(Figure 5.4)**. The first southern room is located in the southeast corner and is shaped by an east-west aligned wall, abutting the interior (west) facing of the east basal wall (CU3 – TS9). This northeast summit wall (CU5) corners with a north-south aligned wall (CU6), which abuts the interior (north) facing of the south basal wall (CU1 – TS9) and establishes the western border of the room. A 0.57m wide bench construction is located in the space between the newly constructed northwest summit wall (CU5) and the interior of the south basal wall (CU1 – TS9); with the back of the bench abutting the

interior of the east basal wall (CU3 – TS9). Fragments of human remains were recovered from the center of this room and were probably interred with the soil fill, raising the height of the room an additional 0.25m from the level of the north room. The final dimensions of this southeast summit room measure 1.3m east-west and 1.2m north-south.

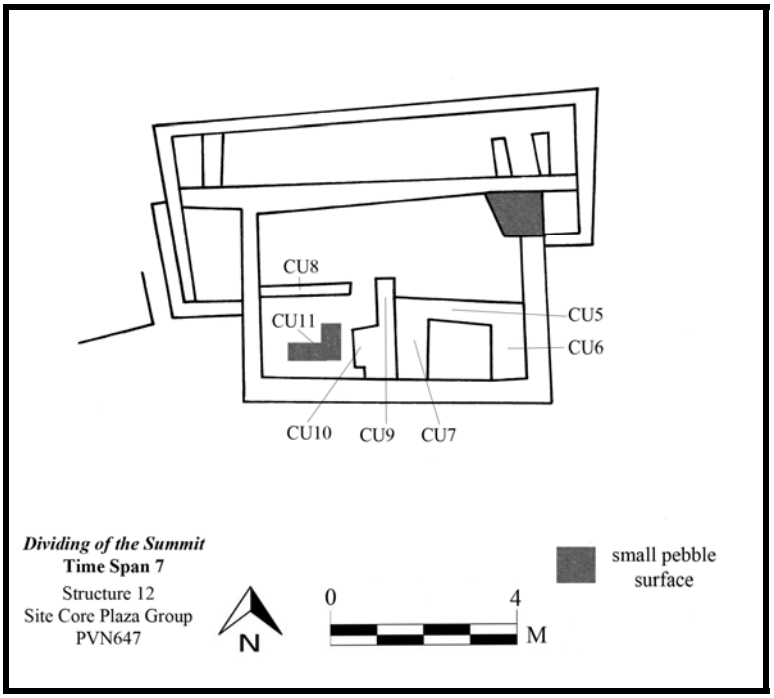


Figure 5.4: Plan-view of excavations of Structure 12 – *Dividing of the Summit.*

The second southern room established during Time Span 7 (TS7) is the southwest summit room. This room is fashioned by the formation of another east-west aligned wall, which abuts the interior (east) facing of the west basal wall (CU2 – TS9). This northwest summit wall (CU8) contains of 2 cobble courses, however, is only one course at its eastern-most extent, as it functions as an entryway into the room. The remainder of the southwest room is formed from a north-south aligned wall (CU9), which abuts the

western facing of the north-south aligned wall (CU6) from the neighboring southeast summit room. Occupying the entire southeast corner of the southwest summit room is a square-shaped bench (CU10), which also abuts the west facing of the wall (CU6) from the southeast room and the interior (north) facing of the south basal wall (CU1 – TS9). A perishable dividing wall between the two south summit rooms would be aligned on top of these 3 abutting construction units. Assembled within the southwest corner of this room is a surface composed of small angular cobbles (CU11). The final dimensions of this southwest summit room are 2.3m east-west and 1.6m north-south. The cobble surface (CU11) in this room is at a lower height than the southeast summit room and was only raised 0.1m from the level of the north room.

The northern region of the summit interior remained an open, undivided space during this time span (TS7) and measured 5.4m east-west, and 2m north-south. If the summit interior did not have a degradable superstructure constructed during the previous time span, walls of poles and bajareque and a thatch roof would have been established during this construction episode.

Construction of External Appendages

Time Span 6 (TS6) marks the expansion of Structure 12 to the north (CU12), east (CU13 and CU14), and the west (CU15) by means of a series of appendage constructions (**Figure 5.5**). The north appendage (CU12) is in the form of an east-west aligned wall construction and is established 1.5-2m down slope to the north from the north basal wall (CU4 – TS8) and the space in between raised 0.3m in height by means of soil fill. Establishing a new northeast region for Structure 12 is the integrating of the north

appendage (CU12) with a north-south aligned wall construction (CU13). This east appendage (CU13) construction is assembled up the slope to the south and corners with yet another east-west wall alignment (CU14), which abuts with the exterior of the east basal wall (CU3 – TS9) where it meets with the cobble surface (CU18) also constructed during Time Span 9. This new region forms the northeast raised area, as it wraps around the northeast basal corner established during Time Span 8 and expands the platform boundary approximately 1m to the east. The space created immediately east of the cobble surface (CU18 – TS9) with the appendage wall constructions (CU13 and CU14) is a formal entrance into Structure 12 along the east, if it had not already been utilized in this way during previous time spans.

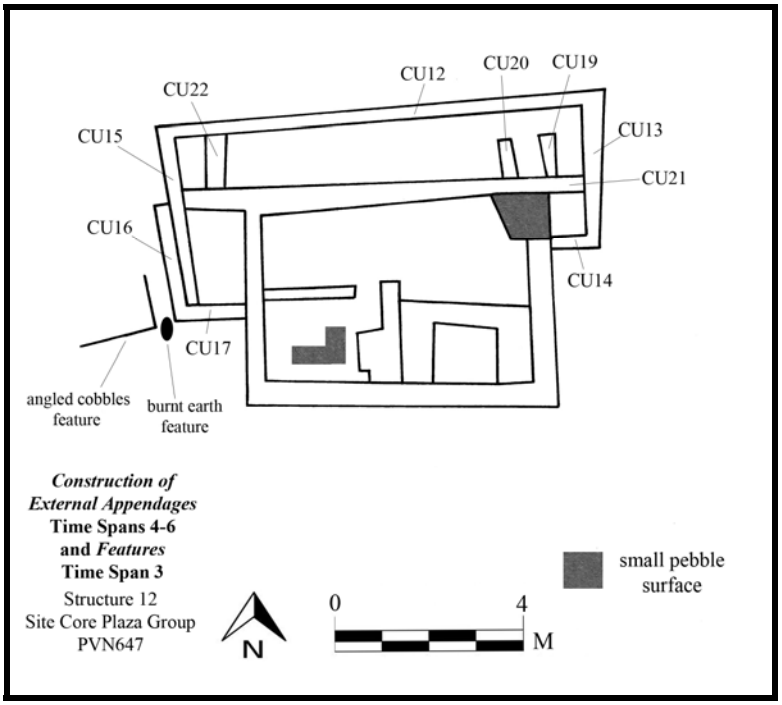


Figure 5.5: Plan-view of excavations of Structure 12 – *Construction of External Appendages* and *Burnt Earth and Connection to Structure 26* (features).

Additionally, during Time Span 6 (TS6), a north-south aligned appendage construction (CU15), in the form of a 4.3m wall, is established along the western side of Structure 12. This appendage wall (CU15) integrates and forms a corner with the north appendage wall (CU12), establishing a new northwest raised region. The southern-most end of this west appendage wall (CU15) does not articulate with any other construction unit during this time, but parallels the west basal wall (CU2 - TS9). Finally, the addition of this west appendage wall (CU15) expands the platform boundary roughly 1.3m to the west and is raised to a height of 0.3m. It remains unclear if all 3 elevated regions, the north, northeast, and northwest, were enclosed spaces, however, could have simply included the covering of a perishable roof.

Time Span 5 (TS5) represents a second renovation episode along the western exterior of Structure 12. A new north-south aligned wall appendage (CU16) abuts the exterior of the previously established west appendage wall (CU15 – TS6). The northern-most extent is in the same positioning as the north basal wall (CU4 – TS8) and extends to the south, along the CU15, where it forms a corner with another wall construction (CU17) and ends abutting the exterior of the west basal wall (CU2 – TS9). These two appendage wall constructions simultaneously extend the platform an additional 0.3m and seal the northwestern elevated region.

Finally, during Time Span 4 (TS4) the northeast and northwest raised regions are augmented further with the addition of 4 more small assemblages. One 1.2m north-south aligned wall appendage (CU22) is established in the northwest between the north basal

wall (CU4 – TS8) and the north appendage wall (CU12 – TS6). This region is not expanded but is raised to 0.1m. Within the northeast region, 3 separate appendage constructions are added. The first two are north-south aligned short wall constructions (CU19 and CU20), which are oriented roughly parallel to each other, as they extend away to the north from the north basal wall (CU4 – TS8). The eastern (CU19) of the two parallel is a better assembled construction and possibly supported a perishable wall to form a more refined passageway to access the entrance along the eastern side of Structure 12. The second appendage (CU20) is positioned roughly 0.15m west of CU19. The third appendage (CU21) is an east-west aligned wall construction and is positioned between the east appendage wall (CU13 – TS6) and the southern end of the perishable wall sustaining appendage (CU19) to form a step-up into the entryway created by the previous northeast appendage constructions near the cobble surface (CU18) from Time Span 9.

Burnt earth and connection to Structure 26

During Time Span 3 (TS3), a burnt earth feature is amassed near the southwest basal corner of Structure 12 (**Figure 5.5 and 5.6**). This feature measures 0.3m east-west and 0.68m north-south. It accrued a maximum height of 0.21m and was less than 0.1m away from Structure 12. Approximately, 0.1m to the west of the burnt feature were a clustering of unmodified river cobbles arranged into roughly 7 paralleling rows and positioned on a 45 degree angle. The complete extent of this cobble feature was not uncovered, but measured an exposed area of 1.3m east-west by 1m north-south and rose approximately 0.2m in height. Excavations immediately to the west of the cobble feature revealed the possible east wall of Structure 26. Any correlation in construction sequences

between the assemblage of this presumed basal wall of Structure 26 and the formal construction of Structure 12 remains unknown. However, due to the extremely close proximity (0.1m) of the cobble feature to the base of the wall, the wall probably predates the purpose of the aligned cobbles and the burning activities occurring in between the structures.

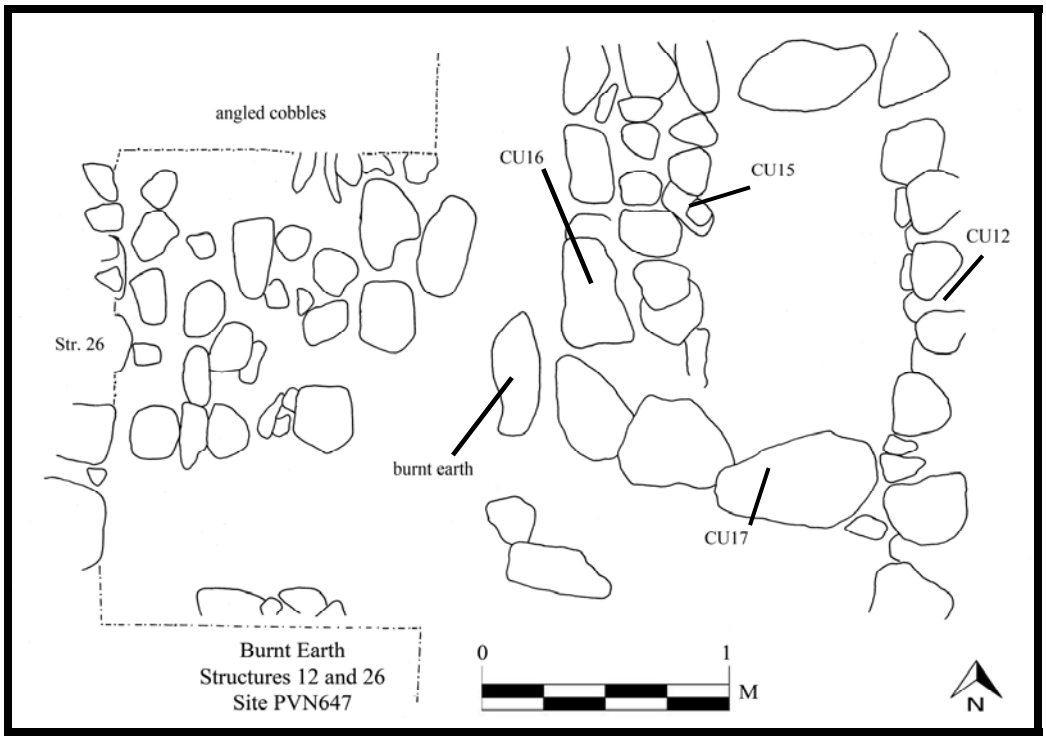


Figure 5.6: Drawing of angled cobbles and burnt earth feature along Structures 12 and 26, PVN647 (original by Chester Liwosz).

Structure 12: Summary and Discussion

In summary, Structure 12 represents the largest and architecturally most elaborate structure investigated within the Site Core Plaza Group. It clearly witnessed the most number of construction units associated with any building, but also the greatest lateral expansion from the original platform by means of numerous external appendage

additions. These external modifications yielded prepared plaza-viewing spaces on the east, north, and west facings of the building. Furthermore, the summit interior exhibits the most comprehensible and formal segregation design with the formation of 2 separate back (south) rooms, with at least one room containing a bench construction. Equally unique is the presence of burnt earth and the small cobbles positioned on an angle along the southwestern exterior of the building. These external features are significant as they are in close proximity to neighboring Structure 26 and indicate a potential correlation between the buildings. However, the actual order of the construction sequences maybe have transpired differently than reported here, as the exterior additions may have been assembled contemporaneously to or before the internal summit enhancements. Regardless, the interior room spaces likely would have supported a superstructure and been enclosed by walls and a roof composed of perishable materials. Additionally, it is plausible that the elevated regions along the north, east, and possibly west sides were also covered but were not sealed spaces by means of dividing walls. Structure 12 is not observed to be architecturally linked to any other building, except to Structure 26 along its southwestern exterior.

The earliest construction of the basal platform assembled during TS9 and TS8 was founded upon the soil deposit associated with the pre-construction activities to establish a uniform surface upon which to assemble the building. This initial version was architecturally quite fundamental and included the construction of the original 4 basal walls and established an enclosed summit area. Though the final, north basal wall was assembled during the different and subsequent time span, the relative time between each

construction sequence is regarded as being rather brief. The east, south, and west basal walls are of sounder construction than the north wall and likely supported the majority of the weight of the superstructure. It is important to note that the west basal wall included a fragmented metate piece as a construction material to compose the top course of the wall. The north wall is assembled near the edge of the natural downward (northward) slope into the main plaza and may have been erected from smaller cobbles and at a lower foundational depth to ensure it did not suffer the effects of gravity and cede its positioning over time.

An entryway denoted by a prepared small cobble surface is established near the northeast corner during this earliest version. Over time the platform is expanded by means of various additions to the north, east and west. During TS6 a wider wall is assembled roughly 1.5m to the north of the earlier north wall and is assembled from much larger cobbles. The space in between was possibly leveled by means of soil fill to the height of the top of the new north wall and included a prepared occupational surface, though none was recovered from excavations. This construction represents the greatest expansion efforts witnessed at Structure 12 from the earlier platform and establishes the largest elevated occupation region, in a form akin to a front porch. Also during TS6, expansion of the original platform to the east near the northeast corner by means of 2 walls, formalizes the previously established entryway into Structure 12. During TS5 the platform undergoes its final expansion sequence with the creation of 2 appendage constructions in wall form along the west. It is unclear to what degree if any of these

expanded areas were enclosed by perishable walls, however, it is likely they were covered and protected by a thatch roof.

The summit interior of Structure 12 is partitioned in the most obvious and formal way. During TS7, two southern rooms and one large northern room are delineated by the construction of several dividing walls. Positioned within the southeast corner of the interior, this first southern room contained a cobble construction along the eastern boundary of the room, which may or may not have functioned as some form of a bench within the space. Additionally, the partial and very poorly preserved remains from at least one individual were recovered from within the middle of the room. This interment is the reason why this southeast room witnessed the highest occupational level from all interior areas of Structure 12. The possible entrance into the southeast room is near the northwest region of the room.

The second south room was established within the southwest corner of the summit interior and abutted the dividing wall that delineated the western boundary of the southeast room. This southwest room included a well-defined stepped entryway near the northeast corner of the room. Additionally, the southwest room contained a bench feature immediately across from the entryway and a partially preserved small cobble prepared surface at the base of the bench construction. The remaining area of the summit interior, labeled the north room, remained an open and undivided space and was likely the lowest in elevation due to the slight downward slope to the north. However, the north room accounts for half of the entire summit interior, while the southeast and southwest rooms together compose the other half (each room representing roughly ¼ of the overall

interior). Furthermore, the north room was likely more public in nature than the two southern rooms, which due to being completely enclosed, were arguably the most private spaces associated with all of Structure 12. Access into the two southern rooms was only attainable from the north room, as no external openings were witnessed within either of the southern rooms.

The exterior constructions to Structure 12 represent the most elaborate modifications to the building and were continuously added along plaza-viewable facings. The results yielded multiple raised areas upon which various pursuits could have taken place; perhaps most important of all: space to observe plaza activities. As previously mentioned, the largest and most significant area was created by the northern appendage during TS6, which took the form of an east-west aligned wall. This wall, extending 9m in length, established an overall area of 13.5m^2 representing the plaza-facing of Structure 12. This substantial amount of occupational space easily could have accommodated numerous people at one time. Additionally, it was likely more public in nature as it was probably sheltered by a perishable roof but still an external space. It is unclear if an entryway into the north room of Structure 12 existed immediately within this northern-most raised area and it is presumed that the perishable summit wall constructed atop the north basal cobble wall marked the southern boundary of this external area.

Also during TS6, the exterior area near the original northeast corner and entryway into Structure 12 is formalized with the addition of various wall constructions. A north-south aligned east wall corners with the wall of the north raised construction and then corners again to the west and abuts near the south side of the original threshold into the

building. These constructions establish the northeast elevated region of Structure 12. During TS4, several other smaller wall constructions within the space were also assembled and in a design to create a semi-concealed passageway from the north, which includes a formal step, and leading to the original east entry of the building. Immediately outside and at the base of the small cobble surface within the north room of the summit interior would have been a leveled and prepared surface. This approximate **1m^2** area represents the formal entrance into the building along the east side. It remains unknown to what extent the entire northeast raised region was enclosed by walls; however, it was likely covered by a perishable roof.

The final external architectural modifications immediately associated with Structure 12 occur near the northwest corner and along the western exterior of the building. During TS6, a north-south aligned wall is assembled to corner with the western end of the north appendage wall. This west appendage wall continues the raised occupational area created by the north appendage wall. At this point in the construction sequence, this west appendage wall is open at its southern end. Additional wall constructions appended during TS5 buttress the wall and seal the south end of the west raised region and create an approximate occupation area of 2m^2. A final short, north-south aligned wall construction is added during TS4 within the raised are near the northwest corner and serves as a step and raises the occupational area at the corner. This raised level is at a corresponding elevation to the space created along the western side of Structure 12. It is possible that the lower buttressing appendage wall (CU16) assembled during TS5 doubled as a step up to the raised platform; however, it is unclear if there was

a formal entrance into the summit interior along this western side of the building. Similar to the region created by the north appendage, the west raised region most likely was covered by an unpreserved roof and remained an open-air zone with no enclosing walls.

Lastly, the presence of burnt earth and cobbles positioned at an angle within the southwest exterior region of Structure 12, as described during TS3, is included in this discussion as a generalized external modification to the building, however, not representative of a formal or major architectural change to the overall structure. Furthermore, it is not clear when the activities in this southwest exterior region occurred in relation to the construction episodes associated with the erecting of Structure 12. However, since the base of the burnt earth is at a higher depth than the base of the nearest construction unit in the area, it is hypothesized that the burning was subsequent to the assemblage of the final cobble additions of the west raised region. Therefore, the accumulation of the burnt earth and neighboring cobbles oriented on an angle correlate with a possible function of Structure 12 and potentially Structure 26, due to its close proximity. No other architectural elements were found in this external southwest region and it is unknown if it was protected by a perishable covering. However, due to the size of the dense concentration of burnt earth, it can be inferred that the subsequence amount of smoke and heat it would have produced would make it seem unlikely that the immediate area over the burnt region could have been covered.

To conclude, Structure 12 represents the most architecturally elaborate within the Site Core Plaza Group and largest in scale within the entire site of PVN647. Due to its prime positioning as the southern plaza anchor opposite from Structure 17 and its visual

rendering, Structure 12 was likely a very imposing construction. However, it is arguably still amassed from a vernacular style, though one of monumental nature, as the combination of expansion and refinement episodes over time addressed the changing needs and purpose of the overall building, and its presumed occupants and activities. Furthermore, those shifting functions carried out within and around Structure 12 were possibly quite diverse and included both private and public components.

The initial version of the building included predominately interior and more exclusive spaces. The undivided north room could have easily accommodated more people and activities than the smaller and more access-restricted southern rooms. Since at least one of the southern rooms contained a bench feature, they may have functioned as private residential spaces; however, it is not clear if the overall function of the structure was the same. Regardless, due to the presumed limited access into the summit interior as a result of only one identifiable entryway into the structure, it is likely admittance was fairly controlled.

This design formation is in contrast to the exterior expansions and the planning of the plaza-observing sides of the building, most importantly the north façade. The entire north facing of Structure 12 has the look of a broad front porch or veranda, as the external appendages extend across the plaza-facing front and wrap around the northeast and northwest sides of the building. It is conceivable that the raised additions supported a perishable roof, which would have yielded an open viewing area of plaza activities and events and it could have accommodated a large number of people at one time. It is unclear if or to what extent access was limited onto the raised veranda area, however, due

to its low elevation, sizable amount of occupational space, and no apparent dividing walls indicating an enclosed or restricted area; it is plausible that it was welcoming of most and not an exclusive space. The area would have been desirable as it could have been shaded from the sun, but not discriminating in who could occupy it. However, due to the architectural complexity of the northeast corner, this region may have been less public in nature compared to the open design of the immediate north raised area. A north-south dividing wall was designed to create a passageway along the east side of the building and therefore deterring and restricting access to the summit entryway along the east. In contrast, the northwest raised region yields an unobstructed space, similar to the front of the building, and but possibly only slightly higher in elevation. The exact function of the southwest exterior region remains unknown, however, due to the limited amount of space between Structure 12 and Structure 26 and the extreme burning activities occurring in the area, it is likely that it was neither public in nature nor had little to no immediate connection with the main plaza.

Finally, though the building techniques of the individual walls and other construction units are not distinguishing for the site as a whole, the construction materials in at least one wall made use of the high quantities of ground stone recovered from the structure. The top course of the west basal wall contained a fragmented, flat-bottomed metate. The fact that the artifact assemblage includes an uncommonly high number of ground stone objects may or may not be an indicator of function or the overall purpose of Structure 12 (see Chapter 6 for further artifact analysis.) What is clear from this observation is that Structure 12 witnessed the recycling of a broken grinding tool for the

purpose of constructing a wall for the building. This repurposing of damaged stone tools coupled with other architectural designs and styles demonstrates the vernacular practices occurring within Structure 12 to address the shifting needs and objectives of the activities and occupants of the building.

Structure 16

Structure 16 is situated within the northeast region of the Site Core Plaza Group and positioned immediately on the main plaza. The buildings orientation accommodates for its positioning to the southeast, as its southern facing is angled to the northeast and it looks out onto the open space of the main plaza. Structure 16 is located between Structure 17, 5m to the west, and Structure 28, 6m to the east. At the start of investigations, Structure 16 was devoid of modern disturbance and only exhibited slight tumbling and deterioration of the construction elements visible from the ground surface.

Description of Architectural Construction

Structure 16 experiences a moderately complex construction sequence, complete with new basal wall additions and layering of abutting appendages along the exterior. Nine time spans are associated with the raising of Structure 16, with six of them directly corresponding to the architectural constructions and modifications of the building (see Appendix A for detailed excavation descriptions and construction sequences). In addition to its intricate architectural design, the construction order of the individual components of Structure 18 only add to its uniqueness.

Time Span 9 (TS9) represents a period of pre-construction and no human activity, characterized by a stratum of sterile soil located beneath the region where Structure 16 will be founded. Time Spans 1 and 2 (TS1 and TS2) correspond to sequential periods of decay and burial by means of the accumulation of several soils associated with the abandonment of Structure 16 by its inhabitants. Time Spans 8 to 3 (TS8-TS3) represent the periods when Structure 16 was assembled into a 3-sided platform, and then later sealed and expanded by means of other walls and external appendages.

Construction of Original Basal Area

Time Span 8 (TS8) marks the first formal construction episode of Structure 16 and consists of three basal walls on the south, east, and west (CU1, CU2, and CU3). The northern, off-plaza side of the building remains open (**Figure 5.7**). This earliest version of the unsealed building measures approximately 0.45m in height, 3.85m east-west, and approximately 4m north-south, accounting for an absent northern boundary. The building's interior was free of any dividing elements and existed as an open summit interior. Due to Structure 16's foundation remaining incomplete during this time span, it is unclear to what degree the three basal walls supported an unpreserved superstructure consisting of walls and a roof. However, it is posed to have functioned as a 3-sided surface-level building, if only briefly.

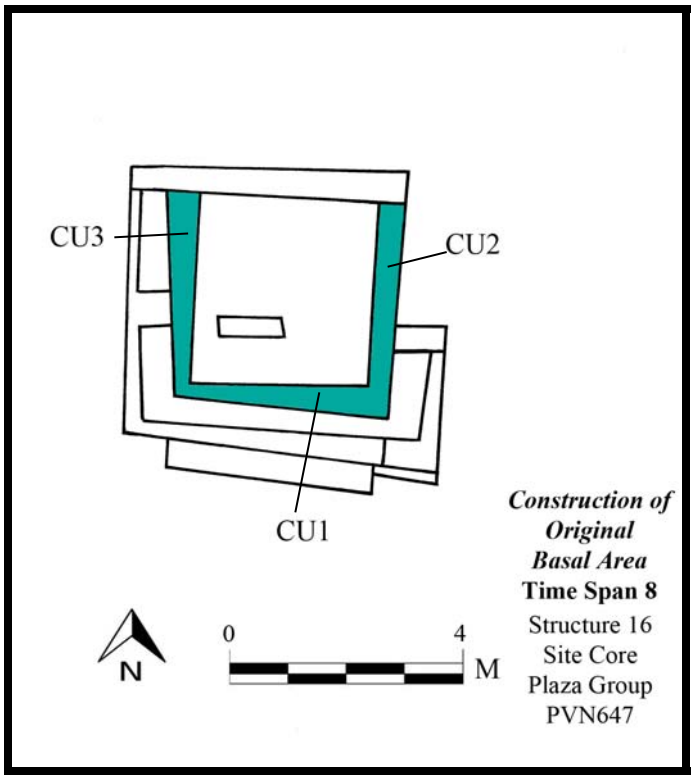


Figure 5.7: Plan-view of excavations of
Structure 16 – *Construction of Original Basal Area*.

Sealing and Construction of Expanded Platform

The occupants at PVN647 dramatically expanded the platform base of Structure 16 during Time Span 7 (TS7) by adding new walls to the south and west exteriors (CU4 and CU5, respectfully) and two appendage abutments along the eastern exterior (CU6 and CU7). The new south basal wall (CU4) was assembled 0.35m to the south of the earlier south wall (CU1 – TS8) and the space between was sealed with soil fill **(Figure 5.8)**. A new southwest corner is established for Structure 16 during this time span with the joining of the new south wall (CU4) and the new west basal wall (CU5). The new west basal wall (CU5) was assembled 0.47m west of the earlier west wall (CU3 – TS8)

but is of a poorer construction quality. It does not maintain a consistent orientation and includes a smaller wall construction perpendicular to and abuting the exterior, western facing of the earlier west wall (CU3 – TS8). It is north of this smaller wall construction where this latest west wall (CU5) veers to the east and takes on a distance of only 0.37m between itself and the exterior facing of the earlier west wall (CU3). It is possible that the entire region between the two west walls (CU5 and CU3 – TS8) was filled in to expand the interior summit space. This short wall construction situated between and perpendicular to the two west walls could have functioned as a stabilizing element to support the weight of the new occupational space created on top of it. The northern extent of this newest west wall does not articulate with any other architectural element during this time span and remains unfinished. During this time span, Structure 16 is still identified as only a 3-sided edifice, with no architectural closure on the northern boundary. However, the southern and western boundaries have been expanded and the new platform measures 4.5m east-west and approximately 4.5m north-south, accounting for the absent northern boundary.

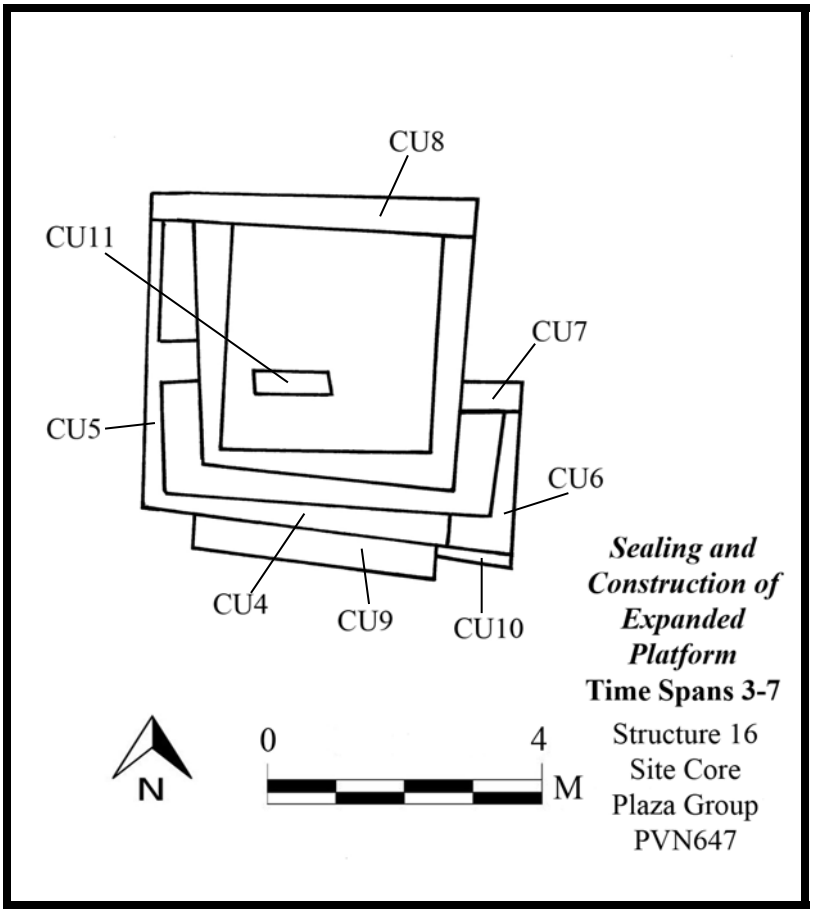


Figure 5.8: Plan-view of excavations of Structure 16 – *Sealing and Construction of Expanded Platform.*

Additionally, during Time Span 7 (TS7), an appendage (CU6) on the east, which is aligned in a roughly north-south orientation, joins with the eastern extent of the new south basal wall (CU4) to establish a new southeast corner region for Structure 16. This east appendage (CU6) is a low-lying construction (approximately 0.15m in height) and is assembled 0.5m to the east of the east basal wall (CU2 – TS8). It forms a right-angle with a second appendage (CU7), which abuts with the exterior of the east basal wall (CU2 – TS8). This second appendage (CU7) is of a better construction style than CU6, and therefore preserved to be higher in height. It is credible that this newly created

southeast portion of Structure 16 with the two low-lying appendages was covered with a perishable surface, however, no material evidence was recovered to confirm this possibility. Furthermore, it remains unknown to what extent the region created by the appendages was sheltered by a perishable superstructure during this time span.

It is during Time Span 6 (TS6) when the north boundary of Structure 16 is finally sealed to establish a 4-sided and fully enclosed building. An extremely haphazardly assembled north basal wall (CU8) is added and establishes a formal northeast corner by abutting with the end of the east basal wall (CU2 – TS8). It extends the east-west distance of the building and poorly articulates with the original west wall (CU3 – TS8) and the later west basal wall (CU5 – TS7) to crudely establish a northwest corner for the building.

Time Span 5 (TS5) represents the addition of an abutting appendage (CU9) along the southern exterior. Spanning 3.5m along the exterior, south-facing of the latest south basal wall (CU4 – TS7), this south appendage (CU9) is roughly 0.1m shorter in height and simply expands the southern boundary of Structure 16 by approximately 0.5m. It does not extend to either the southwest or the southeast corners, but is buttressed up against the very center of the south wall and comprises the dominant appearance of the final version of the south, plaza-facing façade for Structure 16.

Another appendage abutment is added along the south exterior near the southeast corner during Time Span 4 (TS4). Yet this appendage (CU10) is significantly shorter in height (0.1m) and width (0.2m) than the south appendage (CU9) added during Time Span 5. This small southeast appendage (CU10) is located abutting the latest south basal wall

(CU4 – TS7) in the 1m of space between the eastern end of the larger south appendage (CU9) and the southeast corner with the east appendage (CU6 – TS7).

Finally, during Time Span 3 (TS3) a 2-course wide cobble alignment, composed of 17 medium-sized river cobbles, is arranged in the center of the summit interior. This alignment (CU11) does not represent a formal prepared surface, as the top facings of the cobbles are neither uniformly flat nor occur consistently throughout the summit interior. However, this alignment is higher than any of the previously constructed walls and may indicate a general occupational level during this final occupational period of Structure 16.

Structure 16: Summary and Discussion

To summarize, Structure 16 is a moderate sized building and undergoes one of the most complex expansion histories of all investigated structures of a similar size. Additionally, the construction order represents one of the most unconventional assemblage histories, as the fourth and final basal wall to delimit a summit interior is one of the last construction units added to the building. Four labor-intensive construction episodes expand Structure 16 in the three other directions before the building is believed to have been completely sealed off with the north wall. It is unclear how long the structure remained in an open, 3-sided formation; however, it was not long enough for the building to need buttressing or added support. The crucial architectural changes witnessed over time are more representative of a possible shift in function of the building and the requirement of more prepared occupational spaces. The original surface-level building was most likely covered by a roof made of non-preserved construction materials.

Furthermore, the expanded platform may have also been sheltered, yet it is unclear to what extend the east appendage and south, plaza-facing façade was protected and enclosed by perishable bajareque walls. The surrounding exterior spaces were possibly reserved for outdoor activities or plaza events, as no architectural linkages were witnessed to neighboring structures.

Though not the most conventional of construction designs, the initial form of the basal outline during TS8 reveals to be a 3-sided assemblage, with the northern off-plaza side remaining open. These original 3 walls are well-established and sturdy enough to possibly support some form of a perishable superstructure, even without the stabilizing assistance of a fourth basal wall. After a relatively short amount of time, the structure is expanded upon during TS7 to the south and west by means of 2 separate walls, aligned parallel to the earlier respective south and west basal walls. The resulting new space may very well have been sheltered by a modified roof, however it is unclear if it was incorporated as interior space and enclosed by new perishable walls, or if it remained an area that was open to the exterior. The expansion to the east produced a significantly shorter elevated region, which could have been covered, yet remained an exterior space. It was only after all of those modifications that a north wall was assembled and enclosed the interior area during TS6. However, the north wall exhibited the most inferior assemblage of all construction units witnessed from Structure 16. It was erected from large to extra-large unmodified river cobbles that were seemingly unsystematically positioned and separated by large spacings, which were filled in with loose soil. Due to

the haphazard construction and subsequent poor preservation of this north wall, it is unknown to what extent it could have assisted in supporting a perishable superstructure.

Interior modifications to Structure 16 only consist of the late addition of a cobble alignment. Observed during TS3, the final phase of architectural additions, the linear assemblage of approximately 17 small to medium-sized cobbles marks the only preserved constructed element within the summit interior. The exact purpose of the formation remains unknown, as the cobbles are arranged to be only 1 course in height and 2 courses wide. Therefore, it is doubtful they could have supported a perishable wall construction nor function as a bench feature. The elevation of this alignment is observed as being the highest construction within the summit interior and could indicate the top of an occupational level. Furthermore, it is unclear exactly when this cobble alignment was arranged within the interior. It could have been added before all other external additions and even before the north wall was assembled. However, it does not articulate with any architectural elements and therefore its exact temporal order within the construction sequence is unknown. Otherwise, the summit interior remained an open, undivided area, which possibly grew in size with the additions of the second west and south walls.

The majority of the modifications to Structure 16 occurred along the exterior areas of the original building and result in a variety of forms. Additional walls were added along the west and south exteriors and the space in between were raised with soil fill. These new regions are presumed to be covered, yet could have functioned either as expansion episodes to create a larger interior space, in which case they supported new bajareque walls and marked the boundary for the new interior area. A second scenario is

that they were assembled as extensions of the original surface-level building, yet were open-air spaces that wrapped around the outside of the building and created a raised space from which to observe outdoor plaza activities. The south facing underwent a third revision when an abutting cobble wall construction was appended and extends the overall boundary of Structure 16 even further into the plaza area. The east exterior facing also endures modifications when a raised appendage in a U-shape formation is added near the southeast basal corner. The interior area formed by the U-shape was likely filled in with soil and raised to a uniform level as the outlining cobbles. This appendage construction is at a lower level than the southern additions and was probably covered with a prepared surface.

In conclusion, an assortment of construction techniques and styles results in the final version of Structure 16. Due to its significant location immediately on the main plaza within the Site Core Plaza Group, it is feasible this structure included some form of public function, however, it is unclear to what degree it operated as a residence. The architectural attention and labor focused on the expansion episodes along the west and south exteriors, as oppose to the off-plaza north side, speaks to the relative importance of these plaza-oriented facings. If these architectural expansions were to create external, raised platforms as viewing spaces onto the plaza, this could indicate a possible intensification of activities or interaction between the residents of Structure 16 and the plaza area. However, if these regions were assembled to create public viewing platforms, it is not known to what extent they were inviting or inclusive of non-residences. Furthermore, it is unclear exactly how visible the east raised extension may have been

from the plaza, therefore it is not known how public or private the activities occurring within this exterior area may have been. Lastly, presumed to be the most private space as the off-plaza region, the reasoning for leaving the north side of the structure open, remains ambiguous. Though the motivations are unknown for the desired appearance of the northern exterior, it is not necessarily unique to Structure 16 and appears to be a re-occurring vernacular style for PVN647. Overall, the additions and expansion methods emerge as vernacular responses or intuitions to address the changing needs and functions of Structure 16 and its engagement with the northeastern main plaza region.

Structure 17

Structure 17 is located to the north within the Site Core Plaza Group and is one of the northern-most structures at PVN647. Its orientation is positioned to directly face out onto the main plaza. Additionally, it is identified as the second largest excavated structure within the Site Core Plaza Group and is positioned approximately 16m to the north, across the plaza, from Structure 12, the largest excavated structure at PVN647. Structure 16 is positioned to the east and Structures 18 and 19 are positioned to the west of Structure 17. At the time of initial investigation, the building materials from Structure 17 were tumbling down the platform and predominantly to the north, east, and south. Although, it possessed piles of displaced cobble construction materials placed on top of its highest preserved points, Structure 17 did not exhibit any formal signs of contemporary disturbance or dismantling.

Description of Architectural Construction

The formal architectural construction of Structure 17 witnesses a fairly uncomplicated assemblage history; however, evidence of an earlier sub-structure was witnessed, as well as several episodes of stratum deposits. In total, Structure 17 is comprised of nine time spans, of which only five are directly associated with the architectural construction and modification of the building itself (see Appendix A for detailed excavation descriptions and construction sequences).

Time Span 9 (TS9), represents the earliest time span associated with Structure 17 and is a period of pre-activity and pre-construction, as it only contains a culturally sterile soil stratum, upon which the building would later be assembled. The final time spans, Time Spans 1 and 2 (TS1 and TS2), are characterized by the abandonment and decay of the building, as indicated by the multiple soil accumulations that bury the structure. The time spans in between (TS8-TS3) represent the formal preparation, construction and modification episodes associated with Structure 17.

Time Span 8 (TS8) is characterized by the assemblage of a pebble surface (CU1) to the south, where Structure 17's south basal wall would later be constructed upon. It is believed this prepared surface is situated at a deep depth to ready this region for the formal construction of the foundation of Structure 17. However, the full extent of this surface was not visible and was only observed in profile due to the later constructions assembled on top of it. Also during TS8 is the construction of what is labeled a sub-structure, identified by the presence of one wall construction (CU2). Positioned at a depth lower than any other later construction associated with Structure 17, this wall

(CU2) is also of a more solid construction style than others observed at Structure 17 and is amongst the best preserved at PVN647. At the base of this sub-structure wall was uncovered the severely fragmented skeletal remains of what are hypothesized to be from a human infant or young child. Neither identifiable skull fragments nor teeth were observed, however, remains circumspectly identified as unarticulated rib and long bones from a very young human were unearthed.

Construction of Platform

Time Span 7 (TS7) witnesses the first formal construction of Structure 17, as evidenced by the establishment of the stone foundation of the four basal walls to create the basal platform (CU3, CU4, CU5 and CU6) (**Figure 5.9**). The north-south width of the platform measured 5.75m and the east-west length measured 7.45m. The platform height was approximately 0.5m. During this time span, the summit interior consisted of one large, open space and more than likely would have supported a perishable superstructure composed of bajareque walls with a thatch roof.

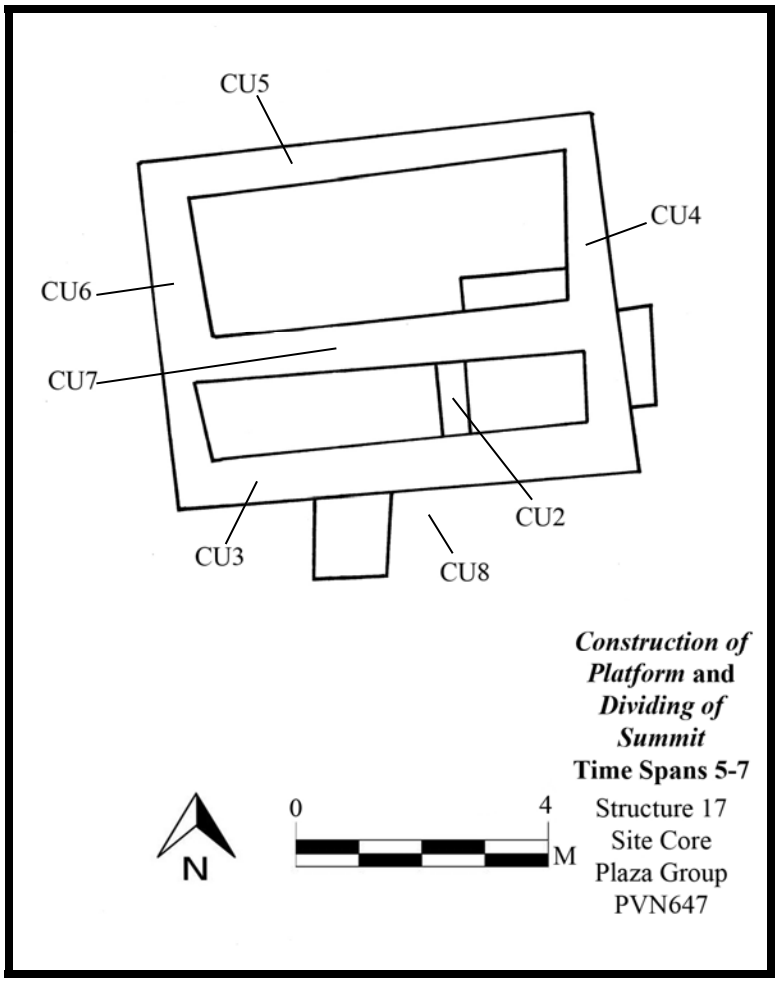


Figure 5.9: Plan-view of excavations of Structure 17 – *Construction of Platform* and *Dividing of Summit.*

During Time Span 6 (TS6), two separate soil contexts are deposited along the north and south exteriors, respectfully. The soil deposit along and abutting the north basal wall (CU5 – TS7) exterior is composed of a similar soil matrix to that of the sterile soil context from Time Span 9 (TS9) and marks the first identified episode relating to the shoring up and preservation of the basal foundations integrity. The second soil context identified during this time span is located along the south exterior, along the south basal wall (CU3 – TS7) and immediately above the pebble surface from Time Span 8 (TS8).

The reasoning for the presence of this soil layer in this position and at this time being the result of occupation and activity or purposely as a fill layer remains unknown. This soil layer is only visible via profile due to later constructions assembled atop of it.

Dividing the Summit

Time Span 5 (TS5) marks the division of the summit interior by means of an east-west aligned wall (CU7) extending the entire length (approximately 6m) of the summit interior space (Figure 5.9). This dividing wall does not raise the height of the platform, but divides the summit interior into northern and southern spaces. The northern space measures 2.2m in width (north-south) and 5.8m in length (east-west). The southern space is questionably separated into two spaces, as the very top of the sub-structure wall (CU2) from Time Span 8 abuts the interior of the south basal wall (CU3 – TS7) and the base of the summit dividing wall (CU7). It is unclear where an occupation level existed within the summit and if the sub-structure wall was completely covered over after the formal erecting of the basal platform. However, the top of the sub-structure wall potentially could have designed an eastern from a western area in this southern-most region of the summit interior. Regardless, the entire southern space created by the addition of the summit dividing wall (CU7) measures approximately 1m in width (north-south) and 5.6m in length (east-west). Additionally, a crushed limestone floor surface (CU8) is assembled along the southern exterior of Structure 17 during Time Span 5 (TS5). This prepared floor is also only visible in profile and positioned immediately on top of the soil layer

from Time Span 6 (TS6), which is on top of the pebble surface (CU1 – TS8). This is the third stratigraphic layer witnessed in this region and established in preparation for the construction of a later addition.

Time Span 4 (TS4) is comprised of yet another soil layer in the same region as the crushed limestone floor surface (CU8) from Time Span 5. Similar to the soil layer from Time Span 6, it is unclear whether this soil context is the result of occupational activities carried out on top of the limestone floor surface (CU8), or if it was purposely deposited as a fill layer. All the same, this soil layer represents the fourth and final level of stratigraphy in association with this southern exterior region. The completion of these layered contexts during this time span comprises the foundation for the construction of a significant exterior addition to Structure 17.

Construction of Appendages

Time Span 3 (TS3) concerns the construction of two appendage abutments and the addition of a cobbled surface within the summit interior (**Figure 5.10**). The first appendage (CU10) is located along the south, plaza-facing exterior and assembled immediately on top of the previous four layers of soils and prepared floors. This appendage is arranged as a solid square block of unmodified river cobbles and measures 1.3m east-west and north-south. The construction design of this appendage was such that the outlining 3 sides (east, south, and west) were assembled first and then the interior was filled in with cobbles and soil to result in a uniform surface on top. It is positioned 2.2m east of the southwest basal corner and ranges 0.2-0.4m in height. This height is at a lower elevation than the top height of the south basal wall (CU3 – TS7), which it abuts.

A second appendage (CU11) is added along the east exterior, abutting the east basal wall (CU4 – TS7). It is not as large nor as prominent as the south abutting appendage, as it measures 1.3m in length, but only 0.47m in width and ranges in height 0.14-0.22m. This second appendage is assembled from approximately 8 medium-sized cobbles and at the same depth as the east basal wall. It may serve as a "step" along the eastern, off-plaza facing into Structure 17.

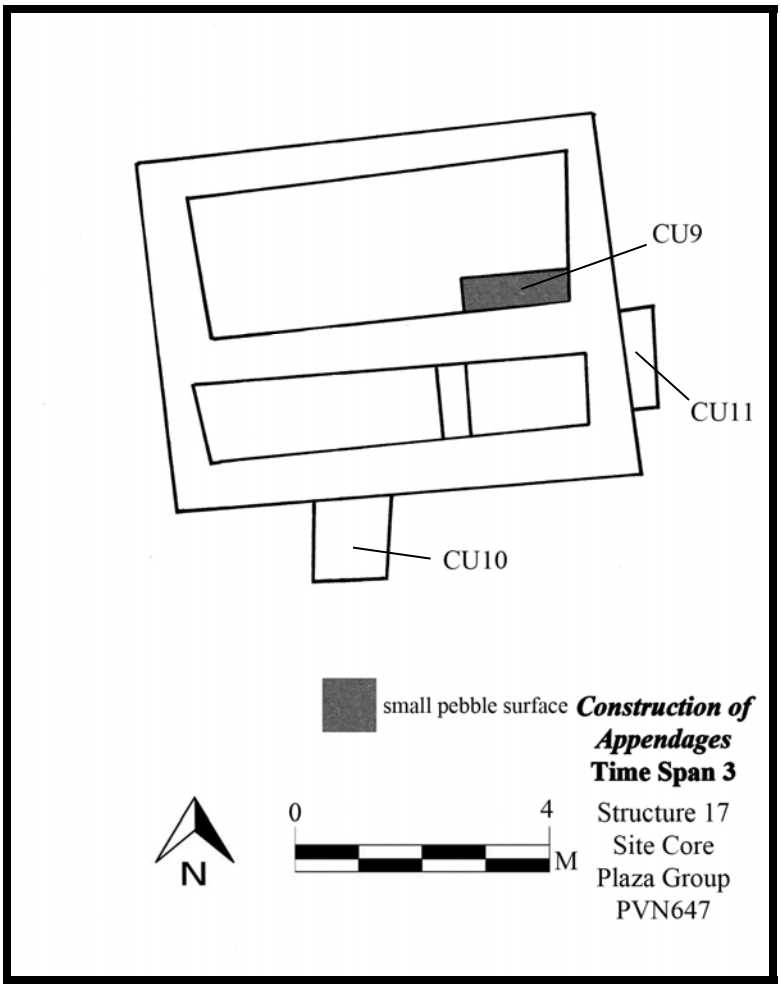


Figure 5.10: Plan-view of excavations of Structure 17 – *Construction of Appendages.*

The final addition assembled during Time Span 3 (TS3) is a cobble surface (CU9), composed of fist-sized stones, within the summit interior. It was located along the north facing of the summit dividing wall (CU7 – TS5) and extends 0.95m north-south and 1.16m east-west. Although this cobble surface was not penetrated for various protocol reasons; however, it may have been arranged on top of an interred burial or some other intentional deposit.

Structure 17: Summary and Discussion

In conclusion, Structure 17 was a sizeable building erected by means of logically discernible construction sequences. No major assembly overhauls occurred and the number of identified time spans is a reasonable outcome given the preserved quantity of construction units. The exact order of the construction sequences accounting for the interior summit changes and the exterior appendage elements may have developed differently from reported, yet clear evidence providing a linear temporal connection between the two regions was not observed. What is clear is that the earliest occupation of the immediate area is indicated by a pebble surface and wall construction associated with a sub-structure. The extent and duration of occupation during this period of pre-construction is unknown, yet these construction units are buried and incorporated into the establishing of Structure 17. The building itself was constructed as a cobble platform, which likely included a superstructure of perishable bajareque walls and a roof made

from thatch. At no point is Structure 17 considered to have formally connected to or shared any common external activity areas with neighboring structures.

The development of the original platform during TS7 is identified to be straightforward and conventional, with the assemblage of the four basal walls occurring simultaneously. These initial construction activities covered the spaces previously occupied and associated with the earlier pebble surface and sub-structure. Particularly, the interior was likely filled in, which included the probable interment of a very young child or infant near the base of the sub-structure wall. The death of this individual may have been associated with the motive for the construction of this platform and set into motion the expansion of occupation in this northern region of the plaza.

Modifications to the summit interior space account for a minority of the overall amendments and additions to Structure 17. The first interior alteration came during TS5 in the form of the east-west aligned summit dividing wall and established northern and southern spaces within the building. During TS3 a small cobble surface was established within the southeast corner of the northern room. Due to the prominent positioning as the north anchoring structure within the Site Core Plaza Group, the plaza-facing, southern room could conceivably have functioned as a more public space, while the north room accommodated more private activities. No other summit constructions or features are observed and the result is large rectangular interior, divided into two occupational zones.

The exterior modifications are far more varied and include the deposit of several strata and the addition of abutting cobble appendages. Along the northern exterior and immediately following the establishment of the basal platform, a soil context similar in

composition to the sterile clay throughout the Site Core Plaza Group was deposited. The similarity in soil makeup is believed to be the result of the sterile soil from TS9 being infiltrated as a means to prepare the region where the north basal wall (CU5 – TS7) was to be assembled. And after it was assembled, the exhumed sterile soil was reused and re-deposited up against the facing of the north basal wall to aid its maintenance. This is the only location within Structure 17 where this practice of architectural reinforcement is witnessed.

The accumulation of the other soil deposits along the southern exterior of Structure 17 from TS6 to TS4 reveals the preparatory activities associated with a more significant construction episode. A series of subsequent and alternating soil and possible floor deposits establish the layered foundation upon which the south abutting appendage is located. The strata are only revealed in profile along the eastern side of the appendage and therefore it is unclear whether they extend further under the appendage, as its construction blocks visibility. There is no evidence for the multiple deposits beneath the appendage observable in profile along its western facing. Furthermore, it remains unknown to what extent each successive deposit was for the purpose of occupation and for how long of a duration of time. Finally, it is also unclear to what extent the surfaces and soils extended into the areas immediately to the east of the appendage and above the pebble surface observed during TS8. Evidence was not preserved, or at least witnessed in the excavations in this region. This may be the result due to the possibility that they were never established in this area; however, it is more likely that they did not survive after periods of abandonment and decay of Structure 17.

The most notable architectural element is added during the final construction sequence (TS3) and along the south exterior of Structure 17. The south abutting appendage is a cobble construction of unique form, design, and possible function due to its location. This solid cobble construction is formed into the shape of a 3-dimensional cube, though its preserved height is not as tall (approximately 0.4m) as it is wide (1.3m east-west and north-south). It was constructed at least 2 courses in height and is preserved approximately 0.1-0.2m below the preserved top course of the south basal wall, which it immediately abuts. The created surface area on top of this construction would have limitations with regard to the number of people who could have reasonably occupied the area and what types of activities could have been carried out within the space.

Due to the substantial size and well-assembled character of the south basal wall, Structure 17 could have easily supported a sturdy and continuous bajareque wall along this plaza-facing façade. The addition of the south appendage creates a continuous raised extension from the exterior of the building, which probably included a prepared but perishable occupation surface and may or may not have been covered. The result would have been a space suited for observing plaza occurrences due to its elevated nature but for a limited number of inhabitants due to its inadequate amount of occupy-able surface area. It is unclear if this appendage is the only remaining vestiges of a formal entrance into the building that was fashioned with other perishable construction materials. An alternative is that access to this appendage was restricted from the exterior by means of low walls and was only accessible from the interior of Structure 17. The result from this type of design would have created a “standing room only” plaza-viewing space and for

select and few exclusive members, akin to a private balcony. Therefore, entry onto the enclosed space created by the appendage would have been from the southern room of Structure 17, deeming its purpose to be more of a communal local within the overall occupational summit interior. Finally, the appendage could function as an exterior bench for viewing plaza activities.

The second abutting appendage is placed along the eastern exterior of Structure 17, yet is of a discernibly altered construction design and shape from the plaza-facing appendage. The east appendage is a low-lying assemblage, composed of 8 medium-sized unmodified river cobbles at the base of the east basal wall. Arranged 1 course in height and 2 courses wide, this appendage serves the purpose as a "step" to a presumed entrance along the eastern side of the building, than as an occupy-able space. The south and east appendage constructions follow a similar solid cobble design, but employ divergent functions due to size and location with respect to the original basal platform of Structure 17.

Overall, Structure 17 represents a well-constructed and prominent building likely of an administrative and high-status nature within the Site Core Plaza Group, but still amassed with the inclusion of architectural vernacular underpinnings. Structure 17 may have held generalized public significance with respect to plaza interests due to its premier location as the north anchoring structure on the main plaza. However, at its inception, the building may not have been inviting and inclusive of all plaza-going peoples and occurrences due to the original inhibiting construction style of the plaza façade. The assemblage of the south appendage would have adapted the association between the

building and the plaza and served as a place of observation and possible formal communication or oration by a select few as it or they related to plaza importance or events. Yet due to the limited size of the appendage and potential restricting architectural design, it was not a space that promoted equal interaction or exchange by accommodating a large number of people at the same time. Therefore, and for whatever motivations, what is clear is that the inhabitants of Structure 17 desired a revised experience with regard to the main plaza. Regardless of precise function, the vernacular implementations to the construction method and form of the south appendage yielded a shift in the relationship between the occupants of Structure 17 and the greater plaza activities, which met their immediate and changing needs.

Structure 18

Structure 18 is situated in the northwest region of the Site Core Plaza Group. Though, no other structure is positioned between Structure 18 and the large open area of the main plaza, it is not oriented to formally face the open plaza. It is aligned such that the buildings southeast corner is pointing toward the center of the main plaza, resulting in two facings (the east and south) having unobstructed views of the plaza. Likewise, this leaves the other two facings (the north and west) somewhat secluded as they are not visible from the center of the main plaza. The closest investigated building is Structure 17 and is located 15m west of Structure 18. The nearest surface-identified edifices to Structure 18 include Structure 19, located 6m to the north, and Structure 20, located 7m to the west. Structure 18 was assembled on a relatively flat terrain and at the initial time

of investigation did not exhibit a significant amount of construction tumble descending down from the sides of the building.

Description of Architectural Construction

The final version of Structure 18 may appear to take on a relatively simple architectural form; however, the construction sequence reveals a much more intricate assemblage history. Structure 18 experiences 6 separate time spans, with only 3 associated with the actual assemblage of the building (see Appendix A for detailed excavation descriptions and construction sequences). Though this structure experiences only 3 distinct time spans of construction, it is the order in which each construction unit was assembled that is significant.

The earliest time span associated with Structure 18 is Time Span 6 (TS6) and is marked by a sterile soil context, observed all throughout the Site Core Plaza Group. The soil indicates the period of no cultural contact or occupation. Time Spans 1 and 2 (TS1 and TS2) represent the final phases associated with Structure 18 and are characterized by 2 distinct soil contexts, symbolizing the abandonment and decay of the building. It is during the remaining 3 subsequent time spans (TS5-TS3) that Structure 18 was erected and amended into a cobble platform.

Construction of Original Basal Design

Time Span 5 (TS5) represents the primary erecting of Structure 18. It is at this time that the 3 basal walls are assembled on the south, east, and west (CU1, CU2, and CU3) but the north side of the building remained open (**Figure 5.11**). Additionally, a

plaster surface (CU4) is established in the center of the interior summit, which is an open and un-partitioned space. At this point in time, the incomplete basal arrangement measured 0.4m in height, 2.2m in length (east-west), and an approximate 3m in width (north-south), though a northern facing is absent. Of particular note during this construction phase is that in the southwest region where the west wall (CU3) articulated with the south wall (CU1), the south wall extends beyond the junction of the two walls. It is unclear whether the basal architecture established during this time span would have supported a decomposable superstructure, even with the construction of basal platform existing as unfinished. However, due to the creation of an easily perishable prepared plaster surface (CU4), it is conceivable that some form of covering was assembled.

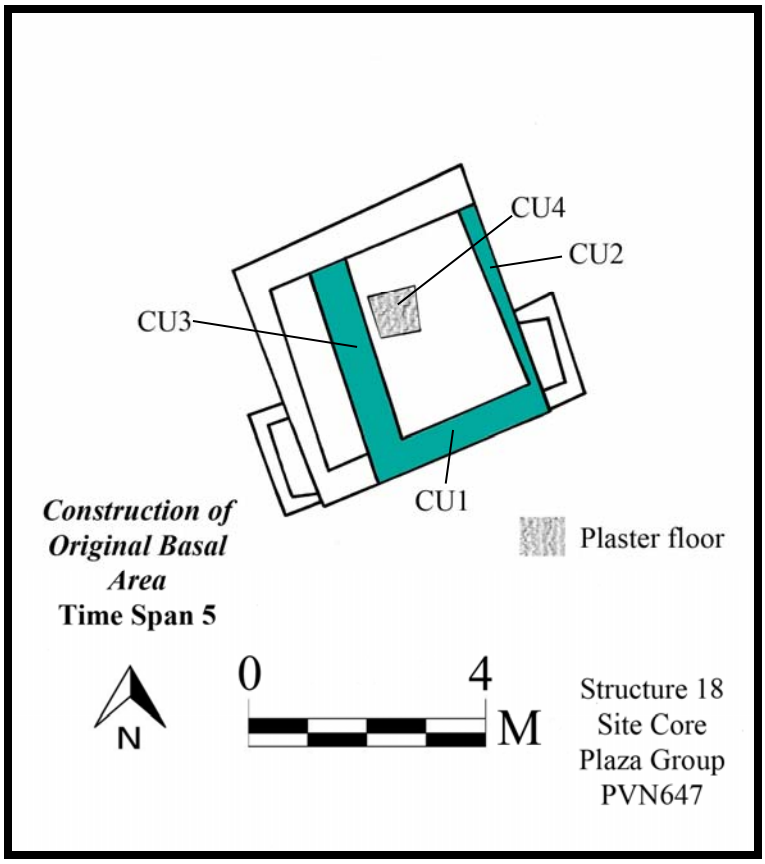


Figure 5.11: Plan-view of excavations of Structure 18 – *Construction of Original Basal Design.*

Sealing of Basal Design and Raising of the Platform

It is during Time Span 4 (TS4) that a north basal wall (CU6) is constructed and seals the northern side of Structure 18 to form a complete 4-sided platform. However, it is also at this time that a second west wall (CU5) is established 0.75m west of the earlier west wall (CU3 – TS5). This latest west wall (CU5) articulates with the extension of the south wall (CU1), assembled during Time Span 5, and forms a new southwest corner for Structure 18. The expansion to the west during this time span increases the basal platform in length to 4.3m east-west. However, the interior area and occupation space of the summit room appears to remain the same and the earlier west wall (CU3 – TS5)

remains the western boundary for the summit room. If not initiated during Time Span 5 (TS5), a perishable superstructure with walls and roofs made of thatch and bajareque would have existed during this time span to shelter the occupants and activities within Structure 18.

Construction of Appendages

Finally, during Time Span 3 (TS3) two low-lying cobble appendages are added along the east and west exteriors (CU8 and CU9), and a bajareque or burnt earth surface (CU7) is fashioned along the western exterior. Both of the appendages are characterized as U-shaped appendages constructed from small and medium sized river cobbles **(Figure 5.12**). The eastern appendage (CU8) abuts the east basal wall (CU2 – TS5) near the southeast corner, stands a 0.36m in height, and is of a complete calculated area of approximately 1.26m^2, with an interior area of 0.48m^2 of soil fill and no cobble construction. The western appendage abuts the latest west basal wall (CU5 – TS4) near the southwest corner, stands 0.11m in height, and has a calculated complete area of approximately 1.06m^2, with an interior area of 0.56m^2 consisting of soil fill and no cobble construction. The tops of the east and west appendages were possibly covered and they served as surfaces, yet it is unclear if they included any degradable walls or roofs.

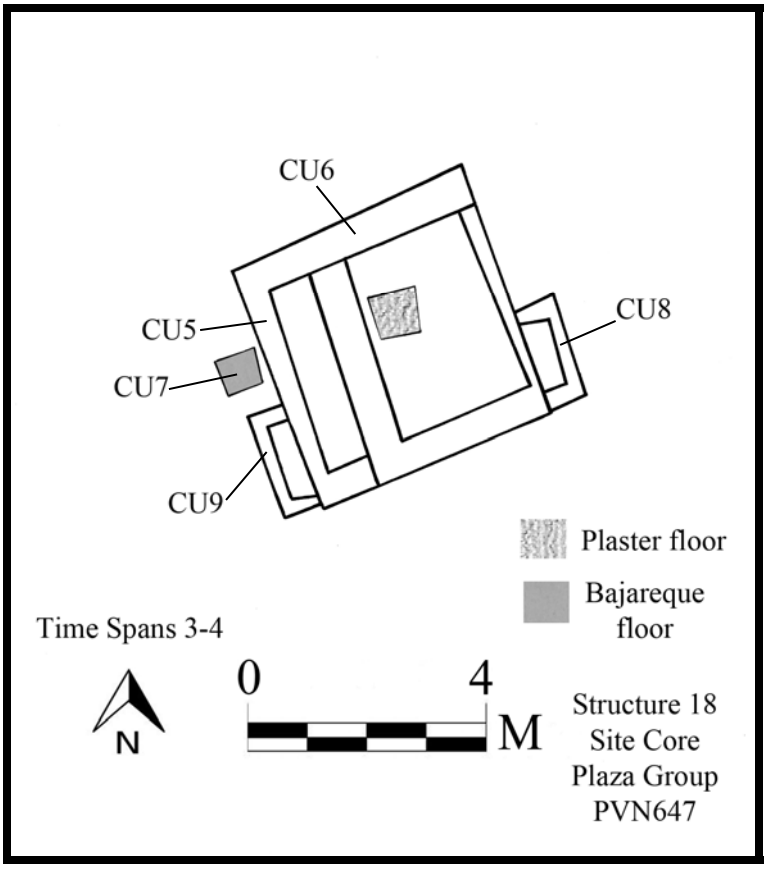


Figure 5.12: Plan-view of excavations of Structure 18 –*Sealing of Basal Design and Raising of the Platform* and *Construction of Appendages.*

Structure 18: Summary and Discussion

In conclusion, Structure 18's final manifestation was that of a medium-sized building with a construction sequence somewhat complicated by the original assemblage composed of only 3 basal walls and then later sealed off to form a 4-sided building. Though unique in order, the overall number of time spans is considerably few with respect to a total of 9 identified construction units. Furthermore, the relative time between each construction phase is presumed to be reasonably short, as Structure 18 did not include any dramatic architectural refurbishments or alterations serving a

reinforcement purpose. Overall, after the establishing of a fourth basal wall, the platform is only slightly expanded and unique appendages are added on both the east and west exteriors, yielding a symmetrical appearance. Structure 18 would have likely been sheltered by a perishable superstructure covering the interior area and possibly select exterior spaces as well. It is not witnessed to architecturally articulate with any neighboring structures and potentially made use of the open spaces on the northern and western exteriors of the building for activities as these regions would have been shielded from view from the main plaza.

The initial version of the platform established during TS5 reveals a generally unconventional construction method, yet one which is not unique to Structure 18 alone. The building is first erected as a 3-sided assemblage, with one of the off-plaza sides, the northern side, remaining opening. Before the fourth wall is assembled, a plaster living surface is established in the center of the interior space. When the fourth basal wall is formed during TS4 it is shorter and narrower and overall noticeably of a poorer construction design when compared to the previous 3 basal walls. During the same construction episode as the haphazardly assembled north basal wall, another wall is assembled paralleling the exterior of the west wall. Paradoxically, this second west wall resembles the construction methods of the earlier 3 basal walls, as it is of a sturdier and sounder founding than the north wall, which is compiled during the same time span. This second west wall extends the overall dimensions of the platform and presumably would have been covered by a perishable roof, yet it is unclear if this added space was a new interior room, though likely created an external activity area.

Structure 18 did not experience any major preserved summit interior modifications over the course of its construction history. The plaster surface was uncovered immediately under the ground surface and in a fragmented preservation. However, due to how dispersed it is within the summit interior, the plaster floor is presumed to have covered the entire occupational space. No evidence was recovered for a prepared surface in the area in between the first and second west wall. The purpose of this space is not known, as it conceivably could have been another fully enclosed and interior room or it could have been designed as an open-air work space, accessible from both the exterior and the interior original summit room. However, the second west wall is constructed at a lower depth than the first wall and therefore whatever functions were carried out in this space were being conducted at a lower level than the original interior summit room.

The most architecturally distinct appendages added to Structure 18 consist of two constructions, which abut the east and west exteriors of the building near their respective southern corners. Both of the cobble appendages are designed in a “hollow” or U-shaped formation. They consist of two parallel extensions abutting the exterior of the building, which creates a sealed interior space by a third connecting line of cobbles. The interior space is raised with soil fill and no additional cobbles, yielding the U-shaped configuration. The top of each appendage would have been leveled with a bajareque or plaster surface. Due to the shape and size of each appendage, occupational space is very limited and most likely functioned as a step or single stair associated with entryways into Structure 18. In addition to their unique design it is also noteworthy these appendages

are assembled on opposing side of the building. The result is a symmetrical appearance from a plan-view perspective. However, due to the orientation of Structure 18, only the eastern appendage would have been visible from the public space of the main plaza. The west appendage would have been obscured from the plaza and therefore probably more private in nature.

On the whole, Structure 18 embodies a combination of architectural elements that concur with its probable varied functions and distinctive location on the main plaza, the physical manifestation of which representative of a vernacular style. Due to its location on the main plaza, it is reasonable to state that Structure 18 may have maintained some form of public role or in the least, the plaza east and south facings in their appearance. The abutting step appendage along the east exterior, near the southeast corner of the building would have been the most immediate, if not only, architectural appendage visible from the main plaza. Conversely, along the north and west sides of Structure 18, more private and shielded activities could have taken place, as neither of these regions were observable from the public main plaza. Furthermore, it is in these off-plaza areas where architectural adaptations were seemingly more important to the inhabitants of Structure 18, as it is where the majority of expansion from the original 3-sided edifice is witnessed. Though the motivations remain unknown, the open north side is eventually sealed off and the overall platform is extended to the west by means of two distinct construction assemblages. Originally, Structure 18 possibly served an overall public function that required the need for it to be an open, 3-sided building. Over time, however, those functions may have changed and resulted in the enclosure of the building

to make the interior a completely private space, possibly residential in nature, all the while maintaining appearances on the plaza facings. Though, no interior built-in furniture is identified. The outcome of all of these architectural modifications express the vernacular manner to which Structure 18 maintained a public aesthetic on the plaza-facing façade, but a discrete, functional and possibly more private and residential element on the non-public sides.

Structure 33

Structure 33 is located in the southeast region of the Site Core Plaza Group and is not positioned immediately on the Main Plaza. This is the only building investigated in the Site Core Plaza Group that is considered to be located off of the Main Plaza. However, Structure 33 is identified to a member of a smaller clustering of buildings located adjacent to the Main Plaza. These surface-visible buildings are loosely recognized as a patio group and include: and Structure 10 (3m to the southwest), Structure 9 (11m to the west); Structure 11 (10m to the northwest); Structure 14 (2m to the north). The calculated area of this possible patio space in between these buildings is approximately $21m^2$. At the beginning of investigations, Structure 33 displayed evidence of slight decay and deterioration of construction materials but no other observable disturbance.

Description of Architectural Construction

Structure 33 experienced a relatively uncomplicated architectural building sequence, yet contained an intricate soil stratigraphy history. The building was erected with a surface-level construction and then expanded upon to the north with a series of layered appendage constructions. In total, Structure 33 is associated with 13 sequential time spans, 9 of which represent the formal construction and addition episodes (see Appendix A for detailed excavation descriptions and construction sequences). Although Structure 33 witnesses a relatively high number of separate time spans, the building consists of only 8 distinct construction units, 4 stratums associated with activity in and around the building, and one burial feature.

Time Span 13 (TS13) represents the earliest time span associated with Structure 33 and is defined by the natural sterile soil depositional layer, indicating a cultural-free context. The first marker of human contact occurs during Time Span 12 (TS12) and includes two separate soil contexts as fill layers associated with pre-construction preparations for the formal erecting of Structure 33. Time Spans 1 and 2 (TS1 and TS2) characterize the sequential periods of abandonment and decomposition of the building by the accumulation of soil contexts, which bury the building. The intervening time spans (TS11-TS3) represent the formal raising and the addendums both within and along the exterior of Structure 33.

Construction of Original Basal Design

Time Span 11 (TS11) marks the primary construction episode for Structure 33 and consists of the assemblage of 2 basal walls. The west basal wall (CU1) and the south

basal wall (CU2) are constructed to integrate where they meet to create the southwest basal corner. The west basal wall (CU1) exhibits the use of unmodified river cobbles arranged on-end, so that the naturally occurring flattest facing of each cobble is positioned outward to form the western facing of the structure. The interior portion of this wall does not display the use of cobbles placed on-end, but cobbles that are arranged to form a flat interior facing. The south basal wall (CU2) exhibits a more conventional construction technique as it does not contain cobbles that are placed on-end, but does display a ragged and unfinished form along the interior of the wall. Neither of these walls articulates with any other construction during this time span.

Time Span 10 (TS10) corresponds to the construction of the east basal wall (CU3) and the formation of the southeast basal corner for the structure. The corner is constructed as an inset corner and the construction style is similar to that of the west basal wall (CU1 – TS11). At its northern most extent, the east basal wall does not articulate with any other construction unit during this time span, resulting in a 3-sided building (**Figure 5.13**).

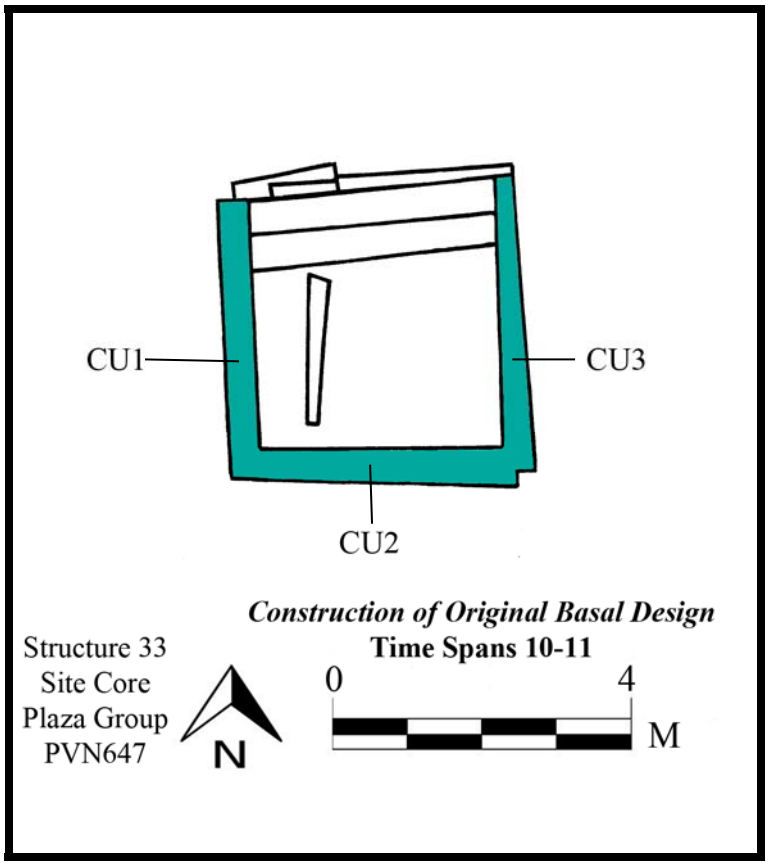


Figure 5.13: Plan-view of excavations of Structure 33 – *Construction of Original Basal Design*

The enclosure of Structure 33 characterizes the significant construction episode of Time Span 9 (TS9). A north wall (CU4) is assembled and seals the building by abutting with the west basal wall (CU1 – TS11) and the east basal wall (CU3 – TS10). Yet, the north wall is not assembled to abut with the other walls at their northern-most extents. It is constructed south of their respective end points. At this time the basal platform measures 4.1m east-west, 3.3m north-south, and stands approximately 0.25m in height. The summit would likely have supported a perishable superstructure fashioned from thatch and bajareque to form walls and a roof.

Construction of Appendages

Time Span 8 (TS8) represents the first in a series of abutting appendages along the north facing of Structure 33. The first north appendage (CU5), which resembles a wall form, is constructed and spans the entire length of the north wall (CU4 – TS9). And similar to the north wall, this north appendage (CU5) also abuts with the interior facings of both the west basal wall (CU1 – TS11) and the east basal wall (CU3 – TS10). The result are better defined northwest and northeast corners during this time span. The addition of this first north appendage (CU5) extends the basal platform measurement approximately 0.5m to the north (**Figure 5.14**).

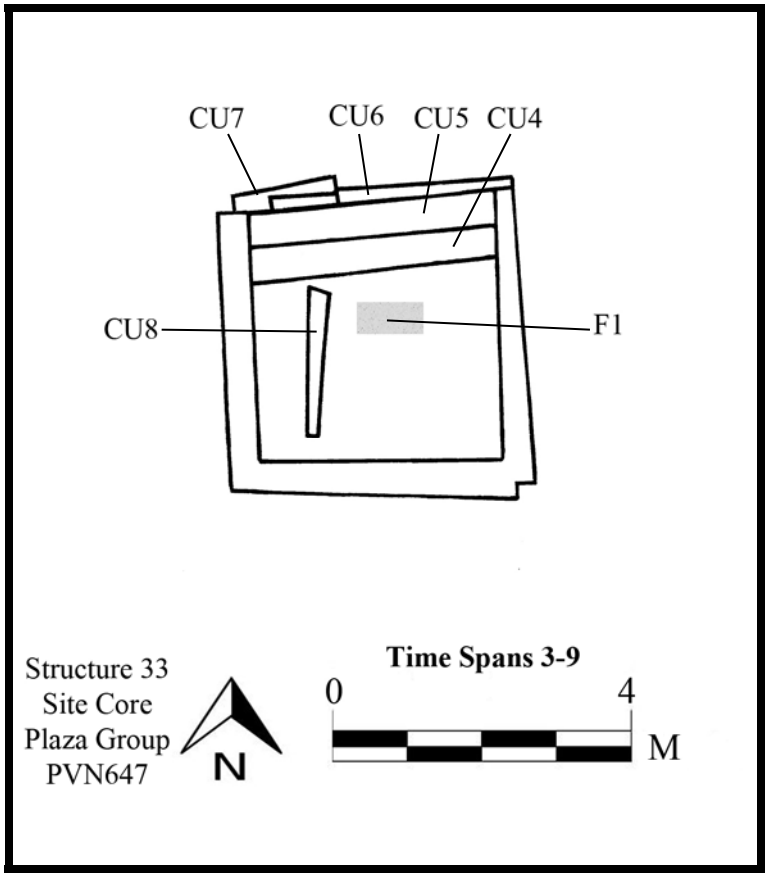


Figure 5.14: Plan-view of excavations of Structure 33 – *Sealing of the Foundation and Raising of the Platform, Construction of Appendages,* and *Defining the Summit.*

A second north appendage (CU6) is added during Time Span 7 (TS7) and extends the basal platform an additional 0.25m to the north. This north appendage (CU6) is assembled in a similar form and abuts the exterior, north-facing of the previous north appendage (CU5 – TS8), yet does not extend the entire length of the now enveloped north appendage (CU5). The second north appendage (CU6) abuts with the end of the east basal wall (CU3 – TS10) to form the final version of the northeast corner of Structure 33. However, this north appendage (CU6) only extends approximately 2.3m and ends before reaching the northwest corner region.

Time Span 6 (TS6) marks the adding of a final appendage along the northern exterior of Structure 33. This appendage (CU7) is assembled in an L-shape formation and abuts with the northern ending of the west basal wall (CU1 – TS11) and then turns 90 degrees to form a corner and continues approximately 1.5m to the east. At its eastern-most extent, this appendage (CU7) overlaps with the western end of the previous north appendage (CU6 – TS7). The interior space created between this northwest appendage (CU7) and the remainder of the un-obscured portion of the second north appendage (CU6 – TS7) consists of soil fill and measures approximately 1.5m east-west and 0.5m north-south and was raised 0.16m in height. This final appendage (CU7) also shapes the final version of the northwest corner and reveals it to also be inset, similar to the southeast corner.

Defining the Summit

During Time Span 5 (TS5), the summit interior experiences its first alterations. A burial (F1) of at least one adult (possibly two) of unknown sex is interred within the

center of the summit and at a depth roughly corresponding to the base of the east basal wall (CU3 – TS10). Cobbles were placed at the same depth and very near the burial feature, yet not in any discernible arrangement or alignment. Time Span 4 (TS4) marks the final activity associated with the burial feature (F1) from the previous time span (TS5). A fill layer of soil is placed on top of and to enfold the burial context and raises the interior summit to a height of 0.2m.

Finally, Time Span 3 (TS3) represents the construction of a summit dividing wall (CU8). This wall is assembled in a north-south orientation and at the same depth as the soil fill deposited during Time Span 4 to seal the burial context (F1 – TS5), but not immediately on top of the burial and approximately 0.3m to the west of the interment. The summit wall is a free-standing wall construction, as it does not articulate by making contact with the interior facings of the north wall (CU4 – TS9) or the south basal wall (CU2 – TS11). The summit area to the east of the wall measures 1.4m east-west and 2.7m north-south and the area to the west creates a space that measures 0.6m east-west and 2.4m north-south. The occupational space within the summit interior is raised to 0.17m during this final construction episode of Structure 33.

Structure 33: Summary and Discussion

Structure 33 is of modest size, yet the smallest of all excavated buildings within the Site Core Plaza Group. The final version of Structure 33 appears quite conventional in design, with relative summit interior minimalism. However, the assemblage history of Structure 33 is composed of numerous time spans (a total of 13), considering only 8

separate construction units were identified. Therefore, one element of architectural uniqueness associated with Structure 33 lies with its order of assemblage, as nearly each construction unit is observed to have been erected during a separate construction episode. The relative time between each episode is recognized to be quite short; however, the vernacular architectural additions indicate a possible shift in function of the building over time. The continued layering along the north exterior with appendage walls abutting each other expands the platform multiple times in this direction, possibly establishing an external raised occupational space. However, the exact temporal relationship between the interior modifications (specifically the internment of at least one adult) and the exterior appendage additions is not entirely clear and may have occurred in an altered sequence than reported. Regardless, the earliest evidence for occupation in the area is indicated by two soil contexts, upon which Structure 33 is assembled. Constructed from unmodified river cobbles, the final version of the platform would have likely supported a perishable superstructure and no architectural linkages to neighboring structures were witnessed in the external regions surrounding Structure 33.

The final version of Structure 33's basal platform would appear to have undergone a fairly conventional construction history; however, the preliminary development of the foundational platform during TS11 only included the west and south basal walls. The east basal wall is added next during TS10 to establish a 3-sided edifice, a reoccurring formation within the Site Core Plaza Group at PVN647. Finally, a north wall is assembled during TS9 and the platform is completed as a 4-sided construction. The reasoning for this staggered construction method is not clear. Furthermore, it is

unknown how long the earlier 3-sided version of Structure 33 could have been in use before the summit interior was sealed, as the east, south, and west basal walls were of sound enough design to have supported a perishable superstructure without a fourth stabilizing wall. Due to the close proximity to northern neighboring Structure 14, the possibility exists that the open, north side of the earlier version of Structure 33 could have been the result of a potential functional connection to Structure 14. In either case, the summit interior certainly would have been enclosed and covered by unpreserved bajareque walls and a roof made of thatch following the establishment of the north wall.

Interior modifications are observed to be few in number, but at least one being of presumed significant personal importance to the occupants of Structure 33. The most formal burial feature from all investigations to-date at PVN647 is in the summit interior of Structure 33 during TS5. Cranial and other correlating skeletal remains from at least one adult of unknown sex were recovered, but enough faunal fragments were identified to indicate a possible second adult. The death of these individuals may have prompted a new building program within the summit interior, as a summit dividing wall is observed during TS4 and to the west of the burial context and at a higher elevation. This north-south aligned wall is not observed to articulate with any other construction unit and may have supported a slender bajareque wall of casual construction to partition the summit interior into a smaller western entrance area and a larger occupational eastern space. The larger and possibly more private of the spaces is located above the interment.

The most uniquely vernacular modifications experienced at Structure 33 occur along the northern exterior and consist of a series of abutting appendage additions, which

over time expand the platform nearly 1m to the north. The first appendage addition occurs during TS8 in the form of a wall and is positioned along the entire exterior length of the north wall. The second appendage addition during TS7 is also in a wall form and abuts the previous appendage addition. This second appendage addition is composed of larger cobbles but sits at a slightly lower height than the first appendage addition. Furthermore, the second addition establishes the final version of the northeast basal corner but extends to the west only far enough to abut with the final appendage addition assembled during TS6. This final appendage abutment is unlike the previous two addendums and is fashioned with small cobbles into an L-shape design at the northwest corner. The interior space created by this formation would be filled in with soil and probably covered with a prepared surface material (bajareque or plaster) and functioned as a step to an entryway near the northwest corner. Additionally, it is likely that the two appendage additions of wall forms, which extend the length of the north facing, would have been surfaced by a perishable material and served as exterior occupational space that may or may not have been covered by an extension of the thatch roof.

To conclude, due to the size, location, and vernacular architectural traits, the final version of Structure 33 most likely was associated with more private and personal occupations, a residence. Measured to contain the minimal platform surface of all investigated structures and also within the most off-plaza locale, the building did not witness any major construction overhauls or adaptations to its exterior. Structure 33 could have been established initially as a 3-sided covered shelter associated with occupational tasks and functions linked to neighboring Structure 14, due to their close

proximity. This proposal is supported by the fact that if Structure 33 was occupied in any way while it was a 3-sided building, the open and accessible side is positioned immediately to the north and at Structure 14. However, over time, and perhaps instigated by the burial of at least one adult, the intention of Structure 33 was converted and developed into a more independent edifice, yet still maintained its most prominent facing on the north with the addition of several appendages. Overall, these architectural manifestations and adaptations represent the vernacular designs associated with needing less external prepared observational areas but greater space for carrying out more private activities. Furthermore, the intentional shift from a work space to a residence.

Discussion of Site Core Plaza Group

Analysis of the buildings investigated from the Site Core Plaza Group reveals the variety and complexity of the architectural styles and practices occurring within this region of PVN647. Some structures share clear similarities in regards to their structural design, while simultaneously displaying divergent characteristics that distinguish their vernacular uniqueness. Several factors undoubtedly contribute to the architectural likeness or disparity between structures and may include, but are not limited to: 1.) length of occupation; 2.) changes over time; 3.) positioning and orientation in relation to the main plaza; 4.) and the individual function of each structure. However, the architectural arrangements of the structures researched in the Site Core Main Plaza are compared and contrasted in this discussion by the following three classifications: platform and basal design; interior elaborations; and exterior modifications and appendages.

Platform and Basal Design

The construction sequences and arrangements of basal and platform designs analyzed from investigated structures within the Site Core Plaza Group expose both conventional building practices and those that were unanticipated. A typical and predominant construction design when initially assembling a structurally independent edifice from unmodified and naturally occurring building materials is the establishment of four separate foundational walls. This particular practice is confidently identified to have occurred with respect to only two researched buildings from this region of PVN647: Structures 12 and 17. The remaining three structures (16, 18, and 33) displayed assemblage histories that initially established a purposeful and functional 3-sided surface-level building, which was later sealed with a fourth wall.

Conventional Design

As a generally standard design plan, Structures 12 and 17 witnessed their original and primary platform configurations to include all four basal walls from the onset of their assemblage. The completion of the platform of Structure 12 is interpreted as occurring over two consecutive construction episodes, but with little relative time separating them. Each of the 4 basal corners from Structure 17 are recognized as integrating and therefore constructed simultaneously. It is noteworthy to reiterate that Structures 12 and 17 are the largest buildings within the Site Core Plaza Group and are positioned on opposite sides from each other across the main plaza on the south and north, respectively. From stratigraphic observations across the main plaza, the platforms from each building are

identified as not having been founded upon corresponding soil levels. Structure 12 is situated on top of a naturally occurring rise south of the main plaza; while the plaza-facing south façade of Structure 17 is assembled on top of several prepared surfaces and soil fill episodes. Though their individual and precise functions may have been divergent, both structures displayed other generalized similarities with respect to containing public spaces associated with their plaza-facings but designed with more restricted and private interiors.

3-Sided Design

The prevailing original basal design observed within the Site Core Plaza Group is the construction of 3-sided or U or C-shape edifices. The buildings that exhibited this earliest form are Structures 16, 18 and possibly 33. This 3-sided configuration results from the assemblage of three basal walls arranged with one wall positioned perpendicular to and structurally integrated with two additional paralleling walls, and immediately upon the ground surface. The two parallel walls remain unarticulated with any other construction feature at the opposite extents from where they form corners with the perpendicular wall. Through architectural analysis of the later construction units associated with the investigated buildings, it is interpreted that this 3-sided design pattern is intentional. Observations from the construction techniques and overall integrity of the original three walls from Structures 16, 18 and 33 suggest that a perishable superstructure could have been supported without the aid of a fourth stabilizing wall. Therefore, the 3-sided design likely held a functional and occupational purpose before a fourth wall was constructed and the building was eventually sealed off.

Structures 16 and 18 stand out for exhibiting several similarities associated with the identification that they were both initially constructed as 3-sided buildings. First, both structures witnessed the assembly of other major construction units either before or simultaneously to the addition of the fourth and enclosing wall. The original basal foundation of Structure 16 extensively expanded to establish occupational areas to the east, south and west before the final north basal wall was established. In a slightly similar way, Structure 18's foundation witnessed its largest and only expansion episode to the west during the same construction sequence as the final north basal wall. These observations support the assertion that the 3-sided configuration is intentional by design.

Secondly, the quality of construction and selectiveness of building materials of the fourth and enclosing wall are significantly inferior to the earlier three basal walls at Structures 16 and 18. The fourth and final enclosing walls from both buildings exhibited shoddy and hasty construction methods as they made use of large and irregularly shaped cobbles and were supplemented with very little to no soil fill or chinking stones for structural support. Therefore, the fourth basal walls from each structure were observed to be extremely poorly preserved and notably falling out of place. The quality of a perishable wattle and daub wall amassed on top of these substandard masonry constructions remains unclear. Nevertheless, the observation that the fourth basal wall is assembled by a dissimilar construction technique further supports the claim that the fourth wall was appended during a different occupational stage of the building and by means of an unequal assemblage process.

Finally, as has been previously mentioned, Structures 16 and 18 are situated immediately on the main plaza and within the northeast and northwest regions, respectively. Therefore, it is their respective south façades that are immediately facing into the main plaza. This positioning on the main plaza is especially significant given that in both instances it is the north or off-plaza facing that is originally the unsealed side to the 3-sided building design. Additionally, neither of the buildings included any further architectural expansions in this specific off-plaza region after the fourth wall was constructed. The fact that the location of the unclosed side in the 3-sided configuration is the off-plaza side can further the understanding of the overall purpose of the building. The exact activities or function of the original 3-sided design of Structures 16 and 18 have yet to be explored in this discussion. However, the intentional 3-sided arrangement yielded an unsealed edifice, which opened up to the off-plaza and potentially less public region of the structure and could link sheltered activities from those that were conducted outdoors.

Structure 33 is guardedly identified as an originally and intentionally constructed 3-sided building. Distinct from Structures 16 and 18, Structure 33 does not witness other major construction episodes before the building is formally sealed with a fourth basal wall. Additionally, the enclosing summit wall is assembled by means of a very sturdy construction technique and well chosen building materials. And finally, Structure 33 is not positioned immediately on the main plaza, therefore any correlation regarding which side of the building remained open, is not necessarily comparable to Structures 16 and 18.

Nonetheless, Structure 33 is located in the southeast region of the Site Core Plaza Group and within a smaller patio-arranged cluster of buildings. Therefore, the region is likely visibly and functionally secluded from the activities and events occurring within the main plaza, though the smaller open patio to the west of Structure 33 may hold significance with regard to the open facing. The construction sequence reveals that the unsealed side of Structure 33 during its early 3-sided existence was the north facing, which is not the patio facing side. Though the precise justification for commencing construction of Structure 33 remains unclear, due to its close proximity and smaller comparative size, it could have held a dependent relationship with neighboring northern Structure 14. This form of association would explain the selection of the north side as the open side of the 3-sided edifice.

Therefore, since Structure 33's original functional intent may have differed from Structures 16 and 18, though possibly associated with a shared open space, its design planning of which side to remain open would not necessarily follow the same patterns witnessed from the immediate on-the-main-plaza buildings. Likewise is it not unexpected that other construction episodes occurring after the fourth and final summit enclosing wall is established, would vary as well. This is the case with Structure 33, as it was the side that was sealed last, the north facing, which witnessed all subsequent exterior expansion activities. No other exterior facing on Structure 33 was altered or expanded upon but the north and summit enclosing wall. The overall foundational design variations witnessed at Structure 33 could be the result of its off-the-main-plaza locale and its potential original supplemental function to another building. However, similar to

Structures 16 and 18, its purpose changed over time, but dissimilarly the architectural shifts included more care, consideration and structural planning when sealing and expanding the basal arrangement of Structure 33.

Summit Interior Elaborations

The evaluation of summit interior modifications and refinements from researched buildings within the Site Core Plaza Group reveal markedly divergent occurrences. Interior enhancements are identified as prepared living surfaces, dividing walls or occupational furnishing features such as a bench. Structures within this region of PVN647 either underwent formal delineations to develop distinct rooms and some with bench features or experienced no partitioning and remained open and undivided spaces. Similar to the groupings relating to platform arrangements, Structures 16 and 18 witnessed minimal interior modifications, while Structures 12 and 17 included numerous and well-defined construction units to establish separate room spaces. The summit interior of Structure 33 is slightly amended, yet the original main occupational space is maintained.

Open Interiors

Recognized to contain the most open and non-segregated summit interiors are Structures 16 and 18. Each building possesses slight evidence for enhancement, yet no major structural additions. Specifically, Structure 16 contains an ambiguously arranged clustering of small cobbles in the center of the interior. Although their precise purpose is unclear, due to the small size of the cobbles and the one course height in elevation, it is

unlikely they could have supported a perishable dividing wall nor functioned as a bench. Access from the exterior of the building into the summit interior is likely from the southeast corner after the fourth basal wall was added to the north and sealed the interior. Structure 18 contained no cobble formations, but included a fragmented, prepared plaster surface in the middle of its summit interior. This surface is significant as a marker for an occupational level within the building. While Structure 18 was a 3-sided edifice, the most immediate access would be from the north, which remained open. However, once the fourth basal wall as assembled in this region, entry into the interior would have shifted to the southeast and southwest interior corners, due to presence of later exterior modifications. It is during this later occupational phase that the plaster floor is posed to have been established. No additional interior modifications or refinements are identified from either of these two structures.

Partitioned Interiors

In contrast, Structures 12 and 17 underwent the most distinguishable and complex summit interior elaborations. Well constructed dividing walls and occupational surfaces are witnessed within both of these buildings. Structure 12 includes the greatest number of distinct summit interior construction units, which consist of at least four cobble walls, two prepared surfaces and at least one formal cobble bench feature. The result of these constructions establish three distinct rooms: a large rectangular north room and two adjacent south rooms, each occupying the south summit corners, with the southwest room containing the definitive bench feature. Additionally, it is the southwest room where the remains of a surface of small cobbles is preserved at the base of the bench feature.

Within the southeast room, the scant remains of one individual of unknown sex are interred in the center of this space. Though a formal living surface was not identified within this room, the depth of the interment would have made the occupational level at a higher elevation than both the north and southwest rooms. The second prepared surface within the summit interior is also composed of small cobbles and is situated immediately upon crossing the threshold into the north room from an entrance near the northeast summit corner. Due to the arrangement of the rooms and that the north room is plaza-facing and the first space upon entering into the structure; it is likely this particular room was more communal in function. The two southern rooms are potentially more private in nature, as they are only accessible from the north room, significantly smaller in size, and contain inhabitable furnishings. However, the overall interior activities might have been somewhat more restricted and only welcoming to selected occupants or visitors, due to the limited access of only one identifiable entrance along the east side into the interior.

Not as elaborate as the interior of Structure 12, the interior of Structure 17 is marked as the second most partitioned summit space for all investigated buildings within the Site Core Plaza Group. The initial version of the summit interior of Structure 17 is an open rectangular-shaped space, which may or may not make functional use of an earlier wall construction located in what is later established as the south room. Upon the addition of an east-west aligned dividing wall, two distinct rectangular spaces are created: a narrower south room and a larger north room. The partial preservation of a white plaster surface is located in the southwest region of the south room, while a small cobble surface is identified within the southeast portion of the north room. Additionally, the

interment of a possible child is located within the southeast portion of the south room. (Though, due to the depth of this burial, it is believed to have been associated with a much earlier occupation and correspond with activities occurring in the area before Structure 17 is formally assembled. The context is posited to be associated with Preclassic occupation.) Similar to the room arrangement within Structure 12, the plaza-most facing room, the south room, was likely a more common and shared space, due to a possible entrance into the summit interior located near the southeast corner. Likewise, the off-plaza or back north room is probably more private in nature, as no other entrance from the exterior into this space is observed and likely only accessed from the front part of the structure, the south room. Finally, if the south appendage feature is a semi-enclosed space and only accessed from the interior of the building, then this would only add to the potential exclusivity or privilege possessed by the occupiers and activities happening within Structure 17. However, if the south appendage served as an exterior bench, the space is still limited in area and capable of accommodating only a select few at a time.

Finally, Structure 33 undergoes significantly fewer summit interior enhancements than witnessed within Structures 12 and 17, yet architecturally more than within Structures 16 and 18. While Structure 33 is still a 3-sided construction, the interior space is open and unrestricted. However, once the summit interior is sealed with the addition of the north wall, a north-south aligned and shallow but free-standing cobble wall is assembled within the western region of the interior. The assemblage quality and integrity of the construction is substantial enough to have supported a perishable dividing wall.

Likewise, after the interior of Structure 33 is sealed, the new entryway from the exterior is located near the northwest corner of the building. Therefore, the summit addition of the dividing wall is in close proximity to the main entrance and may have created a form of a 'hallway' to channel passage at the immediate point of entry into the building. Both ends of the dividing wall were open spaces into the main room to the east, which remained unmodified and free of cobble dividing or inhabitable construction features. No other investigated structure within the Site Core Plaza Group displayed a summit construction element that controlled the flow of movement within the summit interior as is witnessed within Structure 33. The overall activities within the summit interior likely developed into being more personal and private once the building was enclosed to the north. Moreover, it is within the main room where the most complete interment of as many as two individuals of unknown sex was located. The placing of these individuals within the summit interior is near the dividing wall of the structure speaks to the potential residential and non-public character of this space. A likely situation exists within the southeast room of Structure 12, which contains a significantly less formal burial feature, however, is also located within a private and restricted space.

Exterior Modifications and Appendages

The most abundant and intricate architectural elements observed from the researched structures within Site Core Plaza Group are identified as modifications and appendages to the exterior of platforms of any given building. Possible constructions along the exterior include, but are not limited to, additional walls, low-lying cobble

arrangements, or prepared surfaces. Due to the complexity of the observed external appendages and augmentations, this evaluation presents three significant categories of analysis: form and size, interpreted function, and positioning along the exterior of the structure. Under the category of form and size, further classification groupings are described as: block form, wall form, and U-shape or "box" form of exterior appendages. Next, a potential purpose of each form of appendage is examined and categorized to be terraces, verandas, balconies, benches, steps, or platforms associated with entryways into a building. And finally, the exterior appendages are analyzed with regard to their positioning along a building, in addition to the location and orientation of each building in relation to other structures and the main plaza. The culmination of this examination reveals similarities and differences both within and between structures and further accentuate the degree to which architectural vernacular practices are exhibited within this region of PVN647.

Appendage Form: Block Forms

The first category of analysis of external appendages is in reference to the variations of form and size. The first form identified is the block form and is described as a solid or continuous masonry construction, which is purposefully assembled in a non-linear style. The resulting formation is in the approximate shape of a three-dimensional cube or rectangle. This structural form of an exterior appendage within the Site Core Plaza Group is the most uncommonly observed and is primarily only witnessed as a construction practice on Structure 17. Assembled during the final construction episode of Structure 17 is the addition of a block-shaped construction along the plaza-facing south

exterior. Measuring nearly 1m^2 in area, this appendage is in the shape of a square from a plan-view perspective and abuts the south basal wall as a solidly assembled construction. It is not observed to be of a hollow construction with soil fill at the center, but of a purposeful design of a continuous and dense mass of cobble materials. (The interior of the appendage may contain more soil fill than cobbles, however, penetration beyond this final version of the appendage did not occur.) The presence of this appendage is extremely limited, however, significant as it is of an intentional design, shape, and location along the building. Therefore, it likely possesses a purposeful function in relation to Structure 17 and its overall relationship with the main plaza. This block form appendage is not documented in association with any other structure investigated within the Site Core Plaza Group.

Appendage Form: Wall Forms

Probably the most abundantly witnessed appendage form is labeled as a wall form and its description is quite true to the connotation of its title. External appendages that represent a wall form are considered a continuous and linear masonry construction, which are assembled immediately abutting, or extending perpendicular or parallel to previously erected constructions. The variations in the wall form design are in the length, height, and overall quality of construction. These characteristics, along with the location on the building, are pertinent when later considering the function of each appendage. The following discussion highlights the examples of wall form external appendages from every structure investigated within the Site Core Plaza Group.

The building displaying the most appendages recognized in a wall form is Structure 12. In total, approximately 10 separate cobble additions are assembled in a wall form and of various degrees of construction quality, length, height and width. None are identified to abut up against or immediately extend in front of earlier assembled constructions, specifically associated with the original platform and as previously described. Three appendages (all assembled during TS6) are positioned parallel and as non-articulating with earlier walls, while five appendages are assembled perpendicular to earlier walls of the original platform and connect to the paralleling wall form appendages. One wall form appendage along the western exterior (CU16 – TS5) is positioned immediately abutting and extending along another wall form appendage added during the previous time span (CU15 – TS6). In essence, this second wall appendage layered or buttressed against the earlier wall addition and its potential purpose is explored further in a forthcoming discussion. The north appendage wall is measured as the longest appendage of this form for the entire site of PVN647 yet is of a fairly low and narrow construction design. All of the wall form appendages are located along the east, north, and west sides of the building and their resulting configuration establishes the external occupational areas associated with Structure 12.

Identified to contain the fewest wall form appendages is Structure 17, immediately to the north across the main plaza from Structure 12. Structure 17 is witnessed to contain one construction unit described in a wall formation, yet is amongst the smallest, shortest and deepest in depth compared to any other construction of the same form witnessed from all other researched buildings within the Site Core Plaza

Group. Situated along and abutting the exterior facing of the east basal wall, this appendage is mostly preserved to be only 1 course in height. However, it contains 2 stacked cobbles in one location, and therefore, speculated to have been originally assembled to be 2 courses in height. The presumed original height of this wall form addition is significant when considering its purpose and association with Structure 17 as a whole.

The remaining structures (16, 18 and 33) share in common the original foundational configuration of the intentional 3-sided design. This observation is noteworthy because the fourth and final basal wall constructions added to each building could be classified as external appendages of this categorical wall form. Apart from the assemblage of the final basal wall, each structure witnessed the addition of at least one other external appendage of a wall form. Structure 18 contained one additional appendage of a wall form (CU5-TS4), located parallel to the original west basal wall of an equally solid construction quality to the previous assemblage, yet approximately 1m away. Similarly, Structure 16 possessed a wall form appendage parallel to but distanced from the original west basal wall. However, this appendage construction also contains a shorter perpendicular wall construction, which is located between the paralleling west walls. Structure 16 also witnessed the erection of 2 wall form appendages paralleling along the southern, plaza facing exterior of the building. The first south wall appendage (CU4-TS7) is assembled approximately 0.5m south from the original south basal wall and forms a new southwest external corner for the structure with the west wall appendage. However, the second west wall appendage (CU9-TS5) is positioned

immediately abutting and extending nearly the entire length of the first wall appendage. This abutting or layering is similar to the positioning of the abutting wall appendages along the west exterior of Structure 12, and their resulting function may also be analogous. Lastly, near the southeast corner of Structure 16 is a narrow (0.2m wide) and short (1m long) wall form appendage (CU10-TS4), which articulates with a U-shape appendage along the eastern side of the building. Similar to Structure 12, the formation of these external wall form appendages, respectfully, comprise the external occupational spaces created along the western exterior of Structure 18 and along the southern and western exterior of Structure 16.

Finally, Structure 33 contains two additional wall form appendages, aside from the assemblage of the fourth and final basal wall along the north side of the building. Dissimilar to the locations of the wall form appendages to Structures 16 and 18, the two wall appendages on Structure 33 are located immediately abutting the fourth and final basal wall and are all layered and immediately abutting each other. The result is the stacking of three wall appendages against each other. The first wall addition, which immediately abuts the final basal wall, extends the entire length of that summit sealing basal wall. The second wall addition, which abuts the first wall addition, is slightly narrower and extends from the northeast corner to only slightly more than half the distance of the first wall appendage. This extensive technique of layering of wall appendages is not witnessed at any other structure and is unique to Structure 33. Its existence further displays the variation in vernacular styles in operation at this particular building and collectively within the Site Core Plaza Group.

Appendage Form: U-shape or "Box" Forms

The final external appendage form identified within the Site Core Plaza Group is labeled as the U-shape or "box" form. This appendage form is described as an intentional and continuous construction formation and usually consists of two relatively short but paralleling cobble walls, which abut the exterior of a building and are connected by a perpendicularly aligned, and generally longer, cobble construction. The result is a 3-sided, U-shape, configuration or a generalized hollow "box" arrangement. An alternative configuration makes use of preexisting construction units for at least one of the three sides. However, the most salient characteristic of this form is that the interior space established by perpendicularly articulating cobble constructions is devoid of cobble materials but contains soil fill. The complete area of each observed U-shaped or "box" exterior appendage varies in length and width, however, are generally low in elevation. Furthermore, this form is predominantly located near external corners of buildings and does not extend beyond half of the distance of the basal wall to which it is abutting. Structures 16 and 18 contain absolute examples of U-shaped form appendages, while Structure 33 displays a version that is a slight variation and akin to an L-shape, yet still maintain the "box" form scheme.

Structure 16 contains the external appendage with the largest measured area for all appendages of the U-shaped form within the Site Core Plaza Group. This appendage is located along the eastern exterior of the building and near the southeast corner. Its northern-most extent abuts the exterior of the east basal wall, however the southern-most extent of the appendage abuts against the eastern end of the first south wall appendage

(CU4-TS7). The small external appendage in a wall form (CU10-TS4), which was previously discuss, abuts against the southern facing of this U-shaped appendage. Therefore, this U-shaped appendage is the most southeast construction associated with all of Structure 16. The interior space was likely leveled with soil fill along the eastern side and the significance of its location and possible function will be discussed.

Structure 18 includes two external appendages of the U-shaped form along its east and west exteriors, respectfully. Both of the appendages are located near the respective southern basal corners and both comprise an average complete area of 1.1m^2. The east U-shaped appendage only abuts the east basal wall, while the west U-shaped appendage is constructed to abut the west wall form addition (CU5-TS4). The resulting interior rectangular "box" spaces are likely leveled with soil fill, as no cobble materials were recovered from inside these regions. Due to their similarity in arrangement, size, and flanking positions along opposite sides of the exterior of the building, these U-shaped appendages yield a symmetrical plan-view appearance.

Lastly, the exterior appendage located near the northwest corner of Structure 33 is a slightly modified version of the U-shaped form. This appendage contains only 2 cobble constructions, arranged perpendicular to each other in an L-shaped formation. The shorter segment of the appendage abuts the northern extent of the west basal wall at the northwest corner of the building and forms a 90 degree corner, where the longer segment extends to the east. The eastern extent of this L-shaped appendage ends by overlapping with the final north wall appendage (CU6-TS7). The resulting arrangement creates a hollow "box" interior space containing no cobble materials, similar to the U-shaped

formations from Structures 16 and 18. And in comparison to the other structures, the interior space established by the "box" appendage on Structure 33 was likely filled in with soil and leveled to the same elevation as the height of the cobbles outlining the L-shape form. Overall, though the final configuration of these identified "box" appendages reveal slight deviations with regard to shape, size, frequency, and exact positioning in relation to basal corners, the ultimate purpose for their addition is likely corresponding.

Appendage Function: Terrace/Veranda

In the following discussion, the potential purposes of external appendages are preliminarily examined. The most predominant functional interpretation of external appendages from the Site Core Plaza Group is identified as a terrace or veranda. A terrace is described as an outdoor or external raised platform extension, which extends along the majority or entire facing of a building and therefore is capable of accommodating multiple people and activities, and possibly furnishings and possessions, at the same time. A terrace may or may not be covered by a perishable superstructure, but operates as an open-air space established along an external wall of a structure. While similar to a terrace in that it is also an external raised platform extension, a distinct attribute of a veranda is that the platform wraps around at least two facings of a building. Additionally, due to its purposeful design and framing nature, a veranda may include a partial or complete covering, extending from the roof construction over the interior portion of the structure. Depending upon the size and arrangement of the terrace or veranda it requires at least one, but usually multiple, construction units amassed together to establish either of these functional occupational spaces. Within the Site Core Plaza

Group, terrace extensions are present along Structures 18 and possibly 33. Veranda spaces are established along Structures 12 and 16.

The addition of only one wall form appendage approximately 1m away but parallel to the west basal wall of Structure 18 yields the foundation for a raised terrace platform along the entire length of this facing of the building. This raised area was established by leveling the space in between the basal wall and the wall form appendage with soil fill to produce a uniform surface. It created a platform more than 1m in width, 4m in length, and was likely sheltered by a covering or partial covering, which extended from the roof over the summit interior. A formal entrance into Structure 18 may have been accessible from this terrace region. Furthermore, this elevated occupational space is located along the facing that is only partially visible from the main plaza. However, this is the facing that is oriented toward a potential means of access into the main plaza. Therefore, the outcome of appearance, in addition to the activities occurring on and around this terrace, may have been dictated by this easily noticeable exterior region.

Structure 33 witnessed the layering of two wall form appendages along the northern facing, after the fourth basal wall was established to seal the summit interior. Unlike the terrace space established along the west facing of Structure 18, this terraced region created a raised platform completely from masonry constructions and no soil fill. The tops of the preserved abutting wall appendages were nearly all at similar elevations and likely covered by a perishable surface material. The exact functional purpose for such a raised occupational space is unknown; however, it may have been covered by a perishable covering made from thatch.

The largest and most intricate version of a raised platform extension along the exterior of a building is witnessed along Structure 12. Due to the joining of numerous wall form external appendages along the east, north, and west sides of Structure 12, a veranda is fashioned along these main plaza-visible facings. The initial addition of the north wall appendage approximately 2m north of the north basal wall establishes the largest raised region identified for all of PVN647. This wall appendage extends to the east and west beyond the limits of the north basal wall and yields an approximate area of 12.75m^2. Subsequent lateral wall form appendages articulate with the north appendage and establish additional raised platforms, which wrap around the northeast and northwest basal extends of the building, resulting in the descriptive title of veranda. Smaller wall additions are added in the northeast region of the veranda to create a partition from the open occupational space and a formal entrance into the summit interior along the east side of Structure 12. In addition, a short wall addition in assembled within the northwest region and likely serves as a foundation to establish an even higher raised platform area, immediately at the northwest corner of the veranda. The exact types and regularity of activities occurring within this raised space have yet to be considered (see Chapter 6), however, due to the generous amount of measureable area, it likely could accommodate numerous people at any given time. Furthermore, on account of the elaborate design scheme and prime location for observing main plaza visitors and events, this veranda region may have been partially covered by a non-preserving superstructure.

Structure 16 is a second edifice identified to contain a veranda form of a raised platform region. Wall form appendages constructed parallel to, but approximately 0.5m

away along the exteriors of the original south and west basal walls establish the foundation for an elevated occupational area, which wraps around the two facings of the building. The spaces in between the wall appendages and the original basal walls were likely leveled to a uniform elevation with soil fill and capped with a prepared surface. In total, approximately 4.8m^2 of occupational space is established along the south and west exterior of the building. Interestingly, Structure 16 also witnesses the addition of an abutting wall form appendage along the exterior of the south appendage and widens the extent of the raised platform 0.5m further to the south by means of a solid masonry construction. However, as this abutting wall appendage does not extend the entire length of the first southern appendage, it may have been added as a visual aesthetic, but also for the functional service as a durable, single stair upon which to step up and onto the raised veranda platform. Similar to the veranda established around the plaza-visible facings of Structure 12, the veranda around the south and west plaza-facings of Structure 16 was likely sheltered by a perishable roof.

Appendage Function: Balcony or Bench

A second understanding of the purpose of certain exterior appendages observed within the Site Core Plaza Group, which also accounts for the least of all the functional identifications, is that of a balcony or possibly an external bench. The classification of a balcony is described as an external raised platform, which is limited in its occupational space. It may or may not be covered by a perishable roof, however; a key characteristic of a conventional balcony is that it is an enclosed space and therefore access is more controlled compared to a larger terrace or veranda platform region. An external bench is

similar to that of a balcony with respect to being a raised platform of minimal surface area. However, an external bench is not an enclosed space and likely accessed from both the exterior and interior of the structure. Within the Site Core Plaza Group, only Structure 17 seemingly contains such an architectural feature and it is in conjunction with the specific block form of external appendages.

Due to the diminutive size, cube shape, and high elevation of the block form external appendage identified along the south, plaza facing of Structure 17, the closest conceptualization of a functional purpose is that of a balcony or a bench, depending upon the degree of accessibility. Unlike the terrace and veranda forming appendages assembled around Structures 12, 16, 17, and 33, this raised platform extending from the south basal wall of Structure 17 comprises a significantly smaller amount of occupational space, approximately only 1.7m^2 of area. Furthermore, it does not span the entire length of the basal facing and extends away from the building further than any other solid cobble construction. Therefore, due to its form, dimensions, and height, one proposition is that access onto this assemblage was achieved from the interior of Structure 17. Due to the lack of preserved evidence and the overall height of the platform, straightforward access onto it is not observed to be from any of the exterior sides of the assemblage. However, a perishable step could have once existed, supporting the purpose as an external bench, which was accessible from the plaza surface.

Overall, the restricted area of this block form appendage speaks to the limited number of occupants and activities it could accommodate at any singular time. Therefore, it is perceived to be a notably exclusive space, possibly even bounded by a

perishable barrier to further limit admittance. Finally, due to its positioning on the plaza-facing façade, affairs carried out on top of this platform were likely in association with matters relating to the main plaza. However, the form of interaction between the occupiers of this raised space and plaza-goers is questionably of an unequal rapport.

Appendage Function: Entryway/Step

The final identified function of particular external architectural appendages is that relating to a formal entryway into a building or a doorstep, or simply a singular step leading to another occupational space. Most entryways and steps are witnessed to incorporate several construction units to result in a functional threshold or a petite prepared platform or landing before entering a structure. The appendage forms observed to assemble such functional elements include wall form appendages, but mostly the U-shaped or "box" form additions. All structures investigated within the Site Core Plaza Group contain at least one appendage amalgamation, which results as a formal entryway, doorstep, or step.

Comparable to other architectural complexities occurring in and around Structure 12, the area identified as an entryway into the summit interior is equally structurally intricate. The arrangement of at least four distinct wall form constructions fashion the access-restricted entryway to the summit interior along the eastern facing of the building. Located within the northeast region of the plaza-facing veranda, a brief north-south aligned wall marks the border between the open and public veranda space and the cordoned off passage to the summit entrance. On the east side of the brief diving wall lies a single step, which establishes a small (approximately $1m^2$ in area) landing

immediately at the base of yet another step into the north room. This raised landing space is square in shape and the entire entryway was likely covered by a perishable roof made from thatch. However, it is unclear whether an exterior perishable wall existed along this eastern facing to truly form a channeled and enclosed passageway to the entrance, and one that was only accessible from the lower veranda platform to the north. If no such exterior wall was assembled, than access to the entryway landing would have also been open along the eastern exterior of the building and admittance into the summit interior accessible from directions other than the north, plaza-observable north veranda. This structural design to control or possibly restrict access to an entryway, doorstep, or simply a step is not witnessed at any other building within the Site Core Plaza Group. However, it is interpreted to be intentional, along with all other architectural configurations from Structure 12.

In contrast to the multiple construction units on Structure 12 to establish a formal entryway into the building, Structure 17 only contains a short and low-lying wall form appendage along its eastern facing likely serving as a single step. Due to its low elevation and brief length, it does not yield an efficient occupational space. Furthermore, due to its form, size and location, it likely functioned as a step leading into the south room of the summit interior of Structure 17. It is not completely clear from the preservation along the east basal wall that a formal doorway once existed in this region, however; the functional purpose of this low wall appendage operating as a step supports the possibility that an entrance could have been located along this facing. Finally, the

short width of this protrusion was likely covered from the overhanging perishable superstructure amassed on top of the basal platform of Structure 17.

The remaining buildings (Structures 16, 18 and 33) incorporate U-shaped or "box" form appendages that establish steps leading to raised platforms or entryways leading into structure interiors. Structure 16 includes the largest U-shaped external appendage observed within the Site Core Plaza Group, which functions as an entryway or doorstep into the building along the east facing. A presumed entrance into the summit interior is located in this southeastern region and this U-shaped appendage establishes a surface that is not directly on the ground surface. Measuring approximately 2.5m^2 in area, the low-lying raised platform provides a sufficient amount of occupational space to stand before entering and when leaving Structure 16. However, due it is overall size and location, other activities occurring in this immediate outdoor region along this eastern exterior could also have been carried out on top of this surface. The sturdy construction quality of the adjacent east basal wall could have structurally aided in supporting a perishable covering over this exterior doorstep entryway.

Similarly, Structure 18 contains a U-shaped external appendage along its eastern facing, which likely functions as a doorstep entry space. Additionally, Structure 18 includes a second U-shaped appendage along its western facing, which abuts the western terrace and serves as a step up onto this raised occupational platform. The U-shaped appendage along the eastern facing near the southeast basal wall measures approximately 1.5m^2 and comparable to the analogous appendage on Structure 16 establishes a raised platform suitable for select forms of stationary activities, aside from formalizing this

eastern entrance. The second U-shaped appendage on the west facing of Structure 18 is affixed against the west terrace appendage near the southwest basal corner region and roughly measures 1.5m^2 in area, as well. Although these appendages are of similar form and size on flanking sides of the building, they operate in slightly variant ways. The U-shaped appendage along the east facing is positioned immediately outside an entrance into the summit interior and refines this area before entering and when exiting the structure. Alternatively, the U-shaped appendage along the west facing provides a raised and formal prepared surface upon which to stand before stepping up and onto the higher platform of the west terrace. The east entryway could have been partially covered by an extension of the perishable roof assembled to shelter the main summit interior. However, it is unclear to if the west step to the west terrace was sheltered, even though the west terrace region was likely protected by covering made from non-preservable materials.

Finally, Structure 33 includes the "box" form appendage that is configured in an L-shape and distinct from the U-shaped forms observed from Structures 16 and 18. However, the function of this appendage is likely corresponding in that it operated as a singular step, leading to an entryway into the summit interior of Structure 33. The location of this appendage near the presumed entrance along the north facing and near the northwest basal corner is akin to the U-shaped appendages along the east facings of Structures 16 and 18. Although smaller in overall area (approximately 0.5m^2), this L-shaped appendage abuts the exterior of the earlier wall form north appendage and the

raised platform established along this facing of the building. It is unclear whether the immediate step of the "box" form appendage would have been covered by a perishable roof.

Overall, the predominate appendage form that appears to mark an entrance into a building or function as a step to lead to that entrance or another prepared external space, is that of the U-shaped or "box" form. Other likely functional possibilities for these particular appendages could simply be of an external, prepared occupational space, unrelated to the access into a structure. Certain stationary forms of outdoor activities or simply leisurely interests, such as socializing or people-watching could have been conducted in these regions. Furthermore, it is significant to highlight that this appendage arrangement requires minimal cobble materials to establish a low-rising platform region, as the interior of the form is raised with soil fill. Solid cobble appendage assemblages necessitate greater quantities of cobbles, which likely entail greater labor efforts, compared to the U-shaped or "box" appendage form variants. When the locations of these appendages on their respective buildings and the positioning of those buildings with respect to the main plaza are evaluated, further support for their proposed functional purpose is revealed.

Appendage Location: On-plaza

The final category of analysis of external appendages witnessed along investigated structures within the Site Core Plaza Group is in relation to the location on the corresponding building. Effectively, the following discussion compares and contrasts all forms of appendages, their corresponding functions, positioning and orientation with

respect to the main plaza. Since nearly all structures, except for Structure 33, are considered to be positioned immediately on the main plaza, the locations of the external additions are characterized as being appended to either an on-plaza facing or an off-plaza facing. Additionally, the external appendages are examined in reference to the building's locale in relation to other buildings and their positioning with respect to the main plaza. Finally, since Structure 33 is located within a southeast region of the Site Core Plaza Group and not immediately on the main plaza; as such, the analysis of appendage locations from this building is featured in the off-plaza discussion. (However, Structure 33 is recognized to be a member of a smaller patio arrangement within the southeast region of the Site Core Plaza Group.) The purpose of this examination seeks to highlight the significance of expanded versus non-expanded upon external facings and spaces; as well as, initiate the contextualization of the potential public versus private nature associated with these two generalized localities. The result will establish the functional associations with regard to vernacular preference for select appendage forms associated with differing platform types, as well as positioning on or off the plaza.

An on-plaza positioning of an external appendage corresponds to any facing of a structure that is discernible from any generalized location within the main plaza. Certain buildings, namely Structures 12 and 17 are oriented such that there is one prominent facing positioned immediately toward the plaza, resulting in the two flanking sides being visible as well, and the fourth side being completely hidden from view. However, other structures, specifically Structures 16 and 18 are oriented in such a way that two facings are completely exposed to the main plaza, while a third is only partially visible, and the

fourth is entirely concealed. These variations in orientation and direct facing into the main plaza become significant when external appendage form, size, and quantity are evaluated.

Structures 12 and 17 are the largest in size and their platforms are arranged with one direct facing into the main plaza; however, they significantly vary with respect to number and positioning of external appendages. Structure 12 includes the elaborate construction history of the external appendages that form the wrapping veranda along all three of its plaza-observable sides. The most prominent plaza facing, the north, includes the most extensive external appendages to form the northern veranda, as it increases both the width and length of the entire plaza-facing of the building and into the main plaza. In contrast, the most prominent plaza facing of Structure 17, the south, includes the appendage of the possible balcony or bench in the block form and is not observed to extend the building any further into the main plaza. The forms of these external appendages are quite divergent, though their functions may be more harmonizing than their opposing sizes and shapes may indicate. Both spaces are likely established to accommodate observers of main plaza activities. However, by design the veranda on Structure 12 can support considerably more observers at any given time compared to the smaller platform space along Structure 17.

Furthermore, the east and west exteriors of Structure 12 witness elaborately designed wall form appendages to establish the various raised occupational spaces of the veranda that wrap around the northeast and northwest corners of the building. Structure 17, however, only includes the addition of a short and low-lying wall form appendage

near the base of the east basal wall. The exact identification of this low-lying assemblage as a formal step leading to an entrance into the summit interior is not completely substantiated from the preservation of a door or entryway on the east basal wall. However, this appendage is not substantial enough in size or shape to accommodate occupational activities, as compared to the external zones created along the east and west exteriors of Structure 12. Due to the orientations of Structures 12 and 17, both the east and west exteriors of these buildings would be visible from the main plaza. For this reason, it is perhaps not coincidental that the raised platforms along the east and west sides of Structure 12 are predominantly located near the plaza-facing basal corners and not near the off-plaza basal corners.

Overall, though the primary plaza facings from both Structures 12 and 17 witness the addition of external appendages, Structure 12 includes far more in quantity and elaboration to fashion the elevated platform space, which also extends the initial boundary of the building into the main plaza. Likewise, the plaza-observable flanking sides of Structure 12 undergo considerably more episodes of additions and modifications than the slightly modified east facing and completely unaffected west facing of Structure 17. Finally, given the physical magnitude, orientation, and primary positioning across the main plaza from each other, the occupants of Structures 12 and 17 were undoubtedly distinguished and possibly central in main plaza activities and events. Therefore, an element of their role and objective likely included a public and communal relationship with the shared plaza space. This association would yield that the most plaza-observable

façades of each building have the greatest public significance in reference to their individual functions. Yet, the physical manifestations of their most public façades varied considerably.

Unlike Structures 12 and 17, the other on-the-main-plaza investigated buildings, Structures 16 and 18, include two prominent facings toward the main plaza. Structure 16 is located immediately to the east of Structure 17, however, is also positioned slightly south and at a different orientation. As a result, the south and west facings of Structure 16 are immediately visible from the main plaza. Furthermore, it is the south and west exteriors that together witness the addition of four separate appendages and all in the wall form. The outcome of these appendages establishes the veranda occupational area, which wraps around the south and west sides of the building. Due to its orientation and positioning, the east facing of Structure 16 is only partly discernible from the main plaza and is mostly exposed to the close but uninvestigated, eastern neighbor of Structure 28. However, the east facing of Structure 16 includes the U-shaped external appendage of an entryway at the southeast corner of the building. The immediate southeast corner is likely the most visible portion of the east facing from the main plaza; however, it remains unknown to what extent the remainder of the east façade and any possible activities carried out along this exterior platform region are detectable from the main plaza.

Similar to Structure 16, as it is also positioned slightly south of Structure 17 but on the opposite side and to the west, is Structure 18. Structure 18 is also oriented such that its east and south facings are directly positioned toward the main plaza. However, unlike Structure 16, it does not witness the majority of its external appendages added to

these immediate plaza-visible facings. Only the east facing includes the addition of a U-shaped appendage near the southeast basal corner, which establishes a platform entryway into the building and is completely noticeable from the main plaza. No observable modification is made to the other prominent main plaza south facing of Structure 18. The west facing is identified as only partially visible from the main plaza and undergoes at least two distinct construction phases of external modifications. One construction phase includes an external appendage in a wall form and fashions the west terrace, while a subsequent phase adds a second and flanking U-shaped appendage, which yields a raised step that leads to the higher platform terrace region. A burnt earth prepared surface is also located immediately abutting the base of the west facing of the terrace platform and north of the step. The result along this partly detectable from the main plaza side of Structure 18, is a considerable amount of construction activity over time compared to the analogous east facing of Structure 16. Due to the slightly greater density of buildings in the northeast region of the main plaza, it is possible that further expansion was spatially limited in the exterior spaces east of Structure 16. Additionally, it is hypothesized that one point of access into the main plaza is from the west, leaving the western facing of Structure 18 exposed to passing plaza visitors and therefore in need of more modification in presentation and/or function. However, regardless of the degree of visibility and from what directions, the final versions of these respective slightly main plaza viewable regions exhibit external appendages in the similar U-shaped form and for nearly analogous functional reasons.

Overall, similar to Structures 12 and 17, it is likely that Structures 16 and 18 held auxiliary public prominence as buildings situated immediately on the main plaza but positioned in lateral regions. Additionally, due to their locales on the main plaza, Structures 16 and 18 inevitably held some form of respective associations with the public happenings occurring within the main plaza. Therefore, the most plaza-viewable facings from these structures are imagined to be fairly public in nature. The mutual space and shared activities of the main plaza may have been the impetus for expanding the south and west facings and creating the veranda region along Structure 16 and for establishing an entrance along the east facing of Structure 18. It is unclear, however, to what degree the semi-discernible third facings from each structure would have operated as communal or more private types of spaces. The east facing of Structure 16 is most apparent to Structure 28 and therefore, slightly more concealed. Therefore, the platform entryway would also be partly shielded from immediate view from the main plaza. Conversely, the west facing of Structure 18 may have been equally as visible from the main plaza as the east facing of Structure 16, however, if an entry point into the main plaza was from the western region, this particular facing on Structure 18 would have been observable by approaching and departing plaza-goers. Due to this possibility, the west facing of Structure 18 may have expanded with a terrace for reasons unrelated to its degree of visibility from the main plaza but in connection to greater pedestrian traffic in the area and being more exposed from other directions. This scenario marks the west facing of Structure 18 to be on more public display than the eastern exterior of Structure 16 and possibly not as obscured from non-residents or guests.

It is noteworthy to highlight a final observation with respect to amended facings amongst all four of the structures positioned immediately on the main plaza. A similar grouping of observations has maintained from the previous discussions of platform designs and interior modifications. Structures 12 and 17 are identified as being erected by means of a conventional platform assemblage, contain segmented summit interiors, are prominently positioned immediately across from each other, and are oriented such that each building has one principal facing directed toward the main plaza. However, Structure 12 experiences significantly many more external appendages and of dissimilar styles than Structure 17, but all are along plaza-visible facings. Likewise, Structures 16 and 18 are described as intentional 3-sided constructions with open and unrestricted summit interiors, and are oriented with two major façades visible to the main plaza. Structure 16, however, includes more exterior appendages, which form the veranda along the most plaza-visible facings, while Structure 18 expands with greater elaboration with a raised terrace along a third facing, which is only slightly discernible from the main plaza. In contrast to Structures 12 and 17, a similar appendage form, size, and along more analogous facings are witnessed between Structures 16 and 18. The shared functional intent of U-shaped appendages on each building, in conjunction with location, reveals an overall vernacular commonality between these structures.

Appendage Location: Off-plaza

An off-plaza positioning of external appendages are identified in association with facings that are neither visible nor clearly recognizable from the main plaza within the Site Core Plaza Group. As previously described, Structures 12 and 17 each possess one

facing that is not discernible from the main plaza. Likewise, due to their orientations, Structures 16 and 18 each contain one facing completely obscured, but also include one facing that is only semi-observable from the main plaza. Finally, as it is not identified to be immediately located on the main plaza, the discussion of all external appendages associated with Structure 33 is included here.

In brief, Structures 12 and 17 did not witness the addition of any external architectural appendages along their respective off-plaza facings. The off-plaza north facing and subsequent northeast and northwest basal corner regions of Structure 17 are all devoid of exterior alterations or additions. Similarly, the off-plaza south facing and southeast basal corner of Structure 12 did not witness any changes or enhancements. The southwest corner region of Structure 12, however, contains the mound of burnt earth and adjacent angled cobbles arranged into rows. These contexts are not classified into a particular exterior architectural appendage category, as their form, purpose, and direct association with Structure 12 remain unclear. However, they are referenced due to their predominantly off-plaza positioning along the exterior of Structure 12. It is uncertain how distinguishable the activities in connection with these contexts were visible from the main plaza.

Structures 16 and 18 are identified as both being of the intentional 3-sided platform design. In addition, for each building it is the north basal wall that is constructed later during its use. Due to each structures respective positioning within northern regions of the Site Core Plaza Group, it is not unexpected that it is the north wall that is added last in both cases to form a fully enclosed edifice. It has been inferred from

the purposeful 3-sided design that the most off-plaza facing remain the open and incomplete side in this platform arrangement. Therefore, it is the off-plaza facings, the north facings, from Structures 16 and 18 that witness the addition of wall form appendages with the intent to seal the interior of each building. To be precise, for whatever functional purpose, the significance of the open facing in the 3-sided construction design lies in its location as being the most off-plaza facing. It is concluded to be coincidental that it is the north facing from each structure, due to their analogous northern positioning with respect to the main plaza. Technically, the addition of the fourth and final basal wall serves the purpose of completing the foundation and raising of the platform and is not necessarily expanding the exterior facing of the building. Therefore, it is arguable to label such wall form additions as exterior appendages. Yet, due to the relevancy of the location of the open side in this design with respect to the main plaza, the discussion is highlighted in this context. Aside from the addition of the summit sealing wall appendages along the off-plaza facings of both Structures 16 and 18, no other architectural additions or modifications are witnessed in these regions. As previously mentioned, slightly allied appendages are affixed along the semi-visible facings from each structure and for somewhat analogous purposes.

A preliminary assessment reveals that relatively little to no architectural construction activity occurred in the immediate off-plaza regions associated with Structures 12, 16, 17, and 18. Structures 12 and 17 demonstrate none at all (aside from the burnt earth and angled cobbles associated with Structure 12), while Structures 16 and 18 only witness the completion of the building with the fourth basal wall and no other

external modifications. The lack of observable architectural elements can indicate a potential conscious intention for open and unconstructed off-plaza spaces. The result of such unrestricted space could accommodate outdoor activities that do not require masonry constructions. The exact types and frequencies of activities that could take place in these architectural-free regions are uncertain, however, due to their positioning as off-plaza spaces, they would likely be quite private and concealed from the main plaza. Though no elaborate external appendages are witnessed in these off-plaza areas, it is noteworthy to emphasize the potential secluded and non-communal nature of these spaces, as compared to plaza-visible facings.

Finally, Structure 33 is in this off-plaza category because of its overall location as not being positioned immediately on the main plaza. However, it is acknowledged that it is located in the southeast region and a member of a smaller patio arrangement with other buildings. The location of all external appendages amassed along Structure 33, however, are located along its north facing, which is not immediately facing the open patio space to the west. As Structure 33 is cautiously recognized to be of the intentional 3-sided platform design, the fourth and final basal wall is loosely categorized as an external appendage of a wall form. However, in contrast to the definitive 3-sided constructions of Structures 16 and 18, the facing that incorporated the most external appendages at Structure 33 is the fourth facing, which was sealed last. The formally open, north facing of Structure 33 expands with the addition of two subsequent wall form appendages constructed immediately abutting the fourth basal wall. The interpretation of this architectural design is to establish a raised masonry occupational platform. Lastly, an L-

shaped cobble appendage is affixed along this north facing and at the northwest corner of the building, likely operating as a slightly raised doorstep platform positioned immediately outside an entrance leading into Structure 33. None of these abutting appendages are along the direct patio-facing, though likely visible from the open space. However, the positioning of the additions all along the same facing of Structure 33 is significant. No other structure within the Site Core Plaza Group exhibits a similar construction history, where only one facing is amended over time, while all others are unaffected.

To conclude, Structure 33, in several categories, is representative of an outlier but provides substantial contrasting information in comparison to the other buildings investigated from the Site Core Plaza Group. The importance of Structure 33 and its location demonstrate a deviation, as it does not seem to follow any of the predominant patterns witnessed from the on-the-main-plaza buildings. Structure 33 may have an original design of an intentional 3-sided building; however, the direction of the open facing appears to be a result of an alleged relationship with an adjacent building and not with an open patio space. Furthermore, the exterior facing that witnessed the greatest amount of elaboration is in disagreement with the observations from the other structures. Lastly, the public or private nature of the exterior spaces surrounding Structure 33 remain unknown, as all regions not immediately considered in association with the main plaza can be generically categorized as ‘less public’. Overall, the disparities of Structure 33 can

speak to the potential influence of an on-the-main-plaza positioning and the forms of interactions and activities occurring within and between the main plaza and Structures 12, 16, 17 and 18.

Conclusions about the Site Core Plaza Group

The architectural construction designs, arrangements, scales, and locations of all of the researched structures and their associated components reveal that several vernacular observations are occurring within this region of PVN647. Furthermore, analysis of these observations sustains that variations and adaptations were permissible, which further displays the true flexibility and improvisation of vernacular styles. The preceding discussion highlighted the variant manifestations of platform designs, interior alterations, and exterior expansions and demonstrates the architectural distinction and complexity witnessed in and around Structures 12, 16, 17, 18, and 33. The significance in each of these classifications can explain not only how individual structures were amassed, but underscore possible shared social motivations and overall identity expression of the inhabitants at PVN647.

Several benefits exist from evaluating each classification regarding structure foundation/platform design, and interior and exterior modifications, as valuable conclusions can be drawn regarding arrangements and frequencies of architectural vernacular observations. To begin, the greatest variation is witnessed in exterior appendages, however, original design planning of foundation/platforms display a unique vernacular practice. Two primary patterns are observed and while one is unsurprising

due to a standard arrangement of 4-sided structures, the second was unforeseen. From a masonry construction standpoint, a 3-sided edifice is quite unconventional, possibly even inefficient and illogical. However, for whatever functional reasons, it was intentional and evidence that "customary" forms of structural designs neither impeded builder's objectives nor impacted their materialization. The deliberateness of the 3-sided open design is further supported as Structures 16, 18, and 33 stand as evidence that this arrangement was repeatedly exercised within this region of the site. Furthermore, the degree of labor and raw construction materials needed to build this design are less than that required of an initial raised platform. The users of this particular building arrangement likely could amass the design without the assistance of extra-household members. In comparison to the conventional 4-sided raised platform arrangement, which may necessitate greater quantities of construction materials and possibly additional labor help, though likely not specialized or trained builders.

To supplement the validity of this peculiar foundational arrangement, this particular 3-sided edifice formation is also witnessed within the Naco Valley, however, in structures associated with Postclassic occupation (Wonderley 1986). Regardless, the presence of this arrangement at PVN647 is significant because it confirms that some type of a conventional architectural designs is occurring at this site (namely at Structures 12 and 17), but also unique and specifically customized practices are being performed. Alternative ways of arranging and organizing structure founding, which could be identified as makeshift or rudimentary, were exercised to meet immediate structural needs of residents within the region of PVN647.

Secondly, evaluating summit interior arrangements and enhancements reveals two patterns, which may only be loosely associated with a vernacular intent. However, when these patterns are analyzed in conjunction with other characteristics of the building, they provide additional conclusions regarding overall structural associations, variations, and complexity. Both Structures 12 and 17 underwent the most elaborate interior alterations and established distinct occupational room spaces. Furthermore, the partitioned spaces shared the arrangement of creating one open room within the plaza-most facing region of the interior. The off-plaza room within Structure 17 remained unchanged, while Structure 12 underwent further partitioning and resulted in two separate off-plaza rooms. The interior modification of these structures also indicate a greater labor effort associated with the relatively high platforms of these particular buildings, as well as the conscious intent to divide internal spaces. As a result, larger construction teams were likely required to amass these structures.

In contrast, Structures 16 and 18 remained largely unaffected, while Structure 33 included a brief, yet unarticulated, wall construction and left the majority of the interior space unmodified. Perhaps it is simply coincidence or in direct relation to the individual functions of each structure, however, the investigated buildings that witnessed similar interior modifications, or lack thereof, likewise hold other architectural traits in common. However, it remains unknown how conscious and purposeful these similarities between architectural features and vernacular patterns may have been. Regardless, alterations within summit interiors remain vital in understanding the functional significance of each building. Furthermore, the divisions indicate that the occupants were modifying structure

interiors to need their changing needs and had access to the construction materials and labor resources to achieve them.

Finally, perhaps the greatest display of vernacular patterns occurs with respect to modifications and additions to the exteriors of all investigated structures. Due to the variation and complexity of these architectural amendments, they required further classifying taxonomy. As previously described, exterior assemblage forms and sizes, functions, and positioning on structures and with respect to location within the Site Core Plaza Group have all been evaluated.

Of the three configurations identified, the wall form is understood to be the most conventional and perhaps even standard form when it comes to cobble architecture. The observation of this form on nearly every investigated structure from this region of the site supports its potential customary vernacular character. However, the identification of two other external assemblage forms illustrates the architectural ingenuity and adaptability in the organization of structure exteriors. The block form is categorically the most particular of all appendage forms in shape and scale, and likely function and location, and therefore, amongst the most stylistically distinct. Although the block form carries the least statistical significance, considering it only appears once along Structure 17, it is taken to be specific and deliberate in its complete construction design. Furthermore, due to the dense cobble arrangement, the block form appendage required likely as much cobble materials as amassing a wall form appendage, which extends the length of a basal wall. Therefore, the access to the construction and building resources are likely analogues between these two appendage forms.

The U-shaped or “box” form is also deemed to be explicit in its arrangement and serves as another representation of a planned and purposeful assemblage. Though unlike the block form, the U-shaped or “box” form is replicated throughout the Site Core Plaza Group and appears on three separate structures, and even twice on Structure 18. The greater rate of frequency of this form further supports its intentional design and distinguishes it as a unique construction configuration. Furthermore, the relatively low-lying nature of the appendage form, coupled with the use of soil filler, the construction labor and need of raw materials is relatively minimal. The correlation of this appendage form along supplementary buildings within the main plaza is not an unforeseen observation, as the users/occupants of these specific buildings likely did not have the same access to construction means as those from Structures 12 and 17, which do not include this minimal material appendage form. Overall, the existence of the block and the U-shaped or “box” forms signify that other assemblage designs aside from the conventional were fashioned and for likely corresponding distinct and intentional motivations. Therefore, they reveal another variety of vernacular architectural arrangements occurring within this region of PVN647.

The second category of evaluation is the potential function associated with each form of exterior appendage and it demonstrates the overall variability and complexity of possible activities that were occurring on and around the three identified exterior forms. In essence, all external appendage forms establish generalized occupational spaces, however, of varying dimensions, purpose, and likely degree of accessibility. Yet they all operate as complementary and assisting components, which simultaneously formalize and

enhance the aesthetic and function of the surrounding exterior region. Exterior appendages in the wall form fashion the most sizeable external platform spaces and are defined to be either terraces or verandas. Due to the significantly large occupational spaces created by both terraces and verandas, many people could be accommodated and access was likely quite open and unrestricted. The possible balcony or bench construction resulting from the block form appendage along Structure 17, in contrast, could support notably less occupants and was probably a controlled space, where access was granted to a select few. Lastly, the U-shaped or "box" form is proposed to have established a single step, a brief platform leading to a terrace or veranda region, or a doorstep leading to an entryway into a building. The limitation of access relating to each functional space created by this "box" form varies from structure to structure, mostly due to positioning along the exterior. As a whole, there is observed to be more functional consistency within each appendage form than variation. This is important because it marks that regardless of the varying magnitude or alteration of shape, each form maintained the conscious purposeful intent. Therefore, the inhabitants of each structure were flexible to deviations in the assemblage process, yet were consistent in the functional outcome for each appendage form.

Lastly, the positioning of external appendages is analyzed with respect to location on the structure, but also in reference to the individual structures location on the main plaza, or lack thereof. The value of this type of evaluation lies in the potential to reveal similarities and/or differences between neighboring or architecturally comparable structures. Furthermore, evaluating positioning can be effective in understanding the

possible public or private nature relating to the exteriors of structures positioned immediately on the main plaza. If presumed public and communal activities and events occurred within the main plaza, then the facings of buildings immediately positioned toward this shared space likely also took on more public forms of interaction or function with respect to the main plaza, regardless of a structures individual purpose. One line of evidence to support such an outcome is from the architectural manifestations along plaza-viewable exteriors of buildings positioned immediately on the main plaza. Archaeological excavations conducted on and immediately around buildings positioned on the main plaza (Structures 12, 16, 17 and 18) reveal that exterior appendages were predominantly assembled along plaza-visible facings. This observation confirms the presumed influence of the main plaza and plaza activities as governing elements of architectural styles, whether identified to be vernacular or not. However, what is also revealed are similar and deviating patterns with respect to appendage forms and locations, indicating an overall disproportionate form of authority on the part of the main plaza.

For example, Structures 12 and 17 share various analogous characteristics with respect to original platform design, summit interior enhancements, and positioning of exterior appendages. Additionally, they represent the two largest investigated buildings at PVN647 and are positioned immediately across the main plaza from each other, in a north-south alignment. Therefore, these similarities could suggest the individual significance and purpose associated with each structure, but also potentially reveals a mutual relationship as both are notable anchoring buildings within the main plaza.

However, they greatly differ with respect to exterior appendage form and function. While the most prominent plaza-visible, north, facing of Structure 12 includes the numerous wall form appendages to fashion the wide veranda, which wraps around the northeast and northwest corners of the building, Structure 17 only contains the brief, block form appendage along its southern, immediate plaza facing. The result on each establishes occupational platforms, yet of dramatically varying sizes and unequal privileges of access. The main plaza facing of Structure 12 could accommodate and was likely welcoming of most; in addition to being an optimal location for observing plaza activities and events. In contrast, even though the main plaza facing of Structure 17 held an equivalent prime viewing positioning, its physical rendering resulted in being significantly more discriminating of how many, and probably who, could assemble on top of the balcony/bench platform. Therefore, the functional purpose and occupants of Structure 17 likely held an unequal relationship with plaza users and events, as compared to Structure 12. Overall, this architectural comparative assessment provides more insight into the assorted complexities of the social cohesion and possible identity expression of those dwelling within or simply temporarily interacting with Structures 12 and 17.

An additional example is highlighted between Structures 16 and 18. Also located immediately on the main plaza, these buildings are situated in flanking northern positions adjacent to Structure 17. Each is identified to be originally of a 3-sided edifice design, contain minimally enhanced but non-partitioned summit interiors, and is oriented such that two facings are predominantly visible from the main plaza. However, the primary disparity between these structures is with respect to frequency, form, and location of

external appendages. Structure 16 contains the elevated platform veranda spanning along both of the most plaza-viewable facings. Similar to Structure 12, this external space was likely amenable and regularly accommodating of many occupants and activities. Conversely, Structure 18 only includes the U-shaped, doorstep appendage along one of its most plaza-visible facings. Furthermore, the disproportionate amount of external appendages assembled on the facings that were only partially visible from the main plaza, further indicate the variations witnessed along their exteriors. Structure 16 possesses a U-shaped, doorstep appendage leading to an entrance, while Structure 18 includes a terrace and an additional abutting U-shaped stepped platform. Overall, Structure 16 likely held more of a public prominence along its most plaza-facing façades, while the analogous facings on Structure 18 engaged in less formal and more irregular interactions. However, their partially observable facings likely diverged in contradictory ways as well. The east facing of Structure 16 is a more enclosed and possibly private space, while the comparable west facing of Structure 18 is visible from a probable path leading to and from the main plaza and therefore on more public display. Certain architectural vernacular forms (U-shaped appendages) are witnessed on each structure, yet not in completely analogous locations or functions, while other assemblages (elevated terraced regions) appear on only one building. These variations reflect the overall dissimilarity of their physical manifestations, potential individual functions, and alleged relationship with the main plaza. Furthermore, Structures 16 and 18 exhibit how certain vernacular architectural patterns can correspond, yet render in an overall socially discrete representation of identity expression.

Finally, as significant as it is to recognize the potential influence of the main plaza as a justification for establishing architectural elements on plaza-observable facings, it is equally imperative to highlight the significance and positioning of an absence of exterior modifications. Most additions or enhancements occurred on plaza-facing or plaza-visible sides of the buildings positioned immediately on the main plaza. However, none expanded in areas that are identified to be completely off-plaza. Structures 16 and 18 are distinguished for adding the fourth and final basal wall on their off-plaza facings, however, no additional architectural evidence is observed in these regions. Furthermore, no structure is witnessed to laterally expand and architecturally articulate or connect to a neighboring building. (Structure 12 potentially shares an association with western neighbor Structure 26, due to the accumulation of burnt earth and angled cobbles situated in the limited space between them. However, there is no discernible architectural formation that physically links the two structures. Moreover, Structure 26 was not formally investigated; therefore limitations exist with inferring a more definitive connection.) Overall, the precise activities that were carried out in the non-expanded spaces between buildings and to what degree they potentially shared functional or social relations between structures, are not known. It is plausible that the rationale for leaving certain facings architecturally unaffected simply correlated with the individual purpose of a structure itself. However, physical affiliation with the main plaza likely included collective, possibly expected, social responsibilities and duties, which could serve as the impetus for certain architectural outcomes, or lack thereof.

As previously evaluated, Structure 33 does not witness similar patterns associated with the positioning of exterior appendages when compared to buildings located on the main plaza, as it is not located immediately on this prominent plaza. The external architectural manifestations located only along the northern facing of Structure 33 represent their own design and possible vernacular underpinnings associated with a positioning unrelated to the main plaza, but possibly along a smaller patio grouping. Therefore, it is to be expected that although certain categorical architectural construction histories, arrangements, or modifications may appear as correspondent to attributes from the main plaza buildings, the resulting function and potential exclusivity of occupants and activities would greatly differ due to its locale along a smaller patio cluster. This assessment of Structure 33 is noteworthy in that it further denotes the permission of the nonconformity characteristic of vernacular styles.

To conclude, several architectural patterns are occurring simultaneously within the Site Core Plaza Group. With respect to individual structures, original platforms are revealed to be organized by means of at least two distinct assemblage processes. Furthermore, summit interiors demonstrate anything from nearly no enhancement or modification to complex divisions and occupational specificity. Lastly, exterior appendages occur in varying forms and sizes, with corresponding functions and placements. All of these traits manifest differently on each structure, yet some systematic groupings emerge. Building platforms witnessed to be assembled by similar designs, also undergo comparable summit interior enhancements. Yet, those same groups of structures witnessed dramatically different external modifications.

On the whole, the exteriors of all main plaza structures are contended to have been architecturally impacted by their positioning on that prominent plaza, however not equally. Certain structures underwent elaborate expansions to establish abundant and open plaza viewing areas, while others were allowed to contain more exclusive and restricted plaza observable space, in both size and accessibility. And yet, other prominent plaza viewable facings were left unmodified and remained architecture-free regions. Architectural observations from Structure 33 may not be sufficient in frequency to sanction overarching generalizations regarding assemblage processes or modification patterns associated with interior and exterior areas from structures not immediately on the main plaza, yet they are comparable to analogous structures from the main plaza. The importance of Structure 33 is that it serves as a variable, which from its variations both confirms that structures positioned on the main plaza adhered to particular regulations, as pliable as they may have been; but also supports that buildings positioned away from the main plaza did not necessarily have to abide by the same architectural conventions. Regardless of vernacular arrangements or allowance for flexibility within those categories, the main plaza likely operated as a dominating social sphere and maintained an influential presence with regard to constructed versus unconstructed spaces along plaza-viewable exteriors.

In general, a greater understanding is revealed regarding the overall social cohesion and possible identity expression within the Site Core Plaza Group at PVN647. Each structure undoubtedly held its own specific and unique function and as a result displayed inimitable architecturally vernacular traits. However, architectural similarities

designate that they likely maintained a collective purpose and potential shared identity as well. Certain architectural practices were reproduced amongst buildings and perhaps for aligned intentions. Yet divergences in those architectural configurations symbolize the adaptability and resourcefulness of vernacular endeavors. The combination of these observations emphasizes the potential this form of analysis holds in exposing the complexities of social relations and identity expression.

Southeast Plaza Group

Group Overview

The Southeast Plaza Group of PVN647 is located roughly 120m to the southeast of the Site Core Plaza Group and consists of 5 structures. The 2006 survey of the region identified 4 buildings (Structures 6, 7, 8, and 13). The expanded 2008 survey of PVN647 revealed the existence of a probable fifth structure for this group, and is identified as Structure 46. The Southeast Plaza Group is considered to be constructed in a conventional household patio group formation, as nearly all of the structures face the interior patio space. The interior space measures roughly 7m north-south and 10m east-west. Structure 6 dominates as the largest in size and also as the northern-most building. Structure 7 is positioned to the east of Structure 6, while Structure 13 is to the southwest. Structure 46 is located in between Structure 6 and Structure 13 but is not considered to be immediately facing the open patio space. Structure 8 is located in the southeast region of the group and is the farthest from the group. The immediate southern area of the patio group contains a suspicious clustering of cobbles, which could be the remains of a destroyed structure. However, as no clear surface-visible evidence of preserved architectural characteristics was observed, the area is identified to be construction-free.

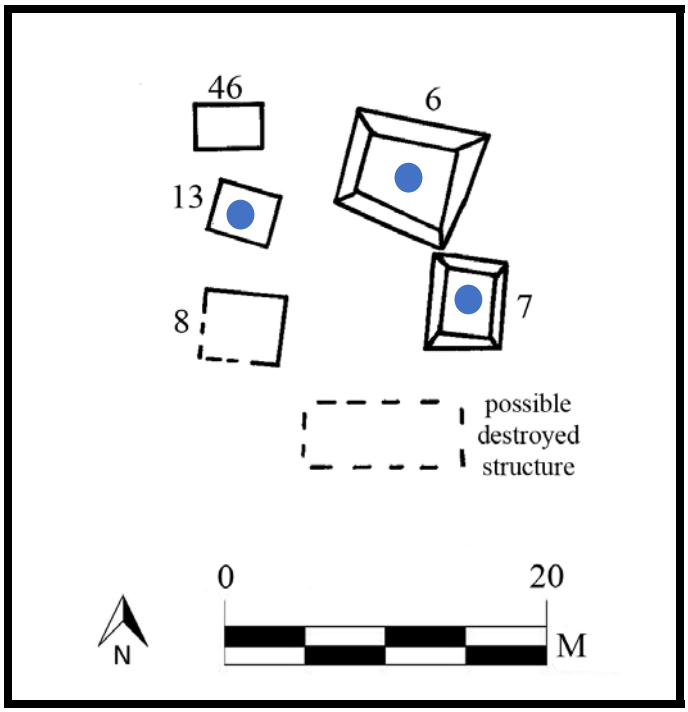


Figure 5.15: Site map of Southeast Plaza Group, PVN647. Excavated structures in blue.

Only the best preserved buildings, Structures 6, 7, and 13 were investigated within the Southeast Plaza Group during the 2008 excavation season (**Figure 5.15**) (see Appendix A for detailed excavation descriptions and construction sequences). Structures 8 and 46 appear from the ground surface to have either looting or damage, and were consequently not excavated. Furthermore, time constraints and excavation resources also proved prohibitive. Horizontal clearing excavations of the three researched buildings revealed complete architectural styles and building methods, as well as stratigraphic relationships between the constructions. All three structures appear to have been assembled atop a similar culturally sterile soil, signaling the earliest occupation history for this region of PVN647. Furthermore, the investigation of these three structures reveals significant variations with respect to the design of the original foundations and

platforms, modifications over time, and exterior additions that indicate architectural linkages between buildings (specifically Structure 6 and 7) (**Figure 5.16**). Significant vernacular architectural arrangements are existent within the Southeast Plaza Group that display similarities to structures from the Site Core Plaza Group, but others that are exclusively observed within this region of PVN647.

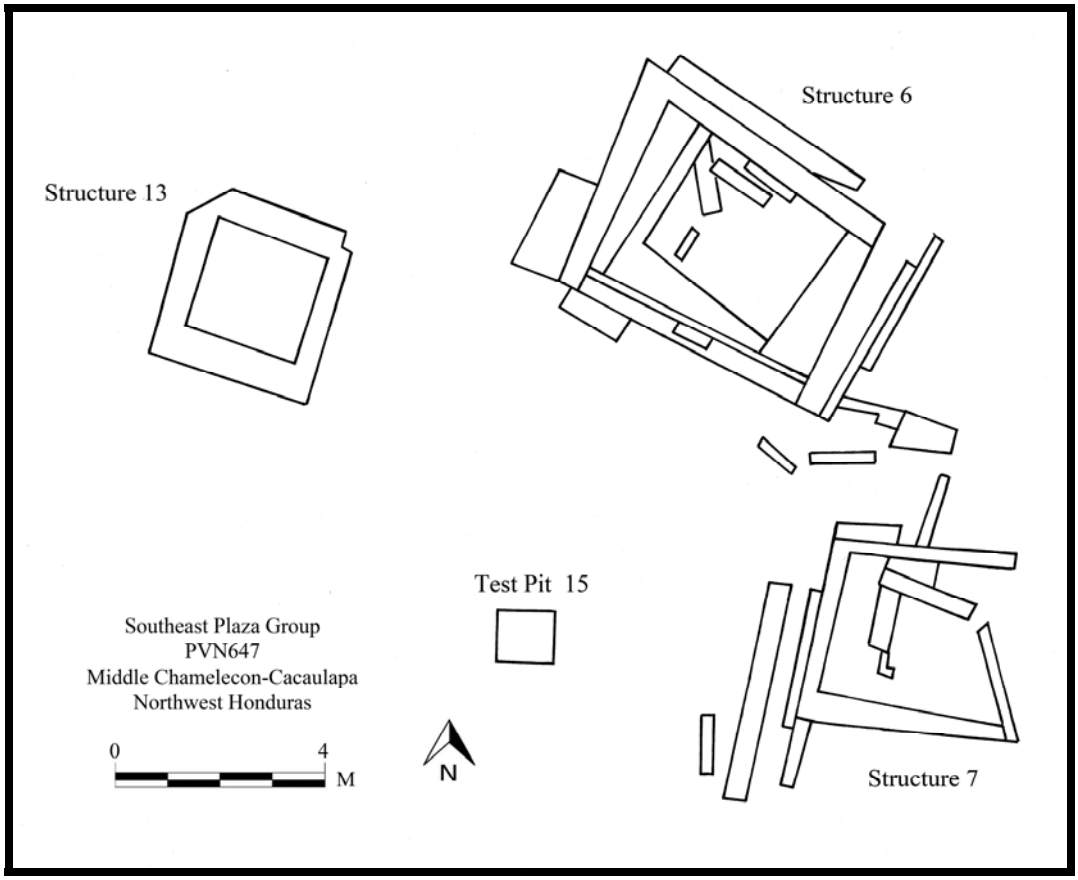


Figure 5.16: Plan-view of excavated structures in Southeast Plaza Group, PVN647.

Structure 6

Structure 6 represents the largest structure in the Southeast Plaza Group of PVN647. It is positioned as the northern-most building and is positioned to face into the open patio. It is flanked to the southeast by Structure 7, which is positioned approximately 2m away, however, due to remnants of cobble alignments, it is speculated that the two buildings were structurally connected. Structure 46 is positioned approximately 4.5m to the west and Structure 13 is positioned approximately 3m to the southwest. Structure 6 does not appear to have been architecturally linked to either of these buildings. Finally, Structure 8 is located approximately 7.5m to the south and across the patio from Structure 6. The northern side of Structure 6 includes a slight downward slope and therefore more tumbled building material debris was witnessed along this facing of the building at the time of initial investigations. The east, west, and south, plaza-facing sides of the structure also displayed cobbles tumbled out of place, yet no sign of formal dismantling or disturbance was exhibited.

Description of Architectural Construction

Structure 6 is regarded as the most prominent structure within the Southeast Plaza Group at PVN647. Not only is it the largest in platform size in the group, it underwent a complicated history of construction, beginning with evidence of an early sub-structure and interment feature, which were later buried within the interior of the building. Established on the relatively level area of the northern portion of this patio group, Structure 6's original platform was eventually expanded along all four exterior facings by

means of multiple appendages of various forms. What are labeled as aligned cobble elements are witnessed to extend away from the building along the eastern exterior and into an adjacent region located in the space between Structures 6 and 7. These cobble elements are components that make up the area between the structures and are referred to as a construction feature. This feature is described and analyzed in the Discussion section of the Southeast Plaza Group, yet the individual cobble elements are not included in the formal construction history of Structure 6. Therefore, Structure 6 is associated with a total of 20 construction units, amassed within 13 sequential time spans. Seven of the 13 time spans represent the formal periods of construction, modification, and expansion of the building, while the remaining six primarily correspond with multiple episodes of pre-construction activities (see Appendix A for detailed excavations descriptions and construction sequences). Furthermore, over the course of its assemblage, occupation, and eventual abandonment, Structure 6 witnesses the presence of eight distinct soil contexts; the greatest number of stratum observed in this region of PVN647.

Time Span 13 (TS13) marks the earliest time span associated with Structure 6 and is identified as a period of pre-activity, as it only contains the culturally sterile soil stratum, upon which the building would later be assembled. The final time span, Time Span 1 (TS1), denotes the abandonment and decay of the building and is indicated by the soil context that buries the building. The intervening time spans (TS12-TS2) include the earliest activities of pre-construction, and the formal assemblage and modification episodes associated with Structure 6.

Time Span 12 (TS12) represents a construction phase associated with four distinct wall constructions (CU1-CU4), identified to be evidence for some form of an early sub-structure (**Figure 5.17**). Two of the wall constructions (CU1 and CU3) are witnessed to extend under the bases of later construction units, which are formally associated with the assemblage of Structure 6, and therefore, their exact measurements remain unknown. Additionally, though all four wall constructions are grouped during the same construction phase, one of the walls (CU4) is observed to be above the highest extents of the other three early walls. This wall (CU4) is hypothesized to have been constructed last in the series of early assemblages, yet its tallest extent is preserved at a depth below ground surface that is lower than the bases of other construction units confidently associated with the formal building of Structure 6. The overall manufacture quality of these four wall constructions is not significantly different from the later assemblages. However, the construction units from this time span are simply identified to be antecedents to the formal erecting of Structure 6 due to their noteworthy depth, between approximately 0.3-0.65m below the ground surface.

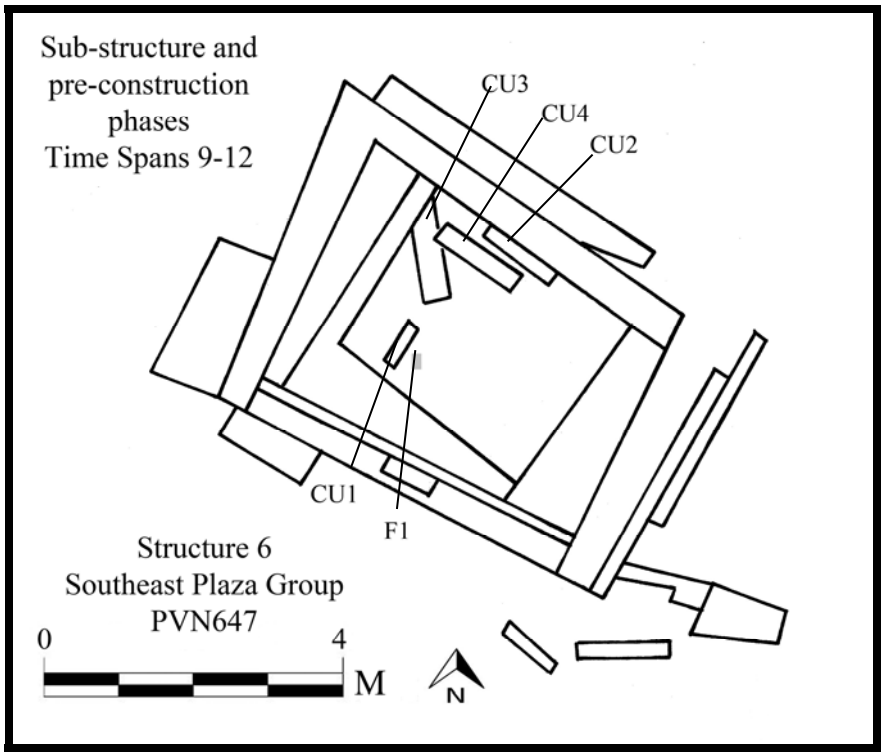


Figure 5.17: Plan-view of excavations of Structure 6 –
Sub-structure constructions and pre-construction phases.

The first in a series of three time spans associated with pre-construction activities is Time Span 11 (TS11). During this period, a soil fill unit is deposited and partially buries two (CU1 and CU3) of earlier four wall construction units. Time Span 10 (TS10) represents the deposit of a burial (F1), accompanied by three distinct soil contexts. The burial feature (F1) is located under the base of a later construction unit (CU8 – TS8) and was only observed in profile. Therefore, it was not formally excavated and the partial remains that were witnessed in situ likely belonged to that of a single adult, based on the size and number of observable bone fragments. One of the three soil contexts is directly associated with the burial (F1) interment. The remaining two soil contexts are witnessed to be sequentially layered on top of the first soil context and the burial event (F1). The

brief observance of the two soil contexts positioned immediately above the burial feature (F1) arguably could represent formal fill episodes with the intentional purpose of covering the interred context, however, it is due to their brevity in depth, composition, and scope that they are simply identified as stratum layers. The third of the soil layers is cautiously thought to have been the remainder of a broken vessel due to the density of ceramics and the color of this soil makeup. Time Span 9 (TS9) marks the third and final pre-construction phase and includes yet an additional soil fill episode, which buries the entire burial feature (F1) and all relating soil. Additionally this fill deposit fully buries three of the earlier four wall constructions (CU1-CU3), and partially covers the fourth wall (CU4)

Construction of Platform

Time Span 8 (TS8) represents the first formal construction phase associated with the assemblage of Structure 6 and includes the erecting of two walls: the west and south summit walls (CU7 and CU8). These two walls are observed to be integrated, share a similar construction design, and form the southwest interior summit corner. Only the interior, summit facings of each wall was fully exposed to the base of the construction unit, due to the close proximity or abutment of other later construction units. Therefore, the potential design of the exterior facings of these walls was not observable. The interiors facings appeared to be in a uniform alignment; neither ragged nor flat-facing.

The east wall (CU9) is added during Time Span 7 (TS7). It is observed to abut with the western-most extent of the south summit (CU8 – TS8) and forms the southeast interior summit corner. The construction quality of the east wall is noticeably poorer than

the assemblage of the previous two summit walls. The east wall makes use of more larger-sized cobbles and large gabs of soil in between, yielding a less stable construction, than the other walls. At its northern most extent, the east wall does not articulate with any other construction unit at this point in the assemblage of Structure 6 and took the form of a 3-sided building. However, it is not hypothesized that Structure 6 remained an intentional and functional 3-sided edifice for an extended amount of time (**Figure 5.18**).

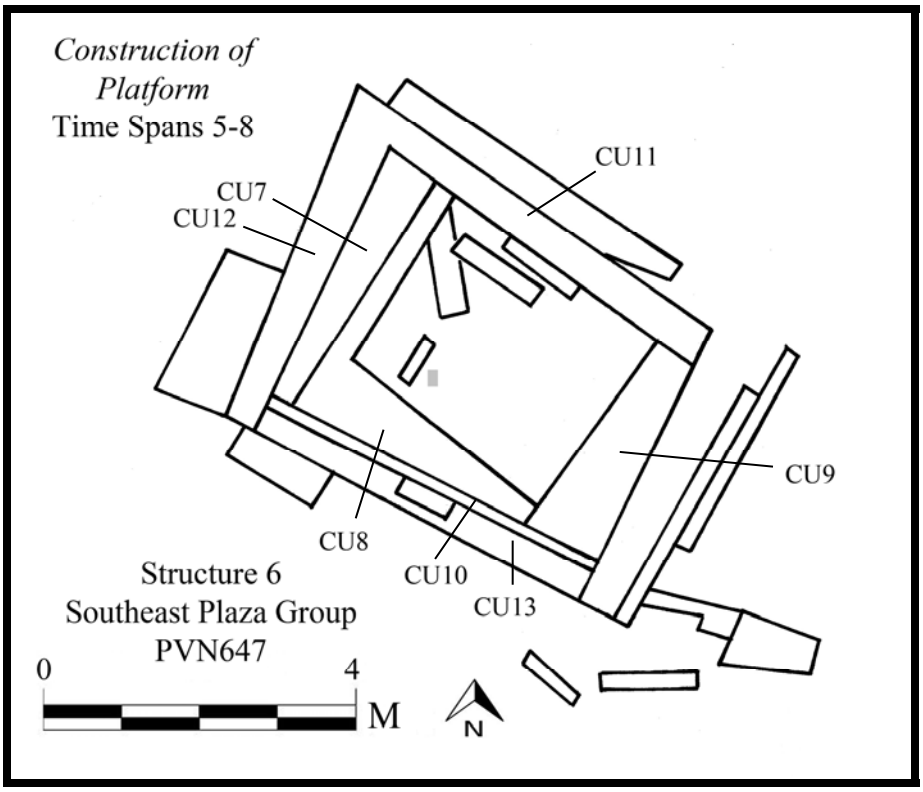


Figure 5.18: Plan-view of excavations of Structure 6 – *Construction of Platform*

Time Span 6 (TS6) corresponds with the addition of an appendage construction along the southern, plaza facing. This appendage (CU10) is the first of three over the course of the history of Structure 6 and takes on the form of a wall. It is assembled

abutting the south facing of the south summit (CU8 – TS8) and articulates with it where it corners with the east wall (CU9 – TS7) and provides greater structural support to yield the southeast basal corner. At the western-most extent of this first south appendage it does not articulate with the southwest corner region. Later construction units added in this region obscure a more precise understanding of the articulation in this southeast region.

The enclosure and platform expansion of Structure 6 occurs during Time Span 5 (TS5). A north summit (CU11) wall seals the summit interior by abutting with the west summit (CU7 – TS8) and the east wall (CU9 – TS 7). This summit sealing wall is amassed on top one of the much earlier wall constructions (CU3 – TS12) associated with a sub-structure. The north summit is observed to be better preserved at its western extent than in the east, where it abuts with the east wall. The result of the north summit not only marks the enclosing of the building, but establishes the northeast basal corner and better defines a northwest basal corner. At its western-most extent, the north summit wall is observed to integrate with a newly added construction unit during this time span: the west wall (CU12). The west wall is established approximately 0.5m west of the west summit (CU7 – TS8). Together, they form the northwest basal corner for Structure 6; however, the corner is cautiously identified as an inset corner, as it was not observed to be a typical right-angled corner. It is also speculated that this corner region did not preserve well over time and that construction elements have fallen out of place. At its southern-most extent, the west wall abuts with the western-most region of the first southern appendage (CU10 – TS 6) and establishes a southeast basal region. At this time, the platform measures

approximately 5.5m east-west and 4.25m north-south and stands approximately 0.4m in height. The interior summit space measures approximately 3.25m east-west and 2.6m north-south. A perishable superstructure, assembled in the form of stick and bajareque walls and a thatch roof, likely would have been supported atop the substructure platform.

The final construction added during Time Span 5 (TS5) is a second appendage along the southern facing. This second south appendage (CU13) is positioned immediately abutting the south facing of the first south appendage (CU10 – TS6) in the southwest region (approximately 0.3m east of the southwest basal corner). The significant observation of this second south appendage is that it is a solid cobble construction, which is fashioned into the shape of a square. It is measured to be approximately 0.8m northeast-southwest by 1.4m southeast-northwest, and ranges 0.26-0.34m in height. Visibility of the east and west facings of the solid appendage is obstructed due to later additions assembled in these adjacent regions. The positioning and form of this second south appendage is similar to an exterior appendage along Structure 17 within the Site Core Plaza Group.

Construction of Appendages

Time Span 4 (TS4) is characterized by the addition of three appendage constructions along the north, south, and west facing of Structure 6 (**Figure 5.19**). Additionally, a bajareque surface is observed along the southern exterior. The first appendage amassed during this expansion episode is along the northern exterior. The north appendage (CU14) abuts against the north summit (CU11 – TS5) wall in the western region and near the northeast corner. However, this appendage does not extend

all the way to the northwest basal corner and therefore contributes to the appearance of this particular corner looking like it is inset and not a right-angle corner. Furthermore, the north appendage is not observed to formally articulate with the northern facing of the north summit near the northeast basal corner. It is unclear if this by purposeful design or if the fill material between the north facing of the north appendage was only that of soil fill in eastern-most region of the construction. The preservation of the construction is more intact in its western-most portions. This north appendage marks the final amendments occurring along this northing facing of Structure 6.

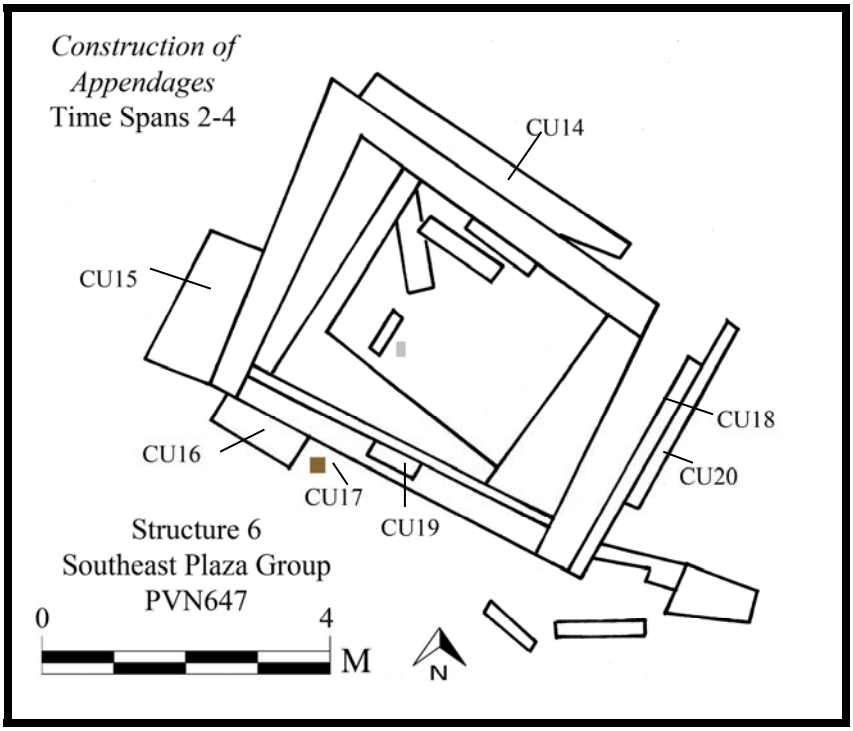


Figure 5.19: Plan-view of excavations of Structure 6 – *Construction of Appendages*

Also during this time span (TS4) an additional appendage is added along the western exterior. This west appendage (CU15) is located near the southwest basal corner

and is of a low design (approximately 0.08-0.16m in height). It is approximately 1.5m north-south and 0.9m east-west and abuts along nearly half of the western facing of the west wall (CU12 – TS5). This west appendage envelopes the previously formed southwest basal corner.

The third appendage added during Time Span 4 (TS4) is along the south, plaza facing exterior of Structure 6. This third south appendage (CU16) takes on the form of a wall and is positioned immediately abutting the south facing of the first south appendage (CU10 – TS6). It extends from the west by abutting against the square-shaped second appendage (CU13 – TS5), along the facing of the first south appendage (CU10) and extends to the east. However, this third south appendage (CU16) does not end by articulating with the southeast basal corner. It is measured to be preserved approximately 0.3-0.35m away (to the south) of the second south appendage (CU13) at the southeast basal corner. The poor preservation of potential cobble fill in between the two appendage constructions in this region is similar to the poor preservation along the north facing with the eastern-most extent of the north appendage (CU14 – TS4).

A partially preserved bajareque surface long the southern exterior of Structure 6 comprises the final construction unit added during this time span (TS4). This bajareque surface (CU17) is observed to be at the base of the third south appendage (CU16) and possibly even deeper than the lowest observable measurements from this particular appendage. However, this bajareque surface and the third south appendage do not formally articulate. The bajareque surface is observed to be preserved approximately 0.2m to the south of the third south appendage. It is unclear if this surface pre-dates or

post-dates the construction of the southern-most appendage constructions. Furthermore, it is not known if this surface continued into the open space of the plaza, however, it is thought to represent an occupational level, associated with Structure 6 and the open plaza within this group.

Time Span 3 (TS3) witnesses the construction of a appendage along the eastern exterior and the addition of an indiscernible cobble appendage along the southern appendages. The east appendage (CU18) is the first of two assemblages along the eastern exterior of Structure 6. This particular appendage construction is in the approximate shape of a square and is positioned near the southeast basal corner, along the eastern facing. Furthermore, the appendage is observed to be of a relative consistent construction design and possibly represents some form of a cobble, occupational surface.

The other addition amassed during Time Span 3 (TS3) is a brief, wall-shaped appendage along the south, plaza facing of Structure 6. This appendage (CU19) is described as a single row of cobbles and is observed to be assembled within the space between the first (CU10 – TS6) and the third (CU16 – TS4) south appendages. At its western-most extent, this south appendage abuts against the second south appendage (CU13 – TS5) and extends to the east.

Time Span 2 (TS2) includes a second east appendage and it is observed to be almost a continuation of the first east appendage. This second appendage (CU20) is in a wall formation and extends roughly parallel to the east wall (CU9 – TS7), however

approximately 0.65m to the east. They are not observed to formally articulate. The second east appendage only articulates with the first east appendage and at its southern-most extent.

Structure 6: Summary and Discussion

In summary, Structure 6 not only represents the largest building with respect to its overall platform footprint, but also includes the greatest number of construction units observed from investigated structures within the Southeast Plaza Group. Four time spans are associated with a sub-structure and other pre-construction activities and include six distinct construction units. However, the majority of units associated with the formal structure are identified as exterior modifications in the form of appendages, rendering the final version of the building as having expanded in all four directions. Though the presented sequence of construction phases orders the primary summit-enclosing wall constructions as assembled during differing time spans, it is not being proposed that Structure 6 was designed nor utilized as an intentional 3-sided building. It is concluded that the original basal platform of Structure 6 was simultaneously founded and expanded upon in a continuous and fluid construction process. It is unclear to what degree the exterior spaces, created by the appendage additions along the east, south, and west sides, would have been shaded by a perishable superstructure; however, it is likely that the primary summit region would have supported bajareque walls and a thatch roof. The architectural appendages along the eastern exterior of Structure 6 are observed to extend into the constructed space in between Structures 6 and 7 (see *Discussion of Southeast*

Plaza Group for detailed description of this region). However, along the north, south, and west exteriors of Structure 6, no other architectural articulations to other identified structures or features are observed.

The most initial version of Structure 6's platform is amassed during TS8 and TS7. At this stage in the assemblage process of the building only 3 sides, the east, south, and west, were amassed. Even though an additional construction phase of appending the first of multiple appendages along the southern exterior facing occurs before the sealing of the summit interior along the north during TS5, Structure 6 is not considered to be a functional 3-sided edifice, similar to other building designs at PVN647. The construction technique and materials used in erecting all four of the identified summit delimiting wall constructions are observed to be similar and are only designated into distinct time spans due to the non-integrated articulation where they form all summit corners, save for the southwest interior summit corner. Only a brief relative amount of time is inferred to have passed between phases TS8 through TS5. Additions observed to be constructed for nearly all remaining time spans, expanded the overall base of the platform in all directions. Of the greatest space created by expansion is along the western exterior by the addition of a new western wall during TS5. It is likely that this episode of expansion yielded more occupational space, as this particular wall construction is of a very solid construction style and quite certainly could have supported a perishable superstructure, which aided in the covering of the entire summit interior.

Other than the earliest evidence for occupation as indicated by the sub-structure wall constructions and pre-construction activities of the fill episodes and stratum layers,

no other interior constructions or features are observed. The soil context identified during TS7 is possibly the remainder of a fill episode or an indicator of a potential occupational level within the summit interior. However, due to the brevity in both location and amount preserved, it is simply recognized as a soil layer. And as previously stated it is not completely clear the occupational function of the space created by the addition of the west wall. One scenario is that the addition of this specific wall expanded the overall space of the summit interior. It is unclear if this remained a segregated space and a perishable wall existed atop the construction identified as the west summit wall (CU7). The alternative scenario is that the addition of the west wall established external space and the summit interior remained an unmodified and open space, as no other structural alterations are witnessed.

In addition to the exterior expansion of the west wall, several other appendages are amassed along the other facings of Structure 6. These additions account for the majority of the overall modifications made to the building. After the construction of the west wall, a low-lying and relatively uniformly flat appendage is added to abut the west wall at the southwest basal corner. The overall amount of occupational space established atop this appendage is quite small; however, it likely served as a form of a step to the space created by the west wall. This region of Structure 6 is not only partially visible from the open patio area, but also facing a possible access route into the Southeast Plaza Group from the north. The visibility of this facing of Structure 6 from several vantage points, likely factored into its functional purpose and public accessibility.

An appendage similar in form to the appendage observed along the west exterior is appended along the south, or plaza-facing exterior, as well. This specific appendage (CU13) is one of multiple appendages added along this facing; however, the others are different in form. The other appendages added along the plaza facing of Structure 6 are predominantly walls, which are aligned parallel to and abut earlier constructions. Therefore, this most-visible plaza facing likely experienced various iterations of structural style and functional intent over time. Similarly, the off-plaza facing, or north facing, of Structure 6 witnesses the addition of one wall-styled appendage, which is also observed to parallel and abut against the earlier north summit construction. Finally, the east exterior included the addition of two appendages, which are aligned parallel to and are abutting each other. Interestingly, these appendages are positioned a short distance away from the east wall and the space in between was likely raised with soil fill and the area leveled with a bajareque or plaster surface to establish a prepared occupational space. This eastern exterior is also unique for its proximity and certain functional connection to the activity area in between Structures 6 and 7. Architectural articulations between construction units associated with Structure 6 and the preserved construction materials in this region are observed (see *Discussion of Southeast Plaza Group* for detailed description of this region).

To conclude, Structure 6 represents the most prominent investigated building within the Southeast Plaza Group. Due to its size, location, and architectural complexity, it likely held both a public and private significance in relation to the open plaza area and with neighboring structures. The original platform of Structure 6 appears to have

expanded in all four directions over the course of its occupation and most notably along the plaza and plaza-visible facings. The occupational spaces created by these expansions along the southern and western facings could have supported a moderate number of occupants taking part in stagnant types of activities, such as the observation of plaza events or the greeting of visitors along the western exterior region of the building. Furthermore, it is likely that a method of access both onto and into the building was established along the western façade by the abutting of appendage constructions. However, the appendage expansions along the eastern exterior of the structure indicate an architectural linkage of the most vernacular in design and lead to a more restricted space. This semi-visible from the plaza region is situated between Structures 6 and 7 and likely established an area of shared activity space, which may or may not have been restricted from the open plaza. Yet, it is proposed to have been more private in function (see *Discussion of Southeast Plaza Group* for detailed description of this region).

Overall, Structure 6 consists of various architecturally vernacular traits, which were regularly added to the building over what is proposed to be a continuous temporal sequence of construction episodes. The fluidity of structural expansion to Structure 6 likely reflects the occupational and activity growth of the entire patio group. While the reasons for the enduring development of Structure 6 individually, and the overall patio group as a whole, remains unclear, the observance of the persistence of architectural expansions is significant for understanding the overall function and social cohesion of the occupants residing within the Southeast Plaza Group.

Structure 7

Structure 7 represents the eastern-most building within the Southeast Plaza Group. It is positioned to face the open patio of the group and is flanked by only one other building, Structure 6. Structure 6 is located approximately 2m to the north-northeast of Structure 7, yet preserved cobble alignments in the space between the two buildings indicate they were formally linked to each other. Structure 13 is positioned across the open plaza space approximately 9m to the west. Structure 8 is located approximately 8m to the southwest. At the initial time of investigation, Structure 7 appeared to be a low-lying building with slight slippage of construction materials from their original positions, but no noticeable destruction or damage.

Description of Architectural Construction

Undergoing a fairly complex architectural construction sequence, Structure 7 exhibits evidence of containing features of an earlier sub-structure, as well as possibly being utilized for a portion of its occupational history as a 3-sided edifice. Structure 7 was amassed within a level area of the Southeast Plaza Group, yet near to the steep drop-off of a seasonal quebrada, immediately to the east. Along the northern exterior of Structure 7 exist what are labeled as cobble alignments, which are hypothesized to be the remains of a formally constructed activity area, located between Structures 6 and 7. As a relative temporal construction sequence for these cobble alignments is not discernible with the formal construction units associated with Structure 7, they are not factored into the assemblage time spans of the building. Therefore, Structure 7 is associated with a

total of 9 sequential time spans and 16 identifiable construction units (see Appendix A for detailed excavation descriptions and construction sequences). One time span each is associated the pre-construction and the abandonment of the building. The remaining 7 time spans are associated with the sub-structure, and formal erecting and expansion of Structure 7.

Time Span 9 (TS9) represents the earliest time span associated with Structure 7 and is defined by the presence of two sterile soil depositional layers. Though similar in relative depth below the ground surface, the two identified soil contexts differ with respect to coloring and non-cultural inclusions. Stratum 2 is located within the western exterior and the interior of Structure 7. This particular cultural-free context is also recognized to mark the pre-activity period before the erecting of all constructions within this group. The second sterile soil context is associated with the eastern exterior and leading to the drop-off to the seasonal quebrada. This second sterile soil context is observed to contain pebble inclusions and could be the possible result of erosion factors in this eastern region of the to-be amassed Structure 7. Time Span 1 (TS1) is labeled as the abandonment and decay of Structure 7, as it is marked by a single soil context, which buries the majority of the building.

Evidence of some form of a sub-structure that precedes the formal construction of Structure 7 is labeled as Time Span 8 (TS8). This phase is associated with the preservation of two wall constructions (CU1 and CU2) and they are located in what is later the interior of Structure 7. These wall constructions are assembled in a roughly north-south alignment, abut each other, and are observed to be the deepest constructed

elements associated with all of the building. Their exact purpose is unclear as they do not appear to functionally articulate with any other construction unit during this time, in addition to later construction units that result after their assemblage.

Construction of Original Basal Arrangement

Time Span 7 (TS7) represents the first construction episode associated with the formal founding of Structure 7. This is witnessed by the construction of the partial basal platform of the building by means of a northwest basal wall (CU3), and the west (CU4) and south (CU5) basal walls. The northwest basal wall and the west basal wall are observed to be integrated and form the northwest basal corner. Similarly, the west basal wall and the south basal wall are also observed to be integrated and form the southwest basal corner associated with Structure 7 during this time span (**Figure 5.20**).

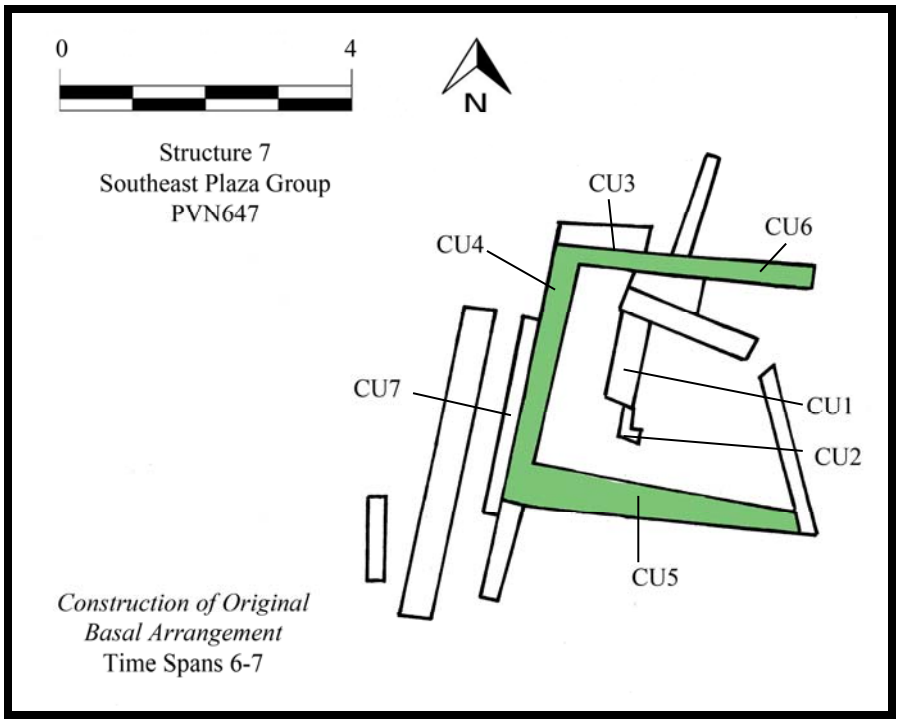


Figure 5.20: Plan-view of excavations of Structure 7 –
Construction of Original Basal Arrangement

The northern portion of Structure 7 is further delineated during Time Span 6 (TS6) with the addition of the north basal wall (CU6). This construction unit is assembled abutting the eastern extend of the preceding northwest basal wall (CU3 – TS7). Up to this point in the construction sequence of Structure 7, the eastern and off-plaza facing remains open and the building is surface-level edifice. This earliest version of the 3-sided building measures approximately 0.3m in height, 3.75m north-south, and approximately 3m east-west, considering the absence of an eastern summit boundary. The summit interior remains open and construction free during this occupational period, except for the earlier sub-structure wall constructions. It is unclear if or to what degree they likely maintained a functional purpose within Structure 7. Furthermore, it is unknown whether a perishable superstructure would have been amassed atop the 3-sided

building, however, the construction design and integrity of the existing basal walls potentially could have supported the weight of a bajareque walls and a thatched roof.

Construction of Appendages and Sealing of Summit

Time Span 5 (TS5) marks the first of several time spans comprised of additions and formal appendage constructions appended to Structure 7. Only one construction unit is added during this time span and consists of an appendage abutting along the west or plaza-facing exterior. The west appendage (CU7) is aligned parallel to and abutting along the middle portion of the exterior of the west basal wall (CU4 – TS7). It is amassed at a lower depth than the preserved height of the west basal wall (**Figure 5.21**).

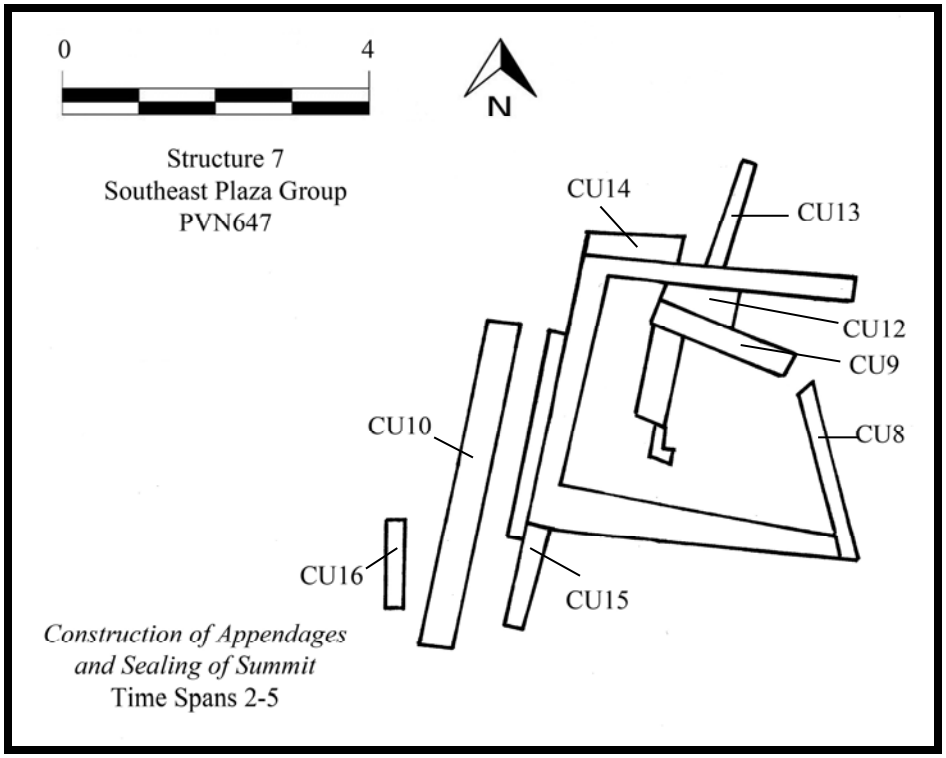


Figure 5.21: Plan-view of excavations of Structure 7 – *Construction of Appendages and Sealing of Summit*

The summit interior of Structure 7 is sealed during Time Span 4 (TS4) as well as additions being assembled within the summit interior and along the plaza-facing exterior. The eastern boundary of Structure 7 is sealed with the poorly constructed east basal construction (CU8). The wall-form, north-south aligned construction is extremely crude and haphazardly assembled and severely slumping out of place. Furthermore, the orientation of the east basal construction is not observed to be constructed parallel with the west basal wall (CU4 – TS7). At its southern-most extent the east basal wall is observed to barely articulate with the eastern extent of the south basal wall (CU5 – TS7) to form a southeast basal corner for the building. Additionally, at its northern-most extent, the east basal construction is not reliably observed to articulate formally with any other construction unit. The nearest preceding construction unit is approximately 1.3m away and is the north basal wall (CU6 – TS6). However, what is identified to be a north summit wall (CU9) is also constructed during this time span and is the closest construction unit to the northern-most extent of the east basal construction. The measureable distance between the two construction units is approximately 0.4m. The north summit wall (CU9) is observed as a roughly east-west aligned construction and possibly corned with the east basal construction to completely seal the summit interior. However, the conclusive identification of the east basal construction as a formal wall is still quite speculative, due its perceived poor amassing and its subsequent poorer preservation. Regardless, an apparent sealing of the summit with the north summit wall slightly alters the interior measurements to approximately 2m north-south.

The other construction units assembled during Time Span 4 (TS4) consist of a sizable free-standing wall along the western and plaza-facing exterior of Structure 7. A west wall (CU10) is assembled parallel to the west basal (CU4 – TS7) and the west appendage (CU7 – TS5), however, approximately 0.4m west of the wall. This wall does not formally articulate with any other construction unit. The northern-most extent of the west wall is roughly similar to the northern-most extent of the west appendage, however, this wall construction extends beyond to the south beyond the exterior boundaries of Structure 7. This west wall is assembled to a similar height as the west basal wall but is observed to be the widest wall construction associated with all of Structure 7, approximately 0.83m at its widest point.

Time Span 3 (TS3) witnesses additions made along the northern and southern exteriors of Structure 7. A north-south aligned wall (CU13) is appended to abut along the northern exterior of the north basal wall (CU6 – TS6). It does not articulate with any other construction unit. Furthermore, an appendage is also added along the northern exterior of the north basal wall and at its western-most extent where it forms the northwest basal corner. This northwest appendage (CU14) stretches along the exterior of the north basal wall from the northwest corner for approximately 1.2m. The abutment of the north wall (CU13) is positioned approximately 0.4m to the east of the eastern extent of the northwest appendage (CU14). A south appendage (CU15) is also appended during this time span and it is positioned to abut the southern-most extent of the west basal wall (CU4 – TS7). This roughly north-south aligned appendage appears to be almost an extension of the west basal. But it does not articulate with any other construction unit.

Also amassed during Time Span 3 (TS3) is the depositing of two fill units. The first fill unit (CU12) is located along the northern exterior and consists of a unit of cobble fill. Its specific positioning is in the space between the north summit wall (CU9 – TS4) and the interior facing of the north basal wall (CU6 – TS6). The cobbles appear slightly haphazard in their placement and it is unclear if the intention was to assemble a more formal cobble construction unit. Due to this lack of clarity, this amassing of cobbles is simply referenced as a fill unit to form a unified, solid cobble construction in this interior space. The second fill unit is identified as a soil depositional unit within the summit interior of Structure 7. This second fill episode is witnessed to partially bury the wall constructions (CU1 and CU2 – TS8) associated with the sub-structure earliest occupation activities. The top of this second fill unit could mark the height of an occupational level within the interior of Structure 7.

Time Span 2 (TS2) represents the final episode associated with the construction activities of Structure 7. During this time, an additional free-standing wall is assembled within the southwest exterior region. This southwest wall (CU16) is located an average of 0.3m to the southwest of the southern-most extent of the west wall (CU10 – TS4). They are not observed to be oriented in a similar alignment nor preserved at similar heights; however, the west wall represents the closest observed construction unit to the southwest wall.

Structure 7: Summary & Discussion

To conclude, Structure 7 exhibits one of the most unconventional building designs, as well as, construction techniques observed within the Southeast Plaza Group. It includes the addition of a fourth and final basal construction after the establishment of the other three basal boundaries. Furthermore, the fourth basal construction is of the poorest assemblage compared to any other observed construction unit associated with the building. And finally, Structure 7 includes multiple wall construction units that do not articulate with any other constructed element at one end. Of particular interest are two wall constructions, namely the west wall (CU10) and the southwest wall (CU16), which do not articulate with any other construction unit and are recognized as being completely stand-alone assemblages. It is unclear how long Structure 7 remained as a 3-sided edifice before the fourth basal construction was assembled, and it is not known if this and the other architectural additions are due to a shift in the buildings function. The original three basal walls likely could have supported a perishable superstructure, without the aid of a fourth basal wall. However, it is uncertain if the free-standing wall constructions along the west and plaza-facing region were sheltered.

A reoccurring construction design, as unconventional as it may be, is that of the original foundation to consist of only three basal wall constructions. Structure 7 adds to the uniqueness of the 3-sided building practice by amassing, during TS7, the entirety of two of the basal walls (the west and south basal walls) and only a brief portion of the northern basal boundary (the northwest basal wall). The complete north basal wall is added during TS6; however, it is unclear of the relative amount of time in between these

defined time spans. Regardless, the construction design and sturdiness of these original basal assemblages likely could have supported perishable bajareque walls and a thatched roof. Maintaining with the pattern observed with 3-sided building constructions, the open facing is the off-plaza side of Structure 7.

It is not until TS4 when a crudely amassed construction is added in this region and is labeled as the east basal construction. Due to its perceived indiscriminate accumulation, it is not formally being designated with the label of a wall. Yet, since it is the only observable collection of construction materials for the entire eastern region of the building, it is labeled as a construction unit and one with the supposed intent of sealing off the summit interior, however rudimentary it may have served that purpose. Equally unique are the petite forms of expansions from the original basal platform along the northern, western, and southwestern exteriors of Structure 7. A west appendage is added immediately along the western, plaza facing, while brief appendages are appended along the northwest and southwest basal corners, respectively. The original basal arrangement is observed increase over the occupation and use of Structure 7. Additions are assembled along the western exterior, and encroaching upon the open patio. Even though these appendages lack architectural articulation to the basal exterior, they are considered to expand the formal base of the platform to the west.

Little observable modification is made to the summit interior of Structure 7, save for the addition of the north summit wall during TS4. This assemblage is understood to be erected during the same construction episode as the fourth basal construction. Furthermore, the eastern extent the brief summit construction is the closest construction

unit to the northern-most extent of the fourth basal construction. Therefore, it is possible that the assemblage of both of these units during the same construction episode yielded a new northeastern summit interior corner and established a more formal interior region for Structure 7. This likely formalizing of the summit interior is continued during TS3 with the accumulation of the two distinct fill episodes. The cobble fill in between the north summit wall and the earlier north basal wall likely sought to reinforce the structural integrity of a formal interior space. Furthermore, the soil fill episode burying the earlier sub-structure constructions, established an occupational level within the summit interior. The totality of these modifications simultaneously formalized and lessened the overall amount of interior space. No other observable summit assemblages or features are identified and the result is a construction-free space, though of an irregular shape due to the orientation of the construction units, which form the boundary of the interior space.

The majority of the modifications associated with Structure 7, occur along the exterior of the building and in various structural forms. No modifications are witnessed along the southern exterior and the eastern, off-plaza region is observed only to include the assemblage of the east basal construction. The north and west facings, however, include the addition of multiple appendages. The construction history of the northern exterior region of Structure 7 has already been presented for its unconventional building sequence, complete with two distinct north basal construction units (the northwest and north basal walls). However, assembled during TS3, abutting constructions along the exterior of these northern basal units are aligned in both paralleling and perpendicular orientations. The low-lying, paralleling northwest appendage could have been covered

with a prepared surface and marked an entry into Structure 7. The north-south aligned north wall represents a construction unit that is observed to extend from the formal facing of Structure 7 and into the constructed area located to the north and adjacent to neighboring Structure 6 (see *Discussion of Southeast Plaza Group* for detailed description of this region). The west or plaza-facing of the north wall is observed to be formalized with positioning the naturally occurring flattened sides of the cobble construction materials to face the west. The eastern side of the wall is significantly less formalized and ragged in appearance.

The west and plaza-facing exterior of Structure 7 includes the most modifications and consist of both abutting and completely un-articulating construction units. The low-lying west appendage added during TS5 abuts the exterior facing of the west basal wall, yet does not extend the entire length of the basal wall. The south appendage is added during TS3 and extends from the southwest basal corner to the south and does not articulate with any other construction unit at its southern extent. This characteristic is one of several construction units that are observed to not articulate with anything at one end. (A similar occurrence is witnessed in the northeast region of Structure 7, where the north basal wall is observed to be completely un-articulating at its eastern-most extent.) However, the most unconventional architectural addition is represented by the addition of the west wall during TS4 and the southwest wall during TS2. Both of these construction units are observed to be entirely free-standing assemblages. The southwest wall is significantly shorter and lower than the west wall and likely functioned as a step onto the west wall. The space in between the west wall and the west basal wall likely was filled in

with soil fill (burying the west appendage) and resulted in a uniformly leveled occupational surface along the plaza-facing exterior of Structure 7. The addition of the south appendage would have extended the region of the southwest basal corner to accommodate the occupational area created by the west wall. The overall result with be a large occupational area along the plaza façade of the building, which does not appear to wrap around the northwest or southwest corners, though it likely could have supported a moderate number of occupants as a work space or observational space of plaza activities. It is possible that this external space was sheltered by means of a non-preservable thatched roof and functioned as an open-air raised platform area.

In conclusion, Structure 7 displays construction techniques that are observed in other structures, both within the Southeast Plaza Group and the Site Core Plaza Group, but also exhibits architectural assemblages that appear completely distinctive to Structure 7. Aside from the reoccurring theme of being a 3-sided building, Structure 7 is vernacularly unique for its semi-articulating and un-articulating construction units. Structure 7 is located as the eastern-most building within the patio, witnessed to be the second-largest investigated structure, and it likely held significant importance with respect to the open plaza. The location and intensity of modifications with respect to the open plaza are indicators of the relationship between Structure 7, the open plaza, and likely neighboring Structure 6. All of the external modifications are observed to occur along the immediate plaza facing and what is likely the most important plaza-visible facing, the northern exterior. The proposed most public space associated with Structure 7 is the western exterior due to the most expansion along this plaza-facing façade; however,

it is unclear to what degree the northern exterior and the region in between Structures 6 and 7 was publically accessible or exclusive. The area unmistakably exhibits evidence as a space for intensive activities, yet a specific function or correlation remains unknown (see *Discussion of Southeast Plaza Group* for detailed description of this region and the relationship to Structure 6). Regardless, Structure 7 embodies distinguished and multiple variations of architecturally vernacular assets, which likely resulted as the occupants needs of their constructed environment shifted over time.

Structure 13

Structure 13 is positioned along the western side of the patio and represents the smallest investigated building within the Southeast Plaza Group. It is flanked to the north by Structure 46, which is located approximately 1.5m away. Structure 6 is positioned approximately 3m to the north-northeast and Structure 7 is positioned across the plaza and is approximately 9m to the east. Finally, Structure 8 is located roughly 2.5m to the south. At the onset of excavations, Structure 13 was observed to be a very low-lying structure with a straightforward platform design, as only an outline of the four basal walls were visible from the surface. Very little tumble was associated with this structure and it did not display any evidence of looting or damage.

Description of Architectural Construction

Structure 13 experienced a notably uncomplicated architectural building sequence, and possibly displayed the most straightforward construction history observed

of all investigated structures at PVN647. Structure 13 was observed to have been established atop a soil fill episode, yet was erected by means of a basic platform foundation, which was not observed to be architecturally modified nor expanded upon. In total, Structure 13 is contains five distinguishable construction units, arranged into 5 sequential time spans, only one of which is associated with the formal construction of the building (see Appendix A for detailed excavation descriptions and construction sequences). Although Structure 13 witnesses a relatively low number of separate construction units, the construction history also includes three stratum contexts associated with the activity in and around the building.

The earliest time span associated with Structure 13, is Time Span 5 (TS5) and is defined by the natural sterile soil depositional layer, indicating a cultural-free context. Initial evidence for occupation occurs during Time Span 4 (TS4) and consists of a soil fill unit of silty ash. This fill layer is associated with pre-construction preparations for the formal erecting of Structure 13. Time Spans 1 (TS1) characterizes the period of abandonment of the building by the accumulation of a soil layer, which buries the building. The remaining time spans (TS3 and TS2) represent the formal raising and occupation of Structure 13.

Construction of Platform

Time Span 3 (TS3) marks the construction episode associated with the complete erecting of Structure 13 and includes the assemblage of all four basal walls (CU2, CU3, CU4, and CU5) (**Figure 5.22**). The east basal (CU2) articulates by abutting with the north basal (CU3) to form the northeast basal corner of the building. However, the

appearance of this corner is not in the conventional right-angle formation, but rather an inset corner. It is unclear if the inset appearance of the northeast basal corner is an intentional design or the result of construction materials falling out of place in this location. The northwest corner, formed by the abutting of the north basal (CU3) and the west basal (CU4), is also observed to be less-than conventional in appearance. This corner is preserved to appear as a rounded corner and not as a right-angle formation. Similarly, it remains unknown if the appearance of the northwest corner is by design or the result of cobble construction materials slipping out of position. Finally, the west basal (CU4) integrates with the south basal (CU5) to form the southwest basal corner. The south basal (CU5) abuts the east basal (CU2) to establish the southeast corner. Both of the southern basal corners are observed to display a conventional, right-angle corner formation. As a result of these construction units, the approximate north-south length of the platform measured 3m and the east-west width measured 2.75m. The platform height was approximately 0.25m. During this time span, the summit interior consisted of an open space and more than likely would have supported a perishable superstructure composed of bajareque walls with a thatch roof.

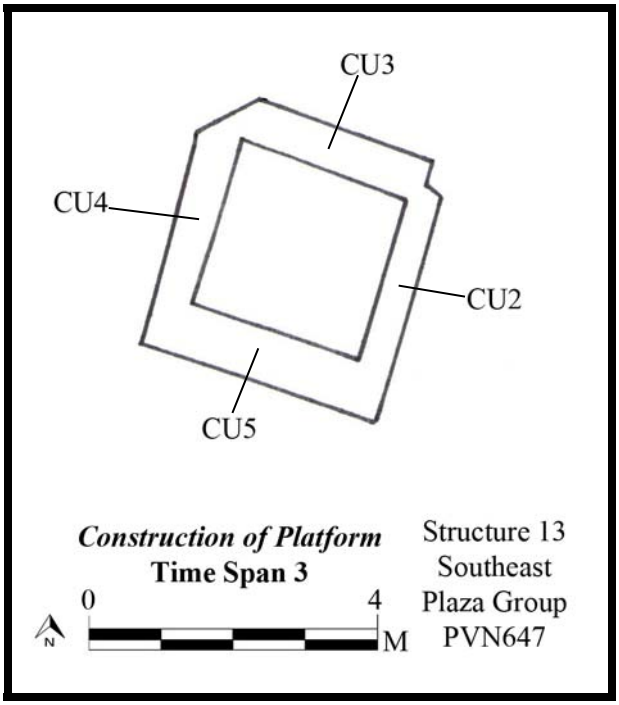


Figure 5.22: Plan-view of excavations of Structure 13 – *Construction of Platform*

Time Span 2 (TS2) is comprised of a single soil layer and is located immediately above the sterile soil context observed during Time Span 5 (TS5). This soil layer is present both within the interior and along the exterior of Structure 13 and is witnessed at depths above the base of construction units. Therefore, it is unclear whether this soil context is the result of occupational activities carried out both within and outside of the building, or if it marks an initial phase of the abandonment and burial of the building.

Structure 13: Summary and Discussion

To summarize, Structure 13 represents the smallest of all investigated structures within the Southeast Plaza Group and of all structures at PVN647 that underwent

complete horizontal exposures. Additionally, it was amassed in the least number of assemblage phases and witnessed the fewest construction units than any other studied building. The result is a roughly square-shaped building of the most simplistic in both assemblage technique and architectural design. The exact order of the four masonry basal construction units is not entirely clear, other than the likelihood that they were amassed in a single construction episode. However, the distinct activity in association with the pre-construction efforts of Structure 13 is the deposit of the ash lens, upon which the entire building is witnessed to be assembled. Structure 13 would have likely been sheltered by a perishable superstructure covering the interior area. It is not witnessed to architecturally articulate with any neighboring structures and likely made use of the open spaces on the northern, eastern, and southern exteriors of the building, as these regions represent the off-plaza spaces association with this structure. It is unclear if any of the exterior areas would have been shaded by an overhanging extension of the roof associated with the non-preservable superstructure.

Structure 13 is architecturally most significant not for what was observed, but for what was not witnessed. The basal design and assemblage only includes the four masonry construction units, which mark the outline of the edifice. It is not witnessed to undergo architectural modifications or additions within the summit interior nor along the immediate exterior regions. The northeast and the northwest basal corners are revealed to be inset and slightly rounded, respectively, and mark the only architectural distinction associated with the building as a whole. The northern facing of Structure 13 is positioned toward Structure 46, yet this building was not investigated and any potential relationship

or association between the two structures remains unknown. The eastern facing is also worth mentioning for what it lacks, and not for what was preserved. The eastern facing of Structure 13 is positioned immediately on the open patio and did not witness any detectable architectural additions or attributes, which might mark significance, associated with this most publically visible facing of the building.

Therefore, though architecturally straightforward, Structure 13 reveals vernacular meaning for its uncomplicated assemblage and likely function. Positioned within the western region and more importantly directly on the open plaza, Structure 13 likely held an associated role with the other larger and more architecturally complex structures also located on the open plaza. The open and construction-free nature of the summit interior could also reveal the use of this sheltered space. As the interior space is sufficient for human occupation, it is also of convenient size for protection and storage of property and supplies. Regardless of exact function, the minimal architectural characteristics of Structure 13 reveal the unneeded or unwanted desire, but also allowance for, unadorned and uncomplicated structural designs. Finally, these structural observations speak to the variety of vernacular practices witnessed within the Southeast Plaza Group.

Discussion of Southeast Plaza Group

As Structures 6, 7, and 13 account for three of the five surface-identified mounds designated as the Southeast Plaza Group, each building holds the potential to reveal explicit and nuanced, as well as unique and shared, indicators of the overall architectural design and assemblage processes in operation within the group. Furthermore, these three

structures are representative of a majority of the overall group and credibly serve to provide a better understanding of the larger plaza functional purpose and general social cohesion of its occupants. At first glance, the investigated structures within the Southeast Plaza Group are inescapably divergent from one another with respect to size, positioning in relation to the open plaza, and likely overall function; however, discreet structural similarities are present. Upon further examination, it is also unmistakable that Structures 6 and 7 are significantly larger and more architecturally complex than Structure 13, and as such, do share more categories for comparison and contrast. Regardless, and in congruence with the discussion of the Site Core Plaza Group, the following discussion analyzes all three structures with respect to: platform and basal design; interior elaborations; and exterior modifications and appendages. Included within the classification of exterior modifications and appendages, the constructed activity area located between Structures 6 and 7 within the northeast region of the patio group will also be described and analyzed.

Platform and Basal Design

The result of analysis of the overall foundation and platform arrangements from the three researched structures within the Southeast Plaza Group indicate that both a conventional design practice, as well as one that was unexpected, were observed. A conventional platform design for a structurally independent building amassed from unmodified (or even modified) construction materials is recognized to consist of four distinct and articulating basal walls, which outline any shape defined as a quadrilateral.

This design is identified to be the conventional practice as it yields the most stable and enduring inhabitable, manufactured shelter when completed with a perishable superstructure, but also is the most dominating vernacular arrangement within this region of Honduras and throughout most of ancient Mesoamerica. Structure 13 clearly is constructed in this conventional configuration. Structure 6 is also presented to be intentionally designed as a conventional four-sided building, though its assemblage sequence varies slightly from the norm. Finally, Structure 7 is identified to exhibit a variation on its basal design and was originally and intentionally arranged as a 3-sided edifice and later sealed with the addition of a fourth basal construction.

Conventional Design

Amongst the most incontestable examples of a conventionally designed platform from nearly all investigated buildings from PVN647 is that from Structure 13. As Structure 13 is comprised of only the four walls and no other masonry construction units, it is perhaps the best representation of this standard design plan. Furthermore, each of the four basal walls of Structure 13 is observed to be integrated at the corners, concluding that they were amassed in a single construction episode. It is worth highlighting again that the exteriors of the northeast and northwest basal corners are not observed, or perhaps not preserved, in a conventional right-angle formation. It is unclear whether the northeast corner is an intentional inset corner and the northwest corner is rounded in appearance by design or due to the deterioration of the walls over time in these particular locations.

In contrast to Structure 13, the assemblage history deciphered for Structure 6 indicates that the four original walls were built over the course of three separate, yet not sequential, construction phases. The south and west boundaries were established first and then the east was added during the immediately following construction phase. An exterior appendage is added during a separate phase before the final north summit wall is added. Though the formation of the complete platform is interpreted to have occurred over multiple construction phases, a relatively very short amount of time is proposed to have passed due to the similarity of assembly technique, structural integrity, and usage of construction materials amongst the four earliest and summit-defining architectural elements. Additionally, the significance of the positioning of Structure 6 is noteworthy in that it is the northern-most building, and by all accounts, the largest in platform area during its final phase of occupation, of all structures defined within the Southeast Plaza Group. Due to such prominence in location and size it is not extraordinary that the original and intentional arrangement of the platform is that of the conventional design.

3-Sided Design

Structure 7 marks a significant divergence in original basal arrangement and is identified as an intentional and functional 3-sided or U-shaped edifice. As previously described, the 3-sided design is characterized by the assemblage of two paralleling walls, connected at corresponding ends by a third and perpendicularly aligned wall. The two paralleling walls remain unarticulated with any other construction unit at the opposing end from where they are joined by the perpendicular wall. The result takes on the

appearance of any quadrilateral shape with one side absent. Furthermore, the 3-sided design is considered to be deliberate if the observed form and quality of construction of the initial three sides are substantial enough to support a perishable superstructure to shelter the semi-enclosed space, without requiring the fourth and potentially stabilizing wall. Though an exact functional purpose of the 3-sided edifice remains unknown, evidence for the existence of buildings initially formed in such an arrangement exists with Structure 7.

In the case of Structure 7, the south, west, and northwest basal constructions are assembled first. The northern basal boundary is defined further during a subsequent construction phase. The likeness in the quality of construction, assemblage technique, and utilization of similar cobble construction materials all serve as indicators for a structural and architectural association amongst these original construction units. Furthermore, due to the well-selected construction materials and their structural integrity upon assemblage, the original 3-sided version of Structure 7 was sturdy enough to support non-preservable bajareque walls and a roof covering. Though few architectural appendages are added to the building before a final summit-sealing construction is amassed along the eastern and off-plaza side of the edifice, it is the condition of the fourth construction that is most significant. The fourth construction along the eastern facing of Structure 7 is noticeably deficient in assemblage technique and is amassed of irregularly shaped and placed, small to large-sized unmodified river cobbles. All descriptions in this document do not refer to this fourth basal construction as a formal wall due to its likely unsystematic and hurried assemblage, which yielded the poorly

preserved and jumbled accumulation of cobbles, roughly aligned in the expected orientation of a summit-enclosing wall. It is not clear if this indiscriminate construction could have supported the weight of a perishable wall amassed atop it, let alone aid in sustaining a sheltering roof. Again, while it is unknown why a building would intentionally be designed as a 3-sided edifice, the various dissimilarities between the fourth construction and the three earlier wall assemblages support that they are not amassed during analogous construction episodes nor constructed with comparable structural intentions. Finally, it is significant to restate that the side of the building that remained opened in the initial 3-sided version of Structure 7 is the off-placing facing. This is a particularly notable observation when compared to similarly designed structures investigated within the Site Core Plaza Group.

Summit Interior Elaborations

Though very few to no summit interior modifications are witnessed within the three investigated structures from the Southeast Plaza Group, the slight amendments still merit discussion. Observable summit interior enhancements are referenced as any form of cobble constructions or prepared living surfaces. Similar to the groupings identified with regard to the design of the original platforms, Structures 6 and 13 are observed to remain open and unmodified summit spaces, while Structure 7 underwent some reconfigurations in the size and formalization of the interior occupational space.

Open Interiors

Concluded to be the most architecturally simplistic building researched at PVN647, Structure 13 is observed to be structurally composed of only the four basal-defining walls and no other masonry or prepared living surface constructions. Therefore, the summit interior was initially established as an open and undivided space and remained unaltered until abandonment. An exact functional purpose of Structure 13 is yet to be formally presented, however, due to its architectural minimalism, it is concluded that its purpose did not necessitate a compartmentalized interior and strongly indicates a storage intent.

Structure 6 is likewise observed to contain no summit interior modifications or alterations, despite its overall complex assemblage history and exterior expansions. The earlier sub-structure constructions identified within the summit interior are buried prior to the formal erecting of Structure 6 and are not recognized as having a functional purpose within the interior space. Furthermore, the only observation made within the summit interior is the presence of a soil context along the southern portion of the interior. The density, concentration, and depth below the ground surface of the context could support its existence as the remainder of an occupational level within the summit interior. However, due to the composition, small quantity, and localized preservation, it is conservatively labeled a stratum and represents the only potential alteration occurring within the summit interior of Structure 6. Yet, it remains unclear if it is an intentional modification or the inadvertent result of the accumulation of soil in this particular region of the interior. Regardless, the lack of interior modifications is significant when

examining other characteristics that describe Structure 6. Its northern positioning within the patio group is not trivial and likely speaks to the role of the occupants and their level of social and functional engagement with the other structures in the group, as well as the activities and events occurring within the open space of the patio.

Amended Interiors

Identified as an intentionally designed 3-sided edifice, it is when the fourth basal construction is proposed to have been added that the summit interior of Structure 7 is also observed to be altered. During the same construction phase as the erecting of the summit-enclosing construction along the eastern facing, so too is added the north summit wall. Though these two constructions are not observed to formally come into contact with each other, it is likely that they formed the northeast boundary of the summit interior. This modification resulted in a reduction in the overall amount of occupational space within what is considered to be a sealed summit region. Additionally, two fill episodes are witnessed within the northern region of the summit interior, which not only bury an earlier wall construction, but also establish an occupational level within the enclosed space. The addition of the cobble fill unit not only further formalizes the northern boundary of the interior, but also plausibly establishes a new entrance into the interior from the eastern, off-plaza area. The space between the north basal wall and the north summit wall could have operated as a narrow corridor leading into the now enclosed summit interior. Even if a new passageway into the structure was fashioned by the minimizing of the occupy-able interior space, another entrance is still considered to have existed near the northwest basal corner, which is unaltered by the interior

modifications. Overall, the enclosing of the summit interior of Structure 7 resulted in a reduction in occupational area, but the simultaneous enhancement of the space. Though entry into the initial 3-sided edifice along the east is significantly modified, an access is still maintained. The shift likely coincides with an adaptation in both the interior and exterior activities occurring in and around the building.

Exterior Modifications and Appendages

Additions and expansions along the exteriors of buildings mark the majority of architectural modifications witnessed within the Southeast Plaza Group. As Structure 13 is revealed to not undergo any structural alterations, this discussion primarily focuses on the external modifications associated with Structures 6 and 7. Additionally, the cluster of masonry constructed elements within the northeast region of the Group and immediately adjacent to Structures 6 and 7 will also be described and analyzed. This constructed region is referenced as the Northeast Feature and the individual masonry components will be identified as elements. To be clear, the Northeast Feature is not labeled as an addition or appendage, exclusively associated with a particular building or analyzed with respect to any structures construction sequence. Its presence is included in this section due to its location as being exterior to formally identified structures, namely Structures 6 and 7.

Due to the complex variation of exterior modifications observed from Structures 6 and 7, and the Northeast Feature, this evaluation is separated into the categories of appendage form, function, and location along the exterior of the building and in relation to the open patio. Within the category of form, the classification is further identified as

either of a block form, wall form, or adjacent and unarticulating to a structure. The category of possible function of each appendage is proposed to be a terrace or veranda, an entryway or step, and finally with reference to the Northeast Feature, an activity area. Lastly, the location along each structure as well as positioning in relation to the open patio are evaluated with all exterior appendages. These identified categories and associating appendage classifications are in correspondence with the previous evaluation of exterior modifications identified along structures within the Site Core Plaza Group. The synthesis of this evaluation of the Southeast Plaza Group will highlight the architecturally vernacular practices occurring within this specific region of PVN647 and allow for greater comparison between this region and the Site Core Plaza group.

Appendage Form: Block Forms

The first of three identified appendage forms observed within the Southeast Plaza Group, which is also identified to be the least common, is that of the block form. The block form is described as a solid cobble construction that is predominantly not configured in a linear alignment. The result of this type of construction can appear as a three-dimensional cube or rectangle, depending upon the number of vertical and horizontal courses. There are three examples of this particular form of an appendage and they are all observed along the exterior of Structure 6. The earliest of the three block form appendages (CU13) is observed to abut along the southern, plaza-facing façade of the building. It is assembled during TS5 near the southwest basal corner and measures approximately 1.4m in length, 0.8m in width, and ranges 0.26-0.34m in height. It measures approximately 3 horizontal courses, however, ranges 1-2 vertical courses. The

southern-most horizontal course of cobbles is preserved to be only 1 course in height, while the remaining 2 horizontal courses stand taller, accounting for the range in preserved height of the overall construction. Regardless, the appendage is amassed as a solid construction along the plaza facing of the building. This location is undoubtedly purposeful with relation to its function as a mitigating architectural component between the overall structure and the open patio.

The second and third block form appendages observed along Structure 6 are more similar in shape and construction technique, than they are to the first block form appended along the southern facing. The other two block appendages are located along the western and eastern exteriors and also near their respective southwest and southeast basal corners. The second solidly constructed appendage along the west (CU15) is amassed during TS4, while the third (CU18) is added during TS3 along the east. Both are witnessed to be low-lying, continuous cobble constructions, fashioned into a rectangular shape, and mostly preserved to be a single cobble course in height. Therefore, these two flanking additions represent an alternative version of the block form appendage category, which takes on the appearance of a prepared cobble platform, composed mostly of medium-to-large sized cobbles. A proposed function of these two additions will be evaluated in a subsequent discussion; however, due to their size and continuous arrangement of cobbles and lack of linear style, they are categorized as variety of the block form.

Appendage Form: Wall Forms

The most reoccurring appendage form observed along the exteriors of Structure 6 and 7 is that of the wall form. This configuration is true to its title and is described as an architectural, masonry construction that is linearly aligned and in a contiguous fashion. Typically, wall form exterior appendages are assembled to abut, whether aligned parallel or perpendicular to an earlier construction. And the majority of examples of this design from Structures 6 and 7 are observed to be affixed to another construction in some manner. However, a variant on this regularity is witnessed in association with Structure 7, as two assemblages are revealed to be physically unconnected and completely free-standing constructions. The significance of these vernacular variations within this particular design category will be highlighted in this discussion and further evaluated later with respect to appendage function and location along the building.

Structure 6 undergoes exterior modifications to all of its façades over the course of its construction history. Furthermore, it is the wall form appendage design that accounts for most these additions. The north and south facings experience wall appendages that are constructed immediately abutting and aligning parallel to previous constructions. However, while the north or off-plaza facing endures the amassing of only one wall construction of this character (CU14), the south and plaza-facing façade accumulates two wall appendages (CU10 and CU16), which abut the earlier south basal wall. The result is a layering of a total of three aligned constructions and an expansion of Structure 6 into the region of the open plaza. Of further similarity between the wall appendages added along these opposing facings is that the northern and the southern-

most wall appendage (CU16) are observed to diminish in structural integrity as they both extend to their respective eastern basal corners. Neither appendage is witnessed to formally articulate with any other construction unit in these regions. It is not known if the preserved condition of each of these most-exterior additions is by planned structural design or a consequence of abandonment and the decay of the building in these regions. It is conceivable that soil and/or small cobble fill once existed in the spaces between the additions and their abutting constructions, but that it did not survive over time.

Conversely, the east and west facings of Structure 6 contain wall form additions that are aligned parallel to previous constructions, yet are amassed at a distance from those earlier assemblages, but are affixed to other associating construction units. Specifically, the west wall (CU12) is assembled approximately 0.5m to the west of the earlier west summit wall; however, the west wall addition establishes the northwest and southwest basal corners with the north summit wall and the southern appendages, respectfully. It is likely that soil fill occupied the space in between and the region was leveled off to the height of the west wall addition. Similarly, a wall form addition is amassed along the eastern facing of Structure 6, yet at a distance of approximately 0.65m to the east of the east wall (CU9). This wall form assemblage is aligned parallel to the earlier east basal-defining wall but also does not formally articulate with it. The earlier east basal-defining wall abuts with the block form appendage located near the southeast basal corner and the east wall form addition abuts to that exterior appendage form. Therefore, this wall form addition does not articulate with either of the eastern basal corners and remains un-affixed to any other construction unit at its northern-most extent.

Overall, though likeness is observed in the preserved versions of each of the wall form appendages witnessed along opposing sides of Structure 6, it is unclear if there is any greater design meaning to this occurrence. It is more likely that the individual function of each of these identified wall form appendages served a unique purpose and that purpose is further influenced by the specific location along the exterior of the building, than an intentional semi-symmetric aesthetic.

Structure 7 contains several examples of wall form appendages along the exterior facings. Amongst these examples, several variations exist with respect to placement along the exterior, alignment to earlier construction units, and the nature of articulation or lack thereof. Identified to be the first external modification is the addition of a wall form appendage that is aligned with and immediately abuts along the exterior of the west basal wall. This particular addition is low-lying, a single cobble course in width, and does not extend across the entire facing of the earlier, plaza-facing basal wall. A similar appendage is added along the northern facing, immediately at the northwest basal corner. This wall form addition is shorter in length than the western, plaza-facing appendage, however, it is also only a single course width, does not extend the full length of the northern boundary, and is established at a lower depth than the northwest basal wall, which it is aligned with and completely abuts. Also along the northern exterior of Structure 7 is constructed a second wall form appendage, which abuts but is aligned perpendicular to the north basal walls and extends to the north, away from the building. Somewhat analogous to this northern, perpendicularly oriented wall appendage is an addition near the southwest basal corner. A brief in length and width, linearly constructed

wall appendage is amassed in alignment with the west basal wall and appears as an extension of this basal defining wall. Therefore, it abuts Structure 7 at the southwest basal corner along the southern facing of the building and extends to the south. It remains unassociated with any other construction unit at its southern-most extent.

The final two wall form additions recorded in association with the exterior of Structure 7 are distinct from the previous four examples due to fact that they are observed to be entirely un-affixed to any other constructed element architecturally connected to the building. Along the western and plaza-facing exterior of Structure 7, two wall form appendages are identified to be roughly oriented with the west basal wall (CU4) and the abutting west appendage (CU7), however, are free-standing masonry constructions. The first, labeled as the west wall (CU10), is positioned approximately 0.4m to the west of the west basal. The second free-standing wall, labeled the southwest wall (CU16), is considerably shorter in length and is located an average distance of 0.4m to the west of the first unattached wall addition. This variety of a well-constructed, yet architecturally unattached or independent appendage is the only account of this type of a masonry addition along any investigated building within PVN647. The location of both of these free-standing additions is certainly significant, in that they are amassed along the plaza-facing exterior of Structure 7. This positioning, along with a proposed purpose, will be examined.

Finally, as previously described explained Structure 7 is originally designed as an intentional 3-sided edifice and therefore lacks a fourth and summit-enclosing construction along the east and off-plaza side. And as such, it is arguable that the fourth assemblage

can be classified as an exterior modification and more specifically of the wall form categorization. However, as also previously stated, the assemblage materials and haphazard compiling of the summit-sealing construction unit was of such poor quality that it is not referenced as a wall in this report, but simply a construction unit. Therefore, it is not considered within this category of appendage form. This interpretation is significant when the overall formation and associated modifications of Structure 7 is evaluated with other similarly designed 3-sided edifices identified at PVN647. Of specific interest is the observation that no other external appendages were constructed along the east or entirely off-plaza facing of Structure 7.

Form of the Northeast Feature

The final category of external modification form identified within the Southeast Plaza Group is referenced as the Northeast Feature. This region of preserved masonry constructed elements is located adjacent to and architecturally articulating with Structures 6 and 7, yet not recognized to be solely associated with only one individual structure. The individual construction components of this feature are labeled as *elements*, as it is unclear of their overall structural formation and purpose. Furthermore, the cobble elements in this region are not accounted for in the time spans and construction sequences for any investigated building and are not referenced as *construction units*. A relative chronological order of their assemblage and in concert with the systemized construction histories for Structures 6 and 7 is not determinable, as clear evidence for coinciding time spans between Structures 6 and 7 is not present. In spite of a lack of certain information,

the presence of this clustering of cobble assemblages and the nature of articulation to identified architectural constructions is significant.

To illustrate the overall form of the Northeast Feature, this account will begin with identified and known architectural components from Structures 6 and 7 and precede on to the description of the articulating construction elements of the feature. The feature is described as approximately six construction elements that are arranged almost in a contiguous fashion, as none are observed to be entirely independent and structurally unconnected. The *first element* to be presented is recognized to be preserved immediately to the east and abutting the southeast block form appendage from Structure 6 (**Figure 5.23**). It is composed of two medium-sized unmodified cobbles, which are positioned in between the block form addition and a likely naturally occurring and unmodified small boulder.

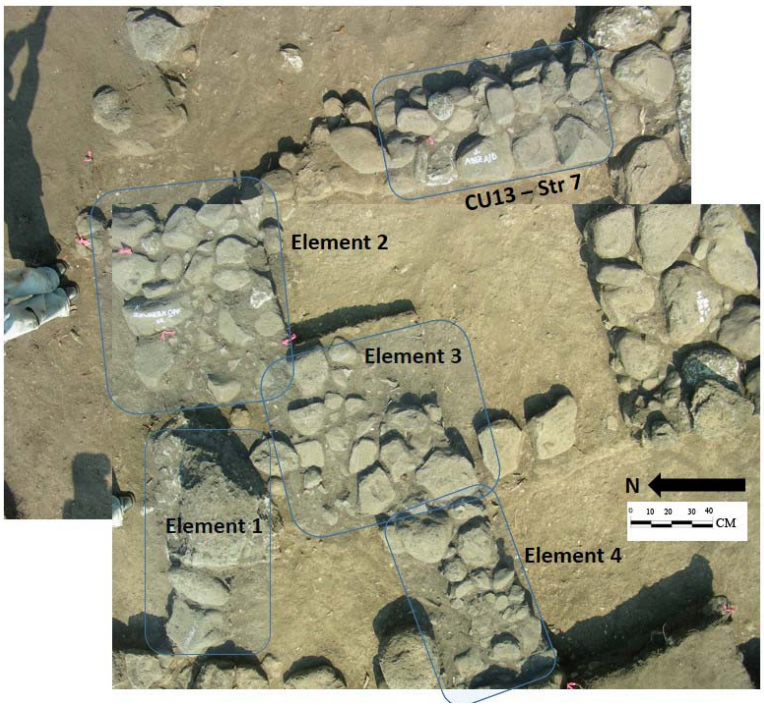


Figure 5.23: Plan-view photograph depicting the Northeast Feature area in between Structure 6 and 7 in the Southeast Plaza Group. Construction Elements 1-4 are highlighted, as well as the north wall appendage (CU13) from Structure 7.

Directly to the east of the small boulder is a cluster of small-to-medium sized, unmodified cobbles, roughly configured in the shape of a square. This *second element* is observed to be a single layer of cobbles and approximately measures 1.13m in length and ranges 0.48-0.8m in width. Of particular note is that the northern side of this second element contains all of the medium-sized cobbles and they are positioned with the naturally occurring flattened facings to the north. The remaining portions of the element do not display any particular intentional arrangement as compared to the placing of the cobbles to the north.

The southwest extent of the roughly square-shaped second cobble element is observed to structurally flow into a grouping of randomly clustered small and fist-sized

cobbles that are located directly to the south of the small boulder. These cobbles, loosely identified as a *third element* within this feature, exhibit no clear organization or intentional design, other than they are immediately adjacent to a *fourth element*, which is preserved with more palpable structural integrity. The fourth element measures approximately 1.3m in length and 0.4m in width and is composed of mostly small and medium-sized unmodified cobbles. It somewhat resembles a wall-style of construction, as it is mostly linear and the cobbles are arranged in two horizontal courses, however, this element is a single layer in height. It is located approximately 0.8-1.0m to the south of the southeast basal corner of Structure 6 and roughly 1m to the northwest of the northwest basal corner of Structure 7.

The western-most extent of the fourth element, loosely in a wall-configuration, is an additional un-systemic grouping of small to fist-sized cobbles, arranged as a single layer. This *fifth element* of grouped cobbles is larger than the other grouping of cobbles, informally referenced as the third element. This cluster is excavated to be rectangular in shape and measures approximately, 0.75m in length and 0.15-0.2m in width. The location of this second clustering is within the open space of the plaza and a range distance of 0.8-1.0m to the south of Structure 6 and approximately 1.2m to the west of the Structure 7.

The final construction element, the *sixth element*, identified within this feature area is another grouping of randomly assembled small and fist-sized cobbles. The overall area of the grouping measures approximately 1.3x in length and 1.2xm in width and is located roughly 0.8m to the south of Structure 6. Excavations did not uncover the full

extent of the fifth and sixth cobble groupings; however, they are surmised to be components of a similar accumulation activity, as they are observed to be articulating.

The final observation from the Northeast Feature is that it is revealed to not only architecturally articulate with Structure 6, but also with Structure 7. The immediate area to the north of the wall form external appendage (CU13) that is aligned perpendicular to the northern basal boundary of Structure 7, contains roughly eight to nine small-sized unmodified cobbles, which articulate with the square-shaped cobble grouping labeled to be the second element. It is unclear if the cobbles in between the formal architectural construction of the north wall added during Time Span 3 of Structure 7's assemblage history and the second element are intentional or the result of tumbled construction materials over time. The identified elements from the entire Northeast Feature region were exposed at a depth no deeper than 0.1m below the ground surface. Though a relatively small amount of terminal debris associated with episodes of structure decay and abandonment is witnessed in this region, the shallow depth of these elements can contribute to the displacement, erosion, and overall poor preservation over time.

Overall, the Northeast Feature region and all identified elements remain indefinable by standard or conventional architectural labels. The irregular shape and density of the cobble clusters are not known to be the result of purposeful design or extreme decomposition. Nevertheless, the existence and location of all of the elements are significant for potentially revealing greater functional use and architectural styles of the preserved structures and vernacular practices within the Southeast Plaza Group.

Appendage Function: Terrace or Veranda

An evaluation of the possible functions of external appendages associated with Structures 6 and 7 and the adjacent constructed area is now presented. The prevailing observed appendage purpose is that of a terrace or more speculatively as a veranda. The identification of a terrace or veranda within the Southeast Plaza Group is analogous to the definition presented in the discussion of the Site Core Plaza Group. To reiterate, a terrace is defined as an external raised platform, which extends along most or all of a single facing of a structure. The result establishes an occupational space, capable of accommodating a relative amount of people and activities, depending upon the size and configuration of the terrace. Furthermore, the exterior occupational space may be shaded by a perishable superstructure covering or remain exposed to the sun and forms of precipitation. A veranda is distinguished from a terrace by the characteristic that a veranda is identified as a raised platform that extends around basal corners and incorporates at least two facings of a structure. It is also proposed that a veranda typically is a covered space, due to the intentional and wrapping design of the elevated space. Finally, it is recognized that at least one appendage is necessary, at least in the case of a producing a terrace; however, several constructions are commonly configured to establish a terrace and most often a requisite to result in a veranda. Structure 6 contains appendages fashioned into terraces and possibly a veranda wrapping around one basal corner. Structure 7 witnesses the formation of only terrace spaces.

Structure 6 witnesses amongst the most complex modification history with reference to establishing functional exterior occupational space. The first wall form

appendage (CU10 – TS6) along the southern facing establishes a short platform of approximately 0.3m in width, but likely functioned initially to provide greater structural stability to the integrity of the original summit wall, than a formal exterior occupational space. However, the block form appendage added along the same exterior fashions a small occupational space. The square shape design of the block form appendage establishes a little more $1m^2$ of surface area. While the southern-most row of cobbles is slightly lower in height and plausibly functioned as a step to the rest of the appendage, the majority of this raised area was likely covered by a perishable surface material. Due to the petite size and shape of this space, it could not have supported more than 2-3 adult occupants, whether sitting or standing. Furthermore, due to its relatively short height, approximately 0.3m, access onto this platform is easily obtained from any side. Therefore, it is not observed to be an exclusive space, with regard to admittance, however limited due to the miniature amount of space. Finally, due to its location along the plaza facing of Structure 6, this brief terrace area likely held some significance as a casual observational space of patio activities. However, over time, the configuration of the plaza-facing façade is modified and includes the addition of the second wall form appendage (CU16 – TS4) and the creation of more occupational space. The amassing of this second wall form appendage establishes approximately 0.4m of occupational space along nearly the entire south facing from the west at the block form appendage, to the east near the southeast basal corner. This wall form appendage is preserved to be approximately the same height as the block form terrace and added to meet the likely increasing need for more occupational space along this plaza-facing exterior. Access to

this broadened terrace is still via the lower step associated with the block form appendage, as well as quite possibly from both the southeast and southwest corners. It is unclear if the earlier version of the plaza-façade with only the block form appendage establishing an occupational terrace area that would have been covered by a perishable roof. However, it is likely that the later construction episodes that fashion the elongated version of the terrace region also included the amassing of an overhead shelter.

The addition of a wall form appendage along the eastern facing of Structure 6 and approximately 0.65m from the east summit-defining wall, establishes a short terrace platform along this exterior. This occupational space is likely created by the area in between this wall form appendage and the basal exterior of the building being filled in with soil and leveled to a uniform surface. Due to its brief height, no more than 0.15m tall, this space is accessible from any side. Furthermore, this occupational space is large enough to accommodate a relative number of occupants and stationary forms of activities. This appendage is observed to abut the block form addition near the southeast basal corner and likely shares an overall similar functional purpose for this eastern facing of the building. Due to the extent of this platform area it is likely it was sheltered by a perishable covering, which look out on to the Northeast Feature region between Structures 6 and 7.

The north facing of Structure 6 includes the addition of a wall form appendage, which on its own plausibly establishes a relatively long, nearly the entire length of the facing; yet short in breadth, terraced platform area. However, with the addition of the well-constructed west wall appendage, it is possible that these two appendages establish a

veranda platform, which wraps around the northeast basal corner. The western exterior comprises the largest occupational, raised area associated with all of Structure 6. The space in between the west wall appendage and the west summit-defining wall is likely leveled by soil fill to produce a uniformly surfaced platform measuring approximately 4m in length and 1.2m in width. Access onto the western portion of the platform is likely gained near the southwest basal corner. The southern and western facings of Structure 6 are significant as they are the most visible from an approaching path from the Site Core Plaza Group and other regions to the north and west. This largest amount of designed exterior space associated with Structure 6 could accommodate the greatest number of occupants and activities, but also establishes the most formally configured facing of the building. Therefore, the likely public nature of these facings necessitated a distinguished façade as observational and greeting space. Finally, due to the intentional expansiveness and formality of the constructed exterior and therefore deemed a functional veranda space, the occupational areas along both the south and west exteriors were likely covered by a perishable superstructure.

In contrast, Structure 7 witnesses the formation of only one terrace platform along the plaza-facing western exterior of the building with the addition of the west wall appendage. The space in between the appendage and the west basal-defining wall is likely leveled with soil fill to a uniform height and capped with a perishable living surface material. This occupational terrace space measures approximately 4m in length and 1m in width, which creates an exterior region that is likely more than half of the total area of the summit interior. The average height of the terrace stands 0.25m and due to its

generous amount of space, likely accommodated a sizable number of occupants, carrying out fixed and unfussy forms of activities. Furthermore, the positioning of this raised platform is along the plaza-facing exterior of the building and certainly a prime locale for interaction between the open patio and this most-public facing of Structure 7. The brief southwest wall appendage to the west likely functioned as a step up onto the west terrace region and operated as the primary form of access to the raised area and into Structure 7. Finally, due to the extensiveness of established space, the terrace is likely sheltered by a perishable roof.

Appendage Function: Entryway/Step

The only other observed functional intention of exterior appendages is associated with establishing entryways or a doorstep, which lead into a building or are a brief prepared platform leading to another larger occupational space. Along the exteriors of Structures 6 and 7 appendages identified to be either a formal entryway, doorstep, or step are witnessed to be of the block form and wall form appendage styles. Each building includes two examples and of the same style.

The two block form appendages, which abut along the east and west exteriors of Structure 6 respectfully, are identified to function as steps leading up onto adjacent raised terrace and veranda platforms. The east block form appendage near the southeast basal corner leads to the raised terrace along the southern, plaza-facing façade of the building, while the west block form appendage near the southwest basal corner leads to the vast west platform associated with the veranda. The lower-lying east step is approximately $1m^2$ in area and is adjacent to and abutting with the eastern terrace. It is likely that the

east terrace is a continuation of the step created by the block form appendage and therefore the intentional purpose might have been altered over time. It is unclear if a formal entrance into Structure 6 exists near to this platform step, and if its design is that of a doorstep before entering the building. At a minimum the east step operates as an alternative access onto the raised terrace overlooking the open patio and also serves as a casual occupational space in conjunction with the later assembled east terrace along the likely non-public façade of Structure 6. It is proposed that in the final occupation of Structure 6 that the eastern exterior could have included an extension of the perishable roof to shield the region from sun and precipitation and leads to the activity space labeled as the Northeast Feature.

In contrast, the west block form appendage from Structure 6 encompasses approximately $2m^2$ of area and stands 0.3m in height. It abuts against the western facing of the veranda platform and due to the significant height of the elevated region; the step serves as the prescribed method upon which to access the formalized exterior region. It is credible that the veranda was protected by a perishable covering, yet it is unknown if a covering would have extended to shelter the step. Finally, due to the public exposure of the western facing of Structure 6, the step leading to the largest area of platform space, accentuates the visual aesthetic of the façade. These architectural elaborations further mark the southwest region of Structure 6 as one of high visibility and likely the coming and going of occupants and visitors, as compared to the eastern exterior.

Steps and entryways observed along Structure 7 are established by the addition of wall form appendages along the north and west facings of the building. The low-lying

wall form appendage abutting against the north facing near the northwest corner is identified to be a doorstep leading into an entrance to Structure 7. The brief height and width does not yield a suitable amount of area for an occupational space and the size of the four cobbles making up the appendage are too small to provide structural integrity to the corner. Furthermore, it is proposed that an access point into the summit interior is positioned near the northwest corner, immediately adjacent to this appendage.

The second wall form appendage is the free-standing wall located near the southwest exterior of Structure 7. This wall appendage is aligned parallel to the west terrace and served as a step up onto the raised platform. The space in between the step and the terrace facing was likely filled with soil and leveled to a uniform height and covered with a perishable surfacing material. Due to the significant height of the western terrace, the step served as a convenient, if not the singular, means of access onto the elevated region. It is not known if an additional entrance into the summit interior of Structure 7 existed along this western facing of the building; however, the addition of the formal step further supports the observation that significant meaning is associated with this facing of the building. The western facing is the most prominent plaza-facing side and is the only exterior of Structure 7's to witness exterior alteration of any sort, aside from the entryway step along the north. The association of the open patio is likely maintaining an influence over the vernacular manifestation of the plaza façades of structures undergoing external modifications.

Function of the Northeast Feature – An "Activity Area"

The final discussion associated with interpreting functional intentions of exterior modifications is of the Northeast Feature region. Due to the indiscriminate shapes and sizes of the preserved construction elements, it is indeterminable to establish exact purpose beyond the generalizing hypothesis that the space likely supported occupants and their subsequent occupations. Therefore, the amalgamation of the elements of the Northeast Feature is labeled to represent an "activity area". Since a relative construction order cannot be deciphered, it remains unknown which elements were constructed first; if all held utility at the same time; and which, if any, were intentionally dismantled and reconfigured for different purposes in antiquity. However, with recorded characteristics regarding the placement, orientation, and continuality of certain elements, along with observations made regarding the modern flow of precipitation runoff during excavations, potential functions will be explored.

The first of two presented functional intentions of all of the construction elements identified within the Northeast Feature region is that collectively they represent an occupational level. The construction materials are nearly all composed of a range of medium-sized and smaller, unmodified river cobbles, arranged at roughly the same depth below the ground surface. A relative and uniform flatness commonly associated with a prepared surface is lacking with most of the elements, however, an intentional occupational surface can be engineered from a layering of small stones and capped by a prepared surfacing material, such as plaster or bajareque. However, there is no trace of preserved surfacing materials above the cobbles in any of the investigated regions where

the construction elements were revealed. Furthermore, this presented scheme does not account for the role of the observed flat facings associated with the first constructed element, or the linear-wall configuration of the identified third element, if the overall intention of the entirety of the Feature is that of a level occupational surface. Finally, the witnessed distribution of the construction element groups appears random and it is unknown if excavated areas that lacked the presence of cobbles is due to poor preservation and erosion factors or that cobbles never existed in those areas.

A second and speculatively proposed intentional function of select construction elements within the Northeast Feature is in association with the channeling and drainage of runoff water from the open patio area within the Southeast Plaza Group. The observation was made while excavations were ongoing that rainwater runoff follows a natural downward slope to the northeast out of the open patio region and continues to the seasonal quebrada, located immediately to the east of the group. Specifically, it was witnessed that runoff flows from the open patio through the space between Structures 6 and 7. An alternative intention of the construction elements is to assist the drainage of rainwater by channeling it out by means of the low-lying cobble elements. The purpose of the cobble groups identified as the fifth and sixth elements is not clear, however, the alignment of the linear fourth element directs the water to the northeast along the third element, which guides the runoff in between the second element and the northern extent of the north wall appendage from Structure 7. Furthermore, it was observed that after an episode of rain, the ground surface remained quite saturated and the mud challenging to traverse. The distribution of the cobble element clusters are conveniently positioned such

that they form a continuous connection between Structures 6 and 7. If the tops of the cobbles were above the level of runoff and mud, they form a pathway from one building to the other, avoiding the saturated ground surface. It is likely that other daily outdoor activities were carried out in between these structures, though those remain to be explained (see Chapter 6). It remains indeterminable if it is only by coincidence that observing how modern rainwater drains out of the patio of this group lends any credibility to discerning the intentionality of the cobble elements in antiquity. However, it is noteworthy to highlight that the occurrence of constructed cobble elements was not observed in between any other structures in any other researched locations at PVN647. Though an exact function of the individual elements nor their collective meaning may not be comprehended, the existence is extremely significant and reveals even greater architectural vernacular variation.

Appendage Location: On-plaza

The location of exterior appendages along Structures 6 and 7 comprises the final evaluation of the analysis of exterior modifications. As all of the surface-visible structures identified within the Southeast Plaza Group are positioned around the open plaza, the following examination draws the distinction between appendages located along an on-plaza facing or an off-plaza facing of a structure. An on-plaza positioning is defined as occurring along any edifice facing that is observable and even partially discernible from the open patio, while an off-plaza location corresponds to appendages that are totally concealed from view from the plaza. Furthermore, the placement of Structures 6 and 7 along the open plaza is considered, as positioning around the shared

activity space holds potential architectural influence. Overall, the objective of this discussion is to examine the categories of appendage form and function in concert with the location on each structure and to compare and contrast observations between Structures 6 and 7. The result is a comprehensive depiction of architecturally expanded versus non-expanded locations and indicators to overall structure function and accessibility to exterior spaces.

Structures 6 and 7 are both oriented with one prominent facing directed immediately toward the open plaza region. Furthermore, it is these immediate plaza-facing façades that witness the most individual external appendages added to each building. Both immediate plaza facings are recognized to establish a raised terrace region, however, architectural variations are present and yield differing appearances and amount of occupational space. Over multiple episodes of building modification at Structure 6, one block form and two wall form exterior appendages are affixed along the south, plaza facing. Though the number of individual appendages and the amount of occupational external space generated along this facing increases over time, the final result establishes a relatively limited amount of area, compared to other expanded facings of this building. In contrast, the west, immediate plaza facing of Structure 7 also witnesses the greatest number of exterior appendages added along its plaza façade, however, the largest area of external space is yielded.

Additionally, the identified appendage forms along the plaza façades of Structures 6 and 7 are of the same category, but are positioned in a dissimilar arrangement. The two wall form appendages added after the block form appendage along Structure 6 are

designed as aligned parallel to and continuously abutting against each other. The terraced region along this plaza facing appears as a solid cobble façade. On the other hand, only one low-lying wall form appendage along Structure 7 is observed to be abutting a previous construction, while the additional two wall form appendages are classified as free-standing wall additions, as they do not physically articulate with any other observed construction unit. The two free-standing appendages provide the structural design for the raised terrace area, while soil fill and likely a capping surface material of plaster or bajareque provided the structural support for the plaza-facing exterior occupational region.

Furthermore, the two flanking facings to the prominent plaza façade on both Structures 6 and 7 are partly visible from the plaza. The region containing the Northeast Feature, located between the structures, is somewhat obscured due to the structures close proximity and the unknown purpose of the activity area. The east and west flanking facings of Structure 6 are noticeably more architecturally elaborated regions than the north and south plaza flanking facings of Structure 7. The west facing of Structure 6 contains the expansive terrace and possibly veranda design, which yields the largest formal exterior occupational area, complete with a low cobble platform serving as a step up to the elevated and sheltered space. It is noteworthy to mention that a path of access into this patio group is likely from the northwest, which positions this facing in direct view of approaching and departing visitors. Therefore, this particular facing may have necessitated a greater aesthetic appearance and/or served as a space for observation and greeting, aside from fulfilling situational obligations as being visible from the open patio

region. Similar to the west facing, the east facing of Structure 6 is modified and includes the low-lying block form appendage, cautiously regarded as an entryway into the building, though an entrance or doorway is not definitively observed. Additionally along the east facing, and abutting against the square-shaped block appendage, is an extending low-lying terrace platform. It is unclear if this space included a perishable shelter, yet it is large enough in area to accommodate occupants and their stationary activities.

Conversely, the flanking south facing of Structure 7 only includes the brief wall form appendage, immediately at the southwest basal corner, and is recognized as functioning as a structural support to the plaza-facing elevated terrace. The north facing of Structure 7 consists of the short wall form appendage, proposed to serve as a doorstep to an entrance near the northwest basal corner, and an additional wall form appendage, which juts away from the building to the north. The functional purpose of this addition remains unknown and likely shares significance with the activities of the Northeast Feature.

The visibility of the Northeast Feature region from the open patio is also of importance, as it encompasses the space in between Structures 6 and 7. Since most of the cobble elements of the Feature are in proximity to the adjacent patio-visible basal corners of Structures 6 and 7, it is likely that most of the element groupings were observable from the patio area. However, since the exact purpose of the Feature remains unknown, it is unclear if the cobble elements supported perishable superstructures that might have impeded visibility into the region. Nevertheless, the appearance and function of the

Northeast Feature area is believed to be connected to an influential and harmonious relationship with the patio and the occupants and purposes of Structures 6 and 7.

In summary, both structures witness an expansion into the open patio space along their most prominent plaza façades, yet by differing design schemes. Nevertheless, the intention of fashioning observational and activity space along the most prominent patio facing is a shared characteristic. The comparison of plaza flanking facings between the buildings, however, highlights substantial divergences expansion size and degree of modification. Furthermore, these deviations likely correspond to overall variances in structure function, dwellers, length of occupation, and degree of engagement and significance with the communal patio. Finally, the presumed public and shared purpose of the open patio likely played a role in the overall relationship with each building and therefore, also impacting the architectural manifestation of all plaza visible facings of both Structures 6 and 7.

Appendage Location: Off-patio

Off-plaza facings associated with Structures 6 and 7 are identified as being completely undetectable or observable from any position within the open patio area. Since both Structures 6 and 7 are oriented such that one facing is prominently directed toward the plaza, the result is that only one facing on each building is deemed to be an off-plaza locale. Exterior modifications are witnessed along each of the off-plaza facings, however, are regarded to be quite minimal compared to other expanded facings and with the specific case of Structure 7, is proposed to be a factor of its original platform design.

Due to the northern positioning of Structure 6 within the Southeast Plaza Group, its non-observable region from the open plaza is its north facing. Along this facing, only one wall form appendage is witnessed and fashions a terrace or conceivably a wrapping veranda with the raised platform along the western facing. It is posed that the northwest basal corner conclusively underwent an alteration. The northeast basal corner does not appear to be modified, as the eastern extension of the wall form appendage does not physically articulate at this basal corner. The breadth of the expansion along the north facing is somewhat similar to the form and appearance of the southern, immediate patio facing, yet not as elevated and is composed of only one appendage addition. It is of note to state that the region north of Structure 6 is observed to be devoid of any surface visible constructions and therefore likely discernible from the Site Core Plaza Group and other surrounding areas. It is proposed that a contributing rationale for the significant exterior expansion along the western, plaza-flanking facing of Structure 6 is due to the high visibility of the façade from the north and northwest areas beyond the Southeast Plaza Group. A similar explanation for the terrace expansion along the northern and undetectable from the open patio region is viewed to be conceivable. No other architectural modifications are witnessed along this off-patio facing.

The manifestation of the off-patio facing of Structure 7 is distinguished to be unique situation due to the identification that the original intentional platform design is that of a 3-sided edifice. By means of various observed architectural differences, the fourth and final summit-sealing construction is concluded to be the eastern or off-patio construction. To reiterate, the fourth basal construction is not defined to be a

conventional wall, due to the likely poor assemblage technique and subsequent even worse state of preservation. However, since it is located in the expected positioning of a fourth and architectural summit-sealing boundary, the construction is designated as serving the purpose of completing the platform of the building. Furthermore, it is highlighted in this discussion not because it is being categorized as a formal "exterior modification", but due to its location as being amassed along the off-plaza facing. A distinct and reoccurring characteristic recognized in structures arranged in the intentional 3-sided design at PVN647 is that the open facing is the off-patio facing. Finally, no other exterior masonry modifications or appendages are witnessed along the off-patio facing, or at the northeast and southeast basal corners of Structure 7, aside from summit-sealing construction.

Overall, the off-patio facings of Structures 6 and 7 are interpreted to be only slightly modified by means of added architectural components. The observance of comparatively minute architectural alterations along off-patio facings is likely an indicator for intentional, mostly, construction-free spaces for the purposes of outdoor activities, which did not require masonry forms of assemblages. Furthermore, off-patio regions can be generally viewed as the most private of exterior spaces, compared to the open and common space of the patio. Due to the concealed nature, formalized occupational space for observations may not be necessary, as public or collective forms of activities and interactions did not frequently occur in off-plaza regions. However, the visibility of the northern, off-patio facing of Structure 6 from approaching and/or departing pedestrians is a distinct variation from the off-patio region of Structure 7.

Arguably, the off-patio area of Structure 7 is of the most secluded region in the Southeast Plaza Group, due to the close proximity of the steep downward slope of the seasonal quebrada, located to the east. Therefore, the outcome of observed exterior elaborations along off-patio facings may be the direct result of this particular location and its oppositional positioning with respect to the shared plaza. In the specific case of Structure 6, however, this assertion is compounded due its off-patio facing participating in an additional level of interaction with other surrounding regions. The added level of a varied form of public interaction is revealed to also dictate the manifestation of this façade.

Conclusions about Southeast Plaza Group

The result of architectural analysis of Structures 6, 7, and 13 reveals some similarities in construction planning, but allowances for vernacular variations within those designs contributing to dissimilar final versions of each building. The observation of seemingly less architectural commonality amongst the buildings could be due to the low frequency in total number of investigated structures within this patio group. However, though conclusions are drawn from the examinations of only three structures, this amount holds some statistical significance since only a total of five surface-visible buildings are identified to compose the Southeast Plaza Group. Apart from sample size, a more likely explanation of architectural variation is due to the individual functioning of each building and its social relationship with the shared open plaza. Additionally, as seems the case with Structure 6, engagement with other surrounding regions likely also

played a role in the architectural appearance of each building, yet not in equal ways. The preceding approach to analyze construction histories by means of examining structure platform design, internal elaborations, and external modifications reveals several reoccurring categories. However, the following conclusions call attention to not only the uniqueness of the observed architectural characteristics, but the way in which the vernacular manifestation of the residents built environment portrays aspects of their shared social identity.

The first level of analysis revealed two distinct patterns of original platform design. The conventional 4-sided arrangement is observed to be the predominant conscious planning principle within the Southeast Plaza Group, as it is it concluded to be the guiding design of Structures 6 and 13. However, variations exist once the foundational arrangement is established. Structure 13 remains entirely unmodified architecturally, while Structure 6 witnesses various episodes of elaboration and extension beyond the original basal plan. Equally distinctive, though unexpected, is the intentional 3-sided basal configuration observed from Structure 7. Although this basal arrangement is witnessed in the founding of only one building within the group, its presence is noteworthy as its design is certainly deliberate and represents the malleability of what can be recognized as customary building techniques. Four-sided structures are generalized as the conventional construction model when it comes to masonry forms of buildings, especially when intended to support perishable superstructures, regardless of size or functional purpose. The existence of an originally designed 3-sided edifice indicates not only the desire or necessity for such a form of shelter, but also the structural ingenuity

and the allowance for vernacular variation within what are thought to be rigid rules governing architectural formations.

The evaluation of summit interior enhancements is the second level of analysis, resulting in little-to-no modifications being observed. Therefore, it is unclear if a planned or unplanned vernacular intent is exercised. Structures 6 and 13 contain no architectural assemblages within their summit interiors that are related to occupational phases directly associated with the formal use of the building. Overall, the interior of Structure 7 experiences a minor modification as the total amount of area is slightly lessened when the fourth facing of the open 3-sided edifice is proposed to be added. It is plausible that the original 3-sided basal design of Structure 7 is the contributing factor to formalizing the internal boundaries, once the building is sealed off. Nonetheless, no other summit enhancements are witnessed. Although very few to no alterations are recognized within the summit interiors of Structures 6, 7, and 13, an overall interpretation can be posed that this absence of change is an indicator of not only the occupational practices carried out within each structure, but also the activities occurring outside the buildings. Perhaps the more familial and communal association amongst the buildings within the patio group placed less value on creating indoor, architecturally compartmentalized spaces, than on outdoor settings for shared and interactive activities. This initiative is dependent upon the function of each structure and the overall nature of production occurring within the group. However, the results of analyzing summit interiors proves useful in better understanding the origins of architectural vernacular styles in other locales, even when intensive internal modifications are presumed to be absent.

The final level of analysis is in reference to exterior modifications along structure facings and this category of examination contains the most variation in architectural designs. The previous discussion assessed exterior modification and/or appendage by means of form, function, and location with respect to the open patio. As Structure 13 is observed to contain no further architectural amendments beyond the original basal platform, the primary focus is on the comparable external attributes of Structures 6 and 7.

Two distinct and definable appendage forms are identified: the wall form and the block form. The wall form represents the most abundant and is the only type observed along both buildings. However, along Structure 6, the wall form appendages are witnessed to be positioned parallel to and immediately abutting along previous construction units. This placement is observed to be quite conventional for PVN647; however, along Structure 7, the wall appendages are recognized to be completely free-standing and un-articulating with any other construction. It is unclear if significance is imbedded in the presence of these differing versions of the wall form design, as they are only appearing along different buildings. This inquiry is further complicated when the function of the wall form appendage is evaluated. Regardless, the variation in positioning of wall form appendages serves as an indication of the allowance for flexibility with construction arrangements within a similar appendage form classification.

The second appendage form, the block form, is observed in three locations and along the same building, Structure 6. The frequency of such an appendage formation speaks to its intentional desire. Furthermore, the reiteration of this form along only one structure represents the degree of stylistic transformation occurring over time and likely

the continuous formalization of the façades along Structure 6. Finally, the initial description of the Northeast Feature is referenced in the discussion of exterior modification forms, as the region in between Structures 6 and 7 represents a form all its own. The masonry elements comprising the Feature are the only architecturally articulating components observed within all the excavated exteriors of buildings at PVN647. The fragmented evidence for the Feature is valuable for understanding that variant forms of external enhancements existed, regardless if precise architectural labeling remains problematic or injudicious due to the poor quality of preservation.

The second evaluation of external modifications is in reference to function of either individual construction forms or as grouped entities. The overarching assessment is that exterior appendages along Structures 6 and 7 established varying degrees of occupational spaces. The most abundant result of either a single or an amalgamation of multiple exterior appendages is that of creating raised terrace or possibly wrapping veranda spaces. However, variations are present with respect to the form of appendage used, the placement of the appendages, and the amount of occupational space that is created. Mostly wall forms are utilized to fashion elevated terrace platforms along both buildings and possibly a veranda around Structure 6's northwest basal corner. Yet a significant deviation is present in that the placement of wall form appendages along Structure 6 are immediately abutting against earlier constructions; while the wall forms added along the exterior of Structure 7 are free-standing. Furthermore, one of the block form appendages along Structure 6 likely operated as an elevated terrace and established the smallest amount of occupational area of all identified terraced spaces along both

structures and over their entire occupational life spans. Conversely, the other two block form appendages established low-lying entry or stepped platforms, associated with either entrances or single steps leading to other elevated areas. Overall, there is more consistency than disparity between appendage form and implicit function. The design and dimensions of the block forms characterized as entryway platforms share significantly more commonality than the block appendage deemed a brief terraced region.

These observations are of note as they reveal a correlation between architectural form and function, yet allow for vernacular adaptations. Finally, an all-inclusive functional conceptualization of the Northeast Feature is unattainable due to poor preservation and the fragmented nature of the cobble groupings. It remains unknown whether all identified constructed elements operated in concert in fulfillment of a unified task or if the distribution is the result of distinct and independent purposes. In spite of this, the remainder of intentional construction in this common region between Structures 6 and 7 likely not only participated in an engagement with the open plaza, but fostered interaction and activities between the buildings.

The final assessment focuses on the location of external appendages, with respect to the open patio. The importance of this examination is tied to furthering the understanding of the role the shared patio region may or may not have played in the architectural enhancement of patio-observable façades. If the notion of the open patio existing as a public and communal space is to be received than the observance of intentional occupational regions along plaza-visible facings may aid in the verification of such a conjecture. Furthermore, the analysis of architectural modifications occurring in

off-patio regions not only holds the potential to support conclusions relating to patio-visible facings but also informs the potential use of the secluded areas, not directly interacting with the open patio. In general, the complexity of evaluating the positioning of all structures with respect to the open plaza within the Southeast Plaza Group is lessened due to all of the structures identified in the group sharing the characteristic of being located on the patio. Therefore, in this discussion, positioning is a constant among all structures, regardless of whether they underwent exterior modifications or not.

Though Structures 6 and 7 are the only studied buildings witnessed to include external alterations, they underwent unequal forms of expansion along plaza-visible facings. Technically, all three patio-observable façades from both buildings witnessed expansions, and occurring over multiple episodes of construction, yet in dissimilar ways. The most altered building facing over time is the south, immediate patio facing of Structure 6. The first version of the south façade of Structure 6 is remodeled from consisting of only the brief square-shaped terrace, by means of the block form appendage near the southwest corner, to the elongated terrace, extending to the southeast basal corner. In contrast, the most prominent plaza facing of Structure 7, which includes the terrace, is not observed to undergo as many and likely functional transformations. Furthermore, the patio-flanking facings of Structure 6 were also modified and expanded to create occupational regions, of various elevations and amount of overall prepared platform area. Uncertain factors necessitated the expansion of Structure 6 along its patio flanking facings, while Structure 7 primarily witnessed the increase in exterior occupational space only along its foremost west, plaza facing. The expansions along the

most prominent patio facing of each structure substantiate the claim that over time the architectural manifestation of the buildings could be a result of associations and/or various forms of interaction with the open patio.

The discrepancy in form and magnitude of expansions along patio flanking facings between Structures 6 and 7 are an indicator of at least two factors. The first is that architectural variations were permissible in these regions and secondly that the variations may be more of an outcome of structure function than direct correlation with the patio. The second assertion is further complicated with the positioning of Structure 6, as the west, patio flanking facing includes the potential veranda platform and is oriented such that it is likely visible from regions beyond the group itself. Therefore, the materialization and aesthetic of this particular facing may be impacted by factors not directly related to open patio area, but the identity expression of the overall Southeast Plaza Group and other structure groupings within PVN647.

In order to assess the potential architectural influence of the open patio on plaza visible or observable facings, non-visible structure facings also require analysis. The regions along the exteriors of Structures 6 and 7 that are identified as holding an off-plaza positioning are observed to include very few modifications. Structure 7 is distinct for including the fourth and final summit-enclosing construction along the east, off-patio facing; however, evidence for other external architectural modifications is not present. The north, off-patio facing of Structure 6 includes the addition of one wall form appendage, which is integrated with other appendages to fashion the veranda platform at

the northwest corner. No other architectural modifications are observed in this off-plaza region.

The overall function of each structure is plausibly a dictating factor for the absence of multiple construction alterations along non-visible plaza facings. Furthermore, the types and frequencies of activities occurring along these facings likely necessitated mostly construction-free spaces compared to facings that are noticeable from the plaza. However, it is noteworthy to highlight the visibility of these particular façades from vantage points other than the open patio. The east, off-plaza region of Structure 7 is located adjacent to the natural down slope toward the seasonal quebrada and likely not easily observable from any other positioning within an identified occupational setting at PVN647. Alternatively, the off-plaza north facing of Structure 6 is oriented such that it is observable from locations to the north and northwest, namely from the general regions of the East Group and the Site Core Plaza Group. Furthermore, this particular facing would have been undoubtedly discernible from pedestrians approaching and departing from the Southeast Plaza Group. As a result, the architectural expansion along this off-plaza facing is posed to not have been directly dictated by detection from or a relationship with the shared open plaza, but the level of perceptibility from other surrounding spaces. This conclusion is not trivial when understanding architectural manifestations of structure facings as correlating with the manner of public visibility and social interaction.

In summary, though only three structures are investigated within the Southeast Plaza Group, several architectural characteristics are revealed to be both commonalities between certain buildings and divergent in others. However, there is no category within

each level of classification (basal design, interior enhancements, or exterior modifications) in which all three structures share. For example, Structures 6 and 13 are erected in a conventional basal organization, undergo no interior augmentation, and yet dramatically vary with respect to external modifications. Moreover, Structure 7 is amassed in the unexpected 3-sided arrangement and is the sole edifice to experience interior enhancements, though only slightly. There are no observed construction designs or architectural modifications that are deemed to be alike between Structures 7 and 13.

Overall, the greatest level of comparison is between Structures 6 and 7 and it is with respect to the architectural amendments made along structure exteriors. Both predominately made use of the wall form appendage, though Structure 6 exclusively includes the block form. However, there is significant variation between each building with respect to expansion along plaza-flanking facings, though off-plaza façades share the characteristic of experiencing very little elaboration. Finally, the space in between Structures 6 and 7 is identified to be a region of occupation and activity either associating with the shared open patio, only one structure, both structures, or likely a combination of all of these options.

To conclude, the Southeast Plaza Group is referenced to be a patio group and representative of a social microcosm with shared and complimenting activities and ambitions. Therefore, the architectural outcome of the buildings within such a clustering would likely reflect the mutual and corresponding objectives of the group residents, yet not in exact duplication. This submission is supported in the observation that from the identified categories of architectural analysis, fewer traits are observed to be harmonious

amongst buildings than are divergences between them. The variations observed within the identified architectural patterns reveal that certain design rules are in existence and followed, yet flexibility is permissible. The adaptability of vernacular characteristics allows for alternatives, which are indicators of the social cohesion and communal identity of the group. Finally, the vernacular practices identified within the Southeast Plaza Group are informative for better understanding the overall architectural organization and identity expression occurring within PVN647.

Comparison and Discussion of Site Core Plaza Group and Southeast Plaza Group

In the previous discussions, the architectural assemblages have been described and analyzed separately for both the Site Core Plaza Group and the Southeast Plaza Group. The following examination compares and contrasts architectural attributes observed within both structure groupings and highlights corresponding construction forms and functions, in order to assess their true vernacular value. The initial evaluation addresses the overall plaza arrangement within each grouping, as distinct patterns regarding group scale and structure placement are present. The subsequent evaluation highlights the various structure formation designs and examines the similarities and variations amongst observed patterns of platform and basal designs, and interior and exterior modifications and additions. Of particular comparative focus are the presence of 3-sided edifices, minimal interior alterations, and the variety of external appendages witnessed at both structure groupings. The final assessment evaluates the structural connectivity between buildings and the overall accessibility into both groups, regarding

structure placements and architectural formations nearest those points of entry and egress. The result of this evaluation will reveal the degree of resemblance and deviation within identified vernacular observed at PVN647 and the means of shared identity expression between the two investigated structure groupings.

Plaza Designs

The Site Core Plaza Group and the Southeast Plaza Group clearly represent differing scales of settlements. The Site Core Plaza Group is identified to contain approximately 20 surface-visible structures, while the Southeast Plaza Group includes only 5 surface-visible buildings. Furthermore, the relative sizes of buildings within each group are observed to be dissimilar, with the main group including a greater degree of variation with regard to building scale.

Bilateral Design: Site Core Plaza Group

However, both groups share the presence of an open plaza region around which all preserved structures are arranged. The Site Core Plaza Group is defined to be predominantly of a bilateral plaza design, where the grouping is dominated by two large and opposing structures, (17 and 12) oriented in a north-south alignment. Furthermore, these two buildings most clearly comprise the largest surface area and rise the highest in height, with Structure 12 acknowledged to be monumental architecture (greater than 1.5m in height). (Structures 10 and 14, located in the southwestern regions of the group, exhibit basal dimensions that may be comparable to those measured at Structures 12 and

17. However, Structures 10 and 14 have not undergone formal investigation and basal dimensions are based from surface-visible evidence.)

All other 18 buildings predominantly surround the open, oblong-shaped main plaza, while a minority are located in the northwest and southeast regions, in identified off-plaza settings. Of particular note is the clustering of buildings in the southeast region of the Site Core Plaza Group, which is loosely recognized to be arranged into a small patio grouping. The formation of these five buildings is semi-circular and the most prominent structure, with regard to size and location, is Structure 10. It is positioned as the southern-most building within the hypothesized grouping. Conceivably, the southeast region of the Site Core Plaza Group represents a residential zone located immediately adjacent to the main plaza. However, only Structure 33 has been studied within this region of the Group and conclusions regarding the purpose of and/or relationship with other buildings from this grouping remain unattainable.

Overall, the relative size and location along the main plaza indicate that Structures 12 and 17 likely held elevated social significance, compared with all of the other constructions within the group. Furthermore, the overall social dynamics taking place within the Site Core Plaza Group, as inferred from the plaza design and scale, suggest that varying degrees of social practices occurred and likely elements of unequal access or participation were not uncommon.

Patio Design: Southeast Plaza Group

In contrast, the Southeast Plaza Group is labeled as a patio grouping and representative of a smaller scale form of settlement, compared to the Site Core Plaza

Group. All observed structures are positioned around an open patio area and form a circular arrangement. The largest structure, both in platform area and height, is identified to be Structure 6 and is positioned as the northern-most building within the group. This placement may hold significance with regard to operating as a "dominate" locale for social practices taking place within the group (Hendon 1991). Though, the size of Structure 6 is not that much greater than the final phase structural version of neighboring Structure 7, and possibility Structure 8, though it was not formally investigated and contains evidence of structural damage and looting. Regardless, Structures 6 and 7 exhibit evidence of being architecturally connected and therefore functionally and socially allied as well. This structural linkage is not atypical of a clustering of structures, arranged in a conventional patio group design. Finally, more equal social affiliations, likely based on kinship, are often synonymous with the settlement and survival of the occupants residing in a patio group design. This is posed to be the case within the Southeast Plaza Group.

In summary, the plaza design schemes, and likely resulting social dynamics, vary considerably between the Southeast Plaza Group and all regions of the Site Core Plaza Group. However, the primary significance from these dissimilarly-sized plaza arrangements it that structural comparisons between the two groups can be made regarding building positioning along a plaza and architectural elements constructed along plaza or off-plaza facings. These forms of comparisons are extremely valuable, as several identified vernacular architectural traits appear to be concomitant with relationships to plaza/patio open spaces.

Structure Configurations

The formal vernacular observations identified at PVN647 are with regard to the architectural assemblages, and not necessarily the variations in plaza or patio group arrangement or size. Therefore, the following comparison evaluates the architectural traits witnessed at both groups and includes variations of posed vernacular arrangements amongst platform and basal designs, and interior and exterior modifications. Within each discussion, conventionally occurring vernacular construction *characteristics* are distinguished from those identified as vernacular architectural arrangements. Furthermore, greater focus is placed upon the correspondence of vernacular patterns witnessed between the two groups in order to highlight the similarities and differences, as well as emphasize the pervasiveness of certain styles.

Platform and Basal Designs

As presented in the discussion sections for each structure grouping at PVN647, only two platform or basal design plans emerge as being reoccurring. These include the conventional platform design and the 3-sided edifice design. Of the eight structures investigated at PVN647, half are revealed to be of the conventional design, while the other half are of the 3-sided design.

Conventional Design

The standard or conventional platform design is identified to include the simultaneous arrangement of four distinct wall assemblages, which establishes a quadrilateral shape and the original boundaries of a given edifice. Structures 12 and 17

from the Site Core Plaza Group, and Structures 6 and 13 from the Southeast Plaza Group are identified to be of this ubiquitous construction model. Only slight variations of construction technique and overall size exist amongst these buildings with regard to original platform assemblage design. However, the orientation and placement of these buildings within their respective plaza groups reveals a significant correlation.

As highlighted in the comparison of plaza design arrangements, Structure 17 within the Site Core Plaza Group represents the northern-most and co-dominating building, along with Structure 12, based upon size and placement, within the Main Plaza. Similarly, Structure 6 within the Southeast Plaza Group is positioned as the northern-most building and likely dominating construction within this patio grouping, as evidenced by its size and architectural assemblage over time. The placement of each building within their particular plaza arrangements marks the value of the conventional platform design and the desire for prominent buildings to be of this standard building scheme. Furthermore, the function and social practices associated with each of these structures may have corresponded due to their shared locational positions and building designs, at least at Structures 17 and 6.

However, Structure 13 within the Southeast Plaza Group is also identified to be amassed by the conventional design and exhibits and a more supplementary positioning within the group; as it is located along the western boundary of the patio. Furthermore, no additional architectural attributes are witnessed to be appended along the building, aside from the initial 4-walled boundary of the structure. Therefore, it is unclear if the standard platform design is consistently associated with a prominent building intention,

or simply ubiquitous due to its structurally logical and straightforward construction method. In either case, only minor correlations are revealed from buildings exhibiting this most conventional, though still vernacularly persistent building design, and therefore no further comparative examination is warranted.

3-Sided Edifices

The primary focus of this comparison is on the recurrent building design of 3-sided edifices. The observation that half of the investigated buildings at PVN647 exhibit a construction history that originates as an intentional 3-sided edifice serves as evidence for not only the deliberateness of this design, but the desire and/or need for its functional intent. Of the four buildings at PVN647, three hold several characteristics in common.

Structures 16 and 18 within the Site Core Plaza Group and Structure 7 from the Southeast Plaza Group are clearly identified as on-plaza buildings, which were originally amassed as intentional 3-sided edifices. Furthermore, all three buildings are situated in secondary positions along their respective plaza or patio groupings; located adjacent to more prominent structures of a conventional platform design. Additionally, once the fourth and summit sealing construction is added to the 3-sided edifice, the assemblage quality of this final wall is significantly lacking compared with the other well-amassed 3 walls. Perhaps above all, all three structures witness the open facing as being the most off-plaza side of each structure. The reoccurrence of this original basal design within the Site Core Plaza Group is curious, yet evidence for it also within the Southeast group strengthens the postulation for its intentional, initial purpose. Furthermore, the commonalities of positioning in supplementary, yet likely highly valued locations

adjacent to prominent northern buildings, even further advances the deliberateness of the building practice. Finally, the observation that in each case it is the most off-plaza facing that remains open and upon being sealed, is amassed by the most haphazard of building techniques witnessed from each structure, supports the vernacular nature of this original basal design, in the least, by the builders and dwellers at PVN647.

Structure 33, however, exhibits certain deviations from the other three originally 3-sided buildings. Located in the southeast region of the Site Core Plaza Group and within a likely smaller residential patio grouping, Structure 33 includes a well-constructed fourth and summit sealing wall. None of the other identified 3-sided structures witnessed additional exterior appendages along the open facing, once it was sealed. All external appendages are only amassed along the fourth and last facing to be sealed at Structure 33. Additionally, all of these additions are witnessed to be of an equal construction quality to the summit sealing wall. Finally, Structure 33 is identified to be a member of smaller patio grouping and therefore possibly located on a plaza group arrangement. However, it is not the most off-plaza facing of Structure 33 that is observed to remain open, but is the northern, semi-visible from the posed open patio space, facing. Therefore, though Structure 33 is argued to be amassed by the intentional 3-sided basal design scheme, the other observed commonalities between Structures 16, 18 and 7 do not appear to be factors dictating the founding or construction history of the building. The architectural deviations at Structure 33 may represent acceptable forms of assemblage styles within this basal design pattern, which is not uncommon within vernacular practices.

In summary, the 3-sided basal design scheme is an unanticipated intentional basal configuration, as the conventional platform design is markedly more ubiquitous for a variety of functional and structural engineering reasons. The conventional design is identified as a standard, generic design observed throughout the Naco Valley, and therefore may be labeled as a vernacular *characteristic* of building practices. Due to its generalized, though not formally quantified, widespread existence it is not pursued further. In contrast, due to the abundant evidence of the unforeseen 3-sided basal design at PVN647, this pattern is highlighted to be examined in other locations within the Naco Valley and neighboring regions in order to assess the true vernacular *arrangement* potential of this building practice outside of PVN647.

Interior Designs

The second category of analysis examined the architectural designs within the interiors of structures at PVN647. The result has yielded discussions distinguishing between relatively unmodified interiors and those that experienced some degree of elaborations. Overall, the majority of investigated buildings at PVN647 exhibited summit interiors mostly free from architectural divisions or furnishings.

Open Interiors

Two structures from each of the Site Core Plaza Group and the Southeast Plaza Group are identified as containing summit interiors, which are observed to be predominantly devoid of any architectural additions or modifications. Within the Site Core group, this includes Structures 16 and 18 and within the Southeast group this

includes Structures 6 and 13. Scant construction evidence is present within both Structures 16 and 6, possibly suggestive of some slight internal arrangement of space, however, both are indiscernible with regard to formation and resulting configuration. Overall, a greater proportion of investigated buildings within the Southeast Plaza Group exhibited construction-free interiors, as compared to the Site Core Plaza Group. Furthermore, correlations regarding building positioning within respective structure groupings appear to be lacking, save for the observation that Structures 18 and 13 represent the northwestern-most building within their respective structure groupings. No other comparisons are revealed within this category of open interior summit spaces.

Amended Interiors

With regard to modified summit interiors, however, the Site Core Plaza Group includes a greater number of investigated buildings with amended interiors, than compared to the Southeast Plaza Group. Structures 12 and 17 represent the greatest compartmentalization of space witnessed from all researched buildings at PVN647, and also happen to be the largest in size and most prominently positioned. Structure 12 includes the division of two off-plaza (or back) rooms and only one larger on-plaza (or front) room. Structure 17 contains the summit dividing wall and separates a smaller on-plaza space from a larger off-plaza (or back) room. Additionally, Structure 33 contains a partitioning wall, which appears to serve as a corridor or hall space for privacy when first entering the building near the northwest corner. Structure 7 within the Southeast group is described to contain a similarly partitioning wall construction near a posed entry into the

interior area. Interestingly, both Structures 33 and 7 are identified as originally 3-sided constructions, as well.

In summary, amendments within summit interiors of investigated buildings at PVN647 appear relatively straightforward and minimal. The hypothesized largest buildings within the Site Core Plaza Group, and at the site as a whole, contain the greatest internal complexity, while the largest structure within the Southeast group remains open and undivided. It is clear that aside from Structures 12 and 17, very little internal architectural complexity was desired or necessary for the occupants at PVN647.

Exterior Designs and Appendages

The final category of analysis of architectural elements from investigations at PVN647 examines exterior designs and the form, function, and placement of external appendages. A total of four forms have been distinguished and corresponding functions have been postulated by means of examining the size and locations along building exteriors. External appendages have been revealed to be a complex mixture of formations with various functions. Furthermore, every investigated structure at PVN647, except for Structure 13, is contended to contain some characteristic of an external appendage. The following discussion summarizes the similarities and variations within appendage form, function, and locational observations from all buildings at PNV647.

Appendage Forms

Exterior appendage forms from PVN647 are determined to occur as block, wall, “box” or U-shaped, and those that are labeled to be wall-shaped but are free-standing. From both of the structure groups, the wall appendage form is clearly the most frequently

occurring and witnessed along each investigated structure that contained external extensions (i.e. all buildings, except Structure 13). By far, the greatest number of individual wall form appendages are witnessed along Structure 12 from the main plaza (**see Table 5.1**). The observation of the wall form being the most abundant is not recognized to be unforeseen as linear cobble constructions are the most ubiquitous form of all architectural components and is identified to be a generalized vernacular building characteristic from this region of northwest Honduras. Furthermore, the typical placement along a building exterior is positioned such that the wall form is aligned parallel with and completely abutting against the basal façade of a structure.

		Appendage Form			
		Wall	**Box or U-shaped**	**Block**	**Free-standing**
Site Core Plaza Group	Str. 12	10			
	Str. 16	3	1		
	Str. 17	1		1	
	Str. 18	1	2		
	Str. 33	2	1		
	Total	17	4	1	
Southeast Plaza Group	Str. 6	6		3	
	Str. 7	4			2
	Str. 13				
	Total	10		3	2

Table 5.1: Summary of frequencies of exterior appendages by form from each structure within the Site Core Plaza Group and the Southeast Plaza Group at PVN647.

The other exterior appendage forms are presented to be distinctive, though not necessarily unique only to PVN647. The "box" or U-shaped appendage form is only witnessed within the Site Core Plaza Group and along three different structures, while the free-standing wall form is only observed along Structure 7 from the Southeast Plaza Group. The truest depiction of the block form is only witnessed along Structure 17

within the main plaza, while three examples of a variation on the form are present along Structure 6 from the Southeast Plaza Group.

Overall, the variety of appendage forms and the frequencies within each categorical form are revealing of vernacular tendencies at PVN647. Noticeably, select forms are present in only one group. The meaning of these distributions is not known, though likely relate to the overall function of each appendage and the structural needs of the occupants and activities of the buildings they articulate with.

Appendage Functions

Five distinct functional classifications are derived from either one appendage form or a combination of multiple appendages and most often of the same form. The functional identifications of appendages are terrace, veranda, balcony, external bench, and step. No other functional identifications are interpreted from the observed appendage forms from investigated buildings at PVN647, though are acknowledged to exist elsewhere. These functions have been identified earlier in this discussion and in Chapter 2 and are contested to be both discernibly and meaningfully distinguishable.

True to an examination of vernacular architecture, appendage functions are not exclusively dictated by appendage form, though strong correlations exist. Functional terrace regions are described to be raised platform areas that extended along only one facing of a structures exterior. However, the manifestation of this particular purposed zone can be by means of the platform design or wall form appendages that both immediately abut against but are also completely free-standing from the adjacent structure. Proposed terrace regions occur along the exteriors of Structure 18 and 33 from

the Site Core Plaza Group, though are the result of differing basal designs and appendage forms. Additionally, Structures 6 and 7 from the Southeast Plaza Group are interpreted to include terrace areas, though Structure 7 clearly includes a free-standing wall form appendage, while Structure 6 includes multiple abutting wall appendages.

The wrapping nature of the wall form extensions along Structures 12 and 16 from the main plaza indicate that functional veranda regions are yielded. The case is less clear along the exterior of Structure 6, as it is conceivable that wall form additions are amassed to fashion a continuous elevated occupational zone, which extends around the northwest corner.

The abbreviated platform surface identified as a functional step is present along every investigated structure, with some including multiple examples and from differing appendage forms. From the Site Core Plaza Group, a single step is established from a brief wall form appendage along Structures 17, while box or u-shaped appendage forms establish steps along Structures 16, 33, and two along Structure 18. The area along Structure 12 that is identified to be a step is the result of other wall form additions, which appear in a some-what box or u-shape form but are not presented to be an example of the formation. Within the Southeast Plaza Group, steps are established from seemingly block form appendages along Structure 6, though both are minimal in height and more uniform in length and width. A brief wall form appendage yields a step along one facing of Structure 7; while a free-standing wall form appendage results in a second along a different facing.

Finally, the appendage functions of a balcony or bench are only recognized along Structure 17 and are the result of the truest example of a block form appendage. The varying means of access to this raised area accounts for the dual functional description of this appendage form. This functional area is not observed to exist along any other investigated building at PVN647.

Overall, correlations exist in relation to appendage function and form, but also with respect to distinct functional appendages that are adjacent to each other. For example, wall form steps are predominately observed to immediately abut against the basal exterior of structures. Steps formed from "box" or U-shaped appendages by observed to abut against either the basal exterior of a building or along a preexisting terrace or veranda region. The single step formed from the free-standing wall form along Structure 7 leads to a terrace area established from *another* free-standing wall form appendage. Though not all terrace or veranda regions include a step or steps to reach the elevated areas. Finally, the balcony area along Structure 17 is positioned immediately along the basal exterior and no additional appendages are present surrounding it.

Lastly, it is acknowledged that presented appendage forms can function in other manners, *and* that the highlighted functions can be manifested by means of other architectural forms. However, this analysis is presented solely based upon observations of appendage forms and functions interpreted from PVN647 and therefore other possibilities are not examined here, though fully recognized to likely exist.

Appendage Locations

The placement along building exteriors of appendage forms and evaluated functions are the final aspect to be presented regarding external appendages. For both the Site Core and the Southeast Plaza Groups the positioning of appendages with respect to open plaza regions dictated this evaluation. Therefore, only on and off-plaza designations have been presented. Though, a semi-observable setting, from the vantage point of an open plaza region, along a building's exterior is considered to be in an on-plaza position. The overall observation from PVN647 is that the vast majority of external appendages occur along on-plaza facings of structures.

All buildings immediately positioned along the main plaza within the Site Core Plaza Group witnessed external appendages immediately along plaza facings. Structures 16 and 17 include appendages along all three plaza-visible facings, while Structure 17 has only one along the most prominent plaza facing. Structure 18 included appendages located along the two facings that are observable from the main plaza, though not immediately positioned on the plaza. Structure 33 includes appendages that are categorized to be in a visible facing from a possible smaller patio, located in the southeast region of the Site Core Plaza Group, though not on the Main Plaza. Within the Southeast Group, Structure 6 includes appendages along all patio visible facings, while Structure 7 includes appendages only along the most prominent patio facing.

Off-plaza facings include far fewer external appendages, if truly any at all. To clarify, from both groups the only observed amendments are categorized as the additions of the wall form constructions to seal the fourth facing, along all three of the identified 3-

sided edifices (Structures 16, 18, and 7). Functionally, these constructions, or appendages, purpose to finalize the enclosure of the interior summit area. However, these modifications are observed to be the only construction activities occurring in the most off-plaza regions from all investigated buildings at PVN647. This is taken to be a remarkable observation and revealing of the influence of open plaza and patios on external architectural modifications.

To conclude, several similarities are revealed with respect to appendage forms, functions, and placements along structure exteriors. Clearly, the greatest congruency occurs with appendage placement, as arguably all true external appendages, regardless of form or function, are located along plaza visible facings. However, the wall form appendage is demonstrated to be the most recurrent, though the functional manifestation of the formation is deemed to vary, as dictated by size and placement. At the same time, as previously stated, the wall form is identified to be a ubiquitous formation and as such will be labeled as a vernacular *trait*.

All of the other identified appendage forms ("box" or U-shaped, block, and free-standing) are concluded to be distinctive, as each is revealed to essentially associate with a single functional purpose at PVN647. (Although, the block appendages along Structure 6 are claimed to be a variation on the truer version of the form along Structure 17, and therefore vary in functional intent.) Regardless, the presence of the box, block, and free-standing forms are selected for further examination in order to evaluate the true vernacular potential of each.

Furthermore, due to the close examination and classification of appendage forms, distinct appendage functions are revealed. While terrace, veranda, balcony, bench, and step have been distinguished, the physical formation(s) of each are recognized to vary from identified forms at PVN647. However, each of these functional platforms/surfaces are also acknowledged to potentially exist by means of other appendage forms not witnessed at PVN647. Therefore, the conceptual ideas of each of these functions are advanced to be examined for their potential to be vernacular. To be clear, only architectural appendage forms are posed to be researched within the Naco and Cacaulapa Valleys, however, the possibility of these functional purposes will be considered in correlation with the forms.

Lastly, appendage placement with respect to an open plaza or patio is proven significant at PVN647. Therefore, the examination of on and off-plaza manifestations of appendage forms is also advanced as a comparative component in order to assess the vernacular viability of appendage position observations from PVN647.

Structure Connectivity and Plaza Accessibility

The final assessment from PVN647 pertains to observations of structural connectivity between buildings and plaza accessibility. Neither topic is intensively discussed within either investigated structure grouping, though is highlighted here as select similarities exist and may also be indicative of vernacular traits. Structural connectivity is identified as referring to the observation of individual structures including architectural components that expand away from the building and establish physical

connections with neighboring structures. These are discussed here as stand-alone structures, which yield open spaces between them and their nearest neighboring structure; and connected structures, which yield construction shared spaces. The observation of these occurrences are not presented to immediately impact the access into plaza or patio spaces, though are discussed together for their relational value for potentially revealing other vernacular traits regarding the comprehensive built environment of PVN647.

Stand-alone Structures and Open Passages

It is clear from the site map that very few structures are observed to be structurally linked at PVN647. However, the site map only reveals surface visible architectural connections between buildings. This particular discussion is presented here because all architectural components from investigated structures have been described and analyzed. And the results from investigations confirm that most of the depictions from the established site map are accurate except for Structure 12, which exhibits evidence of being structurally linked to another. However, all other investigated structures that are witnessed from the ground surface to not structurally connect to neighboring buildings, are observed to adhere to that observation.

Within the Site Core Plaza Groups, the three northern-most investigated buildings (Structure 16, 17, and 18) are not witnessed to include any sub-surface architectural connectors. The excavation boundaries between Structures 16 and 17 in the northeast consisted of less than 1m of uninvestigated surface context and no evidence of formal construction or even tumbled building materials was observed in the profile of the excavation limits associated with either building. The amount of unexcavated space

between Structures 17 and 18 in the northwest was greater, as they are observed from the ground surface to be located farther from each other, than Structures 16 and 17. As such approximately 3m of uninvestigated context separated Structures 17 and 18. However, no architectural constructions were witnessed below the ground surface and no tumbled cobble debris was present from the extents of either excavation regions. Additionally, Structure 33 is not observed to architecturally connect with any neighboring structures, though no other buildings surrounding Structure 33 were formally investigated. Within the Southeast Plaza Group, only Structure 13 is depicted as being a stand-alone building amongst the investigated structures from this region of PVN647. This surface observation is revealed to be accurate and no other architectural extensions are observed within the excavation limits of Structure 13.

In summary, these specific regions are confirmed to be devoid of construction elements and the buildings are deemed to be stand-alone. The significance of this confirmation is that the spaces in between these buildings are open and that passage is permitted, or at least possible, between the buildings. Understandings of the generalized nature of public or private spaces are impacted when passage is allowable between buildings, leading from plaza to off-plaza regions behind structures. Furthermore, the degree of functional or social relationships between buildings can be better gauged, though characterizations based solely upon architectural evidence are deemed limiting. Lastly, these observations can speak to the vernacular traits that characterize the buildings at PVN647, as the majority are confirmed to be stand-alone structures (5 of 8 investigated structures).

Connected Structures and Constructed Spaces

Investigated structures depicted on the established site map of PVN647 to be architecturally connected to neighboring buildings are confirmed via excavations to be linked (Structures 6 and 7). The composition of the construction linkages between Structures 6 and 7 within the Southeast Plaza Group are described as the Northeast Feature within the group. The exact form(s) of the constructions of the Northeast Feature are unclear, though they are not identified to be similar to other structures that are deemed to be "saddled" with each other, where basal constructions are articulating and even formal room spaces are seemingly shared. Furthermore, the function(s) of the Feature remain unknown. However, it is apparent that the Feature area likely operated as an activity region. Furthermore, the density of the constructions, which extend into the northeast region of the patio area, would yield a space that was likely obstructed from passage between the patio and areas beyond the two structures to the northeast of the group. Lastly, the architectural linkages are sound evidence for the shared investment into the common space between Structures 6 and 7 and indicates a functional and social association between the two buildings. This is the only case where structures observed to include architectural linkages between buildings were all fully excavated.

In contrast, Structure 12 within the Site Core Plaza Core includes a sub-surface construction feature near the southwest corner, which architecturally articulates with neighboring Structure 26. However, Structure 26 was not formally investigated, therefore the functional and social association between the two is not conjectured. Furthermore, the function of the constructed space is simply interpreted to be a region for firing or

burning, as a mound of burnt earth was preserved along the western exterior of Structure 12, near the southwest corner. It is not known whether the burnt region is a result of cooking activities or production-related practices. Regardless, the evidence that fire continuously occurred in the narrow region between Structures 12 and 26 indicates that passage between the buildings was hindered. Additionally, the posed public-ness of the plaza facing of Structure 12 is likely in significant contrast to the more confined off-plaza area, made even more unwelcoming due to firing activities.

Overall, the majority of structures as PVN647 are identified to be mostly stand-alone buildings and architecturally un-articulating with neighboring structures. This observation indicates a general desire and acceptance for space between constructions. Social constraints controlling structure expansion episodes are not taken to be an issue, as appendage forms have previously exhibited, however, it is unknown if regulating entities or groups dictated formal, structural linkages between structures. Though it is acknowledged that structure groupings at PVN647 are fairly well-distributed and available space for erecting cobble constructions does not appear to be sequestered. Therefore, is it contended to not be extraordinary that only a select few structures are observed and some confirmed to be architecturally linked. These observations relate well when considering how access into each plaza group was achieved.

Plaza Accessibility

The final evaluation in this comparison between the Site Core Plaza Group and the Southeast Plaza Group focuses on overall access into and out of each group. Social and functional importance is placed on the open spaces of plazas and patios, as being

prime settings for interaction and dealings of economic, political, religious, and overall communal significance. Therefore, evaluating access routes into these spaces are meaningful and hold relevance for identifying vernacular practices. As the majority of observed structures at PVN647 are identified to be stand-alone, passage between buildings into each grouping conceivably could occur between most structures. However, the following analysis of access into plaza regions is founded upon overall site organization, and the placement and spacing of structures within each group and known architectural assemblages associated with posed points of entry.

Entry into the overall site setting of PVN647 likely occurred from the north and northwest regions. This is based on the fact that the river is located to the north of the site and daily trips for water would indicate that considerable pedestrian traffic occurred from the generalized northern region. However, as the other areas of the *vega* to the east and west of PVN647 are suitable for agriculture plots, regular travel patterns likely occurred to these regions, as well.

However, access to the Site Core Plaza Group specifically, likely occurred from the generalized northwest region of the group. This region of the group witnesses greater spacing between buildings than anywhere else in the group. The largest space between buildings in this region is between Structures 17 and 18, however access from the west between Structures 20 and 35 is posed to be a strong potential route; as well as between Structures 18, 19 and 20. This assessment is advanced not only based on surface-detected spatial distances between structures, but also known architectural assemblages from select buildings in this region of the group. Structure 17 is one of the most

prominent buildings in the group and is proposed to include assemblage components that indicate that access to the building was not welcoming of all nor included much in the way of expansive external space in order to engage with the main plaza. Therefore, it is unclear how socially acceptable it would be for pedestrian passage to occur within the immediate area of this particular building. Vernacular evaluations attempt to account for how architectural assemblages can be directly associated with directing concepts of concealment and prohibiting movement through spaces. However, equally important within vernacular studies are the intangible behavioral understandings regarding how to interact with certain architectural spaces. Therefore, these cannot be dismissed as not occurring with respect to Structure 17.

As previously mentioned, in contrast to Structure 17, Structure 18 within the northwest region is observed to contain a significant terrace region along the western facing, which would look upon the posed western access routes into and out of the main plaza, both of which involve passing Structure 20. The terrace region could be a setting to directly observe and interact with residents and visitors alike as they travel into and out of the plaza area. Furthermore, passage to the plaza could occur from the southwest region, between Structures 34 and 26. However, neither of these buildings have been investigated and architectural assemblages remain unexplored.

The generalized eastern and southeastern regions of the Site Core Plaza Group are observed to be more spatially dense, with less observed space between individual structures. The narrow opening between Structures 15 and 27 from the east may have been a point of access utilized by fewer people than the western region. Furthermore,

this passage may be more acceptable for formal occupants of the group and lesser so for visitors to the site. However, no structures in this general eastern region have been investigated, so architectural assemblages remain unknown.

The arrangement of the southern structures, which are positioned immediately on the main plaza, are observed to be close together as well. As evidenced from Structure 12, specific practices including firing activities were taking place between two closely positioned buildings. Passage was likely not occurring in between Structures 12 and 26. However, passage between the smaller southeast patio group of the Site Core likely occurred between Structures 11, 27, and 37, even though an architectural linkage is observed between Structures 11 and 27. However, none of these buildings have been studied, therefore, all surface-visible architectural depictions have not been confirmed by excavations. Lastly, significant space is witnessed between Structures 33 and 10 in the southeast region of this smaller patio group and is posed to be an alternative route into this secondary group without entering from the main plaza. Again, this is posed to be an access most frequently utilized by occupants of this particular ancillary patio group.

With respect to the Southeast Plaza Group, a main access route is strongly posed to be from the northwest, based upon group positioning with respect to the larger Core group, but also architectural assemblages witnessed from excavations. Structure 6 is described to contain extensive terrace, or possibly veranda, areas along the north and west exteriors. These facings are the most prominently detectible from the generalized northwest region leading to the Site Core group. Therefore, visibly of a pathway between the two groups was likely desired by residents of the Southeast Plaza Group in order to

observe pedestrians as they arrived or departed from the group region. However, with regard to internal group functioning, access to other regions to the south and west could occur between pretty much all structures, save for between Structures 6 and 7, which are confirmed to include a shared constructed activity area. Overall, movement into and out of the shared patio space is not observed to be obstructed. Furthermore, the group is labeled to be predominantly a residential setting, where occupants were less likely concerned with issues of privacy or restricting access, as compared to the Site Core Plaza Group.

To conclude, access into both groups is proposed to predominantly occur from the general northwest region, however each grouping includes other supplementary possibilities of entry to the open plaza regions. The importance of this observation is not only that it appears to be similar in each group, but the form of architectural extensions that are appended to structures that are in view of the posed access pathways into and out of each group, appear to be rather analogous as well. Structures 18 and 6 are argued to be positioned within immediate view of access routes within each respective group. Each structure contains the greatest amount of external terraced platform space along these facings that are visible from the routes. Social interaction between building occupants and pedestrians were likely and argued to play a strong role in the architectural manifestations of the external appendages along these specific facings. However, the overall social cohesion of each structure grouping is not presumed to be comparable, based on differences in group area and the architectural scale and frequency of structures. Therefore, the overall openness of nearly all buildings within the Southeast Plaza Group

is posed to be the result of more familial social relations and forms of interactions. This is in opposition to the Site Core Plaza Group, where the need or desire for structural control over the access and passage through the built environment of the main plaza, is more emphasized due to overall greater social complexity occurring within the group.

Conclusions about the Site Core Plaza Group and Southeast Plaza Group

Within the framework of this project, the purpose of conducting original excavations was to reveal an assortment of architectural attributes and designs in order to assess their potential vernacular significance. To that end, the structures chosen for examination at PVN647 are deemed to be successful for resulting in a collection of architectural tendencies, which fall within categories of platform and basal designs, interior elaborations, and exterior expansions and appendages. Within these categories, noted similarities and differences are concluded. The distinct architectural differences are challenging to process, however, the similarities are argued to advance the discussion of architectural designs that are identified to repeat, to be evidence of not only vernacular *characteristics*, but vernacular *arrangements.* Furthermore, that those identified to be vernacular *arrangements* at PVN647 can be further tested to evaluate their potential for being true vernacular *forms* within the region.

Though various similarities are identified within each category of architectural examination, not all are advanced to be compared in order to confirm their full vernacular magnitude. Within the category of platform and basal design, two configurations are identified. As previously stated, the conventional design earns its title as a result of its

generalized architectural persistence not only within the Naco Valley, but also within northwest Honduras and other environmental settings where similar construction materials and knowledge of building shelters are available. A construction amassed as a 4-sided, rectilinear edifice is not argued to be a unique configuration, regardless if established as surface-level or platform structure. Due to its general pervasiveness, it may arguably be labeled as a vernacular form. Even though half of the investigated buildings from PVN647 are identified to be fashioned by this construction design, it is not advanced to be evaluated any further. However, the 3-sided edifice design is contended to be titled as a vernacular *arrangement*, due to half of the buildings at PVN647 exhibiting evidence of this configuration. This configuration is unexpected, yet markedly unique and worthy of further investigation to assess whether its repetition at PVN647 is a site-specific phenomenon or also present within the valley.

Furthermore, two generalized tendencies regarding summit designs are classified within the evaluation category of structure interiors. Noticeably at PVN647, very few internal divisions or architectural embellishments are observed. The result is that a majority of investigated buildings are deemed to be construction-free, with only Structures 12 and 17 including significant architectural additions to create formal internal compartments. Therefore, as minimal and dissimilar architectural modifications are only witnessed at two buildings, no consistent configuration patterns are present. The lack of interior divisions or embellishments, however, is not argued to represent an absence of a design scheme in practice. Indeed, open and undivided interior spaces are frequent at PVN647 and therefore evidence of a pattern. Additionally, the persistence of

construction-free summits is recognized to be a form of intentional design: a desire for undivided internal space. Therefore, while construction-free summit interiors may be categorized as a vernacular *arrangement*, or even *form*, as structures devoid of any interior architectural components are not rare within the Naco Valley. However, the comparative examination of structures with open summits is not posed to be a successful marker for identifying variations with regard to shared architectural practices within a regional setting. Therefore, the observation of a strikingly distinct internal room arrangement is known to occur within the Naco Valley and will be further described and examined in Chapter 7. This configuration will be tested to evaluate its true vernacular potential, despite the fact that it was not observed at PVN47.

Lastly, the category of external modifications and additions revealed a variety of appendage forms, functions, and relational significance with regard to placement along a building. Though the wall appendage form that abuts against a structure is identified to be the most frequently utilized at PVN647, the unique placement of the free-standing wall form is highlighted as a curious intentional design configuration. Though, it is only witnessed along one structure at PVN647, the free-standing wall form appendage is deeded a vernacular *arrangement* due to its positioning away from a building and not formally articulating with an adjacent structure. Additionally, the block and box or U-shaped appendage forms are deemed to be repeated configurations at PVN647 and worthy of comparison. These appendage forms are also labeled as vernacular *arrangements* present at PVN647 and will be investigated to evaluate their potential for being vernacular *forms*.

With regard to external appendage functions, various purposes have been associated with the identified appendage forms. However, appendage form does not consistently equate with a single, described appendage function. Certain forms, for example the wall form, yields a variety of external occupation areas, typically the result of differing sizes. Therefore, as the goal of this examination is to assess architecturally vernacular regularities only appendage forms are advanced for comparing their potential as *vernacular forms.* However, observations regarding placement along a structure and relationship with an open plaza region will be included and evaluated for significance.

To conclude, meaningful and quantifiable architectural observations from investigations of structures at PVN647 have been presented. Select architectural observations have been escalated for further comparative examination, while others have been excluded, mostly due to their general ubiquity and for already being a straightforward and accepted construction configuration. Very little is likely to be revealed regarding variations on shared construction practices by focusing on these particular arrangements, for they can arguably already be labeled as vernacular forms of the most candid variety. Indeed, the conventional platform design and construction-free summit interiors are so commonly a vernacular characteristic that their very occurrence is taken for granted within the built environment. Therefore, in order to assess the degree of vernacular architecture within the Naco Valley and other regions, particular architectural configurations deemed vernacular arrangements will be compared for similarities and variations.

Chapter 6

Artifact, Activities, and Structure Functions from PVN647

Information presented here represents the analysis and discussion from the artifact record recovered from PVN647. To begin, an overview of artifact classes and characteristics are summarized. Next, artifact assemblages from each investigated structure in both the Site Core Plaza Group and the Southeast Plaza Group are presented and evaluated separately. Evaluations highlight descriptions, densities, and locational significance of artifact classes and then interpretations from architectural observations are discussed to determine social practices associated with each building and the groups as cohesive units. Finally, comparisons between the groups are evaluated to reveal overall functional patterns and forms of interaction.

Ceramic Artifacts

Pottery

Ceramic sherds from daily-ware vessels are referenced in discussion as pottery and are sorted and processed within PVN/PVC protocols according to a type-variety-mode analysis process. Pottery vessel forms consist of bowls, jars, plates, and *comals*. All other identifiable ceramic vessel forms are recorded by means of a catalog system. The documentation process for pottery sherds or whole vessels consists of readout sheets, which record ceramic typology, variety within the typology and fragment form. Furthermore, measurements from all preserved vessel rims, which represent at least 5%

of the rim circumference are documented. Lastly, coded forms for vessel lips, handles, supports, bases, and any other plastic decorations or appliques are standardized within the recording system and are noted when present. Comprehensively, these measurements are referred to as pottery metrics. Due to resource and time constraints, only a portion of processed pottery fragments are analyzed. All processed and analyzed pottery totals and percentages are represented in **Table 6.1.**

	Total Pottery Processed	Total Pottery Analyzed	Percent Analyzed
Site Core Plaza Group	99,865	11,702	11.7%
Southeast Plaza Group	28,672	2,067	7.2%
PVN647	**128,537**	**13,769**	**10.7%**

Table 6.1: Pottery totals by group at PVN647

The customary goal of PVN/PVC pottery analysis protocol is to examine no less than a 10% sample of processed pottery materials from every investigated archaeological site. The overall percent of analyzed pottery is roughly a 10% sample from the total of excavated regions at PVN647. The analysis sample selection process is of a stratified random method, in which the overall goal is to analyze processed pottery from roughly each sub-operation associated with excavations from each building, though not necessarily equally. To achieve this, excavation lots from each sub-operation are selected at random for pottery analysis. However, as needed, specific excavation lots are selected and pottery are analyzed based upon observations made during investigations, which consist of: the recovery of whole vessels or pot-smashes; collected materials located

immediately above a prepared floor surface; human internment contexts; middens or other forms of debris deposits; and any other special finds.

Pottery Types: Relative-Dating

General temporal assignment of pottery is a component within the type-variety-mode analysis process. Well-tested types and varieties from within the Naco and Cacaulapa Valleys have been established and relative-dating of pottery presented here distinguishes recovered Preclassic pottery from Late and Terminal Classic. Pottery dating to the Late Classic and Terminal Classic, respectfully, are known, though are calculated together from PVN647, as primary settlement is observed to have taken place during the Late Classic and continue into the Terminal Classic. Furthermore, select pottery types documented to be Late Classic forms are similar to those from the Terminal Classic. Therefore, it is challenging to establish true distinctions when settlement appears to have been continuous. Evidence for Terminal Classic occupation in the Southeast Patio Group, however, is not as consistent as is witnessed in the Site Core Plaza Group. However, less overall pottery material from the Southeast Patio Group has been examined compared to the Site Core Plaza Group.

Pottery Types: Local vs. Imports

The origins of manufacture of select pottery types and varieties are known with relative confidence from PVN/PVC investigations, especially within the Middle Chamelecón-Cacaulapa (MC-C) region. Therefore, pottery types and varieties documented to have been manufactured at the sites of Las Canoas (PVN202) and PVN598 (Stockett 2005a; Ellison 2006), located on the other side of the river from

PVN647, are recognized to be especially local[1]. Furthermore, as these crafting sites are known to have been producing ceramics during the Late Classic, pottery from these settlements indicate Late Classic occupation. This most-locally made pottery is distinguished from types known to have originated from other regions of the Naco and Cacaulapa Valleys. These consist of a mixture of Preclassic, Late and Terminal Classic types. Pottery from these settings are also considered to be local, as the presence of these types is not deemed to be an uncommon phenomenon within the region. The final category is that of imports, which originate from settings beyond the Naco and Cacaulapa environs (**Table 6.2**). Though these are extremely rare at PVN647.

	MC-C (Las Canoas & PVN598)	Other Naco & Cacaulapa settings	Imports
Site Core Plaza Group	61.44%	38.56%	0.03%
Southeast Plaza Group	91.24%	8.76%	0.00%
PVN647	**65.92%**	**34.08%**	**0.02%**

Table 6.2: Summary in percentage of analyzed pottery originating from the Middle Chamelecón-Cacaulapa region, other Naco and Cacaulapa Valley settings, and imports, which are from beyond these regions.

Indeed, the majority of analyzed pottery from PVN647 is speculated to have originated from the crafting settlements of Las Canoas and PVN598. Though distinct

[1] Ceramic types from Las Canoas (PVN202) are concluded to be: Leona Burnished, Manuel: white-washed, Cuchillo: single point, Mal Paso orange-slipped, Manguito Bichrome, Manguito: resist, and Pinabete Polychrome, and all vessels made on the Cacaulapa paste, including: Cacaulapa, Anonales Burnished, Camelotal Incised, Agua Helado Modeled, Jocomico: incised, Jocomico: white-washed incised, Hondurita Red, Temblor Tan, Temblor: burnished, Olola Orange, Barbarita Bichrome, Barbarita: resist, Primores Polychrome, and Primores: resist. Ceramic types produced at PVN598 are concluded to be Pueblo Nuevo Plain and San Joaquin Simple.

types are thought to have originated from within each of these respective settings, they are presented together to represent the general proximity and relatively short distance of travel to arrive at PVN647. All Preclassic types are categorized as originating from other locations within the Naco and Cacaulapa Valleys. A minimum of identified Late Classic types fall into this classification. Very few imports are observed (N=3) at PVN647 and one is tentatively identified to be copanec in design **(see Figure 6.12** later in this chapter).

Pottery Vessel Forms

As previously stated, only four distinct vessel forms as associated with utilitarian pottery. Bowls, jars, plates, and comals appear in a variety of shapes and sizes. The most ubiquitous pottery vessel forms to be commonly recovered from the prehistoric archaeological record in this region of Northwest Honduras are bowl and jar fragments. Bowls are typically observed to be various sizes of a sub-hemispherical shape with a wide open orifice. Occasionally, smaller bowls are observed as having small or restricted orifices, or vertical-to-straight or slightly outslanted shapes. Jars are observed to be a variety of straight-necked vessels with narrow and restricted orifice openings or as flare-necked with continuous curvature to the body of the vessel. Other jar forms are as pyriforms, which are pear-shaped with either short or tall necks but restricted orifice openings, and tecomates, which are described as gourd-shaped vessels with rounded or spherical bodies. Bowls and jars can possess round, flat, dimpled, or ringed bases.

Plates and comals are less common, though not necessarily rare from this region of northwest Honduras. Far fewer characteristics distinguish these vessels forms from

one another, though plates are identified as upturned with flat bases or slightly outflared rims with rounded bottoms. Comals also occur as upturned vessels and are distinct with evidence for burning or sooting. Additionally, comals are coded within the PVN/PVC recording system as occurring in bowl forms that purposed as comals for cooking practices. These particular objects are amongst the shallowest examples of sub-hemispherical bowl shapes. Rarely are plate and comal fragments identified with bases that are of forms other than flattened or rounded.

Principally, all pottery vessel forms are associated with food-related activities, yet in differing phases in food preparation practices. Depending upon the size and shape, bowls and plates are deemed to be vessels for food consumption or serving. Small objects with narrow orifice openings that may have purposed as drinking vessels are coded as either bowl or jar forms, as in the case with smaller straight-walled jar objects. Jars are primarily associated with storage practices, with restricted orifice openings linked with water and fluids, while wider and everted rims with dry goods. However, certain jar shapes, namely without long and straight necks may have been utilized in cooking practices for boiling of water or soup. Comals are mostly associated with cooking as large griddles for searing or frying of solid foodstuffs.

Non-Pottery Ceramics

All other ceramic artifacts from PVN647that are not identified as pottery vessels are documented by means of being issued an individual catalog number and analyzed separately. Categories of ceramics that are individually analyzed are: figurines, ocarinas,

incensarios, potstands, candeleros, stamps, molds, used and worked sherds, and other miscellaneous objects, such as sherd disks or jewelry items (pendants and earspools).

Figurines

Ceramic figurines are fashioned in a variety of shapes and sizes and can include zoomorphic characteristics, but are most often anthropomorphic in form. They are typically mold-made and hollow, though certain stylistic attributes can be embellished after the molded cast has been made and before the object is hardened (Bell 1991; Urban and Bell 1993). For example, the head component of an anthropomorphic figurine is usually solid, mold-made, and face and headdress features are modified after being casted. Furthermore, figurines are observed to usually be assembled in pieces, with heads, limbs, and other accessories to be appliquéd to a core body, and then fired. This manufacturing process is typically the reason why figurines are recovered as fragments and rarely as whole objects (Douglass 2007). Finally, figurines held various purposes in antiquity from ritualistic objects to children's playthings (Halperin 2007).

Ocarinas

Ocarinas can be stylistically similar to figurines, yet functionally, differ greatly. Ocarinas are musical instruments and are always manufactured to be hollow and with finger holes to produce various sounds, similar to a flute (Bell 1991; Urban and Bell 1993). However, unlike the long and tubular shape of convention flutes, ocarinas are typically round in shape. Some ocarinas are manufactured with multiple hollow air chambers and are capable of producing a greater range of musical tones than single-chambered objects. Most are zoomorphic in stylistic design with mold-formed bodies

and individually formed heads. Either the tail-end or the mouth of the animal contains the mouth-piece or blow hole for playing. The occasional anthropomorphic ocarina can take on the shape of a full-bodied person, with the body forming the air chamber and a mouth-piece fashioned from the back of the head. These types typically contain only a single air chamber, with the finger holes located on the back of the object. Similar to figurines, ocarinas are likely assembled in various segments before being amassed to form a single object and then hardened. Therefore, ocarinas are mostly recovered as fragments and are distinguished from figurine fragments when a portion of an air chamber or a mouth-piece can be identified. It is conceivable that some of the fragments cataloged as figurines from PVN647 are from ocarinas, yet did not display conclusive evidence as such and are by default categorized as figurines, in accordance with PVN/PVC laboratory protocols. Other than functioning as musical instruments, it is unclear how revered or commonplace the playing of ocarinas may have been in antiquity (Douglass 2007), though ritual significance is not unlikely (Halperin 2007). The recovery of ocarinas from the Naco Valley is quite common and from a variety of occupational contexts.

Incensarios *or Censers*

Incensarios or censers are a ceramic artifact category that likely encompasses the greatest amount of variation with regard to vessel form, size, and even purpose. Functionally, incensarios are related to ritualistic forms of activities, such as deity idols to whom offerings were made or as incense burners for ancestor veneration. However, they are also posed to function in less sanctified ways and used in the cooking of food,

depending upon the form of the censer vessel. Within the PVN/PVC artifact classification system, the four primary censer vessel forms are: complex censers; pierced ladle censers; modeled censers; and scored censer lids.

Complex censers, or also referred to as braziers, are described as round-based vessels, with conical bodies of continuous shape that lead to a concaved, bowl region, with three pronged "fingers" that extend upward from the bowl area. The base/body region of a complex censer is referenced as the supports for the vessel and is usually constructed separately from the bowl and prong portions of the object. Furthermore, the supports of complex censers can be decorated with cut-out shapes, typically triangular, while the upper portions of the bowl and hollow prongs tend to remain decoration-free. In the center of the bowl portion is where incense is burned or possibly food is positioned. The name for this specific vessel form is derived from its intricate assemblage and appearance and therefore likely more associated with ritualistic activities. Due to the various and separately prepared components of complex censers, rarely is a vessel of this form recovered as a complete object. Recovered fragments of this particular vessel form are identified from the characteristic portions described above.

Modeled censers mostly occur as large, uniformly rounded, straight and thick-walled vessels with flat bottoms and wide openings. The title of this form is derived from the range or decoration that would occur along the exterior of the vessel form. Modeled censer exteriors can be appliquéd with anthropomorphic or zoomorphic faces or geometric designs or motifs. Mostly frequently in the Naco Valley region, modeled censers include appliquéd ceramic conical-shaped and pointed decorations, which are

interpreted as spikes, similar to the projecting spikes that grow along the trunks of ceba trees (Schortman and Urban 1994). Rarely are modeled censers recovered as whole objects and fragments are identified by the thick walls or appliqué decorations. Similar to complex censers, modeled censers are postulated to be used predominately in ritualistic or ceremonial practices and to a lesser degree with food preparation. Therefore, complex and modeled censers are both hypothesized to be associated with contexts of a public nature and less so with that of domestic spaces.

Pierced ladle censers are described as objects with shallow, bowl portions, which provide the title of ladle, with a perpendicularly fashioned handle extending away from the bowl portion. The middle of the bowl portion of a ladle censer includes punctured holes, providing the other title of being a pierced ladle censer. These vessel forms are rarely recovered as complete objects and the bowl portions are identified by fragments containing sizable pierced holes. The handle portions are either fashioned as hollow, conical-shaped tubes or as two, flat straps with smaller supports in between to separate them. Either food or incense would be placed in the center of the bowl region and the whole object placed over a firing source for cooking or burning. Typically burning or sooting markings are preserved and indicate use.

The final primary censer form from the region is a scored censer lid and it is described as a solid ceramic object, which is slightly concave and possesses an appliquéd handle on the top. The bottom or under-facing of the lid contains deeply incised, scored lines, typically in a crisscross pattern, yet not necessarily uniform or systemic. The incised lines are to assure that the lid does not slip when placed atop another object, such

as a cooking vessel or possibly a modeled censer. Scored censer lids are typically recovered as fragments and identified by the deeply incised lines on one side and possible traces of burning or sooting. Due to the flexibility in functionality, scored censer lids can be associated with a variety of contexts, ranging from the public and more ceremonial to the more private realm of a household setting.

Potstands

The artifact class of potstands is fairly new and only first identified within PVN/PVC artifact classification in 2002 as the result of analysis of ceramic collections from the site of Las Canoas (PVN202) (Stockett 2005a; Schwartz et al. 2006). Though, potstands have been identified at other sites within the Middle Chamelecón-Cacaulapa region (see Ellison 2006). Potstands are described as ring-shaped ceramic objects, with a nearly vertical, thick, and flatten upper-edge and a wide-flared base. They appear similar to the rims and necks of ceramic jar vessels that have been inverted upside-down. However, potstands can vary significantly in shape, height, and overall size. In addition to the unique shape, potstands typically include the presence of globs, drops, or splatters of either dried or baked-on clay to the exterior of the object. Furthermore, some potstands are observed to have pronounced visible discoloration, in the form of being bright orange, pink, or red in color.

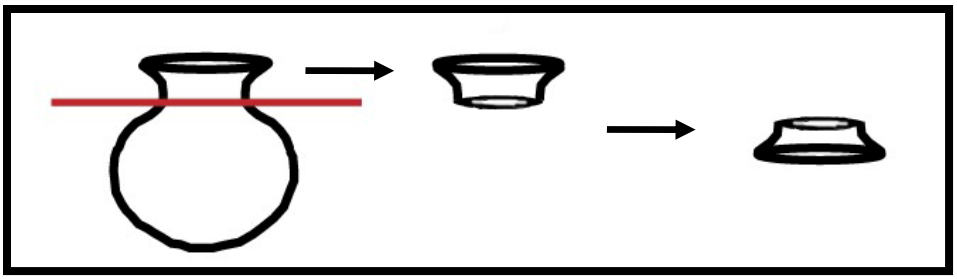


Figure 6.1: Schematic representation of the process of fashioning a potstand from a recycled jar vessel (adapted from Ellison 2006).

Potstands are hypothesized to be manufactured in two ways: intentionally or as recycled objects from broken jar vessels (**Figure 6.1**). Intentionally modeled potstands exhibit nearly vertical necks and are defined by a large everted rim and a break to the body/base of the stand. Furthermore, potstands purposely made as stands are observed to be devoid of evidence indicating that either the lower or upper rims were deliberately chipped, grinded, or smoothed flat (**Figure 6.2**). Potstands recycled from broken jar vessels are described as having either a continuous curvature with no break to the body/base of the stand or having a break between the neck and the shoulder/body (**Figure 6.3**). Additionally, potstands fashioned from broken jars contain evidence of modified edges to create a smooth, flat upper rim where objects would have rested and an even, balanced, and continuous surface at the base in order to not wobble as the object was being shaped.

Figure 6.2: Intentionally modeled potstand from PVN598. This example does not have an everted upper-rim but possesses a clear break to the body/base of the stand. Evidence of clay drippings are present near the base of the object (photo courtesy of Ellison).

Figure 6.3: Recycled potstand from jar vessel from Las Canoas (PVN202). This example exhibits a continuous shape, without a break to the body/base of the stand. Evidence of clay drippings and discoloration due to reheating are present all over the object (photo courtesy of Urban and Schortman).

Lastly, the hypothesis from PVN/PVC examinations over the past decade of this artifact class is that potstands were involved in ceramic production activities, particularly in two distinct ways, and were not solely fragments of jars or other forms of utilitarian ceramic objects. Both posed functions of potstands are as supports for other ceramic vessels. The first use of a potstand is as a support for the shaping, scrapping, and modeling of wet clay vessels before they are fired, as evidenced by the irregular globs and splatters of clay that adhere to the laws of gravity and are observed to drip down the body of the exterior of the potstand towards the wide-flared base. The second function of a potstand is as a form of firing furniture within a kiln or firing facility. This purpose is indicated by the preserved evidence of baked-on clay drippings and extreme discoloration, which occurs when ceramics are re-fired and/or exposed to very high temperatures, especially when it occurs repeatedly. However, due to the shape and overall role as simply serving to support other vessels, it is likely that potstands occupied

other roles, which are undetectable via analysis of recovered fragments. Potstands also could support the elevation of round-bottomed ceramic vessels used in cooking activities or storage practices.

To conclude, potstands are unique to this region of Honduras and most clearly serve as an indicator for local ceramic production activities. Potstands are rarely recovered as whole vessels and mostly occur as fragments. Potstand fragments are identified by the presence of dried or baked-on clay drippings, extreme discoloration due to reheating, and/or a neck curvature that is inconsistent with known jar forms from this region. While it is postulated, it is not verifiable that preserved fragments if this ceramic vessel form held any functional purpose unrelated to ceramic production.

Candeleros

Candeleros are akin in appearance to a candleholder or candelabra; however, a definitive function is less obvious. Candeleros are fairly under-studied in northwest Honduras, though quite common in the Naco and Cacaulapa Valleys during the Late and Terminal Classic (Urban, personal communication 2014). The shape of candeleros can vary from rounded or squared and consist of cylindrical chambers or wells, where the material to be burned is positioned. The number of chambers can vary from being a single well to as many as six individual burning chambers. Trace remains from burning or sooting can be evident both along the exterior or interior of the chambers. Typically, each chamber will include a small hole along the exterior of the chamber to serve as a vent, indicating burning at the base of the chamber. Candeleros can vary stylistically as well and may include supports or feet on the base to elevate the object (**Figures 6.4 and**

6.5). Mostly, candeleros appear to be individually modeled and not mold-made. It is not uncommon for candeleros to be recovered in a relatively complete state, as the clay composition of candeleros is usually quite course and not as delicate as figurines or ocarinas, which are made from finer paste groups. A potential utilitarian function of candeleros could be to burn very small amounts of incense and other fragrant or smoke-producing materials (Bell 1991) for fumigation purposes (Urban, personal communication 2014). Aside from burning materials, it is unknown how sacred or regular of an occurrence it was to use a candelero in antiquity, though they have been associated with ritual practices (Schortman and Urban 1993; Urban and Bell 1993).

Figure 6.4: Plan-view image of a four-chambered, square-shaped candelero from Structure 17 at PVN647.

Figure 6.5: Profile image of same four-chambered, square-shaped candelero from Structure 17 at PVN647. Vent holes and supports are visible.

Stamps

Ceramic stamps predominantly consist of the flat-facing form with a handle or nub on the back with which to grasp the object and press down to make an imprint (**Figures 6.6 and 6.7**). Rarely are roller or in-the-round ceramic stamps recovered from this region of Honduras. However, the shape of flat-facing stamps can vary from being square, rectangular, or circular. The decorative portion of the stamp can also vary greatly from including anthropomorphic or zoomorphic imagery to stylistic designs, motifs, or patterns. Stamps appear to be mostly individually formed, yet could be initially mold-made and then embellished before hardened. Occasionally, dye remnants are present and objects are found as nearly complete, as stamps are solid ceramic objects. Stamps were likely used on textiles or bark-based paper materials. It is unclear if the decoration or imagery of a stamp related to the identity of the owner or manufacturer of an object.

Figure 6.6: Rectangular-shaped stamp from Structure 16 at PVN647. The decorative portion is of three monkeys in profile, holding hands.

Figure 6.7: Rectangular-shaped stamp from Structure 16 at PVN647. This image shows the handle on the back of the object.

Molds

Many components of ceramic objects or vessels are made from cast molds. Therefore, ceramic molds are recovered in various shapes and sizes and made by an impression of another ceramic object and then hardened. Predominantly, ceramic molds are intended for the casting of figurine and ocarina portions, such as faces, heads, headdresses, complete bodies, or for rounded air chambers in the case of ocarinas. Occasionally, molds are used for the creation of other objects, such as small bowls or vases. Molds tend to include some decorative portions yet mostly serve the purpose of establishing the generalized and uniform shape an object that is to be individually decorated or modified after being casted. Ceramic molds are typically made from a fine or medium clay paste and are therefore most often recovered as fragments and rarely as complete objects.

Worked Sherds

The category of worked sherds is identified as any ceramic sherd fragment that displays evidence for intentional modification, such as being re-shaped, chipped, grounded, or smoothed. Therefore, worked sherds are a class of artifacts that are made from recycled materials in order to serve a differing functional purpose. Worked sherds are hypothesized to be predominantly associated with ceramic modeling activities, and used for scraping, smoothing, or shaping of wet clay objects before they are hardened. Worked sherds vary in size and shape and can occur as triangular, square, rectangular, oval, semi-circular, or tear-dropped shaped. Therefore, the most important distinguishing feature that designates a ceramic fragment as a worked sherd is that it exhibits markers

for deliberate shaping as a recycled object, but does not necessarily have to show evidence of use-related wear.

Used Sherds

Used sherds are similar in appearance and possible function to worked sherds, yet vary with regard to visible evidence of use. Used sherds are identified as any ceramic sherd fragment that displays evidence of being used for the purposes of shaping, scraping, smoothing or other activities. Therefore, at least one edge or side of a used sherd exhibits use-related markings. Similar to worked sherds, used sherds are the result of broken ceramic fragments being selected for their original fragmented form and used for alternative intentions, yet not purposefully re-shaped. Furthermore, used sherds are considered to be mostly utilized in ceramic production-related activities, yet could have been used for other unknown purposes. Therefore, due to use-related activities, used sherds can appear triangular, square, rectangular, oval, semi-circular, or tear-dropped shaped in appearance. However, the principle marker of a used sherd is that it does not display evidence for being deliberately shaped, but was an opportunistically used ceramic fragment.

Miscellaneous Non-Pottery Ceramic Artifacts

A variety of other ceramic artifacts were recovered from PVN647 and do not appropriately adhere to the characteristics outlined for the object descriptions previously articulated. While some objects were indiscernible, the most easily identified ceramic artifacts are sherd disks and objects considered to be jewelry or ornamental, such as pendants and earspools. Pendants are identified as objects that contain at least one

pierced hole, large enough to be threaded and worn as a necklace. Earspools are common Mesoamerican ear jewelry and are small, tube-shaped objects that are inserted into a pierced earlobe. Sherd disks are described as circular and flat ceramic objects with a circular hole in the center (**Figure 6.8**). The shape of the object is typically the result of grounding and then smoothing to round the edge and average approximately 2.6cm in diameter. The center hole is fashioned by grinding a pointed object in the center from both sides to achieve a piercing and then further grinding to produce a hole with a diameter approximately 0.7cm. Sherd disks appear to be shaped from discarded ceramic fragments. The functional intent of sherd disks is unclear and have been hypothesized to range in purpose from light weights to ornamental objects for jewelry. All miscellaneous ceramic artifacts are issued a catalog number and analyzed separately, taking note of dimensions, manufacturing or use-related markers, and any other specific characteristics or features that are germane to the particular object type.

Figure 6.8: Sherd disks from PVN647. The objects on the left and center are from Structure 6 from the Southeast Plaza Group. The object on the right is from Structure 12 from the Site Core Plaza Group.

Lastly, chunks of burned or dried mud are labeled as *bajareque* and are categorized in this dissertation as miscellaneous non-pottery artifacts, though not necessarily as ceramics. *Bajareque* is used as a building material in the method of waddle and daub, or stick and mud, wall constructions of structures. It is typically a mixture of mud, clay and other organic inclusions to serve as mortar or as a prepared living surface. Preserved fragments of *bajareque* are informally inspected for material composition and evidence for stick, thatch, grass, or finger impressions. Laboratory protocol dictates that all *bajareque* is counted and weighed, yet not individually analyzed or catalogued. As *bajareque* was likely used in the construction of any intentional edifice, its presence throughout excavations of structures at PVN647 is not unexpected.

Stone Artifacts

The artifact category of stone artifacts comprises any stone object that has been intentionally modified by or used for human activity. The primary designations with respect to stone artifacts consist of chipped stones, ground stones, and the catch-all label of miscellaneous, which includes objects of ornamentation or jewelry.

Chipped Stone

Any recovered stone material that is identified to be associated with the activity of chipping or knapping of rocks to fashion any variety of stone tools is designated as chipped stone. This category encompasses all elements relating to the process of knapping stone tools, which include cores, debitage or debris fragments, blades, and points. PVN/PVC analysis protocols of chipped stone assemblages can vary from season

to season dependent upon the hired lithic analysis specialist. However, at minimum, a sample of the assemblage is analyzed and evaluated by means of a readout sheet system and metrics of stone type, fragment form (core, debris, blade, etc.), and other dimensional measurements and characteristics are recorded. Approximately 21,000 chipped stone objects were recovered from PVN647. In June of 2008, Dr. William McFarlane evaluated roughly 1,000 chipped stone objects, equating to 4.8% of the chipped stone assemblage from PVN647.

The predominate forms of chipped stone material that was recovered from PVN647 is described as locally available chert, locally available perlite obsidian, and imported obsidian. The locally available perlite obsidian comprises most of the percussion flake and other debitage debris, but also occurs as small nodules. This type of obsidian is recognized to be of low quality and the functional purpose of the small nodules remains unclear. The dominant type of imported obsidian is that of Ixtepeque from Guatemala and is observed to mostly occur as finished blades. Locally available chert occurs as percussion flakes and other debitage and is recorded to be the lesser abundant chipped stone material recovered from PVN647.

Finally, chipped stone tools can be associated with a variety of contexts and purposes, such as food and textile processing, maintenance activities, and any other domestic or utilitarian use. It remains unknown if or how chipped stone tools such as obsidian blades or other objects could have been used in more ceremonial or ritualistically-charged activities. Additionally, evidence for artifact imports can speak to forms of regional or interregional interaction and identity formation.

Ground Stone

Ground stone artifacts are characterized as any stone object that displays evidence for being used in activities of grinding or grounding of other materials; either as the surface for such activities or as the object that is doing the action. Objects identified as a surface for grinding are labeled as metates or mortars, while objects recognized as doing the grinding are labeled as manos or pestles, depending upon the size and shape of the object. PVN/PVC laboratory protocol dictates that each object (whole or fragmented) identified as a ground stone artifact be issued a catalog number and individually analyzed.

Metates are typically made from locally occurring vesicular basalt and are rectangular in shape. Some metates are flat-backed while others are fashioned to be stabilized with three legs, in a triangle arrangement, located on the opposite side from the grounding or working surface. The working surface or use area of metates can vary, as the types of grinding motions or materials being ground can differ from object to object. However, a horizontal, back-and-forth motion is a typical wear pattern that can be observed from striation or smoothing markings along the working surface. Mortars are similar to metates in function, yet are typically smaller, bowl-shaped, and support the grinding of materials in a circular motion. Metates and mortars are used in the activities of food preparation. Metates are typically used to ground harder materials, most commonly maize. Mortars are utilized for softer materials and in smaller quantities, such as seeds. It is unknown if metates were used for other purposes unrelated to food preparation. Mortars may have been used to grind pigment stones or other non-ingestible

compounds for other intentions. It is not uncommon for metates to be preserved as whole objects, yet mortars may have been used with less frequency and are rarely recovered.

Manos are also predominantly made from locally available vesicular basalt and occur in a range of shapes and sizes. Some appear as long and oblong, similar to a modern rolling pin, and meant to be used with two hands. However, if a mano is not very heavily used, it may appear rectangular in shape. Other manos appear short and no wider than the average human hand, yet with similar diameters to longer manos. Typically manos are cylindrical or oval in the shape of their circumference and have at least one side exhibiting evidence of flattening or smoothing, which is associated with use. Pestles are typically smaller than manos and designed to be completely grasped with one hand. Additionally, pestles are usually fashioned from less porous fragments of basalt than those selected for manos, as a high density of stone can be more easily managed in one hand and as a smaller tool. Manos are typically used in tandem with metates for the grounding of denser foodstuffs, while pestles are associated with grinding activities and in smaller quantities and used with mortars. Pestles are frequently recovered as whole objects, while manos (especially longer manos) tend to be recovered in fragments. Since the majority of ground stone objects are utilized in the preparation and processing of food, they are most commonly recovered from less public contexts, yet both inside and outside of preserved structures.

Miscellaneous Stone Artifacts

Recovered stone artifacts that are not labeled to be chipped or ground stone, consist of various ornamental or jewelry objects, such as pendants and beads, and more utilitarian objects, such as celts and pigment stones. Pendants and beads can be made from a variety of stones and can occur in an assortment of shapes and sizes. Depending upon the size and quality of the stone material, jewelry and other bodily ornaments can be recovered as whole objects. Any stone artifact deemed to be ornamental is issued a catalog number and analyzed separately, taking note of specific characteristics or features that are germane to the particular object type. Celts are most closely described as axe heads, with a wide or broad butt portion, which narrows to a pointed blade. Celts can vary in size yet most are highly smoothed and polished in order achieve a sharp blade and insure clean cuts. When the broad butt portion is fashioned to a handle, a celt can cut through bone or wood. Formed from denser stones, such as igneous rocks, celts can commonly be recovered as whole objects. It is not known if the raw materials used to make these particular stone objects are locally occurring within the region, therefore a manufacturing origin remains unclear. Celts are also issued individual catalog numbers and measurements are documented, along with any other manufacturing or use characteristics. Lastly, pigment stones do not appear to be manipulated into any functional form, yet were likely utilized for their typical red or orange coloring for pottery and serve as potential indicators for ceramic production. The stones are collected and counted, yet no additional analysis is performed on these objects.

Flora and Fauna

All floral and faunal remains recovered from PVN647 have been informally or visually analyzed and documented by the author as time and resource allowed. Formal analyses of these remains are pending. The primary categories of classification consist of *jute* or shell, bone, and human internment materials.

Jute

Scant collections of river snail shells or *jute* at PVN647 were collected, counted, and weighed. Though the species of these shells have not been expertly identified, based upon visual inspection and similar to analysis of data assemblages from neighboring investigated archaeological sites (Stockett 2005a, Ellison 2006), the recovered snails are likely *Pachychilus indiorum.* River snails were food sources and likely boiled in water, as most inspected shells appear intact. No shells were observed to be altered in any manner, as would be an indication for a secondary purpose as a decorative or ornamental object. Finally, the presence of snail shells is not uncommon and likely sourced from the Rio Chamelecón or other tributary streams or *quebradas* surrounding PVN647.

Bone

Likely food sources for residents at PVN647 were local wild mammal, bird, and fish species. Trace faunal remains were collected and visually analyzed to determine a preliminary identification of species type and most were assessed to be of small mammal remains. Formal analysis of these remains is pending. However, considerably low quantities were recovered from PVN647.

Human Internments

Finally, once identified in situ at PVN647, human remains were investigated at the discretion of the author, as assessed by location and surrounding contexts. As a result, only one formal human internment context was excavated and analyzed. Two separate potential human internment contexts remain unstudied, as they were not deemed necessary to disturb nor were surrounding construction units and features essential for examination. Therefore, the one human internment context was fully documented for its content and positionality of the remains before extraction and later analyzed informally by the author. Individual bone fragment types were documented, yet age, sex, and overall health was not able to be assessed.

Summary Comments on Artifact Analysis

Recovery of intact or whole objects of any artifact class is extremely rare. Unmodified cobble construction does not withstand well to the gravitational effects of building decay over time, therefore, artifacts seldom survive this process and are broken. Additionally, archaeological studies of prehistoric household contexts have revealed that certain artifact classes, both ceramic and stone, were stored by suspension in building walls or roofs within structure interiors (Sheets 1992). Items left behind in these elevated locations are susceptible to damage due to the processes of structure abandonment. Lastly, select artifact classes are particularly vulnerable to breakage or damage from tumbled building materials and the accumulation of soil matrix; for example, finer paste ceramic objects, such as figurines and ocarinas. The greatest likelihood of uncovering

complete or nearly complete objects is from primary context settings, which are not commonly preserved. Aside, from structural decay, artifact and context preservation is greatly impacted by the disturbance of natural factors, such as plant root growth, animal borrowing, and soil acidity. Finally, it is unclear in what stage of preservation or what objects remained when occupation of PVN647 was terminated. Therefore, likely as a result of these factors, and among others, nearly all objects recovered from PVN647 occur as fragments in various shapes, sizes, and stages of preservation. Occasionally, artifacts are uncovered in situ in a fragmented state, yet infrequently with all fragments preserved.

Additionally, due to factors of transport, processing, or being exposed to the natural elements once extracted from excavations, certain artifacts fragment further. Therefore, not each documented artifact fragment is representative of a different object of that particular artifact class, but may be fragments from the same vessel. These multiple fragments from the same object are recorded and discussed where appropriate. Lastly, the select few artifacts that remain complete or nearly complete are highlighted in this discussion in reference to provenience, context, and significance.

To conclude, all artifact analysis and interpretations of PVN647 materials have been accomplished by visual examination. Dating of various contexts has been established by relative dating from ceramic analysis. Use-wear or residue analysis and chemical sourcing have not been conducted. Furthermore, not all artifact classes have been examined equally. Therefore, an in-depth analysis of every artifact class is not presented in this discussion. Though excavations at PVN647 have concluded and no

future invasive investigations have been proposed, the analysis of currently excavated, yet understudied, artifacts is on-going. Therefore, interpretations and conclusions presented here are based upon known information that has been completed at the time of manuscript submission. Upon potential future examinations of PVN647, the conclusions presented here based upon the artifact assemblage may require amendment or reevaluation.

Artifacts from PVN647

The following discussion highlights artifact density, the number of artifacts per one cubic meter (m^3) of excavated context, and distributions from all investigated structures from the Site Core Plaza Group and the Southeast Plaza Group at PVN647. Artifact classes are presented based upon context and the matrix, provenience, and association are referenced as accurately as possible. The principal identified contexts are terminal debris and fill, as no artifact remains can confidently be assigned as occurring within a primary context. Terminal debris is identified as a general secondary context and refers to episodes of use, reuse, or abandonment, which are not clearly distinguishable. For example, mixtures and tumbled debris of cobbles, artifacts, and soil matrices that are associated with fallen architectural constructions are referenced as a terminal debris context. A fill episode is also identified as a form of a secondary context, yet distinguished by its intentional deposition. Fill contexts may be located between construction units or as material to level-out an uneven region in preparation for a living surface, either inside or outside of a structure.

Pottery identified from both terminal debris and fill contexts are included in this discussion when applicable, as certain temporal patterns are revealed by the relative dating of ceramics and are significant to structure and site history. However, only pottery densities calculated from terminal debris contexts are referenced in reconstructing each buildings material composition and informing function. Likewise, all other artifact class densities aside from pottery, which occur within terminal debris, are discussed as indicators of structure purpose and association within each investigated group.

Site Core Plaza Group

The greatest volume of excavated material from PVN647 occurred within the Site Core Plaza Group, as a total of 5 individual structures were entirely investigated (Structures 12, 16, 17, 18, and 33). The totality of these examinations equates to approximately 77.6m^3 of excavated matrix. (Approximately 74.8m^3 is identified as terminal debris context, while 2.75m^3 is identified as fill, and 0.15m^3 is identified as sterile soil.) Artifact classes recovered from the Site Core Plaza Group consist of pottery fragments, chipped stone implements and debris, groundstone tools, figurines, ocarinas, candeleros, molds, stamps, potstands, censers, used and worked sherds, among other ceramic and stone objects (**Table 6.3**).

Artifact Class	Object per m^3 in terminal debris from Site Core Plaza Group
Bowls	11.90
Jars	113.35
Plates	0.36
Comals	0.24
Candeleros	0.13
Figurines	0.67
Ocarinas	0.17
Complex Censers	0.13
Modeled Censers	0.23
Scored Censer Lids	0.45
Pierce Ladle Censers	0.12
Stamps	0.05
Molds	0.05
Potstands	1.28
Worked Sherds	0.51
Used Sherds	0.55
Sherd Disks	0.01
Obsidian	234.40
Chert	16.20
Metates	0.37
Manos	0.29
Celts	0.03
Pigment Stones	0.07
Bone	1.90
Jute	0.13
Bajareque	7.19
Pendants	0.03
Beads	0.01
Earspools	0.01
Other	0.05

Table 6.3: Summary of artifact density by m^3 by artifact class from terminal debris context from all investigated structures from the Site Core Plaza Group at PVN647.

Overall, pottery vessel fragments (bowls, jars, plates, and comals) represent one of the most abundant artifact classifications within the Site Core Plaza Group. Furthermore, a significant number of relatively dated pottery fragments are consistent with Middle to Late Preclassic period paste groups, forms, and styles. However, deposits containing these particular ceramics indicate that the fragments were used in fill episodes

and are predominately located at depths lower than observed architecture. It is concluded that discarded Preclassic materials were utilized as construction filler in preparation for nearly all investigated buildings where fill context is identified. This occurrence is not extraordinary, as the East Group at PVN647 has been identified as a Middle Preclassic settlement and marks the earliest known evidence of occupation within the boundary of PVN647. Therefore, the evidence of relatively-dated Preclassic ceramic materials from the 5 investigated structures are concluded to occur as an "under layer" of the Late and Terminal Classic occupation within the Site Core Plaza Group. This assessment is founded upon the provenience and association of the overall contexts in which these particular earliest ceramic deposits are recovered.

Fill contexts were identified in only 3 of the 5 investigated structures within the Site Core Plaza Group: Structures 12, 16, and 17. Therefore, the calculation for pottery fill density for the Site Core Plaza Group is representational of that context for only those buildings. All excavations from Structures 18 and 33 are labeled as terminal debris context and are discussed as such.

	Total Pottery *Processed*	Total Pottery *Analyzed*	Percent *Analyzed*
Structure 12	32,152	3,042	9.4%
Structure 16	21,163	3,455	16.3%
Structure 17	17,740	1,623	9.1%
Structure 18	14,622	1,058	7.2%
Structure 33	14,188	2,524	17.8%
Site Core Plaza Group	**99,865**	**11,702**	**11.7%**

Table 6.4: Summary of total pottery processed and analyzed from each structure from the Site Core Plaza Group.

Finally, it is noteworthy to highlight the proportional variation of analyzed pottery between each structure within the Site Core Plaza Group. The goal of PVN/PVC laboratory pottery analysis is to achieve a minimum of a 10% sample of pottery from each structure, each plaza grouping, and therefore all of PVN647 (**Figure 6.4**). Due to resource limitations and time constraints, pottery analysis from each building did not undergo equal attention. It is clear that the analysis of pottery from Structures 16 and 33 supersedes the samples analyzed from the other buildings, and that Structure 18 observed the least analysis. Though, the overall percentage of analyzed pottery for the Site Core Plaza Group equates to an approximate 11.7% sample and all of PVN647 experienced roughly a 10% sample.

	Total excavated matrix in m^3	Total pottery *processed* per m^3	Total pottery *analyzed* per m^3
Structure 12	23.05	1394.88	129.45
Structure 16	12.5	1693.04	276.4
Structure 17	20.93	847.59	77.54
Structure 18	12.3	1188.78	86.02
Structure 33	8.8	1612.27	286.81
Site Core Plaza Group	**77.58**	**1287.25**	**145.98**

Table 6.5: Summary of pottery processed and analyzed per m^3 from total excavated matrix for each structure from the Site Core Plaza Group.

However, when the amount of total excavated matrix from each structure is considered, it is clear that Structures 16 and 33 contained the greatest volume of processed pottery from their respective total amounts of excavated matrix **(Table 6.5).** Therefore, a larger sample of pottery was selected to be analyzed from these buildings in order to better understand this greater density. Furthermore, as Structure 33 is identified

to be the only investigated building within the group that is not located immediately on the Main Plaza, extra attention was placed upon of the analysis of the artifact assemblage in order to determine how location may have resulted in variations in artifact types and styles.

	Total excavated terminal debris in m^3	Total pottery *processed* per m^3 from terminal debris	Total pottery *analyzed* per m^3 from terminal debris
Structure 12	22.35	8,266.57	64.53
Structure 16	11.7	10,203.99	263.08
Structure 17	19.73	9,193.49	71.18
Structure 18	12.3	4,337.15	86.01
Structure 33	8.8	6,076.40	286.82
Site Core Plaza Group	**74.88**	**38,077.59**	**767.90**

Table 6.6: Summary of pottery processed and analyzed per m^3 from terminal debris only for each structure from the Site Core Plaza Group.

Additionally, when only terminal debris context is considered, the density of pottery for this particular matrix from each structure varies **(Table 6.6)**. Structures 12, 16, and 17 are identified to contain scant volumes of fill matrix and therefore portions of the pottery analyzed from each of these buildings is from this context. The significance of the variation of pottery identified from fill and terminal debris are highlighted for each structure, where applicable. However, it is clear that the structures with the greatest calculated densities of pottery from the total amount of excavated matrix (Structure 16 and 33), also contain the greatest densities of pottery from terminal debris.

		MC-C (Las Canoas/PVN598)	Other PVN/PVC Settings	Imports
Structure 12	Terminal Debris	69.98%	30.02%	0.00%
	Fill	57.58%	42.42%	0.00%
Structure 16	Terminal Debris	55.26%	44.74%	0.03%
	Fill	46.15%	53.85%	0.00%
Structure 17	Terminal Debris	27.35%	72.65%	0.00%
	Fill	32.42%	67.58%	0.46%
Structure 18	Terminal Debris	96.60%	3.40%	0.09%
	Fill	0.00%	0.00%	0.00%
Structure 33	Terminal Debris	75.99%	24.01%	0.00%
	Fill	0.00%	0.00%	0.00%
Site Core Plaza Group	**Terminal Debris**	**63.42%**	**36.58%**	**0.02%**
	Fill	**53.27%**	**46.73%**	**0.04%**

Table 6.7: Summary in percentage of analyzed pottery from terminal debris and fill for each structure within the Site Core Plaza Group, representing the origin of pottery manufacture, distinguished by the Middle Chamelecón-Cacaulapa region, other Naco and Cacaulapa Valley settings, and imports, which are from beyond these regions.

Finally, the distributions of pottery by the origin of manufacture portray a unique pattern across the Site Core Plaza Group (**Figure 6.7**). Structures 18 and 33 significantly include greater amounts of the pottery types and varieties that are known to originate from the sites of Las Canoas and PVN598. Structure 17 clearly witnesses the most from other local manufactures, however, still within the realms of the Naco and Cacaulapa Valleys. Overall, these disparities may speak to the social function of each structure and the range of activities taking place.

It is acknowledged by the author that the lack of statistical consistency of analyzed pottery from analogous depositional matrix (namely terminal debris) and between each investigated structure within the Site Core Plaza Group may impact the following interpretations of structure function(s).

Structure 12

Structure 12 represents the largest investigated structure at PVN647 and therefore the greatest volume of excavated context, with an approximate total of 23m^3 excavated. Of this, approximately 22m^3 is identified as terminal debris, while 0.55m^3 is labeled as fill context and 0.15m^3 is identified as sterile soil. Structure 12 is the only investigated building from the Site Core Main Plaza that contains a recorded excavated lot identified as a context completely devoid of cultural material and associated with a period preceding any evidence of human activity or occupation.

Pottery from Structure 12

Even though only slightly more than 0.5m^3 of excavated matrix from Structure 12 is identified as fill, greater densities of pottery fragments are associated with this context than are identified to be located within terminal debris. The majority of fill context (~0.5m^3) from Structure 12 is located in a region along the west exterior and a smaller portion (~0.05m^3) near the southwest corner. A smaller deposit is located within the northern veranda region and likely served as the intentional purpose of preparing the northern occupational regions of Structure 12.

Pottery type	**Per m^3 of Fill from Structure 12**		**Per m^3 of Fill from Site Core Plaza Group**	
	Preclassic pottery	**Late/Terminal Classic** pottery	**Preclassic** pottery	**Late/Terminal Classic** pottery
Bowls	170.90	78.19	45.45	31.27
Jars	1829.09	972.72	427.45	322.27
Plates	3.64	5.45	0.73	1.45
Comals	0.00	0.00	0.00	0.00

Table 6.8: Summary of pottery fragment types per m^3 of fill by temporal identification from Structure 12 and the Site Core Plaza Group from PVN647.

A significant majority of pottery fragments from fill contexts from Structure 12 are identified to be from Preclassic vessel types (**Table 6.8**). Furthermore, the overall volume calculations of Preclassic pottery from Structure 12 are greater than the calculated volumes for the rest of the Site Core Plaza Group. Similar to density comparisons from fill of Preclassic pottery, volumes from Late and Terminal Classic periods are greater than from investigations of fill contexts of the same periods from all investigated structures from the Site Core Plaza Group. It is plausible that pottery fragments from the earlier Preclassic period were in greater abundance than Late and Terminal Classic pottery to be utilized as construction filler. As previously stated, Structure 12 occurs on the greatest rise in elevation from the plaza-facing to the off-plaza region compared to all other investigated buildings in the main plaza. The natural rise of the landscape from the north to the south may have required leveling out in certain locations in order to establish the foundation for Structure 12.

Pottery type	**Per m^3 of Terminal Debris from Structure 12**		**Per m^3 of Terminal Debris from Site Core Plaza Group**	
	Preclassic pottery	**Late/Terminal Classic** pottery	**Preclassic** pottery	**Late/Terminal Classic** pottery
Bowls	4.65	2.33	3.78	8.12
Jars	29.84	23.76	24.1	89.30
Plates	0.13	0.00	0.07	0.29
Comals	0.00	0.09	0.00	0.24

Table 6.9: Summary of pottery fragment types per m^3 of terminal debris by temporal identification from Structure 12 and the Site Core Plaza Group from PVN647.

With regard to pottery recovered from terminal debris contexts from Structure 12, a greater density are identified as Preclassic fragments than Late and Terminal Classic

fragments (**Table 6.9).** However, this occurrence is likely the result of excavation methods. Occasionally, changes in depositional context are not immediately recognized during field excavations. Therefore, it is posed that Preclassic materials associated with a fill context were not immediately recognized and were excavated in a similar excavation lot containing terminal debris. The result of an excavation lot containing a mixture of depositional context is that the entire excavation lot, and all collected artifacts, is designated as a terminal debris context.

Aside from a mixture of temporal pottery fragments, terminal debris from Structure 12 contains a significantly greater density of jar fragments than any other pottery vessel type. Jars are customarily associated with storage of foodstuffs, therefore it is plausible that Structure 12 maintained activities more aligned with storage of goods than serving of food, which is a primary identified purpose of bowls. However, the density of Late and Terminal Classic jars from Structure 12 is significantly lower than the calculated density of the same temporal pottery type from terminal debris from the Site Core Plaza Group. Structure 12 likely engaged in activities that made use of these pottery vessel forms, yet not to the same degree as compared to other structures from the main plaza.

Lastly, pottery fragments identified as Late and Terminal Classic ceramic types from fill contexts occur in greater densities than from terminal debris. While this occurrence is not implicit, it is postulated that due to the natural slope of the landscape in which Structure 12 is established along, a high quantity of fill material, of whatever form, was necessary in order to construct the largest investigated structure at PVN647. Overall,

the comparatively low volume of pottery form fragments from terminal debris may be more an indicator of function of the building, which included minimal activities associated with the purpose of these types of ceramic objects. Though, it is acknowledged that the general region of Structure 12 may have been occupied during Preclassic periods, also accounting for the high densities of pottery dating to this time, though still used as a fill material. No architectural arrangements observed from Structure 12 are concluded to associate with occupation predating the Late Classic.

Artifact Class	Object total from Structure 12	Object per m^3 from Structure 12	Object per m^3 from Site Core Plaza Group
Candeleros	2	0.09	0.13
Figurines	7	0.31	0.67
Ocarinas	1	0.05	0.17
Complex Censers	0	0.00	0.13
Modeled Censers	0	0.00	0.23
Scored Censer Lids	9	0.40	0.45
Pierce Ladle Censers	2	0.09	0.12
Stamps	0	0.00	0.05
Molds	1	0.04	0.05
Pot Stands	2	0.09	1.28
Worked Sherds	2	0.09	0.51
Used Sherds	6	0.27	0.55
Sherd Disks	1	0.04	0.01
Obsidian	6,856	306.80	234.40
Chert	497	22.20	16.20
Metates	16	0.72	0.37
Manos	14	0.63	0.29
Celts	0	0.00	0.03
Pigment Stones	3	0.13	0.07
Bone	4	0.20	1.90
Jute	0	0.00	0.13
Bajareque	282	12.61	7.19
Pendants	0	0.00	0.03
Beads	0	0.00	0.01
Earspools	0	0.00	0.01
Other	2	0.09	0.05

Table 6.10: All non-pottery ceramics, lithic, and flora and fauna artifact totals and densities per m^3 from Structure 12 and the Site Core Plaza Group at PVN647. Terminal debris context only.

Several interesting occurrences are revealed from the densities of all other artifact classes from Structure 12, when compared to the densities from all of the Site Core Plaza Group (**Table 6.10**). To begin, the majority of non-pottery ceramic artifacts are calculated to be of densities less than those observed from the rest of the group, and most dramatically, complex and modeled censers, pot stands and worked sherds. Secondly, and in contrast, select non-pottery ceramic classes occur in equal or higher densities than the other buildings within the group, namely scored censer lids, molds, and sherd disks.

Third, all stone artifact classes (except for hachas) occur is significantly greater densities, most noticeably ground stone artifacts. The high density of the generalized "other" artifact class is the result of two worked stone objects. And finally, the density of bajareque is the only artifact class of marked greater density than any other floral or faunal remains.

Non-Pottery Ceramics from Structure 12

The greater ceremonial and ritualistic activities associated with complex and modeled censers may have be absent from Structure 12, as interpreted from the low densities of these particular artifact classes. Furthermore, production related activities assigned to the use of pot stands and worked sherds were also likely not located within or immediately surrounding Structure 12. This particular form of a more domestic-associated pursuit is not unanticipated; however, other artifact classes may indicate evidence for food preparation and storage.

The presence of scored censer lids is telling perhaps not for the more ceremonial or ritualistic activities that can be associated with this particular artifact class, but the more utilitarian purposes. Scored censer lids could have been used as lids to cover jars, which as previously highlighted, occur in the greatest density of all pottery artifact types. The scored censer lids may have been used in tandem with the jars for the storage of foodstuffs. Though, nearly all of the scored censer lids (N=9) display signs of burning or sooting on the scored or underside of the lid, which can be an indicator of the object being exposed to a heat source, as related to cooking or burning of incense activities.

However, the lids may have originally been utilized around heat sources and later transitioned into lids for storage vessels.

The higher densities of ceramic molds and sherd disks may be less associated with their respective uses and more a result of the overall low occurrences of these artifact types. One of the four mold fragments recovered from the Site Core Plaza Group was located within the northwest region of Structure 12 and contains the imagery of a headdress and earspool, likely for a figurine. Furthermore, the one and only recovered sherd disk from the Site Core Plaza Group is from Structure 12. The low frequency of both of these artifact classes is interpreted that ceramic production activities and the corresponding use of sherd disks likely did not occur within and around Structure 12.

Lastly, the high density of bajareque from Structure 12 is likely associated with the overall size and high number of masonry constructions, which supported waddle and daub assembled walls. Structure 12 contained nearly twice the number of wall construction units, compared to all other investigated buildings within the group. Therefore, as the perishable walls deteriorated over time, it is estimated that a significant amount of bajareque debris would preserve and be recoverable, as is the case at Structure 12.

Stone Artifacts from Structure 12

The third significant observation relating to the high densities of stone artifact fragments is fairly unique to Structure 12. While the chipped stone analysis from PVN647 remains under-studied, the significance of the higher densities of obsidian and chert, as compared to the rest of the investigated buildings within the Site Core Plaza

Group, remains unknown. As the stages of manufacture from these chipped stone fragments are not known, it is possible the densities of each could be associated with production activities, but also the accumulation of objects, which set the occupants and activities of Structure 12 apart from the occupants and activities of the other buildings.

Most prominent from the stone artifact assemblage from Structure 12 is the high densities of ground stone items. Excavations of Structure 12 revealed the most metate (N=16) and mano (N=14) artifacts recovered from one building for all investigated structures at PVN647. One of the metates remains a complete object, with a well-smoothed working surface and no legs (or flat-backed). The majority of metates (11 of 16) are fragments of the working surface region, while three are only leg fragments. Additionally, most (9 of 16) are observed to be finished items, including the complete metate. Three metates each are identified as unfinished items or are undeterminable. Finally, one item is identified to be a mortar, as it is circular in shape, small and can be held in one hand and is preserved as a complete object. As the majority of recovered metates are deemed to be in various states of use and also manufacture, it is likely that not only were abundant grounding activities being carried out within Structure 12, but also production of these ground stones.

Mano artifacts recovered from Structure 12 exhibit similarities to analyzed metate objects, with regard to use and manufacture. Four complete manos were recovered and are round or oval in shape and show evidence of working on none to 1-3 sides. One of the whole manos is determined to be a finished object, yet displays no smoothing or polishing wear associated with use. The remaining items (9 of 14) were identified to be

preserved in various fragmented shapes and sizes. Most manos (11 of 14) display one or two worked facings, while one is identified to be unfinished and another to be indeterminable. One item is identified to be a broken metate leg that was reworked and repurposed as a pestle. In tandem with interpretations of metate objects, it is likely that mano objects were also being both manufactured and used within and/or around Structure 12.

Lastly, the greatest number of pigment stones (N=3) and the most generalized "other" worked stone objects (N=2) are from the Site Core Plaza Group and are recovered from Structure 12. While the purpose of pigment stones at Structure 12 is not entirely understood, it is not extraordinary for the greatest density of pigment stones to also occur within the same context as the greatest occurrence of ground stone objects. Pigment stones were typically ground down into a fine powder and used for coloring of paint in pottery production or perhaps dying in textile manufacturing. Finally, two opportunistically used pieces of stone account for the high density of "other" artifacts. The purpose of these objects is not understood but both have been intentionally shaped by grounding in order to flatten and smooth. As their use-related objective is not known, they remain without a title.

Discussion of Artifacts from Structure 12

In summary, the recovered artifact assemblage from Structure 12 portrays a unique set of activities occurring within or around the building. As the location, size, and architectural complexity of Structure 12 are a likely indicator of its distinct function, it contains a composition of unforeseen objects and in high frequencies. Activities of

grounding of likely foodstuffs is marked by the high densities of ground stone objects. Yet, the density of jar vessels and scored censer lids, as related to a possible storage system for the grounded provisions, do not appear to be proportionate. These differing densities between ground stone implements, jars, and lids may indicate that storage was occurring elsewhere within the group.

However, food preparation appears to be the extent of food-related practices occurring within Structure 12. Late and Terminal Classic *comals* are present at Structure 12, yet in low densities that cooking activities likely did not equate to the output of the grounding of foodstuffs. Furthermore, Late and Terminal Classic bowls occur as well, yet at an even lower density than compared to the rest of the Site Core Plaza Group. The low occurrence of bowls, along with no identified plates, would support the claim that very little-to-no serving or consumption of food likely took place within Structure 12, as well. Lastly, the presence of pigment stones may indicate that grounding of materials was not limited to consumable provisions, but also other substances or materials for other utilitarian purposes. Therefore, practices of processing of food and other resources, and subsequent storage of yielded supplies, comprise the most dominating activity and intention of Structure 12.

The architectural design and use of space is critical to consider in conjunction with the artifact assemblage. Structure 12 is concluded to include a large appendage or "front porch" region that overlooks the main plaza (see Chapter 5 for detailed architectural description). The length and width of this likely sheltered space would be ample space for the kneeling, and therefore stationary, action of grinding with the use of

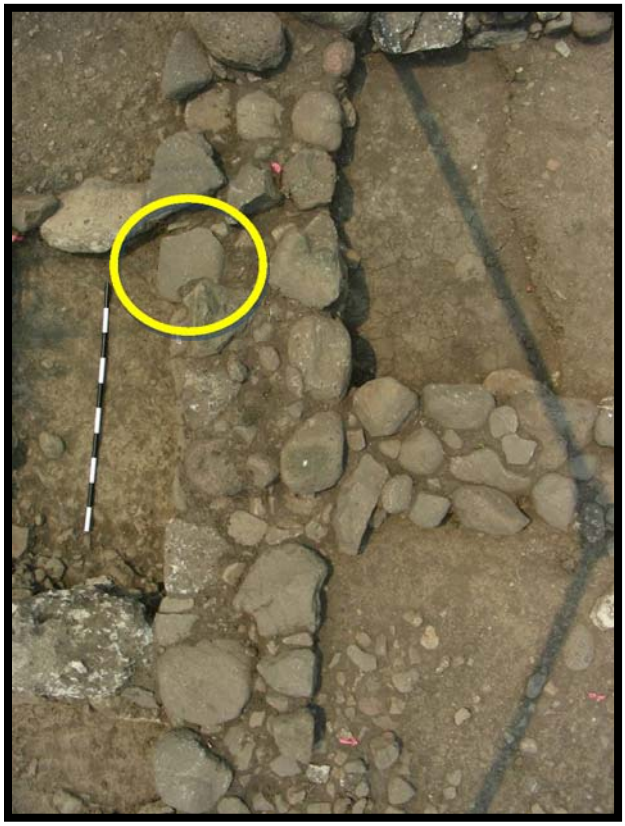
ground stone tools. Furthermore, the interior space of Structure 12, approximately 13.5m^2 of occupying area, would provide ample room for the storage of large quantities of processed food or pigment goods, though this does not appear to be the case. The restricted entryway into the interior space may indicate that the area was not as accessible of a space as the exterior region of the building. However, it is not clear if the entirety of the interior of Structure 12 was utilized for storage. The interior is determined to contain at least three occupation spaces, two of which are clearly separated rooms, with at least one conclusively included a bench feature. Furthermore, built-in furniture is recognized and an indicator of a residential intention, at least for these most-interior regions of the building. Therefore, parts of the interior may have served a combination of residential and domestic uses that were more private in nature, while the exterior, plaza-facing region was welcoming of many to make use of the ground stone tools, as communal resources.

Additionally, the presence of a mound of burnt earth near the southwest exterior corner of Structure 12 may indicate that some form of heating or cooking was occurring in relation to the grounded products that were being processed in the area. However, as previously highlighted, *comals* and even pierced ladle censers (which can also be used for cooking purposes) occur in significantly lower densities compared to the proportion of processing tools.

Figure 6.9: Above: Side-view of inverted metate fragment in west basal wall, Structure 12.

Figure 6.10: Left: Plan-view of inverted metate fragment in west basal wall, Structure 12.

Figure 6.11: Below: Working surface of metate fragment from west basal wall, Structure 12



Finally, there is one additional observation that is noteworthy to further underscore the uniqueness of the high density of ground stone recovered from Structure 12. An approximate area of 86.25m^2 was excavated from Structure 12, therefore, the occurrence of metates and manos (N=30) is roughly equivalent to one groundstone object for every 2.875m^2 of the building. The intensity of groundstone use in the area of Structure 12 must have been so great, as one of the fragmented flat-backed metates was recovered from the top course of a wall construction unit (CU2) **(Figures 6.9-6.11).** The object was recycled into construction material upon fracturing and placed in an inverted position (the back of the metate facing upward) on top of a wall. As the wall construction in which the object was covered from (the west basal wall) is identified to have been amassed in one of the earliest construction phases of the structure (Time Span 9), it is likely that the manufacture of the metate fragment occurred before the assemblage of the building. It is unclear if the abundance of other ground stone artifacts, namely metates, is the result of other repurposed objects occurring as intentional, yet tumbled, construction material. However, this is not the posed rationale for the high density of ground stone recovered from Structure 12.

Structure 16

Structure 16 is located within the northeast region of the Site Core Plaza Group and included approximately 12.7m^3 of excavated matrix. Of this, approximately 11.7m^3 is identified as terminal debris, and the remaining 1m^3 is labeled as fill context. While sterile soil and its depositional provenience were identified during the investigation of

Structure 16, all excavation lots included cultural debris. Therefore, no context is determined to be sterile within the excavations of Structure 16.

Pottery from Structure 16

More than half ($0.6m^3$) of the identified $1m^3$ fill context is from the northwest exterior corner of Structure 16 (within Sub-operation AV). Specifically, it is the region in between the first west basal wall (CU3 – Time Span 8) and the second west wall (CU5 – Time Span 7) at the northwest corner. Furthermore, this is near the north basal wall (CU8 – Time Span 6), which is identified to be poorly constructed and therefore, poorly preserved. The remaining identified fill ($0.4m^3$) is immediately adjacent to the south of the previously mentioned fill deposit and is also in the region between the two west basal walls (within Sub-operation AU). The totality of these fill designations are identified to be of the same depositional episode, in the same location and are documented as separate measurements due to methodological excavation procedures (**Table 6.11**).

Pottery type	**Per m^3 of Fill from Structure 16**		**Per m^3 of Fill from Site Core Plaza Group**	
	Pre Classic pottery	**Late/Terminal Classic** pottery	**Pre Classic** pottery	**Late/Terminal Classic** pottery
Bowls	12.00	28.00	45.45	31.27
Jars	63.00	273.00	427.45	322.27
Plates	0.00	1.00	0.73	1.45
Comals	0.00	0.00	0.00	0.24

Table 6.11: Summary of pottery fragment types per m^3 of fill by temporal identification from Structure 16 and the Site Core Plaza Group from PVN647.

It is clear from the calculated densities from Structure 16 that the majority of pottery fragments recovered from the fill context is identified to be from Late and

Terminal Classic vessels. Furthermore, the proportions of Late and Terminal Classic pottery from fill are nearly equivalent to those calculated for all investigations from the Site Core Plaza Group that are also identified to contain fill. The calculation of Late and Terminal Classic plate fragments is represented as occurring at substantially higher density than the rest of the group, however, this is a result of the number of identified fragments (N=1). The presence of one plate fragment is not a significant frequency to draw conclusions. Finally, the density of pottery from fill associated with PreClassic forms and types is noticeably less than the rest of the Site Core Plaza Group. It is not known why so fewer PreClassic pottery fragments are associated with fill from Structure 16, though it could be an indication of the relative order of construction of buildings within the group. It is feasible that the majority of Preclassic pottery debris was utilized in the preconstruction efforts of other structures, most specifically Structure 12, within the group and Structure 16 was amassed when less debris from this earlier period was available as construction fill material.

Pottery type	**Per m^3 of Terminal Debris from Structure 16**		**Per m^3 of Terminal Debris from Site Core Plaza Group**	
	Preclassic pottery	**Late/Terminal Classic** pottery	**Preclassic** pottery	**Late/Terminal Classic** pottery
Bowls	5.56	24.87	3.78	8.12
Jars	26.83	204.36	24.1	89.30
Plates	0.00	1.20	0.07	0.29
Comals	0.00	0.26	0.00	0.24

Table 6.12: Summary of pottery fragment types per m^3 of terminal debris by temporal identification from Structure 16 and the Site Core Plaza Group from PVN647.

Pottery fragments densities from terminal debris contexts at Structure 16 are only marginally identified to be from Preclassic vessel types (**Table 6.12).** The density of Preclassic pottery from terminal debris is only slightly greater than the calculated density of Preclassic fragments from all investigated buildings within the Site Core Plaza Group. Though it is quite minimal, the presence of Preclassic fragments in this context is likely the result of excavation procedures and the mixture of fill contexts and terminal debris within the same excavation lots. Structure 16 is not deemed to have been erected nor occupied during the Preclassic.

The majority of the density of pottery from terminal debris within Structure 16 is that of Late and Terminal Classic fragments; and most dominantly from jar vessels. Late and Terminal Classic jar fragments occur at nearly twice the density as those calculated for the entire group. Additionally, bowl and plate fragments occur in higher densities than compared to the density for all of the investigated buildings from the group. However, the density of *comal* fragments is roughly equivalent to the rest of the group. Jars are most prominently associated with being used as storage vessels, yet may also serve as cooking vessels. Coupled with the moderate density of *comal* fragments, it is plausible that cooking activities were occurring within and/or around Structure 16. The high density of bowls and plates supports that serving of food was also occurring. Interestingly, the density of serving vessel forms appear to be higher than food cooking pottery forms. An alternative account for the high density of jars, bowls, and plates may be that Structure 16 held the purpose of being a storage facility for various forms of vessels and objects, and did not necessarily engage in large-scale cooking and serving

activities. The remaining recovered and analyzed artifact assemblage from Structure 16 lends support to this possibility, but also complicates the range of potential activities occurring within and around the building.

Artifact Class	Object total from Structure 16	Object per m^3 from Structure 16	Object per m^3 from Site Core Plaza Group
Candeleros	0	0.00	0.13
Figurines	13	1.11	0.67
Ocarinas	3	0.26	0.17
Complex Censers	6	0.51	0.13
Modeled Censers	11	0.94	0.23
Scored Censer Lids	13	1.11	0.45
Pierce Ladle Censers	1	0.09	0.12
Stamps	2	0.17	0.05
Molds	0	0.00	0.05
Potstands	48	4.10	1.28
Worked Sherds	13	1.11	0.51
Used Sherds	10	0.85	0.55
Sherd Disks	0	0.00	0.01
Obsidian	3,242	277.10	234.40
Chert	252	21.50	16.20
Metates	4	0.34	0.37*/0.23**
Manos	3	0.26	0.29*/0.15**
Celts	0	0.00	0.03
Pigment Stones	0	0.00	0.07
Bone	0	0.00	1.90
Jute	3	0.26	0.13
Bajareque	81	6.92	7.19
Pendants	0	0.00	0.03
Beads	1	0.09	0.01
Earspools	0	0.00	0.01
Other	0	0.00	0.05

Table: 6.13: All non-pottery ceramics, lithics, and flora and fauna artifact totals and densities per m3 from Structure 16 and the Site Core Plaza Group at PVN647. Terminal debris context only. (* = object per m3 for all 5 investigated structures. ** = object per m3 for Structures 16, 17, 18, and 33 only.)

Structure 16 contains the greatest density of all other classes of artifacts calculated from all investigations at PVN647 **(Table 6.13**). As a result, numerous observations can

be made from each grouping of artifact classes. Most apparent are the high densities of non-pottery ceramic artifact classes, and most prominently: figurines, scored censer lids, potstands and, worked sherds. Other non-pottery ceramic classes occur in either equal densities to those calculated for the rest of the Site Core Plaza Group or are not identified at all. Obsidian and chert occur in slightly higher densities than those calculated for the group; however, ground stone objects occur in even higher densities. Furthermore, interpretations regarding the densities for ground stone are based on comparisons made from two calculations for the remaining Site Core Plaza Group. The high density of beads from Structure 16 is the result of a single, stone bead recovered from within the summit region of the building. Finally, jute and bajareque are the only identified artifact classes categorized as flora and fauna from Structure 16.

Non-Pottery Ceramics from Structure 16

Several artifact classes of non-pottery ceramics occur in high densities at Structure 16. Three of the four censer artifact classes are present in the highest densities calculated for all investigated structures at PVN647. The high occurrence of complex and modeled censer may be indicators of ceremonial practices associated with Structure 16. The large density of scored censer lids may also be associated with specialized and formal activities of rituals, however, may also correlate with the high density of jar fragments and may mark the storage of goods.

A rationale for the high density of figurines and presence of ocarinas is slightly obscured, as both artifact classes can be associated with ritualistic practices, but also more commonplace amusement and children's playthings. Furthermore, the densities of

more utilitarian objects, such as pot stands, worked sherds, stamps and used sherds, provide more variation to the types of activities occurring within and around Structure 16. Of all of these artifact classes, the stamps (N=2) are of the most notable as they are both nearly complete, yet different in shape and design. Both stamps are flat-facings, yet one is rectangular in shape and the other is circular. The rectangular stamp contains the incised image of three monkeys in profile, holding hands (**see Figures 6.6 and 6.7)**. The circular stamp contains a more abstract, deeply incised pattern of lines.

While ceramic stamps are typically associated with a single purpose of ceramic production or textile decoration, the remaining artifact classes incur more flexibility with respect to their functional possibilities. Worked and used sherds can be tied to activities of ceramic production but also other tasks of daily, household repairs. Similarly, pot stands are evidenced to be associated with various stages of pottery production; however, the basic intention of a pot stand is to support another vessel. It is conceivable that pot stands were being utilized to elevate and secure round-bottomed vessels, which were used for storage purposes. Therefore, the overall interpretation from all of the non-pottery ceramic artifacts is that they were likely housed in Structure 16 for more storage-related reasons, than actual utilization.

Additionally, the high frequencies of certain non-pottery ceramics may also be the result of several fragments associated with the same object. Figurines (N=13), complex censers (N=6), and modeled censers (N=11) are all analyzed to contain instances of at least 5 fragments occurring from the same object. Therefore, the calculation of density of

these particular artifact classes may not reflect the true occurrence of each within Structure 16.

The occurrence of bajareque from Structure 16 is nearly the same density as the rest of the group. Therefore, the preservation of bajareque is representative of the size of Structure 16, which is deemed to have been moderate, comparative to the other investigated structures from the group.

Stone Artifacts from Structure 16

The densities of obsidian and chert fragments occur in slightly higher volumes when compared to the Site Core Plaza Group as a whole. It is likely that the high occurrence of these objects is also more in line with storage practices. However, as the chipped stone assemblage from PVN647 remains under-evaluated it is possible that some low-output activities of production were occurring at the building.

Structure 16 has the second-highest densities of metates and manos for all of PVN647, after Structure 12. However, since Structure 12 contains an extraordinary amount of ground stone objects, densities for manos and metates recovered from all other structures within the Site Core Plaza Group have been calculated. The first density calculation for the Site Core Plaza Group accounts for the results from all five buildings (indicated by the * in Table 6.11). The second density calculation represents the volume for both metates and manos from only Structures 16, 17, 18, and 33 (indicated by the ** in Table 6.11). Therefore, proportional variations can be compared to both the densities from all excavations within the group, but also take into consideration the bias created from the high frequency of objects from Structure 12.

The majority of the ground stone objects recovered from Structure 16 are preserved as fragments, save for one mano, which was recovered as a whole object. Of the other two manos (N=3), one is a fragment with one working surface preserved, while the other is a fragment that has no preserved working surface, as it does not appear to be a finished object. Of the recovered metates (N=4), all appear as fragments and in various stages of being unfinished or indeterminable states of manufacture. Three fragments are of body segments with unused working surfaces, while the fourth is a leg fragment. It is possible that manufacturing activities of these objects were occurring within Structure 16, as many of the analyzed fragments are observed to be unfinished and not used. However, it is also possible that these utilitarian objects were only being stored within the building.

Floral, Faunal, and all other Artifact Classes from Structure 16

A high density of *jute* or river snail shell marks the only naturally occurring artifact class recovered from Structure 16. Though the calculated density from Structure 16 is twice the density from the rest of the Site Core Plaza Group, it is the result of a very low frequency (N=3). Regardless, the presence of jute at Structure 16 can be an indicator for cooking practices in or around the building.

Finally, the one and only bead recovered at PVN647 was located in the eastern region of the summit interior of Structure 16. The bead is made from a green stone and is circular in shape and approximately 0.8cm in diameter. Though the object has been smoothed greatly, the shape is slightly irregular. The center hole is slightly offset, has been achieved from the drilling of both sides and measures approximately 0.3cm in diameter. A deeply personal ornament and its singular frequency is rare to locate within

excavations, especially when not associated with a human internment. Typically, such an item may add distinction to the use of the building and its residents. However, the significance of the presence of a sole bead within what is deemed as a storage location is unclear.

Discussion of Artifacts from Structure 16

Structure 16 reveals a considerable amount of diverse artifacts and in substantial densities that an array of interpretations can be concluded. One such interpretation is that Structure 16 partially operated as a space of storage, as indicated by the density of a variety of different objects. Most prominently, high densities of jars and scored lids serve as strong indicators for the storage of supplies. Furthermore, as potstands can conceivably be associated with the purpose of stabilizing and elevating round-bottom vessels, perhaps even jars, that the high density of this particular artifact classes is also tied to storage.

Densities of plates and bowls may also indicate that Structure 16 was a locale for feasting. However, the density of cooking vessels does not seem to be proportional to the density of vessels associated with serving and consuming of food. The density of various censer forms may be a result of these vessels being utilized in cooking practices. Furthermore, as potstands are growing to be an artifact class with greater functional purposes, it is possible that they were also being utilized in cooking practices to support round-bottomed cooking vessels.

However, as potstands have initially been linked with pottery production practices, and other artifact classes occur in high densities that can be tied to the shaping

of heated and unheated ceramic items, this is also another possible activity occurring at Structure 16. High densities of ceramic stamps and worked and used sherds can serve as indicators for pottery production, but also generically can represent production or simply maintenance forms of activities. The densities of chipped and ground stone objects also lend to the possibility of production practices and perhaps the building and the immediate surroundings operating as a workshop locale.

The presence and high densities of more specialty items, such as figurines, ocarinas, and complex and modeled censers are indicators of differing activities than production. While figurines and ocarinas mark a greater range of sentimentality and purpose, complex and modeled censers are predominantly tied with more ceremonial practices. Furthermore, the recovery of a single, green stone bead adds more inquiry as to the overall intention of the building. Structure 16 appears to be a site of multiple, and perhaps dissimilar, activities.

When the artifact assemblage is considered with the architectural design and construction history for the building, a more refined understanding may be revealed regarding the purpose of Structure 16. Structure 16 is interpreted to contain a wrap-around veranda along the two most prominent plaza-facing façades of the building (the south and west facings). This likely covered space provides ample room for observing plaza happenings, but also a setting for activities. Pottery production can be quite messy and requires a lot of room for other resources and tools to be immediately on-hand. Furthermore, the process of chipping or knapping of stone to create usable tools creates a lot of small, yet sharp debris and is typically not an activity that is carried out in public

spaces, such as immediately adjacent to the main plaza of a particular site. Similar to Structure 12, however, an elongated front porch is a suitable environment for the grounding activities associated with the manufacturing and use of metates and manos, in addition to observing daily happenings of the plaza.

Moreover, the interior space of Structure 16 is observed to be amongst the smallest calculated for all buildings with the Site Core Plaza Group, approximately 6m^2 of area. While the building could have later been used as a domestic residence, the original design of the building did not include a fourth wall. Structure 16 is deemed to be one of the initially 3-sided edifices and was open along the northern, off-plaza side. Therefore, very little privacy is provided when one facing remains completely unsealed. As a result, Structure 16 may have operated as a multi-purpose work space, which included activities of production and served as a workshop of sorts, but also food preparation and cooking practices. However, the building likely also served as a place of storage of provisional supplies and specialty goods. The density of ritual-related objects may mark specialized activities, yet it is more likely that objects such as ocarinas, complex and modeled censers were housed within the structure and brought out for public ceremonial purposes, as needed.

Overall, an amalgamation of activities likely took place within and around Structure 16. Additionally, it is probable that as the architectural complexity of the building grew over time, so too did the functional intention of the edifice develop. As it is unclear how long Structure 16 operated as a 3-sided edifice, it is not known how the artifact assemblage recovered from the building represents practices that took place

before or after the sealing of the fourth wall. Therefore, it is not known how the proposed potential activities correlate with the changing use of the space. Yet, it is credible to claim that over the course of occupation at Structure 16 a variety of activities occurred, which include storage, production, and other daily domestic tasks of cooking and consumption of food. Once sealed, the building may have taken on more of a residential purpose, (though, architectural correlates such a built-in furniture as well as sizable occupational area are not present), in addition to workshop and observational space of the main plaza.

Structure 17

The second-largest investigated building within the Site Core Plaza Group is Structure 17 and included approximately 20.93m^3 of excavated context. Additionally, Structure 17 is the third building within the whole group identified to include fill, which accounts for 1.2m^3 of the overall excavated material. The majority, approximately, 19.73m^3, is identified as terminal debris. No excavation lots were determined to exclusively contain sterile soil, though it was identified, therefore, no amount of excavated context is assigned the designation of being sterile.

Pottery from Structure 17

As 1.2m^3 of fill context is identified within Structure 17, the analysis of recovered pottery is discussed by depositional context. Fill is identified in two distinct locations and both are deposits within the summit interior of the building. The first is located near the northwest interior corner region and comprises approximately 0.3m^3 of the total

1.2m^3. This fill context is located at a depth below the base of the adjacent architecture, the north and west basal walls (CU5 and CU6, respectively, from Time Span 7). It was identified during excavations as an intentional depositional fill context due to the density of recovered artifacts, namely ceramics, but also from other discarded debris, such as jute. However, collected pottery fragments from this fill context were not analyzed and are not discussed in reference to pottery recovered from fill at Structure 17.

The remaining 0.9m^3 of fill context is located in the southern region of the interior and is the matrix associated with an earlier sub-structure wall construction (CU2 – Time Span 8). This wall construction is identified to pre-date the assemblage of the formal building labeled as Structure 17 and is also the context that articulates with the potential burial of a young child. This possible internment was not formally investigated or extracted. (See Chapter 5 and Appendix A for further architectural descriptions and location of sub-structure and associated potential internment.) The totality of pottery discussed in reference to fill from Structure 17 is from this earlier setting. Therefore, the density of pottery is presented as two calculations; the first calculation (marked with *) represents the density from the total of 1.2m^3 of identified fill from the building. However, the second calculation carries greater significance as it is only calculated from the earlier sub-structure setting where all analyzed pottery identified to come from fill is located (**Table 6.14**).

Pottery type	**Per m^3 of Fill from Structure 17**		**Per m^3 of Fill from Site Core Plaza Group**	
	Preclassic pottery	**Late/Terminal Classic** pottery	**Preclassic** pottery	**Late/Terminal Classic** pottery
Bowls	15.33*/21.11**	12.50*/16.67**	45.45	31.27
Jars	88.33*/117.78**	65.83*/87.78**	427.45	322.27
Plates	0.00	0.00	0.73	1.45
Comals	0.00	0.00	0.00	0.00

Table 6.14: Summary of pottery fragment types per m^3 of fill by temporal identification from Structure 17 and the Site Core Plaza Group from PVN647. (* = object per m^3 from all of total fill context: $1.2m^3$. ** = object per m^3 from $0.9m^3$ of analyzed fill context only.)

The presence of Preclassic pottery fragments from the fill associated with the sub-structure assemblage, which pre-dates Structure 17, is not extraordinary. However, the complete context is not designated as Preclassic, as there is a low density of Late and Terminal Classic pottery fragments recovered from the fill, as well. Regardless, the overall densities of both the temporally identified pottery forms from the fill context occur in lower densities than those calculated for the rest of the group. However, the proportions between vessel types still maintain, as jars are observed to be the highest in frequency while comals and plates are not even present. Overall, the presence of PreClassic pottery fragments indicates that Structure 17 is likely founded upon materials from the earlier period of occupation at PVN647. It is possible that the sub-structure is associated with this earlier time period. However, it is unclear if the potential human burial is also contemporary with the construction or if it was interred later. The latter possibility would account for the presence of Late and Terminal Classic pottery fragments. Yet, since the entirety of the context was not investigated, interpretations remain inconclusive.

Pottery type	Per m^3 of Terminal Debris from Structure 17		Per m^3 of Terminal Debris from Site Core Plaza Group	
	Preclassic pottery	**Late/Terminal Classic** pottery	**Preclassic** pottery	**Late/Terminal Classic** pottery
Bowls	2.33	5.48	3.78	8.12
Jars	19.42	43.45	24.1	89.30
Plates	0.10	0.20	0.07	0.29
Comals	0.00	0.10	0.00	0.24

Table 6.15: Summary of pottery fragment types per m^3 of terminal debris by temporal identification from Structure 17 and the Site Core Plaza Group from PVN647.

Pottery fragments included within terminal debris context from Structure 17 occur in lower densities within all vessel types, when compared to the Site Core Plaza Group as a whole (**Table 6.15**). Specifically, pottery fragments identified as Preclassic ceramic types likely occur in a lower density than the rest of the group due to fewer excavation lots containing a mixture of earlier fill context and later terminal debris context, than other investigated structures. However, it is also possible that less PreClassic ceramic material was utilized in the founding of Structure 17.

Additionally, Late and Terminal Classic pottery fragments occur in lower densities when compared to the rest of the group and may be an indicator of the range of activities that were taking place within and around the building. Though the density of identified Late and Terminal Classic jar vessel fragments is half the calculation for the rest of the group, it is still in-line with proportional observations from the rest of the group. Plates and comals are present at Structure 17, yet occur in the second lowest density of all structures from the group. An overall assessment of the low frequencies of pottery fragments from Structure 17 may signal that small-scale or minimal cooking, serving, and consuming of food were taking place at the building. When coupled with

the analysis of the rest of the artifact assemblage and the architectural design of the building, this interpretation is further supported.

Artifact Class	Object total from Structure 17	Object per m^3 from Structure 17	Object per m^3 from Site Core Plaza Group
Candeleros	4	0.20	0.13
Figurines	6	0.30	0.67
Ocarinas	4	0.20	0.17
Complex Censers	1	0.05	0.13
Modeled Censers	3	0.15	0.23
Scored Censer Lids	5	0.25	0.45
Pierced Ladle Censers	2	0.10	0.12
Stamps	2	0.10	0.05
Molds	2	0.10	0.05
Potstands	17	0.86	1.28
Worked Sherds	14	0.71	0.51
Used Sherds	11	0.56	0.55
Sherd Disks	0	0.00	0.01
Obsidian	3,739	189.60	234.40
Chert	289	14.70	16.20
Metates	6	0.30	0.37*/0.23**
Manos	4	0.20	0.29*/0.15**
Celts	0	0.00	0.03
Pigment Stones	0	0.00	0.07
Bone	10	0.50	1.90
Jute	7	0.35	0.13
Bajareque	149	7.55	7.19
Pendants	1	0.05	0.03
Beads	0	0.00	0.01
Earspools	0	0.00	0.01
Other	1	0.05	0.05

Figure 6.16: All non-pottery ceramics, lithic, and flora and fauna artifact totals and densities per m^3 from Structure 17 and the Site Core Plaza Group at PVN647. Terminal debris context only. (* = object per m^3 for all 5 investigated structures. ** = object per m^3 for Structures 16, 17, 18, and 33 only.)

Somewhat similar to the pottery fragments recovered from Structure 17, the densities for most of the other artifact classes are roughly equal to or less than the calculated densities from all of the Site Core Plaza Group (**Table 6.16**). Select ceramic

items occur in slightly higher densities, namely candeleros, stamps, molds, and worked sherds, however, not by too great of a margin. Furthermore, ground stone fragments occur in slightly greater of a density when compared with all other investigated buildings, and when the data from Structure 12 are excluded. Jute are the only artifact class associated with floral or faunal types of remains that occur in a slightly greater density than from the group as a whole. And finally, a complete ceramic pendant was recovered from Structure 17, along with a fragment of a decorative portion that was likely appliqued onto another ceramic artifact type. Both of these items are very low in frequency for all of PVN647 and likely their uniqueness correlates with the specialty of activities that were taking place within and around the structure.

Non-Pottery Ceramics from Structure 17

Interestingly, all non-pottery ceramic artifact classes occur at Structure 17, save for sherd disks, which have a very low occurrence within all investigations of PVN647. Structure 17 is the only investigated building from the Site Core Plaza Group where this occurs. However, though nearly all ceramic artifact classes are present, they occur mostly in comparable densities to the rest of the group. Candeleros (N=4) occur in the same frequency as Structure 33, which is twice the frequency as the only other building containing candelero fragments, Structure 12 (N=2). Candeleros have been associated with vessels for candle or incense burning. These functions can be linked to a wide array of possible activities within the building.

However, the slightly higher densities of ceramic molds and stamps may indicate that practices of production were occurring within and around Structure 17. The stamp

fragments (N=2) are both highly eroded and incomplete objects, while the mold fragments (N=2) are of a better preservation. One of the mold fragments is likely for a figurine, as it contains anthropomorphic features of a partial headdress, a complete ear with an earspool and an eye. The other mold fragment possesses less of the imagery portion, yet may also be for a figurine as parts of a head and headdress can be observed. It is unclear why these artifact forms are recovered from a setting that contains very little other artifacts associated with ceramic production. Pot stand fragments are present, yet in a comparatively lower density. Lastly, the density of worked sherds may indicate that generalized maintenance of some form was occurring within the space, yet it is not clear for what purposes the sherd fragments were being re-worked into other items.

Finally, the high density of the specific artifact class of pendants is highlighted in this discussion, as the single recovered object is observed to be ceramic. The pendant is oval in shape (approximately 5.5cm in length and 1.3cm thick) and has a pierced hole preserved at one end. The object is slightly irregular and lumpy as it appears to be hand-modeled, yet fairly well preserved. The presence and preservation of an ornamental object such as a pendant is not frequent and may signal the distinctiveness of the building and its occupants. However, the low level of modeling quality of the item may mark a form of status or craft specialization, as well. Overall, the item is decorative, yet may not be a symbol of notable prestige difference.

Stone Artifacts from Structure 17

The chipped stone tool assemblage from Structure 17 indicates that slightly lower densities of both obsidian and chert were recovered from the building, as compared to the

rest of the Site Core Plaza Group. As these artifact classes have not been thoroughly examined, it is not known in what stages of processing these items occur. However, the lower densities of both chipped stone classes could indicate that these objects were utilized or manufactured in roughly the same abundance or less than is calculated for the rest of the group.

Ground stone objects from Structure 17 are observed in roughly the same density as calculated for Structures 16, 18, and 33, however the frequency is higher. As Structure 17 is the second-largest building investigated within the Site Core Plaza Group, the calculated densities of metates and manos is slightly misrepresented. Of the recovered metates (N=6) from Structure 17, three are fragments with working surfaces that are either unfinished or of an indeterminable state of completion. Two are only broken leg fragments, while the final item is observed to have both one leg and a portion of the working surface preserved. This larger fragment containing both a leg and working surface appears to be the only finished metate item from Structure 17. One of the manos (N=4) from Structure 17, however, is recovered as a whole and likely finished object, yet has no working surfaces indicating that it was not used. The remaining three manos are recovered as varying sized fragments, with one object containing two preserved working surfaces. Of the other two fragments, one is observed to be unfinished, while the other displays evidence of being broken in antiquity and attempts at being re-worked into something else can be observed. Overall, the majority of recovered ground stone artifacts appear to be objects still in stages of manufacturing or are too poorly preserved or fragmented for a phase of completion to be determined. Therefore, activities associated

with the manufacturing of ground stone objects may have been practiced with greater frequency in and around Structure 17, than the use of these items for the purpose of grounding materials.

Floral, Faunal, and all other Artifact Classes from Structure 17

As previously highlighted, jute or river snail shell remains were the predominant floral artifact class that is preserved in a density greater than is calculated for the rest of the group. The presence of jute remains may indicate practices of cooking and consumption, as jute were typically a source of food. However, it is more likely that the recovered jute (N=7) are the result of excavation methods and that a mixture of contexts occurred. The location of the recovered jute from identified terminal debris are immediately above the areas from Structure 17 where jute associated with fill were located, specifically near the base of the north and west basal walls (CU5 and CU6 – Time Span 7). Though, if food processing and cooking were even minimal within or around Structure 17, the preservation of a very low frequency of jute remains is not exceptional.

Discussion of Artifacts from Structure 17

In summary, the presence of nearly every artifact class contributes to the assortment of potential activities and purpose associated with Structure 17. Since no particular artifact type occurs in a remarkably high or low density, it is possible that numerous, coinciding practices were taking place in and around the building, yet on small-scale levels and likely with little specialization. The various activities could include: cooking, serving and consuming of food; storage of foodstuffs and other

supplies; ritual or ceremonial practices; and/or manufacturing of select utilitarian vessels and tools. However, all of these activities would likely occur as needed. The overall quantity and density of objects is in proportion to the size of the building and would indicate that basic, everyday domestic practices were occurring. However, it is unclear if Structure 17 was solely purposed as a domestic residence. The architectural design and positioning on the main plaza complicates the minimalism of the artifact assemblage.

The architectural analysis of Structure 17 would lend that the building likely contained more private than public space, considering it is positioned as the northern-most structure, immediately on the main plaza. As oppose to its immediate eastern flanking neighbor of Structure 16 and the large Structure 12 across the plaza to the south, Structure 17 did not have a large, covered, plaza-facing terrace or veranda that could accommodate many people. Structure 17 is identified to have an exterior space that is more of a exclusive balcony or bench space. The limited exterior space along the most prominent facing to the main plaza is one the main indicators of the likely non-public nature of the building.

The interior space of Structure 17 is identified to be partitioned into two rooms, the larger of the two being toward the back, or off-plaza region of the building. As only one entryway, and a possible second, is identified, access into the building is postulated to have been quite limited and regulated. However, since the interior space contains only one dividing wall, the back or off-plaza room is of a considerable size and could accommodate several people and activities. Yet, no built-in furniture is witnessed, which

would noticeably mark the interior as a residence. The absence of such a feature might indicate the ceremonial intent of the space.

The artifact assemblage from Structure 17 reveals densities that are fairly proportional to other investigations from the Site Core Plaza Group. Therefore, the building could have functioned as a communal setting for gatherings of either a municipal or ceremonial nature. The low densities of artifacts could indicate that it was not for everyday residential use but reserved for more special occasions or assemblies that required an enclosed, private, or simply sheltered space. Furthermore, Structure 17 contains the greatest frequency of pottery originating from beyond the immediate Middle Chamelecón-Cacaulapa region. If Structure 17 operated in some form of a household capacity and not as a public building, the occupants were certainly of a more distinct grouping of residents at PVN647.

Structure 18

Structure 18 is the fourth building investigated that is positioned immediately on the Site Core Plaza Group. It is located within the northwest region of the plaza and consisted of approximately 12.3m^3 of excavated context. Structure 18 is not identified to contain any fill material, therefore the entirety of excavations are deemed to be of terminal debris context. The depositional context of sterile soil was determined in association with Structure 18, however, due to excavation procedures no excavation lots are identified to be solely sterile context.

Pottery from Structure 18

As all excavated context from Structure 18 is identified to be terminal debris, the analysis of pottery from the building is only presented from the single context. However, Preclassic pottery forms were identified from Structure 18, therefore, vessel fragments are distinguished based upon the relative-date of analyzed pottery.

Pottery type	**Per m^3 of Terminal Debris from Structure 18**		**Per m^3 of Terminal Debris from Site Core Plaza Group**	
	Preclassic pottery	**Late/Terminal Classic** pottery	**Preclassic** pottery	**Late/Terminal Classic** pottery
Bowls	1.87	4.80	3.78	8.12
Jars	6.75	72.36	24.1	89.30
Plates	0.00	0.00	0.07	0.29
Comals	0.00	0.24	0.00	0.24

Figure 6.17: Summary of pottery fragment types per m^3 of terminal debris by temporal identification from Structure 18 and the Site Core Plaza Group from PVN647.

It is evident that a low density of Preclassic pottery material is recovered from Structure 18 (**Table 6.17**). Though the proportions between vessel types are comparable with the Site Core Plaza Group as a whole, the densities from Structure 18 are significantly less than the group. Similarly, the proportions of Late and Terminal Classic pottery types from Structure 18 are similar to those from the rest of the group. To be specific, jars are clearly the dominant vessel type from Structure 18, with the bowl fragments recorded as the second highest density. Interestingly, the density of Late and Terminal Classic *comals* from the building is analogous to the calculated density from the whole group, while plates are not identified from the sample of analyzed pottery. Overall, the analysis of pottery vessel types from Structure 18 indicate that minimal

activities of storage, and food preparation, cooking, and serving were occurring within and around the structure.

Artifact Class	Object total from Structure 18	Object per m^3 from Structure 18	Object per m^3 from Site Core Plaza Group
Candeleros	0	0.00	0.13
Figurines	13	1.06	0.67
Ocarinas	2	0.16	0.17
Complex Censers	3	0.24	0.13
Modeled Censers	2	0.16	0.23
Scored Censer Lids	2	0.16	0.45
Pierced Ladle Censers	3	0.24	0.12
Stamps	0	0.00	0.05
Molds	1	0.08	0.05
Potstands	4	0.33	1.28
Worked Sherds	2	0.16	0.51
Used Sherds	8	0.65	0.55
Sherd Disks	0	0.00	0.01
Obsidian	1,624	132.04	234.40
Chert	86	6.99	16.20
Metates	1	0.08	0.37*/0.23**
Manos	1	0.08	0.29*/0.15**
Celts	0	0.00	0.03
Pigment Stones	0	0.00	0.07
Bone	0	0.00	1.90
Jute	0	0.00	0.13
Bajareque	18	1.46	7.19
Pendants	0	0.00	0.03
Beads	0	0.00	0.01
Earspools	0	0.00	0.01
Other	1	0.08	0.05

Figure 6.18: All non-pottery ceramics, lithic, and flora and fauna artifact totals and densities per m^3 from Structure 18 and the Site Core Plaza Group at PVN647. Terminal debris context only. (* = object per m^3 for all 5 investigated structures. ** = object per m^3 for Structures 16, 17, 18, and 33 only.)

Structure 18 has some of the lowest densities of recovered artifacts of all investigated buildings from the Site Core Plaza Group (**Table 6.18**). Most artifact types occur in densities less than or equal to the rest of the group and only a minimal number of

types are recovered in densities that are greater than the rest of the group. Figurines, complex and pierced ladle censers, and used sherds are the only ceramic artifacts identified in moderately higher densities. The catch-all artifact type of "other" is calculated to have a higher density than the rest of the group, as one particular ceramic vessel fragment is recovered from the building. In all likelihood, the ceramic fragment is from a jar vessel; however, due to the decorative specialization and artifact processing protocols, it is discussed with other non-pottery types. All other artifact types of stone or other natural remains are recorded to occur in slight densities at Structure 18, if at all.

Non-Pottery Ceramics from Structure 18

Ceramic artifacts at Structure 18 with higher densities than the rest of the group are only figurines, complex and pierced ladle censers, and used sherds. Of these, only the censer vessel fragments occur in densities that are approximately twice that calculated from the other structures in the group. Complex censers are typically associated with more ritualistic and therefore formal practices or ceremonies, however, have also been linked to domestic activities. Pierced ladle censers may almost equally be associated with both formal and informal household practices. Similarly, figurine function also spans from sacred to commonplace associations. However, used sherds are predominantly tied with utilitarian activities of manufacturing or maintenance. Therefore, a mixture of activities can be interpreted from these non-pottery ceramic artifact types. Though, it is likely that the overall low density of non-pottery ceramics is indicative that simply the basics were needed by the residents of Structure 18.

Figure 6.12: Ceramic fragment from Structure 18
within the Site Core Plaza Group, PVN647.

The recovery of one particularly unique ceramic fragment has the potential to complicate the purpose of Structure 18 and the social positioning of its occupants. The sole ceramic fragment that accounts for the high density of "other" artifacts from the building is that of a body portion of a straight-sided jar vessel (**Figure 6.12**). The complete object was likely not utilitarian in purpose, and though identified to be from a jar vessel, is not deemed to be diagnostic pottery. This ceramic item is observed to be highly distinctive, as it has preserved an incised image of a human figure engaging in some form of a social interaction. The imagery partially portrays a human figure in profile, clothed in a patterned tunic with a hanging belt, and adorned with a necklace and

earspool. The nose, lips, chin, and part of the body of the individual are preserved. However, it is indeterminable whether the figure is seated, kneeling, or standing, as the remainder of the body and leg portion is missing. Only one arm of this individual is preserved and it is responsible for the handling of a circular bundle. Two additional hands are preserved and are interpreted as also being involved in the importance of the cradled bundle. The exact significance of the bundle is not known, nor is the direction of the transaction understood. It is possible that the two hands are delivering the bundle and the partially preserved figure is the receiver. The ceramic type and decorative style is informally assigned to be Copanec in origin, and therefore not local (Urban 2012, personal communication) though Karl Taube contends it could be from an Ulua polychrome vessel (personal communication, 2014). Recovery of such a distinguished and imported item is quite unusual and the meaning of its presence is not understood.

Lastly, the low density of bajareque at Structure 18, compared the rest of the group, is likely associated with the smaller size of the building. Structure 18 is identified to have been originally a 3-sided building and then later sealed with a fourth wall. However, no other dividing or expanding walls that would have supported a bajareque superstructure are interpreted to have been associated with the later additions to the structure. Therefore, it is not remarkable that the building contains the lowest density of recovered bajareque from the entire Site Core Plaza Group. Alternatively, the lowest density of bajareque from the entire group may simply be the result of erosion and other factors of poor preservation, which impacted Structure 18 in unequal ways as compared to the other investigated buildings.

Stone Artifacts from Structure 18

Noticeably lower densities of chipped and ground stone artifacts are recovered from Structure 18, when compared to the Site Core Plaza Group as a whole. As the chipped stone assemblage remains understudied, the proportion of debitage to finished objects is not known. Therefore, the significance of low density of obsidian and even lowered density of chert fragments remains unclear. Furthermore, Structure 18 possesses the lowest density calculation for metates and manos for the entire group. Overall, it is likely that activities and practices that necessitated these particular stone tools were taking place on small-scale levels in and around the building. Though the densities are comparably low, they may be more representative of an average household assemblage and a frequency associated with everyday use.

Discussion of Artifacts from Structure 18

Overall, the artifact assemblage from Structure 18 is potentially representative of a typical residential household assemblage, given the size and architectural composition of the building. Pottery vessels associated with a variety of food-related activities are present and in densities suggestive of everyday scales of usage for a minimal number of individuals. Furthermore, select non-pottery fragments, namely censer vessel forms, which are present can also be associated with daily, domestic practices. As all other artifact types occur in low densities compared to the group as a whole, it is likely that only the necessities for small-scale food preparations were needed at Structure 18. It is plausible that the building purposed as a storage facility, given that jars are the highest

density of all pottery vessel types. The architectural design and expansion of the building over time, however, only speculatively supports this sole functional intention.

The architectural history of Structure 18 is understood of have been originally constructed as a 3-sided building, with the open facing positioned along the north and off-plaza region of the structure. The fourth wall is eventually added, as is a covered terrace region along the semi-observable from the main plaza, northwest facing of the building. Once sealed, entry into Structure 18 is interpreted to exist along the northwest and southeast facings of the building. No other internal architectural additions or partitions are observed. Therefore, the interior region is open and accommodating of multiple inhabitants and activities at one time. Even though built-in furniture is not observed, it is possible that storage occurred within the open interior, however, once sealed, the building transitioned into a residence. Though, aside from the absence of a bench, high densities and varied types of artifact fragments would be anticipated in the recovered artifact assemblage. And this is not the case at Structure 18.

Additionally, the exterior regions surrounding Structure 18 remain mostly open and useful for residential domestic tasks. The elevated terrace along the northwest facing is large enough to accommodate several occupants and subsequent stationary activities. Furthermore, its positioning along the northwest side is postulated to face one of the access points into the main plaza. This vantage point for observing visitors is more indicative of a structure that is permanently occupied, rather than solely used for storage. Aside from the elevated terrace, all other facings of the building are observed to be

minimally expanded, if at all. Therefore, the exterior space around Structure 18 remains amenable to various outdoor activities, which do not require fixed or formal assemblages.

Finally, the presence of the highly decorated, Copanec-styled, jar-vessel fragment further complicates the purpose of Structure 18. As no other recovered ceramic fragments from the building, or from PVN647, are identified to be similar to this sherd, it is unclear if the entire vessel was present in antiquity or if only the fragment. If the complete vessel (or most of the vessel) was once housed at Structure 18 it is unlikely that the building functioned as solely storage, as such an object would be highly valued and better guarded by being in a residence that was continuously occupied. Likewise, if only this fragment existed, it was likely esteemed as a personal keepsake or token and kept near to its owner, if for more sentimental reasons than security purposes. Above all, such an object is extremely uncommon within the Naco Valley and especially outside of investigated PVN or PVC sites associated with socio-political strength and influence, such as the valley centers of La Sierra or El Coyote. Therefore, the meaning of such a fragment being recovered from PVN647 is not known. Furthermore, based from the size, architectural complexity and overall artifact assemblage from Structure 18, is it confounding why an item of this magnitude was not recovered from a likely more public and prominent building. Overall, during its final phase of occupation, Structure 18 embodies most of the architectural, except a bench, and artifact characteristics associated with a domestic residence, aside from the imported, decorative pottery fragment.

Structure 33

Structure 33 is the final building to be excavated within the Site Core Plaza Group and is the only investigated structure that is not positioned immediately on the Main Plaza. It is located within the southeast region of the group, within a possible smaller patio-group arrangement with other structures, and consisted of approximately 8.8m^3 of excavated context. All excavated context from Structure 33 is identified to be terminal debris, as no fill context is observed. Additionally, investigations of Structure 33 include a burial feature, the only observed depositional context of its kind within all of PVN647. However, as the internment is not identified to be an undisturbed context, the feature and surrounding stratum deposits are deemed as terminal debris. Lastly, excavations of Structure 33 reveal the location and depths of sterile soil in association with construction units of the building, however, no excavation lots are deemed to be devoid of cultural material. This is a result of excavation procedures and the final explanation for why all of the depositional context associated with Structure 33 is identified to be terminal debris.

Pottery from Structure 33

As Structure 33 is identified to comprise no additional depositional context, other than terminal debris, the following discussion of analyzed pottery from the building is presented as such. Though, temporal distinctions are identified from the sample of analyzed pottery, resulting in both Preclassic and Late to Terminal Classic pottery vessel forms presented (**Table 6.19**).

Pottery type	Per m^3 of Terminal Debris from Structure 33		Per m^3 of Terminal Debris from Site Core Plaza Group	
	Preclassic pottery	**Late/Terminal Classic** pottery	**Preclassic** pottery	**Late/Terminal Classic** pottery
Bowls	4.89	11.14	3.78	8.12
Jars	40.22	229.20	24.1	89.30
Plates	0.00	0.45	0.07	0.29
Comals	0.00	0.91	0.00	0.24

Table 6.19: Summary of pottery fragment types per m^3 of terminal debris by temporal identification from Structure 33 and the Site Core Plaza Group from PVN647.

The results of analyzed pottery from Structure 33 reveal that most of the calculated densities from vessel types are greater than the densities calculated from the Site Core Plaza Group as a whole. From the Preclassic vessel forms, only bowls and jars are identified from the sample and in densities nearly twice that of the rest of the group. However, the greatest quantities and calculated densities of analyzed pottery from Structure 33 are identified to be of Late and Terminal Classic styles. Furthermore, the Late and Terminal Classic vessel densities from Structure 33 are the highest of all investigated structures from the Site Core Plaza Group, save for plate fragments. Jar and comal fragments are observed to be of densities more than double the calculations of similar vessel forms from the Group. These calculated high densities indicate that a variety of activities were taking place in and around Structure 33. The densities of bowls and plates are strong indicators for food prepping, serving, and consuming activities. The high presence of jars and comals support that storage and food cooking practices were likely also carried out by the inhabitants. The initial evaluation of the intention of Structure 33 is that of a moderately productive domestic residence, yet the possibility of a storage facility is also considered. However, the presence and density of other artifact classes complicates the option of a solely storage purpose of the building.

Artifact Class	Object total from Structure 33	Object per m^3 from Structure 33	Object per m^3 from Site Core Plaza Group
Candeleros	4	0.45	0.13
Figurines	11	1.25	0.67
Ocarinas	3	0.34	0.17
Complex Censers	0	0.00	0.13
Modeled Censers	1	0.11	0.23
Scored Censer Lids	5	0.57	0.45
Pierced Ladle Censers	1	0.11	0.12
Stamps	0	0.00	0.05
Molds	0	0.00	0.05
Potstands	25	2.84	1.28
Worked Sherds	7	0.80	0.51
Used Sherds	6	0.68	0.55
Sherd Disks	0	0.00	0.01
Obsidian	2,093	237.80	234.40
Chert	92	10.50	16.20
Metates	1	0.11	0.37*/0.23**
Manos	0	0.00	0.29*/0.15**
Celts	2	0.23	0.03
Pigment Stones	2	0.23	0.07
Bone	126	14.00	1.90
Jute	0	0.00	0.13
Bajareque	8	0.91	7.19
Pendants	1	0.11	0.03
Beads	0	0.00	0.01
Earspools	1	0.11	0.01
Other	0	0.00	0.05

Table 6.20: All non-pottery ceramics, lithic, and flora and fauna artifact totals and densities per m^3 from Structure 33 and the Site Core Plaza Group at PVN647. Terminal debris context only. (* = object per m^3 for all 5 investigated structures. ** = object per m^3 for Structures 16, 17, 18, and 33 only.)

Several initial observations can be made from the densities of all other non-pottery artifact classes identified from Structure 33 (**Table 6.20**). To begin, a considerable number of artifact classes are calculated to occur in densities greater than those calculated for all of the Site Core Plaza Group. Non-pottery ceramics that occur in high densities are candeleros, figurines, ocarinas, potstands, and used and worked sherds.

Conversely, most of the censer vessel form densities occur in lower densities, except for scored censer lids, which are only slightly greater than the calculated density for the Group. Secondly, Structure 33 is the only investigated building to include celts and the calculated density of pigment stones is the second highest density of all buildings from the Group. All other lithic and ground stone artifact class densities vary from equaling the rest of the Site Core Plaza Group to not being identified from the structure. Finally, a correlation exists between the high densities of the ornamental objects of earspools, and possibly pendants, and the extremely high calculated density of bone, which is associated with the burial feature located within the summit interior of Structure 33.

Non-Pottery Ceramics from Structure 33

Interestingly, certain non-pottery ceramic artifact classes occur in corresponding densities that can be associated with possible shared activities or functions. Firstly, the density calculation of figurines is the highest from all investigated structures within the Site Core Plaza Group. Furthermore, along with ocarinas, the calculated density is twice that of the rest of the Group, while candeleros are calculated to occur at a density three-times that of the Group. Figurines and ocarinas have the dual association with ceremonial or ritualistic activities, but also as informal playthings for children or items related to personal hobbies. Additionally, candeleros are linked with the burning of incense associated with either utilitarian activities or sacred practices. However, it is informative to highlight that multiple fragments of the identified candeleros are from a single vessel. From the total quantity of candeleros recovered from Structure 33 (N=4), the majority (N=3) are identified to be from the same vessel. Overall, it is likely that a

combination of all of these uses, ceremonial, recreational, and practical, for all of these non-pottery ceramic classes were occurring within Structure 33.

A second notable correspondence of non-pottery ceramic densities is with respect to the various identified forms of censer vessels. Scored censer lids and pierced ladle censer forms are calculated at densities only slightly greater than or roughly equal to those calculated from all other structures from the Site Core Plaza Group. Additionally, from the identified scored censer lids, (N=5), at least two of the fragments are postulated to be from the same vessel. The density of pierced ladle censers is the result of a single strap handle fragment. Regardless, scored censer lids may embody the greatest functional variation of all censer forms. Therefore, the slightly higher density of this form may indicate that more domestic activities of cooking or food preparation, rather than ritualistic practices, were occurring in and around Structure 33. Modeled and complex censers occur in low to no calculated densities, respectively, from the building. Both of these forms are more closely associated with ceremonial burning of incense and their nominal densities support that likely the need for highly ritualistically-charged, non-pottery ceramics was minimal at Structure 33.

Finally, non-pottery ceramic vessel forms that are predominantly charged with utilitarian uses are present at Structure 33, yet in disproportionate densities. Potstands occur in the second highest density for all of the Site Core Plaza Group and are tied to ceramic production but can also function as supports for round-bottomed storage vessels. Likewise, worked and used sherds occur in slightly higher densities than compared to the rest of the Group. Though an exact purpose of these similarly seeming objects is not

entirely known, both have been associated with the scraping and smoothing of wet clay in the modeling stages of ceramic production. However, worked and used sherds can also be opportunistically utilized in a variety of daily maintenance practices or tasks. Overall, potstands, worked and used sherds possibly indicate the site of a ceramic workshop, however, no stamps or molds are identified from Structure 33, which are purely associated with ceramic production. Additionally, as there are no identified molds, it is inconclusive to claim that the high densities of figurines and ocarinas at the building are the result of where they are being manufactured. Therefore, it is likely that these utilitarian objects were associated with household-scale storage, food preparation, and other domestic repair activities.

Stone Artifacts from Structure 33

Similar to the non-pottery ceramic artifacts recovered from Structure 33, the calculated densities of chipped and ground stone objects are informative to the range of activities that once took place in and around the building. Though the forms of the obsidian and chert debitage from Structure 33 are not known, the densities of each are roughly equivalent to or less than the observed densities from all investigations of the Site Core Plaza Group. Therefore, the use of chipped stone tools at Structure 33 likely corresponded with a typical household pattern and were only minimally fashioned around the building, if at all. Additionally, a very low density of metates is calculated, while manos are absent from the artifact assemblage. Though an initial postulation is that Structure 33 functioned as a domestic residence, the densities of groundstone artifact types are less than would be expected, even for small-scale production. However, it is

possible that grinding activities were being carried out in a different location and processed foodstuffs were stored and prepared at Structure 33.

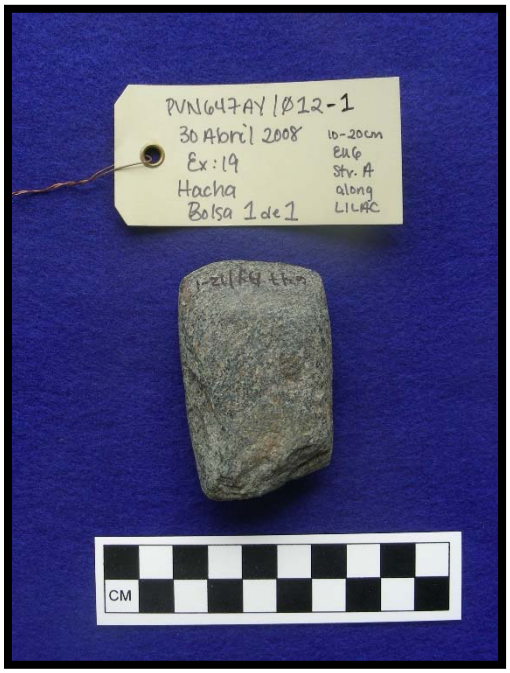


Figure 6.13: Celt from Structure 33
in the Site Core Plaza Group, PVN647

The final stone artifacts witnessed at Structure 33 are deemed to be fairly uncommon at PVN647. The only recovered celts and the second highest density of pigment stones are from Structure 33. The two identified celt objects are observed to be fragmented and of an unidentified stone, yet are both oval in shape and portions of the blade end of each are preserved. The larger of the two (6.6cm in length, 4.2cm in width, and 2.6cm in thickness) appears to be a finished object and maintains chipped markings, indicating use (**Figure 6.13**). The smaller fragment (3.3cm in length, 1.8cm in width, and 1.5cm in thickness) is indeterminable with reference to phase of production and use.

Tools of this size can be utilized in a variety of manners, ranging from food processing to light carpentry of cutting sticks and thatch in housing construction. Items such as these are not out of the ordinary for a typical household artifact assemblage.

The pigment stones, however, may signify activities relating to ceramic or textile production, as coloring is added to slips and paints associated with pottery and/or cloth decorative phases of manufacture. Though, typically pigment stones are grounded into a powder and the presence of such artifacts is unclear given the low density of identified groundstone artifact classes from Structure 33. No manos are observed, while only one metate fragment is documented to be associated with the building. As previously stated, it is possible that grounding activities were conducted away from Structure 33. It is plausible that small-scale activities of production were occurring in and around Structure 33, though were limited it in variety and specialization.

Floral, Faunal, and all other Artifact Classes from Structure 33

Structure 33 possesses the highest density of three artifact types from all of the Site Core Plaza Group. Due to the only formal burial context excavated within the interior summit of Structure 33, it observes the greatest density of bone fragments recovered from all of PVN647. Furthermore, the only earspool and largest pendant identified from all investigations of the site are from Structure 33.

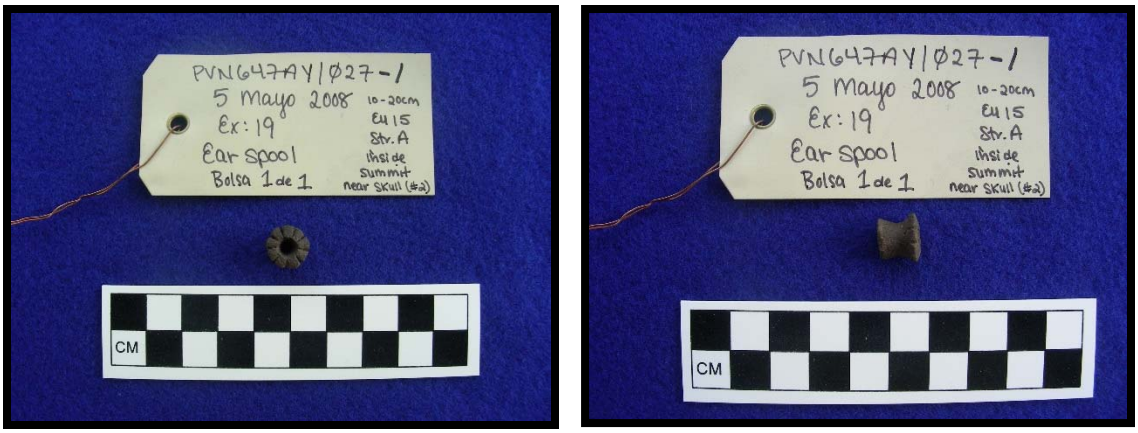


Figure 6.14: Ceramic earspool from Structure 33 in the Site Core Plaza Group, PVN647. The left image displays the decorative portion, while the right image is a profile view.

The high density of bone fragment is the result of at least one adult internment, however, it is likely that two individuals were positioned closely together, as multiple long bones indicate more than one deceased. It is with the burial context that the complete, circular, and ceramic earspool is recovered. The decorative portion of the flare contains incised lines to yield a flower-pedal design (**Figure 6.14**). The item was likely hand modeled and the center hole created by piercing both ends of the cylinder-shaped clay before it was hardened. The earspool is wider at each end and narrow in the middle, likely to aid in holding in place in a human ear and not fall out easily.

Figure 6.15: Image of stone pendant fragment from Structure 33 within the Site Core Plaza Group, PVN647.

Unlike the earspool, the recovered pendant object is not complete, yet a pierced hole to thread a string through is partially preserved. The object is made from an unknown stone material and rectangular in shape, with rounded edges (**Figure 6.15**). The best preserved facing is observed to have been highly polished, yet is preserved to be moderately eroded and contains various scratch markings. The pendant fragment is not observed to be associated with the burial context and was recovered along the western exterior of the building. Regardless, the presence of the burial remains and all associated artifacts located within the summit interior of Structure 33 are consistent with household ancestor internment practices.

Discussion of Artifacts from Structure 33

Though Structure 33 includes some of the more specialized and uncommon artifacts observed from all of PVN647, the density and context from which they are witnessed is not necessarily extraordinary. The densities of serving vessels (bowls and

plates) are amongst the highest for all of the Site Core Plaza Group, however, the densities of cooking-associated vessels (comals and scored censer lids) are comparatively high, as well. Food prepping, cooking, and consuming activities are consistent with a domestic intention.

However, marked densities of jars and potstands can be indicative of storage practices. Additionally, utilitarian tools of worked and used sherds, celts, and pigments stones are typically associated with manufacturing or production activities. It is unclear how pigment stones or other harder materials associated with food consumption (such as maize or tree nuts) were processed due to such a low density of recovered groundstone tools. If Structure 33 operated as any form of a setting for production, the complete process did not occur in and around the building, as raw materials likely were grounded elsewhere. Likewise, if ceramic production occurred near Structure 33, it did not yield large quantities as molds are not speculated to have been used. The possibility remains that Structure 33 purposed as a setting for storage and/or production activities. However, the complete architectural history supports that as the structural design of the building changed over time, likely too did the functional intent.

It is critical to note that Structure 33 is argued to originally be amassed as an intentional 3-sided edifice. Furthermore, due to the buildings positioning and location to neighboring structures is it postulated that in its earliest form Structure 33 operated as a supplemental facility for another building, possibly Structure 14 immediately to the north. It is unclear how the 3-sided buildings at PVN647 were utilized when they possessed an open facing, though likely not as residences. The covered internal space

would make a better setting for various workshop activities and provisional storage of non-valuable or frequently used tools, than a private residence. Perhaps the presence of slightly higher densities of certain artifact classes associated with storage and production are aligned with this earlier architectural configuration of the building, and therefore the most original functional intent. Over time, though, the open, north facing of Structure 33 is sealed and other minimal architectural additions are appended. The relative time between Structure 33 operating as a 3-sided construction and when it is enclosed is not known. Furthermore, it is indeterminable to decipher which artifact classes were used in and around the building over the course of its assemblage history, as all context is deemed to be terminal debris. However, as the structural design of Structure 33 underwent modification, likely so too did the functional purpose of the building and transitioned into being an occupied residence.

Aside from the assortment of manufactured artifacts associated with domestic practices occurring in and around Structure 33, the identification of at least one human internment is a strong indicator of the building being a residence. Observations from burial contexts from other Late and Terminal Classic household settings within the Naco Valley share the commonality of interments residing in the base of residential structures (Schortman 2013). This practice is linked with the notion of keeping ancestors in close proximity to living descendants. Family members would likely not be positioned beneath a storage facility, as this may be interpreted as disrespectful. Though, cultural interpretations of burial practices from this region of southeast Mesoamerica are predominantly founded upon the documentation and analysis of Classic period Maya

burial practices. Very few formal studies have investigated the variations of burial contexts from northwest Honduras, aside from those at Copán. Though burial settings have been detected and documented from various archaeological sites within the Naco Valley, a comparative analysis of internment customs or patterns has not been attempted. Therefore, it is plausible that this extrapolation of the significance of burial location is misguided.

Finally, the position of Structure 33 within the Site Core Plaza Group provides an indication for its functional purpose. Structure 33 is not located on the main plaza, as oppose to all of the other investigated buildings from the Group. Therefore, the inhabitants and their subsequent daily activities were likely not in full view from the public space of that plaza. Likewise, due to the close proximity to other neighboring structures and lack of prepared exterior space (in the form of terraces or verandas), it is doubtful that Structure 33 hosted large gatherings of people for shared social events, similar to the capabilities of some of the other buildings located on the main plaza.

However, Structure 33 is deemed to be a member of a possible patio group cluster with other structures and may have operated not only in concert with Structure 14, but other buildings within the grouping and the open space of the patio area. The densities of cooking and serving vessels indicate that food preparation and consumption are occurring in and around Structure 33, however, other forms of ceremonial items, such as the more fancy forms of censers are not identified from the building. Therefore, more domestic practices, rather than formal rituals, were taking place with greater frequency and regularity at Structure 33 and likely after it was sealed as a 4-walled building.

Discussion of Artifacts and Activities of the Site Core Plaza Group

From the structures sampled within the Site Core Plaza Group it is evident that a variety of activities and likely social complexity is taking place within this particular region of PVN647. The diversity of structure size, architectural complexity, as well as artifact assemblages is unmistakable, however, not too extraordinary considering the overall size of the group. Though the majority of the buildings and spaces comprising the group remain archaeologically unexplored, the recovered structural and artifact evidence indicate that select construction designs and activities were distinct at each sampled structure, but likely also socially and functionally harmonious between the investigated structures.

The following discussion highlights select categories of activities taking place within the Site Core Plaza Group, as postulated from both the analysis of architectural and artifact evidence. The first of three categories of activities is in reference to food processing, cooking, consuming, and storage practices. Various artifact classes are linked with each of these food-related tasks, yet collectively comprise a system of subsistence, which occurs in an assortment of settings. The range of these undertakings is significant to consider, as food procurement and management are essential for survival and indicative of a residential setting. Furthermore, the location(s) of such activities indicate structure function but also locales for differing social practices, as identification of casual dining versus formal feasting may serve as markers for status and specialized meaning of a building.

The second category of activities is related to ritual and ceremonial practices. While these are arguably more forms of performance, the practice of honoring ancestors or deities is noteworthy with respect to understanding social identity and expression. Furthermore, the locales where these acts take place likely add further value to the setting and its meaning to the occupants.

Lastly, the third category considers artifacts and associated contexts tied to maintenance and production activities. Similar to the network of activities involved in food-related tasks, various phases occur with respect to upkeep and formal manufacture of goods. Architectural designs are considered in relation to densities of maintenance and production-associated artifacts to assess if structural formations correlate with these particular activities.

Certain artifact classes likely served multiple purposes and are therefore referenced with at least two or all three of these highlighted categories of activities. General practices of dwelling, such as locales for sleeping and informal forms of socializing or recreation, are also mentioned in this discussion, where applicable. Finally, artifact class densities are from terminal debris context only and pottery type densities include only Late and Terminal Classic styles from terminal debris.

Food Processing, Cooking, Consumption, and Storage

Artifact classes commonly linked to food-related activities include: bowls, jars, plates, comals, lithic and groundstone materials, and bone and jute debris. Additional artifact classes included in this evaluation of food procurement and management within the Site Core Plaza Group are: all censer vessel forms and potstands, as these non-pottery

ceramics can be multi-purpose in situations where other typical cooking artifact forms are absent or in low densities (**Table 6.21**).

Table 6.21: Summary of artifact class densities associated with food preparation, cooking, consumption, and storage per m^3 from terminal debris by structure and for the Site Core Plaza Group at PVN647. (* = object per m^3 for all 5 structures. ** = object per m^3 for Structures 16, 17, 18 and 33 only. *** = all human internment remains.)

Artifact Class	Object per m^3 from Terminal Debris					
	Structure 12	**Structure 16**	**Structure 17**	**Structure 18**	**Structure 33**	**Site Core Plaza Group**
Bowls	2.33	24.87	5.48	4.80	11.14	8.12
Jars	23.76	204.36	43.45	72.36	229.20	89.30
Plates	0.00	1.20	0.20	0.00	0.45	0.29
Comals	0.09	0.26	0.10	0.24	0.91	0.24
Complex Censers	0.00	0.51	0.05	0.24	0.00	0.13
Modeled Censers	0.00	0.94	0.15	0.16	0.11	0.23
Scored Censer Lids	0.40	1.11	0.25	0.16	0.57	0.45
Pierced Ladle Censers	0.09	0.09	0.10	0.24	0.11	0.12
Potstands	0.09	4.10	0.86	0.33	2.84	1.28
Obsidian	306.80	277.10	189.60	132.04	237.80	234.40
Chert	22.20	21.50	14.70	6.99	10.50	16.20
Metates	0.72	0.34	0.30	0.08	0.11	0.37*/0.23**
Manos	0.63	0.26	0.20	0.08	0.00	0.29*/0.15**
Celts	0.00	0.00	0.00	0.00	0.23	0.03
Bone	0.20	0.00	0.50	0.00	14.00***	1.90
Jute	0.00	0.26	0.35	0.00	0.00	0.13

Artifacts associated with activities of food processing and preparation are predominantly lithic and groundstone objects and both types are present within certain locations of the Site Core Plaza Group in significant densities. Varieties of obsidian and chert tools are linked with tasks of cutting and chopping of foodstuffs. Groundstone implements are associated with grounding and grinding of dense and hard materials. Structures 12, 16, and 33 are calculated to contain amongst the highest densities of obsidian material; however, only Structures 12 and 16 witness the greatest densities of chert. The densities of metates and manos at Structures 12 and 16 are also the highest, however, Structure 17 is observed to have a calculated density that is similar to that of Structure 16. Structure 33 is calculated to have a relatively low density of metates and no manos at all. Uniquely, though, is that Structure 33 contains the only observed celt fragments from all of PVN647. It is likely that small-scale processing is taking place at Structure 33. Overall, it appears the greatest concentration of food processing with the use of stone tools is occurring in and around Structures 12 and 16. Coincidently, Structures 12 and 16 are observed to contain the greatest amount of prepared exterior terrace and veranda regions, compared to all other investigated buildings within the group. It is likely that these prepared and covered external areas were ideal settings for the use of these stone tools and perhaps the manufacture of them, as well.

Evidence for cooking practices within the Site Core Plaza Group remains relatively slight compared with other food-related activities. Comal pottery vessels are most exclusively identified as objects for cooking over a heat source, yet the densities throughout all investigated structures are considerably low. Structure 33 is calculated to

contain the great density of comals; while Structures 16 and 18 are observed to have values that are average for the group as whole.

With such low densities of comals as evidence for cooking practices, other artifact types are explored, which could be multi-purpose in their function. Jars may be commonly referenced as storage vessels, however, depending upon the size and shape of the neck and opening of the vessel, cooking tasks may be also performed. Vessels formed with flared rims and continuous necks, with little-to-no break to the body of an object may be suitable for containing liquids and for the purposes of boiling, as in the case of preparing soup. Structures 16 and 33 have dramatically higher densities of jar fragments compared to all other buildings, with Structure 18 observing the next highest concentration of jars. The majority of analyzed rims from all three of these buildings indicate they are from vessels with flared rims, any combination of slight or continuous necks, and without sharp breaks to the body. The locations of jars of this form compliment cooking activities, as indicated from comal densities.

Aside from ritual practices, all four censer forms can potentially be used in varying forms of cooking methods. Modeled censers are typically deep-basin vessels with thick walls. Therefore, boiling of liquids could occur in this vessel form. However, evidence of modeled censers within the Site Core Plaza Group are quite slight and the greatest density is calculated from Structure 16, likely indicating greater ritual signifcance. Complex and pierced ladle censers could be utilized for frying or searing of foodstuffs, in the absence of proper comal vessels. Complex censers are calculated in the great density from Structure 16, while pierced ladle censers are greatest at Structure 18.

Lastly, scored censer lids can be used in a variety of other means to cover any vessel form for the purpose of keep prepared foods warm. These occur with the greatest density at Structure 16 and also at Structure 33. Overall, if all censer forms are interpreted as also aiding in cooking activities, Structure 16 is revealed to be a central locale for such activities. Structure 33 is likely a secondary setting and one which is engaged in small-scale cooking, similar to efforts of processing and preparation.

Additionally, potstands are identified as perhaps the most multi-purpose ceramic vessel form, though evidence for functional intent unrelated to ceramic production is more problematic to demonstrate. Regardless, the generalized function of potstands is hypothesized to stabilize other vessels. Therefore, potstands could conceivably be linked with supporting cooking vessels by providing the elevated suspension needed over a heat source. Densities of potstand fragments are greatest at Structure 16 and 33, further supporting these buildings as locales for food cooking.

The final artifact class linked with food cooking activities are those of bone and jute, as the organic debris remains of cooked foodstuffs. The overall density of bone, reliably not identified to be human, is relatively quite low from the Site Core Plaza Group. Structures 12 and 17 are the only buildings to include faunal remains. Though, it is unclear if some of these remains are in fact human. The high density of bone remains from Structure 33 are exclusively identified as human. The highest densities of river snail jute are observed from Structures 16 and 17. Jute would typically be boiled and consumed as an ingredient in soup. Though Structure 17 is not observed to relate to any other forms of food cooking practices, it is unclear if the jute remains recovered from this

location exclusively indicate cooking. Settings identified for cooking activities are not necessarily indicative for settings for food consumption.

The third phase associated with food-related practices are those pertaining to consumption of prepared meals. Fewer artifact classes are linked with the eating of food and are predominantly identified by the presence of ceramic bowls and plates. Each of these pottery types can occur in a variety of shapes and sizes and purpose as items for individual consumption or as serving vessels. Similar to other food-related artifact classes, Structures 16 and 33 are identified to contain the greatest densities of both bowls and plates compared to the group as a whole. From both buildings, the majority of bowl vessel fragments are commiserate with forms indicative of individual consumption, while fewer are identified as serving vessels. Interestingly, from bowl fragments observed to be straight vessels linked with serving, both structures witnessed these forms to be of not immediately local ceramic groups. Each structure contained at least one bowl fragment of a straight body form identified as an Ulua vessel and is clearly an import.

All other buildings (Structure 12, 17, and 18) observed bowl forms to be a mixture of individual and larger serving vessel shapes. All five buildings also included very small densities of bowls that are small in size (roughly fist-sized) with continuously curved bodies and relatively small orifice openings. A functional intent of these vessels is unclear, though the fragments with the widest of orifice openings could have served as drinking vessels. Those with the most minimal opening could purpose as specialty containers for a variety of contents, even non-edible. Finally, Structure 12 witnessed a low density of bowl and plate vessels that due to their shape and thick walls, border on

being labeled as large serving platters. Some observed slightly deeper-welled interiors, though most contained wide, everted rims. These forms could couple with grounding activities posed to have taken place within this structure and serve as large basins for collecting processed foodstuffs or other resources.

Overall, based upon density distributions of certain artifact classes, the predominate settings for serving and consuming of food within the Site Core Plaza Group is likely in and around Structures 16 and 33. Structure 16 contains a considerable amount of evidence for other food-related activities, in addition to an abundance of prepared exterior space. However, the interior space is amongst the smallest area calculated from all investigated buildings within the group. Therefore, the near entire process of food preparation thru consumption likely occurred within immediate range of the building, yet perhaps not within the building. Additionally, Structure 33 is posed to be an independent residence and therefore contain a variety of, if not all, forms of food management and preparation.

Lastly, the evaluation of storage practices is considered to complete the range of food-related activities occurring within the Site Core Plaza Group. Jars are typically the primary artifact form associated with activities of storage. Though, potstands and scored censer lids are also posed to have supplemented in the stockpiling of resources.

Fragments from jar vessels account for the greatest density from all ceramic artifact types and are predominantly located at Structures 16 and 33. Structure 18 witnesses the next highest density, yet it is still lower than the density calculated for the group as a whole. Regardless, of the jar fragments analyzed from these three structures,

the majority are identified to be of the form with a flared neck that is continuous and have no break to the body. The remaining jar fragments are of the form with straight and long necks before a clear break to the body. Therefore, these observations may support that the majority of jar vessels were associated with cooking activities and a minority are linked with storage practices in these three specific settings. Analyzed jar fragments from Structure 17 are identified to be roughly split between the two hypothesized functional forms. Structure 12 is identified to contain the lowest density of jar fragments from all five of the investigated buildings. However, analyzed jar forms from Structure 12 are observed to be of the straight and long necked forms with everted rims. These forms are also typically larger in size and possess narrow orifice openings. Though a relatively low density is calculated from the building, it is likely that greater storage practices by means of jars were occurring in and around the structure, compared with all other buildings.

Potstands have been referenced as potentially being multi-purpose utilitarian objects and this is likely the case within the Site Core Plaza Group. In regard to storage practices, potstands can be utilized as stabilizers for smaller round-bottomed storage vessels. The greatest density of potstands are witnessed from Structures 16 and 33, an observation that is not unique with artifacts associated with food-related practices. Though most of the analyzed jar vessels from these two buildings are identified to be linked with more with cooking activities than storage, it is plausible that some of the hypothesized cooking jar forms were multi-purpose and occasionally used for storage, as well. Therefore, these particular vessel forms or any other that may have be fashioned with a round bottom potentially also utilized potstands.

Lastly, scored censer lids may also be multi-purpose objects and serving as lids for storage vessels to keep resources protected from contaminants. The greatest density of scored censer lid fragments is calculated from Structure 16 and Structure 33 identified to be the second highest density. The majority of fragments from Structure 33 do not display evidence for graying or sooting on the underside or scored side. This may indicate that they were utilized primarily in storage practices and not exposed to flames or high temperatures from heat sources. The majority of scored censer lid fragments from Structure 16, however, exhibit evidence of sooting on the scored or underside and reveal they were exposed to heat or smoke from cooking or burning of incense. Any ceramic object utilized as a lid over a material that is not being heated or cooked would show no signs of that functional purpose. Therefore, scored censer lids exposed to heat or smoke may also have served as lids and display no evidence of having done so.

Above all, markers for a building operating as a storage facility include those pertaining to the stockpiling of provisions but also the stowing of any assortment of objects and tools. Based upon densities of nearly every artifact class associated with utilitarian intentions, as well as other practices, it is clear that the majority are recovered from Structures 16 and 33. Other buildings, namely Structure 12, include high calculated densities for select artifact classes and may indicate a specific set of activities are occurring in and around the building, but a specific form of storage arrangement, as well.

In summary, the full array of food-related activities are all present within the Site Core Plaza Group. In some cases a particular action only occurs in one location, while others are conducted in multiple settings, yet perhaps on differing scales of intensity and

for divergent social reasons. However, not only are the locations significant to highlight, the architectural designs of each setting are critical to evaluate. Architectural analysis of investigated buildings from the largest constructed region of PVN647 reveals a variety of construction styles, which yield contrasting quantities of formal internal and exterior occupation spaces. The links between the architectural designs of each structure and food-related activities are necessary to explore to underscore the social network occurring within the group, as it relates to the shared system of food management and security.

The locations and means by which the procurement of raw food resources occurred remains unknown for all of PVN647, however, the likely initial phase in the procedure of food-related activities has been deemed the processing and preparing of foodstuffs. Based upon densities of artifact classes linked with these activities, Structures 12 and 16, and possibly to a lesser degree Structures 17 and 33, have been identified as the settings for these particular practices. Coincidently, Structures 12 and 16 are the two buildings within the group observed to contain the greatest and most complex arrangement of external occupation settings. Both are posed to contain plaza-facing, extending terraces, and even a wrap-around veranda in the case of Structure 16. Therefore, both are ideal structure exteriors to engage in stationary food processing and organizing activities, while protected under a sheltered roof.

However, the two buildings are divergent with regard to internal space and accessibility into each structure. The summit interior of Structure 12 is measured to be the greatest internal area observed from all PVN647 structural investigations, though is also amongst the most restricted with regard to access. The divided interior is posed to

be vast in space, though exclusive in entry. Furthermore, though the interior is large in occupation area, very few other artifact classes are recovered from the setting, indicating that minimal cooking, consuming, and storing of foodstuffs is taking place within the building. Additionally, the presence of at least one cobble bench indicates a residential intent.

Conversely, Structure 16 is measured to contain amongst the least amount of internal occupation area, yet vary in its degree of accessibility over the course of its construction history. Structure 16 is identified as originally established as a 3-sided edifice and was open along its off-plaza, north facing before eventually being sealed. A formal entryway is observed along the eastern facing, near the southeast corner. It is unclear how, or if, the range of activities taking place in and around Structure 16 transitioned over time, in conjunction with its expanding architectural design. Therefore, it is not known if the overall high densities of multiple artifact classes is the result of long-term utilitarian activities occurring in and around the building. Regardless, some of the highest artifact densities indicating food processing, cooking, eating, and storing were recovered from the structure. The minimal summit interior area is suitable as a storage space, though not too accommodating for other activities or generalized practices of dwelling. The plaza-facing, external veranda area, however, could conveniently accommodate food processing and informal consumption, while the off-plaza unconstructed regions are fitting for open heat sources for cooking activities.

Forms of food-related activities, namely processing, may also have taken place at Structure 17, though only minimally. This postulation is founded upon the presence of

only ground stone implements and lesser-so chipped stone lithic materials. Very few other food-related artifact classes are calculated in significant densities to indicate anything more than occasional or slight practice in and around the building. This observation is not exceptional, as the architectural analysis of Structure 17 submits that the building is associated with likely some of the most formal of practices. Structure 17 is positioned as the most prominent, northern building within the Site Core Plaza Group and is calculated to contain the second-largest summit interior space in terms of occupying area. The design of the interior is more suitable for gathering and socializing, which could include the serving and eating of food. This particular activity within this space would likely be a more formal event and better designated as a setting for feasting. This being the case, accompanying feasting accoutrements would likely not be housed within the same building, and potentially the reason for the low densities of associated artifact classes. The relation, if any, between Structures 16 and 17 is not known, though the high serving-ware artifact densities calculated at Structure 16 supports the postulation of it purposed as a storage facility and Structure 17 as a more formal setting. Unlike the interior of Structure 17, the exterior is less accommodating of multiple occupants and only includes the limited balcony or bench region, along the plaza-facing southern façade. This prepared setting is suitable for very little, other than the temporary gathering of few, and likely exclusive, inhabitants. In its final phase of occupation, Structure 17 is not identified to be a residence, but a distinguished building with significant social importance. Overall, it is not surprising that it does not contain much evidence for utilitarian, food-related activities having taken place in and around the structure.

Roughly average or less-than-average densities compared to the Site Core Plaza Group as a whole are calculated from food-related artifact classes observed from Structure 18. As previously highlighted, it is likely that cooking is occurring near the building, though possibly lower proportions of processing and consuming activities are taking place in and around the structure. Structure 18 is calculated to contain the lowest densities of processing implements, though includes a sizable amount of external terrace area. This observation of formal occupational exterior area and low densities of artifacts associated with food preparation and processing is divergent from the architectural and artifact assemblages of Structures 12 and 16. However, the positioning of the likely covered terrace region of Structure 18 is not along an immediately plaza-visible facing. The region is secluded from the plaza and may indicate an overall more private locale and dwelling, though still positioned on the main plaza. This may not have been the original intention of the building, as Structure 18 is identified to have been initially arranged as a 3-sided edifice. It is conceivable that the overall utilitarian intent of the building shifted upon the fourth and off-plaza facing wall being added to seal the interior. Overall, the low densities of food-related artifact classes denote that activities likely occurred on small-scale levels and perhaps only tending to the needs of the residents.

Lastly, Structure 33 is similar to Structure 16 in that it is observed to include high densities of artifact classes indicating food-related activities. Based upon analyzed artifacts, processing and preparation of foodstuffs in the form of grinding and grounding activities are not taking place at Structure 33 in great frequency. However, cutting and chopping may have occurred, though all bone remains are associated with human

internments and none are deemed to be discarded refuse from human consumption. Other forms of evidence indicates that cooking, serving, eating, and storing did occur in and around the building, though, as revealed by the densities of other artifact classes. Additionally similar to Structure 16, Structure 33 is deemed to have been originally a 3-sided edifice and likely endured functional transformations over time, as architectural attributes were added, namely the fourth and summit-sealing wall. Contrary to Structure 16, the external space around Structure 33 does not include an expansive, formal terrace region. Even more, Structure 33 is posed to have been converted into a residential dwelling, from its earlier 3-sided functional purpose, as deciphered from its architectural assemblage. Therefore, the greater densities of daily food-related artifacts support that subsistence activities are in practice and perhaps for more than only the residents of the building. As it is located in a setting of a possible smaller patio group cluster, it is conceivable that Structure 33 is only one building in a household grouping. Though, most activities relating to food cooking, eating, and storing are occurring at the building, it is unclear where grounding activities were carried out.

Ritual or Ceremonial Practices

The second category of activities to be highlighted are related to ritual and ceremonial practices occurring within the Site Core Plaza Group. Artifact classes reliably associated with ritual and ceremonial actions include: candeleros, figurines, ocarinas, and all censer forms. Additionally included here are the densities for faunal remains, as well as items of significant personal value, which include pendants, beads, and earspools. These decorative objects are referenced due to associations with human internment

contexts. Analysis of all of these artifact classes by means of densities and locational distributions throughout the group will indicate the range of ritual and ceremonial practices taking place within the group (**Table 6.22**).

Artifact Class	Object per m^3 from Terminal Debris					
	Structure 12	**Structure 16**	**Structure 17**	**Structure 18**	**Structure 33**	**Site Core Plaza Group**
Candeleros	0.09	0.00	0.20	0.00	0.45	0.13
Figurines	0.31	1.11	0.30	1.06	1.25	0.67
Ocarinas	0.05	0.26	0.20	0.16	0.34	0.17
Complex Censers	0.00	0.51	0.05	0.24	0.00	0.13
Modeled Censers	0.00	0.94	0.15	0.16	0.11	0.23
Scored Censer Lids	0.40	1.11	0.25	0.16	0.57	0.45
Pierced Ladle Censers	0.09	0.09	0.10	0.24	0.11	0.12
Bone	0.20	0.00	0.50	0.00	14.00***	1.90
Pendants	0.00	0.00	0.05	0.00	0.11	0.03
Beads	0.00	0.09	0.00	0.00	0.00	0.01
Earspools	0.00	0.00	0.00	0.00	0.11	0.01

Table 6.22: Summary of artifact class densities associated with ritual and ceremonial practices per m^3 from terminal debris by structure and for the Site Core Plaza Group at PVN647. (*** = all human internment remains.)

Overall, evidence for ritual or ceremonial practices within the Site Core Plaza Group is relatively slight, though several artifact classes deemed to be associated with such activities are present. Furthermore, select artifact classes are more densely concentrated in particular regions within the group, while others are located in disparate settings. These locational distributions indicate variations in the forms of ceremonies being carried out within the group and also reveal scales of public versus private customs.

The artifact classes connected with ritualistic practices, as well as other recreational activities, include candeleros, figurines, and ocarinas. All three of these objects can serve in smaller-scale sacred ceremonies or processional performances. Alternatively, candeleros can also pragmatically operate as light sources, while figurines and ocarinas can be representative of playthings for secular or personal entertainment. As various artifact vessel types have already been presented to serve multiple roles, it is likely that these three object types also embodied both spiritual meanings and playful importance. Interestingly, the densities of all three of these artifact classes are greatest at Structure 33 and to a varying degree at Structure 17.

The total frequency of candeleros from the Site Core Plaza Group are the lowest (N=10), followed by ocarinas (N=13), while figurine fragments are the most abundant (N=50). The highest number (N=4) of candeleros are located at both Structures 17 and 33, however the majority of fragments recovered from Structure 33 are observed to be multiples of the same object. The nearly complete candelero, as previously mentioned, is recovered from Structure 17. This object appears to be a finished item, yet includes no vent holes and displays no evidence of sooting or burning. The lack of vents along the

chambers indicate that the object may not have served to burn incense or some other material at the base of each well, as vents for airflow would be necessary to ensure consistent and complete burning of a substance. However, evidence for intense sooting may have deteriorated over time and no longer present at the time of recovery of the object. Only two other fragments, one each from Structures 17 and 33, display evidence for sooting and indicate that burning was associated with use. Therefore, it is unclear to what degree burning of incense occurred with any of the other recovered fragments (N=8), which did not possess preserved evidence of sooting. Furthermore, it is indeterminable to gauge whether these objects held ritual or ceremonial intentions, or mostly utilitarian purposes, or a combination of both. Consequently, it remains unknown how representative of ritual or ceremonial practices these candeleros are in the three structures in which they are recovered.

Figurines and ocarinas, however, are present at each investigated building within the Site Core Plaza Group. The overall calculated density of figurines for the Site Core Plaza Group is the highest artifact class (aside from bone) that is linked to ritual practices. High densities of figurines occur at Structures 16 and 18, while the highest is at Structure 33. The majority of fragments are quite small and eroded and of mostly foot supports or partial headdress designs. Pastes of the ceramics appear mostly locally made with commonly occurring motifs and decorations. The locations are seemingly the most significant, especially with Structures 18 and 33, as they are likely the most representative of residential settings. Though identified as places for dwelling, it is unclear if figurines held ritual or recreational importance, or both. Structure 16 is lesser

so associated with serving as a residence, but perhaps a storage location. Therefore, it is also uncertain if the second-highest density of figurines with the Site Core Plaza Group marks a setting for ceremony or entertainment, or conceivably a locale for storage or place of manufacture.

Ocarinas are recovered in an overall density lower than figurines but analogous structures are witnessed to contain the greatest densities. Structures 16 and 33 are calculated to have the two greatest densities, while Structures 17 and 18 possess closer to the average density that is observed for the group as a whole. Very few decorative or distinctive features are preserved from the entire assemblage from the Site Core Plaza Group. Therefore, nominal conclusions regarding ritual or ceremonial importance can be drawn. However, similar to the locational distributions of figurines, the structures from which ocarina fragments are recovered appear comparable. Structures 18 and 33 are likely settings for dwelling and varying densities may indicate varying intensity of use. A meaning for the slightly higher-than-average for the group density of ocarina fragments at Structure 17 is not clear, though supports the postulation that the building was a setting for more formal practices than other investigated locales.

The densities of various censer vessels from the Site Core Plaza Group also reveal indications of ritual and ceremonial practices. Overall, scored censer lids are calculated to be the in the greatest of abundance within the group, followed by modeled censers, and lastly complex and pierced ladle censers calculated at roughly similar densities. The greatest densities of nearly all censer forms are located at Structure 16, with scored lids clearly being the highest. Both Structure 16 and scored censer lids have been

demonstrated to be associated with practices of storage, therefore, it is unclear how the high density can be fully understood as indicating ritual or ceremonial activities. Furthermore, the highest densities of complex and modeled censers are also from the building, and likewise are inconclusive as to whether ritual performances were enacted in the confined space, or simply housed in the building.

Structures 18 and 33 witness densities for censer forms that are either slightly above or below the calculated averages for the group as whole, depending upon censer vessel form. Both buildings are posed to be domestic dwellings, yet contrasting densities amongst the four vessel types indicate that likely dissimilar ritual practices were conducted within the spaces. However, though the practices may be distinctive at each structure setting, the scale and regularity of ritual happenings is likely on a household-level, as indicated by the overall low densities.

Finally, as Structures 12 and 17 comprise the largest buildings in scale and posed to be of the most specialized with regard to social activities, the least comprehensive evidence of censer forms are observed from these locales. As most censer forms are of sizes and shapes that are transportable, it is conceivable that these structures were of such unique meaning that ritual or ceremonial practices involving censer forms were performed within or around the buildings, yet the objects themselves housed elsewhere. This has been hypothesized to be the case between Structures 16 and 17, yet it is unclear if a similar form of relationship existed between Structure 12 and an immediately neighboring edifice. None of the flanking structures near Structure 12 have been formally investigated. However, solely based upon the densities and locations of all

identified censer form fragments it appears that ritual or ceremonial practices involving these vessels likely occurred in settings architecturally identified as more domestic or residential in purpose. Therefore it is possible that the sacred was also more personal, private, and individualized to the occupants of a dwelling.

The final artifact classes linked with practices of ritual both support, but also complicate, an identification of ceremonial spaces as those also of more household in comprehensive purpose. The greatest evidence of a formal human internment is observed at Structure 33 and accounts for the highest calculated density of bone remains. Furthermore, the recovery of a complete ceramic earspool is associated with this specific context and likely belonged to one of the deceased. A fragmented pendant from the same building is not immediately associated with the interred context but is a marker of identity expression and likely held high personal value.

Due to the poor preservation and scant recovery, it is unclear if the faunal assemblage from Structure 12 are conclusively human, other, or a combination of both. However, Structure 17 most likely contained human remains of a very young individual associated with some of the very earliest architectural components of the building. Overall, the observation of interring the departed within constructions is not a unique burial practice within Maya cultures, including those documented within the Southeast Mesoamerican region (Gonlin 1993). It is identified as a practice of ancestor veneration and implies personal importance of the building to all those who occupied the space. Though not concluded to be culturally Maya, the residents of PVN647 may have adhered to similar burial practices to those documented from Pre-Columbian Maya sites.

In general, the observance of a burial context containing likely two individuals within Structure 33 is not extraordinary as various other lines of architectural and artifact evidence suggest the building purposed as a domestic dwelling, at least in its later construction phases. However, the presence of possible juvenile remains from Structure 17 implies a different form of sacred value linked to the building. By informal analysis of the remains from Structure 33, the interred were adults and perhaps even elderly. The passing of a young child carries differing emotional sentiments and possibly varying mortuary practices or rituals, than a grown adult. In the least, the setting for the burial of a youth holds significance, if not even more so than for an adult. Therefore, Structure 17 is identified to be a building of formal prominence and the possible interring of a youngster complicates further the range of importance of the building.

Overall, the buildings within the Site Core Plaza Group identified from architectural analysis to be of the most structurally grand in size and likely specialized with regard to social function do not appear to contain correlating high densities of artifacts linked to ritual or ceremonial practices. For example, Structures 12 and 17 are measured to the largest in scale and positioned most prominently along the main plaza, compared to all other investigated buildings within the group, yet contain the lowest densities of ritual-related artifacts, especially with respect to censer vessel forms. Furthermore, the calculated area of internal space is also observed to be amongst the largest for the group as whole. Therefore, based solely upon location of the recovered artifact assemblage, it would appear that little-to-no ritual or ceremonial events occurred within or around these two most prominent buildings. However, the lack of ritually-

related artifacts from these regions may or may not indicate that ceremonial practices occurred in these settings. Due to the investigation of adjacently positioned Structure 16, it is posed that Structure 17 may have engaged in a variety of activities, including ritual practices, though the artifact markers indicating these particular actions were housed elsewhere. Furthermore, as the interior of Structure 17 could lodge several occupants at once, ritual practices involving several participants conceivably could occur, though not all were equally welcome due to the limited accessibility into the building. However, the elevated balcony or bench region identified along the plaza-facing of Structure 17 could easily accommodate a select grouping of ritual specialists charged with conducting invocations to the public occupying the open plaza. However, this all remains speculative due to the lack of artifact evidence recovered from these particular locations. Though, Structure 17 is still revered to have held some form of nonphysical importance, as indicated by the postulated interment of a young child during the establishment of the building.

In contrast, the settings containing the greatest evidence of ritually-charged artifacts are associated with structures deemed to be more residential or storeroom in purpose. Interestingly, Structures 16, 18, and 33 are all also identified to have been originally 3-sided edifices and eventually the summit interiors were sealed to establish an enclosed and likely functionally altered space. While Structure 16 is considered to be more storage facility in functional intent, Structures 18 and 33 are more confidently identified as residences and exhibit a varying distribution of nearly all artifact classes linked with ceremonial practices. Both structures contain moderately-sized interior

spaces yet differ greatly with respect to prepared exterior space, and most noticeably positioning within the group. Structure 18 is located immediately on the main plaza, while Structure 33 is identified as being off the main plaza and likely a member of a smaller patio cluster. It is not known if dissimilar densities of certain ritual-related artifacts between the two buildings are the result of positioning within the group. However, density variations are likely more-so linked with distinct individual ceremonial practices taking place at each setting, suggesting a range of preferred ritual devotion. The interment of at least two adult individuals distinctly conveys the magnitude of ancestor veneration taking place at Structure 33. Above all, the practices taking place at Structure 18 and 33 are more indicative of household-scales and forms of worship, which are most meaningful and centered on the spiritual needs and preferences of the residents of each building. Additionally, select artifact classes that are calculated in higher densities likely held both sacred and secular importance.

To conclude, similar to other daily activities of dwelling, it is challenging to archaeologically pinpoint the location(s) of social practices that are most credibly recognized from mobile objects. Furthermore, it is not known where ritual practices were predominantly conducted in antiquity, irrespective of regularity or scale with regard to number of participants or observers. However, the distributions of artifact classes associated with these practices from Structures 18 and 33, which are architecturally identified as domestic settings, likely took the form of being smaller and more intimate ceremonies, taking place in private exterior regions or within interior spaces. Larger procession events that included more people and taking place in building summit settings

able to accommodate many or entirely exterior to buildings most likely involved Structures 12 and 17, though supportive artifact evidence is lacking.

Maintenance or Production Activities

The final activity category to be evaluated is related to artifact classes that are linked with maintenance and production activities. Artifact classes highlighted in this assessment relate to the possible tools or implements used in manufacturing practices and typically include: stamps, molds, potstands, worked and used sherds, metates and manos, and pigment stones. Additionally, artifact classes that may be yielded products are also included and consist of: all pottery vessel forms, figurines, sherd disks, and lithic materials. Select artifact classes may be representative of multiple phases relating to manufacture processes and referenced as such in order to gauge the degree of maintenance and production activities taking place within the Site Core Plaza Group (**Table 6.23**).

Artifact Class	Object per m^3 from Terminal Debris					
	Structure 12	**Structure 16**	**Structure 17**	**Structure 18**	**Structure 33**	**Site Core Plaza Group**
Bowls	2.33	24.87	5.48	4.80	11.14	8.12
Jars	23.76	204.36	43.45	72.36	229.20	89.20
Plates	0.00	1.20	0.20	0.00	0.45	0.29
Comals	0.09	0.26	0.10	0.24	0.91	0.24
Figurines	0.31	1.11	0.30	1.06	1.25	0.67
Stamps	0.00	0.17	0.10	0.00	0.00	0.05
Molds	0.04	0.00	0.10	0.08	0.00	0.05
Potstands	0.09	4.10	0.86	0.33	2.84	1.28
Worked Sherds	0.09	1.11	0.71	0.16	0.08	0.51
Used Sherds	0.27	0.85	0.56	0.65	0.68	0.55
Sherd Disks	0.04	0.00	0.00	0.00	0.00	0.01
Obsidian	306.80	277.10	189.60	132.04	237.80	234.40
Chert	22.20	21.50	14.70	6.99	10.50	16.20
Metates	0.72	0.34	0.30	0.08	0.11	0.37*/0.23**
Manos	0.63	0.26	0.20	0.08	0.00	0.29*/0.15**
Hachas	0.00	0.00	0.00	0.00	0.23	0.03
Pigment Stones	0.13	0.00	0.00	0.00	0.23	0.07

Table 6.23: Summary of artifact class densities associated with maintenance and production activities per m^3 from terminal debris by structure and for the Site Core Plaza Group at PVN647. (* = object per m^3 for all 5 structures. ** = object per m^3 for Structures 16, 17, 18 and 33 only.)

From this single activity category, two forms are distinguished as more daily maintenance practices and formal craft production. Maintenance activities relate to everyday upkeep and the frugal practice of recycling broken objects into other usable implements. Formal production is identified by the yielded products of manufacturing efforts or simply the evidence indicating that activities of production were taking place. Evidence for both forms of activities are present within the Site Core Plaza Group, though in fairly specific locations.

Markers for maintenance activities consist of the presence of worked and used sherds, and potstands identified to be recycled from other pottery vessels. All three of these artifact classes are fashioned from the salvageable remains of fragmented ceramic objects and represent pragmatic maintenance efforts. Worked and used sherds are calculated to be roughly the same density within the Site Core Plaza Group, though used sherds display a pattern of more equal distribution amongst all of the investigated structures. The highest densities of both forms of sherd-tools are observed at Structure 16, though the second-highest are located at dissimilar buildings. Structure 17 is calculated to contain the second highest density of worked sherds, while all other buildings have fairly low densities. The second-highest density of used sherds is observed at Structure 33. Overall, it appears that the intentionally shaped and opportunistically used ceramic implements are present within the group and variations in structure distribution may indicate differing maintenance activities and needs.

Potstand fragments are observed at every studied building, though most noticeably at Structures 16 and 33. Most of the potstand fragments from the complete

assemblage reveal evidence of originally being manufactured as potstands. Therefore, even though some items are being fashioned from broken jar vessels, the majority of potstands are not the result of recycling efforts. No identifiable functional difference exists between potstands that are originally modeled versus those that are shaped from reclaimed jar vessels.

The final observation indicating maintenance and repair efforts is from the ground stone assemblage. The highest densities of both metates and manos are unmistakably from Structure 12, though Structures 17 and 18 also witness calculated densities that are significant. One mano fragment from both Structures 12 and 17 are observed to be fragmented objects that were in the process of being reworked into other tools. The fragment from Structure 12 is identified to be a mano that was likely being reshaped into a hand-held pestle. It is unclear how the fragment from Structure 17 would be repurposed, though manufacturing marks are evident and indicate redesign intent, likely into a smaller mano. Finally, the metate fragment witnessed as construction material in the west basal wall (CU2) from Structure 12 is a very distinct representation of recycling and maintenance activities taking place at the building. Overall, though only slight, markers for frugal maintenance and repurposing activities are occurring within the Site Core Plaza Group and in select locations.

With regard to evidence for formal practices of craft production, the Site Core Plaza Group is observed to exhibit evidence for multiple forms of production, though the scale and intensity of production remains unclear. Select artifact evidence exists for the production of ceramic objects in the form of both pottery and specialty items. In the case

of pottery production efforts, densities of potstands, worked and used sherds, and the identification of a mold in the shape of a small bowl serve as evidence. Potstand vessels are posed to aid in various stages in the process of pottery production; from the shaping of vessels from wet clay to the use as furniture in the firing phase. The majority of analyzed potstand fragments from throughout the Site Core Plaza Group indicate that vessels included clay drippings, indicating use in pottery modeling, and also evidence of being reheated, in the form of baked-on clay and discoloration. These particular attributes signal use for the purpose of pottery production efforts and predominantly at Structures 16 and 33, where the greatest densities are calculated.

Similarly, evidence of worked and used sherds are also indicators of pottery production efforts. These objects are interpreted as tools for the purpose of scraping and modeling of moist clay vessels. As previously stated, the greatest densities of each are recovered from Structure 16. The location of these primary densities corresponds with the location of the greatest density of potstands. Finally, the recovery of a ceramic mold in the shape of a small bowl from Structure 18 serves as an indicator for production within the group. It is unclear if this bowl shape is for utilitarian purposes or for more formal or ceremonial intentions. Regardless, the presence signals a form of manufacture, though the location is not consistent with other lines of evidence.

Lastly, though the densities of select pottery vessel types are high in select locations, namely Structures 16 and 33, evidence of wasters or ceramic middens remain absent. Analyzed pottery samples do not reveal that experimental pottery production activities were taking place within the Site Core Plaza Group. Therefore, it is unclear to

what degree of intensity pottery production is taking place, as evidenced by the densities of potstands, and worked and used sherds. Extensive forms of pottery production is documented to have been conducted immediately across the Rio Chamelecón from PVN647 at the sites of PVN598 and Las Canoas (Stockett, 2005; Ellison 2006). The majority of ceramics at PVN647 are sourced to have originated from these settings and could result in, for example, the presence of potstands with clay drippings indicating vessel modeling activities. Regardless, it is posed that any ceramic production occurring at PVN647 would have been small-scale and carried out predominantly to meet the everyday demands of the residents of the group. Furthermore, the likely limited activities were mostly centered in and around Structures 16 and 33, even if firing facilities were located elsewhere. Though potstands, and worked and used sherds may also serve functional intentions that are unrelated to pottery production, yet yield no visible evidence of such activities, and may be the cause for the high densities.

The second form of ceramic production to consider is that of specialty items. Aside from the mold of a small bowl from Structure 18, additional mold fragments are identified within the group. Structure 12 is observed to contain one partial figurine mold, while Structure 17 contains two fragmented figurine molds. All three are observed to be likely portions of headdresses with earspools or other decorative designs still preserved. Facial features are not preserved, therefore it is unclear if the molds were intended to represent anthropomorphic or zoomorphic characteristics. Overall, identified figurine densities are significant in select locations and possibly support figurine production efforts. However, the majority of figurine fragments recovered from the Site Core Plaza

Group are not witnessed at Structures 12 and 18, but most clearly from the other three investigated buildings. Regardless, of all the analyzed figurine fragments, most depict feet or other lower body portions and a small sample contain headdress decorative portions. Fragments are too eroded and small to conclude if figurine objects correlate with molds. However, it is likely that small-scale figurine production is taking place within the group and for local demands, as most fragments are also observed to be of local pastes. Furthermore, it is unclear if the locations of identified figurine molds represent production settings. Such small items require minimal production space for modeling, are easily mobile, and conceivably produced autonomously and/or capriciously to personalized or made-to-order specifications. However, once again, ceramic production is occurring immediately across the river at PVN598 and Las Canoas and all observed molds may have been the possession of residents at PVN647, though manufacturing practices were carried out at those neighboring locales.

The second form of craft production is related to manufacture or maintenance of chipped stone tools. High densities of obsidian and chert materials signal that knapping or retouching activities are likely occurring within the Site Core Plaza Group. The greatest calculated densities are located at Structures 12 and 16, which are settings already associated with maintenance and/or production activities. However, the chipped stone assemblage from PVN647 has not been fully examined and therefore the classification of processed lithic debris forms are not known. Regardless, the high densities indicate that in the least retouching and recycling of broken items may be

occurring, even if cores and other formal evidence for production efforts in the form of initial knapping stages are absent.

Unlike the chipped stone assemblage from PVN647, all ground stone implements have been analyzed and a third form of craft production is evident from the abundance and observed characteristics of ground stone fragments recovered from the Site Core Plaza Group. The greatest density of both metates and manos is identified from Structure 12 and secondarily from Structures 16 and 17. Each of these three buildings included three metate fragments identified to be unfinished objects, half of which (5 of 9) are observed to be working surfaces in the process of being prepared. From the total of mano fragments recovered (N=25) from the group, only three are identified to be unfinished items (one fragment from Structure 12 and two fragments from Structure 17). As previously described, two mano fragments (one each from Structures 12 and 17) are observed to be in the process of being recycled into a pestle and likely a smaller mano, respectively. Therefore, it appears that production of both metates and manos is occurring within the Site Core Plaza Group and predominantly at Structures 12, 16, and 17. In addition, it is likely that ample processing activities are taking place at these locations, or at least at Structures 12 and 16, as concluded from the high calculated densities from these settings. Output from ground stone implements is not commonly included in the discussion of generalized practices of production, as it is problematic to archaeologically investigate the forms and quantities of resulting “products”. Typically, grounded materials are for consumption or other forms of craft production, in addition to being organic, perishable, and in a pulverized state. Therefore, processed remains are

rarely archaeologically unrecoverable. However, ground stone tools are amongst the most laborious to manufacture, yet the most enduring over time, necessitating infrequent replacement. Therefore, the high densities recorded within the group indicate that great use of these tools was likely taking place. The speculation exists that certain locales, namely Structures 12 and 16, served as communal spaces for group residents to carry out personal grinding activities by means of shared implements, and may not necessarily indicate high production for wholesale purposes.

The final form of production explored within the Site Core Plaza Group is related to textile production. Similar to the yielded materials from grinding activities, textile goods do not withstand preservation over time in this region of the world due to various environmental processes. Regardless, the recovery of four ceramic stamps from the group serve as indicators for textile-related decorative processes. Stamps can conceivably make imprints on a variety of materials, yet have been predominantly linked with textile production, as designs and motifs from preserved stamps do not appear on preserved local pottery. The identified stamps are recovered from Structures 16 and 17, each containing two.

Furthermore, pigment stones are postulated to have been ground down into powder and used as coloring for dyes in textile production. Though, pigment stones are also posed to have been made into dyes for slips and paints used in decorative phases of ceramic production. Conceivably, pigment stones yielded the substances for which stamps were dipped into to make imprints on textiles or other materials. Regardless, three stones are recovered from Structure 12 and an additional two are identified from

Structure 33. Structure 12 is already deemed a locale for chipped stone and ground stone production and processing, while Structure 33 is identified as a potential site for small-scale ceramic producing and overall dwelling. Therefore, the recovery of pigment stones from these setting is not extraordinary. However, no barkbeaters or other tools credibly linked with textile or paper-based manufacture are witnessed from investigated regions of PVN647. Therefore, it is likely that only decorative stages of textiles or other materials by means of stamps and pigment stones occurred within the Site Core Plaza Group. This postulation more soundly corresponds with the likely comprehensive functional intents of Structures 12, 17, and 33.

In general, evidence indicating maintenance or production activities is present within the Site Core Plaza Group but greatly concentrated to specific building locations. Structures identified to be likely specialized settings due overall size and positioning within the group, namely Structures 12 and 17, are revealed to be locales for at least select forms of production. Stone materials are clearly calculated in the greatest densities from Structure 12 and the architectural design of the building is conceivably a suitable location for grinding activities by means of ground stone implements. The extensive terraced area along the plaza facing can accommodate several occupants and stationary activities, simultaneously. However, due to the immediate proximity to the publically accessible main plaza, it remains unclear how appropriate of a setting the structure is for retouching of chipped stone tools, or at least from the prominent plaza facing of the building. The practice of knapping creates undesirable and hazardous debris. However, as the chipped stone materials from PVN647 remain under-examined, the forms of debris

are not known and therefore interpretations regarding the significance of high densities are unsubstantiated. It remains unknown if activities involving either forms of stone tools occurred within the interior of Structure 12, as access into the building is amongst the most restrictive.

Similarly, Structure 17 is associated with a specialized intent due to its scale and location along the main plaza, though the exterior spaces are not as welcoming of occupants nor activities, as compared to Structure 12. The building does not contain comparable densities of stone materials, yet possesses greater densities of utilitarian objects of potstands, and worked and used sherds. In this particular setting, the assemblage of these artifact classes are not interpreted to indicate formal pottery production practices, but likely small-scale maintenance activities involved in the upkeep of the building. Nearly all structures within the group are observed to contain the most opportunistically fashioned used sherds and likely for the purpose of individual repair needs. However, most interestingly is the recovery of two stamp and two figurine mold fragments from the building. All four of these items are quite eroded and unclear if collectively representative of formal production activities. As evidence is severally minimal for the complete process of textile production occurring at PVN647, stamps may have been utilized for decorative purposes only and reserved for the exclusive use by only a few. The architectural design of Structure 17 supports a selective intent with regard to both access to interior and exterior spaces of the building. Therefore, overall, very little in the form of craft production is posed to have taken place in or immediately around Structure 12.

In contrast, settings deemed to be residential in purpose display dissimilar evidence for maintenance and production activities taking place. Structures 18 and 33 are identified with a household intent and both have densities of used sherds that are above the calculated average for the group as whole, yet both have amongst the lowest densities for worked sherds. Domestic settings may possess less formal implements, but greater opportunistically fashioned objects to meet immediate needs. In contrast, Structure 33 is observed to contain a significantly greater density of potstands than Structure 18, though formal pottery production activities are not considered to be the exclusive usage of potstands in general at PVN647. Furthermore, Structure 33 contains the greatest number of recovered pigment stones, though nearly no ground stone tools. Overall, Structure 18 is situated with greater constructed and unconstructed exterior area surrounding the building, while Structure 33 has minimal occupational space. Production activities would be better accommodated around Structure 18, yet the artifact assemblage does not correlate. The bowl mold fragment recovered from Structure 18 is so small that vessels produced from this mold equate with the production needs of other smaller mold-made items, such as figurines and ocarinas. None of these ceramic forms require ample production space and formation can occur just about anywhere. Therefore, likely small-scale yields resulted from this mold and for personal, household intentions.

Structure 16 includes amongst the highest densities of most artifact classes associated with maintenance and production activities, when compared to the Site Core Plaza Group as a whole. This observation is not exceptional, as the building is identified to be predominantly tasked as a storage facility, both architecturally and from the rest of

the artifact assemblage. However, the architectural design also supports that small-scale forms of ceramic production (whether pottery or of specialty items) and stone tool production and processing likely occurred along the exterior regions of the building. Similar to Structure 12, extensive and elevated areas exist along the two most prominent plaza-facing sides of Structure 18. This wrap-around veranda could accommodate multiple occupants and stationary actions at once. Furthermore, the exterior space of Structure 16 could serve in tandem with Structure 12 as a shared locale for grinding activities. However, the interior function of the building is principally reserved as storage space for processing materials, as well as other utilitarian vessels and tools. It is unclear how communal the interior stowage area would have been to all community members.

Overall, the first activity form of daily maintenance is likely occurring everywhere within the Site Core Plaza Group. Regardless of positioning, prominence, or purpose, each building eventually required routine structural maintenance, which likely necessitated an assemblage of commonly used equipment; or a "tool kit" of sorts. Therefore, the presence of worked and used sherds, as well as lithic materials at each structure are likely linked with everyday forms of upkeep and repair, though not exclusively.

Alternatively, other forms of formal production, regardless of intensity, appear to be are more localized to select settings within the group. The exteriors of Structures 12 and 16 are posed to serve as common spaces for primarily grinding activities and likely by means of communally shared implements. Structures 18 and 33 are observed to contain little-to-no ground stone materials, yet are posed to be residences by other lines

of evidence. It is conceivable that residents of the group, or even the site as whole, who did not possess personal property essential for certain processing and production activities, benefited from cooperative locales and pooled tool resources. To be clear though, production practices are not postulated to have been directed or controlled by a centralized group or entity, but at the individual guidance of residents. Furthermore, it is unclear if yielded foodstuffs or materials were also communally stockpiled, for example at Structure 16. Though resource-banking and sharing are not deemed to have been the result of communally accessible processing tools. Regardless, a distinct form of production-related artifacts in these specific locations are linked with a civic purpose.

Forms of craft production associated with other artifact classes, namely potstands, stamps and molds, were focused at Structures 16, 17, 18, and 33, as evidenced by the locational distribution of these particular vessel forms. Potstands likely served in multiple utilitarian and production-related capacities, while stamps and molds are highly mobile and dexterously useful for casting objects as needed. The mold and stamp fragments recovered from Structures 16 and 18 may indicate storage of the objects and/or sites for usage, however, Structure 17 is lesser-so associated with such domestic or utilitarian forms of practice. The significance of mold fragments recovered from Structure 17 is not entirely known, though the presence of stamps may mark the building as a locale of exclusivity.

Conclusions about the Site Core Plaza Group

The preceding discussions have described the artifact assemblages, analyzed the various social practices likely occurring in particular settings, and correlations to construction patterns from all investigated structures within the Site Core Plaza Group. The result has yielded a depiction of an architecturally unique and functionally diverse grouping of structures. Though buildings and activity categories were assessed separately, undoubtedly they functioned in coordination with each other, along with other uninvestigated structures, yet not necessarily uniformly. Select structures supported seemingly greater diversity of activities and social practices, at least as assessed from the preserved and analyzed artifact record.

As a construction order relative to all studied buildings within the Site Core Plaza Group remains undeterminable, it is not known within the Late and Terminal Classic periods how each structure temporally corresponds with regard to founding, design expansion, and functional intent. However, what is deduced from the sampled locations is a mixture of likely municipally purposed structures, coupled with storage and small-scale production sites, and comprehensive settings for household dwelling. Furthermore, even greater divergences, both in regard to architectural and artifact compositions, are observed amongst seemingly similar settings of social practice.

At the outset, the architectural canons observed between the two largest and most prominently position buildings within the group displayed diverging design intentions. The northern, Structure 17 is identified architecturally to be restrictive in access to both internal and external constructed spaces. The building conveys largeness and

prominence, but simultaneously exclusivity and privacy in all structural facets. The recovered and analyzed artifact assemblage from Structure 17 verifies this assessment by revealing little evidence for dwelling or other domestic practices, indicating a likely specialized purpose.

Likewise, Structure 12, positioned immediately to the south of Structure 17, includes the most formalized and compartmentalized summit interior, yet also particularly limiting with regard to access. The exterior of Structure 12, in contrast, is reasoned to be expansive, open, and inclusive to many and accommodating of their activities, by means of a raised veranda area extending the entire length of the northern plaza-facing façade. Analyzed artifacts from Structure 12 indicate that little other than substantial producing of and processing by ground stone implements was taking place at the building. However, the presence of at least once cobble bench indicates a residential purpose. The likely sheltered "front porch" of the structure is identified to be a public locale for individual grinding activities, by means of communally accessible stone tools. Therefore, both Structures 12 and 17 are charged with civic intentions and as settings for engagement with the greater public of the community, but in seemingly unequal ways. Furthermore, architectural evidence supports that Structure 12 was also utilized as a dwelling and likely for those of an elevated status, while it is unclear if Structure 17 also operated as a residence.

An expanded porch region is also witnessed at Structure 16 and similar to Structure 12, is associated with a public-serving intention. Though the formation of the exterior space varies and is in the form of a wrapping veranda, the yielded occupational

area is likely comparable to that of Structure 12. However, Structure 16 is positioned in the northeast corner of the main plaza grouping and is identified with an overall distinct purpose. The plaza-viewable veranda is deemed to be a communal locale for daily processing activities, as evidenced by expansiveness of the setting and the artifact assemblage. However, the interior of the structure is charged with more of a storage intention, rather than residential. While it is likely that the interior of Structure 12 purposed as a private dwelling for the caretakers of the building, given the restrictive access into the summit interior, the limited internal area of Structure 16 reduces the likelihood of the building being anything other than a storehouse. A large majority of the greatest densities of artifacts from the group as a whole are observed from Structure 16. The minimal interior area and high occurrence of nearly all artifact classes supports the purpose of being storage, supplemented with other forms of food-related and small-scale production activities. It is postulated that the high densities of a variety of objects at Structure 16 is due to a functional relationship with neighboring Structure 17. If Structure 17 is deemed to be a locale of specialized activities and potentially limited use by a few for socializing or engagement with the public, all accompanying paraphernalia for feasting and ritual ceremony could conveniently be housed next door.

The architectural assemblage of Structure 16 is amongst the most distinct form recognized from all of PVN647 and is identified as an original and intentional 3-sided building. This construction design is similar to that observed with Structures 18 and 33. All three are 3-sided buildings and likely originally functioned as different spaces than their final phase purposes. Structure 18 is also immediately on the main plaza, yet in the

northwest region and does not include any major architectural extensions along plaza-visible facings. Expansion appears to be desired along a conspicuous facing from the main plaza, though possibly more visible from a hypothesized access route into and out of the main plaza from the northwest region. The artifact assemblage from the building supports an overall greater private intention and includes densities analogous with a residential purpose, even though architectural evidence in the form of built-in furniture is not present. The internal area is moderate in size, yet undivided, and therefore a variety of food-related, ceremonial, and maintenance activities are possible on household-scales of intensity and frequency. It is not inconceivable that evidence for sleeping practices is not present because other means of dwelling were formed from perishable materials. The high quality of the raised platform, once sealed, could support hanging hammocks from the rafters of the pole and thatch superstructure. Overall, Structure 18 appears to be amongst the most autonomous and self-sustainable household settings from all investigated locations within the Site Core Plaza Group. Though, evidence for groundstone implements is noticeably slight and residents of Structure 18 may take part in the communal area and grounding tools located at Structures 12 and 16.

The final 3-sided building of Structure 33 is located in the southeastern region of the Site Core Plaza Group and witnesses the best constructed fourth wall, once it is added. Also associated with a residential purpose, once sealed into a 4-sided building, Structure 33 exhibits significant densities of nearly all artifact classes, save for select censer vessel forms and most noticeably ground stone implements. It would appear that the occupants of the building engaged regularly in food-related activities, household

rituals and especially ancestor venerations, and likely small-scale forms of ceramic and chipped stone tool production. Similar to Structure 18, it is postulated that residents of Structure 33 made use of communally shared grinding implements located at Structures 12 and 16, yet transported back to and housed processed foodstuffs and other materials within the building. Furthermore, the high densities of select utilitarian objects suggest that the residents likely engaged in shared, daily practices of dwelling with other neighboring buildings. Structure 33 is deemed to have been a supplementary edifice to Structure 14 for the purpose of storage or as a work space when originally amassed as only a 3-sided edifice. Therefore, once expanded and occupied as a residence, it is plausible that the inhabitants maintained social relations and obligations, as Structure 33 transitioned into being an additional component within a larger household organization of structures. This organization of shared social practices may be with other adjacent buildings deemed to be members of the smaller patio group. However, as no other structures within this region have been formally investigated, this interpretation remains completely speculative.

Overall, an assortment of vernacular architectural attributes are revealed from investigations of the Site Core Plaza Group, and select characteristics are observed to repeat in more than one location. Furthermore, analyzed artifact assemblages complement certain structure function interpretations, based from construction designs. However, a comprehensive understanding of the social dynamics of the group as a whole remain somewhat fragmented. From the standpoint of the author, the sampled structures have successfully achieved the goal of this investigative project by serving as informative

representations, which highlight the variety of construction designs and vernacular patterns occurring within this region of the Middle Chamelecón-Cacaulapa. However, the current sample of investigated buildings from the Site Core Plaza Group is not recognized to be sufficient in order to discern a most comprehensive depiction of social dynamics and site organization principles. Based from architectural grandness and artifact assemblages, select buildings are posed to have witnessed elevated status positions over others, namely those of Structures 12 and 17 over the residents of Structures 18 and 33. However, it is unclear how the occupants of Structures 18 and 33 were positioned with respect to each other. Therefore, interpretations regarding the comprehensive cohesiveness of the group are currently unachievable. As this was not the primary research aim, this is not prohibitive to describing and analyzing the extent of vernacular architectural canons and deciphering functional intent of those construction attributes for comparable purposes. Though, variations in social positioning are fully recognized to factor into observations of vernacular distinctions.

Southeast Plaza Group

The Southeast Plaza Group comprises the second grouping of structures intensely investigated at PVN647, resulting in three individual structures being fully excavated (Structure 6, 7, and 13). The total calculation of excavated matrix from this setting is approximately 39.6m^3. (Approximately 37m^3 is identified as terminal debris context, while 2.3m^3 is identified as fill and 0.3m^3 is identified as sterile soil.) Similar to the Site Core Plaza Group, the artifact assemblage from the Southeast Plaza Group includes fragments from pottery, chipped and ground stone implements, various non-pottery ceramics, and slight amounts of faunal and floral remains (**Table 6.24)**. However, artifact analysis did not identify any ornamental artifact classes, such as pendants, beads, or earspools from the investigated structures within the Southeast Plaza Group.

Artifact Class	Artifacts per m^3 of Terminal Debris from Southeast Plaza Group
Bowls	6.63
Jars	47.73
Plates	0.16
Comals	0.03
Candeleros	0.16
Figurines	0.27
Ocarinas	0.19
Complex Censers	0.08
Modeled Censers	0.05
Scored Censer Lids	0.08
Pierced Ladle Censers	0.16
Stamps	0.00
Molds	0.03
Potstands	0.49
Worked Sherds	0.43
Used Sherds	0.22
Sherd Disks	0.05
Obsidian	45.47
Chert	4.45
Metates	0.03
Manos	0.08
Celts	0.00
Pigment Stones	0.00
Bones	0.03
Jute	0.08
Bajareque	18.63
Pendants	0.00
Beads	0.00
Earspools	0.00
Other	0.00

Table 6.24: Summary of artifact density by artifact class per m^3 of terminal debris context from all investigated structures from the Southeast Plaza Group at PVN647.

The artifact classes deemed as fragments from pottery vessels (namely bowls and jars) are amongst the highest densities of artifacts within the Southeast Plaza Group. While relatively dated pottery fragments are concomitant with Middle to Late Preclassic period paste groups, forms, and styles, the vast majority are consistent with Late and Terminal Classic periods. However, pottery densities will be presented based upon both

relatively dated temporal identifications. It is not clear why densities of Preclassic vessel types are low within the Southeast Plaza Group. One possibility is that the group was established later than the Site Core Plaza Group, where greater densities of Preclassic pottery fragments are identified, and less material was available for fostering settlement in the Southeast region of PVN47. Additionally, the Southeast Plaza Group is situated at a further distance from the Middle Preclassic mound of the East Group than the Site Core Plaza Group. Therefore, it is likely that less debris from this region was transferred in the founding of the Southeast Plaza Group due to a disinclination to transport it a slightly greater distance.

Finally, while fill context is identified from excavations of the Southeast Plaza Group, it is only observed at Structures 6 and 7. Yet, since a very small sample of pottery fragments were analyzed from fill contexts, only densities of pottery classes from terminal debris contexts will be discussed.

	Total Pottery Processed	Total Pottery Analyzed	Percent Analyzed
Structure 6	11,411	897	7.9%
Structure 7	10,551	554	5.3%
Structure 13	6,710	616	9.2%
Southeast Plaza Group	**28,672**	**2,067**	**7.2%**

Table 6.25: Summary of total pottery processed and analyzed from each structure from the Southeast Plaza Group.

Above all, it is critical to underscore that the estimated percent of analyzed pottery fragments from the Southeast Plaza Group is approximately a 7.2% sample (**Table 6.25**). Furthermore, the distribution of analyzed pottery across all 3 investigated

structures from the group is not proportionate and none experienced the minimum goal of a 10% sample. This is predominantly the result of investigations of the Southeast Plaza Group being initiated later in the excavation season and therefore recovered artifacts being processed later than materials generated from the Site Core Plaza Group. Severe time constraints limited the quantity and locational distribution of analyzed pottery generated from the Southeast Plaza Group as a whole.

	Total excavated matrix in m^3	Total pottery processed per m^3	Total pottery analyzed per m^3
Structure 6	19.38	588.80	46.28
Structure 7	13	811.62	42.62
Structure 13	7.3	919.18	84.38
Southeast Plaza Group	**39.68**	**722.58**	**52.92**

Table 6.26: Summary of pottery processed and analyzed per m^3 of total excavated matrix for each structure from the Southeast Plaza Group.

Though the overall percentages of analyzed pottery from structures in the Southeast Plaza Group are low, when the amount of total excavated matrix from each structure is considered, density proportions have correlations to analyzed percentages **(Table 6.26).**

	Total excavated terminal debris in m^3	Total pottery processed per m^3 from terminal debris	Total pottery analyzed per m^3 from terminal debris
Structure 6	18.18	4,397.21	49.33
Structure 7	11.6	5,398.42	43.97
Structure 13	7.3	3,714.29	84.38
Southeast Plaza Group	**37.08**	**13,509.92**	**177.68**

Table 6.27: Summary of pottery processed and analyzed per m^3 of terminal debris only for each structure from the Southeast Plaza Group.

Additionally, when the total amount of excavated matrix identified as terminal debris is considered, pottery densities are also roughly proportionate **(Table 6.27).** Structure 33 is identified to contain the least amount of processed pottery, yet experienced the greatest percentage of analysis and also witnesses the greatest calculated density of pottery from all three of the researched buildings. However, as the samples of analyzed pottery from Structures 6 and 7 are markedly lower than the 10% sample goal, the density of analyzed pottery are roughly equal.

Overall, the following inquiry is recognized to be based upon a statistically problematic sample size of analyzed pottery from each structure within the Southeast Plaza Group. Therefore, it is admitted that interpretations of structure function(s) may be inaccurate. However, since all other ceramic artifact classes from each structure witnessed complete analysis, it is only conclusions posed from analyzed pottery vessel fragments that may be misleading.

		MC-C (Las Canoas/PVN598)	Other PVN/PVC Settings	Imports
Structure 6	Terminal Debris	93.20%	6.80%	0.00%
Structure 7	Terminal Debris	95.69%	4.31%	0.00%
	Fill	95.45%	4.55%	0.00%
Structure 13	Terminal Debris	84.42%	15.58%	0.00
Southeast Patio Group	**Terminal Debris**	**91.24%**	**8.76%**	**0.00%**

Table 6.28: Summary in percentage of analyzed pottery from terminal debris (and fill for Structure 7) for each structure within the Southeast Plaza Group, representing the origin of pottery manufacture, distinguished by the Middle Chamelecón-Cacaulapa region, other Naco and Cacaulapa Valley settings, and imports, which are from beyond these regions.

Lastly, the origin of manufacture of analyzed pottery from the Southeast Plaza Group is largely sourced to be from the Middle Chamelecón-Cacaulapa region **(Figure 6.28**). Specifically, from the sites of PVN598 and Las Canoas (PVN202). Structure 7 is the only building determined to include soil fill and the proportions of sourced ceramics appear to be equivalent between these two contexts. Additionally, although Structure 13 is calculated to include the least amount of analyzed pottery, the largest proportion of pottery from other regions of the Naco and Cacaulapa Valley systems are observed from this particular building. This observation is informative for understanding structure functions and the overall cohesiveness of the group. Finally, no imports are identified from the analyzed sample. Therefore, as the overwhelming amount of analyzed pottery is viewed to be from the most local of pottery-producing locales, the residents of this patio group are inferred to have minimal interaction or trade networks outside of the immediate

river system. Furthermore, the implication of minimal contact beyond the immediate region suggest the residents are of a lower status than the occupants of the Site Core Plaza Group, as origins of pottery are calculated to be more diverse from that sector of PVN647.

Structure 6

Structure 6 is positioned as the northern-most building within the Southeast Plaza Group and included an approximate total of 19.4m^3 of excavated matrix. Approximately 18.18m^3 of this matrix is identified as terminal debris, while the remaining 1.2m^3 is deemed as intentional fill context. Though fill is identified at Structure 6, this discussion does not include a summary of pottery fragments recovered from this specific context. Additionally, sterile soil is identified both within and outside of Structure 6, however, due to excavation procedures, no excavated lots are witnessed to be free from cultural material. Therefore, no measured depositional matrix is identified to be sterile.

Pottery from Structure 6

As articulated above, pottery vessel fragments were recovered from both terminal debris and fill depositional contexts at Structure 6. A total of approximately 458 pottery fragments were processed from excavation lots identified as fill, however, none were analyzed. Therefore, pottery vessel types and potential relatively-dated temporal variations remain unknown. Therefore, the following presentation only includes the analysis of pottery fragments from terminal debris. As relatively-dated pottery vessel variations are observed from the sample analyzed from terminal debris, the following

discussion includes both densities of PreClassic vessel types and fragment types identified to be from Late and Terminal Classic periods.

Pottery type	Per m^3 of Terminal Debris from Structure 6		Per m^3 of Terminal Debris from Southeast Plaza Group	
	Preclassic pottery	**Late/Terminal Classic** pottery	**Preclassic** pottery	**Late/Terminal Classic** pottery
Bowls	0.28	7.81	0.32	6.31
Jars	1.16	39.93	1.40	46.33
Plates	0.00	0.11	0.00	0.16
Comals	0.00	0.06	0.00	0.03

Table 6.29: Summary of pottery fragment types per m^3 of terminal debris by temporal identification from Structure 6 and the Southeast Plaza Group from PVN647.

Overall, pottery fragment densities from terminal debris contexts from the Southeast Plaza Group are quite moderate. However, vessel types identified to be of Preclassic pottery are markedly low and include no evidence of plate and comal fragments. Calculated densities of pottery from Structure 6 are fairly aligned with the calculated densities from the rest of the group, in reference to both vessel type and temporal identification (**Table 6.29).** The density of Preclassic pottery from terminal debris is only slightly less than the calculated density of Preclassic fragments from all investigated buildings within the Southeast Plaza Group. Though pottery fragments from identified fill contexts at Structure 6 are not analyzed, it is possible that the observed Preclassic types are the result of excavation procedures and a mixture of fill and terminal debris contexts. The sub-operations in which the Preclassic types are observed from include the deepest excavations into the center of the structure and may align with the earliest sub-structure construction units. However, the edifice that is labeled Structure 6 is not deemed to have been erected prior to the Late Classic. Any evidence of Preclassic

pottery at Structure 6 is likely the result of its repurposing as fill construction material for the founding of the building and only possibly marking an early episode of activity in the region.

Late and Terminal Classic pottery fragment densities are observed to be greater than the earlier styles, yet in comparable proportions to the rest of the group. Jar vessel fragments occur in the greatest density, with bowl fragments occurring in the second greatest density. These densities signal that moderate scales of storage and food preparation and serving were occurring in and around Structure 6. Furthermore, the calculated density of comal fragments from Structure 6 is the lowest of all vessel types, however, twice the calculated density for the group as a whole. Comals are charged as vessels for cooking and serve as indicators for cooking activities. However, the frequency of identified comal fragments is significant as the only, singular comal fragment recovered from all investigations within the Southeast Plaza Group is located at Structure 6. Therefore, the more interesting inquiry relates to why essentially no comal vessel fragments occurred within the group and how else was food cooked? Finally, plates are calculated with an equivalent density to the rest of the group and further support that some level of serving and consumption likely occurred within or around the building. Overall, the density of pottery vessels are quite moderate to low and indicate that likely household-scales of activities respective to each vessel type was taking place at Structure 6.

Artifact Class	Object total from Structure 6	Object per m^3 from Structure 6	Object per m^3 from Southeast Plaza Group
Candeleros	4	0.22	0.16
Figurines	7	0.39	0.27
Ocarinas	1	0.06	0.05
Complex Censers	2	0.11	0.08
Modeled Censers	1	0.06	0.05
Scored Censer Lids	1	0.06	0.08
Pierced Ladle Censers	0	0.00	0.16
Stamps	0	0.00	0.00
Molds	0	0.00	0.03
Potstands	12	0.66	0.49
Worked Sherds	7	0.39	0.43
Used Sherds	0	0.00	0.22
Sherd Disks	2	0.11	0.05
Obsidian	768	42.24	45.47
Chert	70	3.85	4.45
Metates	0	0.00	0.03
Manos	2	0.11	0.08
Bone	1	0.06	0.03
Jute	3	0.17	0.08
Bajareque	557	30.64	18.64

Table 6.30: All non-pottery ceramics, lithic, and flora and fauna artifact totals and densities per m^3 from Structure 6 and the Southeast Plaza Group at PVN647. Terminal debris context only.

The calculated densities for all other non-pottery artifacts from the Southeast Plaza Group occur in noticeably low densities, save for obsidian, chert, and bajareque, which occur in moderate frequencies (**Table 6.30**). Structure 6 witnesses the greatest variation in recovered artifacts, compared to Structures 7 and 13. Furthermore, several non-pottery ceramic artifact classes occur in slightly higher densities at Structure 6 than compared to the group as whole. These include: candeleros, figurines, complex censers, potstands, and sherd disks, which are only identified at Structure 6. Densities of chipped and groundstone implements are roughly equivalent to those calculated from the rest of the group, except for manos. Finally, bone and jute remains are only present at Structure 6 and nowhere else in the Southeast Plaza Group. Bajareque occurs in a density nearly

twice that of the rest of the group; this is likely due to the overall size and longer construction history of the building.

Non-Pottery Ceramic Artifacts from Structure 6

Due to the considerable low densities of all non-pottery ceramic artifacts from all of the Southeast Plaza Group and also from Structure 6, it is challenging to decipher a range of possible activities that were taking place within the area. Structure 6 observed the greatest density of candeleros and figurines, though the overall low densities may indicate that ceremonial practices were occurring, however minimal. Likewise, the presence of such artifact classes signals that lighting was needed from the candeleros and that the figurines were playthings.

Furthermore, the low occurrence of censer vessel forms can be understood in two functional ways. Select censer forms, namely scored censer lids and pierced ladle censers, can be associated with either ritualistic purposes but also practical, utilitarian uses, such as cooking. Recovered from Structure 6, scored censer lids are calculated at a density less than the rest of the group, while no pierced ladle censers are identified at all. The remaining censer forms of complex and modeled occur in densities slightly greater than the rest of the group, and with complex censers in the highest frequency (N=2). Both of these forms are commonly linked with more ceremonial practices than utilitarian, however, due to their low densities, the significance of their presence remains unknown.

Figure 6.16: One of the two sherd disks from Structure 6 of the Southeast Plaza Group at PVN647. Also see **Figure 6.8.**

Of the more all-purpose non-pottery ceramics, Structure 6 is recorded to have the greatest density of potstands and sherd disks (**Figure 6.16**). Potstands have been most greatly associated with ceramic production activities, yet could also purpose as supports for round-bottomed ceramic vessels, specifically those associated with storage or possibly food cooking intentions. As only one comal fragment is identified from Structure 6, it is possible that potstands were utilized as stabilizers for other vessels for cooking. A solid functional purpose for sherd disks is not well known, however, the largest quantity (N=2) from all of PVN647 and the only such objects occurring within the Southeast Plaza Group are located at Structure 6. Sherd disks are quite rare and unclear as to serving as light weights for weaving, ornamental jewelry, or simply opportunistic objects, which are fashioned indiscriminately.

Lastly, the high density of bajareque recovered from Structure 6 is likely associated with the scale and relative age of the building, as compared to Structures 7 and 13. Structure 6 is identified to contain at least four early sub-structure wall constructions and at depths deeper than any formal architectural attributes from either of the other two investigated buildings within the group. Furthermore, Structure 6 contains more identified construction units, which likely supported its perishable superstructure. Finally, a bajareque (earthen) surface is identified along the southern, plaza facing exterior of the building and it is possible that materials from this context are considered with all other bajareque from the building. Regardless, Structure 6 likely possessed walls made from bajareque that were greater in number and quality over the course of its construction history, as compared to the other buildings within the Southeast Plaza Group. These attributes would yield a high recoverable density of bajareque from the building. However, it is unclear why Structure 6 had a considerably greater amount of bajareque compared with all of PVN647. Select structures from the Site Core Plaza Group are larger in size and required the excavation of more matrix during investigations, yet possessed nearly half the amount of preserved bajareque witnessed from Structure 6.

Stone Artifacts from Structure 6

Chipped stone densities from Structure 6 are roughly equal to those calculated for all of the Southeast Plaza Group. The overall lower densities of obsidian and chert indicate that knapping activities likely did not occur in or near the building, if at all in the group. Though the various forms of lithic debris are not known, it is likely that the uses of obsidian and chert at Structure 6 match the necessity for these artifact types at

Structures 7 and 13. Furthermore, the lower densities serve to indicate that minimal activities involving these items occurred and mostly in commonplace, daily circumstances, therefore, only a few objects would suffice.

Similarly, ground stone fragments occur in extraordinarily low densities within the South Plaza Group and specifically at Structure 6. However, the greatest density and highest frequency (N=2) of mano artifacts are recovered from Structure 6. One object is observed to be complete and possesses one working surface. It is posed to be a finished object, yet displays evidence of only slight use. The second mano is a fragment with two preserved working surfaces. The object is finished but appears to be in the process of being recycled into something else. A frequency of two manos is not uncommon, given the size and construction history of Structure 6 and its likely purpose as a residence. However, it is unclear how the manos were being used when no metates or other grinding objects were recovered from Structure 6. It is possible that grinding of food or other dry materials was being done elsewhere, yet the need for personal manos was required.

Floral, Faunal, and all other Artifact Classes from Structure 6

The densities of all floral and faunal artifact classes from Structure 6 are nearly double the calculated densities for all of the Southeast Plaza Group. Furthermore, the only remains of bone and jute are recovered from Structure 6. However, the low densities of each of these artifact classes is due to their low frequencies (bone N=1 and jute N=3). Animal bone remains and jute are common markers for food processing, however slight in density. As Structure 6 is deemed to be a residential locale, the remains for processed foodstuffs is not extraordinary.

Discussion of Artifacts from Structure 6

In summary, the artifact assemblage from Structure 6 indicate that a variety of activities may have taken place, however on low-scale levels of production. The relatively high density of jars indicates practices of storage of supplies. However, it is also possible that these vessel forms were utilized for cooking purposes and round-bottomed jars were used in tandem with potstands over fires. Likewise, complex censers could serve a double-purpose as daily cookware and also ceremonial functions, as needed. Coupled with the presence, albeit low density of bowls, it is likely that small-scale or household-levels of food processing, cooking, consuming, and storage were occurring in and around Structure 6. Additionally, the low densities of other utilitarian artifact forms, namely worked sherds, manos, and possibly sherd disks mark activities of a day-to-day regularity. The sum of these items and their relative abundance at Structure 6 is quite indicative of a household setting, which included a variety of activities relating to everyday living and in a corresponding equitable intensity of output.

When the architectural design and construction history of Structure 6 are considered along with the analyzed artifact assemblage, the proposition of the building serving as a residence in a household complex is further strengthened. Structure 6 undoubtedly undergoes the greatest lateral and contiguous architectural expansion when compared to all investigated buildings from the group and therefore displays the soundest evidence for operating as a residence that was persistently altered to meet shifting structural demands. The interior summit space is observed to remain an open and an undivided space, while the exterior facings witness multiple episodes of amendments to

elongate occupational regions. The northern and western exteriors contained raised platform additions, which established likely covered settings for stationary utilitarian activities but also observance of the shared patio and of a likely entrance into the plaza from the northwest. Additionally, it is posed that the eastern and southeastern exterior areas of Structure 6 were occupied and shared with the residents and/or purpose of neighboring Structure 7. Though only surface-level construction units are identified in this setting, it is likely that interrelated activities were occurring, which required only minimal architectural elements. This exterior setting would be suitable for small-scale, outdoor activities that correspond with the artifact assemblage from the building, namely cooking, eating, and/or other daily maintenance tasks.

Finally, if Structure 6 is not only considered to be a residential setting but only one building in a household complex of structures, the low density of the artifact assemblage may reflect this communal relationship. The Southeast Plaza Group is comprised of only five individual structures and likely represents a collective grouping of inhabitants and activities. Each structure held its own significance for certain tasks, which operated in unison to achieve all of the social expectations and necessities of a household group. Therefore, the entirety of corresponding artifact vessels and tools would be distributed throughout the group of buildings. Structure 6 is identified to contain a variety of artifact classes, yet in low densities if considering the building operated as a standalone facility for supporting only its occupants. However, when Structure 6 is viewed as one element in a cooperative system with other buildings and

residents, the recovered artifact assemblage is representative of the selective and small-scale activities occurring in only a sampled setting of a larger household complex.

Structure 7

Positioned in the eastern region of the Southeast Plaza Group, Structure 7 experienced the second-largest investigative effort in the group and included approximately 13m^3 of excavated matrix. Of this, approximately 11.6m^3 is identified as terminal debris, 1.1m^3 is identified as fill, and the remaining 0.3m^3 is identified as sterile context. While investigations of the other two buildings from the Southeast Plaza Group identified a cultural-free soil context associated with their respective examinations, Structure 7 is the only locale to include an excavation lot witnessed to be completely devoid of cultural material and therefore able to be calculated as a sterile context.

Pottery from Structure 7

Processed pottery artifacts from Structure 7 received the least attention with regard to analysis. Only a 5.3% sample of processed pottery from the building has been analyzed, to date. Therefore, interpretations regarding the range of activities and overall structural intention of Structure 7 remain circumspect. However, of the seven sub-operations utilized to examine the building, pottery samples from all but two have been analyzed. However, not each sub-operation has undergone equal analysis that is proportional to the total processed count from each sub-operation.

Furthermore, from the 1.1m^3 context identified as fill, approximately 843 pottery fragments have been processed and of these only 44 have been analyzed. Therefore, the

results of pottery identified from fill are not highlighted in this discussion, as this sample is not statistically significant. However, all of the 44 analyzed pottery fragments are identified to align with styles and paste types dating to Late and Terminal Classic periods.

The following discussion of analyzed pottery from Structure 7 is representative of fragments collected from terminal debris only. As variations with regard to temporal significance are identified, analysis of pottery is presented by the relatively-dated assignments of either Preclassic or Late and Terminal Classic designations.

Pottery type	**Per m^3 of Terminal Debris from Structure 7**		**Per m^3 of Terminal Debris from Southeast Plaza Group**	
	Preclassic pottery	**Late/Terminal Classic** pottery	**Preclassic** pottery	**Late/Terminal Classic** pottery
Bowls	0.60	4.31	0.32	6.31
Jars	2.67	36.12	1.40	46.33
Plates	0.00	0.26	0.00	0.16
Comals	0.00	0.06	0.00	0.03

Table 6.31: Summary of pottery fragment types per m^3 of terminal debris by temporal identification from Structure 7 and the Southeast Plaza Group from PVN647.

Even though the least amount of processed pottery collected from any building within the Southeast Plaza Group has been analyzed from Structure 7, the results reveal that the greatest densities of Preclassic pottery is recovered from the building (**Table 6.31**). The calculated densities from Preclassic jar and bowl vessel fragments are nearly twice the density calculated for the group as whole. The sub-operations in which the Preclassic fragments are predominantly located also include some of the earliest sub-structure construction units of the building and near excavation lots labeled as fill context. It is likely that the relatively high density of Preclassic vessel fragments are the

result of the earliest forms of occupation in the region where Structure 7 is later formally founded.

The majority of analyzed pottery from terminal debris contexts are identified to be Late and Terminal Classic types and varieties. Late and Terminal Classic bowls and jars are calculated at densities slightly less than those calculated for all of the Southeast Plaza Group. However, the density of plates is slightly greater than the rest of the group, while comals are not identified from all from the building. Based upon these densities alone, is it possible that food processing, storage, and consumption are occurring in and around Structure 7. Jar vessels may be utilized in cooking practices as well, as this would account for a lack of comal fragments. However, as the overall percentage of analyzed pottery from the building is so low, the meaning of these densities and their respective proportions remain inconclusive.

Artifact Class	Object total from Structure 7	Object per m^3 from Structure 7	Object per m^3 from Southeast Plaza Group
Candeleros	2	0.17	0.16
Figurines	2	0.17	0.27
Ocarinas	1	0.09	0.05
Complex Censers	0	0.00	0.08
Modeled Censers	1	0.09	0.05
Scored Censer Lids	2	0.17	0.08
Pierced Ladle Censers	1	0.09	0.16
Stamps	0	0.00	0.00
Molds	0	0.00	0.03
Potstands	3	0.26	0.49
Worked Sherds	4	0.35	0.43
Used Sherds	3	0.26	0.22
Sherd Disks	0	0.00	0.05
Obsidian	696	60.00	45.47
Chert	62	5.35	4.45
Metates	1	0.09	0.03
Manos	1	0.09	0.08
Bone	0	0.00	0.03
Jute	0	0.00	0.08
Bajareque	108	9.31	18.64

Table 6.32: All non-pottery ceramics, lithic, and flora and fauna artifact totals and densities per m^3 from Structure 7 and the Southeast Plaza Group at PVN647. Terminal debris context only.

Interpretations regarding activities and building function of Structure 7 based from all other non-pottery artifact classes hold greater statistical significance, as all processed items are analyzed, save for obsidian, chert, and bajareque. However, the overall densities of artifact classes are fairly low and most are similar to or less than the corresponding calculated densities for the rest of the Southeast Plaza Group (**Table 6.32**). Scored censer lid vessel forms are observed to be the only non-pottery ceramic artifact class to have a calculated density that is greater than calculated for the group as a whole. Modeled censers, ocarinas, and used sherds also witness densities that are only slightly greater than the group, however, Structure 7 is one of the only two buildings within the group to contain evidence for each of these artifact types. Interestingly, all artifact

classes identified to be either chipped or groundstone have densities greater than the rest of the group. Bajareque is the only other artifact class that is identified from Structure 7 and no other floral or faunal remains are documented to be present.

Non-Pottery Ceramic Artifacts from Structure 7

Evidence for every non-pottery ceramic vessel form is present at Structure 7, except for complex censers, molds, and sherd disks. (Stamps are not witnessed at Structure 7, however nowhere else from the Southeast Plaza Group, as well.) Though nearly all forms are present, they are in low densities. Scored censer lid fragments comprise the only vessel form that not only exceeds the density calculated for all of the group but is also the highest from all three investigated structures. Modeled censers are the only other censer form to be witnessed from the building in a density only slightly greater than the group as a whole. It is possible these two censer forms were utilized mutually, however, the scored lids could also be linked with the relatively high density of Late and Terminal Classic jar vessel fragments. Modeled censers at Structure 7 may be multipurpose and used in cooking activities but also performed as ceremonial vessels, as needed. Regardless, it is important to highlight the frequency of each of these censer forms, as each are very low (modeled censers: N=1; and scored censer lids: N=2). Therefore, these postulations are offered only very cautiously.

Additionally, though the density of used sherds is only slightly greater than that calculated for all of the Southeast Plaza Group, the relative density is quite low. A total of 3 used sherds are identified from the building. The functional purpose of these objects is not definitive and can be used in an array of utilitarian activities. Used sherds are the

most opportunistically fashioned non-pottery ceramic form and challenging to interpret, given the low densities of complementary artifact types, namely potstands and worked sherds.

Bajareque is the only other artifact type recovered from Structure 7 that is not identified as ceramic or stone. Furthermore, it is calculated at a density that is nearly half of the density for the group as whole. The architectural design and construction history of the building is likely the reason for this moderate density. Structure 7 is identified to have few wall-supporting construction units over the course of its occupational history. Furthermore, construction units deemed to have supported perishable waddle and daub walls are observed to be quite rudimentary in construction quality. Therefore, the bajareque walls that were likely established on top were not very robust, utilizing only moderate amounts of bajareque.

Stone Artifacts from Structure 7

Unlike most of the non-pottery ceramic artifact forms, all stone artifact classes from Structure 7 are calculated at densities greater than those for all of the Southeast Plaza Group. Obsidian and chert account for the highest densities of all three investigated buildings from the group. Though, obsidian and chert objects from PVN647 remain under-evaluated and results are not known. Therefore, the variety and quantity of differing forms of debitage from Structure 7 are not discussed here. However, the high densities of both forms of chipped stone indicate that use of these objects likely occurred in and around the building. More specifically, use of these items likely occurred in exterior areas as the majority of chipped stone fragments are concentrated in sub-

operations along the north, east, and south regions of the building. These locations are not extraordinary, as they are all deemed to be off-plaza regions of Structure 7.

Ground stone items are also calculated at densities that are greater than the group as a whole. Metates account for the highest ground stone density for all of the group. However, the relatively low densities of these object is the result of their low frequencies. Only one fragment of each are recorded at Structure 7. The metate fragment is recorded to have a portion of the working surface preserved, along with two legs, though the object is deemed to be unfinished and not used. The mano fragment is identified as be a finished object and have at least one working surface preserved. If Structure 7 is understood to have functioned as a residence, the presence of fragments from one mano and metate are not exceptional. A household assemblage likely would not necessitate multiples of these particular items. Therefore, it is probably that processing of foodstuffs and other materials was taking place in and around Structure 7.

Discussion of Artifacts from Structure 7

The overall assessment of the artifact assemblage from Structure 7 indicates that a variety of activities were likely carried out in and around the building, however, none deemed to be unrelated to a typical household functioning. It has been previously postulated that the overall purpose of Structure 7 certainly shifted over time, as the architectural design of the building witnessed compounding additions. This observation, coupled with the limited analysis of pottery artifacts complicate a definitive understanding of structure intention. Yet the near complete analysis of all other non-pottery artifact classes aids in gauging how Structure 7 likely harmonized both structural

and socially with the other buildings and residents within the Southeast Plaza Group.

The statistically, and therefore comparatively, low frequency of analyzed ceramic pottery artifacts obscure the evaluation of variations in activities occurring in and around Structure 7, as they are linked to these particular ceramic artifact classes. However, of the analyzed pottery, it is likely that low-scale levels of food processing, cooking, storage, and consuming occurred in association with the building. Jars and bowls, in coordination with modeled and pierced ladle censers, scored censer lids, and manos and metates collectively indicate these forms of subsistence practices occurred at Structure 7. Furthermore, these are all activities associated with common household practices and likely in proportions consistent with meeting the needs of a family and possibly extended family.

The relatively low densities of all other non-pottery artifacts indicate that only what the residents needed, was in their possession. A typical household setting relies upon basic necessities for subsistence and social reproduction on a daily basis. Artifacts associated with greater ritualistic purposes or in frequencies/densities consistent with likely high occurrences of these activities are not customarily recovered from household contexts. Therefore, the low densities of figurines, ocarinas, and complex censers may indicate that ceremonial practices linked with these items either did not take place at Structure 7, or occurred as smaller and more private events. Candeleros are also tied to ritualistic burning of incense and other smoke-producing substances. Though candeleros are observed, the frequency of these items (N=2) impacts the significance of their presence at Structure 7. Additionally, these fragments are identified to be multiples from

the same object and therefore the calculated density of candeleros from Structure 7 is more aligned with the average occurrence of these objects for the rest of the group. This would indicate that very little incense burning or illumination by means of a candelero was occurring in and around the building.

The slightly higher densities of obsidian and chert are markers for greater use or production of tools made from these particular materials at Structure 7, than at any other investigated building from the group. It is possible that slight manufacturing or retouching of chipped stone tools was occurring around the building, and predominantly in off-plaza regions. However, it is unclear if these activities are associated with earlier structural designs of the building, or later when architectural extensions are appended. In order to fully assess the intention of Structure 7 the architectural history needs to be examined in coordination with the artifact assemblage.

As previously mentioned, Structure 7 is deemed to be an originally 3-sided building and over time a fourth wall is added. However, the relative amount of time that Structure 7 operated as a 3-sided edifice is not determinable. Furthermore, it is not known what activities predominantly occurred while it remained an open-faced structure. The possibility exists that the building operated as a work area, as this could account for the greater density of chipped stone materials and other utilitarian items, such as used and worked sherds. The open facing of the building is located along the eastern or off-plaza facing. Activities involving chipped stone and other ceramic tools could take place in this region and any generated debris would not clutter or pose a hazard to the open patio. Furthermore, the open facing is directed toward the downward slope to the seasonal

quebrada and is positioned as a convenient location to direct debris or garbage away from the group. (Archaeological survey investigations did not occur in the *quebrada* region and therefore it is not known if cultural debris is located in this area.) Finally, the off-plaza region is also adequate for cooking activities, as evidence from the artifact assemblage indicate these likely occurred near Structure 7.

Additionally, the western or plaza-facing exterior of Structure 7 witnessed the addition of an elevated terrace, complete with a formal step up to the raised area. This area was likely covered with a perishable superstructure and could accommodate a moderate number of occupants and stationary activities. Finally, the northern facing of Structure 7 is the region that is observed to architecturally articulate with Structure 6. Though it is not known what activities occurred in this region nor how private from view it might have been from the open patio area, it is certain to have been utilized for shared purposes between the two buildings.

Considering the architectural design and shifts over time in concert with the analyzed artifact assemblage, Structure 7 is associated with a pattern of residential activities that were likely linked within a greater household network. In its earliest construction form, Structure 7 likely supplemented the need for a working area by the neighboring residents in other buildings within the Southeast Plaza Group. This postulation would account for the 3-sided version of the edifice. As the occupants within the group increased, so too did the need for additional residential space to accommodate more people. Therefore, Structure 7 transitioned into an enclosed structure, complete with a “front porch” for observing and interacting with the occurrences and occupants of

the open patio. Furthermore, the region between Structures 7 and 6 expanded, as it is plausible that resident growth at Structure 6 is the causal reason for the functional and structural alteration of Structure 7. Above all, the low density of non-pottery artifacts from Structure 7 indicate that likely practices of sharing or communal use of certain tools and utensils was occurring between the two buildings, if not throughout the group as a whole. Collectively, these observations support that the Southeast Plaza Group operated as a cooperative set of buildings, typical of a household organization.

Structure 13

The smallest investigated building from the Southeast Plaza Group is Structure 13 and included approximately 7.3m^3 of excavated matrix. Though both fill deposits and sterile soil contexts are identified at Structure 13, no excavation lots are observed to be exclusively assigned as either of these forms of depositional context. Therefore, all of the excavated matrix from Structure 13 is deemed terminal debris.

Pottery from Structure 13

The discussion of the pottery assemblage recovered from Structure 13 requires the most contextualization compared to all other investigated buildings within the Southeast Plaza Group. Structure 13 is observed to include by far the lowest frequency of processed pottery fragments from a single building not only within the Southeast Plaza Group but for all of PVN647. A total of approximately 6,710 pottery fragments were processed from investigations of the structure. Of these, only 616 are analyzed, yielding an analyzed percentage of 9.2%; the highest from all buildings within the group.

However, the 616 analyzed pottery fragments are all from only one of the four sub-operation designations utilized to investigate the structure. This sub-operation (BO) accounts for the eastern half of the axial trench and represents approximately 20% (1.5m^3) of the total excavated matrix from all of Structure 13. Therefore, the analyzed pottery is from a limited location of the building, which does not include any of the off-plaza regions around Structure 13.

An additional interesting evaluation from Structure 13 is revealed when the total amount of excavated matrix is considered. Structure 13 has a calculated density of total pottery processed of 919.18m^3. The smallest investigated building from the Southeast Plaza Group has the highest calculated density of pottery from the group as whole.

Lastly, it is significant to highlight that of the 616 pottery fragments analyzed from Structure 13, none are identified to be relatively-dated to time periods prior to the Late Classic. Therefore, all analyzed pottery are observed to be from the Late and Terminal Classic periods, but densities for PreClassic pottery from the rest of the group are still included below.

Pottery type	**Per m^3 of Terminal Debris from Structure 13**		**Per m^3 of Terminal Debris from Southeast Plaza Group**	
	Preclassic pottery	**Late/Terminal Classic** pottery	**Preclassic** pottery	**Late/Terminal Classic** pottery
Bowls	0.00	5.75	0.32	6.31
Jars	0.00	78.49	1.40	46.33
Plates	0.00	0.14	0.00	0.16
Comals	0.00	0.00	0.00	0.03

Table 6.33: Summary of pottery fragment types per m^3 of terminal debris by temporal identification from Structure 13 and the Southeast Plaza Group from PVN647.

The results of analyzed pottery from Structure 13 reveal that the sample shares corresponding density proportions with the rest of the Southeast Plaza Group, with regard to Late and Terminal Classic vessel types (**Table 6.33**). Jars are observed to be of the highest density, followed by bowls, plates and comals. However, the density of Late and Terminal Classic jar fragments from Structure 13 is nearly double the density calculated for all of the group. The density of the remaining pottery vessel types is roughly aligned with the densities calculated for the rest of the group, though no comals are identified from the sample of analyzed pottery. Jar vessel forms are strong indicators for storage practices, which is not unexpected from such a small construction. If Structure 13 was utilized predominantly as a storage facility and lesser-so as a residence, the low densities of other pottery forms is not extraordinary. The presence of the other forms may indicate that bowls and possibly plates were also being housed within Structure 13.

The absence of evidence for Preclassic pottery forms is unique, as Structure 13 is the only investigated building with a sample of analyzed pottery to be devoid of vessel fragments associated with this earlier time period. Therefore, it is likely that Structure 13 is amongst the last buildings to be erected within the Southeast Plaza Group and did not make use of Preclassic pottery debris as a foundation for the structure. Furthermore, it is fairly definitive support that Structure 13 was likely erected and occupied no earlier than the Late Classic. However, the sample of analyzed pottery from Structure 13 is limited to only a particular region of the building and it is acknowledged that processed but unanalyzed pottery from other regions of the structure may sustain or invalidate this postulation.

Artifact Class	Object total from Structure 13	Object per m^3 from Structure 13	Object per m^3 from Southeast Plaza Group
Candeleros	0	0.00	0.16
Figurines	1	0.14	0.27
Ocarinas	0	0.00	0.05
Complex Censers	1	0.14	0.08
Modeled Censers	0	0.00	0.05
Scored Censer Lids	0	0.00	0.08
Pierced Ladle Censers	5	0.68	0.16
Stamps	0	0.00	0.00
Molds	1	0.14	0.03
Potstands	3	0.41	0.49
Worked Sherds	5	0.68	0.43
Used Sherds	5	0.68	0.22
Sherd Disks	0	0.00	0.05
Obsidian	222	30.41	45.47
Chert	33	4.52	4.45
Metates	0	0.00	0.03
Manos	0	0.00	0.08
Bone	0	0.00	0.03
Jute	0	0.00	0.08
Bajareque	26	3.56	18.64

Table 6.34: All non-pottery ceramics, lithic, and flora and fauna artifact totals and densities per m^3 from Structure 13 and the Southeast Plaza Group at PVN647. Terminal debris context only.

Several observations can be made from the remaining artifact assemblage from Structure 13, as all of these artifact classes have been thoroughly analyzed, except for obsidian, chert, and bajareque items (**Table 6.34**). From the non-pottery ceramic artifacts, it is clear that complex and pierced ladle censers, molds, and worked and used sherds have calculated densities greater than those observed from all of the Southeast Plaza Group. All other types are roughly equivalent to the rest of the group or are not present at Structure 13. Obsidian and chert are the only lithic material recovered and bajareque is the only other artifact class observed from the building.

Non-Pottery Ceramic Artifacts from Structure 13

Structure 13 reveals a diverse amount of various non-pottery ceramic artifacts and some in markedly high densities, compared with the rest of the Southeast Plaza Group. Amongst the most strikingly high densities are pierced ladle censers, molds, and used and worked sherds. These items are representative of a variety of possible activities taking place in and around Structure 13. An all-encompassing assessment would claim that these seemingly disparate artifact classes were simply being stored at Structure 13, yet a closer examination may reveal additional practices occurring in and around the building.

The density of pierced ladle censers identified from Structure 13 is the highest and it observed the greatest frequency (N=5) of fragments, compared to the other investigated structures from the group. However, of the 5 identified ladle censer fragments, two are observed to be multiples, indicating that a maximum of only three individual pierced ladle vessels are observed from the building. However, this observation still places Structure 13 with the most of this particular form of censer, as Structure 7 are identified to include only one and Structure 6 is observed to contain none. It remains unknown how scared or utilitarian the use of pierced ladle censers may have been in antiquity. Therefore, it is unclear if these items are markers of ritual practices or of cooking activities, or both. However, as no other censer forms, other than complex censers, are identified from Structure 13, it is unclear how pierced ladle censers were utilized with other vessel forms.

The one and only ceramic mold fragment from all of the Southeast Plaza Group is recovered from Structure 13. It is moderately eroded and the decorative portion of the

mold is only slightly apparent. It is possible that the mold is of a figurine, as a possible headdress may be preserved. The only figurine fragment from Structure 13 contains a partial headdress from an anthropomorphic figure, however, it is not discernible if the two items share similar enough decorative elements to be corresponding. It is uncertain whether the recovery of a single mold fragment is an indicator of specialized ceramic production of figurines or possibly ocarinas. So few of these items are recovered from all of the Southeast Plaza Group.

The possibility for low-levels of specialized ceramic production may be supplemented by the highest densities of used and worked sherds at Structure 13 than from any other investigated building in the group. The exact purpose of these utilitarian and often opportunistically fashioned tools are not known. Yet, the predominating use of both of these items is linked with ceramic production. The small size and various shapes from the total of 10 used and worked sherds may have been involved with small-scales of figurine or ocarina molding and modeling in or around Structure 13. A location for firing remains unknown and if forms of production were occurring within the Southeast Plaza Group, it is unclear if finished objects were distributed, as so few are recovered from investigated locations within the group. However, the possibility that all of these non-pottery ceramic items were simply stored in Structure 13 is also very likely.

Lastly, the density of bajareque from Structure 13 is markedly the lowest compared to the Southeast Plaza Group as a whole. This observation is likely the result of the architectural design and low frequency of construction units identified at Structure 13. The building is observed to contain four cobble walls, which likely supported waddle

and daub walls of proportional size and quality of durability. Therefore, since so few construction units are observed, very little bajareque was needed in the erecting of the perishable superstructure, compared to more elaborate designs and longer construction histories of Structures 6 and 7.

Stone Artifacts from Structure 13

Unlike Structures 6 and 7, no groundstone artifacts are recovered from the investigated areas of Structure 13. The only stone artifact remains identified from the building are in the form of obsidian and chert fragments. As comprehensive lithic analysis of obsidian and chert remains incomplete, the varieties of lithic debitage are not known. However, the density of obsidian processed from Structure 13 is slightly less than the calculated density for the group as whole. It is likely that whatever activities occurring in and around the building that required obsidian did not take place with equal frequency compared to the other investigated structures. Chert density from Structure 13 is roughly equal to that of the rest of the group and likely not too disparate in terms of activity purpose and frequency of use. Overall, it is likely a variety of small-scale use and/or production, in addition to storage of lithic items was occurring at Structure 13.

Discussion of Artifacts from Structure 13

Overall, the recovered artifact assemblage from Structure 13 reveals that a limited range and intensity of activities likely occurred within and around the building. Artifacts that are analyzed and calculated in densities with significance indicate that storage practices were likely, along with other small-scale production of certain non-pottery ceramics and possibly lithic retouching.

Predominantly it is the identification of the highest density of jar pottery fragments from all of the Southeast Plaza Group, which signal Structure 13 once purposed as a storage facility. Other indicators for daily household residency, such as bowls and plates, are present, yet in disproportional densities to jar fragments. The relatively small area of the structure would likely be quite crowded if utilized as a dwelling, in addition to housing a high density of jar vessels. However, the density of utilitarian objects, such a ceramic mold fragment and used and worked sherds denotes that daily maintenance activities, or at least the tools relating to such undertakings, resided near the building.

The lack of select artifact classes recovered from Structure 13 is also telling of potential building function. The highest density of jar vessel fragments are calculated from the structure, yet no ground stone fragments are identified from investigations. Jar vessels were used to stockpile and ration foodstuffs or other dried materials relating to ceramic production. A lack of grinding tools denotes that processing of materials did not occur at Structure 13. Therefore, the building housed unprocessed foodstuffs or supplies were processed elsewhere and then stowed at Structure 13, or a combination of both. Alternatively, jar vessels are also deemed to be used for water storage, which could account for the lack of grinding implements recovered from the building.

Above all, the simplistic construction design of Structure 13 supports a postulation for limited activities occurring in and around the building. Only four wall construction units are identified from the assemblage history of the building. No internal divisions nor external modifications are observed. Furthermore, the occupational area of Structure 13 is amongst the smallest of all investigated buildings from PVN647 and

would be extremely limiting if utilized as a residence by multiple occupants.

As the Southeast Plaza Group is recognized to be a household group or cluster of individual edifices, which operate functionally and socially in cooperation, Structure 13 likely holds a unique purpose within this communal organization. Not all buildings within a patio or household cluster are deemed to have been regularly occupied as a residence by extended family members. Storage or workshop facilities are necessary for housing supplies and tools and providing a locale where certain production activities can be conducted and away from domicile spaces. Therefore, though Structure 13 is not postulated to have housed occupants of the Southeast Plaza Group, it is identified to play a key role in the social reproduction of the group by providing shelter for subsistence provisions and other tools for daily maintenance.

Discussion of Artifacts and Activities of the Southeast Plaza Group

As demonstrated in the previous discussion (see Chapter 5), the architectural canons of the three investigated buildings from the Southeast Plaza Group share greater divergence than similarity. Certain correlations are observed between the undivided summit interiors of Structures 6 and 13, in addition to the external expansions witnessed along Structures 6 and 7. However, variations are present amongst these resemblances with respect to construction unit form and location. These vernacular distinctions are likely the result of varying construction histories and lengths of occupation, as well as functional importance, which is unique to each structure. Corresponding significance is revealed from the analysis of recovered artifacts from each building. The presence (and absence) of certain artifact types and corresponding densities supplement postulations formulated from the architectural design of each structure regarding the individual intent of each structure. Furthermore, the comprehensive evaluation of the artifact assemblage from all studied structures further highlights the collective social association amongst the buildings and residents of the Southeast Plaza Group.

The following account summarizes artifact densities from each structure within the Southeast Plaza Group in accordance with generalized categories of shared activities or practices. The categories include: food processing, cooking, consumption, and storage; ritual or ceremonial practices; and maintenance and production activities. Certain artifact classes likely performed double or multiple duties and are therefore referenced with various activity categories. Pottery type densities only include calculations from Late and Terminal Classic styles from terminal debris. The intent is to

highlight the location and distribution of various household-related tasks and how harmoniously these were carried out within the Southeast Plaza Group.

Food Processing, Cooking, Consumption, and Storage

The following artifact types are typically associated with activities of processing, cooking, consuming, and/or storing of foodstuffs: bowls, jars, plates, comals, potentially all censer forms, chipped and ground stone implements, and other organic remains. Potstands are also included in this category of activities, as they can be utilized in the stabilizing of round-bottom vessels during cooking or storage, aside from pottery production.

Artifact Class	**Object per m^3 from Terminal Debris**			
	Structure 6	**Structure 7**	**Structure 13**	**Southeast Plaza Group**
Bowls	7.81	4.31	5.75	6.31
Jars	39.93	36.12	78.49	46.33
Plates	0.11	0.26	0.14	0.16
Comals	0.06	0.00	0.00	0.03
Complex Censers	0.11	0.00	0.14	0.08
Modeled Censers	0.06	0.09	0.00	0.05
Scored Censer Lids	0.06	0.17	0.00	0.08
Pierced Ladle Censers	0.00	0.09	0.68	0.16
Potstands	0.66	0.26	0.41	0.49
Obsidian	42.24	60.00	30.41	45.47
Chert	3.85	5.34	4.52	4.45
Metates	0.00	0.09	0.00	0.02
Manos	0.11	0.09	0.00	0.08
Bone	0.06	0.00	0.00	0.03
Jute	0.17	0.00	0.00	0.08

Table 6.35: Summary of artifact class densities associated with food preparation, cooking, consumption, and storage per m^3 from terminal debris by structure and for the Southeast Plaza Group at PVN647.

Based upon calculated artifact densities per m^3 from terminal debris only, settings for food processing or preparation was likely occurring mostly in or around Structures 6 and 7 within the Southeast Plaza Group (**Table 6.35**). This is concluded from the greater densities of obsidian and chert materials, but also the groundstone fragments of manos and metates from both of these locations. Though an understanding of chipped stone debris forms and varieties are not known from the processed obsidian and chert assemblages from PVN647, it is known that lithic tools fashioned from these materials are associated with cutting and carving in the processing of provisions. Furthermore, manos and metates are utilized in the grounding and grinding of solid and dense foodstuffs of maize or tree nuts. No grinding stone fragments are recovered from Structure 13. Finally, the only evidence of faunal bone and jute remains are observed at Structure 6. These forms of organic remains are markers for food processing and cooking, as both of these naturally occurring resources are understood to be elements of the diet of past peoples in this region.

The cooking of processed foods may not always occur in the same locations as food processing or preparation activities. However, within the Southeast Plaza Group, cooking activities were also most likely carried out in and around Structures 6 and 7. Comals are amongst the most soundly recognized pottery vessel form associated with cooking activities and Structure 6 is the only building within the group witnessed to include these forms. Depending upon the size and shape of a jar vessel, it is also possible that boiling for soup or other liquid-based meals were occurring by means of these forms. The analyzed rim forms of jar vessel fragments from Structures 6 and 7 appear to have

only slightly flared necks, which are continuous and have no break to the body of the vessel. These forms may be more closely associated with the rim shape of a modern soup tureen. Therefore, these jar vessel forms would be adequate for cooking and serving of foods with liquid ingredients. However, Structure 13 is observed to have the highest calculated density of jar vessel fragments from the group as whole. A greater portion of identified rims from Structure 13 are observed to be vessel fragments with straight and long necks before a clear break to the body. These forms more closely resemble vases, which have everted rims and long necks and are more associated with practices of storage. Therefore, if cooking practices were occurring in or around Structure 13, the intensity of such activities was likely less than that happening at Structures 6 and 7.

Additionally, potstand vessels are mostly associated with ceramic production activities, however, can also function as supports for round-bottomed vessels used for cooking. As potstands are tubular in shape, an object can be positioned immediately over a heat source and elevate another vessel, similar to modern stands used in fondue. Though, it is acknowledged that use-wear evidence for such a practice is challenging to decipher. The greatest density of potstands are calculated from Structure 6 and likely utilized in tandem with jar vessels or comals used in cooking. However, potstands are also associated with simply providing support and balance to round-bottomed vessels, as might be necessary in the storage of goods. The second highest density of potstands observed at Structure 13 are deemed to be more associated with this purpose than linked with cooking practices at the building. Regardless, when evidence for ceramic

production is lacking, potstands are allied with a variety of other utilitarian uses, whether involving a heat source or not.

Lastly, nearly all censer vessel forms can be conceivably utilized for different purposes in the cooking of food. Complex and modeled censers can accommodate varying quantities of foodstuffs as griddles or pots, respectively. Scored censer lids can operate as lids over other vessels to keep foods warm, while pierced ladle censers can be used in steaming or possibly straining of dried goods. All four censer forms are present within the Southeast Plaza Group, yet in varying distributions across the three investigated locations. More importantly, however, are the relatively low calculated densities of these particular artifact classes. Frequencies are observed to be very low and therefore, conclusions based upon their respective significance remain problematic.

Similar to cooking practices, the consumption of fully prepared foods may occur in a different setting than where it is prepared and/or cooked. Artifact classes predominantly associated with the serving and consuming of food are bowl and plate pottery vessels. Based upon calculated densities from the three investigated areas of the group, Structure 6 witnesses the greatest density of bowl fragments, yet the lowest occurrence of plates. The inverse of this is observed at Structure 7, while Structure 13 observes the middle range of each pottery type. Therefore, it is possible that consuming of food is not restricted to certain locations throughout the group.

The final phase involved in food security to be evaluated is that of storage of non-perishable foodstuffs. A primary means by which to store consumable (and even non-consumable goods) is with jar pottery vessels. Fragments of jar vessels are recovered in

relatively substantial densities from all three investigated buildings, however, Structure 13 clearly observed the greatest density. Furthermore, a considerable portion of these jar fragments are identified to be of forms with everted rims and long necks, likely quite tall and wide in shape. These forms are not conducive for cooking, but best used for storage of dried goods or possibly water. Additionally, the second highest density of potstands is observed from Structure 13 and potentially tasked with supporting smaller storage jars, to ensure the vessel does not tip over and the contents lost. Overall, the location that likely most principally served as a repository for foodstuffs from the three sampled buildings is that of Structure 13.

The architectural design and sizes of the three investigated structures from the Southeast Plaza Group are observed to accommodate the proposed activities that likely occurred at each building, based upon artifact analysis. Structures 6 and 7 contain the greatest architectural complexity and yield varying forms of prepared external space, aptly available for an assortment of food-related activities. Covered terrace platforms provide shelter for grinding and other processing or preparatory activities, while the Northeast Feature identified to be positioned between Structures 6 and 7 is suitable for food processing, cooking, and consuming. Additionally, Structures 6 and 7 contained the greatest summit interior area and could accommodate multiple occupants as lodging, but also indoor feasting. However, no built-in furniture is observed in either Structures 6 or 7 and therefore, artifact patterns supplement the final phase occupation of the buildings as residences.

The architectural arrangement of Structure 13, however, is observed to contain no constructed spaces, either within the interior or along the exterior to the building. The structure is deemed to have supported a perishable superstructure, yet it is unclear if any external spaces would have also been sheltered by means of overhanging extensions from the roof. Therefore, it is not known how accommodating external regions around Structure 13 would be for stationary food processing activities. The unconstructed exterior immediate around the building would be suitable for open-hearth forms of cooking, however, the fewest artifact classes associated with cooking practices are recovered from the building. The openness of the summit interior and overall small area of the edifice supports the postulation based from the artifact assemble that the building most prominently served as a storage facility for the group.

The overall implication of these observations is that the various stages of food-related practices are occurring in an assortment of locales within the Southeast Plaza Group. Furthermore, the density of artifact classes associated with these activities of daily subsistence indicate that small-scales of cooking and consumption were likely occurring. Evidence of storage practices indicate that greater quantities of provisions were stockpiled than were likely prepared and consumed. However, densities of tools associated with processing are not equivalent. Stone artifact materials occur in moderate-to-high densities relative to the size of the group, however, markers for ground stone implements appear disproportionate to hypothesized storage capabilities. It is conceivable that the other two uninvestigated buildings within the group (Structures 8 and 46) were locales for grounding and grinding and therefore contain artifact evidence

for these activities. Conversely, due to the high density of groundstone implements recovered from the Site Core Plaza Group, it is plausible that raw goods were processed in this setting and transported to the Southeast Plaza Group for storage.

Aside from an under-representation of ground stone objects, the distribution of food-related artifact classes and activity settings is not uncommon within a cohabitating and cooperative household group, in which residents share occupational spaces and daily subsistence duties. Each structure within the Southeast Plaza Group likely held its own nuanced importance, whether personal or functional, yet the overall effective operation and survival of the group lies with its interconnected network of subsistence activities, which is indicative of a household organization.

Ritual or Ceremonial Practices

The second evaluation of activities occurring within the Southeast Plaza Group is associated with ritualistic or ceremonial practices. Artifact classes most commonly linked with these specialized activities include: figurines, ocarinas, candeleros, and all censer forms. The following discussion reveals the locales and degrees to which these practices were taking place within the group (**Table 6.36**).

Artifact Class	Object per m^3 from Terminal Debris			
	Structure 6	**Structure 7**	**Structure 13**	**Southeast Plaza Group**
Candeleros	0.22	0.17	0.00	0.16
Figurines	0.39	0.17	0.14	0.27
Ocarinas	0.06	0.09	0.00	0.05
Complex Censers	0.11	0.00	0.14	0.08
Modeled Censers	0.06	0.09	0.00	0.05
Scored Censer Lids	0.06	0.17	0.00	0.08
Pierced Ladle Censers	0.00	0.09	0.68	0.16

Table 6.36: Summary of artifact class densities associated with ritual and ceremonial practices per m^3 from terminal debris by structure and for the Southeast Plaza Group at PVN647.

The overall densities from all artifact classes that indicate practices of ritual or ceremonial practices from the Southeast Plaza Group are relatively low. The low calculated densities are due to the low frequencies of collected items. However, the presence of such artifacts signal that practices of sacred traditions were likely occurring, yet in very infrequent and household-level scales of incidence.

As candeleros have been linked with both the burning of incense of other smoke-producing materials, as well as utilitarian items to provide light, evidence of such an artifact is challenging to interpret from a household setting. Of the total candelero fragments collected (N=7) from the Southeast Plaza Group, they are all from Structures 6 and 7 and only two fragments (both from Structure 6) have preserved evidence of burning or sooting markings. Ceramic objects that are exposed to intense heat of a burning material, typically exhibit evidence of blackening due to the heat and/or smoke emanating from the object. As the majority of analyzed candelero fragments from Structures 6 and 7 are not observed to contain these markings, it is possible that the burning of incense was not occurring with these vessels. Of the two fragments that

exhibit burning and sooting evidence, it is more likely these items were utilized in the burning of substance and perhaps for ritual or ceremonial intentions. This evidence sets Structure 6 apart from all investigated buildings within the group as a locale for a ritual specialist of a household-scale of ceremonial practice.

Similarly, figurine and ocarina objects are associated with ritual purposes or as entertainment items. The relatively low densities (especially of ocarinas) from the group indicate that small-scale uses of these objects likely occurred in and around the investigated buildings. Analogous to the density of candeleros, Structure 6 is observed to contain the greatest density of figurines, followed by Structures 7 and 13, respectively. The majority of the total cataloged figurines (N=10) from the group as a whole are identified to be fragments of supports or legs in a conical shape. Only one fragment is confidently identified as a portion of a decorative headdress from an anthropomorphic object. Interestingly, this item is recovered from Structure 13, which is the same location as the only ceramic mold fragment from the entire group, and likely a fragment of a headdress. The slightly higher density of figurines from the group could be the result of small-scale manufacture for a variety of sacred or informal purposes. Only one ocarina fragment is recovered from both Structures 6 and 7 and contain no preserved decorative portions are evidence from either item. Therefore, neither the ritual nor recreational importance of ocarinas within the Southeast Plaza Group is indeterminable, however, likely quite slight due to such low frequency.

Finally, censer vessel fragments vary in density in relation to vessel type from the Southeast Plaza Group. Pierced ladle censers are calculated to have the highest overall

density (N=6) and most clearly concentrated at Structure 13 (N=5). Of the bowl fragments, three are identified to be multiples of the same object, while the remaining two fragments are tube handles and also observed to be multiples of the same object. All five fragments exhibit evidence of burning or sooting marks and indicate use, though it is not known if all five objects are from a single vessel. Furthermore, Structure 13 is not argued to be an edifice of residence and the item(s) may have been stored and but not used in this location.

Complex (N=3) and modeled (N=2) censers are identified to be of the most ritualistically charged and are calculated in low densities from the group. The majority are recovered from Structure 6 and none of the complex fragments are observed to contain evidence of burning or sooting. The two modeled censer fragments are decorative portions and only one have preserved evidence of burning or sooting. It is not known if the fragments with no burn or soot markings were used or not, however, the overall low frequencies indicate that extremely low-to-no ritual practices associated with these censer forms were occurring within the group.

The greatest density of scored censer lids is located at Structure 7 and marks either ceremonial use in conjunction with other censer forms, or utilitarian purposes associated with serving as lids for cooking pots. Scored lids can be paired with complex censer forms, however, are more conveniently coordinated with modeled censer forms. As no modeled censer fragments are recovered from Structure 7 it is likely that use of the scored lids was more closely aligned with other domestic household cooking activities, and only on occasion with ritual practices.

The relatively low observance of ritual and ceremonial-related artifact classes from the Southeast Plaza Group indicates that practices of these forms were likely quite infrequently conducted in this region of PVN647. Alternatively, if ceremonial practices were carried out in a semi-regular or frequent fashion, it is likely the events were on a small household scale and predominantly included the residents of a structure or the group at the most. Regardless of the rate of occurrence, the artifacts utilized in ritual activities likely also purposed as non-ceremonial, utilitarian items on a day-to-day basis. This multi-functioning of vessels is not uncommon within a household setting.

Maintenance or Production Activities

The final analysis highlights artifact classes associated with daily maintenance or various forms of production activities within the Southeast Plaza Group. Artifacts typically related to these practices are: stamps, molds, potstands, worked and used sherds, and potentially sherd disks. Densities of pottery types, lithic and groundstone materials are included in this discussion, as these artifact classes may be related to and/or are the result of production efforts occurring within the group (**Table 6.37**). Finally, figurines are also included in relation to the presence of a ceramic mold fragment.

Artifact Class	Object per m^3 from Terminal Debris			
	Structure 6	**Structure 7**	**Structure 13**	**Southeast Plaza Group**
Bowls	7.81	4.31	5.75	6.31
Jars	39.93	36.12	78.49	46.33
Plates	0.11	0.26	0.14	0.16
Comals	0.06	0.00	0.00	0.03
Figurines	0.39	0.17	0.14	0.27
Stamps	0.00	0.00	0.00	0.00
Molds	0.00	0.00	0.14	0.03
Potstands	0.66	0.26	0.41	0.49
Worked Sherds	0.39	0.34	0.68	0.43
Used Sherds	0.00	0.26	0.68	0.22
Sherd Disks	0.11	0.00	0.00	0.54
Obsidian	42.24	60.00	30.41	45.47
Chert	3.85	5.34	4.52	4.45
Metates	0.00	0.09	0.00	0.02
Manos	0.11	0.09	0.00	0.08

Table 6.37: Summary of artifact class densities associated with maintenance and production activities per m^3 from terminal debris by structure and for the Southeast Plaza Group at PVN647.

A variety of maintenance or production activities feasibly may be occurring within the Southeast Plaza Group. Evidence for daily maintenance activities in the form of repairs and recycling of broken items into other objects is likely occurring within the group, however, in selective forms. The relatively high densities of worked and used sherds from all buildings, except for no used sherds found at Structure 6, indicate that ceramic fragments were both intentionally and opportunistically being reshaped into other tools. Only one mano fragment from Structure 6 is identified as being refashioned from another broken object, however, all other ground stone items are observed to display no evidence for being reworked. Similarly, a minority of potstand fragments are identified to be recycled from other jar pottery vessels, indicating that little repurposing of broken ceramics were transformed into potstand objects.

The presence of worked and used sherds and potstands, though, are markers for ceramic production. Worked and used sherds are hypothesized to be linked with scraping and shaping of clay objects before being fired. However, these objects may hold other functional purposes and evidence to explicitly link them to ceramic production remains indeterminable. Potstand fragments, however, are more definitively associated with ceramic production when evidence for clay droplets and/or ceramic color changes due to episodes of reheating are evident. The majority of analyzed potstands from the Southeast Plaza Group exhibit evidence for reheating and baked-on clay. Therefore, it is conceivable that small-scale ceramic production was occurring within the group. However, as potstands are also posed to have been used as cooking furniture, the observation of baked-on clay may be the result of select potstand objects being used to shape unfired objects and then used to prepared cook meals. The overall low densities of potstands calculated from the group indicates that objects likely held multiple functional purposes.

Ceramic stamps and molds are also strong indicators for production activities. Stamps may be associated with ceramic manufacturing, however, more strongly tied to decorative phases of textile production. However, there is no evidence for stamps from any of the investigated regions of the Southeast Plaza Group. Conversely, a single ceramic mold fragment is identified from Structure 13 and is observed to be a partial headdress of likely an anthropomorphic figurine. Figurine densities from the group are calculated to be relatively low, however, at least two fragments are identified to be portions of headdresses, possibly similar to the mold, though too eroded to be certain. If

any form of ceramic production is occurring within the Southeast Plaza Group, it is likely in the form of small-scale specialty items, such as figurines and possibly ocarinas. Not all figurine forms and shapes require molds and can be hand-modeled with the use of worked and used sherd implements. (Ocarinas typically require molds for manufacture.) The location of possible production activities is likely in or around Structure 13 where some of the highest densities for worked and used sherds, potstands, and the only ceramic mold are observed. This setting as a possible workshop area is not extraordinary, as Structure 13 is posed to be purposed as a storage facility and not a regularly occupied, domestic dwelling.

Densities of pottery types may also denote the possibility of ceramic production. Most pottery types are calculated in relatively low densities, except for jar vessel fragments from all of the Southeast Plaza Group. Of all of these analyzed Late and Terminal Classic fragments, the majority are identified to be of locally produced pottery types and varieties. However, few-to-no waster fragments are identified and no other markers for pottery ceramic production have been identified from investigated regions of the group.

Finally, the relatively high densities of obsidian and moderate densities of chert may indicate lithic production or at least retouching activities. The greatest densities of both are observed from Structure 7. The complex construction history and the eastern location of Structure 7 may support that the building is the optimal setting for lithic production. Sharp debris from lithic manufacture would not be desired within the open and shared region of the patio and the eastern slope to the seasonal *quebrada* may be

ideal to discard debitage. However, as the lithic assemblage from all of PVN647 remains understudied, it is unclear what forms of lithic debris are preserved. Therefore, the significance of the high densities of lithic materials is unknown.

On the whole, the Southeast Plaza Group likely conducted household-levels of maintenance and upkeep activities, in the form of recycling broken ceramic objects into other functional tools. These activities are not only an attempt to be frugal but likely necessary for daily repairs and recovered from settings throughout the group. Furthermore, it is plausible that small-scale production of specialty ceramic objects was occurring around Structure 13. However, it is unclear if production of larger pottery vessels and/or chipped stone tools was taking place within the group. Nonetheless, if production activities of these forms did occur, it was also likely on a household-scale of manufacture to address immediate needs of group residents and not a wholesale endeavor for export or tribute to non-residents of the Southeast Plaza Group.

Conclusions about the Southeast Plaza Group

The Southeast Plaza Group represents a social sphere distinct from the organization and interactions of the Site Core Plaza Group. The semi-circular patio arraignment of the three investigated buildings (Structures 6, 7, and 13) along with the two unstudied (Structures 8 and 46) formulate a household group. The interconnected framework of the structures is apparent both from the architectural and artifact assemblages.

Though the temporal construction history of all three investigated buildings relative to each other is unknowable, it is clear that Structures 6 and 7 eventually

expanded into the shared region that lies between them. Both buildings are identified was having dramatically distinct architectural origins, with regard to construction design and function. Structure 6 is witnessed to contain the earliest evidence of occupation within the group, yet still assembled to be of a standard 4-walled building scheme. Additions are added to nearly all external facings, yet the western façade includes the most extensive terraced region. Alternatively, Structure 7 is observed to be originally a 3-sided edifice and eventually sealed and then expanded along the most plaza-visible façades, which includes the region adjacent to Structure 6**.** The functional transition of Structure 7 is likely from a supplementary facility for storage, processing, and production to one of permanent occupation as a dwelling. The functional and social relationship between Structures 6 and 7 likely originated as one similar to that of a home and an external shed. However, during final phases of occupation, the social practices of cooking, eating, engaging in small-scale ceremonies and production and overall dwelling deemed to have been occurring at both buildings are identified to be complementary and quintessentially characteristic of an extended family, household organization.

Furthermore, when the architectural and artifact assemblages from Structure 13 are factored in, the depiction of a household patio group is even further elucidated as being the overall social association witnessed at the Southeast Plaza Group. Structure 13 is deemed to be contain minimal internal summit area and undergo no external modifications to establish formally constructed occupation regions. Furthermore, interpretations from analyzed artifacts suggest that the building is concomitant with a storage intention, supplemented with other small-scale production activities taking place

in unconstructed external areas. This assessment is aligned with the variety of daily practices occurring within a patio group and the need for an assortment of constructions in order to perform and carry out differing tasks on a daily basis. Lastly, the architectural distinctions observed between all three of the investigated structures supports the proposition that due to the small-scale production and reproduction needs of a household group, repetition in building form and function is pragmatically unnecessary.

For the Southeast Plaza Group as a whole, slight evidence is identified to indicate ritual or ceremonial practices, at least as interpreted from censer vessel form densities. However, the material paraphernalia required by household members to engage in sacred activities or ancestor veneration may be sufficed by means of other specialty ceramic items, namely candeleros and figurines. Alternatively, the overall low occurrence of all of these ritual-related objects may indicate simply household-levels of ceremonial practice were customary and/or needed few physical accoutrements. However, the low incidence of ground stone implements is noticeable and appears disproportional to the posed size of occupation of the group. It is acknowledged that three other documented structures within the group remain unexplored and potentially include greater densities of this seemingly scarce, yet domestically fundamental artifact type. Yet, given the abundance of metate and mano fragments from the Site Core Plaza Group, it is conceivable that a reliance on tool resources from outside of the group may be occurring with residents of the Southeast Plaza Group.

In summary, the cohesiveness of the investigated structures is noticeably apparent by the evaluations of the architectural and artifact compositions observed within the

Southeast Plaza Group. While this conclusion is not essential to the primary research aims of this examination, the result only enhances the architectural observations and the degree of vernacular variation present within the group. The functional and social relationships amongst Structures 6, 7, and 13 are revealed to be harmonious with respect to analyzed construction designs and artifact assemblages. The importance of this observation proves beneficial for comparative purposes with other architectural characteristics from other household settings within the Naco Valley and other settings within Northwest Honduras.

Discussion and Conclusions about the Site Core Plaza Group and the Southeast Plaza Group

Artifact descriptions and analyses have been presented separately for the Site Core Plaza Group and the Southeast Plaza Group. Each grouping is established to include unique artifact densities with regard to locational setting and interpreted associating social practices. The following discussion highlights similarities and variations between the two structure groupings in order to discern patterns of articulating activities or practices. To begin, groups are evaluated in relation to functional intent of structures and an overall public or private-serving purpose, as interpreted from both architectural and artifact assemblages. Building interiors and exteriors are evaluated and compared to further the understanding of functional meanings of identified architectural vernacular traits. Select structures are underscored for individual characteristics, while others are emphasized as operating in concert with other structures, though not always

with equal reciprocity. Lastly, the comprehensive social cooperativeness of both structure groupings are compared and contrasted, as distinct design plans and scales of practice are occurring at each setting.

Functional Intentions

As the Site Core Plaza Group and the Southeast Plaza Group are likely representative of differing social spheres, due to the scale and number of structures, among other factors, it is not extraordinary that the functional intentions of each were divergent. However, when generalized public and private spaces are evaluated, comparisons of functional purpose are revealed. Select social practices most often align with a communal intent, while others are more sequestered and likely personal. Though a secluded activity area may not be necessarily linked with privacy, so much as establishing a setting that is distant from other community members for safety reasons, as in the case with chipping stone or heat sources for cooking or ceramic firing. Therefore, this analysis will classify functional intentions as municipal, residential, or storage, and evaluate notions of private and public within these categories of purpose.

In this analysis, a municipal functional intent is loosely identified as a setting that is associated with serving the needs of community members. Therefore, it is a shared and public space, which is predominantly accessible, welcoming, and accommodating of many and most, though not in all cases. Furthermore, the activities taking place within these municipal spaces may be of a ritual intention, but also other political or communal practices.

With regard to structures, spaces exterior to buildings, such as plazas and patios, are far more often referenced as public regions, than compared to interior settings. For the purpose of this discussion, certain constructed exterior spaces immediately along buildings are also deemed to have municipal intentions, in addition to select structure interiors. In general, a municipal or public purpose is typically linked with the greater number of occupants that can be accommodated and the forms of activities that occur within the setting. For example, practices of dwelling are not necessarily associated with municipal locales, but ritual ceremonies and processions, in addition to generalized civic broadcasts or deliberations commonly take place in spaces open and accessible to a majority. Additionally, the overall visibility of a space from another vantage point is critical to evaluate, as constructions can impair sightlines of other spaces, and municipal settings are regions to gather and engage with multiple people, simultaneously.

In contrast, residential spaces are identified as generally more private and restrictive with regard to access and overall visibility from publically deemed locales. As residences are settings for predominantly the family, or extended family and invited guests, they are typically smaller in size and less accommodating of many occupants at the same time. Furthermore, as spaces of dwelling, a variety of necessary and daily domestic practices are carried out. These activities typically occur on small-scale levels and do not require the majority of occupants to be all together at once. Residential and more private regions are also identified by building arrangements and structure interiors are by design the most limiting with regard to ability for accommodating multiple people and activities, by possessing a finite amount of space. Furthermore, exterior spaces

immediately along structures or slightly distant or adjacent may be more isolated or selective with regard to access and use of the space and indicators of private settings, associated with a residential intent.

Storage facilities are labeled as being distinct from municipal or residential intentions, yet are typically linked functionally with either setting. Locales for storage are most exclusively associated with not only constructed buildings, but the interiors of those assemblages. Even though storage facilities may also include accompanying activities, such as tool production or cooking practices, usually the setting is not identified as a place for the masses to gather nor with other generalized practices of dwelling, such as sleeping or feasting. Storage settings may vary with respect to the notion of being either public or private spaces. This form of accessibility is identified to be a characteristic defined by the nature of the relationship with other neighboring or corresponding constructed spaces.

Overall, it is acknowledged that as the Site Core Plaza Group and the Southeast Plaza Group vary in terms of scale and number of buildings, so too may be contrasting are concepts of municipal versus residential and notions of public versus private, and likely greatly. Within the Site Core Plaza Group, privacy is likely best achieved away from the main plaza and in areas not easily detectable from any vantage point within the plaza, most notably inside of structures. Furthermore, the main group credibly supported a greater density of occupants, whose social ties were likely not all based solely in immediate ancestry, but a settlement with multiple unrelated family units and some extended family components and with a recognized system of social hierarchy.

Therefore, the importance of distinguishing between municipal versus residential settings within the Site Core Plaza Group may be of a greater necessity. Alternatively, the Southeast Plaza Group more accurately represents a patio group and likely occupants were allied by means of immediate family relations. Conceivably, the notions of "public" and "private" comprise different characterizations amongst predominantly kinfolk and therefore may appear less discernible, as oppose to a settlement that includes a greater diversity of non-familial neighbors. This plausible disparity is accounted for in the discussion by focusing on spatial arrangements, architectural attributes and evidence for social practice by means of artifact patterns.

Municipal, Communal, and Public Intentions

Settings associated with a municipal, communal, and perhaps overall public intention encompass a wide-ranging assortment of locales. As previously mentioned, open plazas and patios are most commonly acknowledged as locations for communal gathering and shared social practices. Both the Site Core and Southeast Plaza Groups include open and semi-circular unconstructed regions in which preserved architectural assemblages are amassed around. However, select zones of constructed exteriors along buildings are also recognized to be spaces able to accommodate many occupants and select forms of stationary activities, and serve as regions for public use. Once again, both structure groupings include examples of this form, yet variations are also present. Finally, only one structure from all investigations at PVN647 is identified to include a

summit interior that is associated with an overall municipal intent, yet likely not equally accessible by every community member.

The design and arrangement of structures in both groups is around a centralized plaza or patio space. The result yields an open and unconstructed region, able to support a considerable number of occupants and a variety of activities, proportional to the size of the space. Plaza and patio arrangements are common site planning organizations in the Naco Valley throughout Mesoamerica and as previously articulated (see Chapters 2, 3 and 5), the two groupings at PVN647 adhere to differing design scales, yet are similar with regard to providing venues for engagement and shared practices.

The Site Core Plaza Group, however, revealed by means of the Test-Pitting Program, contains a circular cobble construction, located in the center of the open plaza region. The cobble assemblage is located equidistant from Structures 12 and 17 and is observed to contain evidence of burning and sooting in the center of the feature (**Figure 6.17** and see Appendix C). Preliminarily, the cobble construction is identified as some form of a hearth or firing feature, though it is unclear if the purpose was for cooking, firing for production, ceremonial significance, or simply some other pragmatic reasoning. Regardless of purpose, the presence of an intentional cobble construction is evidence that the entire open plaza region of the Site Core Plaza Group was not unconstructed. However, the open space is still deemed a public locale for gathering and engagement, though exact practices are complicated by the existence of the burnt cobble feature. In contrast, one test unit within the open patio region of the Southeast group exhibited no evidence of intentional constructions within the open space. It remains unknown if other

portions of either the plaza or patio contain remains of purposeful construction, as none are visible from the ground surface.

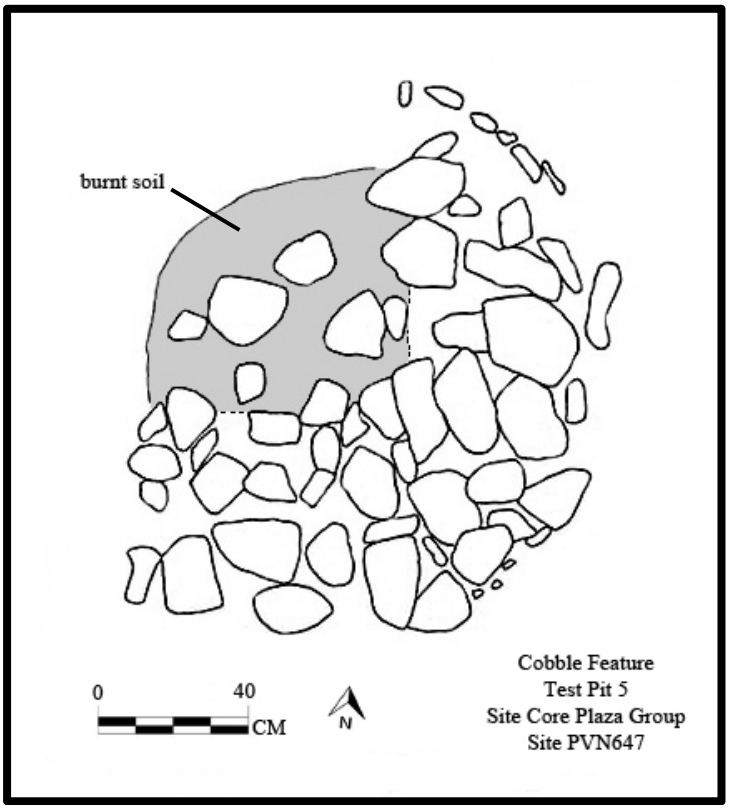


Figure 6.17: Plan-view drawing of circular cobble feature with evidence of burning, Site Core Plaza Group, PVN647 (drawing by Chester Liwosz).

Formally constructed and architecturally discernible settings of a municipal intent are more abundant within the Site Core Plaza Group than in the Southeast Plaza Group. The expansive terrace and veranda exteriors of Structures 12 and 16, respectfully, from the Site Core are distinctly sizable spaces, able to accommodate many occupants, as well as stationary activities. Furthermore, the location of these elevated external regions are both positioned along immediate plaza-facing façades of both buildings. Plaza activities

and events are clearly visible from both of these locations. Though no artifact materials are identified to be recovered in situ, the artifact assemblages from each structure indicates that considerable use of ground stone implements was occurring and interpreted to take place along the prepared external regions of both buildings. Therefore, not only are the expansive raised external platforms evidence for communal occupation and observation of the main plaza, the identified artifact materials indicate that shared production practices were taking place at both locales, as well.

In contrast, Structures 6 and 7 from the Southeast Plaza Group exhibit raised terrace regions, yet only Structure 7 witnesses this form of communal space along its more prominent plaza facing. The terrace or possible veranda region along Structure 6 is located on the plaza-visible west facing of the building. However, as both terraced regions along these buildings are recognized to accommodate several people at once, both structures are identified with an overall residential intention. Furthermore, the overall social organization of the Southeast Plaza Group is labeled to be that of a household cluster. Therefore, the designation of these external settings servicing as "publically" accessible spaces carries a divergent implication than the expansive terraced spaces along Structures 12 and 16 within the Site Core. The occupants of the site core group likely included multiple family units, while the Southeast Group is identified to be group of immediate and extended family members, based on scalar variations, amongst others. Additionally, access into Structure 12 is identified to be amongst the most restrictive and likely more private, as the interior is associated with a residential purpose.

Furthermore, Structure 16 is recognized to purpose as a storage facility and the internal space completely unrelated with a municipal or residential function.

Overall, though all four buildings exhibit sizeable external raised regions, the extensions along Structures 12 and 16 from the main plaza likely held a greater municipal intent, than the buildings within the Southeast Plaza Group. Activities and events taking place within the plaza of the main group conceivably engaged greater numbers of participants and observers and with elevated levels of formality. The generalized purpose of the open patio within the Southeast Plaza Group was that of a shared space, yet likely for differing forms of practice, which included greater domestic activities and recreation.

Lastly, within the Site Core Plaza Group, Structure 17 is identified with an overall municipal intention, yet is divergent with regard to access to both interior and exterior spaces. Structure 17 is observed to vary from Structure 12 by possessing only the minimal external raised platform of the balcony or bench space along the most prominent plaza facing. It is evident that significantly fewer people could occupy this space and access is deemed to be restrictive with regard to entry into the interior of the building. However, no internal furniture is observed, which would strongly indicate a residential purpose. Therefore, Structure 17 is interpreted to represent a building utilized for public activities yet, not necessarily for all. The interior is suitable as a meeting, ritual, or feasting space, while the external platform space is useful as a raised podium to engage with the public occupying the open plaza. This example demonstrates how a municipal intent within this region of PVN647 may not equate with equal accessibility to all.

Residential, Domestic and Private Intentions

Settings associated with a residential, domestic, or a generalized private intention are more abundant than those linked with a municipal or public intent at PVN647 and typically include a greater diversity of social practices. Residential settings may engage in all previously identified forms of practices (food-related activities, ritual ceremonies, and storage), yet on small-scales of production or frequency. Overall, a residential or a domestic location is primarily recognized as a constructed space, whether interior or exterior to formal buildings, but usually the entire edifice and surrounding activity regions. From household settings from other regions of northwest Honduras, residences are identified by the presence of internal built-in furniture (benches, shelves, niches, etc.) (see Hendon 1991; Douglass 2002). However, I argue that identifying a structure as a residence can be achieved by means of evaluating other architectural attributes along with the artifact record. As such, several examples of residential and domestic settings are present from both the Site Core and the Southeast Plaza Groups, though variations are observed.

Structures 18 and 33 are most broadly identified as residences within the Site Core Plaza Group and share the similar construction history of being originally 3-sided edifices that were later sealed. Furthermore, upon being enclosed, Structure 18 witnessed an extensive terrace appended along a plaza-visible façade, yet not directly facing the open plaza. In contrast, Structure 33 includes various abutting terrace-creating additions along the fourth and final facing, yet the yielding space is not equivalent in area to that of Structure 18. Furthermore, Structure 33 is not positioned immediately on the main plaza,

but within a smaller patio cluster area, southeast of the main plaza. The external additions are along a patio-visible facing; the same facing that was the last to be added and sealing the building. Lastly, the artifact assemblages from each building reveal that daily-to-moderate forms of domestic practices were taking place in and around the buildings, which are markers of an overall intention of dwelling.

Additionally, Structures 6 and 7 within the Southeast Plaza Group are most conclusively identified as residential settings by means of architectural attributes and artifact assemblages, though it is unclear how Structure 7 purposed in its earliest 3-walled formation. The exteriors of both buildings include extending terrace appendages, yet only the addition along Structure 7 is positioned to immediately face the open patio. As referenced with the discussion of municipally intended settings, the Southeast Plaza Group as a whole is identified as a household grouping and therefore associated with an overall domestic and familial functioning. Though the terrace along the patio-facing façade of Structure 7 is similar to arrangements along Structures 12 and 16 from the Site Core Plaza Group, the overall meaning of the space is less formal and likely the notion of "public" is associated with the colloquial.

In comparing identified residential settings between the structure groupings, two similarities are revealed. The first is that three of the four dwelling locales are described as originally fashioned 3-sided edifices. Structure 18 and 33 from the Site Core and Structure 7 from the Southeast over time are adapted into residences from their earlier architectural formations. However, the significance of this correspondence is not known. Secondly, all of the identified residential structures are calculated to contain amongst the

lowest densities of ground stone implements from all investigations at PVN647. It has been postulated that if the municipal and public exterior settings of Structures 12 and 16 operated as communal locales for grinding activities, than it is likely that the occupants of the identified residences utilized these spaces and resources, as they did not possess adequate ground stone tools of their own.

Storage and Workshop Intentions

The final functional intent analyzed is referenced as locations designed as storage and possibly small-scale production or workshop settings. The identification of this form of purposeful intent is most exclusively based upon the size and form of a construction and associated density of artifacts. The notion of public or private in relation to a storage or workshop setting is multifaceted and posed to be associated with the overall correlation to neighboring structures, if discernible. Two structures from all investigations at PVN647 are identified as storage facilities, one located within each structure grouping.

The interior function of Structure 16 is recognized as operating as a site for storage within the Site Core Plaza Group. The expansive veranda along the plaza-facing façades are linked with a municipal intent, though the interior is identified as the storehouse for the ground stone and other food-related implements, as well as ceremonial objects. It is postulated that Structure 16 served as the housing for shared tools utilized in and around the building, but also for the ritual and feasting-related practices likely occurring at neighboring Structure 17. Therefore, the exterior of the building is identified as a communal setting, though the interior is likely not publically accessible. The overall

interior size and high densities of a variety of items suggest that use occurred elsewhere, though it is not clear if access to all resource items was equal. Specialty or ceremonial objects may have been used only at Structure 17 and not available for loan by general members of the community, which clearly marks a status difference between those at Structure 17 and other buildings.

In slight contrast, Structure 13 is identified as a storage facility within the Southeast Plaza Group, though it is not postulated to be as restrictive with regard to access as Structure 16. Furthermore, the intention of the building is likely only that of storage and various small-scale activities of production or maintenance. However, Structure 13 is observed to contain no external architectural assemblages and therefore exterior activities were occurring in unconstructed spaces. Finally, as the Southeast Plaza Group is recognized to be a household grouping, the resources housed within Structure 13 were likely accessible and shared by all residents of the group. Between Structures 16 and 13, variations in access control, use of the space, and generalized storage needs are exhibited and are representative of differing functional and social needs of each group.

Overall Cohesiveness of Groups and Final Conclusions

In the previous discussions, the architectural attributes and artifact assemblages from the Site Core and Southeast Plaza Groups have been presented separately and the functional intents have been compared, yet how were these groups interacting or engaging with each other? Does evidence suggest that each group operated independently or did a system of reliance on one-another exist? The final assessment of

both groups is the evaluation of the generalized social order and cohesiveness and the form(s) of interaction and engagement occurring between the groups. This examination is based upon shared architectural traits and interpreted daily activities and social practices present within each group.

As formerly stated, the Site Core Plaza Group witnesses a lower percentage of sampled structured compared to the Southeast Plaza Group. Therefore, the notion of overall cooperation and social order is more challenging to decipher, due to only five of 20 surface-visible buildings having been studied. However, select relationships between the five researched structures within the main group are revealed, as in the case of Structure 16 likely serving as storage for ceremonial and food-related items deemed to be utilized at neighboring Structure 17. Additionally, it is conceivable that as the expansive exterior spaces of Structures 12 and 16 served a municipal intention, other buildings and residents within the group were dependent upon those locales and available stone tool resources for processing activities. However, it is unclear if access and maintenance of those ground stone implements were controlled and managed by a supervising entity or governing group. Therefore, it is not known if this situation demonstrates a form of control over certain forms of daily subsistence practices or a genuinely communal collective, where access to the space and the use of tools was equal and unconditional. Yet, it is undeniable that status differences are existent within the Site Core Plaza Group, as the extensive architectural assemblages of Structures 12, 16, and 17 likely required larger labor parties than those utilized to erect Structures 18 and 33.

The evaluation of potential resource regulation occurring within the Site Core Plaza Group is further complicated when other forms of production or maintenance are considered. Structures identified with an overall domestic and residential intention (Structures 18 and 33) include evidence of other forms of daily food-related and craft production, albeit on small-scale or household levels. It remains unclear why only use of groundstone tools would be centralized at specific locations, while other forms of processing or manufacturing are allowable to occur in more household and private settings. This observation may indicate that those of greater social status held control over the use or even manufacture of these particular tools. However, due to the minimal number of investigated buildings from this sector of PVN647, only superficial functional and social linkages are legible. As a result, a more comprehensive understanding of the form(s) of social operation taking place within the group is currently indiscernible.

Alternatively, the majority of surface-visible structures comprising the Southeast Plaza Group have been investigated (3 of 5) and identified as a patio group, likely composed of a tightly-knit, extended family network operating as a household unit. Therefore, the degree of social interconnectedness is deemed to be significantly greater than that of the Site Core Plaza Group. The majority of architectural attributes signal access and use of exterior and interior spaces to be open and unrestrictive, though not with a similarly identified form of "public-ness" as is likely occurring within the Site Core Plaza Group. Daily subsistence practices and activities of maintenance and production, in addition to household ritual, are taking place mainly at the identified residential settings, Structures 6 and 7. Overall, the Southeast Plaza Group demonstrates

a fairly independent existence, as evaluated from the analyzed artifact assemblage, save for ground stone implements. Recovered mano and metate fragments from the investigated buildings are of considerably lower densities than other identified food-related artifact types that it raises the question of how residents of the group were processing foodstuffs with only minimal immediate access to these essential grinding tools.

One possible explanation for the overall irregular distribution of ground stone fragments from all investigated structures at PVN647 is the earlier posed situation of communal use of the tools at Structures 12 and 16. Perhaps not only did the inhabitants of the Site Core Plaza Group utilize the exterior spaces of the buildings and shared access to the implements, but so too did the residents of other structure groupings at PVN647. The noticeable lack of ground stone fragments from the Southeast Plaza Group may indicate that grounding activities occurred away from the group, namely at Structures 12 and 16, and processed foodstuffs were returned to the patio group for consumption and storage. The variety of bowl and jar vessel fragments analyzed from the Southeast Plaza Group support that if processing occurred elsewhere, materials could conceivably be transported back by means of vessels of mobile sizes and shapes.

Similar to the inquiry posed within the Site Core Plaza Group, it remains unknown how controlled access to and use of the ground stone implements for all members residing at PVN647 may have been at Structures 12 and 16. Due to the low densities of manos and metates recovered from other structures, the fundamental activity of personal grounding and grinding for household subsistence must have occurred

somewhere. However, it remains indeterminable to assess whether only individual processing occurred with the implements, or if wholesale production was dictated and managed, indicating a more elevated form of social organization and control of resource production activities. Vesicular basalt cobbles are commonly available from the surrounding hills, as well as from *quebrada* or riverbed locations (Schortman 2008, personal communication) and an outcrop is documented to the north in the vicinity of the southwest region of the Naco Valley (see Anderson in Schortman and Urban et al 1993). Therefore, access to the raw material in order to produce a functional metate or mano is a relatively unproblematic strategy in order to personally possess a stone implement. Furthermore, the manufacturing methods involved in fashioning a grinding tool require less technical skill and knowledge than other forms craft production, namely ceramic production. Therefore, it remains unclear why only ground stone objects were seemingly centralized at two locations, when all other production and food-related artifact types are recovered from settings and in densities that are not deemed to be extraordinary for daily existence, when also evaluated with observed architectural attributes.

The scenario of grounding activities concentrated at Structures 12 and 16 signals two forms of social cohesiveness potentially occurring between the two investigated structure groupings. The first form is linked with the postulation that access to implements is communal and unconditional. If processing activities are deemed to have occurred only for personal subsistence and processing means, than residents from the Southeast Plaza Group depended heavily upon the right to access and use the implements consolidated at only the two buildings within the Site Core Plaza Group. Therefore,

maintaining virtuous social connections and relationships between the two groupings likely held greater importance to the dwellers from the Southeast Plaza Group, in order to ensure access to tool resources that are observed to be nearly non-existent within the patio group. However, if the high densities of ground stone fragments at Structures 12 and 16 indicate that organized grounding and grinding practices are occurring for large-scale production-related reasons, than a more complex depiction of social stratification is revealed. In this second situation, administrators likely residing within the main group, and at Structure 12, rely upon the labor of residents from throughout the site for processing productivity, in exchange for personal use for household subsistence needs. Though, these posed situations are entirely speculative. Overall, the full range of possible social relations associated with the unusual distribution of ground stone implements witnessed at PVN647 is very challenging to measure.

Finally, aside from social relations resulting from the irregular occurrence of ground stone fragments at PVN647, the degree of interaction and interconnectedness between the two investigated structure groupings is likely quite conventional. It is not known for how long the settlement of the Southeast Plaza Group took place during the Late Classic in correspondence with buildings within the Site Core Plaza Group. However, evidence indicates that the Site Core Plaza Group witnessed prolonged occupation into the Terminal Classic and the Southeast Plaza Group did not. Furthermore, it is indeterminable whether the southeast region was settled by residents from the main group, nor for what reasons. Regardless, the occupants of both structure groupings exhibit evidence for an autonomous existence, save for the unbalanced density

of ground stone materials. It is projected that amicable communication, casual forms of social reciprocity, and most likely extended familial relations existed between the two groupings. Similar artifact types and forms are recovered from both settings and architectural assemblages are revealed to be corresponding, yet with vernacular variations to suit individual structural needs or preferences.

However, the denser settlement of structures and the overall larger size of buildings within the Site Core Plaza Group is indicative of greater social potency occurring within this region, as compared to the Southeast Plaza Group. Greater quantities of pottery sourced from other ceramic producing sites from the Naco and Cacaulapa Valleys are witnessed within the Site Core; in addition to the presence of imports for farther beyond these valley systems. No imports are witnessed in the Southeast Plaza Group and signify that the occupants of the region did not engage with communities from greater distances. Furthermore, occupation of the Site Core Plaza Group persisted well into the Terminal Classic, while evidence for occupation from the Southeast group is present but not with corresponding intensity. The Southeast Plaza Group was likely abandoned before the Site Core Plaza region and the residents may have been concentrated in this region before the whole river *vega* region was abandoned by the Early Postclassic.

Though the overall goal of this investigation is focused on the architectural canons present at PVN647, the evaluation of social practices and social relations between investigated structure groupings is relevant in order to assess similar or divergent structural traits. Comparable or differing vernacular styles are deemed to be linked with

pragmatic decisions of the builders/occupants of the structures but are also reflective of local identity expression. Vernacular architectural tendencies identified at PVN647 are representative of the inhabitants of individual buildings, the plaza or patio group in which they co-reside, and the defined site area as a whole. Only upon the comparative evaluation of these identified vernacular manifestations with other documented observations from within the Naco Valley and other regions within the northwest Honduras, will a more comprehensive depiction of shared identity expression and allowance for variation be revealed.

Chapter 7

Intra-Regional Comparisons:
Vernacular Architecture within the Middle Chamelecón Drainage
(Naco and Cacaulapa Valleys)

The following discussion comprises the initial comparative analysis to evaluate the degree of vernacular architectural attributes occurring within archaeological sites within in Northwest Honduras. This analysis is presented as an intra-regional comparison. The Naco and Cacaulapa Valleys are considered within a single unit of regional measure in this dissertation, as site PVN647 is located within the Middle Chamelecón-Cacaulapa region, which marks the border between the two valley systems (less than 5km from PVN647). Therefore, hypothesized vernacular architectural arrangements from documented Naco Valley (PVN) and Cacaulapa Valley (PVC) sequence sites are highlighted and, where applicable, contrasted with those observed from PVN647.

The first component to this discussion explains the sample selection process and how previously generated PVN and PVC archaeological datasets are chosen for comparative aims. Next, the selected posed vernacular architectural arrangements and construction designs for comparison are described and the significance of each are underscored. A brief background for each compared valley region is located in Chapter 3, however relevant observed architectural traits and site-planning principles are included here. These traits are compared and contrasted to reveal the extent of shared architectural

designs and the degree of variation and flexibility allowed within vernacular styles within the Naco and Cacaulapa Valleys.

Comparison Sample Selection Process

The goal of this comparative analysis of vernacular architecture within this region of northwest Honduras is to initiate the examination of the range of construction variation and identify patterns of commonly occurring building techniques and designs. While various datasets of investigated archaeological sites within the Naco Valley are currently available, this investigation is not attempting to include reference to all applicable previously investigated sites. To do so would yield the most comprehensive evaluation of documented architectural traits from the region, however, is not logistically feasible for this analysis. The following comparisons are posed to be part of a qualitative analysis and not representative of a systematic quantitative study. Therefore, this evaluation is based upon four criteria for sample selection, which are all comparable to archaeological observations made from PVN647. These criteria include: (1) relative-temporal occupation; (2) degree of archaeological investigation and access to excavation reports; (3) site size and spatial organization; and (4) locational setting, with respect to PVN647.

Criterion 1: Time Period of Primary Occupation

The first criteria of the selection process is regarding the relatively-dated time period of primary occupation of any given archaeological site. For the purposes of this examination the Late and Terminal Classic periods have been selected and are evaluated

as loosely continuous time periods, as the occupation at PVN647 exhibits evidence as predominantly established during the Late Classic and continuously occupied into the Terminal Classic period. Approximately 215 sites within the PVN sequence and 35 within the PVC sequence are either confirmed or credibly identified as dating to the Late Classic and/or Terminal Classic periods, based upon a variety of formal investigation and dating techniques.

One particular site within the PVN system (PVN128) has been selected for the distinct characteristic as also containing evidence for occupation occurring as early as the Middle Preclassic and extending into the Terminal Classic period. This is also witnessed at PVN647 and highlighted for comparison as the overall evidence for occupation during this early time period is relatively scant in this region of Mesoamerica.

Criterion 2: Comprehensive Archaeological Investigation

The degree of archaeological investigation undertaken at an individual site marks the second criteria in the sample selection process. As individual structures are evaluated based upon the comprehensive assemblage of architectural features, sites which experienced complete horizontal exposure of structures are selected for comparison. As test-pitting or axial trenches do not reveal the complete architectural arrangement of a given structure, buildings that have only undergone this extent of archaeological investigation are not considered in this comparison.

For conservation and site preservation reasons, no archaeological site in this discussion has undergone extensive exposure of all documented structures within a given archaeological site. However, sites which included at least 2-3 fully (or mostly) exposed

structures were considered for comparison, regardless of site size. In this discussion, this is the identification of a site that has experienced *extensive horizontal investigation* or E.H.I., as it will be referred. To be clear, labeling a site as having undergone E.H.I. is not proportional to the number of identified structures associated with a given site, but representative of the scale of archaeological examination carried out on individual structures.

Furthermore, the availability and quality of excavation and architectural write-ups are also taken into account. Of the aforementioned number of both PVN and PVC sites identified to be primarily occupied during the Late and/or Terminal Classic periods, approximately 65 within the PVN and 13 within the PVC sequence have undergone extensive horizontal investigation (E.H.I.).

The majority of documented descriptions from previously investigated sites within the PVN/PVC are in the form of field-report informes and Bachelor degree Honors theses; and to a lesser degree Master and Doctoral degree theses, and peer-reviewed journal articles. Approximately 45 Bachelor degree honors theses have been prepared as a result of PVN/PVC investigations since 1992 by field school students. Of those, only 30 formally include examinations of architectural elements. However, only a portion are relevant to a discussion of non-monumental forms of architecture (**Table 7.1**). All other sampled sites are based upon information ranging in manuscript format from field reports to Masters and Ph.D. theses to peer-reviewed journal articles and edited volumes.

		PVN Total	PVN Sampled	PVC Total	PVC Sampled
Criterion 1: Time Period	Late & Terminal Classic	215	15	35	3
Criterion 2: Degree of archaeological investigation	Extensive Horizontal Investigation (E.H.I.)	**~ 65**		13	
	BA Honors Theses	20	**~ 6**	4	1

Table 7.1: Summary of the total number of documented sites and number of sampled sites in this comparative discussion from both the PVN and PVC sequences, distinguished by Criterion 1 (Time Period of Primary Occupation) and Criterion 2 (Comprehensive Archaeological Investigation) in the sample site selection process. PVN647 is not included in this summary.

Criterion 3: Site Size and Structure Arrangement

In maintaining certain observed attributes from PVN647 as constants with comparisons made to other archaeological sites, the overall site size, structure organization of sampled sites, and building materials comprise the third criteria in the selection process. The primary settings of investigation at PVN647 are the Site Core Plaza Group and the Southeast Plaza Group. The site core group contains approximately 20 surface-visible structures, while the Southeast Group is documented to contain a total of 5 structures. These frequencies of structures places the groups within a Tier 3 and Tier 5 designation, respectfully, based upon the established Late Classic PVN settlement hierarchy (see Chapter 3 for description of PVN/PVC Settlement Pattern Site Hierarchy).

Additionally, the structure arrangements at PVN647 align with the commonly occurring patterns of formal plazas and the smaller patio group configurations. Plaza/patio size and degree of nucleation can be an indication of collaborative and shared social practices and values. Therefore, previously investigated sites selected for comparison also adhere loosely to PVN Tier 3-5 site size designations and include some clearly discernible group arrangement around a common open area, either a plaza or

patio. However, similar to the investigations at PVN647, not every structure comprising a plaza or patio group at the selected sample sites has undergone formal and complete excavation. Sampled comparison sites that do not adhere to the designation of including some discernible plaza/patio group arrangement are referenced, where appropriate.

As a Tier 5 designation within the PVN/PVC settlement ranking includes a wide range of site arrangement possibilities, a further breakdown is established. Within Tier 5 settlements, sites containing approximately 5 buildings or less are referenced as "small" Tier 5 households, while those with more than 5 structures are deemed to be "large". Structure arrangements are considered within these sub-set categories and discussed for each site. The distinction is offered to better facilitate analyzing the range of spatial variation occurring within compared sites identified to be within a Tier 5 ranking.

The overall structure size and construction materials utilized in erecting each sampled structure are also factors to be considered. Nearly all observed buildings at PVN647, except for Structure 12, are identified not to be of monumental size (i.e. less than 1.5m in height). A structure greater than 1.5m in height likely signifies an elevated status or functional specialization. Again, vernacular characteristics are identified as associated with more domestic and household contexts and constructions, and therefore, less than 1.5m in height. Although Structure 12 is identified as standing approximately 1.5m in height and labeled to be monumental architecture, selected comparative structures in this discussion are chosen for the characteristic of predominantly not being identified as monumental in size. However, exceptions are noted when mentioned.

Furthermore, all observed building materials at PVN647 are deemed to be free of intentional modification for the sole purpose of functioning as a construction component for a structure. (Structure 12 at PVN647 includes the fragmented metate as a recycled building material, however, the original formation of the stone was for other grinding-related purposes, and not for use in architectural construction.) Cobbles and smaller stones purposely selected for their naturally occurring shape and size is identified as a differing construction practice, compared with building materials that have been deliberately modified to meet construction needs. Cut-stone or other intentionally prepared building materials can signify more complex or preordained forms of monumental architectural designs and overall social order (see Hendon 1994; Gonlin 1993). Therefore, all selected comparative buildings are amassed primarily using unmodified building materials, predominantly river cobbles, for consistency purposes. However, certain sites contain a mixture of structures assembled by means of both modified and unmodified building materials and contain both monumental and non-monumental architecture. These examples are referenced when applicable, as differing site dynamics may be occurring as well.

	Site Size Hierarchy Designation	PVN		PVN Sampled	PVC		PVC Sampled
		Total	E.H.I.		Total	E.H.I.	
Criterion 3: Site Size	Tier 3 (16-28 structures)	22	12	1	3	1	0
	Tier 4 (13-18 structures)	39	12	5	3	2	1
	Tier 5 (10 or less structures)	145	23	8	28	9	1

Table 7.2: Summary of the total number of documented sites, number of sites undergone Extensive Horizontal Investigation (E.H.I.), and number of sampled sites in this comparative discussion from both the PVN and PVC sequences, distinguished by Criterion 3 (Site Size) in the sample site selection process. Note: the distinction between Tier 3 and 4 Sites is not only dictated by number of structures, but also considers number for formal plaza groupings and monumental architecture. PVN647 is not included in this summary.

Overall, of the approximate 215 Late and/or Terminal Classic PVN sites, approximately 206 hold relevance with regard to site size (between Tier 3-5) (**Table 7.2**). All other PVN sites are either larger than a Tier 3 designation and/or date to a different time period or are unknown with regard to time period occupation. Additionally, Tier 5 sites that are documented to only contain artifact scatters and no formal structures are not included for comparative purposes. All Late and/or Terminal Classic sites within the PVC sequence adhere within the Tier 3-5 range, except for El Coyote. The specific Tier designation and structure arrangement of each sampled site is described in the discussion of the referenced site and the general valley setting is summarized in Chapter 3.

Criterion 4: Locational Setting and Distance from PVN647

The final criteria of selected sample sites is with regard to geographical location and the attempt to evaluate architectural attributes from a range of household settings within northwest Honduras. Interaction amongst households groups likely varied in intensity in correlation with physical distance. For most regular subsistence and material

exchanges, settlements located within a few kilometers of each other could have most conveniently engaged with one and other. However, interaction over greater distances (for example, beyond 20km) may occur less frequently, resulting in fewer exact material overlaps, as in the case of particular paste groups of pottery and perhaps architectural components. Again, generalized vernacular architectural characteristics or traits of households are recognized as similar-seeming construction materials and construction techniques, relative scaling of structures, and some variant of a plaza or patio clustering or arrangement of buildings. Therefore, within a similar environmental zone, access to comparable raw materials for construction may make architectural manifestations appear analogous, especially when amassed from completely unmodified resources (i.e. cobbles). However, in order to assess variation of household vernacular architecture, a range of comparative distances need are necessary.

For immediate comparative intentions, sites within the Middle Chamelecón-Cacaulapa (MC-C) region are distinguished from other Naco Valley (PVN) and Cacaulapa Valley (PVC) sites, as these settings are located no more than 5km away from PVN647. As indicated by the density of pottery materials from PVN647 originating from the sites of Las Canoas and PVN598, regular interaction and exchange occurred between these particular settlements. However, in order to assess the comprehensive degree of interaction and shared practices, architectural comparisons are attempted. Sampled sites from beyond this region are presented as located within the Naco and Cacaulapa Valley's (residing roughly more than 5km away from PVN647), within the PVN and PVC sequences, respectfully (**Table 7.3 and Figures 7.1 and 7.2**).

			PVN		PVN	PVC		PVC
			Total	E.H.I.	Sampled	Total	E.H.I.	Sampled
Criterion 4: Location	Middle Chamelecón-Cacaulapa (MC-C) (less than 5km from PVN647)	Tier 3	1	1	0	1	1	0
		Tier 4	2	1	1	2	1	1 – PVC187
		Tier 5	8	4	1	10	0	0
	Naco Valley (beyond 5km from PVN647)	Tier 3	20	10	1	-		-
		Tier 4	37	11	4			
		Tier 5	137	19	7			
	Cacaulapa Valley (beyond 5km from PVN647)	Tier 3	-		-	2	0	0
		Tier 4				1	0	0
		Tier 5				18	9	1

Table 7.3: Summary of the total number of documented sites, number of sites undergone Extensive Horizontal Investigation (E.H.I.), and number of sampled sites in this comparative discussion from both the PVN and PVC sequences, distinguished by Criterion 4 (Location and Distance from PVN647) and with Criterion 3 (Site Size) in the sample site selection process. PVN647 is not included in this summary.

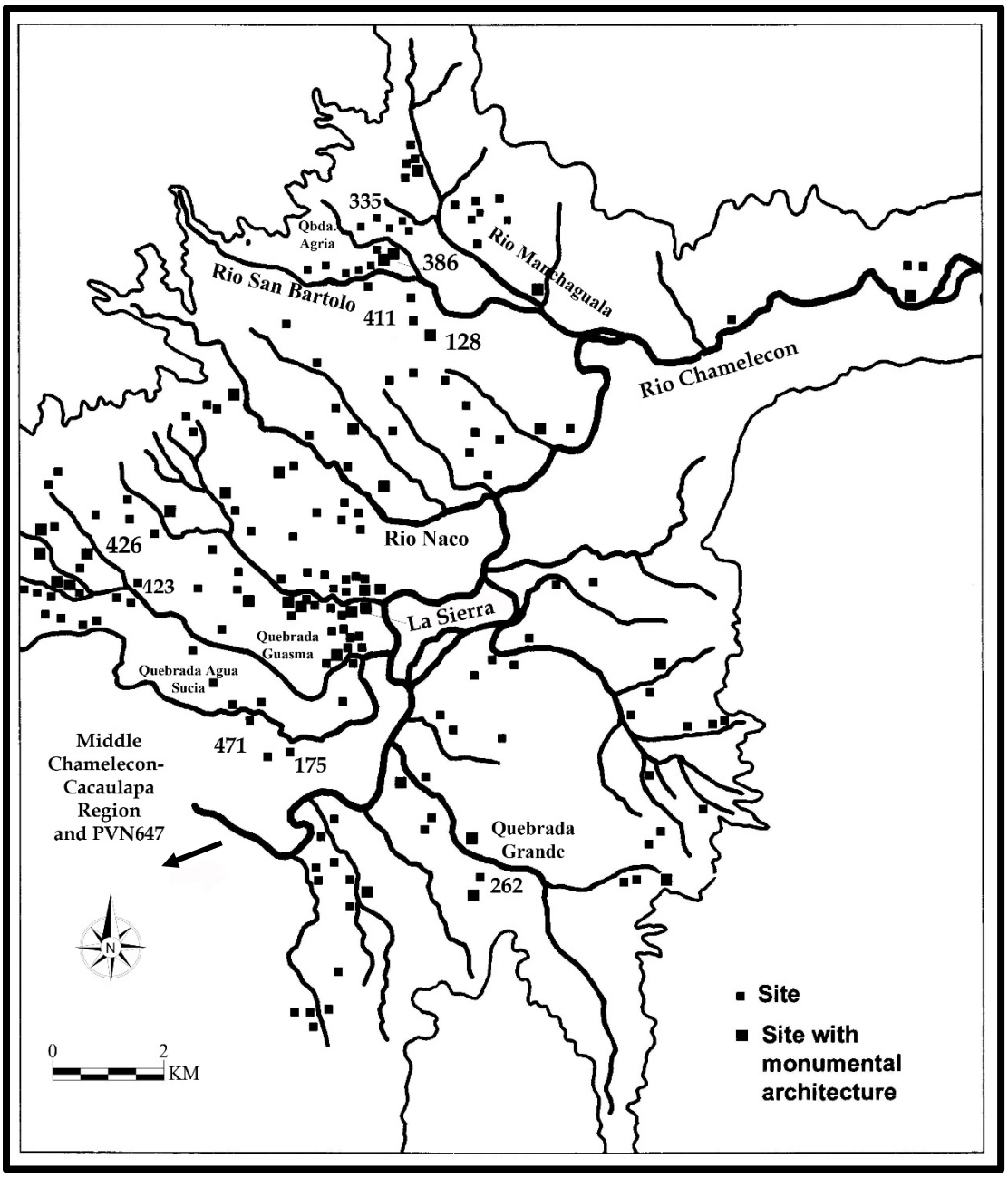
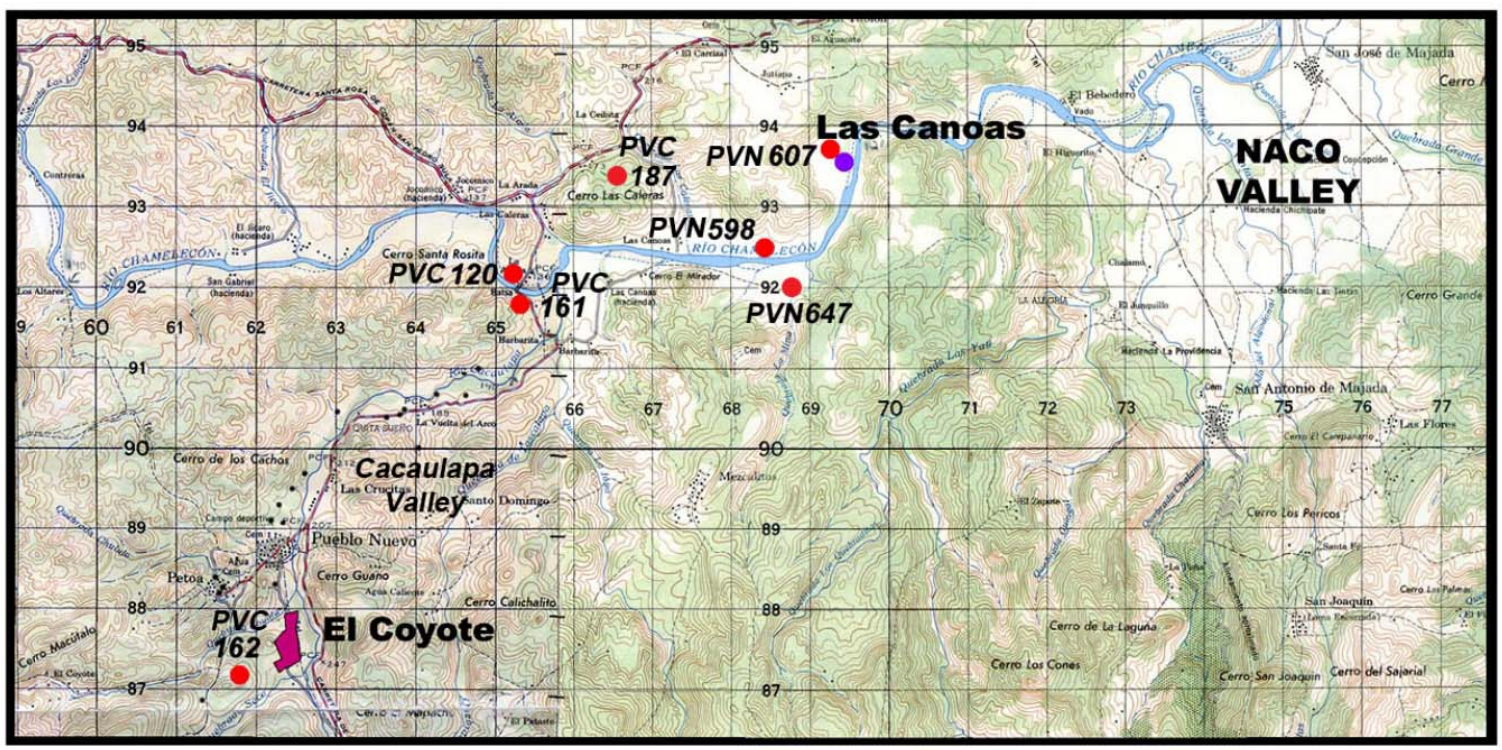


Figure 7.1: Map of the Naco Valley and sampled PVN sites in comparative analysis (adapted from Urban and Schortman 2004, after Ross 1997).

Figure 7.2: Map of Middle Chamelecón-Cacaulapa Region, Cacaulapa Valley, and sampled PVN and PVC sites in comparative analysis (adapted from Urban 2007).



However, comparisons between PVN647 and Las Canoas are recognized to deviate from one or several of the above caveats. Roughly 9 sites relevant to this discussion within the MC-C, which includes PVN647, have undergone extensive excavation. Since 1999, the majority of research focus in this region has centered at Las Canoas, which represents a Tier 1-2 ranking and clearly includes monumental architecture. As fewer household settlements from other neighboring sites (that date to the Late and Terminal Classic) have been extensively investigated, architectural formations from Las Canoas are included in this discussion. However, references to structures from this regional administrative center are located within identified household settings and within patio group arrangements.

Furthermore, El Coyote within the Cacaulapa Valley contains approximately 340 structures, ranged in occupation from the Late Preclassic to the Early Postclassic, and is openly recognized not to adhere with the pre-established criteria for comparison. However, identified non-elite residential zones within this site include structures identified as components of household groups and are deemed worthy of comparison. As few sites have been extensively investigated within this valley system, consideration of only a select region from El Coyote is included. The acknowledgment of the undoubtedly differing social practices, status variations, and systems of power taking place at both Las Canoas and El Coyote are referenced as potential factors in architectural comparisons, and mentioned where necessary.

However, sites from within the immediate La Sierra site area in the Naco Valley are intentionally excluded from this comparison. Rulers at La Sierra are evidenced to

have controlled material exchange and social practices of household groupings located within an immediate area of the political center (Schortman and Urban 1993; Schortman et al. 2001). As such, building practices and spatial arrangements from household settings may be impacted by spatial proximity to the centrally-positioned valley rulers during the Late Classic. Though household settings at Las Canoas and El Coyote are recognized to be subjected to differing social constraints, the majority of intensive research efforts over the past decade have been centralized at these settings, therefore datasets are more comprehensive than from smaller Tier 3-5 settlements within the Middle Chamelecón-Cacaulapa region. A significantly larger dataset of household settings outside of the immediate La Sierra zone exist from within the Naco Valley proper.

Finally, to be clear, in this discussion site PVN647 is not positioned to be representative of a standard or distinguished archaeological site with regard to its observed site size, structure arrangements, or architectural attributes. On the contrary, site PVN647 characterizes an architectural assemblage that is unique only onto itself and while select traits are witnessed to occur in other places, it is the variations within the identified traits that are the focus of this comparative analysis. Therefore, the four criteria for sampled comparative sites are predominantly derived from certain elements that describe PVN647 as a whole, however, are not meant to infer value nor prominence. The goal of establishing the criteria is to hold certain factors as constants in order to focus on other observed construction similarities and deviations. Though, sites that range in settlement size and are categorized as ranging between Tiers 3-5, and predominantly

occupied during the Late and Terminal Classic periods, comprise a significant majority of documented archaeological sites within the Naco Valley, and other settings within this region of northwest Honduras. Therefore, PVN647 is posed as a suitable site upon which a comparison of vernacular architecture occurring within this region can be initiated.

Architectural Attributes and Designs for Comparison

Similar to the site selection process, the forms of architectural attributes and designs that are highlighted for comparison are influenced by observations made from PVN647. However, one architectural occurrence that has been observed to be a pattern, at least within the Naco Valley region, though not witnessed from any of the investigated buildings at PVN647, is also presented. This construction design is highlighted as it has not been formally studied for comparative purposes and holds relevance for evaluating the range of architectural variation and vernacular patterns taking place within the valley. As previously stated, PVN647 is not held to be representative of likely all architectural patterns exhibited within the region, but presented as an example of a select collection of construction practices. It is acknowledged that other architectural arrangements and forms are likely occurring and possibly even recurrent within the same settlement region as PVN647. However, only a select sample of architectural patterns deemed to be vernacular *arrangements* are highlighted as an initiation to evaluate the range of similarity and variation in order to assess their potential as a vernacular *form* within this region of northwest Honduras.

Therefore, the following discussion presents three hypothesized vernacular construction arrangements and evaluates the presence and the scope of similarity and variation occurring within each design plan at other PVN and PVC sites. The abundance or lack thereof of each posed vernacular arrangement speaks to the likelihood of it representing a truly vernacular *form* within this region of Honduras. The three vernacular construction arrangements adhere to the order of presented architectural attributes witnessed at PVN647 (see Chapter 5). Within the category of platform and basal designs, the 3-sided edifice is examined. With reference to interior elaborations, the tripartite room arrangement is assessed. This particular interior arrangement is not witnessed at PVN647, though is observed at several other locations. Finally, from the category of exterior modifications, the formation and size of external appendages are evaluated. Of particular focus are the block form and U-shaped or "box" form appendages, as well as free-standing appendages. Additionally, within this category, function of the identified forms is considered, when possible.

These three hypothesized vernacular arrangements are all compared with regard to construction quality and history, but also the overall pattern of site organization and the size and positioning of the structure within the sampled site. As previously articulated, the site arrangement is selected as a criteria for comparison. However, both configurations defined as plazas and those identified as patio groups are considered, as both are investigated at PVN647. The distinction holds that plaza arrangements include a greater total number of structures, compared with patio group formations. Furthermore, plaza arrangements may be dominated by an assortment of larger structures, perhaps

containing monumental forms of architecture. Patio group arrangements are more representative of nucleated household groups and are typically only defined by a discernible circular arrangement around an open space (Schortman and Urban 1994; Hendon 2010; Douglass 2002). Select buildings within a patio group may appear to be dominating (Hendon 1991), with respect to size, and contain anywhere from one to eight other ancillary or "dependent" buildings (Douglass 2002). Therefore, as architectural occurrences are documented from both group arrangement formations at PVN647, both are included and distinguished for each sampled site for comparison.

As stated above, select buildings within both plaza and patio arrangements typically contain buildings of various sizes and likely include varying degrees of architectural modifications. Structure size can reflect anything from history of expansion to functional intentions. Furthermore, positioning of a select building with respect to the overall group arrangement has been demonstrated to hold significance and is highlighted in this discussion for comparative purposes. The proximity of structures to each other is also considered, as certain buildings often expand and are architecturally linked with others. The overall aim is to identify patterns in overall structure size and locational setting, with respect to other buildings within a site and also between sampled sites. Overall, several previously investigated sites within the PVN and PVC sequences are presented and hold relevance with regard to at least one of the three hypothesized vernacular arrangements. Select structures and/or sites include more than one of these distinct vernacular arrangements and are noted for their comprehensive package of vernacular patterns. The aim is to present only a sample of architectural elements

observed within the Naco Valley and surrounding areas, to demonstrate the degree of vernacular persistence, and reveal the forms of shared social identity within the region.

Finally, the following comparative cases have been prepared from a variety of research documentation formats. Furthermore, available resources and technologies at the time of archaeological examination of any given site has varied greatly due to factors of timing, decade of investigation, and degree of investigation. Lastly, as much of PVN and PVC archaeological excavations are supervised by field students-in-training, resulting notational descriptions and observations vary with degree of investigative experience. Therefore, the degree of descriptive detail included in this discussion of selected comparative samples varies.

Platform and Basal Design: 3-Sided Edifice

The evaluation of platform and basal designs at PVN647 reveals evidence of both a conventional structure design and one identified to be atypical. The 3-sided edifice design (or a U or C-shaped structure) is recognized to be an extraordinary architectural pattern occurring at PVN647. The posed deliberateness of the building plan at PVN647 supports its labeling as a vernacular building arrangement. Furthermore, due to half of the investigated structures from PVN647 exhibiting evidence for originally being assembled in this open-sided configuration, its frequency proves significant enough to assess its presence in other locales and potential as a vernacular form.

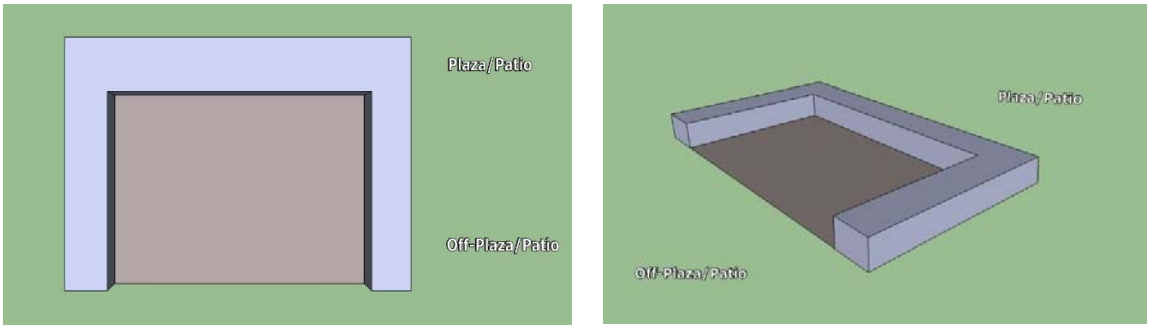


Figure 7.3: Schematic depiction of generalized 3-Sided Edifice (U or C-shaped).
The left image is a plan-view perspective, while the right is a side-view perspective.

Once again, the 3-sided edifice design is described as three, articulating wall constructions, which yield a bounded space that is open along one facing. The size and shape of the building may vary, though the characteristic open-facing is the essential marker. (Note: **Figure 7.3** is intended to only represent the general formation of this design and not overall size or shape.) As observed at PVN647, structures identified to be of this arrangement did not maintain an open facing over the entire course of occupation and were eventually sealed. Therefore, analogous architectural cases are evaluated based upon the potential for this arrangement at some point early in the construction history of any given structure. One way this has been determined is by assessing the quality of wall constructions of plausible 3-sided buildings. The summit sealing construction of identified 3-sided edifices at PVN647 are more often of notably poorer quality than the other basal constructions. Furthermore, positioning within a structure grouping is highlighted and the relationship between an open facing and a shared plaza or patio space is analyzed. At PVN647, the open region consistently maintained an off-plaza setting. In general, characteristics of 3-sided edifices at PVN647 are not held as a standard, rather a point of departure to assess the degree of variation present within this posed vernacular

construction arrangement. The persistence of this construction configuration is observed at PVN647, though variations are also observed with regard to the sealing method, once the fourth and enclosing wall is added. The following discussion presents evidence of the original 3-sided edifice design, variants on this theme, or complete lack thereof, initially from other sites within the Middle Chamelecón-Cacaulapa (MC-C) region and then the Naco and Cacaulapa Valleys.

Evidence of the 3-Sided Edifice Design from the Middle Chamelecón-Cacaulapa

No previously investigated archaeological sites within the MC-C region that adhere to the sample criteria for this comparison include structures that appear in the 3-sided edifice design.

Evidence of the 3-Sided Edifice Design from the Naco Valley

Site PVN175 – Structure 2

Site PVN175 is located in the western region of the Naco Valley and approximately 3.4m to the south of La Sierra (**Figure 7.4**). It is positioned on relatively level terrain on a terrace overlooking the Quebrada de Agua Sucia, roughly 350m to the north. Eight of the twelve surface-visible structures have been investigated, which are arranged around three plaza groupings. This number of structures places it as a small Tier 4 designation. Located in the western plaza grouping is Structure 2 (PVN175-2). It is the western-most building and is identified to exhibit characteristics of being originally

designed as a 3-sided edifice (**Figure 7.5**). Site PVN175 was investigated in 1995 by Michael Kneppler and dates to the Late and Terminal Classic periods.

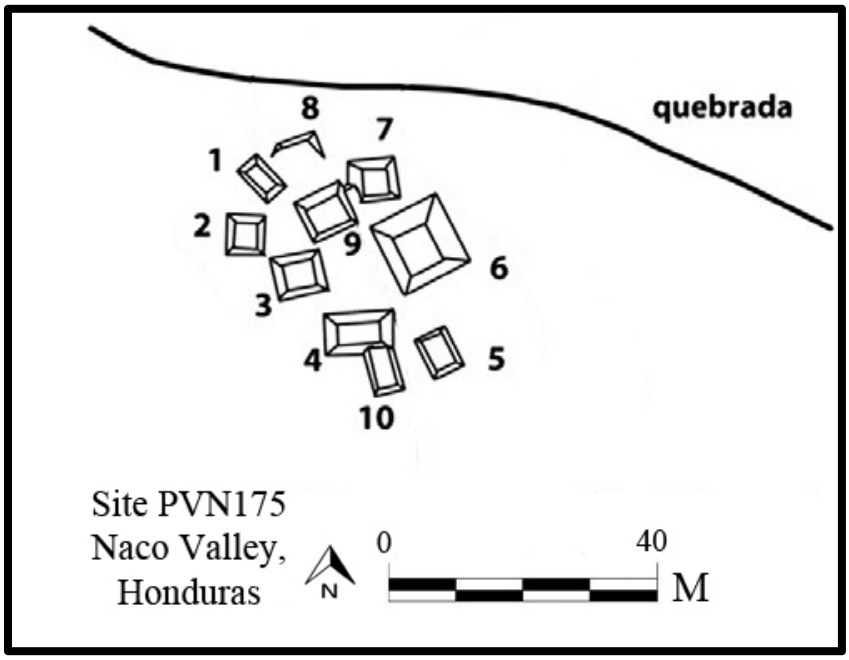


Figure 7.4: Site map of PVN175 (adapted from Schortman and Urban 2012).

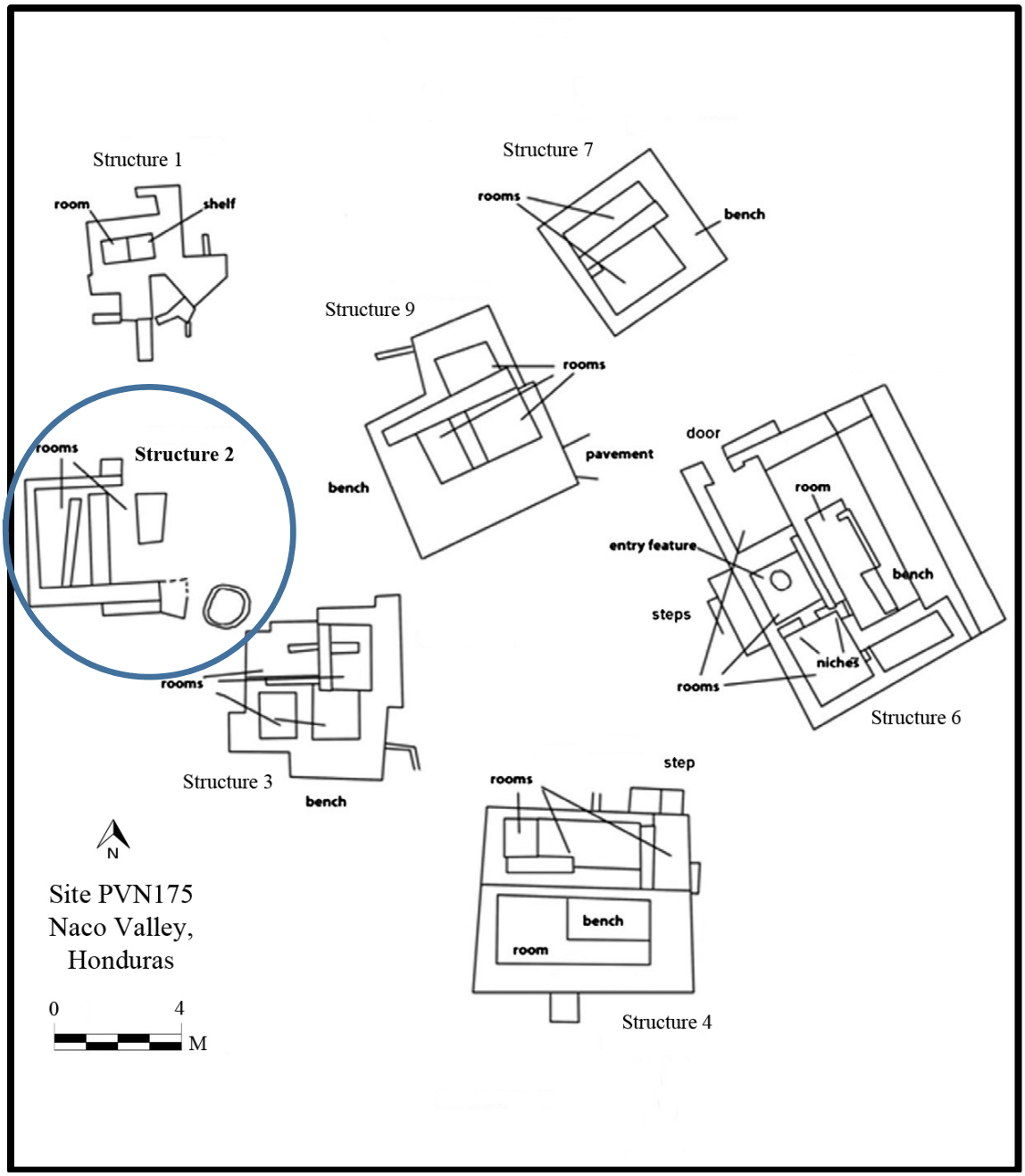


Figure 7.5: Plan-view of excavated structures at PVN175. Structure 2 is noted to represent a 3-sided edifice (adapted from Schortman and Urban 2012).

During the earliest construction phase, PVN175-2 is a surface-level construction with two room spaces, arranged in an east-west alignment. The western-most room is recorded to be enclosed on all sides, while the eastern room remains open along the eastern facing. During the same construction phase, a free-standing wall construction is amassed in the eastern region of the building. It is concluded to establish a formal eastern boundary of the building and seal the eastern room, maintaining points of entry near the northeast and southeast corners. However, before the eastern wall is assembled, the earlier north, west, and south walls are of substantial enough construction to support a perishable superstructure, covering both room spaces. Interestingly, the open facing of Structure 2 is the eastern side, which is the facing immediately on the plaza. This positioning of the open facing of a 3-sided edifice is recognized to be the reverse with regard to an open plaza region, as witnessed at PVN647. PVN175-2 is determined to serve as a storage facility (Schortman and Urban 2012).

Site PVN 411 – Structure 1

Site PVN411 is situated roughly 5.5km north of La Sierra in the northern region of the Naco Valley. It sits roughly 750m south of the Rio San Bartolo and is considered within the San Bartolo and Agria settlement setting. Identified to primarily date to the Terminal Classic, site PVN411 contains five structures all less than 1m in height, of which four were investigated (**Figure 7.6).** Organized in a semi-patio group arrangement, Structure 1 (PVN411-1) occupies the northeastern-most region of the cluster, roughly 3.5m north of Substructure 1 and 10m northeast of Structure 3 (PVN411-

3). Excavations of PVN411-1 were carried out in 1996 by Michael Kneppler, M. Morrison, and K. Delvendahl.

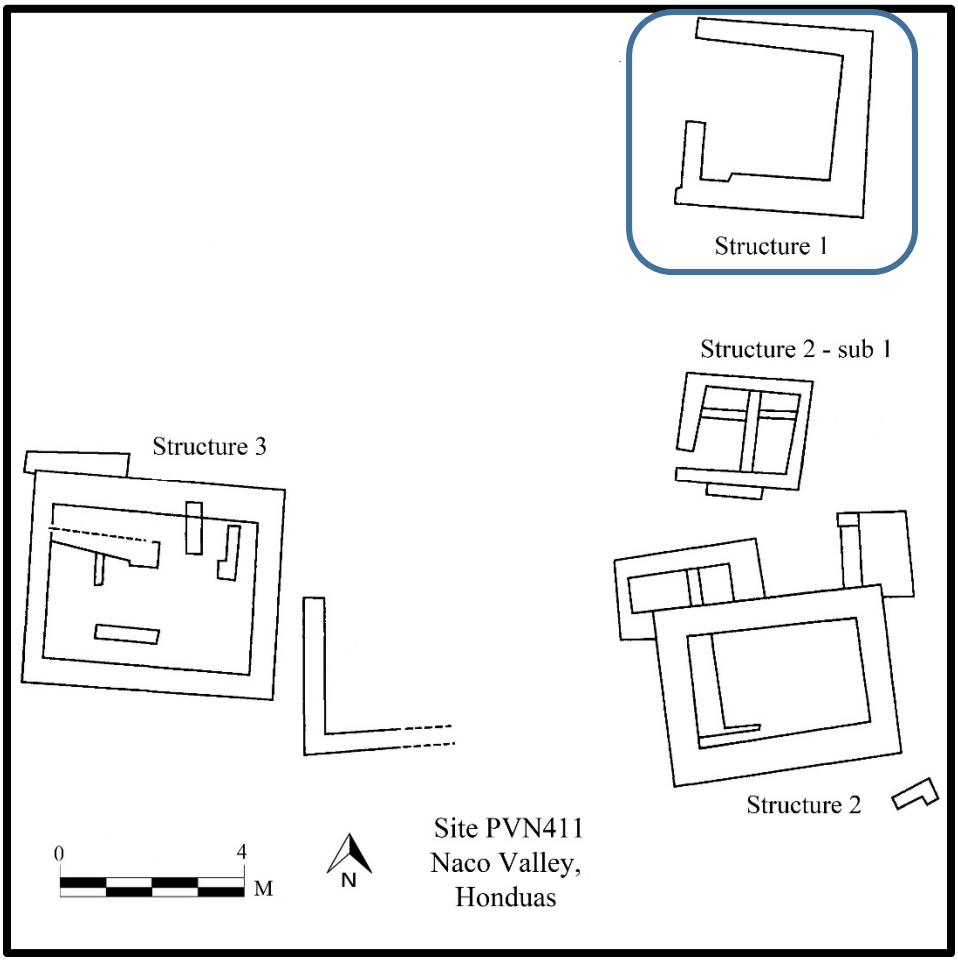


Figure 7.6: Plan-view of excavated structures at PVN411.
Structure 1 is highlighted to represent a possible 3-sided edifice
(adapted from Urban and Schortman 2004).

PVN411-1 is highlighted for exhibiting a partially unsealed summit interior and therefore a potential variant on the 3-sided edifice design. The building is observed to be a surface-level structure and include no additional architectural constructions other than a north, east, south, and partial western wall. Although PVN411-1 contains three

articulating basal corners, the northwest corner region remains open. Furthermore, the opening along the western facing is measured to be greater (nearly 2m wide) than the brief western construction, which extends less than 1m from the southwest corner. Even if a perishable barrier existed in this region, the opening is observed to be significantly greater than typical doorway measurements, roughly no wider than 1m. Therefore, it is possible that the interior of PVN411-1 was more alfresco with regarding the large opening along the west side of the building, than other structures with formal doorways incorporated into the architectural design of the building. As a result, PVN411-1 is positioned to stand as a hybrid of a conventional, sealed platform design and the generalized open, 3-sided edifice arrangement. Finally, it is worth nothing that the semi-open facing of PVN411-1 is the western side and is partially visible from the shared patio region to the south. It is not the most prominent-patio facing, nor the most off-patio region of the building. This observation is an added element of variation to this vernacular basal design scheme.

Site PVN471 – Structure 1

Located approximately 3km southwest of La Sierra is site PVN471. It is positioned on the south bank of the Quebrada de Agua Sucia, roughly 75m to the north, placing it within the Agua Sucia settlement region. The field containing the site is observed to have endured mechanized plowing, perhaps the cause for some of the disturbance of the four identified structures, which define the site. Though disturbed, three structures were excavated over 75% or more of their total surface-areas in 1995,

and basic architectural forms and dimensions were re-constructable. Of particular focus at PVN471 is Structure 1 (PVN471-1), located in the southeastern region of the loosely arranged patio grouping. Structure 2 (PVN471-2) is located roughly 12.5m to the west and Structure 3 (PVN471-3) is 14.5m to the north. PVN471-1 is highlighted in this discussion as a possible 3-sided edifice. It was investigated in 1995 by Michael Kneppler. Furthermore, while occupation at other buildings within PVN471 are concluded to have been amassed as early as the Late Classic, PVN471-1 is identified to have been assembled during the Terminal Classic (**Figure 7.7**).

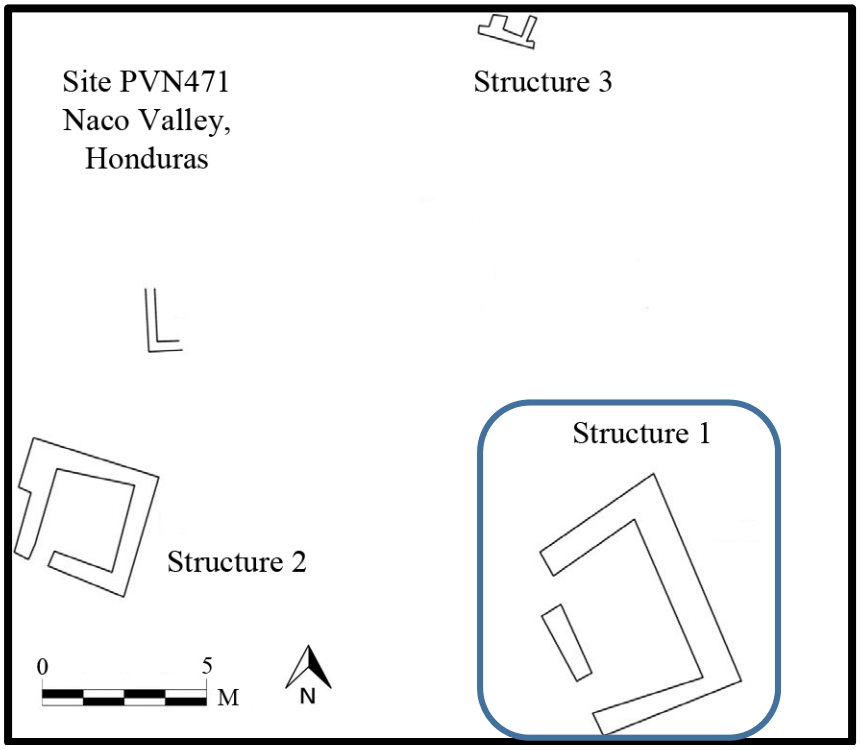


Figure 7.7: Plan-view of excavated structures at PVN471. Structure 1 is highlighted as a possible 3-sided edifice (adapted from Schortman and Urban 2012).

All four wall constructions comprising PVN471-1 are documented to have been assembled simultaneously, however, only three articulate with each other (Figure 7.X). The western-most construction is noted to be free-standing and in alignment with the end-points of the northern and southern walls. The open regions located near the southern and western corners are recorded to be formal entryways into the earthen-floored single-room compartment interior. This region of the PVN471-1 faces southwest and away from the open patio area, though possibly observable from that vantage point. The eastern-most wall is observed to be the widest and best quality of construction, preserved to be 1m wide, of all identified architectural elements. This width and substantial building construction may indicate that the wall also served as a bench or shelf, and labeling the building as a residence (Schortman and Urban 2012)

The outline of the three articulating wall constructions of PVN471-1 form a U or C-shape and are similar to the design of a 3-sided edifice. It is unclear how soon after the three articulating walls were assembled that the free-standing western wall was added. It is conceivable that, even for a brief period of time, PVN471-1 was occupied only as a 3-sided edifice. The substantial construction quality of the eastern wall potentially could have supported a perishable covering, supported by the north and south walls. The excavation report does not include detailed comments regarding the quality of the western wall, though notes that most horizontal coursing could not be assessed due to the overall low heights (ranging 0.18-0.4m) of most of the walls, some of which only survived to be one cobble in height. Regardless, the potential of a 3-sided edifice is furtherer by the observation that the open-facing of the building is located in an off-plaza

region. Overall, PVN471-1 exhibits more evidence than not for plausibly having been amassed, and even in operation, as a 3-sided edifice, before its enclosure by the western wall.

Site PVN395 – Structure 2

The site of PVN395 is located in the northwestern region of the Naco Valley, near the Rio San Bartolo, a seasonal streambed. It is described as a Late Classic, large Tier 5 residential cluster of 8 structures, organized around an oval-shaped central plaza. Structure 2 from PVN395 is positioned as the northeastern-most building within a patio grouping with three other buildings. It is not categorically argued to have been originally a 3-sided construction, however, displays evidence for including a significant gap/opening, which was later sealed. Site PVN395 was investigated in 1996 and analyzed by Stockett (1997, 2001).

The four retaining walls of PVN395-2 are observed to have been assembled during the same construction phase, however, only three walls are described to interlock. The northeast corner region is observed to include a gap measuring approximately 0.6m between the northern and eastern walls. This location is positioned in an entirely off-plaza region. It is unclear if this space functioned as an opening into the interior, as a formal doorway is described along the southern wall. Eventually, the opening in the northeast region is sealed. This original construction arrangement is observed to have never been fully enclosed along its open facing, even once a construction was amassed, with the attempt to seal the building. PVN395-2 is not posed to ever have been a 3-sided

building, yet the opening along its off-plaza facing speaks to the desire for such a space in this likely more-private setting, which is an observed similarity with a labeled 3-sided building at PVN647.

Evidence of the 3-Sided Edifice Design from the Cacaulapa Valley

Site PVC162 – Structure 1

Within the Cacaulapa Valley, site PVC162 contains evidence for a variety of architecturally vernacular elements, though the first to be presented is that of the 3-sided edifice platform design. PVC162 is located approximately 1.5km southeast of El Coyote and is positioned atop a hill nearly 75m above that center. A total of seven constructions define the site, with four buildings arranged in an irregular patio grouping due to the steep slope and limited space atop the hill (**Figure 7.8**). Structure 1 (PVC162-1) is identified to be the second largest building and is located in the western region of the clustering of structures, approximately 4m southwest from Structure 2 (PVC162-1) (**Figure 7.9**).

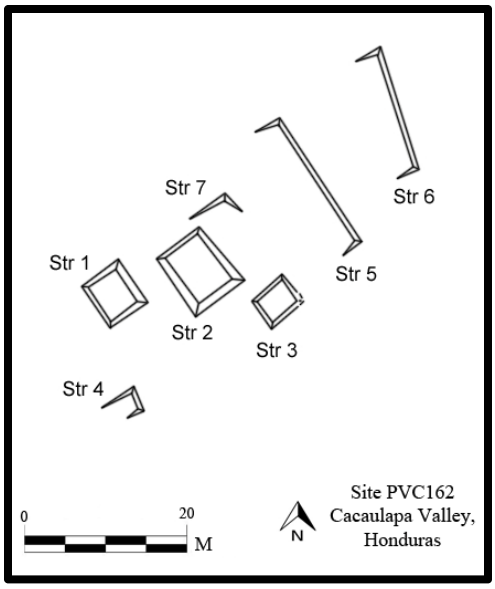


Figure 7.8: Site map of PVC162
(adapted from Urban 2007).

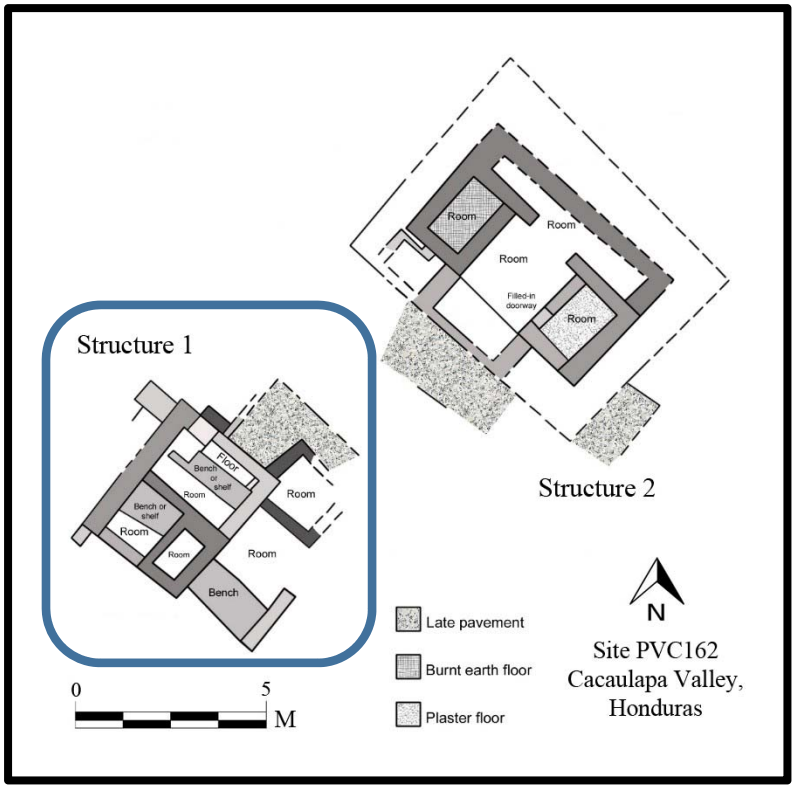


Figure 7.9: Plan view of excavated structures from PVC162.
Structure 1 is noted to represent a variant on the 3-sided edifice design
(adapted from Urban 2007).

Investigations at PVC162 during the 2004 field season by Leigh Anne Ellison and Charlie Webber, revealed PVC162-1 to be initially constructed as a stone-faced platform with an adjoining surface-level, earthen-floored room to the northwest. During this earliest of construction phases, this northwest room compartment is inferred to be open along the southwest facing and measured approximately 1.3m x 2m. It is not until a later construction phase that this open facing is sealed and a bench is added within the northeast region of the compartment. Later construction phases add even more room compartments within the northeast and eastern regions of PVC162-1, some of which are recorded to also maintain large opening, which are tentatively understood to function as doorways.

Overall, the earlier version of the northwest room compartment of PVC162-1 exhibits an intentionality for maintaining the space as open along one facing. This particular building is not argued to represent a prototypical example of the 3-sided edifice design, though a variation on the desire, however temporary, for an unsealed summit interior space. Furthermore, the southwest side of PVC162-1 comprises the opposite facing from neighboring PVC162-2 to the northeast. Though a clear patio organization of the identified structures at PVN162 is not established, the exterior expansions along both Structures 1 and 2 are predominantly located on the facings that are most visible to each other. The observation of the open facing of a 3-sided or U or C-shaped building to be oriented away from perceived shared plaza space is a characteristic witnessed from 3-sided buildings identified at PVN647. Furthermore, once the open facing is sealed, very

little other architectural amendments are observed to occur. To conclude, the intent for one room compartment from an earlier version of Structure 1 to remain unsealed represents a flexibility on the overall 3-sided edifice design scheme.

Discussion of the 3-Sided Edifice Design

To summarize, evidence for the 3-sided edifice basal arrangement is deemed to be relatively scant, as only one variant is observed within the greater Cacaulapa Valley area and none are observed within the MC-C region. However, slight patterns emerge from the select structures that do exhibit the potential pattern. These relate to 1.) the degree of variation on the arrangement; 2.) site size and spatial configuration; 3.) structure function; 4.) time period of occupation and 5.) location.

Of the five sites discussed, only three (PVN175, PVN411, and PVN471) include examples that most suitably match the description of a 3-sided edifice. Most specifically PVN175-2 and PVN471-1 are observed to include open facings, though later partly sealed by means of free-standing wall constructions. Entryways are preserved at each adjacent corner, though the interior of PVN175-2 is divided and includes multiple room spaces. PVN411-1 and PVN471-2 are observed to be maintain being open, undivided spaces. Furthermore, PVN411-1 includes three basal corners and a relatively large opening, which is interpreted to have resulted in the interior being quite breezy, similar to a 3-sided design. The remaining two examples (PVN395-2 and PVC162-1) represent variants on the arrangement, as they are concluded to have been originally erected as only

partially open along one facing. Moreover, upon being sealed are further modified within the interiors by means of divided room compartments and the addition of bench features.

The second observation is that of site size and structure positioning within each group. Three sites (PVN411, PVN471, and PVC162) are observed to be rather small Tier 5 designations and representative of likely nucleated familial household groups. The two PVN sites are arranged in patio formations and the structures displaying 3-sided vernacular traits are positioned along the patio, though in divergent placements. The example from PVC is not recognized to adhere to a discernible patio configuration. In contrast, sites PVN395 and PVN175 are larger household groups, although the highlighted structures from these settings are both located in on-plaza positioning's. Furthermore, the structures displaying variant arrangements (PVN395-2 and PVC162-1) had openings along off-plaza facings of the buildings. Therefore, these structures diverge from the arrangement design, but are open along non-plaza visible facings. In contrast, PVN175-2 is open along its eastern and most prominent plaza-facing side. This is fairly divergent from observations at PVN647. PVN411-1 and PVN471-1 include semi-open facings along partially visible plaza-facing sides. This is also observed to be a variation on the proposed 3-sided design scheme.

With regard to function, transitions are observed over the life-span of each structure. Over time, PVN395-1 and PVC162-1 include additional interior architecture and are deemed to purpose as residences. However, PVN411-1 and PVN471-1 do not include any additional construction features, though each contains one wall construction that is deemed substantial enough to have serviced as a bench and are therefore also

identified as residences. PVN175-2, which includes two room compartments, is identified to be for storage. 3-sided edifices at PVN647 are deemed to have shifted purpose over time, though PVN647-16 may have always maintained an ancillary function.

Temporal occupation is revealed to be significant within this vernacular arrangement. The truest examples of a 3-sided edifice design (PVN175-2, PVN411-1, and PVN471-1) are identified to have been occupied into the Terminal Classic period. This has strong overlap with observations from PVN647 and Terminal Classic occupation at Structures 7, 16 and 18. The other two structures identified as variants and only potentially initially assembled with one open facing (PVN395-1 and PVC162-1) are more closely placed as Late Classic settlements. This indicates that the 3-sided edifice design may be a practice occurring at the end of the Late Classic and into the Terminal Classic period.

Finally, the lower frequency of settlements dating to the Terminal Classic within the MC-C and Cacaulapa Valley, outside of the moderate to large-sized sites (Las Canoas, PVN647, and El Coyote) may be the reason why little to no evidence of this arrangement is present within these regions. Aside from PVN647 and PVC162, the 3-sided edifice is observed within the northern Rio San Bartolo settlement region (PVN395 and PVN411) and the southwestern zone along the Quebrada Agua Sucia (PVN175 and PVN471) of the Naco Valley. These particular regions are known to have noteworthy Terminal Classic occupation histories (Schortman and Urban 2012 and Urban and Schortman 2004), particularly at site PVN175.

Overall, the evidence for the 3-sided edifice design to be a vernacular *form* is lacking. However, it is possible that the design is representative of a particular transition window of occupation in the region; that from the Late and Terminal Classic periods. Variations in structure open-facing, placement with regard to a patio, and degree of sealing are all present. The most variant examples (PVN395-1 and PVC162-1) also include the most interior architectural modifications and additions. Therefore, the construction history is challenging to decipher. As such, the observation of the 3-sided original basal design is predicated on a careful examination of the construction history of a structure and recognition of its existence can be easily overlooked, especially in the absence of knowing its potential presence.

Summit Interior Elaborations: Tripartite Structures

The configuration and design of structure interiors are the next component evaluated for comparison. Summit interiors from investigated buildings at PVN647 on-the-whole did not exhibit evidence for much architectural elaboration (except for Structure 12 and 17) nor were any observations witnessed to repeat. However, a particular pattern of interior room arrangements has been observed to repeat in multiple locations within the Naco Valley over the past three decades of investigations (personal communication, Schortman 2007). The room configuration is labeled as a tripartite arrangement and is described as a summit interior containing one room space located in the back of a structure and three separate room spaces aligned continuously in the front of the building (**Figure 7.10** is a generalized depiction and does not represent size or shape).

Therefore, tripartite structures are more appropriately quadripartite structures, as there are a total of four discernible room spaces, however, were assigned the name due to the aligned configuration of the three rooms (personal communication, Schortman 2013).

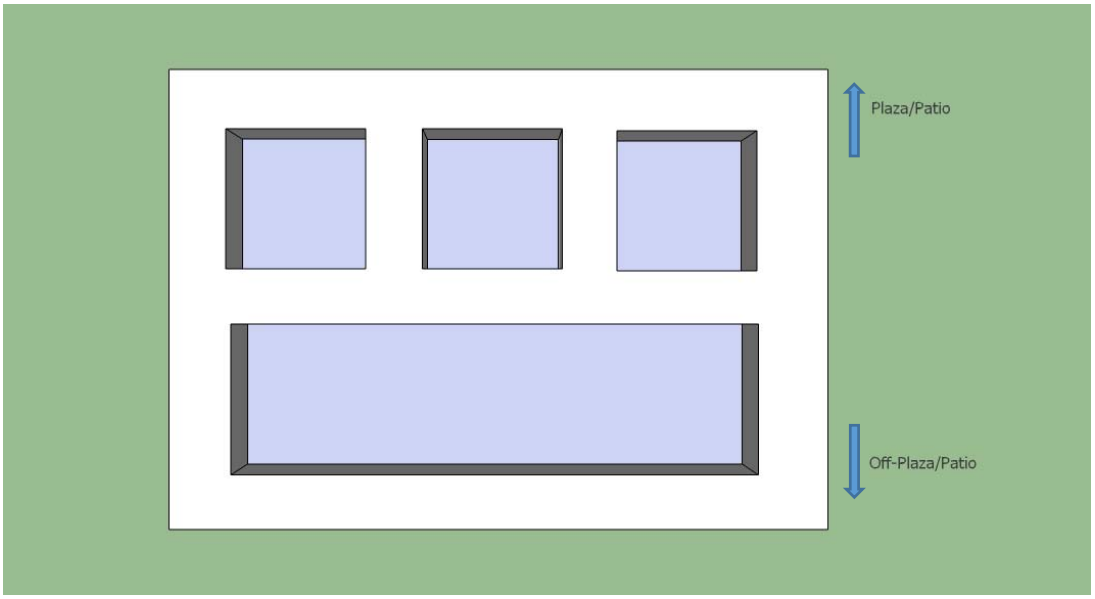


Figure 7.10: Schematic plan-view depiction of a generalized tripartite room arrangement.

Access into the three front rooms in the tripartite design is not always discernible, though the arrangement is distinct. Furthermore, typically the three aligned rooms are square in shape and roughly uniform in measured occupation area. The back, singular room is observed to be rectangular in shape, as it customarily spans the length of the three aligned front rooms. Tripartite building are typically associated with a plaza or patio household grouping and the three aligned rooms face toward the open space. Observations regarding room alignment and measurements, interior furniture (such as benches, shelves, or niches), as well as points of access, doorways, and any external constructions (such as prepared occupational platforms) are also included in this

discussion, where applicable. Again, though this interior design is not witnessed at PVN647, it is deemed a vernacular arrangement and its potential for being a vernacular form is now presented.

Evidence of Tripartite Structures from the Middle Chamelecón-Cacaulapa

Site PVN598 – Structure 7

As previously mentioned (see Chapter 3), Site PVN598 is situated immediately across the Rio Chamelecón from PVN647 and is composed of 18 structures, arranged into two patio groupings. As such, it is a Tier 4 site and a larger household clustering of pottery producing residents, primarily dating to the Late Classic. During the summers of 2004 and 2005, Ellison (2006) carried out investigations of a total of six structures. Of particular interest is Structure 7 (PVN598-7), which is included here to represent a variation on a tripartite arrangement.

PVN598-7 is located in the southwest region of the larger patio grouping and is located roughly 3.5m southeast of Structure sub-6 and 12m south of Structure 1 (PVN598-1. Approximately five construction episodes are immediately associated with the amassing of PVN598-7 and are identified reveal a complex assemblage history (**Figure 7.11**). Initially, the building is assembled as a single-room edifice with a large bench and measuring approximately 5m x 3m. Over time, two solid cobble compartments are appended along the north facing, at the east (1.75m x 1.55m) and west (1.9m x 2.25m) extents. The region in between the two cobble compartments is paved with flat stones and establishes a formal entryway leading to the large room with the

bench. Later construction episodes establish two addition room compartment spaces along the eastern exterior facing of the original platform arrangement. The first east room included a burial context, while the second eastern compartment is a low-lying addition (0.24m in height).

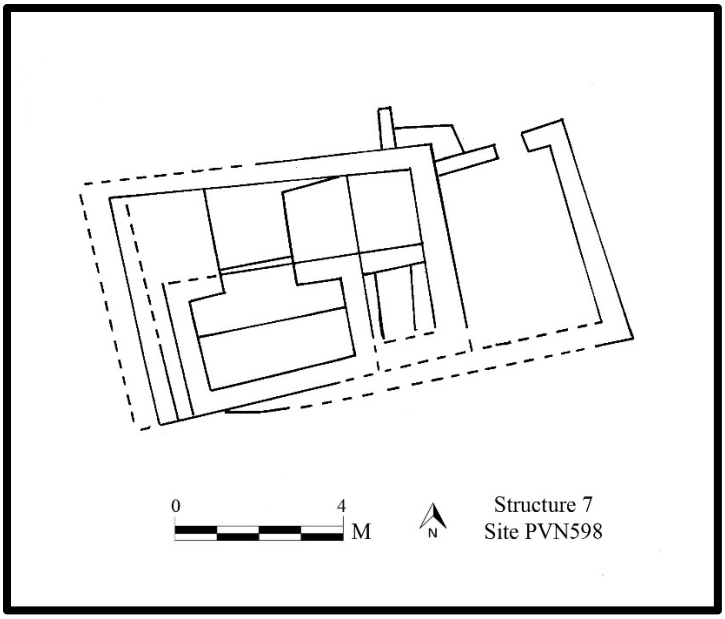


Figure 7.11: Plan-view of Structure 7 from PVN598 (redrawn from Ellison 2006).

Therefore, PVN598-7 has a final phase basal area of roughly 76m^2 and stands 0.68m in height. While it is unclear if the two solid cobble additions along the northern facing of the building represent formalized rooms or not, the overall depiction of three distinguished spaces fronting a larger open space is rendered. However, another notable variation is that the overall orientation of PVN598-7 is such that two façades are prominently facing the open patio. Though, the northern facing is one of these patio facings sides. Therefore, the three aligned spaces are positioned onto the open patio

region. Due to the presence of a bench, PVN598-7 is identified as a residence, though the additional room compartments are identified as storage rooms (Ellison 2006).

Site PVN607 – Structure 3

An additional tripartite structure is located at site PVN607, which is positioned approximately 500m northwest of Las Canoas (PVN202) and therefore, also on the opposing side of the Rio Chamelecón from PVN647. The site is also identified to be a Late Classic clustering of five structures, three of which are arranged in a semi-circular patio-group arrangement and are labeled as the principle group of the site (**Figure 7.12**). All excavations at PVN607 occurred in 2004 and carried out by David Alberto Duron, Leigh Anne Ellison, Anna Novonty, and Charles Webber, and analyzed by Urban (2007). Structure 3 (PVN607-3), which defines the patio's northern edge, is identified to contain three distinct rooms along the southern facing, the plaza-most facing, and includes an addition of a single, northern room, rectangular in shape. The initial building phase constructed the outline of the platform and then the three aligned rooms were established. The back room is posed to have been added afterward. Entrances into the room spaces remain unknown, though a solid cobble terrace surface is appended along the northwestern exterior, near the area of the back, single room (Urban 2007).

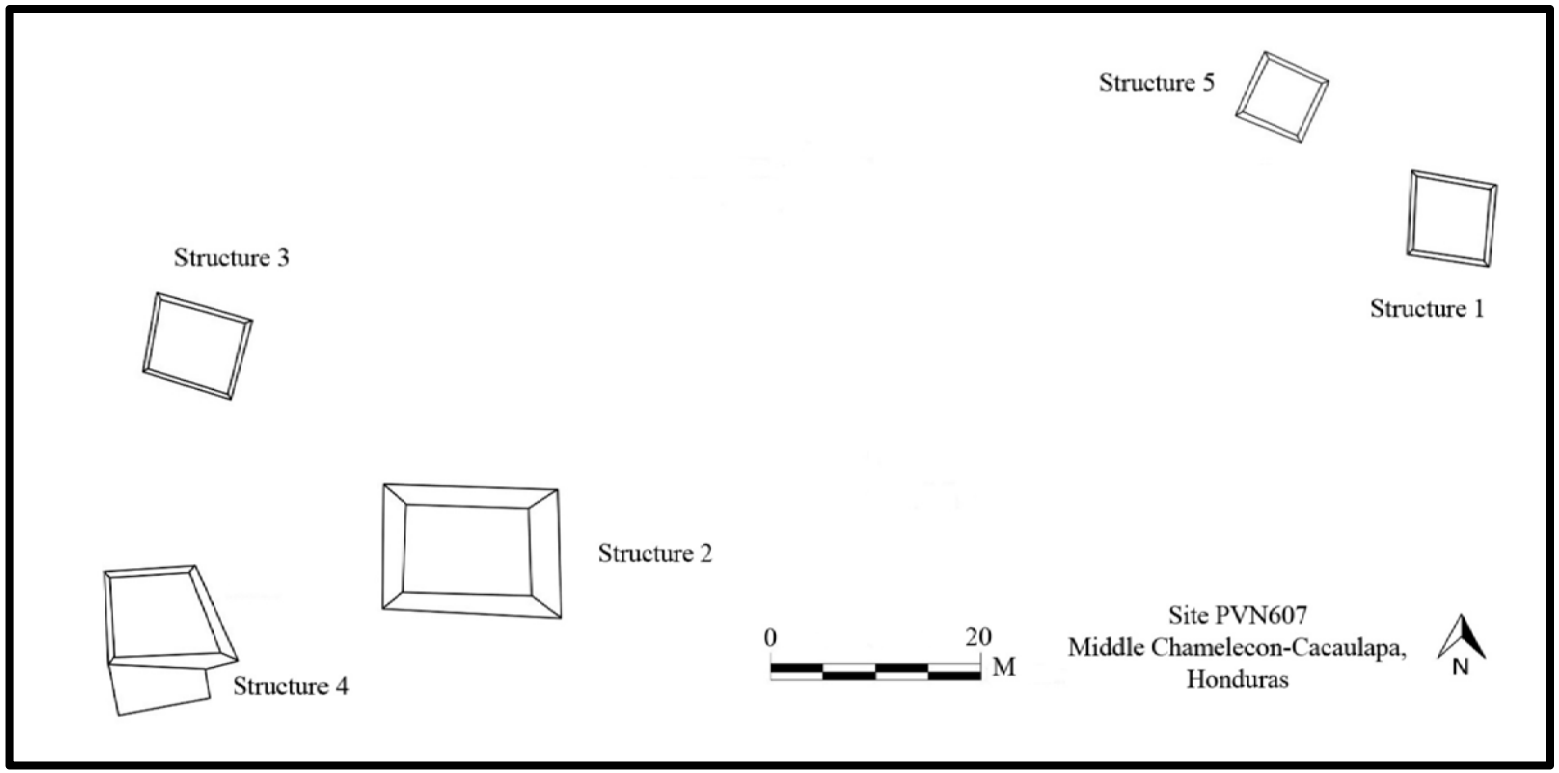


Figure 7.12: Site map of PVN607 (adapted from Urban 2007).

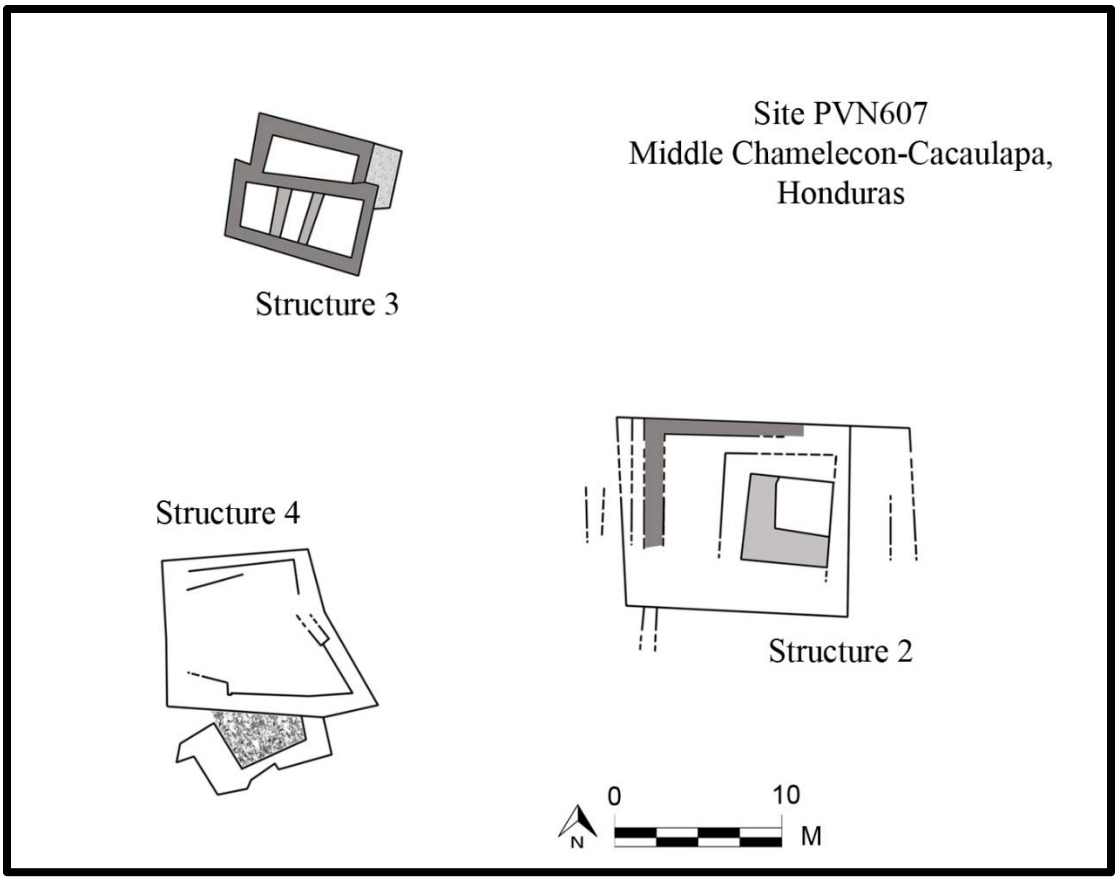


Figure 7.13: Plan-view of excavations of principle group at PVN607. Structure 3 is identified to represent a tripartite room arrangement (adapted from Urban 2007).

While Structure 3 from PVN607 is posed to be representative of the tripartite structure formation, it still presents variations on the generically described design (**Figure 7.13**). The three aligned rooms are positioned toward the open plaza region, however, the measured occupation area between the three rooms is recorded to be notably unequal. The eastern-most compartment is observed to be the largest, followed by the western-most and finally the center room. Additionally, the larger, off-plaza room compartment does not span the complete length of the three aligned room. Due to its abbreviated shape, the back portion of the building appears to step-in on the east and west facings.

Therefore, Structure 3 characterizes a version of a tripartite structure arrangement that displays deviations to the building style design.

Las Canoas (PVN202) – Structure 47

The site of Las Canoas, as presented earlier, does not entirely fit within the site selection criteria, however, is included here as containing a tripartite building arrangement. Structure 47 (PVN202-47) is located in the eastern-most extent of Las Canoas and a member of a patio grouping comprised of Structure 62 immediately to the north, Structure 46 immediately to the south, and Structure 49, roughly 12m to the west. Excavated in 2004 by David Rogoff, PVN202-47 has not been formally analyzed for its architectural or artifact assemblages (**Figure 7.14**).

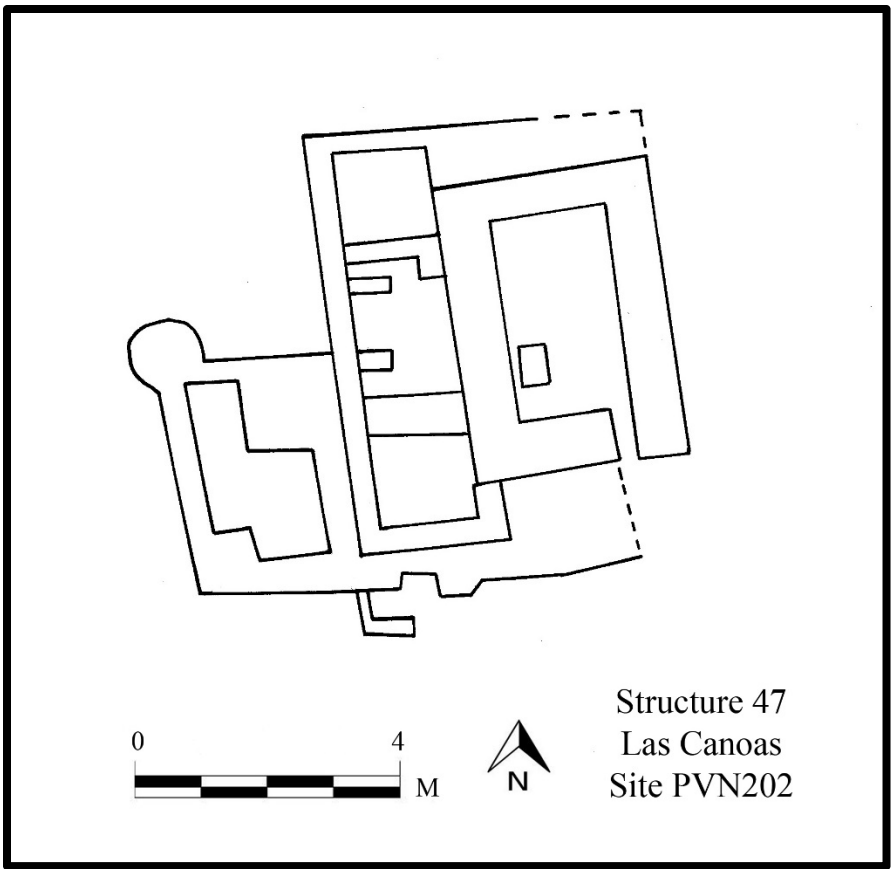


Figure 7.14: Plan-view of final phase architecture of Structure 47 at Las Canoas (PVN202) (redrawn from original by Schortman 2004).

Amassed over several construction episodes, PVN202-47 initially contained two large east-west room compartments, measuring 3.5m x 1.9m and 6.65m x 1.9m, respectfully. At this point the edifice stood approximately 1.15m in height; slightly shy of a monumental labeling. However, later renovations divided the southern half of the western room compartment and established two western or plaza-facing compartments. The southern-most room included a bench along the eastern region of the room. Later, a third compartment is added to the north and the result yields three aligned rooms, roughly equal in size. Other external amendments are established along the plaza-facing, west side of the building by means of an additional room compartment. The final building

measures roughly 6.5m x 8.3m. Entry into the large off-plaza room is likely channeled through the center room and no other additional interior features are observed. Structure 47 is deemed to be residence for occupants of elevated status compared to the surrounding other household groups that comprised Las Canoas.

Site PVC187 – Structure 3

Located in the hills northwest of Las Canoas and PVN598 is site PVC187 (see Chapter 3 for detailed background on site and location setting). Within this narrow valley, PVC187 is a Tier 4 site, with Structure 3 (PVC187-3**)** positioned within the western region and outside of the main plaza (**Figure 7.15**). Specifically, PVC187-3 is roughly 8m southwest of Structure 1 (PVC187-1) and 10m west of Structure 2 (PVC187-2) and is identified to be of a tripartite arrangement. The architecture at PVC187 is distinct from other sites on river *vegas* in that the primary construction material is that of limestone. As a result, greater use of vertical coursing occurs at PVC187, although preserved wall heights do not differ too dramatically from valley-floor sites predominantly amassed from unmodified river cobbles. PVC187-3 was excavated in 2008 by Marcela Esqueda and primarily dates to the Late Classic.

PVC187-3 undergoes multiple construction phases, yet begins as a single-roomed building. Over time, expansion episodes establish additional room compartments along the south and east sides of the building. Specifically, along the east facing, three north-south aligned compartments are appended and measure from north to south: 1.7 x 1.8m; 1.7 x 1.2m; and 1.4 x 1.6m. Although PVC187-3 is not immediately positioned on the

main plaza, the east facing is directed toward the main grouping of structures. The western summit interior of PVC187-3 includes at least two room compartments, within the northwest and southwest, and a potential third space is situated in between, complete with a built-in bench. The final version of PVC187-3 roughly measures 5 x 6.5m and includes two brief 1m in length steps along the eastern facing immediately outside of the middle compartment, which formalizes the entrance along this side of the building. The presence of built-in furniture (a bench) and a partial burial within the northwest summit interior support that PVC187-3 functioned as a residence.

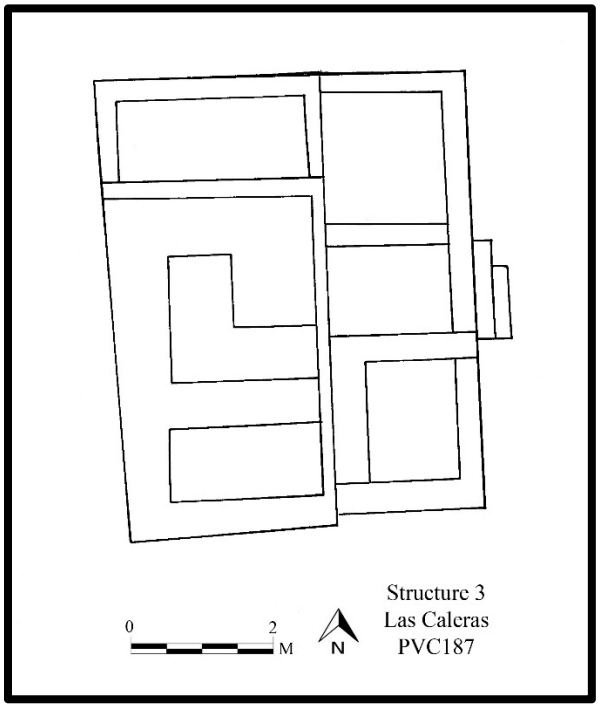


Figure 7.15: Plan-view of excavations of Structure 3 from Las Caleras (PVC187) (redrawn from original by Esqueda 2008).

Evidence of Tripartite Structures from the Naco Valley

Site PVN175 – Structure 6

Site PVN175 is located in the southeast region of the Naco Valley and approximately 3.4km to the south/southwest of La Sierra. It is positioned on relatively level terrain on a terrace overlooking the Quebrada de Agua Sucia, roughly 350m to the north. Therefore, it is considered within the Quebradas Agua Sucia and Guasma settlement zone. Primarily conducted in 1995, eight of the twelve surface-visible structures have been investigated. The buildings are arranged around three plaza groupings, placing it within a large household Tier 5 or Tier 4 designation. Located in a southern plaza group is the largest investigated structure at PVN175, Structure 6 (PVN175-6). PVN175-6 is concluded to be amongst the strongest example of a tripartite building from this site, though others (namely PVN175-3, 4, and 9) are also discussed as potential variations (**Figure 7.16**). Excavations at PVN175 were carried out by Nicholas Gevock and Michael Kneppler and date to the Late and Terminal Classic (Schortman and Urban 2012).

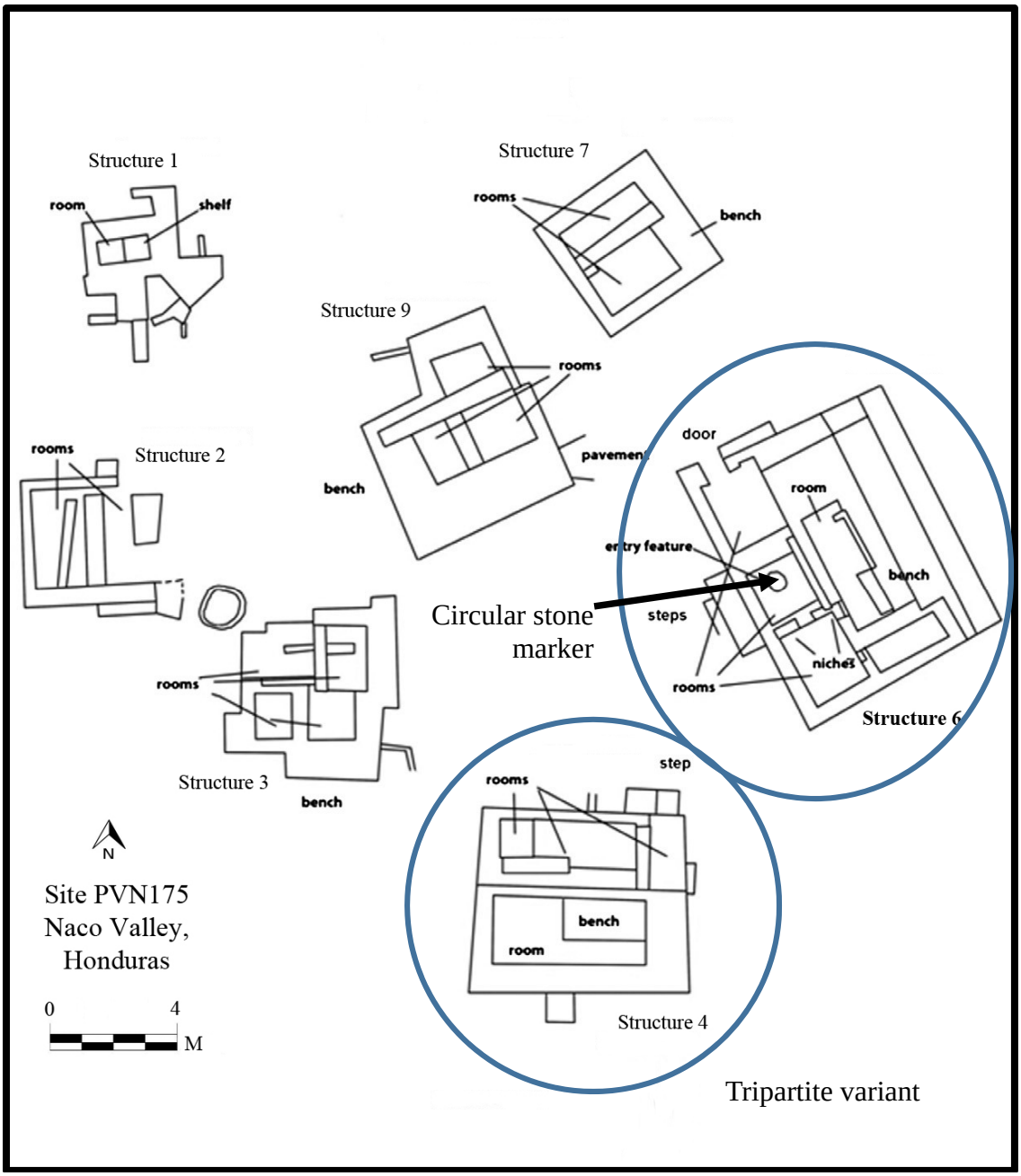


Figure 7.16: Plan view of excavated structures at PVN175. Structure 6 is noted to represent a tripartite room arrangement, while Structure 4 is noted as a variation on the design (adapted from Schortman and Urban 2012).

Structure 6 is positioned as the eastern-most building within this plaza group and sits approximately 5m northeast from PVN175-4; 9m east from PVN175-3; and 2m southeast from PVN175-9**.** Over several construction episodes, the final version of PVN175-6 measures approximately 8.2 x 6.5m and stands 1.4m in height. This height places it near the marker of being monumental in size. The interior of PVN175-6 is marked by three enclosures along the plaza-most facing and one large off-plaza room. The three aligned rooms are set in a northwest-southeast-trending formation (and measure from northwest to southeast: 2 x 1.7m; 1.5 x 1.5m; and 2.2 x 1.7m). The northwest room is observed to be an earthen-floored room and entered through a doorway along the northwest wall. The southeast-most room is paved with stone and contains four shallow niches, constructed as pairs. One pair each of the niches are in the northwest and southwest walls, which define the compartment space. The central room space is contains an earthen-floor and an intentionally-shaped circular stone in the approximate center of the enclosure. The stone feature marks a threshold into the building, associated with a formal entryway along the southwest plaza-facing façade; along with three low steps near the southwest exterior of the building and adjacent to the central room. None of the three aligned rooms contain built-in furniture or any other construction features.

Lastly, the large northeast room is observed to be paved and include a stone-faced bench along the northeast wall and faces out toward the three aligned rooms. All wall constructions from PVN75-6 were primarily composed from unmodified river cobble, making use of naturally occurring flat faces and oriented outwards from the building. Select walls included shaped masonry stones, though these construction materials are not

recorded to be dominant components. The functional significance of the building is established to be a residence, though likely of the highest ranking occupants within the household group.

Overall, PVN175-6 is identified to be representative of the tripartite arrangement, but presents one slight variation on the design. The larger, off-plaza room is not observed to span the complete length of the three, plaza-facing aligned room compartments. The back room is abbreviated in occupation area due to the sizeable built-in bench construction, however, also as a result of a smaller constructed area along the southeastern facing. It is unclear if this region established an additional, small compartment or an occupational platform space. Regardless, the overall essence of a tripartite room formation is clearly discernible at Structure 6 and stands as the most conclusive example of the posed design at PVN175.

PVN175-4 is the southern building within this plaza grouping and is positioned to the southwest of Structure 6. It is highlighted in this discussion for its depiction as containing three distinct spaces aligned in an east-west fashion, along a plaza-facing, and for containing one open room within its off-plaza region (see **Figure 7.16**). This compilation and arrangement of spaces adhere with the description of a tripartite structure, however, PVN175-4 is not argued to be entirely representative of this particular summit interior design. The central compartment space is questionably the only region identified as a formal room enclosure, as the flanking east and west regions are identified as stone pavements. Passage between the central room and western pavement is unobstructed whereas a low stone foundation divides that room from the eastern

pavement. It is unclear how this northern summit region of PVN175-4 was compartmentalized in antiquity. A tripartite structure arrangement is contended to demonstrate clear constructions, which delimit three distinct room enclosures. Furthermore, there is greater disparity with regard to the dimensions and proportions of the identified spaces, than there is uniformity. It is likely that PVN175-4 is representative of an alternative or improvised attempt at a tripartite summit interior arrangement. As such, it is representative of a formation very similar to a tripartite design and worthy of highlighting as a variation to a pattern.

Lastly, PVN175-3 and 9 are referenced as they contain four and three distinct room spaces, respectively, yet lack the design plan of the tripartite formation. PVN175-3 is located to the west of PVN175-6 and is observed to include two plaza-facing room compartments and two off-plaza compartments. This arrangement of four room spaces is clearly not in accordance with a tripartite formation, though it includes four distinct room spaces. Additionally, PVN175-9 is located to the northwest of PVN175-6 and is documented to include two plaza-facing room spaces and one off-plaza room compartment. Though this arrangement of rooms appears similar to a tripartite design, it is absent one plaza-facing room and the off-plaza region is observed to be irregular in shape and does not extend the full length of the front, plaza-facing room spaces.

Overall, at Site PVN175-6 is the most definitive case of a tripartite arrangement, while PVN175-4 is positioned to be closely compliant with the identified design scheme. It is unknown if PVN175-3 and 9 are depictions of intentional, yet greatly modified versions of a tripartite design or characteristic of differing and deliberate functional

interior summit formations. Regardless, the presence of such elaborate summit interiors of multiple structures is worthy of mention and presentation as potential alternatives to a posed vernacular scheme may exist and immediately alongside a conclusive example. Furthermore, PVN175-6 is positioned to be the 'dominant building' (Hendon 1991), coupled with the stone marker that distinguishes the occupants as holding an elevated political standing (Schortman and Urban 2012).

Site PVN262 – Structure 3

Site PVN262 is located in the southeastern region of the Naco Valley and on the eastern side of the Chamelecón from La Sierra. The site is on a colluvial fan on the south bank of the Quebrada Grande, placing it within the Quebrada Grande settlement region. Four structure groupings, roughly arranged along a north-south line, contain 17 constructions. Due to the sites building distribution, it is considered in the range between a Tier 5 and 4 designation. The largest grouping of buildings, the Central Group includes seven structures in a patio arrangement and is open to the east. Roughly 75m south of this group is the next largest grouping, the South Group, consisting of six buildings, also arranged in a patio formation and open to the east. The two other structure groupings are located to the north and east of the Central Group and contain a total of three buildings. All excavations at PVN262 took place during 1992 and carried out by Neil Ross and Lavinia True (Schortman and Urban 1993) and are included in Douglass' (1999, 2002) analysis. Structure 3, within the Central Group, is highlighted and is referenced to be within a large household grouping and primarily dates to the Late Classic (**Figure 7.17**).

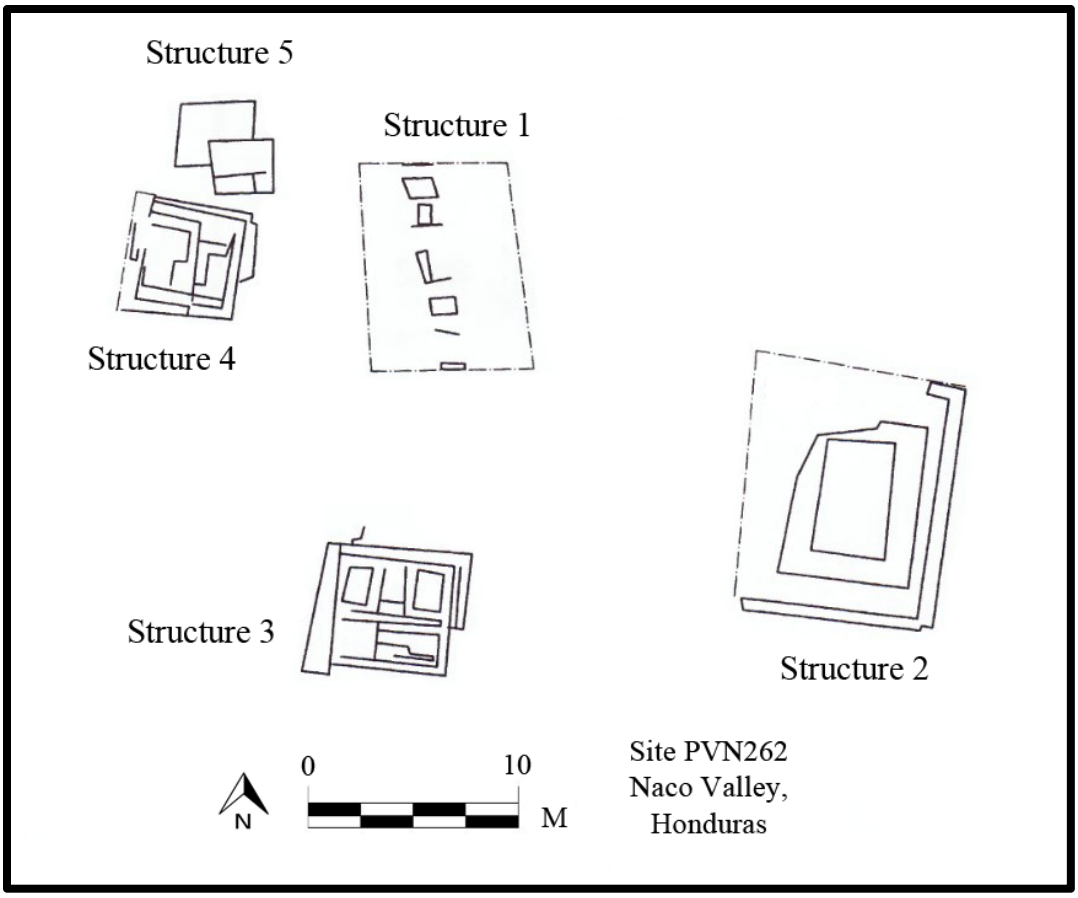


Figure 7.17: Plan-view of excavated structures at PVN262. Structure 3 is noted as a tripartite building arrangement (adapted from Douglass 2002).

Structure 3 at PVN262 is the southern-most building and is located roughly 12m southeast of PVN262-4; 7m south of PVN262-1; and 13m west of PVN262-2. Several construction episodes are associated with PVN262-3, as it is amassed over an earlier version of construction. However, the final version of the building measures roughly 5.5m in each side and stands 0.95m tall. The internal arrangement of PVN262-2 contains five distinct room spaces. The northern, plaza-facing contains three aligned rooms (measuring east to west: 1.2m x 1.8m; 1.1m x 1.4m; and 0.9m x 1.65m). The central compartment contains a stone floor and a shelf that extends the length of the southern

side of the room. The southern, or off-plaza, portion of PVN262-3 includes two compartments: a southeast room (1m x 2.5m) and a southwest room (1.4m x 1.6m). No other internal built-in furniture is observed, however, two terraced regions are appended along the length of the plaza facing, north façade, and the eastern side, providing access into the building from both areas. The functional assignment of Structure 3 is that of a residence.

Site PVN335 – Structure 3

Located in the northern region of the Naco Valley, Site PVN335 is situated approximately 200m north of the Quebrada Agria and 500m south of the Rio Manchaguala, placing it roughly 7.5km north of La Sierra. Site PVN335 is a household group consisting of three low-lying surface-surface structures arranged in a patio grouping, all on relatively flat terrain. All structures were investigated in 1992 under the direction of Kim Sarnecki (1993; and Schortman and Urban 1993) and included in Douglass' (1999, 2002) analysis. Structure 3 (PVN335-3) is of most relevance to this discussion as it is recognized to be a tripartite building (**Figure 7.18**). It is identified to have been initially raised during the Late Classic and occupied through the Terminal Classic.

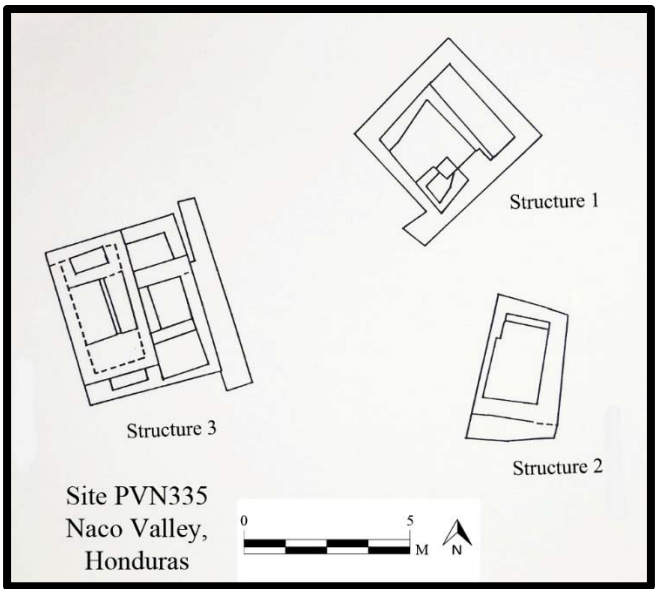


Figure 7.18: Plan-view of excavated structures from PVN335. Structure 3 is noted as a tripartite structure (adapted from Douglass 2002, redrawn from Sarnecki 1994).

PVN335-3 is the western-most building and is observed to be the largest in the group and contain the greatest architectural complexity. It is located approximately 7m west of PVN335-2 and 6.2m southwest of PVN335-1. PVN335-3 witnesses at least two episodes of renovations after the initial construction period. However, it is during this first period when the primary dimensions are established and the building is approximately 4.2m x 2.5m and stands 0.7m in height and includes four separate, earthen-floored compartments. The rooms are arranged in a 2 x 2 fashion; two parallel lines running north-south, and no interior furniture is observed.

During subsequent renovations the southwestern-most room is filled and an additional compartment space is added in the northeast region. The result and the final version of PVN335-3 yields three compartments on the eastern portion of the building, which are aligned in a north-south arrangement (measuring 0.9m x1.3m, 1.1m x1.3m, and

1m x1.5m, respectfully). The central room along this eastern side of the building includes a built-in bench that runs the length of the western wall of the room. The western half of PVN335-3 consists of one large, centrally-positioned room (1.7m x 1.8m) and includes a shelf along the western wall and the bench (standing 0.5m in height) formed from the filled-in former southwest room. To the north of this large western room is a fifth room space (0.5m x 1m) and contains to internal furniture. A 0.12m high cobble terrace is appended along the eastern, plaza-facing façade of the building and establishes a formal entry into Structure 3 from this side. The final version of PVN335-3 roughly measures 4.5m x 5m and is identified to be a residence, due to the two built-in benches and as evidenced from the analyzed artifact assemblage from the building.

Site PVN423 – Structures 17 and 23

Located in the western regions of the Naco Valley, site PVN423 is positioned approximately 6km west of La Sierra. It lies less than 500m from and in between two seasonal tributaries of the Quebrada Guasma. This places it within the Quebradas Agua Sucia and Guasma settlement region. The site zone includes a slight rise in the terrain of approximately 1.5m from the southwest to the northeast over roughly 280m. Aligned along this trending line are the 23 surface-visible structures, clustered into three distinct patio groupings, which comprise PVN423. The largest grouping is identified as the Southwest Group, containing 13 structures, one of which is identified as the only monumental platform at the site. Roughly 90m to the northeast from the Southwest Group is the Central Group and is comprised of seven structures, arranged in a single

plaza formation. Finally, the Northeast Group is positioned approximately 40m to the northeast from the Central Group, and is identified to be a small plaza of only three structures. Primarily conducted in 1992, a total of 13 buildings have undergone extensive investigation. Most notable for this discussion, as deciphered from recorded architectural design descriptions, are Structures 17 and 18 from the Central Group, and Structure 23, the only building investigated within the Northeast Group at PVN423. Excavations of Structure 17 were directed by Stacie King; while excavations of Structure 18 were supervised by Rachel Smith. Excavations of Structure 23 were directed by Neil Ross.

PVN423-17 is located within the western region of the Central Plaza grouping and is positioned approximately 7.2m to the north of PVN423-15, and 7m to the southwest of PVN423-18, which is also discussed here. Initially, the structure is documented to be erected as a one room edifice, unencumbered by any built-in furniture and with an interior summit measuring approximately 1m x 2.4m. During a subsequent construction phase, PVN423-17 is expanded along the plaza-facing eastern side to include three distinct and small compartments, aligned in a north-south formation. The three cubicles are recorded to have been earthen floored and open on the east, facing the open patio region of the structure grouping. The northeast and southeast enclosures are measured to be approximately 0.7m x 2m and free from observable built-in furniture, while the center space is measured to be 1m x 2m and includes a stone step near the southeast corner of the room. The size and positioning of the stone is posed to be formalizing of the entry into the larger western room from the central enclosure.

Also from the Central Group at PVN423 is PVN423-18. It is positioned approximately 7m northeast of PVN423-17 and roughly 3.2m northwest of PVN423-19. PVN423-18 is recognized to be the northern-most edifice within the structure grouping. Additionally, it is noted as being amongst the most architecturally complex, with regard to identified appended sub-structures along both the eastern and western flanks of the building. Though the architectural arrangement of PVN423-18 is not argued to be that of a tripartite formation, it is highlighted as an example of a potential construction variation of the identified tripartite design. PVN423-18 is documented to include three later and adjoining sub-structure additions, however, before these expansions, the core of the building was comprised of three distinct room enclosures, though not arranged in a linear alignment.

The earliest identified construction phase of PVN423-18 is observed to include only two adjacent room spaces, positioned in an east-west alignment. The western room is noted to contain an L-shaped cobble bench, while the eastern room is devoid of any built-in furniture. Furthermore, the occupational level of the western room is observed to have been higher than that observed for the eastern room, resulting in uneven room elevations. Lastly, the western room is measured to be greater in space, approximately 2.1m x 2.2m, while the eastern room measured 1.4m x 2.5m.

During the subsequent construction phase, a third room space is added near the southwestern corner of PVN423-18, though not immediately flanking the earlier western room. The third room is recorded to measure roughly 1m x 1.3m, include a stone pavement floor, and two cobble “risers” positioned near the northern region of the

enclosure and serve as steps into the earlier western room space. The entrance into the summit region of PVN423-18 was channeled from the open patio region through the third, southern-most room. Therefore, the design of the building, composed of three identified room spaces, is arranged in an 'L' shape, with the third room defining the shorter "leg" segment of the shape. However, excavation reports indicate that investigation to the east of the identified third room did not occur, therefore it remains unknown if an additional room space or evidence of construction features exist in this adjacent area. Regardless, PVN423-18 is documented to be composed of three distinct room spaces, which are not linear in their alignment, though likely intentional in positioning.

Overall, it is unclear if PVN423-18 is representative of an amended desire for a tripartite designed building. The three room compartments are not all constructed simultaneously, variety with regard to occupational area, and are not aligned linearly. Additionally, the structure lacks the larger fourth room space, which extends the length of the three aligned rooms, also marking its design plan as being unlike that of the identified tripartite formation. PVN423-18 is noted to include a solid, low-lying cobble construction feature along the northern, off-plaza facing and is concluded to have served as an occupational region. The region is not identified to be a formal enclosure, though an extension of the structure that is undetectable from the open patio space to the south. The inclusion of PVN423-18 in this discussion highlights the variability of the number of room enclosures and the subsequent difference in positioning that is possible within a single structure. Furthermore, its presence and architectural design is included due to its

close proximity to an identified tripartite structure within the same structure grouping, Structure 17.

Lastly from PVN423 is the discussion of Structure 23 within the Northeast Group. PVN423-23 is the only of the three buildings within the group to be formally investigated. It is positioned as the western building in the small patio arrangement and is located 1m southwest of PVN423-22 and roughly 2.8m northwest from PVN423-21. PVN423-23 is posed to be in a tripartite room arrangement, though exhibits slight variations in the form of select rooms being further compartmentalized.

During what is identified as the first formal construction phase of PVN423-23, the building is described as a rectangular enclosure, with the length oriented in a roughly north-south alignment. A low-rising, roughly east-west aligned cobble construction is recorded to potentially establish two compartments within the interior summit of the building. Within the southern compartment, a square-shaped stone surface abuts the southern facing of the dividing construction and is deemed to mark a hypothesized entryway between the two spaces.

During the subsequent formal construction phase, PVN423-23 undergoes expansion into the patio space to the east. Established in this region are three distinct, north-south aligned compartments, which abut against and extend the length of the earlier rectangular enclosure. The northern and central compartments are documented to be paved with stones and measure 0.7m x 1.6m and 1m x 1.5m, respectfully. The northern room also includes the presence of a low-laying, roughly east-west cobble construction. Documented interpretations of PVN423-23 describe this cobble construction as

establishing two distinct room spaces, each roughly measuring 0.25m x 1.6m. However, it is possible that the dividing construction established the facing of a built-in furniture feature and fill materials raised the level of the northern portion of the compartment for interior occupational purposes. Therefore, the space remained as a single room compartment, accessorized with built-in bench. Additionally, the central compartment includes a square-shaped cobble construction (similar to the earlier and larger western room) within the northeast region of the space and is identified to mark an entryway into the northern-most compartment. Lastly, the southern-most compartment measures 0.9m x 1.4m, is also paved with stones, and open along the southern boundary. Though formal entrance into Structure 23 is documented to have been channeled through the central room on the building's eastern, patio-facing side. It is conceivable that access also existed along the southeastern region from the open, southern compartment. Additionally, a low step is documented to have been appended along the exterior near the southwest corner and is recorded to have established an informal entrance into the larger western compartment of the structure.

While PVN423-23 includes a larger, off-plaza room that is documented to be divided into separate spaces, the tripartite arrangement of three aligned and nearly-equal-in-size rooms are appended along the patio facing of the structure. The potential total room enclosure count for PVN423-23 may be 5, however, the generalized tripartite formation is present. PVN423-23 may represent a slight deviation from a "standardized" tripartite structure arrangement. However, this form of variation is an element of vernacular styles and serve as an example of flexibility with design planning. As neither

of the other two structures from the Northeast Group were investigated, it remains unknown how the observed architectural room arrangement of PVN423-23 associates with the other known buildings from this particular patio grouping at PVN423.

Site PVN426 – Structure 7

Site PVN426 is located approximately 5.25km west-southwest of La Sierra and therefore located within the central area of the Naco Valley. It is positioned on level terrain at the base of the western foothills of the valley and approximately 100m from the season tributary of the Quebrada La Guasma. The perennial Rio Agua Sucia is located roughly 725m to the south. The site is comprised of 15 surface-visible constructions grouped around two adjoining northwest-southeast aligned patio groupings. Due to the presence of two monumental platforms, PVN426 is guardedly identified as a secondary administrative center. From the total of five constructions selected for investigation during a 1992 PVN field season, PVN426-7 is revealed to be a potential tripartite building. However, the entirety of the edifice is documented to have not been fully uncovered during excavations. Excavations of PVN426-7 were carried out by Lavinia True (Schortman and Urban 1993).

PVN426-7 is located in the line of buildings that separates the northeastern and southwestern plaza groupings. It is approximately 15m northwest from PVN426-11 and roughly 14m southeast from PVN426-3. PVN426-7 is identified to contain a northeastern room compartment, approximately measuring 1.6m x 3.1m, and in the southwest region, a northwest-southeast running line of two, possibly three, rooms. The

larger northeastern room is documented to not contain any built-in furniture but does include evidence of a doorway near the northern corner. Additionally, a low, stone threshold feature near the entryway is documented to likely further formalize the passageway.

Of the posed three aligned rooms, the central compartment is documented to be the most thoroughly investigated. It is recorded to be an earthen-floored space and lacks any built-in furniture. A doorway is observed to provide access into the enclosure from the southwestern plaza region, but no evidence that the room was accessible from other compartmentalized regions of the summit interior. Immediately exterior to the central room is a stone-faced terrace surface, which extends along the southwest plaza façade of PVN426-7 and is predominantly positioned in alignment with the central room. A stone-paved compartment with a doorway that also overlooks the southwestern plaza is located to the southeast of the central room and is identified as a second room space. The probable third room space is located to the northwest of the central compartment, however, excavation efforts did not pursue far enough in this region to confirm this possibility. The prospect of a third room is recorded to be inferred based upon the symmetry of surface-visible cobble features outlining the posed compartment. Therefore, PVN426-7 is strongly suggestive to serve as an additional example of the tripartite room arrangement design.

PVN128 – Structures 18 and 19

Located in the Rio San Bartolo and Quebrada Agria region of the Naco Valley, site PVN128 is approximately 5km north of La Sierra. It is positioned roughly 150m southwest of the river and contains 28 surface-visible structures, arranged in four adjoining plaza groupings, which places it within a high Tier 3 designation. At least six of the buildings are identified to be of monumental architecture and lie within the southern and eastern plazas. However, Structure 19 (PVN128-19), located within a western plaza group (Group I) is measured to stand 1.5m tall and labeled to be of a tripartite arrangement (**Figure 7.19**). Also within this plaza group is Structure 18 (PVN128-18), which stands only a mere 0.4m in height and is also identified to be of a tripartite configuration (**Figure 7.20**). PVN128-18 and 19 are located adjacent to one another. PVN128 is of particular interest for containing two tripartite buildings, but also for its overall large size, as well as Terminal Classic occupation. It is identified to be founded in the Late Classic and transition to being a political center during the Terminal Classic, as power shifts occurred during this period with respect to La Sierra and its range of influential power within this region of the Naco Valley (Urban and Schortman 2004). Investigations at PVN128 were conducted in 1996 and Structures 18 and 19 were studied by Briana Beacom, Amy McCoy, and Neville Handel.

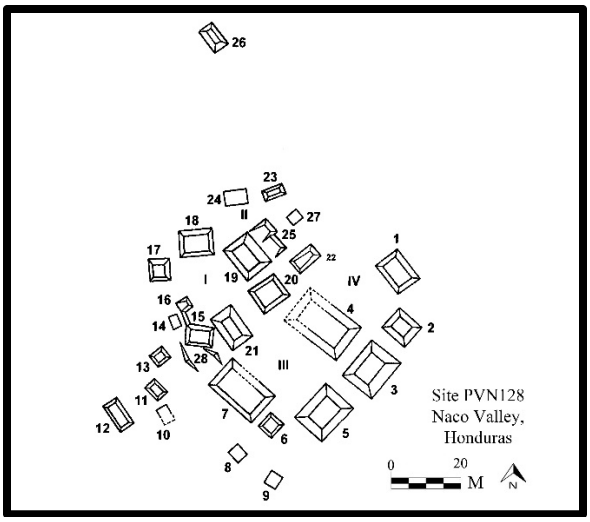


Figure 7.19: Site map of PVN128 (adapted from Schortman and Urban 2004).

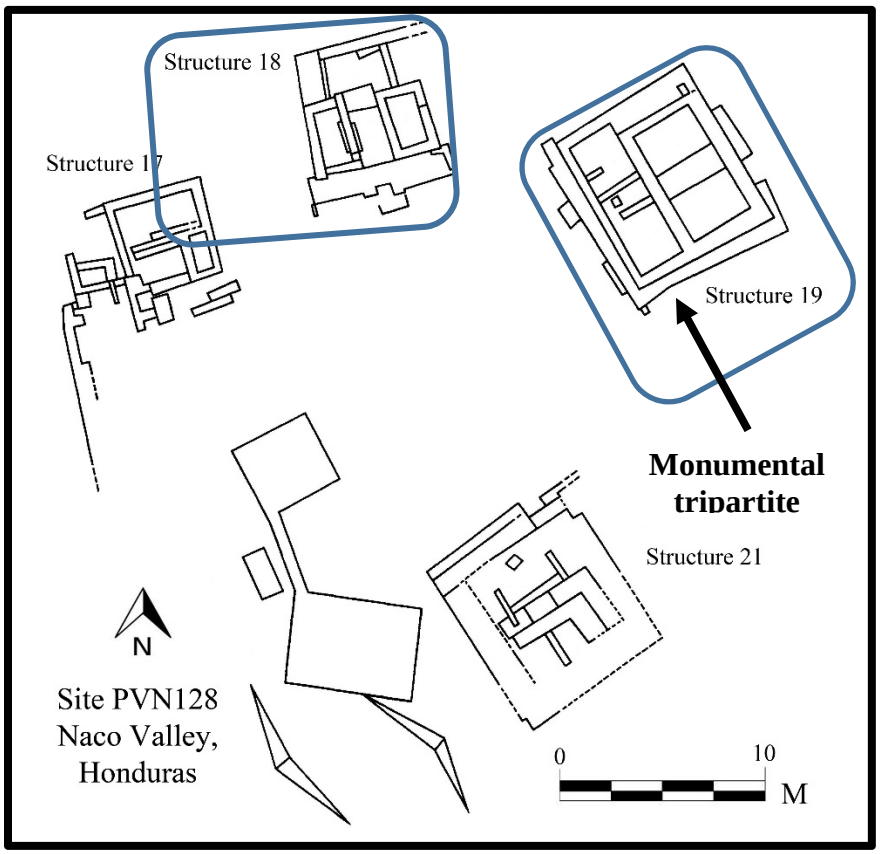


Figure 7.20: Plan-view of excavated structures at PVN128.
Structures 18 and 19 are noted to be tripartite building arrangements
(adapted from Schortman and Urban 2004).

PVN128-18 is located approximately 5.5m northeast of PVN128-17 and 16.5m north of PVN128-21. Neighboring tripartite building, PVN128-19, is positioned roughly 4.5m to the southeast. During excavations, PVN128-18 was revealed to be two closely spaced buildings that were likely linked in their northern regions during final occupation. The western portion of the building is revealed, though the eastern extent remains unexplored. The result is that PVN128-18 underwent at least two construction episodes. The first resulted in a low-lying, surface-level edifice (~0.2m tall) and comprised of only one room. The later construction phase expanded the platform to measure roughly 6.5m x 9m and stand 0.4m in height. The interior is divided and results in four room compartments, arranged in a tripartite configuration. Three roughly east-west aligned room compartments (measuring from east-west: 1.5m x 2.25m, 1.9m x 3, and 1.5m x 3m) are positioned immediately facing the open plaza to the south. The center and west compartments contain low shelves and are observed to open to the south, while it is unclear how access occurred to the eastern-most room. The center room includes a 0.07m stone-faced step-up, which leads to the north and the fourth "back" room of the building. This room contains an L-shaped bench feature, which occupies most of the room space. All observed rooms are earthen-floored. The fourth back room is observed to continue to the east, however, excavations halted in this region and it is unclear if additional rooms exist. The majority of construction material is that of unmodified river cobbles and the functional intent of PVN128-18 is that of residential and as work space, as the greatest number of recovered ceramic stamp objects were retrieved from Structure 18 (Urban and Schortman 2004:263).

Located adjacent to PVN128-18 is PVN128-19, also deemed to be of a tripartite configuration. Unlike its neighbor, PVN128-19 is observed to be a free-standing building and during final phase of occupation measured 8m x 9m and stood 1.5m tall, labeling it as monumental. Over the course of at least two construction phases, the southwestern plaza-facing of PVN128-18 contains three aligned room compartments, (measuring from northwest to southeast: (2.5m x 2.8m, 1m x 2.4m, and 2.5m x 2.9m), with the two outer rooms being roughly equal in area. A passageway between the center and southeast room is observed, while the northwest compartment is access by means of a doorway from the southeast plaza area. No built-in furniture is recorded in any these plaza-facing compartments. A fourth room, located in the off-plaza, northeastern region of the structure is observed to contain a wide (ranging 0.5-0.75m) and encompassing the entire southern region of the room. Entry into the large fourth room is unclear, though terrace constructions are observed along the northern and southern regions and may indicate that access occurred via these less conspicuous regions. Though monumental in size, PVN128-19 is observed to be primarily constructed from unmodified river cobbles, but by means of well-constructed walls making use of selective flat-facing cobbles and chinking stones to fill in gaps. PVN128-19 is identified to be an elite residence that could accommodate relatively large gatherings and therefore also an administrative setting. It is recognized as being amongst the most prominent structures within this group and at PVN128 (Urban and Schortman 2004).

Evidence of Tripartite Structures from the Cacaulapa Valley

Site PVC162 – Structure 2

As previously highlighted for containing evidence of a structure that is a variant on the 3-sided edifice formation, site PVC162 more conclusively exhibits evidence of a tripartite structure (**Figure 7.21**). Structure 2 (PVC162-2) is identified to be the largest and is centrally located within the grouping of buildings. Investigations of PVC162-2 reveal that it includes three aligned rooms along its southwestern facing and one narrow, rectangular room along its northeastern facing. The three aligned rooms are arranged in a northwest-southeast orientation. The two outer rooms are observed to contain evidence of a plaster floor, while the middle room exhibits evidence of being an earthen surface. Furthermore, the central room is revealed to be open to the southwest and contained a formal doorway into the back, rectangular room. Finally, a low-lying 1.2m wide cobble surface is appended along the southwest exterior and is centered on the central room. Though the positioning of buildings at PVC162 is irregular, the three aligned rooms are arranged along the facing that is immediately facing PVC162-1 to the southwest. It is possible that the region to the south of PVC162-2 and northeast of PVC162-1 at was purposed as a patio area, though the immediate southern area of the grouping is free from any construction (Urban 2007).

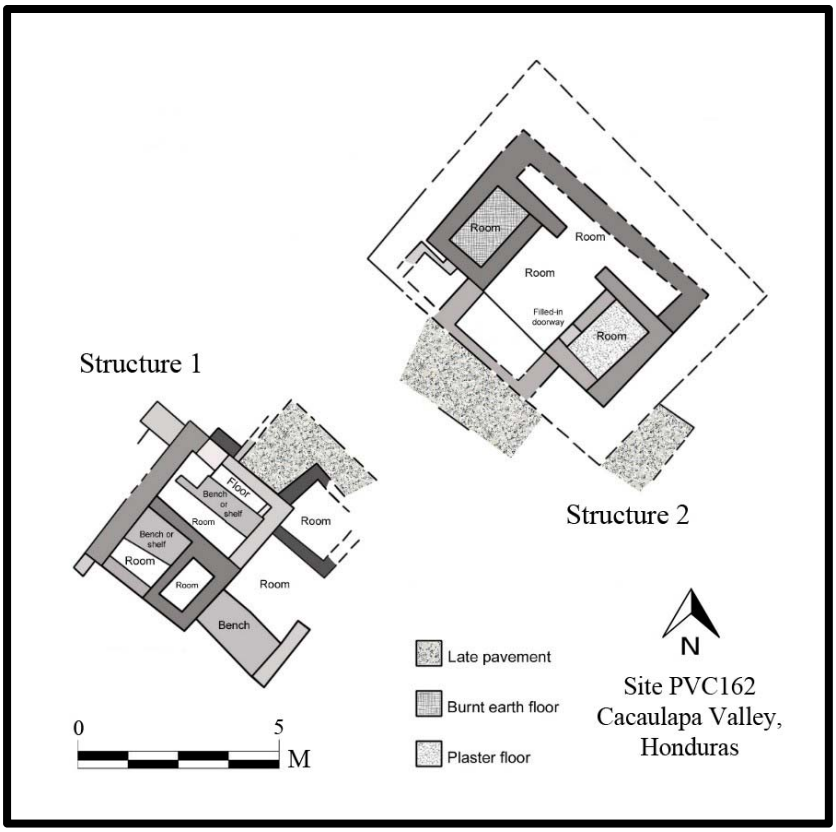


Figure 7.21: Plan view of excavated structures from PVC162.
Structure 2 is noted to represent a tripartite room arrangement (adapted from Urban 2007).

Overall, the room arrangement of PVC162-2 adheres with the identified description of a tripartite structure formation. Though the placement of buildings at PVC162 does not establish a typical patio or plaza configuration, the southwestern facing of PVC162-2 looks upon a possible external occupational area of neighboring PVC162-1. Furthermore, the intentional cobble surface positioned around the central room supports that entry into the building was likely accessed along this facing. Above all, the alignment and configuration of rooms of PVC162-2 serve as an example of this construction design within a rural site setting in the Cacaulapa Valley.

El Coyote – Structures 24B and 59

As previously stated, El Coyote represents a diversion from the site selection sampling criteria with regard to site size and structure organization (Criterion 3), as it is designated as a Tier 1 site. However, the structures to be discussed are located within a region of the site that is deemed to be a non-elite residential zone. The Southwest Group at El Coyote comprises the most densely settled portion of the site and includes approximately 55 surface-visible structures, though building sizes and forms vary and some identified edifices lie below the ground surface (**Figure 7.22**). Furthermore, a common observation is the architectural "bridging" of several structures linked together, resulting in any number of buildings being connected and labeled as multiples or as sub-structures of one structure designation. Lastly, due to the densely packed nature of the buildings, patio groupings and arrangements are often not clearly distinguishable. However, the identification of two structures are highlighted in this discussion, as they are posed to adhere to the summit interior design characteristics of the tripartite room arrangement. The two buildings are Structures 24B and 59, both investigated during a field season in 2000 by Juliana Novic and Imogen Gunn.

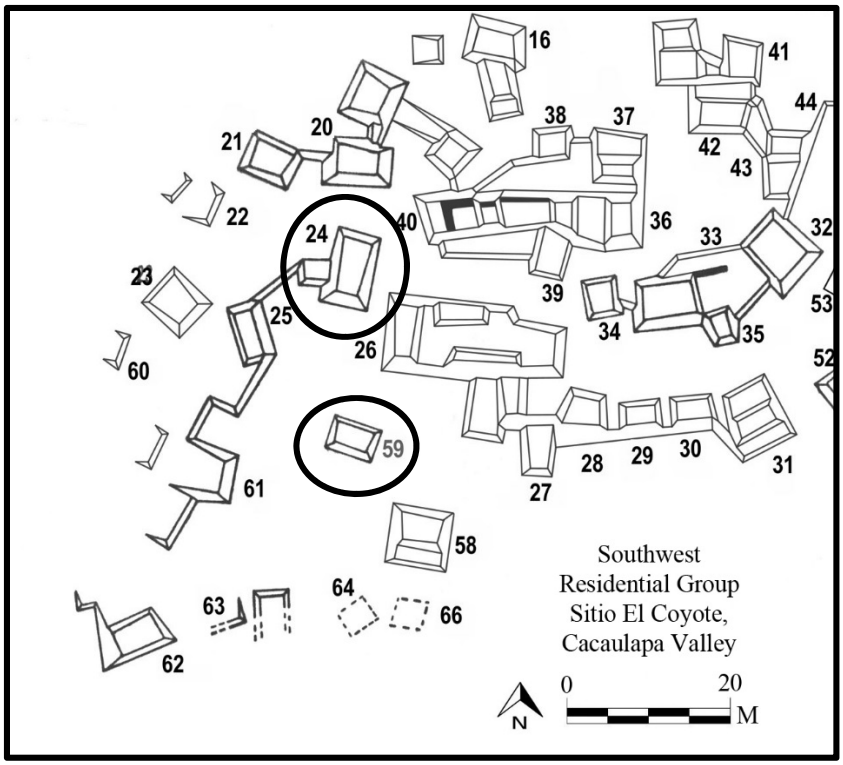


Figure 7.22: Site Map of Southwest Residential are of El Coyote, Cacaulapa Valley. Structures 24 and 59 are highlighted as tripartite buildings (courtesy of Urban and Schortman).

Structure 24B is located in the southwestern-most area of the Southwest Group. It is observed to be the second of two edifices that are connected and are arranged in roughly a northwest-southeast alignment. Structure 24A is labeled as the earlier building and is positioned to the southeast of Structure 24B. The entirety of what is identified as Structure 24 is positioned approximately 10m from Structure 23 and roughly 6.5m southwest of Structure 20. It is identified as establishing an eastern boundary to a potential patio group, with the open region located to the northwest of Structure 24. The earlier founded Structure 24A is recorded to be a platform composed of two room compartments, with an appendage of two additional room compartments in a terraced region to the northwest. Both sets of rooms are aligned in a northeast-southwest

formation. Structure 24B abuts the northwest facing of the added two compartments. Along the northwestern, patio-facing of Structure 24B are documented to be three aligned room compartments, arranged in a northeast-southwest orientation. To the southeast of these three aligned rooms is a rectangular-shaped room compartment, aligned in roughly the same orientation. The southeast boundary of this fourth room abuts against the northwest extent of the earlier added two room compartments, associated with Structure 24A. It is not clear if a formal doorway or means of access between these two constructions existed in antiquity. The three aligned rooms are described to be earth-and-stone floored and free from any built-in furniture. The center of the three rooms includes a step, constructed from three cut-stone blocks and is posed to mark a formal entryway into the "back" fourth room. Though no doorway is recorded to be observed in the foundational cobble constructions dividing the two room spaces.

In summary, Structure 24B is documented to be a subsequent construction to the earlier Structure 24A and architecturally linked by the addition of two room compartments, located in between. Though constructed later, Structure 24B is positioned most prominently to face out onto the semi-discernible patio group to the northwest. Most notably, the summit interior design of the structure (24B) is concomitant with the tripartite room arrangement. As it is not identified to be a free-standing edifice, Structure 24B serves as an example of how this particular building design is allowable with constructions that architecturally expand over time and articulate with other discernible edifices.

Structure 59 is situated on a lower southern terrace within the Southwest Group at El Coyote. It is established atop a south-to-north upward sloping terrain, away from a seasonal quebrada to the south. Structure 59 is positioned in the middle of likely various patio clusters, but closes off the north side of a patio grouping, defined by Structure 58 roughly 2.2m to the southeast and the line of constructions labeled as Structure 61 roughly 7.4m to the southwest, and Structure 26 roughly 6m to the north. From the deciphered construction history of Structure 59, it is argued to represent an alternative to the prevailing identification of a tripartite room-arranged building.

Though recorded to only undergo a total of four construction phases, Structure 59 witnesses the addition of several exterior wall constructions, terrace appendages, and during the final stage of occupation, even additional platform constructions. The result of which is an exceptionally complex assemblage history. Nevertheless, the earliest formal construction of the edifice is described to be surface-level construction, with a summit interior divided into two distinct room spaces, oriented in a northwest-southeast alignment. These room compartments are documented to be stone-floored and unequal in size, with the northwestern room (Room 1) being the greater of the two. During this earlier construction phase, no entrances are observed and it is unclear if passage between the two rooms existed.

Structure 59 takes on the formation of a potential tripartite room arrangement during the subsequent building phase, when two definitive room enclosures are amassed along the northeast facing. These two rooms are positioned such that one room is aligned with the center of the northeast facing and the other is located immediately adjacent to

the northwest, near the northwest corner of the earlier construction phase. The center room is recorded to be earthen-floored, slightly larger in area, and higher in occupational elevation compared to the stone-floored, smaller, and lower northwest enclosure. A stone-lined raised occupational platform is observed to front the northeast facings of both rooms and wrap around the northwest corner and terminates nearly halfway along the northwest facing of the earlier and larger northwest room (Room 1). Fragmented wall constructions immediately to the southeast serve as evidence for a potential third enclosure located adjacent to the center room. However, this northeast region of Structure 59 is documented by the excavators to have been heavily disturbed in antiquity, as evidence supports that construction materials were later robbed from the building (possibly even before formal abandonment) in order to amass neighboring constructions.

The resulting formation depicts Structure 59 as consisting of two distinguishable room compartments aligned in roughly a northwest-southeast alignment, with a possible third room located to the southeast, with two earlier and larger room compartments located to the southwest of the posed three-aligned enclosures. The entire edifice is roughly oriented in a northeast-southwest formation, with the possible three-aligned rooms positioned in clear visibility from neighboring Structure 58 to the southwest, though not directly facing that building. Furthermore, the orientation of Structure 59 is such that the alleged three-aligned compartments are not immediately positioned toward the patio region of the grouping.

Several elements are presented from the construction history and final summit design of Structure 59 that deviate from the “prototypical” description of a tripartite room

arrangement. Evidence suggests that a possible third room existed in alignment with the two clearly adjacent rooms, which is consistent with a tripartite arrangement. However, Structure 59 varies in that instead of possessing one, large room that abuts against the three-aligned rooms and extends the length of those enclosures, the building contains two compartments, which extend the length of the posed three rooms. The edifice is purported to have contained as many as five room enclosures. Additionally, the possible three-aligned rooms are not oriented to face outward immediately onto an identified plaza region. Lastly, Structure 59 includes additional external wall constructions and other masonry appendages that are not documented to channel entry into the building from the northeast, via the aligned compartments. Consequently, Structure 59 is offered as representation of a variation on the tripartite room form, for multiple design reasons.

Discussion of Tripartite Structures

A greater amount of evidence is yielded from an examination of tripartite building arrangements, than compared to the 3-sided edifice basal design. Clearly, the tripartite configuration is present within the Middle Chamelecón-Cacaulapa and Cacaulapa Valley and in nearly every settled environmental zone outside of La Sierra within the Naco Valley. Furthermore, several commonalities are revealed within this arrangement pattern; as well as deviations.

Similarities of Tripartite Structures

Several aspects of tripartite buildings appear to be comparable, though none are exactly alike. The resemblances of tripartite buildings relate to 1.) location on patio

groups; 2.) entry and movement through building; 3.) placement of exterior appendages; 4.) function of building; 5.) presence of internal furniture; 6.) size of building relative to size of patio grouping; and 7.) temporal period of occupation.

The first three commonalities are presented as being associated and therefore discussed together. With regard to location, all tripartite building are observed to be a member of a household patio group. The size of the group, as well as the size of the structure, varies, however, none appear in patio groupings with more than 4-5 surface-visible structures. The placement within the patio varies, though the eastern and northern positions appear to be favored (examples are: PVN202-47, PVN 607-3, PVN128-18, PVN128-19, PVN175-6, and PVC162-2).

As all examples of tripartites are located as members of a patio group, the second observation of entry to a building witnesses another commonality. Tripartites appear to be primarily accessed from the patio region and via the center room within the aligned patio-facing compartments. Furthermore, movement is channeled through the center room of the three aligned spaces to the larger back or off-patio room (PVN598-7, PVN128-18, PVN128-19, PVN175-6, and PVN262-3). Of particular reference are PVN175-6 and PVN423-23, which both contain stone markers on the floor of the central room, further formalizing the entryway into the threshold of the structure and likely marking the elevated status of the residents.

The focus of the center compartment of the building is further emphasized by the third observation: the presence of external appendages located adjacent to the center room. The form of the external appendages varies with respect to being a wall-form

terrace, which stretches the length of the platform (PVN128-19, PVN262-3, and PVN426-7) or simply a brief step (PVN175-4, PVN175-6, and PVN423-17). Larger and wider terraces are present as well (PVN128-18, PVN335-3, and PVC162-2). Appendages are also witnessed along other facings, including the most off-patio facing, though less consistency is observed with the placement and form of these additions. However, all are observed to be solid cobble constructions or paved surfaces. Furthermore, the function of each example is fairly uniform in that of a residential purpose, which is heavily linked with the presence of internal furniture. Built-in fixed features, such as benches, shelves, niches, or prepared surfaces are observed in nearly all examples (save for PVN607-3 and PVN426-7), though PVN426-7 includes a formal doorway and passage from the central room to the larger back room. However, due to the multiple room compartments, various supplemental domestic or ritual activities could take place within the interior of a tripartite building, aside from practices of dwelling. Though, evidence suggesting specialized and exclusive function as a ritual or ceremonial shrine is lacking.

The presence of internal furniture also holds a connection with the overall size of the building, with respect to other buildings within the patio group, as well as primary period of occupation. The tripartite arrangement is not always the largest building within a given patio grouping, however, those that are (PVN128-19, PVN175-6, PVN335-3, and PVN423-23) all include benches. Furthermore, those from larger site settlements (greater than 10 structure or Tier 4 and higher) (PVN598-7, PVN128-19, PVN175-6, and PVN423-23) have benches located in the larger back room. PVN335-3 is a member of a

smaller household grouping (a small Tier 5) and is observed to be the largest building in the group, though the bench is located in the central room and not the back room. However, with the particular cases of Las Canoas and El Coyote, PVN202-47 and Structure 24B from El Coyote are identified to be the largest in their respective patio groupings, though lack internal furniture. The large municipal and polity center organization of Las Canoas and El Coyote, respectfully, are likely factors in influencing variations that are not witnessed at significantly smaller sites, especially those of rural household patio groupings.

One final commonality is revealed with respect to time period of occupation and size of a tripartite building. Sites PVN128 and PVN175 are identified as settlements with distinctively powerful families and prominent residents during the Terminal Classic within the Naco Valley (Schortman and Urban 2012; Urban and Schortman 2004). PVN128-18 and 19, as well as PVN175-6 display amongst the most uniform characteristics of the tripartite arrangement, with PVN128-19 and PVN175-6 identified as being monumental in size. Particular correlations appear to exist with tripartite buildings being 1.) established in the Late Classic and persisting into the Terminal Classic and 2.) elevating in physical eminence and architectural consistency, at least in these two settlements. Most other sites with tripartite arrangements are primarily observed to be occupied during the Late Classic. Similarities with reference to site size and structure size do not appear to deviate between the regional settings of the MC-C, and the Naco and Cacaulapa Valley's.

Variations in Tripartite Structures

The ability to include variation and modification is a hallmark aspect of vernacular designs. As highlighted buildings of a tripartite arrangement do *not* all appear to be identical, the following deviations are presented with respect to: 1.) construction sequence resulting in intentional or modified interior arrangement and 2.) number and size of compartment spaces.

The construction technique and assemblage history of the presented tripartite arrangements appear to include the greatest amount of variation and lack of uniformity. Tripartite arrangements are distinguished between those intentionally amassed in the formation and those that are adapted. Intentionally amassed buildings are identified due to the relatively few number of construction phases and the absence of evidence supporting earlier construction episodes. Of those deemed to be intentionally designed (PVN128-18 and 19, PVN175-6, PVN423-17, PVC162-2, and Structure 24B from El Coyote) there is no clear consistency with how they are assembled. For example, PVN423-17 begins with the construction of the larger back room and then the three patio-facing aligned compartments are amassed. However, PVN262-3 is observed to be raised all during a single construction episode, with only exterior appendages added during later periods of renovation. In contrast, at El Coyote, Structure 24B is assembled adjacent to the earlier Structure 24A; however, evolves from the establishment of the three patio-facing aligned rooms and then the addition of the back, larger room, which abuts the earlier construction associated with Structure 24A.

Furthermore, of the tripartite buildings assembled as modified versions, even more variation regarding construction history is revealed. PVN335-3, for example, is initially established as a platform of four room compartments, aligned in a 2 x 2 design. Over time, an additional third room is added along the patio facing, yielding the tripartite formation, while one of the back rooms is filled in and transformed into a bench and an additional room is added. Therefore, PVN335-3 has a total of five room compartments: three along the patio front facing and two along the back, labeling it as a variation of the tripartite arrangement. Additionally, PVN202-47 is deciphered to originally consist of two large rooms; one facing toward the patio and one away. Subsequent construction episodes divide the patio-facing room in half and then later add an additional room, resulting in the three aligned compartment appearance along the patio side. Finally, PVN423-17 is identified to be have been an intentional tripartite arrangement, however, over time the three aligned rooms are presumed to have been filled in and the area raised as a large terrace region in front of the back room. Regardless, the result of these construction variations predominantly indicates the *desire* for the tripartite formation, even if not initially.

The final observation regarding variations within tripartite buildings relates to the number and size of room compartments. Again, with the tripartite arrangement greater emphasis is placed upon the presence of three aligned room compartments along the plaza or patio facing side of a given structure. Less variation is witnessed within these spaces as is present with the number of back rooms. PVN262-3, PVN335-3 and PVN426-7, and Structure 59 at El Coyote include two back rooms. However, the room

compartments associated with PVN607-3 and PVN175-4 are observed to lack uniformity. At PVN607-3, the back room is not observed to span the length of the three aligned rooms. Additionally at PVN175-4, the two side compartments along the patio facing are not fully recognized to even be room spaces, but platform areas. Furthermore, the three spaces lack equivalence with regard to size, as the middle room is considerably larger, and the side spaces are unequally smaller.

Overall, the persistence of the tripartite arrangement across the three investigated valley regions yields stronger support for the design to be truer of a vernacular intention and at various household scales. The smaller versions of tripartite buildings are not concluded to have required a large labor force to erect and conceivably could have been assembled by the immediate residences. Indeed, if only the outline for the configuration existed and no other added amendments (i.e. benches, terraces, additional room compartments), this minimalism would only add to the ease of amassing the design, as less natural resources are required. Furthermore, non-monumental tripartites that emerge by means of renovations indicate a shifting of priorities over time and a cognizant desire for this particular spatial arrangement. However, at the smaller tripartite examples, these shifts are recognized to be indications of a wider variety of domestic activities and not necessarily an outcome of an elevated status of household occupants.

In contrast, larger versions of the tripartite design likely required greater access to labor and elevated social status to create such monumental structures. The intentional design and size are indicators of the influence of the household residents to acquire the labor to amass the building and the typical internal bench, shelves, or niche features. The

larger tripartite structures of PVN128 and PVN175 indicate higher ranking household families and the ability to raise a monumental version of the arrangement. Furthermore, these particular settlements include occupation beginning in the Late Classic and persisting into the Terminal Classic. The tripartite pattern appears to not only persist during this time span but become more easily recognizable, or at least at PVN128 and PVN175.

Finally, as multiple examples exist within the Naco and Cacaulapa Valley regions, in contrast to the 3-sided edifice design, the tripartite design is being advanced as representative of a vernacular *form*. The distribution and continuance of the design across the valleys and into the Terminal Classic signal the desire for the formation. Furthermore, the lack of strict uniformity with regard to number of rooms (or at least back rooms), positioning on a patio, and most of all construction technique, indicates the truly fluid and lack of a 'high-design' nature of the formation. The variations in assemblage procedures for both buildings identified to be intentional and modified tripartites represent a lack of formal construction training and absence of standardized building plans. The salient observation is that the tripartite form is a favored internal arrangement of space, though achieved by various construction approaches at different locations. This is an indication of vernacular architecture and not that of a more grand design. Moreover, it is present in varying building scales (non-monumental and monumental) and from small patio household groups to residential regions of larger polity centers (El Coyote and Las Canoas).

Labeling the tripartite design as a vernacular architectural form confers a shared aspect of identity expression. The persistence of the tripartite form is indicative that occupants of the Naco and Cacaulapa Valley areas interacted and in select settings held common notions of how to arrange buildings for a residential purpose. The presented compared sites are largely rural settlements, save for the large centers of Las Canoas and El Coyote. However, comparative sites from within the Naco Valley are deemed to be slightly distanced from the immediate, daily political reaches of the rulers at La Sierra. Furthermore, extensive excavations from various regions within the La Sierra settlement zone are revealed to not contain constructions similar in design to the tripartite form (Schortman 2013, personal communication). Conceivably, the tripartite form is representative of valley occupants who were not under the immediate persuasion or control of those in power at La Sierra. Furthermore, as the political might of La Sierra waned into the Terminal Classic, certain practitioners of the tripartite form gained higher status, as indicated at sites PVN128 and PVN175, which include monumental versions of the form into the Terminal Classic. At sites where tripartite buildings are witnessed to be the largest structures, the occupants potentially represent the highest ranking households within the patio grouping and/or site, yet not the highest elites within the valley.

Exterior Modifications and Appendages

The final category of comparison considers the external modifications made to a structure; most specifically by the addition of architectural appendages. As articulated in Chapter 5, appendage form, function, and location are all evaluated from observed

external additions along investigated structures at PVN647. Similar discussions of appendage descriptions from structure exteriors from other archaeological sites hold for this comparative analysis. Of particular focus here are the appendage forms identified as the block form, the U-shaped or "box" form, and the free-standing wall form. These appendage forms are identified as vernacular arrangements present at PVN647, though their potential for being vernacular forms requires evaluation.

To reiterate, the block form appendage is described as a solid cobble construction, which is observed to abut along the exterior facing of a structure (**Figure 7.23**). While it is not compulsory for this form to be a geometric cube (i.e. equal in measure on all sides), it is deemed to adhere more with a square or rectangular-shape and not exhibit a linear/rectilinear or overall "wall-form" character. Furthermore, though the construction can vary in size, it is to maintain the consistency of being solely faced on all exposed sides by cobble materials. The intention of this form is to establish a uniform, cobble occupation platform.

In slight contrast, the U-shape or "box" form takes on the outline of a quadrangular construction, which is free from cobble construction in the center (**Figure 7.24**). The appendage is positioned such that it abuts against the exterior of a building in two parallel locations. However, it is identified to not span the entire length of exterior basal facing. The interior of the U-region of "box" space is leveled with fill material or debris, though not stones, and capped with bajareque or plaster to yield a prepared occupational surface.

Finally, the free-standing form is described as a linear, wall construction that is positioned roughly parallel to an external facing of a structure, though does not formally articulate (**Figure 7.25**). The length, shape, orientation, and distance from a structure of the appendage may vary, but the key observation is that it does not abut the structure in any way. Again, fill or debris is placed in between and capped with bajareque or plaster to result in an occupational surface. (Note: the schematic depictions of **Figures 7.23-25** are intended to represent the overall generalized formation and/or shape of the proposed three exterior appendage arrangements. They are not provided to serve as definitive portrayals with regard to appendage size (length, width, and height) relative to an adjacent structure.)

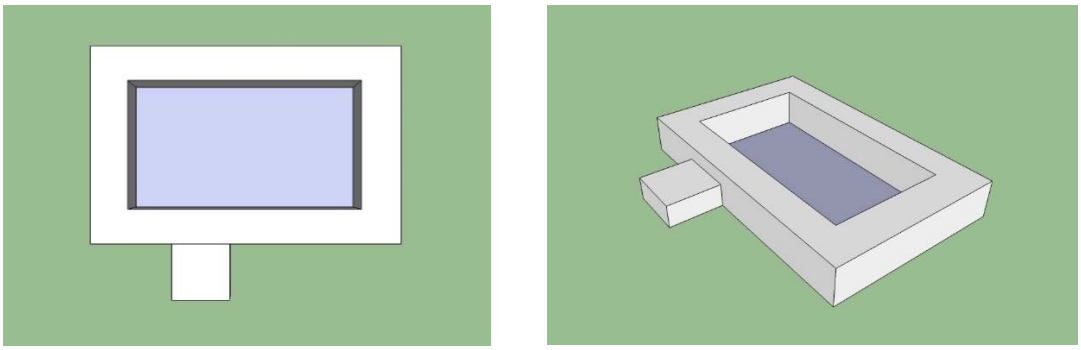


Figure 7.23: Schematic depiction of generalized block-shape exterior appendage. The left image is a plan-view perspective, while the right is a side-view perspective.

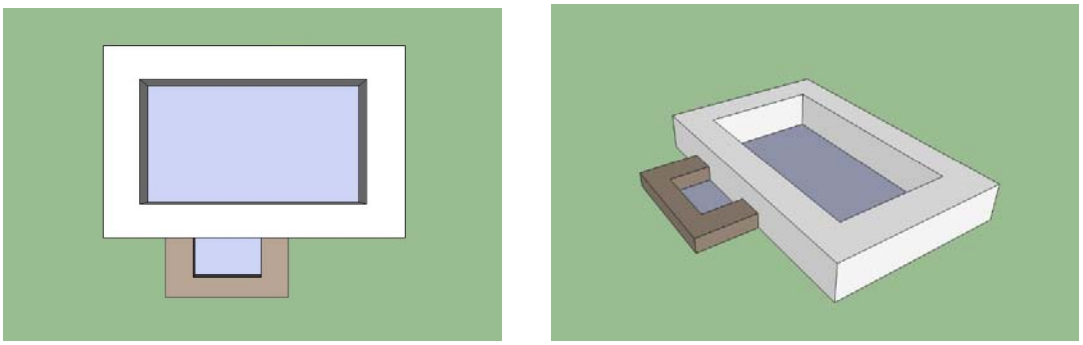


Figure 7.24: Schematic depiction of generalized U-shaped or “box” exterior appendage. The left image is a plan-view perspective, while the right is a side-view perspective.

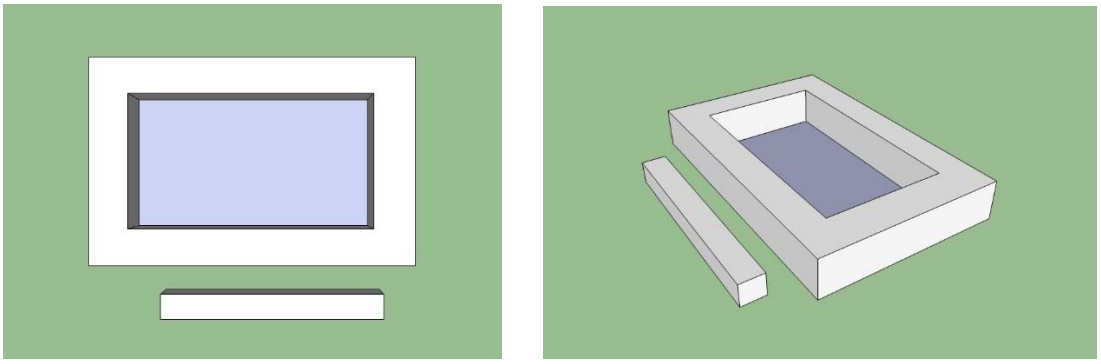


Figure 7.25: Schematic depiction of generalized free-standing exterior addition. The left image is a plan-view perspective, while the right is a side-view perspective.

From identified comparative examples of each of these three appendage forms, the size, shape, and deciphered functional purpose are all analyzed. For example, similar to analysis from PVN647, distinctions between functional steps and terraces or verandas are presented, when conclusive. Additionally, the positioning of these additions with respect to plazas and patios are presented in order to further reconstruct purposeful intent, coupled with spatial significance. Select patterns from these observational factors are revealed from analysis at PVN647 and analogies are now examined in order to assess their full vernacular potential at other locations within the Middle Chamelecón-Cacaulapa region, and the Naco and Cacaulapa Valleys.

Evidence of Exterior Appendages from the Middle Chamelecón-Cacaulapa

Site PVN202 (Las Canoas) – Structure 57 – U-shape or "Box" Form

As previously stated, the site of Las Canoas (PVN202) does not adhere to several of the sampling criteria for this comparative discussion (**Figure 7.26**). However, structures investigated from this particular site that are deemed to not contain forms of the monumental architecture and located in residential sectors of the site are considered. Therefore, Structure 57 (PVN202-57) qualifies for comparative purposes and is highlighted for exhibiting evidence of two examples of the U-shape or "box" appendage form (**Figure 7.26**). PVN202-57 was excavated in 2004 and analyzed by Lara Britain (2004).

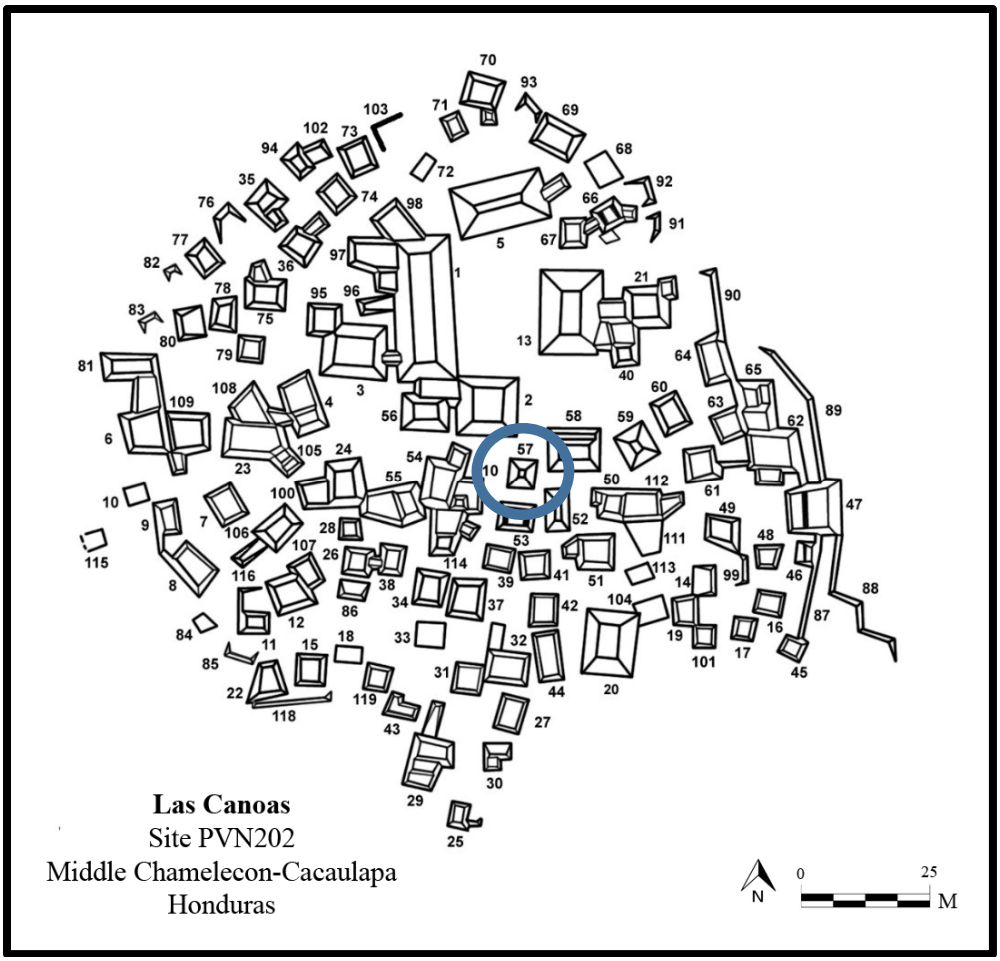


Figure 7.26: Site Map of Las Canoas (PVN202) highlighting Structure 57 (adapted from Stockett 2005a).

PVN202-57 is located in roughly the center of Las Canoas and holds an eastern positioning within a small patio grouping of buildings. It is deemed to be residential in function, with evidence for some form of craft production (Britain 2004). PVN202-53 is located approximately 3m to the immediate south, while Structure 110 is to the west, roughly 5m away from PVN202-57. PVN202-2 is located roughly 4m to the northwest and is identified to contain elements of monumental architecture, as it sits as the southern anchor of the Main Plaza of Las Canoas. As a result, PVN202-57 is located such that the

western facing of the building is most prominent on this plaza facing. According to the construction history, the first of two "box" appendages is amassed along the southern facing, near the southeast basal corner. It is recorded to be fashioned from two construction elements; one arranged to the east in an L-shape, which abuts with the second construction to the west. The complete low-lying appendage is described to stand only two courses tall, with the top course composed from cut tuff stones, likely appropriated from other older and abandoned structures at the site. The appendage is interpreted to function as a step leading to a terraced region of PVN202-57, which is posed to be the primary point of access from the south.

The addition of a second U-shape or "box" appendage is along the northern facing of PVN202-57 during a subsequent construction phase. This appendage is amassed as one construction unit and is considerably poorer in assemblage quality. The appendage maintains a "box" shape, yet is not observed to be of equal lengths along the parallel portions, which abut the northern basal facing. Regardless, it is characterized as functioning as a "small porch" (Britain, 2004:10). Overall, both appendages adhere architecturally to the description of U-shape or "box" formations. Furthermore, neither appendage is witnessed along the western, immediate plaza-facing side of the structure. However, PVN202-2 to the north is recorded to have shifted orientation over its span of occupation and evolved to switch access from the north to the south, therefore in close proximity to the northern facing of PVN202-57. The addition of the U-shape appendage along the north may indicate an increase in activity and/or access along this region, in accordance with the growing relationship with PVN202-2.

Site PVN607 – Structure 1 – U-shape or "Box" Form

Site PVN607 has been highlighted earlier with reference to including a tripartite building. However, an additional building at the site exhibits evidence for a variation on the U-shape or "box" form external appendage. Structure 1 (PVN607-1) is located in the northeast region of the site and is positioned approximately 45m from the principle group (see **Figure 7.12**). PVN601-1, along with PVN607-5, do not form a discernable patio-group arrangement, as these are the only two preserved buildings identified in this region. This is recognized to be a slight deviation from the criteria of selected comparative sample sites. However, near the northwest corner of PVN607-1 is observed an external appendage that is similar in arrangement to the "box" form (**Figure 7.27**).

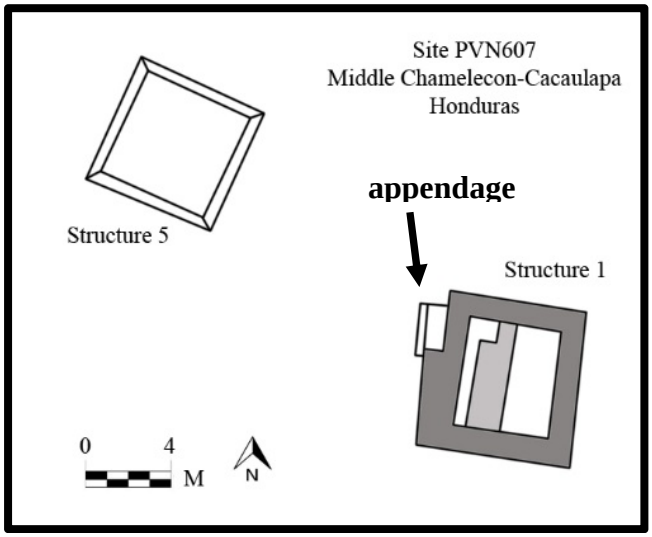


Figure 7.27: Plan-view of excavated northeast structures at PVN607,
with an adapted version of a 'box' or U-shape appendage (adapted from Urban 2007).

The appendage is slightly irregular in shape, however, it does exhibit an overall rectilinear outline with two preserved cobble alignments. The low-rising cobble constructions are arranged perpendicular to each other, as one extends away to the west from the basal corner of the building and abuts the other construction, which is in a roughly north-south alignment. The west basal wall of PVN607-1 is observed to be irregular in width and tapers in breadth from the south to the north. Therefore, the north-south aligned appendage construction abuts a portion of the west basal wall and completes the hollow "box" formation. The external appendage is documented to have functioned as a low step, providing access to the summit of PVN607-1. Though PVN607-5 has not been investigated, it is crucial to note that the northwest region of PVN607-1 is positioned toward neighboring PVN607-5. A relational understanding between the two buildings is not known, however, it is significant that the only observed external appendage on PVN607-1 is located in the region most-immediately facing PVN607-5.

Evidence of Exterior Appendages from the Naco Valley

Site PVN386 – Structure 4 – Block Form

Located in the northern Rio San Bartolo and Quebrara Agria region of the Naco Valley, site PVN386 is roughly 6km to the north of La Sierra. The site is positioned roughly 250m north of the river and includes 25 structures, arranged into four patio groups, with the largest being Group IV and comprised of twelve structures. The total number of structures within the site zone places it into a Tier 3 designation. However,

the individual structure groupings are representative of smaller household settings. Groups I and II are positioned roughly 90m to the north and contain five buildings each and are classified as small household settings. Group III is comprised of only three low-lying structures and is located approximately 18m to the northwest of Group IV. All investigations at various locations of PVN386 occurred in 1992 and date to the Late Classic. Structure 4 (PVN386-4) is within Group I and was excavated by Matthew Turek (1993; and Schortman and Urban 1993) and highlighted for its multiple block form appendages.

PVN386-4 is located in the northern region of Group I and is roughly 3m northwest of PVN386-3. The building is amassed by multiple construction episodes to stand approximately 0.35m in height and measures 4.1m x 4.6m. The interior space is divided into eastern and western compartments, one of which contains a built-in bench. However, along the exteriors several abutting appendages are added along all facings of the building. However, four cobble appendages, two on the east and two on the west, measuring roughly 0.2m high and ranging from 1m to 1.6m in width, project 0.5m away from the building. They are symmetrical in appearance and likely intentioned as steps to the summit of PVN386-4. Clearly, these appendages are relatively low-lying and brief, however, are representative of a variation on a block form appendage. Each appendage along Structure 4 is observed to be solid cobble construction. Furthermore, the symmetrical appearance is an indicator of intentional design. Finally, the southern facing of PVN386-5 most prominently faces the shared patio space, and other abutting appendages are located here, namely two cobble risers, likely stairs. The diminutive

block form appendages are located on patio-visible facings. This arrangement is reminiscent of Structure 18 from PVN647 and the box or u-shaped symmetrical appendages along its patio-visible facings. PVN386-4 is observed to function as a residence.

Site PVN395 – Structure 2 – Block Form

Structure 2 from site PVN395 (PVN395-2) is previously highlighted in this chapter in the discussion of platform design and is identified during its earliest assemblage to possibly represent an intentional 3-sided edifice. During a later construction phase, PVN395-2 is documented to include an abutting external appendage in the form of a solid cobble construction (Stockett 2001). PVN395-2 is positioned within the northeast region of the plaza group. Therefore, the immediately plaza-facing side of the building is the western façade. It is along this facing, and near the northwest corner, where a solid cobble construction measuring approximately 1.5m x 0.9m is appended. It is recorded to function as a step leading into a newly established entry along this plaza facing side of the structure. Though this appendage is not measured to be completely uniform along all facings, it maintains the block design and is observed to be solidly fashioned from cobbles along all exposed facings.

Site PVN175 – Structure 4 – Block Form

Site PVN175 is highlighted yet again to contain an additional example of a posed vernacular building form. As previously articulated, PVN175-4 is loosely contended to

display a tripartite room arrangement (**Figure 7.28**). However, it is also recognized to include multiple examples of the block form appendage along opposing facings.

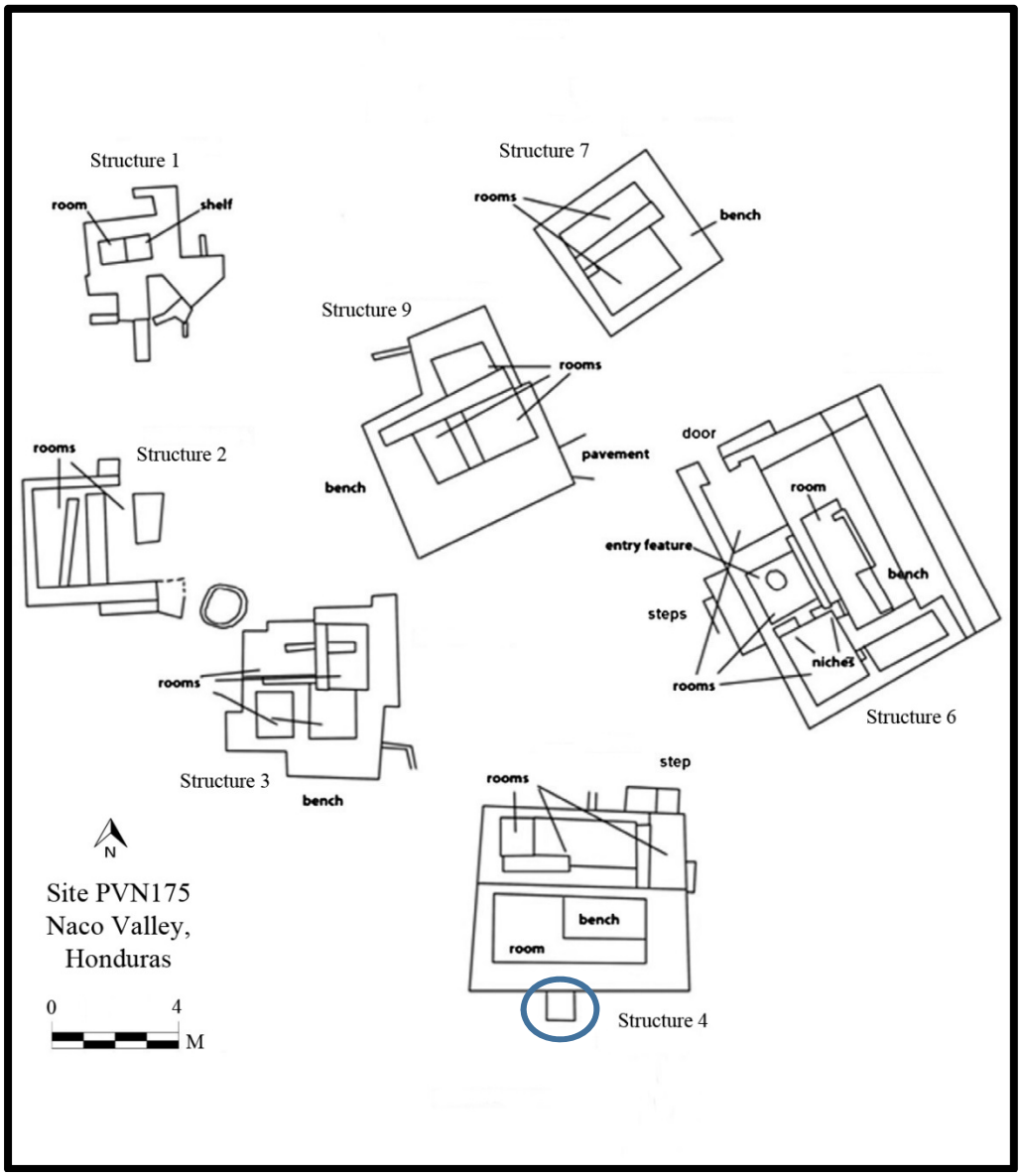


Figure 7.28: Plan-view of excavated northeast structures at PVN175, with a block appendage along Structure 4 (adapted from Urban and Schortman 2012).

The clearest depiction of a block form addition is along the southern, off-plaza facing, where a low-rising square appendage is positioned roughly in the center of PVN175-4's southern basal wall. This appendage measures approximately 0.9m in length and width and is described to be of solid stone construction. Conversely, along the northern, plaza-facing side of Structure 4, are positioned what are recorded to be two constructions that "comprise a stone block" (Urban and Schortman 1995). The two constructions abut against the northern basal wall near the northeast corner and are recorded to be adjoining for a length of approximately 1.7m and extend 0.8m away from the building. The eastern construction of this pairing is described to be surfaced with stone, while the western is topped with earth. Though they are composed of differing materials, each are depicted to be solid constructions, with the eastern-most appendage adhering most conclusively to the identification of a block form appendage.

Furthermore, both examples along the north and south facings of PVN175-4 are recorded to function as formal steps leading to the northeastern compartment and southern compartment, respectfully. It is also significant to highlight that each block form rendering is positioned on the most immediate plaza facing and the completely off-plaza facing. The necessity for the on-plaza appendage to be possibly expanded, as inferred from the differing building materials, may indicate greater emphasis on the plaza facing as a more frequent or favored means of access. This particular construction serves as a variation on this vernacular solid cobble appendage form. The off-plaza appendage more closely represents the block form design, all the while supporting that entry via the likely less-public, "back" region of PVN175-4 also existed.

Site PVN386 – Structure 14 –U-shape or "Box" Form

Site PVN386 is discussed again with respect to a different appendage form. Structure 14 (PVN386-14) occupies the eastern region of Group IV and is highlighted for containing a variant on the box or u-shaped appendage form. It is positioned roughly 6.5m south of Structure 13 and is observed to contain a saddling structure located in between the Structures 13 and 14. Due to the overall size of Group IV, it is categorized to be a large household setting at PVN386. Excavations within this particular group were conducted by Chris Attarian (1993) and Jennifer Shearin (Schortman and Urban 1993) and analyzed by Douglass (1999, 2002).

PVN386-14 endures a complicated construction history and results in a raised platform (~0.4m tall) measures 6.2m x 6.6m and contains six distinct room spaces during its final phase of occupation. A niche is observed in a northwest room and no other internal furniture, therefore, the overall functioning is deemed to be for storage and not residential dwelling (Douglass 2002). However, PVN386-14 is observed to contain amongst the largest amount of interior area amongst other investigated structures from Group IV. Nonetheless, an approximate total of three box or u-shaped appendages are witnessed along the immediate plaza facing, west, and off-plaza, west facing of PVN386-14. Along the plaza-facing, a cobble faced projection extends 1m away to the west from the building and extends approximately 2.1m along the facing and stand 0.25-0.3m in height, however, is deemed to be free from cobbles within the interior of the appendage. This appendage is located at the northwest corner of PVN386-14, along the western

facing. An entry is not observed in this region, though the existence of this particular appendage is suspicious.

Furthermore, along the eastern, off-plaza facing near the southeast corner of PVN386-14 are two assemblages that appear to be "box" shaped and together form two steps leading to an entrance. Both are observed to be partially preserved due to their slightly poor construction. The entirety of the assemblages is measures to extend 2.2m away, or east, of the basal wall. The farthest box form appendage is approximately 0.76m outset from the larger, 0.55 x 2.5m second box appendage. They are described as thread of steps and contained dirt fill behind each riser. This formation of two box or u-shaped appendages assemblage together is unique and not observed anywhere else. Overall, the presence of three appendages of this form along the same building are significant.

Site PVN128 – Structure 13 –U-shape or "Box" Form

Structure 13 from PVN128 (as previously highlighted as containing two tripartite structures) is located in the southwestern region of the site and not immediately within one of the formal plaza group arrangements. It is positioned roughly 4m north of PVN128-11 and 12m northeast from PVN128-12. It is one of the most diminutive buildings within the group and measured to stand only 0.37m in height. Investigations of Structure 13 were carried out in 1996 by Beverly Shade and analysis provided by Olga Steffan.

PVN128-13 is raised by means of at least three construction phases and results in an edifice measuring approximately 4.3m x 4.6m. The interior is defined by at least two room spaces and includes a large terrace along the plaza facing southeast side. Access into the northwestern positioned rooms is by means of doorways along the northeastern and plaza-facing southwestern sides. Of particular interest is the addition of an appendage long the northwestern, off-plaza facing that is circular in shape. Two appendages are concluded to extend away (0.8m) from the basal wall and curve with a length of approximately 1m. The results establishes an internal space of roughly 1m x 1.95m and is bounded by an average height of 0.25m. The excavator concludes the space to service as storage cubicle or a low platform region. Both are potentials and represent a variant on the "box" or u-shaped appendage form, as this arrangement contains more circularity than "boxi-ness". PVN128-13 is observed to function as a storage facility and supplemented with activities for work or production (Urban and Schortman 2004).

Site PVN324 – Structures 1 and 3 – Free-standing Form

Site PVN324 is located within the northern region of the Naco Valley, on the north side of the Rio Manchaguala. The site contains only three low-lying structures, arranged in a patio grouping and are deemed to be a small household grouping with a Tier 5 designation. All three structures were excavated in 1996 by Douglass (1999, 2002) and date to the Late Classic. Structures 1 and 3 (PVN324-1 and PVN324-3) are highlighted for presence of free-standing wall appendages (**Figure 7.29**)

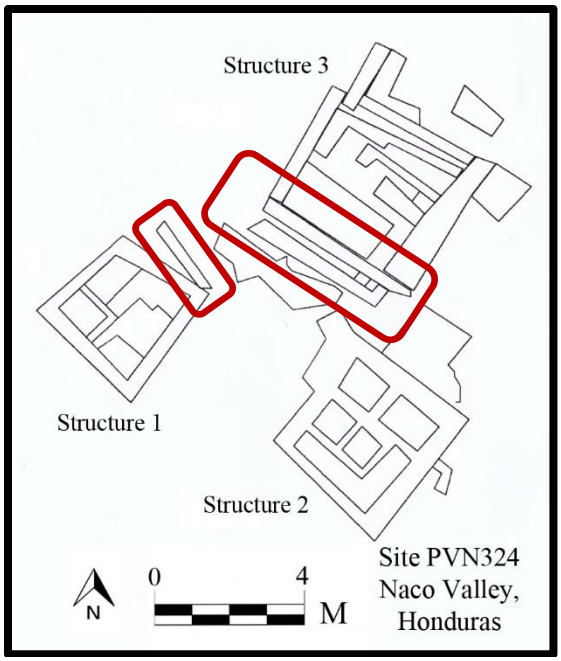


Figure 7.29: Plan-view of excavated structures from PVN324. Structures 1 and 3 are noted to have free-standing wall appendages (adapted from Douglass 2002).

PVN324-1 is the western-most building within the group and is located approximately 3.5m northwest of PVN324-2 and only 1m to the southwest of PVN324-3. Several construction episodes result in the building being raised to approximately 0.3m in height and includes three distinct internal room spaces, complete with a bench feature and shelves, labeling its function as a residence (Douglass 2002). Additionally, along the northeastern, patio-facing side of the building, two parallel "lines of stone abut the northeastern patio side of the platform, fragmenting the patio space adjacent to the platform (ibid: 88-89). Though the wall-form external appendages articulate at one end of the basal platform, they extend away and do not touch again. These are inferred to established a raised platform region and formalize an entrance into PVN324-1 from this facing directly across from PVN324-3. Furthermore, the orientation of these parallel

appendages appears to realign the façade of PVN324-1 to face directly upon that of neighboring PVN324-3.

Additionally, PVN324-3, positioned in the northeast region of the group is also observed to contain a wall-form and semi-free-standing external appendage. It is recognized to be the largest building and most architecturally complex within the group. After undergoing several renovations, both internally and externally, a "low riser" is appended along the patio facing southern side (ibid:92). This appendage nearly extends the entire length of the patio façade and is positioned approximately 0.3m to the south and away from the platform facing. However, near the southern-most corner, the appendage articulates with basal architecture and is not deemed to be a completely free-standing addition. Nevertheless, the construction is assembled away from the immediate facing and analogous concepts of construction are deemed to have occurred with the formation of patio-side entrances along both PVN324-1 and PVN324-3. Both buildings are identified to function as residences (ibid).

Site PVN128 – Structures 17 and 23 – Free-standing Form

Located in the San Bartolo region of the Naco Valley, site PVN128 is revisited once again for including additional vernacular architectural features (see **Figure 7.19** for site map). PVN128-17 and 23 are highlighted for including variations on the free-standing appendage form. PVN128-17 is located in the same plaza group as previously discussed PVN128-18 and 19 (Plaza Group I), while PVN128-23 resides within the northern grouping (Plaza Group II). Excavations at PVN128-17 and 23 were supervised

in 1996 by A. Dietz and H. Osburn, respectfully, and analysis was supplemented by A. Althoff.

PVN128-17 is positioned roughly 5.5m southwest of PVN128-18 and is the northern-most building along the western line of structures within the group (Plaza Group I), thereby occupying the northwest corner (**see Figure 7.20**). During final phase of occupation, PVN128-17 is revealed to be a complex arrangement of at minimum four room spaces, along with at least one bench feature, all as surface-level constructions. The overall dimensions of the building are roughly 7.5mx 9m. Though the internal configuration is deemed to be intricate, located in the southeast exterior region of PVN128-17, within the plaza region, are the remains of two parallel free-standing wall appendages. The western-most assemblage measures 0.32m in width and 1.8m in length (northeast-southwest) and stands 0.15m tall. Its counterpart, 0.3m adjacent to the east, is 0.15m wide, 0.63m in length and stands 0.21m in height. Conceivably, these are the remains of a low-lying platform that fronted the plaza-facing of PVN128-17. Though the western appendage is longer and wider, the eastern appendage is taller, indicating that this outermost appendage dictated the height of the raised region. The construction quality is observed to be poor and haphazardly arranged, indicating its less likely functioning as supporting a perishable superstructure. PVN128-17 is concluded to be a residence but also a place of crafting production, as indicated by the high number of recovered ceramic stamps (Urban and Schortman 2004).

Located in Plaza II, PVN128-23 occupies the northern extent of this group and is positioned roughly 5.1m east and 4.75m north of PVN128-24 and 25, respectively.

During its final phase of occupation, PVN128-23 is observed to measure approximately 4.85m x 5.75m and stood 0.47m in height. Amassed over one intensive construction period, the building includes at least one internal compartment, complete with a bench feature. Near the eastern corner of PVN128-23 are multiple constructions, which according to the excavator, together yield a surface-level edifice immediately adjacent to the building. Of particular interest is a low-lying (~0.3m in height), free-standing appendage that is oriented roughly northeast-southwest and extends for 1.8m. This appendage is positioned approximately 0.5m from the eastern-most corner of the structure. The space that is enclosed contains a circular configuration made from smaller cobbles and is poorly preserved, though may also predate the construction of the original platform. Therefore, the circular feature may have been early and later buried and the free-standing appendage utilized to establish a raised region near this exterior corner. PVN128-23 is associated with a residential intent, but also as a setting for cooking, storage, and work space (Urban and Schortman 2004).

Evidence of Exterior Appendages from the Cacaulapa Valley

No previously investigated archaeological sites within the Cacaulapa Valley that adhere to the sample criteria for this comparison include structures that appear to include exterior appendages in the arrangements discussed here.

Discussion of Exterior Appendages

Similar to the 3-sided edifice within the category of platform and basal designs, there is ostensibly slight evidence for these *particular* three appendage forms, especially, within the Cacaulapa Valley. The greatest evidence lies with the existence of the box or u-shape form, followed by variants on the block and free-standing wall forms, though mostly from the Naco Valley. The Middle Chamelecón-Cacaulapa region only includes the box form, while the greater Cacaulapa Valley observed none of these forms. Although, most generally, external appendages appear most frequently along structures with seemingly complex internal architectural assemblages and those that under multiple episodes of renovations. Regardless, relative comparisons are made within each form of appendage and relate to 1.) degree of variation of the generalized form; 2.) placement along a building; 3.) and the deciphered appendage function in association with structure function. The locational setting within the two valley systems does not appear to hold significance, though one particular pattern is observed from the sites associated with occupation from the Late into the Terminal Classic.

The block form appendage only appears within the Naco Valley and at three sites (PVN386, PVN395, and PVN175). Unlike the block form appendage from PVN647-17, the examples from these Naco sites mostly all appear as low-lying constructions, though still fashioned as solid cobble assemblages. Furthermore, all examples are observed along residences and function as steps leading to entrances to a building. However, there is variation with respect to placement along the exterior of a building. PVN386-4 contains four examples of the form, which are symmetrically amassed on the two side

facings to the open plaza. The symmetry and along plaza-visible facings is indicative of the intentionality of the form. The single block form example along PVN395-1 is positioned along the facing directly on the plaza; while, PVN175-4 contains multiple examples of the form, which appear on both the immediate on and off-plaza facings of the building. One final commonality is that all three sites witnessed to include a block form appendage are recognized to be relatively large household groups with clear plaza arrangements. The block form may be amongst the most laborious to construct, due to the solid nature of the formation and necessity of extra building materials. Therefore, greater dependence upon extra-household assistance may be required. This form of reliance on, or control over, non-household members for building indicates a higher status household and authority to command labor resources (Hendon 1991; Schortman and Urban 2012; Urban and Schortman 2004).

Appearing in both the Middle Chamelecón-Cacaulapa region and the Naco Valley is the box or u-shape appendage form. Slight variations are present, though the overall outline of a hollow, u-shaped formation is discernable. The overall sizes of the examples are comparable (~1m in length), however variations exist with respect to placement along a building. Within the MC-C at Las Canoas, PVN202-57 includes two examples of the form, both on side facings to the plaza. However, PVN607-1 includes one formation that is immediately positioned on the open patio. The Naco examples include PVN128-13, which witnesses a curved version of a u-shape form and along the most off-plaza facing of the building. Finally, PVN386-14 includes multiple variations along both plaza and off-plaza facings. The on-plaza box form version is slightly asymmetrical, while the off-

plaza region includes two appendages that abut each other and fashion a set of stairs leading to a back entrance to the building. All other examples establish steps, though along PVN128-13, an alternative interpretation is a possible storage cubicle along the backside of the building. Structures with this particular appendage located in a completely off-plaza setting are also aligned with a storage facility intention.

Overall, slight divergences are observed between these examples and the box form appendages witnessed at PVN647, though none too stark to warrant further interpretation. Furthermore, all structures, including those at PVN647, with box or u-shape appendage forms are identified to not be the largest within their respective patio grouping. Though structure function varies between residence and storage facility, and the residences are not deemed to be the 'dominant' building within a household group. Therefore, as this appendage formation is identified to be amassed by low to moderate labor expenditure and use of construction materials, perhaps the correlation between overall modest structure size and appendage formation indicates that occupants/users of the structure were also the primary builders, with little to no additional labor assistance accessible beyond the household members.

Lastly, evidence of the free-standing wall appendage form is only witnessed within the Naco Valley and at two settings, located on opposite sides of the valley from each other. However, at each site (PVN324 and PVN128) two structures are observed to include examples of the form. PVN324-1 includes two appendages that are aligned parallel to each other, with only one slightly articulating with the end of the building near one basal corner. The appendages are not aligned parallel to the basal platform, though

appear to realign the direction of the facing to look immediately upon adjacent PVN324-3, which also includes a free-standing wall appendage. Clearly, this technique of wall-form additions, set slightly distanced from the basal wall to establish a raised terraced region, was desired in this particular region of the small household group.

In contrast, at PVN128, the free-standing wall form appendages are interpreted to establish extra room compartments along exteriors. At PVN128-17, two parallel free-standing forms are placed along the most prominent plaza-facing. The quality of preservation of these constructions is quite poor, therefore, conceivably the result was that of a slightly raised terrace region, leading to an entrance along the plaza facing, and not supporting a perishable wall superstructure. Additionally, along the off-plaza facing of PVN128-23, a single free-standing wall form is nearly perpendicular to the building. The exact purpose in this region is not clear, though possibly also retained a low-rising surface near an exterior corner of the structure. PVN128 is considerably larger than PVN324 and examples at this larger Terminal Classic setting are located along modestly-size residence dwellings within in household groupings with other larger structures.

In summary, though few examples of external appendage forms have been highlighted, they represent the degree of variation that exists within this classification of architectural modification. In general, the exteriors of structures may undergo the most dramatic or minor architectural modifications, however, are also likely to suffer the most during periods of abandonment and decay. Furthermore, external observations are challenging to uncover archaeologically, depending upon the depth and distance of the appendage from the associated structure. For example at PVN647, evidence of a free-

standing appendage form was clearly discernible from the ground surface, however, another free-standing wall form immediately adjacent to it was of such a smaller size that it was undetectable from the ground surface. If excavation methods had not included such a wide investigation area, the construction would have gone unnoticed. Similarly, other smaller appendage forms may suffer damage or go completely unobserved. Though, larger and more robust forms tend to be more durable to preservation and are associated with larger structures, which tend to withstand processes of abandonment better, as well. The correlation between larger and more complex exterior appendages are associated with larger structures, indicating longer life-spans of the dwelling, a greater command of labor, and overall higher household positioning within a group.

Overall, appendages along basal exteriors are arguably the most utilitarian type of architectural additions. Constructed spaces along plaza facings are clearly desirable, though side facings and even off-plaza facings are just as necessary, though perhaps for more utilitarian purposes. Furthermore, the shape and size of a given appendage may be amongst the most organically manifested, depending upon the needs of the occupants of the building. As a result, the category of external appendages may be less useful as a vernacular category to attempt of fully quantify, or at least these chosen appendage formations do not appear to result in any distinguishable patterns. However, the correlation between overall appendage size and construction quality and comparable attributes of the structure are worthwhile.

Discussion & Conclusion about Vernacular Architecture from the Middle-Chamelecón-Cacaulapa, and the Naco and Cacaulapa Valleys

The result of investigating the vernacular potential of the 3-sided basal design, tripartite buildings, and various external appendage arrangements has revealed that only the tripartite arrangement exhibits evidence of a true vernacular form. Several aspects factor into this outcome with regard to detectability, construction quality, and overall assemblage complexity within any given design. Furthermore, no compared site includes all three of the investigated vernacular potentials within a single structure. However, certain combinations of designs are present within multiple buildings from the same site (**Table 7.4).**

	Sites exhibiting evidence of **3-Sided Edifices**	Sites exhibiting evidence of **Tripartite Structures**	Sites exhibiting evidence of **Exterior Appendages**	
Middle Chamelecón-Cacaulapa (MC-C)		PVN202, PVN598, PVN607, **PVC187**	Block	
			Box	PVN202, PVN607
			Free standing	
Naco Valley (PVN)	175, 395, 411, 471	128, 175, 262, 335, 423, 426	Block	175, 386, 395
			Box	120, 128, 386
			Free standing	128, 324, 485
Cacaulapa Valley (PVC)	162	162 El Coyote	Block	
			Box	
			Free standing	
TOTAL	**5**	**11**	**Block**	**3**
			Box	**5**
			Free standing	**3**

Table 7.4: Summary of sampled sites by valley setting and evidence for 3-sided edifice, tripartite structures, and exterior appendages.

The 3-sided edifice design is witnessed with the tripartite design at two sampled sites: PVN175 and PVC162. The case of the 3-sided building at PVN175 (Structure 2) is a better example than the modified Structure 1 from PVC162. Regardless, distinct size differences are present within the site settings and PVC162-1 is deciphered to transition into a residence, while PVN175-2 includes two room compartments but maintains a storage-related functional intent. Furthermore, PVN175-2 is observed to open along the plaza facing side, while PVC162-1 is posed to have been open briefly along an off-plaza facing. An additional observation is between sites containing the 3-sided edifice and the block appendage form, though along different structures. Sites PVN175 and PVN395 are deemed to be closer in site size, though the presence of the block form is more apparent at PVN175.

Overall, very few correlations exist between the 3-sided edifice design and the other compared vernacular arrangements. However, though the 3-sided, or U or C-shaped, design has been shown to not be extensive as a structural design in the Naco and Cacaulapa Valley regions, it was worthwhile to investigate due to the significance that the overall shape holds within Mesoamerican construction forms and site arrangements. The 3-sided, or more often utilized U or C-shape, has been demonstrated to hold great significance within many Mesoamerican plaza or court arrangements (Andrews 1975; Wagner et al. 2013). The arrangement of three temples in a trapezoidal shape with one of the widest ends remaining open was first observed by Proskouriakoff (1946) at the Maya sites of Uaxactun and Piedras Negras. Over time in both of these cases, a fourth temple is erected in the vacant area and a quadrangle layout results, yet the initial open facing is

deemed to be intentional. Additionally, the U or C-shape is witnessed within various forms of Mesoamerican art and imagery.

However, little is known of a 3-sided or U or C-shape formation of individual structures and with a domestic functional intent from other regions, unassociated with a monumental architectural agenda. The most dominating observation from comparative sites within the Naco Valley is the presence of the 3-sided edifice associated with Terminal Classic occupation. This is the case at PVN647, though it appears all cases from this site were initially erected during the Late Classic and transformed over time. The leading value of and desire for the 3-sided edifice appears to be with the functional flexibility of the yielded space and the directionality of the opening associated with a plaza or patio grouping. It is unclear if a greater ritualistic significance was linked with these spaces in antiquity. Furthermore, it is unknown to what extent the arrangement was employed as a widespread vernacular form, as comparisons remain limited. Though the construction design is simple, when coupled with the propensity to expand upon the arrangement over time, it is challenging to decipher from the archaeological record if close observations are not recorded during excavations.

With regard to tripartite buildings, none are observed to have originally formed as 3-sided edifices nor include any of the three exterior appendage forms chosen for comparison (except for PVN175-4, which is deemed a variant on the tripartite form and contains block form appendages). Appendages along tripartite buildings appear to be wall forms and immediately abut against the patio facing basal wall of the structure to establish various sizes of terrace platforms. Furthermore, the appendages are observed to

be higher quality and amassed by greater volumes of construction materials. As previously assessed, the larger tripartite structures within household groupings likely indicate the high ranking of the occupants. These families would have greater access to labor parties to acquire the raw construction materials and build the larger and more elaborate architectural designs. This is most apparent at the Terminal Classic sites of PVN128 and PVN175, where the tripartite structures are the largest within their respective patio groups.

The tripartite buildings are also the most indicative of a shared vernacular building practice occurring within the Naco and Cacaulapa Valleys. The Late Classic samples are predominantly located in rural settlements, though examples of the design also exist at Las Canoas and El Coyote, both large centers with occupation continuing into the Terminal Classic and even Early Postclassic at El Coyote. Furthermore, all examples are a mixture of intentional and modified varieties to yield the formation. This observation lends that the design is intentional and desirable not only as a functional residential space, but as a marker of shared expression on how to build households, and by extension an indicator of shared identity traits. Furthermore, the lack of standardization in how to build the arrangement supports that non-specialized builders are erecting the structures. However, the larger versions do indicate that status differences existed as assistance beyond the immediate household was likely required.

A further consideration with the tripartite building form as the best supported vernacular design is with regard to the concealed nature of the internal formation. With the addition of a perishable superstructure, the interior design of a tripartite structure is

hidden from external detection. Aside from functional preferences for the various room compartments, the arrangement could be the result of deliberately obscured or subconsciously covert cultural expressions. As previously stated, households from the immediate site core of La Sierra in the Naco Valley are not witnessed to include the tripartite formation, whether monumental in size or not (Schortman 2013, personal communication). Conceivably the control over these residential areas at La Sierra extended into nearly every aspect of daily practice and included the design and formation of household structures. From the known areas within the Naco Valley to include tripartite structures, sites within the southwestern Quebrada Agua Sucia and Guasma settlement regions (PVN175, PVN423, and PVN426) are the closest to La Sierra and are located roughly 3.5-5.5km away (**see Figure 7.1**). Therefore, perhaps the influence of rulers at the valley center did not extend to these reaches, or at least not as intensely as to dictate interior arrangements of buildings.

In contrast to this scenario is the possibility that residents of more rural settlements may have embraced the tripartite form as marking a shared camaraderie, while at the same time an "out-group" identification as being unassociated from those within the La Sierra zone. Furthermore, during the transition into the Terminal Classic when rulers at La Sierra are witnessing a decrease in authority (Schortman and Urban 2004, 2011), the rise of larger tripartite buildings at PVN128 and PVN175 could be the result of an increase in influence and shared pride in identity of those who build, own, and occupy households with tripartite residences. In either instance of establishing an 'in-group' identity, the tripartite design is intentionally vernacular and significance is

likely associated with the detailed internal arrangement and lesser-so on observable external embellishments.

Lastly, with regard to external additions, the chosen appendages for comparison reveal minimal evidence to be labeled as vernacular forms. However, the presence of box or u-shape appendages serving as steps and along smaller buildings is a shared trait with observations at PVN647. Furthermore, the establishment of elevated terrace regions with the addition of free-standing wall appendages appears to be alike, as well. The compared block form appendages are revealed to be slightly raised surfaces and lesser-so elevated platforms, associated with an exclusive functional intention. As such, the selected external appendages are deemed to have only moderate vernacular implications, aside from revealing that less labor intensive appendages are typically associated with less labor intensive structures.

In summary, the chosen categories of architectural formations achieved the goal of assessing platform/basal formations, and the internal and external modifications associated with a given building. The results are that vernacular arrangements derived from observations at PVN647 yielded far fewer comparisons than the evidence for the tripartite building form within the Naco and Cacaulapa Valley regions. Regardless, the persistence of the tripartite formation throughout the Naco and Cacaulapa Valleys indicates a common building practice and is supportive of a vernacular architectural pattern. Furthermore, the construction practice is representative of a shared identity within these settlements either by originally amassing the tripartite form or modifying preexisting buildings to match the design. However, what remains unknown is where

and how this vernacular pattern developed and to what extent is it shared with households in other neighboring valley settlements in northwest Honduras.

Chapter 8

Inter-Regional Considerations:

Vernacular Architecture from other Valleys of Northwest Honduras

The next level of analysis is presented as an inter-regional consideration of vernacular architecture from select regions of northwest Honduras. In order to assess the range of vernacular patterns observed in the Naco and Cacaulapa Valleys, examinations of adjacent regions are necessary. Regions are identified here as valleys that have been researched and referred to as a valley-region. The ideal goal is to evaluate evidence for the three identified vernacular arrangements (3-sided edifices, tripartite structures, and various exterior appendages) within valley systems and regions of greater geographical distance from PVN647. However, the availability of datasets with detailed architectural descriptions vary by valley and select settings are presented with greater depth than others. Therefore, this assessment attempts to identity similar vernacular traits and arrangements occurring in more distant settings and the correlation with shared building practices within this region of northwest Honduras and Southeast Mesoamerica. When applicable, reference is provided to the previous three identified architectural arrangements.

The selected valley-regions of consideration are chosen for their proximity to the Naco and Cacaulapa Valleys and for their degree of archaeological investigation to date. As it is located the closest to the Middle Chamelecón-Cacaulapa region where site PVN647 is located (less than 25km to the south), the Central Santa Barbara region is

chosen for discussion. This region includes the Late Classic site of Gualjoquito, amongst other smaller domestic settlements, which are positioned along the Rio Ulua. The Tencoa Valley is also highlighted as it is located further south within the Santa Barbara Valley (roughly 14km south of Gualjoquito) and also along the Rio Ulua. Additionally, the Lower Ulua or Sula Valley, located roughly 50km to the northeast of site PVN647 is selected for consideration, as this region is positioned nearly immediately to the north and is the only substantial settlement zone between the Naco and Cacaulapa areas and the Caribbean Ocean. Finally, the Cuyumapa Valley in Yoro, Honduras is selected as representing an eastern region to the Naco and Cacaulapa valley settlements. The Cuyumapa region is arguably outside of the 'bounded' area of northwest Honduras and considered to be within central Honduras. Regardless, investigations of small-scale household contexts have occurred in the region and prove useful for consideration.

Overall, greater emphasis is placed upon settlement regions that are closer in geographic positioning to PVN647, as possible shared building practices by means of architectural attributes and construction styles are hypothesized to occur amongst settlements that are in proximity to each other. Additionally, these valley settings all include a major river system and smaller tributary quebradas, which collectively source sufficient amounts and a range of construction materials for building. Furthermore, the majority of evidence from these valley-regions indicate that inhabitants had limited forms of interaction with the Maya residents of Copán and were of 'non-Maya' identities (Hendon 2010; Joyce 1991; Schortman and Urban 1986a, 1987, 1994, 2011a; Urban and Schortman 1986, 1987, 2004). Therefore, the consideration of vernacular architectural

traits and patterns observed within the Naco and Cacaulapa settlements are presented to reveal either construction commonalities or differences, which in turn may indicate identity-based affiliations or lack thereof, with neighboring valley residents.

Finally, in order to assess the degree of similarity or variation of architectural vernacular patterns highlighted from within the Naco and Cacaulapa Valleys to other neighboring settings and with 'branded' cultural groups, one conclusively Maya venue is selected as a comparative sample. The rural household settlements of Copán are selected for consideration to gauge the architectural patterns occurring within a recognized Maya setting and reveal the forms of vernacular commonality, as well as distinction from those observed from other locations within northwest Honduras. Additionally, select urban household settlement sites are considered, as a particular structure configuration is witnessed to potentially hold relevance with structure arrangements from the Naco and Cacaulapa Valleys.

The selection process of sampled sites within these valley regions is in alignment with the selection process of PVN and PVC compared sites. All sites are identified to be predominantly occupied during the Late and/or Terminal Classic periods and have undergone extensive, horizontal investigations of complete or near-complete structure formations. Furthermore, though the valley systems included in this discussion are not bounded by designations established by PVN/PVC site-ranking protocols, the generalized assignment of site size hierarchy is maintained. Therefore, household settings included in this inter-regional consideration are arranged in plaza or patio group formations and include anywhere from 5-30 identified structures. Furthermore, households composed

predominantly of unmodified building materials and those identified as non-monumental in size are considered.

Middle Ulua Valley– Site 106

The majority of archaeological investigations within the Middle UIua Valley and more specifically the Santa Barbara Valley has focused at the Late Classic center of Gualjoquito and its immediate environs. In brief, Gualjoquito is recognized as the Santa Barbara valley capital during the Late Classic and included interregional interaction and trade with neighboring Lake Yojoa and Tenoca Valley, as well as the Maya of Copán, as evidenced by the presence of elite material forms believed to originate from these regional settings (Ashmore 1987). The surrounding hinterland area, within 8km^2 of Gualjoquito, is recognized to have been the settings for "domestic activities of the non-elite support population of Gualjoquito" (Schortman and Urban 1987a:16). Within this area are four distinct settlement regions: the first is approximately 1km north of Gualjoquito and on the same river terrace as that site; the second is located to the northwest, on the other side of the Rio Ulua from the first region, and is recognized to be the farthest from Gualjoquito; the third region is southeast of Gualjoquito and also on the east bank of the river; and the fourth is southwest of the large center and along the west bank of the river. The close proximity of these regions to Gualjoquito is similar to the immediate settlements surrounding La Sierra within the Naco Valley. As such, material culture manifestations from these sites may be influenced by the leaders at the valley center. However, as comparable distanced settlements are not known within this region

of the central Santa Barbara Valley, considerations of architectural data are presented with this closer relational proximity in mind.

Overall, the Late Classic architectural arrangements from the greater Gualjoquito region are described as nucleated patio groups composed of modest, stone-faced platforms amassed from locally available, unmodified building materials and standing roughly 0.3-0.5m in height (Schortman 1987; Schortman and Urban 1987a). The density of settlements range from small household clusters, with approximately 3-5 structures, to larger supra-household settings comprised of nearly 25 structures. Of the 148 documented sites in the valley, 32 have been investigated to varying degrees, which includes Gualjoquito (see Ashmore 1987; Ashmore et al. 1984; Schortman and Urban 1987a, 1987b, 1995; Schortman et al. 1985, 1986; Urban and Schortman 1985). Of these, Site 106 (Schortman and Urban 1987, 1995), within the settlement region immediately north of Gualjoquito, is identified as a large household setting, composed of 23 structures, arranged in a tightly nucleated central patio arrangement. The site is recognized as amongst the best preserved of the hinterland settings and includes a site plan that is similar to that of Naco Valley settlements, placing is markedly deviating from that of Gualjoquito and other known lowland Maya site organizational patterns (Schortman and Urban 1987a; Urban 1986a, 1986b). Site 106 is selected for consideration as it has experienced the greatest research attention, aside from Gualjoquito, and for the presence of a potential variation on a tripartite arranged structure, though a monumental version, as well as a possible variant on the 3-sided surface-level edifice design.

Site 106 is located roughly 30m to the south and 145m east of the Rio Ulua. The majority of the surface-identified structures are arranged around two adjoining patios, roughly in a north-south orientation **(Figure 8.1).** The northern grouping includes the largest structures, while the southern patio includes buildings more modest in size. Three buildings are irregularly dispersed to the north and one solitary structure is located to the south of the major clustering. Occupation at Site 106 is recorded to occur as early as the Late Preclassic and continue into the Early Postclassic. However, the greatest population density is associated with the Late Classic period, when nearly all preserved cobble architecture is posed to have been erected (Schortman 1987; Schortman and Urban 1987, 1995). All excavations at Site 106 were conducted during various months in 1985 (Schortman et al.) and 1986 (Schortman 2010) and directed by P. Urban, E. Schortman, D. Brennan, M. Johnson, T. Johnson, R. Paine, C. Siders, and S. Smith.

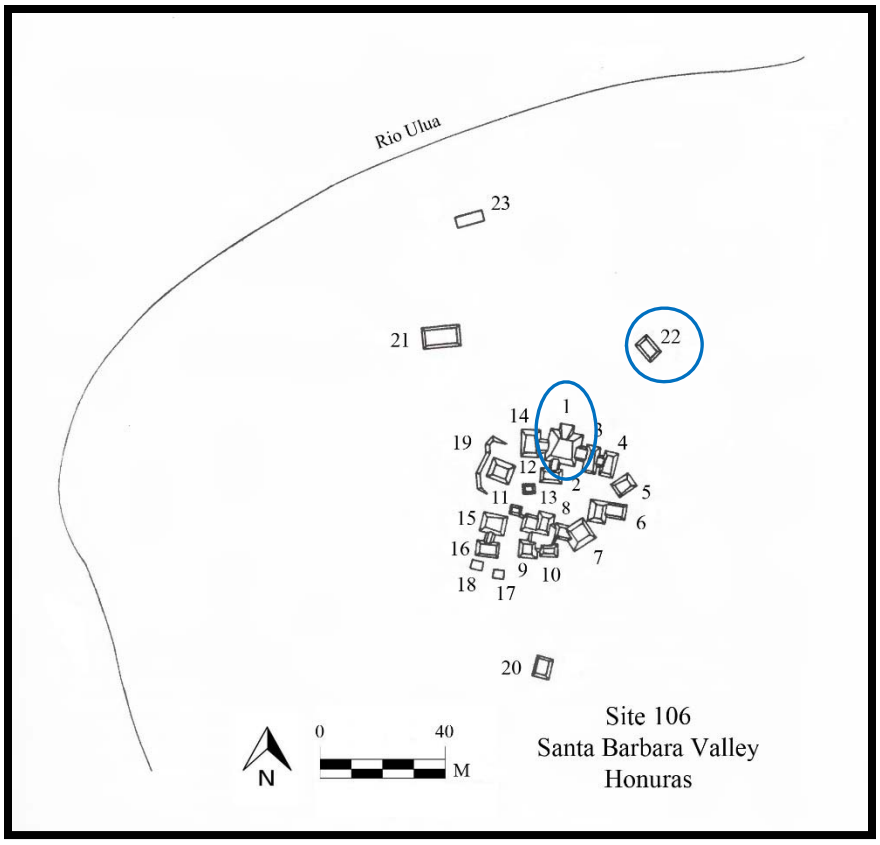


Figure 8.1: Site Map of Site 106, Santa Barbara Valley with Structures 1 and 22 highlighted (adapted from Schortman and Urban 1987).

Structure 1 at Site 106 (106-1) is centrally positioned within the northern patio grouping and is identified to be the largest at the site, standing nearly 1.75m in height and marking it as monumental. It is located roughly 2.5m north of Structure 2 (106-2) and roughly 2m west of Structure 3 (106-3) and 2m east of Structure 14 (106-14); all three of which are architecturally linked to 106-1. Structure 8 (106-8) is positioned approximately 17.5m to the south and across the open patio from 106-1. At least three construction phases are associated with the assemblage of 106-1, which is observed to be reminiscent of a Naco or Cacaulapa Valley tripartite building formation. An earlier version of the building stood roughly 0.7m in height and included an L-shaped cobble

bench, which looked out to the north. The presence of a built-in bench indicates a residential intent. The final version of 106-1 is measured to be roughly 11.65 x 10.15m and accessed by means of five terrace risers along the northern facing and at least one broad (1.5m wide) terrace along the southern facing, which extends in the southwest region to Structure 106-2. Therefore, 106-1 includes formal entry along the immediate on-patio and off-patio facings, a unique characteristic, though likely associated with the overall monumental nature and central placement of the construction. However, all walls are observed to be fashioned using unmodified river cobbles and by means of varying coursing and construction techniques; larger walls amassed with greater care, while single course alignments were more casually assembled.

Within the summit interior of 106-1, eventually the earlier bench feature is buried and an east-west dividing construction is added, which distinguishes a northern section from a southern space. However, the east-west dividing wall is not observed to extend all the way to the western portion of the interior, as a room compartment is located at the western end of the wall. A second compartment is located in the northeast corner region of the northern compartment. The resulting central space in between these two compartments is observed to be partially paved. A possible bench feature may result from a segment of the east-west summit dividing wall in this central region and looks out onto the northern terraced region. The southern space is observed to contain at least two small partitioning walls, likely functioning as small cubicles, rather than formal rooms. Large fragments of ceramic vessels were recovered from within these cubicle regions and

may have purposed as supports for large, round-bottomed storage vessels, maintaining the vertical integrity of the stored contents (Schortman 2010:80).

As a result, the interior arrangement of 106-1 includes two room compartments along the western and northeast regions and a central space with a bench feature; and an open southern compartment, supplemented with cubicles associated with storage. The bench indicates a residential purpose, however, the configuration is not exactly that of a prototypical tripartite. The design is evocative of the three aligned compartments, backed by an open room space, yet, the orientation of compartmentalized spaces within 106-1 is arranged such that the larger open region is directed toward the southern patio facing. This is contrasting to the observed spatial arrangement of tripartite structures within the Naco and Cacaulapa Valleys. Greater emphasis is placed upon the three aligned room compartments being located along the on-plaza facing, regardless of irregularity in sizing. However, at 106-1, the reverse is witnessed. Therefore, a correspondence in vernacular arrangement is uncertain, though, the intent to reconfigure the summit interior to include divided compartments is unmistakably apparent.

Also worthy of highlighting from Site 106 is Structure 22 (106-22), which is positioned approximately 34m to the northeast and is an isolated outlier to the group. Structure 106-22 is discussed not for its seemingly solitary positioning but its architectural composition, similar to the unconventional 3-sided edifice design. Measured to be roughly 6m x 9m and standing 0.35-0.5m in height, Structure 106-22 is amassed in one construction episode and from river-rounded, vesicular basalt cobbles set on end and held together with a mud mortar. The summit interior is free from built-in

furniture and the exterior includes extensive terrace regions along the north, west, and south facings. However, the foundational arrangement is observed to contain basal walls that do not form straight lines and bow out in their centers. It is unclear if this is an intentional design or the result of decay over time. Furthermore, Structure 106-22 includes a 1.6m gap between the eastern and northern basal walls. The east basal wall is observed to extend roughly 0.5m beyond a possible corner with the north basal wall, which ends, resulting in the gap. The northern portion of 106-22 is revealed to be poorly preserved and possibly the result of haphazardly constructed assemblages in this region. The construction sequence is not clear, however, the northern facing could have been amassed later, yielding the poorly preserved state of the assemblage.

Due to a lack of internal furniture and broad terrace regions along the north, west, and south facing (roughly 1.2m, 1.8m and 2.5m wide, respectfully), the functional intent of 106-22 is likely that of a work space. Analysis of the artifact assemblage associated with the structure is not available, however, the distance from the concentration of other buildings indicate that activities required plentiful space and possibly for noxious or hazardous practices, such as a firing facility or a setting for chipped stone manufacture. Regardless of exact purpose, 106-22 is identified as a surface-level edifice that may have originally been established as open ended or in the least, required a wide opening for access along the facing directly opposite of the main grouping of structures. Furthermore, this architectural arrangement is not for that of a residential intent. This scenario is slightly similar to 3-sided edifices from the Naco and Cacaulapa Valleys, though those examples were placed within household patio groups and not located as

solitary constructions, distanced from the primary occupational setting. However, the overall architectural assemblage is reminiscent of the vernacular arrangement, even the possible functional intent, though not immediately located within a household grouping.

Overall, the highlighted examples from Site 106 within the Central Santa Barbara Valley do not appear to be immediately similar to the vernacular forms identified within the Naco and Cacaulapa Valleys, however the general vernacular characteristics are present. Site 106 represents a larger household setting (a Tier 3 placement within the PVN/PVC settlement hierarchy) and likely with residents in Structure 1 of the highest ranking, as indicated by the monumental size of the structure. The spatial arrangement and architectural assemblage is identified to be differing from that witnessed at Gualjoquito and therefore marking the residents at Site 106 as group practicing varied cultural customs. The architectural observations at Site 106 are not deemed to be closely matched with those from the northern Naco and Cacaulapa regions, however, may be more alike with the residents in the valley capital of Gualjoquito, which are not considered here.

Tencoa Valley, Santa Barbara

Located roughly 14km to the south of Gualjoquito and also along the Rio Ulua is the settlement region of the Tencoa Valley. The Tencoa region is postulated to be more fertile than the Gualjoquito area of the Santa Barbara Valley as it has roughly 8km^2 of continuous bottomland for agricultural activities (Benyo and Melchionne 1987), which is nearly double. However, Gualjoquito is positioned near the confluence of the Ulua and

the Jicatuyo Rivers and likely the reason for the overall greater political and economic power linked to the occupants of that site. In contrast, the Tencoa Valley is deemed to be more physically isolated and is observed to include far fewer sites, approximately 41 sites, only 24 of which include architecture, while the remaining 17 sites are defined as artifact scatters only. Therefore, the significance of highlighting the Tencoa region as a consideration of vernacular architecture is in relation to its overall smaller settlement setting, but also the likely minimal occurrence of interregional interaction with other larger political centers acting as structural influences.

Earliest occupational evidence of the Tencoa Valley is linked to the Late Preclassic period and primarily located at the Baide site, which consists of three 4-6m tall buildings within the northern region of the valley (Benyo and Melchionne 1987:53). Similar to other Preclassic architecture, the buildings in Tencoa are observed to be earthen mounds and there is no evidence for stone wall constructions. In contrast, the Late Classic witnesses an increase in occupation density and use of cobble architecture, compared to the scant settlement during earlier periods. Most generally, Late Classic architecture from the Tencoa Valley is described as cobble structures with earth and stone fill. Stones in foundational walls are predominantly composed of unmodified river cobbles, selected for possessing a naturally flat facing and are amassed to stand two to three courses in height (ranging 0.2-0.5m). Recovered burnt clay remains indicate that superstructure walls were made from perishable wattle-and-daub materials and extended terrace appendages occur along one or two facings. Structure arrangements adhere with a loose patio formation around a shared circular or square-shaped construction-free space.

This comprehensive description is similar to the vernacular architectural traits witnessed in other regions of northwest Honduras.

Amongst the largest known settlements in the Tencoa Valley is Site 320 and may have been the valley center during the Late Classic (ibid:55). Observed to be distributed into two plaza groupings, Site 320 includes 30 structures. Group A is identified as containing mostly large platform structures and arranged in an open plaza; while Group B includes 14 small and low-lying buildings. The full extent of architectural assemblages from this site have not been explored, therefore their potential for containing vernacular architectural correlates to other regions remain unknown. Additionally, the majority of other Late Classic settlements within the Tencoa Valley are identified to be small and signify mostly domestic and/or residential purposes. However, the architectural arrangements from these smaller settings also remain underexplored. As such, the comparative significance of similar or variable building designs and techniques is not known.

Nonetheless, the purpose for highlighting this particular region rests in the comparable small valley setting, which appears to lack a large politically and economically dominating polity center. Free from possible social controls or pressures placed upon low-status household residents from polity elites, architectural manifestations may represent a more genuine expression of collective identity, which differs from those of ruling parties. Further extrapolation from this observation may reveal vernacular architectural arrangements that are akin to those previously explored in this discussion or others that remain unidentified. Therefore, the demographic depiction

of the Tencoa Valley during the Late Classic is featured for its potential as a regional setting to investigate vernacular architectural assemblages, as it may reveal further evidence regarding the degree of identity variation within northwest Honduras.

Lower Ulua Valley

The region of the lower Ulua Valley, or also referred to as the Sula Valley or Plain, is the vast floodplain of northern Honduras, which includes the Rios Chamelecón and Ulua before they flow to the Caribbean Sea. Various prehistoric settlements have been documented in this area and conclude that the heaviest occupation occurred during the Late and Terminal Classic periods. Of particular research focus has been at the political center of Cerro Palenque and how evidence indicates that occupation of the site area during the Late Classic is substantial, however, grows larger during the Terminal Classic (Joyce 1985, 1986, 1991; Hendon 2010).

From the four distinct settlement areas defined within the Cerro Palenque archaeological site zone, Group I from CR-157 is considered for its preserved architectural features and its overall small patio size. Additionally, the buildings in the group are observed to be amassed predominantly from naturally occurring cobble materials, though some cut blocks are present, one of which is identified to be associated with a cache deposit with a burial context (Joyce 1991:48-49 and Hendon 2010:115-116). It is recognized that Cerro Palenque is situated in a hilly topographic setting and therefore results in irregular distribution patterns of settlement areas, which appear to produce physically dispersed or isolated household clusters formed around patio spaces on

differing ridges. As such, interaction amongst residents within the same residential ridge sector would have been compulsory. Moreover, evidence suggests that "movement across ridges must also have taken place given the integration of the site in terms of material culture" (Hendon 2010:44). Therefore, as leaders of the site occupying the Great Plaza held significant influence over residents in the zone, it is acknowledged that architectural manifestations may be the result of social pressures placed upon smaller household residents by ruling parties in very close proximity, as they are not identified to be rural settlements. This possibility suggests that vernacular architectural observations may have been impacted by ruling elite agendas, a situation which varies from previous examples from the Naco, Cacaulapa, and Tencoa Valleys.

Mindful of this variation, Group I from CR-157 is considered for is description as a small patio grouping of four structures, arranged in a rectilinear design and oriented north-south. The largest building within the group holds the northern-most positioning and stands roughly 1.75m in height. (Within structure-size ranking protocols at Cerro Palenque, the designation of 'monumental' is assigned to buildings, even in their collapsed form, as measuring taller than 2.5m in height (Joyce 1991:66). This contrasts with other valley system definitions for monumental scale, which is closer to a height of 1.5m.) Additionally, this building witnesses the only evidence for formal summit compartmentalization of space in the form of two distinct east and west room spaces. A large bench ($7.5m^2$) is observed to occupy the entire northern portion of the summit and straddles both compartments. The presence of a bench, as well as the overall large size, is concluded to indicate a residential purpose. A single line of cobbles marks a likely

buttressing or terrace feature along the western facing, while several short and paralleling cobble alignments establish terrace steps leading to the building along the southern, plaza-facing side of the building.

The eastern building within Group I at CR-157 is measured to stand 0.75m in height and appears to include multiple openings, the largest of which is along the off-plaza, east facing of the structure. As such, the building is observed to be unsealed and most formal access is observed from the western patio-facing side, by the presence of a series of large stone steps. The final discernible structure is the southern-most building and is observed to be an enclosed edifice standing only 0.2m in height. This is the structure observed to contain a schist block in association with a cache of ceramic artifacts.

Overall, the architectural descriptions, from at least this particular grouping, indicate that residential patio groupings are comprised of structures amassed from naturally occurring stone materials to form preserved substructure foundations. Perishable superstructures are hypothesized to have been fashioned as wattle-and-daub walls (Joyce 1991:48). Descriptions regarding substructure coursing and construction technique were not attainable, however, most foundational walls are inferred from drawing depictions to be defined as mostly single cobble formation with very little horizontal coursing. Nonetheless, select vernacular similarities are observed with regard to bench placement located in the back of a room compartment, which looks out over a shared patio region. Furthermore, external architectural amendments are predominantly located along patio facings and establish formal entryways by means of a series of steps

or doorways. Finally, internal arrangements, at least from this considered patio group, do not include extensive internal divisions and most summits are observed to be construction free. This summit interior minimalism is very common and likely represents amongst the most vernacular characteristic, aside from the penchant for rectilinear-shaped structures.

To conclude, the architectural arrangements from Group I at CR-157 are observed to be relatively modest in formation, though likely required extra-patio group labor assistance, namely to erect the 1.75m tall northern structure. This building marks the presumed highest occupants within the grouping. The overall close proximity (roughly 1km) to the Great Plaza in the southeast is acknowledged to factor into the daily lived experience of residents of this group and their material correlates. Though, the immediate architectural descriptions do not match previously presented vernacular arrangements or forms, the continued and strengthened occupation into the Terminal Classic in the Cerro Palenque zone is noteworthy. The tripartite building form is witnessed in the Naco Valley to not only persist into the Terminal Classic but expand in overall size and prominence. Demographic shifts are occurring in the Cerro Palenque settlement zone within the lower Ulua Valley, as well as in the Naco Valley during this particular time period, though architectural manifestations appear dissimilar. Perhaps the absence of evidence of the tripartite formation within the Cerro Palenque zone during the Late and Terminal Classic periods indicates the disparity of particular vernacular practices occurring within the two valley systems, but also representative of their cultural and social distinctions.

Cuyumapa Valley, Yoro

The eastern-most region to the Naco and Cacaulapa Valleys to be considered in this discussion is the Cuyumapa Valley within central Honduras. The region is selected for the settlement dispersal appearing to be in the form of small-scale structures that are arranged in patio groupings along the Rios Olomán to the northwest and Cataguna to the southeast, as well as smaller tributary *quebradas***.** These settlement clusters have been investigated to predominantly date to the Late and Terminal Classic periods (Joyce et al. 2001; Hendon et al. 2009) and defined as household settings, with residences and associated functioning buildings (Hendon 2010:46). Furthermore, the majority (roughly 462 of 511 documented structures) are observed to be less than 1.25m in height and vary as concentrated small-scale structure clusters with respect to monumental (or large-scale) forms of architecture (Joyce and Hendon 2000:147-148). Examples of large-scale buildings (taller than 1.25m) are dispersed across the lower Rio Cuyumapa settlement and do not exist in a single large monumental center, though ballcourts are documented in close proximity to various residential clusters. The range of structures included in the label of a small-scale cluster is from 2-23 structures (Fung 1995).

General settlement pattern observations from Joyce and Hendon (2010) indicate that small-scale structure groupings within the northwest Rio Olomán drainage are only relatively positioned near to "the less imposing of the large-scale groups" (*ibid*: 153) and mostly at sites that include ballcourts. Roughly 29 small-scale clusters are observed to be evenly distributed along the Olomán drainage, which includes three large-scale clusters with ballcourts, but not nucleated at those sites. This distribution is concluded to be the

result of accessibility to water and land, "rather than reflecting administrative control or centralization" (*ibid*: 150), or a lack thereof. However, in the southeast Rio Cataguna drainage, small-scale groupings are more closely situated with not only large-scale or monumental buildings or clusters of building, but also those with ballcourts. As a result, divergent distribution patterns are revealed with regard to small-scale residential clusters between the Olomán and Cataguna drainage systems. Therefore, plausible vernacular architecture variations may also be occurring.

Access to archaeological datasets from both the Olomán and Cataguna drainages was not possible for this discussion. However, within the north Olomán Valley, two structure groups are presented from the site of PACO 2, as examined by Fung (1995) for doctoral research. PACO 2 includes 173 small mounds, organized in 43 clusters and predominately dates to the Terminal Classic. Two small-scale cluster groups, 5-2 and 6-2, were examined by Fung and consist of roughly five and four mounds, respectfully. Structure mounds are described to be ground-level platforms, assembled from small cobbles, ranging from steep to gentle slopes, and perishable superstructures made from stick and *bajareque* materials (Fung 1995: 117). Although full structure clearing excavations did not occur to reveal complete architectural assemblages, other site-planning principles and construction technique variations are documented, which could indicate vernacularly constituted building practices.

Group 6-2, located in the southern portion of the Central Zone of PACO 2, is presented to contain architecture that is "less formal" than Group 5-2 (Fung 1995:113). Group 6-2 is described to be a single-patio group with a dispersed arrangement and a

wide patio area (*ibid*: 288). Structure mounds are determined to be amassed on the ground level and includes multiple terrace constructions adjacent to identified mounds. In contrast, Group 5-2, which is located in the northeast portion of the Central Zone of PACO 2, is described to be part of a multi-patio group with a more concentrated arrangement (*ibid*). As a result, Group 5-2 includes a smaller patio area. Furthermore, the cluster is documented to include larger mounds than Group 6-2 and to be assembled atop a constructed cobble terrace. Fung attests these differences between the two groups to access to greater labor resources and a concern with regularizing space on the part of the residents at Group 5-2 (*ibid*: 289). Additionally, analysis of associated artifact assemblages suggest status differences between the groups, as well as varying household relations with neighboring structure clusters.

Overall, the primary architectural assemblages from structure mounds from these two small-scale clusters at PACO 2 remain uninvestigated. Therefore, interpretations regarding detailed architectural similarities or variations between the settings are unworkable. However, the observations of varying patio-planning principles and the usage of terracing are potential indicators of vernacular building practices. The use of elevated terrace constructions (or possible basal platforms), upon which structure mounds are amassed, as not a regular occurrence within the Naco and Cacaulapa Valleys from Late and Terminal Classic contexts. Conceivably, the usage of elevated terraces is a vernacular architectural practice occurring in this region of the Cuyumapa Valley. Perhaps more particularly, a vernacular practice that is engaged by select settlements within the valley. Comparisons with architectural assemblages of similarly sized cluster

groups from other Olomán Valley, as well as the Cataguna drainage to the east, may reveal similar or disparate building practices.

Copán Valley – A Maya Consideration

In order to assess the comparability of observations of vernacular architecture from the Naco, Cacaulapa, and other regions within northwest Honduras, which are accepted as not representing Maya peoples, a recognized Maya setting is selected for consideration of architectural attributes. The chosen Maya settlement is also within northwest Honduras and is located in the hinterland regions of the political center of Copán. Of particular focus are the eight rural household settlements highlighted by Gonlin (1993, 1994, 2004, 2007, 2012; Webster and Gonlin 1988); four of which are positioned along the tributary Quebrada Sesemil to the north of Main Group, and the remaining four are located to the east and along the Rio Copán (**Figure 8.2**). Also referenced is the urban residential settlement of Las Sepulturas, specifically the northeast plaza setting of Site 9N-8 (Plazas D and H), due to the presence of a particular building arrangement. The room formation of one building is highlighted for including a design of three aligned compartments. This specific region of 9N-8 is significant as it is concluded to be a residential area of a Lenca or non-Maya enclave within the Maya site (Gerstle 1988). All sites referenced from the Copán Valley date to the Late Classic period.

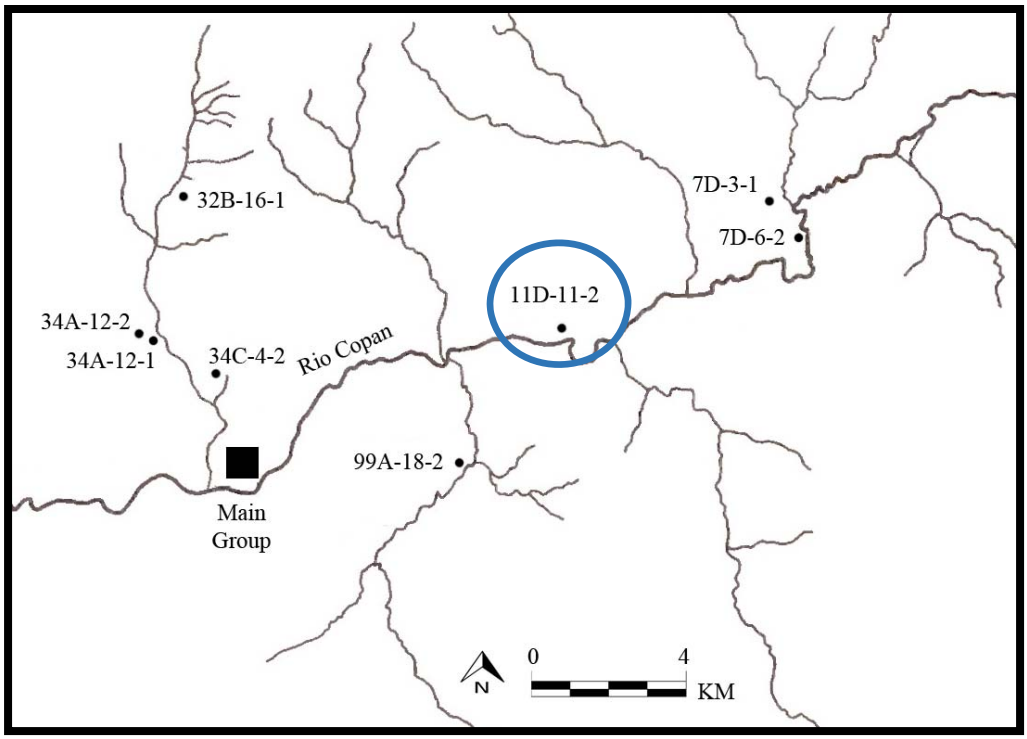


Figure 8.2: Map of eight rural Maya settlements, Copán Valley with site 11D-11-2 highlighted (redrawn from Gonlin 1993).

Identified as Type 1 settlements within the Copán Valley settlement taxonomy developed by Willey and Leventhal (1979), the eight rural sites are described as ranging from single mound sites to sites containing three to five mounds and arranged in a patio arrangement. Type 1 settlements are further noted to be low-lying platforms, ranging in height from 0.25-1.25m and constructed from unmodified building material with earthen fill. "Type 1 and single mound sites are the most numerous in the valley and are associated with the lowest status of Copán society" (Gonlin 1993:55).

Type 2 settlements are identified as containing six to eight mounds, arranged in one or two courtyards, and stand as tall as 2.5-3m in height. Furthermore, as the majority of construction material is unmodified, Type 2 units may include dressed stones. Type 3

settlements witness more advanced construction techniques and higher quantities of modified cobble building materials than Type 2 sites, though the number of mounds may be comparable (see Gonlin 1993:56). The elite residential setting of Las Sepulturas is identified as a Type 4 site and is defined as a complex, multi-plaza grouping with numerous mounds composed of cut block, sculpture, and vaulted roofs. Structure heights may reach to 10m and include well-established terraced regions along all facings.

As such, the description of Type 1 settlements within the Copán Valley is somewhat akin to a Tier 5 ranking within the PVN/PVC site size system with regard to mound organization and structure height. However, the number of observed mounds vary. Nevertheless, the established definition of Type 1 settlements within the Copán region situates sites of this placement in comparable architectural categories to those previously addressed from other northwest Honduras valley regions. The Type 2 and 3 settlements are comparable to the number of structures within the Tier 4-5 designations within the PVN/PVC system, however, not with regard to structure height and overall high quality of masonry construction. Furthermore, the distinguished example of a Copán Valley Type 4 setting, Las Sepulturas, is likely most closely positioned as a Tier 1-2 PVN/PVC designation and therefore erroneous for immediate comparison to PVN647, other Naco and Cacaulapa Valley sites, and Site 106 from the Santa Barbara Valley. However, as previously mentioned, only a particular architectural configuration is flagged with relevance to the PVN/PVC vernacular tripartite structure form.

Rural Household Settlements

In summary, from Gonlin's analysis (1993), a total of 27 structures were investigated and revealed that the majority comprise low-lying platforms (averaging roughly 0.45m in height) with earthen and rubble fill. General observations of structures are that the largest buildings within a group likely functioned as residences; they included appended step and terrace additions; and witnessed minimal to no internal summit divisions or prepared paved or cobble surfaces, either within or exterior to buildings. Only two settings (Sites 11D-11-1 (OP30) and 99A-18-2 (OP38)) included cobble bench features. All buildings are identified to be constructed from locally available raw materials (sourced from roughly no more than 100m away from each site) and stones for foundational walls are mostly free from intentional modification. Site 7D-6-2 (OP 31) is located in close proximity to a Type 4 site (roughly 1km away) and is deemed to be the reason for the presence of some cut stones at that particular site. Tuff stones are present at several sites, though predominantly at ones which are in close proximity to natural outcroppings in the surrounding hills. Tuff stones are used in temples and palaces found within the Main Group, however are modified and shaped into blocks. None are witnessed at the rural sites and the use of the naturally occurring cobbles of this particular stone material is not associated with marking a status symbol (Gonlin 1993).

Of particular interest are the observations regarding architectural arrangements and discernable appendage shapes and functions from these Type 1 settings. Most structures from the eight rural sites are concluded to be amassed by means of a single construction episode (Gonlin 1993:439), though external appendages along foundational

facings may indicate supplemental construction efforts. This low frequency of architectural modification is evident by the lack of internal divisions, as well as expansions of platform areas. This observation both matches and contrasts with descriptions of small-scale household settings from other previously compared regions of northwest Honduras. Furthermore, though few structures exhibit evidence for occupation prior to the Late Classic (for example, at Site 11D-11-2 (OP30)), as well as intentional abandonment of buildings and reuse of salvaged building materials for other structures (Site 34A-12-2(OP34)), most do indicate consistent occupation of buildings during the Late Classic, once initially erected. By means of energetic analyses of structures, Gonlin (1993:448) accounts for this observation by inferring that small labor groups (likely the family unit and extended members) were responsible for amassing their own dwellings, and that buildings were constructed in a minimal amount of time and perhaps used for only short periods of time. These similarities are not intended to homogenize the residents of these rural sites. Indeed, observed architectural variations demonstrate diverse building practices and likely represent assorted concepts and approaches to building techniques.

For example, two sites (11D-11-2 and 34C-4-2) exhibit clear and discernible architectural connections between structures within a grouping. These arrangement are a combination of attempting to link functional uses and likely social relations amongst residents at the site. Additionally, architectural linkages are deciphered to assist in maintaining leveling efforts of the internal patio surface at sites that witness a sloping of topography. Finally, the majority of connections are observed along patio-facing sides of

structures. All six other investigated sites witness structures to be free-standing and not architecturally articulating with neighboring buildings, though some including external terrace regions. As a result, varying spatial arrangements and preferences are revealed, though sites that include such architectural integrations also represent some of the largest settlements, ranging in four to six buildings per site. Regardless, the presence of such connections represent the range of vernacular practice within the region at these smallest of household settings. However, as similar forms of architectural linkages or "structure saddles" are witnessed in other regions (the Naco and Cacaulapa Valleys, for example) and for aligning practical purposes, it is not hypothesized that these formations convey similarity in cultural affiliation.

Additionally, variations are observed with regard to form and placement of exterior appendages at the eight rural sites. Interestingly, external terrace regions are established by means of wall form appendages that both abut immediately against the foundational walls and by those that do not. At Site 11D-11-2:

> Structures 1-sub, 2, and 3 share the architectural feature of an unattached terrace. A line of cobbles runs parallel to the east walls of Structures 1 –sub and Structure 3, and parallel to the north wall of Structure 2. These lines are not fully integrated into the architecture. The space between the edge of the cobbles and the building is filled in with soil and artifacts [Gonlin 1993:125-126].

The description of an 'unattached terrace' is a facsimile to the identification of a free-standing wall form appendage characterized from the Naco and Cacaulapa Valleys (**Figure 8.3)**. However, in significant contrast, these exterior appendages from Site 11D-

11-2 are observed along completely off-patio facings of each structure. The arrangement appears to be vernacular in design and function, though it is uncertain to what degree it marks this particular form as a direct correlate of identity expression across valley regions. As previously stated (see Chapter 7), the highlighted forms from the category of external appendages are deemed to be inconclusive as a means of representing "likeness" of cultural custom or practice, as the forms appear to be preferred for their functional service rather than symbolic meaning.

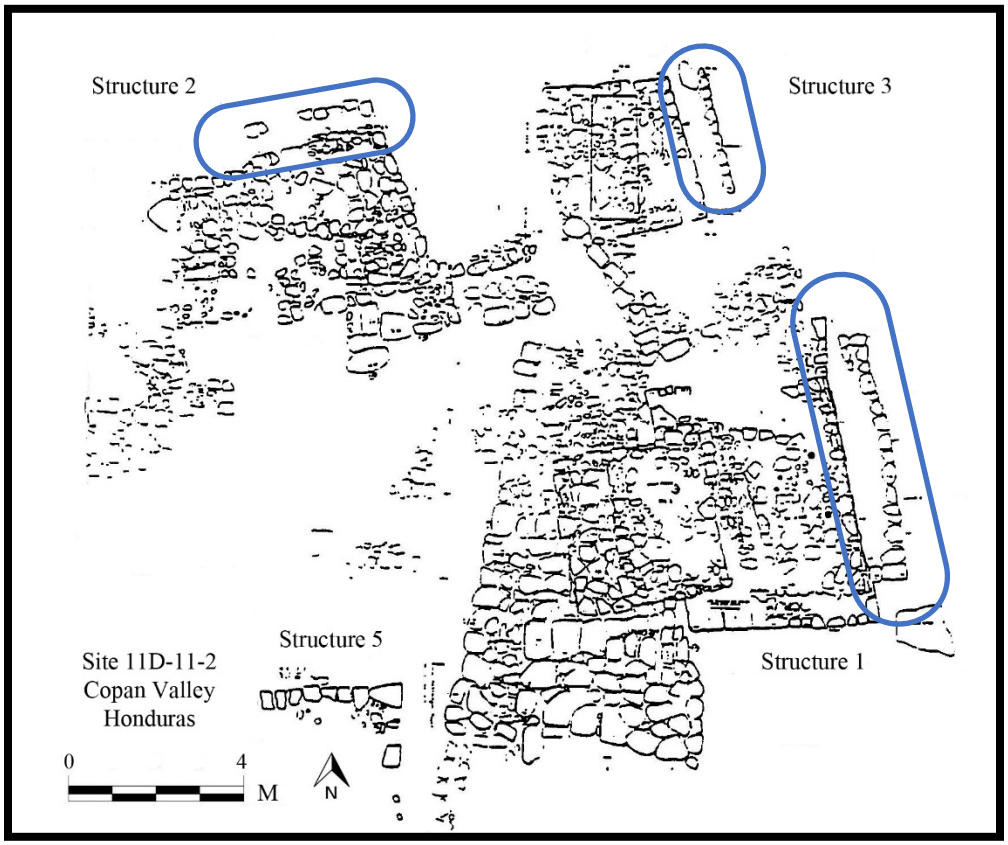


Figure 8.3: Plan-view of excavated structures from Site 11D-11-2 within the rural hinterlands of Copán. Free-standing wall appendages along Structures 1, 2 and 3 are highlighted (adapted from Gonlin 1993).

As a result, observations of seemingly similar architectural arrangements from rural areas of Copán are not argued to be emblematic of an analogous, prehistoric pan-northwest Honduran, small-scale household cultural identity; but representative of the utilitarian nature of vernacular building practices. Compared to monumental construction efforts within the Main Group at Copán, Gonlin (1993) claims that,

> the low energetic input required for rural structures makes it likely that all buildings were constructed within a familial recruitment system, of either generalized or balanced reciprocity. There would be no need for outsiders to supply additional labor or specialized construction knowledge since the architecture is simple, it could be built by unspecialized laborers [448].

This identification summarizes the main premise of vernacular architecture. Furthermore, it represents the wide-spread application of people making use of immediate resources to meet immediate structural needs and the lack of a preoccupation with formal or rigid building designs.

However, these statements only supply generic correlates to the vernacular observations from other regions of northwest Honduras. The detailed architectural data do not support cultural linkages from rural settings surrounding the Maya political center of Copán and other previously highlighted Late and Terminal Classic settlements in northwest Honduras. The distinguished vernacular form of the tripartite room arrangement is not revealed in the investigations from at least these eight rural settlements. Comparisons to even more rural or small-scale household settings from this particular area are required in order to fully assess the prospect of the tripartite structure

form being present. However, the lack of its presence adds support to the claim that the builders of the tripartite structure form within the Naco and Cacaulapa Valleys are not immediately related to and/or affiliated with the inhabitants of the Main Group nor the surrounding areas of the Copán Valley and therefore sustaining the notion they are of a 'non-Maya' identity group.

Urban Household Settlements

As previously stated, the established site-size hierarchy system for the Copán Valley does not immediately correspond with the PVN/PVC system. Furthermore, sites containing more than roughly 30 structures and primarily amassed from modified, cut stone blocks are not considered in the previous qualitative architectural analyses. However, the following discussion is knowingly veering from the predetermined set of comparative criteria for this final consideration of architectural observations from the Copán region. The residential setting of Las Sepulturas (a Type 4 site), most specifically Site 9N-8, along with Type 3 Site 9M-22, and Type 1 Site 9M-24, are recognized to be within an urban residential zone, located outside of and to the east of the Main Group, though still within the urban core or 'pocket' of the site of Copán. These urban residential sites are selected for consideration due to the presence of platform structures appearing to contain three room compartments. One example of this structure formation is located in the northeast region of 9N-8, straddling Patios D and H (**Figure 8.4**). Proximity to Patio D within Site 9N-8 is also cause for highlighting this building arrangement, as it is identified to have been occupied by non-Maya peoples residing at Copán during the Late Classic (Gerstle 1987, 1988).

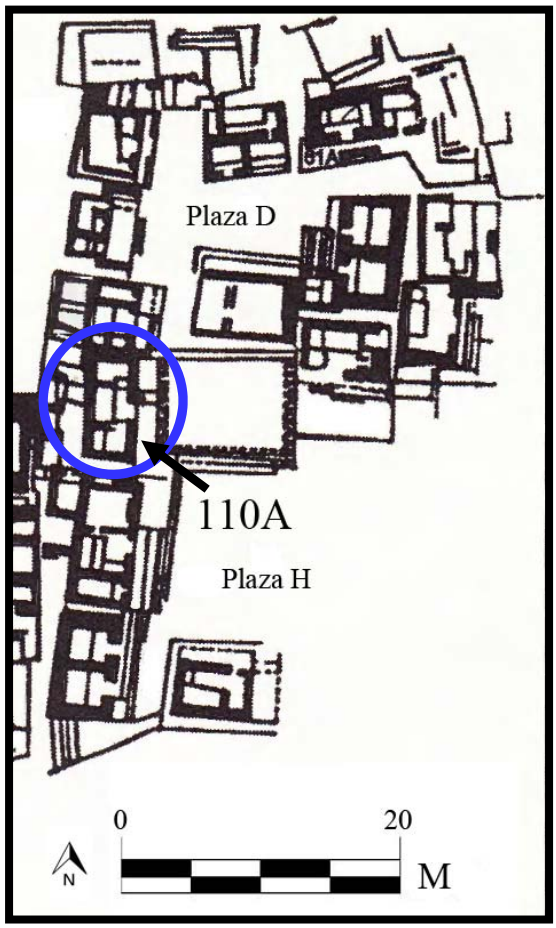


Figure 8.4: Plan-view of three-roomed structure (Str. 110A)
From Patio H, Site 9N-8 from Las Sepulturas, Copán
(adapted from Gerstle 1987).

The structure arrangement observed from the three regions of Las Sepulturas is described as a rectilinear building, with only one entrance along or near to a patio facing and three distinguishable internal room compartments. All examples contain benches in nearly every room of each structure and are therefore identified to be residences. Not all structures are observed to immediately face outward on to a patio area, as arrangement of patio spaces are observed to vary greatly between the three sites. This particular room

arrangement is highlighted for its resemblance to the tripartite formation, however, not intended as an immediate correlate.

The first structure in question is located as a spanning between two patio groups (D and H) at Site 9N-8. This particular building**,** Structure 110A (Hendon 1987), is described as a rectilinear-shaped building, roughly oriented north-south and is located in the northwestern corner of Patio H. A single entry is observed along the eastern facing of the building and leads to a central room space, with a bench that occupies nearly the entire interior area. Flanking room compartments to the north and south are not observed to be equal in area, as the southern room includes a bench feature. Overall, the room configuration of the structure is highlighted due to its seeming resemblance to the tripartite room arrangement from the Naco and Cacaulapa Valleys. However, the structure from 9N-8 does not include a fourth 'back' or off-plaza room of any form, nor is it observed to be amongst the largest structures within the patio group. Furthermore, select versions of the tripartite form from the Naco and Cacaulapa areas include entrances to the side, flanking rooms from the exterior, as well as only from the interior. Therefore, it is unclear what relation, if any, exists between the 'alpha' building formation and the tripartite from the Naco and Cacaulapa Valleys to the east.

Regardless of not representing a direct correlation to the vernacular tripartite structure design, the formation of the three-aligned compartments of Structure 110A is mentioned in this discussion as the alignment of the three smaller rooms is held as a significant consistency within the tripartite design. However, also significant with the location of Structure 110A is its close proximity to the non-Maya identified Patio D

setting. Structure 110A faces onto an adjacent building, Structure 64, immediately to the east. Structure 64 is identified as a boundary building between the two patio groupings and is only accessible from Patio H (Gerstle 1988). Access from Structure 110A to the non-Maya Patio D region to the north, in between Structure 64, is observed to not exist by means of a connecting raised terrace platform. Access from a patio-level surface into Patio D is identified to only occur along the eastern facing of Structure 64 in the southeast corner of the patio and from the east, by means of passage through the eastern Patio K (Gerstle 1987, 1988).

This significance of highlighting this building arrangement and the adjacent Patio D is due to the particular identity of this posed non-Maya residential area. The setting is argued by Gerstle (1987, 1988) to have been occupied by prehistoric northeastern Honduran, ethnically Lenca inhabitants by the recovery of Ulua polychrome vessels and mold-made figurines sourced to originate from the Ulua valley region from structures within the patio group. Furthermore, the dense structure arrangement around the patio and limited access suggests that the occupants were being spatially restricted and likely socially monitored and/or controlled by their Maya 'hosts'. However, the purpose of these ethnically non-Maya inhabitants residing at Copán, and in such close proximity to the residences of other noted Maya elite, is likely related to their high social standing in their home communities. Therefore, these posed non-Maya residents are identified as political ambassadors or representatives, and only lesser-so as some form of merchants, slaves, or 'royal hostages' (Gerstle 1987:344-347 and 1988:2576-280). However, counter-arguments have been posed (see Fox and Joyce 1990 from Gonlin 1993) that the

high concentration of Ulua polychrome vessels is a result of status differences and not ethnicity.

Additionally, any correlation between the formation of the three-aligned room structure from Patio H and the presence of northeastern Honduran, non-Maya occupants at 9N-8 is further complicated by the occurrence of the room configuration at other sites, which are not identified to be residential settings of non-Maya peoples. At Site 9M-22, two structures (194B and 195B) with the same room arrangement are located adjacent to each other in the northern region of Patio A. In this instance, both structures face onto the open patio area and all three rooms are observed to include benches. Additionally, Site 9M-24 includes one example of the three-aligned room formation, Structure 211. At this site, the building is located in the northeastern region of the open patio, though is not oriented to face directly onto the shared space. As a result, the single entrance to the three rooms faces directly to the south. Furthermore, benches are present, though only in the eastern and central room compartments. As a slight variation, Structure 211 at 9M-24 includes two additional room compartments along the western region of the building. Entry into these room spaces is observed to be from the west or the most off-patio region associated with the building.

Overall, the structure groupings of Sites 9M-22 and 9M-24 are observed to be architecturally less-dense than Patios D and H from 9N-8. Furthermore, the artifact assemblages from Structures 194B and 195B from 9M-22 and Structure 211 from 9M-24 are not presented to be corresponding with including high densities of northeastern Honduran ceramic imports. Therefore, any correlation between the seemingly similar

architectural arrangements in all three settings is not known. More importantly, the aligned-three room structure arrangement is not argued to hold any cultural (or ethnic) relevance with the observation of the tripartite room formation from the Naco and Cacaulapa Valleys. This particular three room arrangement within these urban residential contexts of Copán may be representative of an elite vernacular design practice, though comparisons to mostly lower-status residential settings from other considered northwest Honduras valleys remain impractical. If the northeast sector of 9N-8 was occupied by political representatives of high standing within their eastern home communities, than a more appropriate architectural assessment would be between these settings of Las Sepulturas and high-status residential zones associated with Late Classic regional polity centers from northwest Honduras. Greater comparative potential exists between the investigated rural residential segments of the Copán Valley and lower-status household contexts from other northwest Honduran settings. Though, the result of that particular examination is concluded to yield little insight into observable vernacular architectural similarities and causal understanding for variations.

Discussion and Conclusions of Vernacular Architecture from Northwest Honduras

Observing the degree of similarity and variation with vernacular architectural configurations within northwest Honduras was the aim of considering other regional valley settlements, which surround the Naco and Cacaulapa Valleys. The result of evaluating valley settlements to the north (Ulua), south (Santa Barbara), and east (Cuyumapa), which is arguably outside of the 'geographic bounds' of northwest

Honduras and considered part of central or northeast Honduran prehistory, of the Naco and Cacaulapa Valleys reveals a variety of commonality and divergence with regard to building practices. As well, absolute Maya household settings from the Copán Valley represent a culturally-certain example of architectural features; of which some appear more similar than not to their eastern neighbors. Overall, the observations for vernacular tendencies from these chosen northwest Honduran regions are to be summarized as reflective of vernacular architectural *characteristics*, as well as possible vernacular *arrangements*. However, as highlighted at the start of this chapter, this particular discussion is not intended to be a structured comparative analysis of household architectural configurations and associated functions, but an initial qualitative consideration of the diversity of construction practices. This preliminary assessment seeks to address how informative vernacular architecture can be for observing and understanding regional identity expression, and variations within those material manifestations.

To begin, it is necessary to mention that differences exist in the archaeological investigation protocols, classifications, and/or excavation outcomes from each considered valley setting and/or highlighted site. As previously articulated (see Chapters 2, 3, 4, 5, and 7) evaluations of prehistoric vernacular architectural trends are best undertaken, as conclusions are better supported, when extensive and comprehensive datasets are available for comparison. However, the selected valley settlements have been researched in differing intensities and for various scholarly intentions, therefore, resulting archaeological datasets are not operationally equivalent in sample size nor

methodological approach. Deviations exist with regard to excavation practices to uncover architectural features; which arguably can impact the observation of complete construction histories and earlier versions of a given structure. However, most notably are the variations of structure size labeling and conceptualization of 'monumental' building formations. These fluctuations are deemed to be the result of the archaeologist's observations and the establishment of standardization procedures that are relative to each settlement context.

Possible reasons for these operational outcomes are linked with other variables between the considered valley settings. To start with, factors such as valley size and availability of suitable land and other natural resources for prehistoric habitation are recognized to contrast. Additionally, varying socio-political operations are observed to impact practices of settlement nucleation or dispersal. Therefore, differing sized residential settlements have been considered in this discussion; as well as deviations with regard to identifications of 'rural-ness' and the proximity of large, political valley centers. As a result of closeness to seats of authority, house building designs are acknowledged to possibly be more reflective of an imposed practice, rather than a custom based on a shared 'non-elite' identity. Finally, the implications of the presence of ballcourts and lower-status households coexisting in relative proximity are not considered at all this discussion, yet is a reality in the Cuyumapa Valley. In summary, several variables are present in the selected site considerations and are the result of both prehistoric social decisions and modern research agendas, as well as environmental conditions.

Regardless of identified variables, generalized vernacular architectural characteristics or traits appear consistent (or similar) across the considered valley systems during the Late and Terminal Classic. At the outset, small-scale household settings primarily consist of structures amassed as slightly raised (ranging 0.2-0.5m) platforms made from locally available, unmodified construction cobble materials. The technique of coursing is employed as a means to construct taller platforms and internally are supported by cobble and earth fill. Superstructures are concluded to be fashioned as wattle-and-daub, yet variations exist with regard to the use of smaller stones and other inclusions in the mud mortar. Additionally, patio or courtyard arrangements with external architectural features mostly affixed along patio facings, where noted, are observed to be a comparable occurrence. However, deviations are present at Site 106 from the Santa Barbara Valley, where Structure 1 includes terraced steps along the off-plaza facing. Furthermore, Site 11D-11-2 from the Copán Valley also includes structures with free-standing wall appendages located primarily along off-patio facings. Finally, select sites include evidence for architectural growth over time; indicating a desire to remain in place and allowance for adaptation and expansion. As such, vernacular building patterns can be observed and deviations or commonalities traced.

Overall, these corresponding architectural observations may not be striking nor even unfamiliar to archaeologists who have conducted research within these regions of northwest Honduras. However, what is noteworthy to highlight are the architectural practices that are not observed to be vernacular characteristics of this particular area. The vast majority of structures for habitation, small-scale and ‘monumental’ alike, are

rectilinear in shape. Little-to-no evidence supports the usage of circular or oblong-shaped buildings as domiciles, or as ceremonial or workshop settings, during the Late and Terminal Classic. Though, round structures have been documented in association with Preclassic contexts (see Hendon 2000; Aimers et al. 2000 from Belize; and Szymański 2010 for Maya). Only small circular cobble formations are observed to function as cooking hearths or firing pits involved in ceramic production (Urban et al. 1997). Furthermore, positioning of household groups atop a basal platform construction is also not witnessed within these settings of northwest Honduras. Wilk (1991) documents the presence of basal platforms amongst the Kekchi Maya of Belize, though evidence for the formation in prehistoric household settings is very limited.

Finally, though the observed vernacular characteristics from these regions of northwest Honduras may not appear compelling or noteworthy, when considered with architectural evidence from earlier and later time periods, similar corresponding similarities persist. Evidence from Preclassic and Postclassic household settlements, respectfully, however low in density during these periods in these selected valley settings, also appear comparable. Preclassic edifices are observed to be mostly earthen mounds, with minimal use of cobble coursing; while Postclassic household contexts exhibit single cobble coursing of structures, with broad plaza formations. Therefore, differing vernacular building practices of household settings are observed to be consistent in this region through time, which is significant when attempting to evaluate inter-valley building variations.

As detailed architectural descriptions and construction histories of individual structures are not equally available from each sampled valley setting, variations are most-broadly discussed with regard to observations of settlement patterns and site-planning principles. Most notably within these generalized characteristics, differences include issues of household group nucleation and relative proximity to larger settlements with monumental architectural forms. For example, Cerro Palenque in the northern region exhibits evidence for concentration of household groupings, as witnessed at Group I at Site CR-157. However, Cerro Palenque is located within a roughly 3km^2 area of hilly topography to avoid settlement destruction by means of flooding and to make use of flatlands for agriculture subsistence of the vast Sula floodplain. As such, highland settlement might appear to be more concentrated along hill ridges. Additionally, Cerro Palenque is a larger political center, whose power increased from the Late into the Terminal Classic period. Therefore, the proximity of Group I to the rulers inhabiting the residential area of the Great Plaza region of CR-157 may also impact the structural arrangement and building design due to influential authorities. The particular variable of proximity to a large political center was controllable within the Naco Valley due to the vast area (roughly 96km^2) and dispersed settlement pattern of household clusters throughout the entire valley floor. As a result, comparative sampled settlements are located at least 5km away from the valley center of La Sierra.

In contrast, the Cuyumapa Valley region includes two settlement patterns along the two river systems. Both the Olomán and the Cataguana/Cuyumapa River settlements include sites with large mound groups (i.e. monumental architectural forms) and

ballcourts, though the proximity of small-scale mounds to these large sites vary. The northwest Olomán witnesses greater dispersal of small-scale mounds, while the southeast Cataguana zone witnesses the reverse (Joyce and Hendon 2000:153). Both valleys are measured to be quite substantial in area (roughly 85 km^2 for the Olomán and 80 km^2 for the Cataguana), therefore inhabitable land is more available in these settings than within the hilly and limited terrain where Cerro Palenque is situated. Social factors undoubtedly relate to the divergent settlement practices observed within the two neighboring river valleys and are also strongly linked with the varied use and prominence of the multiple ballcourts in the regions. Again, the social significance of ballcourts in proximity to small-scale, lower-status household settlements has not been explored in this discussion. Therefore, the influence of this relationship on vernacular architectural outcomes is not known, though is posed to likely exist. Finally, the Cuyumapa Valley does not include a singular politically dominating center, as is the case in all other considered valley areas. Consequently, the impact upon small-scale settlement dispersal and presumably on architectural assemblages is even further differentiated in this particular valley setting.

Beyond commonalities or variations with generalized vernacular building *characteristics*, little evidence supports more definite construction practices representative of vernacular architectural *assemblages*. The clearest examples of previously highlighted vernacular arrangements occur within the rural household settlements of Copán and the appearance of the free-standing exterior appendage form. The appendage design and function are concluded to be alike, though the placement along off-plaza facings is observed to be a notable difference from the Naco and

Cacaulapa versions. The cultural, social, and even ethnic, associations of this commonality are not known. However, external appendages are concluded to be more functionally useful than representative of cultural customs. Therefore, little value is placed in the identity expressiveness of these particular architectural formations than compared to internal compartmentalization designs.

With regard to observations of interior room designs, where available, Site 106 from the central Santa Barbara Valley area includes a seemingly similar architectural arrangement to the tripartite formation from the Naco and Cacaulapa Valleys. The positioning of the potential three rooms do not face an open plaza region, however, the internal design of the space is reminiscent of the overall configuration. Geographically, this sector of the Santa Barbara Valley is in closest proximity to the Cacaulapa Valley and interaction or contact may have been more common with occupants of that diminutive valley than with the northern Ulua Valley or even the eastern Cuyumapa Valley. Therefore, the observation of a potential variation on the tripartite arrangement is not as unheard of, when considering the proximity of each settlement zone.

Lastly, the three-aligned room configuration witnessed at three separate residential sites within the Las Sepulturas settlement sector in the Copán Valley are not concluded to be direct correlations with the tripartite room arrangement from the Naco and Cacaulapa Valleys. Greater comparative insight can be achieved by analyzing residential areas of analogous social standing. Plausibly, if the existence of the three-aligned room compartment structures in elite residential areas at Copán were known by rural inhabitants of the Naco and Cacaulapa Valleys, than potentially the mimicking of

the formation may be a justification for its outcome. However, greater evidence supports that the rulers at large policy centers, for example at La Sierra, were appropriating elite-associated practices and paraphernalia from neighboring Copán Maya elites to legitimate their authority over local peoples (Schortman and Urban 2004, 2011). As such, evidence for similar architectural practices would most likely, and in some cases do, occur at large political centers, rather than small rural settlements. Achieving an understanding as to the origin of valley-specific household vernacular occurrences is best undertaken by evaluating earlier periods of analogous sites within the valley context itself.

Beyond observations of external appendages and nebulous versions of the tripartite room arrangement, no other observations clearly support an association of shared architectural arrangements *nor* forms amongst the considered valley settlements. To be clear, not all sampled valley settings represent the same level of detailed architectural consideration. Therefore, evidence for previously described architectural arrangements may exist. The Tencoa Valley, for example, may reveal similar architectural configurations, which may be corresponding or modified versions of known vernacular arrangements from the Naco and Cacaulapa regions. However, detailed architectural descriptions were not available for this analysis.

Additionally, it is acknowledged that other valley regions within northwest Honduras have not been included here and may also reveal insights to architectural relationships. The larger La Entrada region (see Inomata 1988; Inomata and Aoyama 1996) to the west of the Naco Valley and in close proximity to the Copán Valley may or may not include architectural cues from household contexts that are similar to previously

described arrangements. For example, within this region, the smaller-scale household settlements in the surrounding environs of the sites of El Cafetal and El Paraíso within the El Paraíso Valley, roughly 27km to the northeast of Copán, are also considered to possibly reveal curious vernacular architectural configurations, due to the recognized multiethnic composition of the setting. Canuto and Bell (2013; Bell et al. 2001; Canuto et al. 2010) have established that the El Paraíso Valley was within the scope of the Copán kingdom, yet maintained two secondary polity centers: El Paraíso as an administrative outpost to the Copán dynasty, and El Cafetal, which appears to have been founded by likely non-Maya inhabitants prior to the Classic period Maya rulers at Copán (Canuto and Bell 2013). These conclusions are based from differences in construction techniques, architectural arrangements and uses of space (ibid), as well as material culture assemblages (von Scherwin 2010). Furthermore, it has been posed that the 'paired center' political strategy may also have been utilized by the Maya of Copán in other neighboring valleys of the La Entrada area: namely within the Rio Amarillo Valley with the sites of Rio Amarillo and Piedras Negras; the La Florida Valley with the sites of El Abra and El Puente; and La Venta Valley with the sites of Los Higos and Roncador (Canuto and Bell 2013:18). As such, comparisons between 'commoner' household contexts from each of these site settings may make known additional vernacular arrangements, which may or may not correspond to observations from other northwest Honduran valley settlements.

Other regions closer to the Naco and Cacaulapa Valley study areas that have not been considered in this discussion may also reveal insights to architectural relationships.

Firstly, the Palmarejo Valley immediately to the east of the Naco Valley includes the monumental center by the same name. Directed by Wells and Davis-Salazar (Wells 2014; Wells et al. 2012; Davis-Salazar et al. 2012) research at the site of Palmarejo has most generally sought to address topics of ancient ritual economy, natural resource and land use, as well as archaeological evidence for the degradation or destruction of the environment. Other studies (Rothenberg 2010; Rothenberg et al. 2014) have focused on plaza formation and uses within various plaza contexts at the site of Palmarejo. Other secondary sites and small-scale household groupings have been documented within the valley and may yield architectural configurations that are similar to vernacular arrangements that are already known within the adjacent Naco Valley.

Additionally, the eastern-most extent of the Quimistan Valley is located to the northwest of the Middle Chamalecón-Cacaulapa region. The valley extends to the west and is in association with the La Entrada region. The eastern portion of the Quimistan Valley has not undergone formal investigated, however the large monumental site of El Milagro was been mapped and preliminarily surveyed in 2008 and estimated to date to the Late Classic (see Schortman and Urban 2008). The large center is situated roughly 1km south of the Rio Chamelecón and near where it enters into the Middle Chamalecón-Cacaulapa region and the Naco Valley. The site is observed to include at least 15 monumental platform mounds and is arranged in a series of five plaza groupings. The most dominating architectural feature at the center of the site is a roughly 4m high basal platform that supports five monumental constructions arranged around an extensive plaza on its summit. An acropolis-like arrangement such as this at El Milagro has no known

parallels in the neighboring Naco, Middle Chamelecón, or lower Cacaulapa Valleys (Schortman 2013, personal communication). As such, the monumentality of the site indicates an extensive and politically-dominating polity settlement, with probable ties to the juxtaposed site of El Coyote less than 4km to the southwest. However, surrounding regions to this large site have not been surveyed and therefore the density nor distribution pattern(s) of rural/hinterland settlements remain unknown. Regardless, the commanding site of El Milagro and its posed surrounding settlements raises compelling research possibilities, with significant inquiries regarding architectural arrangements and vernacular configurations from household contexts.

To conclude, this initial consideration of vernacular architectural observations from these northwest Honduran valley settlements has revealed generalized notions of construction techniques and designs from a variety of household sizes and social settings. Some of the highlighted vernacular characteristics may have already been presumed from archaeologists who work within the region, however, no previous study has intentionally considered the similarities and variations. As such, it is revealed that generalized vernacular architectural characteristics appear more consistent than divergent during the Late and Terminal Classic. However, nuanced variations exist and are concluded to represent the varied cultural practices and customs of valley/regional northwest Honduran peoples.

Chapter 9

Vernacular and Identity Variability in Northwest Honduras and other Conclusions

The following discussion summarizes the results, applications, and implications of an examination of vernacular architecture from prehistoric household contexts to test the usefulness of the approach for inferring identity expression within northwest Honduras. Indeed, other scholars have investigated identity formation and materialization within household settings from this region and by means of a comparative framework. While most of these studies include architectural descriptions and deciphered structure functions, the majority do not evaluate variability beyond building size, quality and generalized complexity of manufacture, and associated artifact assemblages.

As articulated in Chapter 1, the goal of this dissertation has been to demonstrate that a systematic exploration of vernacular architectural configurations from this particular region of Southeast Mesoamerica contributes to clarifying the extent of identity variation inferred from a distinct form of the non-movable material record. The strategy to achieve this goal has been a three-fold design. The first component examined the architectural *characteristics* at site PVN647 as a type of a 'control sample', in order to reveal architectural *arrangements*. The second component tested the potential of identified architectural *arrangements* from PVN647 to be true vernacular *forms* by means of an intra-regional comparative analysis within the Naco and Cacaulapa Valleys. The third component considered the architectural descriptions from other neighboring valley

settlements within northwest Honduras and the Maya hinterland households of Copán, to assess the degree of vernacular consistency across this region of Southeast Mesoamerica. The ensuing discussion addresses the successes and future remodeling for improvement upon this strategy.

Vernacular and Identity Expression at PVN647

The rigorous examination of structure histories and architectural configurations at site PVN647 within the Middle Chamelecón-Cacaulapa region of northwest Honduras has revealed an assortment of building practices. Some of these observations are recognized to be conventional construction techniques, while others are identified to be unique, though all are concluded to be vernacularly constituted.

Architectural observations have been categorized into platform or foundation configurations, and internal and external modifications. Sub-categories of greatest comparative vernacular potential are concluded to be the 3-sided building design (4 of the 8 investigated structures) and the variety of external appendage formations. However, advancing both of these occurrences at PVN647 to test comparability of the arrangements in other regions, I maintain that evidence appears inconclusive for a shared, regional building practice. Regardless, the repetition of the 3-sided building design at PVN647 demonstrates that distinctive construction practices were taking place at the site and that occupants were unrestricted to innovatively amass buildings as the saw fit. Therefore, I argue that the appearance of the vernacular 3-sided building design as a vernacular

arrangement is indicative of a settlement-specific shared preference by the residents at PVN647.

Moreover, conclusions regarding function, and the private or public nature of resulting constructed spaces, yield commonalities of practice at PVN647. The 3-sided edifice design is associated initially with a storage or workspace, although with the addition of a fourth wall and likely enclosing of the summit interior, structure function becomes more assorted. Only one former 3-sided building maintains its original function (Structure 16), while all others exhibit evidence for being domiciles (Structures 7, 18, and 33). Identified residences at the site (as many as 5 of the 8 investigated structures) lack any form of built-in furniture, except for Structure 12. Some scholars in southeast Mesoamerica identify benches, niches, or shelves as markers for residences (Gonlin 1993, 1994; Hendon 1987, 1991; Sheets 1997). However, as articulated in Chapter 2, other factors, such as amount of occupation area and artifact types and frequencies, can also indicate potential building function. Therefore, an additional shared domestic practice by inhabitants at PVN647 is the likely use of perishable furnishings in the form of hammocks or sleeping mats.

The various identified external appendage forms also include greater harmony with regard to utility, although I still argue that terminology for architectural forms should be distinguished from those used to designate function. Indeed, extensive external occupational areas are established along a variety of different sized and functioning buildings. Moreover, appendage forms are not concluded to be structure *function*-specific, although construction quality and placement along more noticeable buildings

appears can vary. For example, appended steps and entries that require greater amounts of construction material, namely, the block form, appear exclusively along the plaza side of two of the most prominently positioned buildings at PVN647 (Structures 6 and 17). Similarly, the least demanding appendage form, in terms of construction material or labor, the 'box' or U-shaped form, is present along smaller, supplementary or 'dependent' buildings. These observations parallel Hendon's (1991) assertion that 'dominant' structures in household contexts are those that are amassed larger and by means of more and better construction materials. However, Structure 12 (a residence) is the largest and internally most architecturally complex building at PVN647, yet the wall form appendages along the plaza-facing sides are amongst the most diminutive in scale, modest in construction quality, and material scarce of all observed examples of this particular appendage form. Therefore, architectural manifestations at PVN647 support only partially any correlation between scale and resource investment and social rank.

Moreover, examinations at PVN647 analyzed two inhabited locations intensively. Similar architectural manifestations appear in the dissimilarly sized settlement groups: the Southeast Plaza Group, a small household patio group; and the Site Core Plaza Group, the larger hamlet-center setting, complete with both public-serving and residential amenities and a range of social pursuits. As such, the settings represent locales of varying social practices, as indicated both by architectural arrangements and inferred structure functions. Although construction similarities are present in plaza arrangements, architectural components, and privileging plaza façades for elaboration of structure interiors, they occur on distinct physical scales. The inhabitants of the Southeast Group

may have been a family unit who settled in the southeastern-most extent of the site boundary to establish a small-scale residential compound. However, occupation did not last as long into the Terminal Classic at the Southeast group as is believed to have been the case at the Site Core Plaza Group. As a preliminary interpretation, residents of the Southeast Group are hypothesized to have abandoned the setting of the patio group and potentially moved closer to the main group. As discussed in Chapters 1 and 8, this potential is more indicative of the elite-level, socio-political relations occurring near Cerro Palenque in the Ulua Valley during the Terminal Classic (Joyce 1991) than is witnessed in the Naco Valley (Schortman and Urban 2011) during the same time period. Although a comprehensive depiction of the social organization at PVN647 is challenging to reconstruct, the densities and distributions of analyzed artifacts supply some clarification.

Although vernacular architectural arrangements support a shared building practice and likely communal identity at PVN647, certain artifact types and distributions indicate an unequal access and range of production and other social practices. The considerable concentration of ground stone implements at Structures 12 and 16, coupled with their respective extensive, external terraced regions, suggest that considerable use or manufacture of these tools were taking place in these specific locales. (High densities of ground stone materials were also recovered from Structure 17, although the significance for this occurrence is less clear.) Furthermore, the considerably lower densities of ground stone from other domestic settings suggests that use of these implements was communal and semi-centrally located within the main group. It is unknown whether or

how access to these tools was controlled. Modestly-sized outcrops of vesicular basalt have been detected in the southern hills adjacent to PVN647 and cobbles are also present in the riverbed, therefore raw materials are locally available. It is cautiously offered that occupants of the Southeast Plaza Group may have contributed to production activities and supplemented tool use with those being manufactured within the Site Core Plaza Group.

The hypothesis of ground stone production for short-distance exchange is intriguing, especially when evidence for other forms of craft production are noticeably absent at PVN647. However, I infer that the majority of utilitarian ceramic vessels were likely manufactured most immediately across the Rio Chamelecón at the sites of Las Canoas and PVN598. As such, residents at PVN647 may have engaged in local agreements to exchange ground stone implements with these other settlements to meet pottery needs at PVN647. In the modern environment in this region along the Rio Chamelecón, crossing the river is treacherous without the aid of a floating vessel, such as a canoe, even during the dry season when the river is at its lowest. It is conceivable that occupants residing along the banks of the river could have fashioned small, wooden boats in order to ferry materials cross the river safely. Indeed, the English translation of the site name *Las Canoas* is 'the canoes'. The name in antiquity surely differed, and can only be conjectural.

Regardless of the mode, interaction between the residents at PVN647 and these adjacent river settlements is supported by the movable material record. Furthermore, the presence of ceramic types hypothesized to be from other settings within the Naco and Cacaulapa Valley's environs suggest that pottery needs were also supplemented from

beyond the immediate crafting communities within the Middle Chamelecón-Cacaulapa region. The calculated densities of non-PVN598 and Las Canoas pottery are highest at Structures 12, 16 and 17, which corresponds with the posited elevated status of the dwellers or overseers of these particular buildings at PVN647. Therefore, the residents associated with these structures potentially managed material exchange relations with neighboring crafters at Las Canoas and PVN598, as well as other Naco and Cacaualapa Valley inhabitants.

Beyond exchange interactions, how much did the residents of these settlements have in common? The fixed built environment does not include much in the way of substantial similarities of vernacular arrangements between PVN647 and the sites of PVN598 and Las Canoas. Therefore, the occupants at PVN647 shared identity expressions in movable material culture, but made site-specific choices in architecture. The examination of architectural similarities with other previously investigated sites from the greater Naco and Cacaulapa Valleys reveals a variety of practices – some of which hold vernacular significance to those occurring at PVN647.

Vernacular and Identity Expression within the Naco and Cacaulapa Valleys

The systematic comparison of architectural arrangements from the Naco and Cacaulapa Valleys has demonstrated that one configuration (tripartite building design) is representative of a vernacular *form*, while the others (the 3-sided edifices and external appendages) remain labeled as vernacular *arrangements*. The 3-sided building design and the three chosen exterior appendages witnessed at PVN647 yielded mixed results

regarding their appearance outside of the site. As such, the 3-sided building design is interpreted to be representative of a utilitarian building, which appears variable in form and functional use expands over time, by means of architectural modifications. The 3-sided building design has proved challenging to identify without attentive excavation methodologies and detailed documentation in order to reconstruct building history. However, I maintain that the design is intentional and vernacularly constituted, although recognized as a vernacular *arrangement* and not a vernacular *form*.

Likewise, the three exterior appendages observed at PVN647 occur infrequently in the Naco and Cacaulapa Valleys. The configuration of compared external appendages seem to manifest for their serviceability and frugal use of building materials, but not as marking any form of identity expression. Correlations only exist with regard to relative size and architectural complexity of a given structure and the adding of more cobble-dense appendage arrangements. Additionally, regardless of structure size, prominence or complexity, expansions by means of appendages are favored along plaza facing or plaza visible façades of buildings. This observation is aligned with the preferred placement of external appendages from PVN647 and supports the overall value of the shared open spaces. Therefore, the three selected appendage configurations maintain a vernacular label, though only due to their practical utility and remain categorized as vernacular *arrangements*.

The tripartite building design is the only arrangement advanced to signify a vernacular *form* within the Naco and Cacaulapa Valleys. Although not observed from investigated structures at PVN647, the tripartite building exhibited vernacular potential

due to its known recurrence from previous PVN and PVC archaeological examinations. Results of the first formal comparative analysis of the tripartite arrangement in this dissertation indicate that the practice is distributed across the Naco Valley and present in a variety of sites within the Cacaulapa Valley – ranging from small household groups to the non-elite residential area of the valley polity center of El Coyote.

Support for characterizing the tripartite building design as a vernacular form within the Naco and Cacaulapa Valley settings is due to the intricacy of the configuration, the repetition of the formation across the valley regions, and evidence for both intentionally and adapted versions of such buildings. Indeed, the distinctiveness of the room configuration and emphasis on the three-aligned plaza-facing compartments persist, regardless of structure size, placement within a plaza group, number of off-plaza or 'back' rooms, and site size. Furthermore, roughly 4 of 9 sites from the Middle Chamelecón-Cacaulapa region; 6 of 30 sites from the Naco Valley; and 3 of 10 sites from the Cacaulapa Valley include at least one structure arranged as a tripartite building[2]. Although these frequencies do not indicate that a majority of previously investigated sites dating to the Late and Terminal Classic periods include versions of a tripartite building, the rates suggest deliberateness. Lastly, intentional and adapted-into-the-form versions of the design support a building practice of a vernacular nature, as the design is open to modification and variations.

[2] Total number of sites are those that are considered to have undergone Extensive Horizontal Investigation (E.H.I.), as identified in Chapter 7.

Moreover, the tripartite building design is suggestive of a form of practice, expressed by means of the fixed material record, as presented in Chapter 2. Tripartite buildings are mostly associated with non-elite household contexts, although variations in structure and overall household group size, status, or wealth are observed to vary. Therefore, the social significance of the design may relate to a variety of identity affiliation markers within a generalized non-ruling population from the Naco and Cacaulapa Valleys. Original assemblage of a tripartite building may symbolize a fidelity to a particular communal identity when founding a new household settlement, whether or not consciously done so. Conceivably, tripartite versions that were converted into the formation over time serve as physical representations of shifting membership ties. A construction sequence observed to result in the burial of the configuration (PVN423-17), although still use of the structure, may indicate an action or decision of leaving the group (or being forced out) and renouncing the social affiliation by means of an observable display. However, I acknowledge that these interpretations are speculative. Intensive examination and comparison of artifact assemblages from each tripartite building and associating household structures within a site context need to be done in order to support or negate such prospects.

Moreover, the vernacular significance of the tripartite form is recognized to be internal. That is, it is unclear how 'visible' the design is to those who do not enter the dwelling. As superstructures of buildings are fashioned from perishable materials, it is impossible to know if, or reconstruct how, structure exteriors were decorated in antiquity. Furthermore, is it unclear if dissimilar functioning buildings and dwellers of differently

ranked residences within a household grouping were visually marked, aside from building scale and positioning within the group. Therefore, it is not known whether an internal tripartite design was distinguishable from the exterior to symbolize a group identity.

However, the intricate creation of interior space is an interesting component of the tripartite building design. Joyce and Hendon (2000) recognize how internal and external spaces can be differentially impacted by spatial organization in terms of intimacy, visibility, and circulation frequency. They contend that small-scale houses that were constructed by means of a vernacular architecture were constrained by those building practices and resulting internal actions would have included greater conformity (compare "canonical expression", per Blanton 1994). Furthermore, they claim that due to the visibility of regularly timed, shared social and life-cycle events, external plaza or patio spaces may be "the best opportunity for the archaeological recovery of traces of citational practices through which identities were shaped and community formed" (Joyce and Hendon 2000:156). While I acknowledge the latter claim to be accurate, I contend that *variations* within an architecturally vernacular design may be associated with a greater diversity of internal practices, which in turn signify both site-specific and 'regionally' communal forms of expression.

Regardless of the function of the internal space, the recurring tripartite design potentially provides an additional cue for understanding the shifting elite-centered socio-political dynamics taking place during the transitional period of the Late Classic into the Terminal Classic, specifically within the Naco Valley. Schortman and Urban (2011,

2012; Urban and Schortman 2004) have articulated how the political power and prominence of Late Classic rulers at La Sierra in the Naco Valley diminished into the Terminal Classic. Moreover, the site of PVN128, which includes two examples of tripartite buildings (PVN128-19 being monumental in size and one of the largest observed in this comparative analysis), is recognized as a political center during the Terminal Classic (Urban and Schortman 2004).

Furthermore, the Terminal Classic site of PVN175, though not identified as a political center, includes a circular stone marker in the threshold to the largest building (PVN175-6) in the primary plaza, which is also designed as a tripartite building. Urban and Schortman (2012) contend that the stone was "either recycled from a Late Classic monumental construction at La Sierra or was modeled on masonry used at that center. In either case, the stone's appearance on Structure 175-6 implies that its occupants staked tangible claims to whatever charisma was associated with the earlier capital and its still-powerful Terminal Classic leaders" (510). Therefore, I propose that the regional group, or select members of the group, of builders, owners, and occupiers who shared in the tripartite building practice achieved higher social ranking (status) during the transition from the Late to the Terminal Classic, though never reaching the pinnacle of the valleys' social hierarchy. The monumental version of the tripartite structure at PVN128 along with the recycled or replica circular stone marker in the tripartite structure from PVN175 suggest that the occupants who practiced this particular building design not only took part in celebrating the diminished political power of La Sierra rulers, but also achieved an elevated social positioning within Terminal Classic Naco Valley.

An understanding of the socio-political positioning of occupants of the tripartite building design in the Middle Chamelecón-Cacaulapa region and the Cacaulapa Valley proper is less clear, as the vernacular form is present at both Las Canoas and the non-elite residential zone of El Coyote. Thus, the form was not exclusive to the Naco Valley. Finally, the observed distributional pattern of the tripartite building design supports the utility of tracking construction arrangements. However, at this point in analysis, the tripartite building design does not appear to exist beyond these two valley settlement regions.

Vernacular and Identity Expression within Northwest Honduras

The examination of vernacular architecture beyond the Naco and Cacaulapa Valleys within northwest Honduras revealed little in the way of seemingly similar vernacular *arrangements*, let alone vernacular *forms*. The consideration of building practices from household contexts within the Cuyumapa, lower and middle Ulua, and Copán Valleys revealed the most common vernacular construction characteristics. Evidence of possible versions of the functional 3-sided building design and assorted exterior appendages are observed from the central Santa Barbara Valley and the rural Maya sites in the Copán Valley, however, none do I deem suggestive of a widespread common building practice.

Several characteristics of the considered valley regions differ. These range from valley size and prehistoric settlement patterns, to scholarly models of social organization and socio-political interaction. Additionally, archaeological agendas and investigation

protocols are representative of site- or valley-specific research questions. Therefore, examinations of household contexts range from test sampling of mounds to the complete exposure of all architectural configurations of a structure or group of structures from a given site. The result is that comparisons of architectural assemblages across regions are challenging to assess with established datasets of such varying excavation approaches and revealed building configurations.

Moreover, aside from the eight rural household sites from the Copán Valley, this examination only considered the building configurations from roughly one household plaza grouping from the other regions. This limited sample selection impedes observations of the comprehensive building practices occurring within each considered area. Indeed, considering the architectural manifestations from a greater variety of household settings from each region (similar to the number considered from the Copán Valley) might yield more informative interpretations regarding the extent of shared building practices, or the degree of distinction between considered valley regions.

Alternatively, I argue that in order for cross-regional architectural observations to be compared most efficiently, a similar form of comparative analysis of construction practices and structure designs needs to be conducted first (similar to the framework of analysis in this dissertation with datasets from the Naco and Cacaulapa Valleys). An extensive comparative analysis of architectural configurations within each considered valley region would result in generating a list of valley-specific vernacular manifestations. Comparisons of the most vernacularly significant construction practices and building designs, whether vernacular *arrangements* or established *forms*, from each

regional setting would yield more informed conclusions regarding the range of vernacular similarity and variation, and cultural continuity or individuality interpreted from the fixed material record. Although, it is recognized that the investigative parameters granted by IHAH for research at PVN647 (and other Naco and Cacaulapa Valley sites) allowed for complete structure clearing. This particular excavation method may not be sanctioned or ethical in other settings of northwest Honduras. As a result, research models similar to this dissertation may not be possible for examining vernacularly constituted architecture from other locales of the region.

Research Merit and Future Applications of Vernacular Architecture in Northwest Honduras

With reference to the three-fold research design of this dissertation, the first component is deemed successful for identifying vernacularly significant architectural configurations from the site of PVN647. Intensive excavations revealed a variety of building practices and from two dissimilarly sized plaza settings, with select configurations repeating, earning the label of vernacular arrangements. However, the second component of the research design to advance vernacular arrangements from PVN647 for comparative analysis, did not find significant replication within the Naco and Cacaulapa Valleys.

The 3-sided building design from PVN647 is argued to be particularly challenging to detect from documented records of previously investigated structures. Typically, the 3-sided edifice design was expanded upon and the open facing is

eventually closed. Therefore, this dissertation has underscored the value of careful excavation procedures and keen observations of architectural construction histories, as nuanced structural shifts over time can be tricky to perceive.

Although the 3-sided building design seems not to repeat beyond PVN647, the second component of this research design is deemed effective for demonstrating that vernacular arrangements can be tracked across a valley landscape and convey greater social meaning within a regional context. The previously detected tripartite arrangement had only been speculated as an architectural pattern, although never systematically analyzed within the Naco and Cacaulapa Valleys. Therefore, by establishing a framework of comparative criteria, an examination of the tripartite building process, function, and shifts in prominence over time have been recognized. Furthermore, the results of analysis are argued to be useful for reconstructing the impacts of changing socio-political organization on household contexts within the Naco Valley during the Terminal Classic.

Finally, a contributing factor to the success of this particular comparative framework is the prior existence of and access to an extensive archaeological dataset of architectural formations from household contexts within the Naco and Cacaulapa Valleys. Without significant comparative architectural observations from corresponding social contexts within a given regional setting, it is unlikely that the extent of analogous vernacular configurations could be observed, let alone tracked across a region. However, the lack of access to similarly-sized datasets from neighboring valley regions contributes to the inability to assess the degree of architecturally vernacular associations between

valley regions in this dissertation. Therefore, the third component in the three-fold research design has been inconclusive for demonstrating that particular vernacular building practices were widely shared throughout northwest Honduras. It is recognized that datasets exist for select research areas of northwest Honduras and are promising for conducting a study similar to the intra-regional comparative analysis of the Naco and Cacaulapa areas. Therefore, more comprehensive comparisons of vernacular arrangements within northwest Honduras, to reveal either commonalities or distinct differences, are still posited to be possible *and* informative. Although, once again, it is acknowledged that research agendas and permission authorization vary for a variety of scholarly and ethical reasons across northwest Honduras and might not yield immediately comparable datasets.

Nonetheless, further applications of the archaeological datasets from PVN647 and the sites containing tripartite structures can be conducted to reveal additional information regarding building composition, both structurally and socially. For example, quantitative energetic building efforts to be calculated to better assess the degree of human and material resources needed to construct certain vernacular arrangements (similar to Abrams 1994). Additionally, detailed assessment of artifact assemblages can reveal aspects of overall household wealth and comparable status rankings within and between household groups with similar vernacular arrangements or forms (similar to Douglass 2002). These forms of examinations on vernacular architectural forms hold the potential to examine house life-cycles, family growth and composition over time, and the overall social heterogeneity of household contexts.

Finally, in order to more comprehensively understand the 3-sided edifice design and the tripartite structure form, future examinations can be designed to trace the architectural origins of the configurations. Although population densities during the Preclassic were considerably lower than during the Late and Terminal Classic in the Naco and Cacaulapa Valleys, attempts to observe either of the vernacular manifestations from earlier time periods may reveal where the configurations first appeared within valley settlements. Additionally, architectural assemblages from Early Postclassic household sites hold the potential to confirm whether the vernacular formations persisted into later periods. It is unknown if the designs would be recognizable from the prehistoric record, considering both Preclassic and Postclassic periods are associated with divergent architectural vernacular building characteristics, which most notably employ minimal cobble building materials. However, variations on a vernacular arrangement theme might be detectable and provide a more complete history of vernacularly constituted construction formations and changes over time.

Implications for Studies of Vernacular Architecture, Household Archaeology, and Identity in Southeast Mesoamerica

This dissertation holds important implications for the scholarly approaches it sought to merge: vernacular architecture, household archaeology, and identity expression as observed from the material record. Most generally, this examination reveals the variation in building designs of prehistoric households from the Naco and Cacaulapa Valleys, which are argued to have been both consciously and subconsciously practiced.

Furthermore, although the lack of written records or instructions on how to construct houses are aspects of vernacular architecture, it is illustrated that access by any other means to the builders, owners, and occupiers themselves is not necessarily a requisite in order to examine vernacular assemblages of past peoples.

By means of intensive archaeological excavations and vigilant observations of architectural configurations from complete structures, vernacular designs and patterns can be observed and, if sufficient datasets are available, tracked across a landscape. While archaeological examinations of prehistoric vernacular configurations are possible, the modes by which the design 'know-how' is transferred amongst affiliated patrons of a given form remains inaccessible. Nevertheless, demonstrating that vernacular manifestations can be detected from the prehistoric record speaks to the importance of seemingly 'commonplace' constructions and the endurance that these forms of the built environment have witnessed in human history.

Moreover, I have shown how a systematic consideration of architectural configurations can not only complement but also enhance already practiced archaeological methods and theoretical approaches by which to investigate household contexts. At both the archaeological site and regional-valley scales, I have argued that architectural assemblages reveal far more than comparable quantifications of building scales, occupation areas, and structure arrangements within household groups. Indeed, I have established that construction techniques and building designs were not random outcomes nor dictated simply by availability of naturally occurring resources. The expression of group affiliation, be it social, cultural, ethnic, spiritual, or socio-political, is

entrenched in vernacular architecture. Once vernacular exhibitions are identified, interpretations formed by means of the movable material record can be enhanced to reveal a far more comprehensive depiction of prehistoric household settings.

To conclude, this dissertation has presented a research model that is deemed successful for identifying, classifying, and comparing vernacular architecture from prehistoric household contexts. When traced across a regional setting, perceptions of social organization and group affiliation can be revealed from within and between households, and over time. As a result, this approach contributes to the investigation of ascertaining the degree of construction variation and cultural diversity within the Middle Chamelecón Drainage of northwest Honduras. Finally, I contend this research model and yielded results contribute to the development of a more complete understanding of the architectural patterns and the social expression, variation, and diversity of household inhabitants in this region of Southeast Mesoamerica.

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Appendix A

Structure Time Spans and Construction Sequences from PVN647

2008 Field Season

The following is a detailed description of the excavations and construction sequences from the 2008 season at PVN647. Each investigated region of the site is summarized and a spatial arrangement overview is provided, along with a description of each excavated structure. The data for each structure are organized into a table detailing the relative time spans and construction phases with observed corresponding construction units, stratum, and features.

Architectural Terms:

Construction Unit: material remains that were purposely constructed (prepared living surfaces/floors, walls, appendages, fill deposits, benches).

Feature: material remains that have been disturbed from their intended positioning by means of natural or cultural factors or activities (tumble, wall fall, burials).

Stratum: descriptions of soil levels that articulate with Construction Units and Features.

Wall: linear cobble construction unit, amassed by the technique of coursing

Platform: elevated cobble arrangement, the substructure of a building

Basal wall: four walls delineating the extent of a structure's original or modified platform

Summit wall: wall construction which delineates interior room(s)/occupational space(s). Usually interior to basal walls. Though, in some cases, a single wall construction marks

both a basal and summit boundary.

Appendage: construction appended to the exterior of basal walls.

Courses: single row or layer of cobbles aligned on top of each other or side-by-side to create walls.

Chinking stones: fist-size stones or pebbles used randomly to supplement or stabilize courses of larger building materials, or constructed as a layer of a course.

Bajareque: hardened and/or fired mud used as a mortar construction material within wall features associated with the wattle-and-daub construction method. Also associated with prepared floor surfaces.

Bench: cobble construction unit located within a summit room used for occupational activities.

Stone sizes:

Pebble: <0.025m in length, <0.025m in width, <0.025m in height

Large pebble or chinking stone: 0.025-0.05m in length, 0.025-0.05m in width, 0.025-0.05m in height

Extra small or "fist-size": 0.05-0.09m in length, 0.05-0.08m in width, 0.05-0.07m in height

Small cobble: 0.09-0.17m in length, 0.08-0.13m in width, 0.07-0.10m in height

Medium cobble: 0.17-0.27m in length, 0.13-0.20m in width, 0.10-0.15m in height

Large cobble: 0.25-0.35m in length, 0.20-0.30m in width, 0.15-0.20m in height

Extra large cobble: >0.35m in length, >0.30m in width, >0.20m in height

Construction and Excavation Sequences:

Site Core Plaza Group – Structures 12, 16, 17, 18, and 33

What is designated the Site Core Plaza Group for PVN647 consists of approximately 20 structures. Roughly situated along a north-south axis and facing each other from opposing ends of this primary plaza are Structures 12 (southern) and 17 (northern). These two structures represent the largest measureable constructions at PVN647 and were extensively investigated. Situated to the east and west from Structures 12 and 17 are the remaining 18 structures (Structures 9, 10, 11, 14, 15, 16, 18, 19, 20, 26, 27, 28, and 33-38) that comprise the Site Core Plaza Group. Of these 18 structures, only 3 structures (Structures 16, 18, and 33) were investigated.

Stratum Designations for Site Core Plaza Group:

Stratum one: Very dark gray organic topsoil (munsell 7.5YR 3/1)

Stratum two: Dark grayish brown topsoil (munsell 7.5YR 3.5/1.5)

Stratum three: Dark brown dense sterile clay (munsell 7.5YR 3/2)

Stratum four: Brown fine soil (munsell 7.5YR 4/2)

Stratum five: Dark grayish brown, fine soil (munsell 10YR 3.5/2) with dense white flecks of inclusions and cultural debris.

Stratum six: Dark grayish brown soil (munsell 10YR 4/2) with very fine white flecks of inclusions and cultural debris.

Stratum seven: Grayish brown soil (munsell 10YR 5/2) with fine white flecks of inclusions, very small pebbles, and cultural debris.

Stratum eight: Dark brown gravely soil (munsell 7.5YR 3/2) with moderate white flecks of inclusions and dense ceramic fragments. (similar to stratum 5 but with more inclusions)

Stratum nine: Dark grayish brown fine soil (munsell 10YR 3.5/2) with no white flecks of inclusions or cultural debris. (similar to stratum 8 but with no inclusions; not sterile like stratum 3)

Stratum ten: Dark grayish brown fine and silty soil (munsell 10 YR 4/2) with very fine white flecks of inclusions and no cultural debris.

Stratum eleven: Very dark gray soil (munsell 10YR 3/1) with fine white flecks of inclusions, very few to no small pebbles but ceramic fragments and cultural material.

Stratum twelve: Very dark gray soil (munsell 10YR 3/1) with dense white flecks of inclusions, very few to no small pebbles but ceramic fragments and cultural material. (similar to stratum 11 but with more white inclusions)

Stratum thirteen: Gray dense soil (munsell 7.5YR 5/1) with fine white flecks of inclusions.

Stratum fourteen: Dark gray dense soil (munsell 7.5YR 3.5/1) with moderate white flecks of inclusions and small pebbles.

Stratum fifteen: Very dark brownish gray, dense soil (munsell 10YR 3/2) with white flecks of inclusions.

Stratum sixteen: Dark gray compact, clay soil (munsell 7.5 YR 3.5/1) with slight fine white flecks of inclusions, small pebbles, and cultural debris.

Structure 12

Structure 12 is located within the southern region of the Site Core Plaza Group and identified to be the largest structure at Site PVN647. It is flanked by Structure 11 approximately 7m to the East, and Structure 26 approximately 4m to the West. (Neither Structure 11 nor Structure 26 was formally investigated; however, the space between Structures 12 and 26 was excavated and revealed a possible relationship between the two buildings.) Structure 17, identified to be the second largest structure at PVN647, is located 16m immediately north across the plaza from Structure 12. The purpose of carrying out excavations at Structure 12 was to gain a better understanding of the construction style and architectural design of the structures from the Site Core Main Plaza and from the best surface-visibly preserved buildings, which includes Structure 12.

Excavations at Structure 12 commenced on 18 February 2008 and continued until 19 May 2008. All excavations of Structure 12 were supervised by Lauren Schwartz. A 1 x 37m trench was oriented 21/201 degrees and started from the northern side of Structure 17 and extended through the Site Core Plaza and over Structure 12; all the while positioned across the center of both buildings. This 37 meter trench was established to investigate the two largest structures in the Site Core Plaza Group (Structures 12 and 17) and to sample the center of the Site Core Plaza all from the same orientation. However,

the excavated trench over Structure 12 only consisted of the southern-most 14 meters (sub-operations AA and AD) in the 37 meter trench.

Excavations within the14 meter axial trench revealed northern and southern basal architecture (**Figure A.1),** which was followed laterally to expose the full basal dimensions and interior summit features of Structure 12 (sub-operations AO, AP, AQ, and AR). Lateral excavations along the northern, plaza-facing basal wall to the east (sub-operation AP) exposed 9.5m2, the northeast corner and portions of the eastern basal wall and northeast appendages. Lateral excavations along the northern, plaza-facing basal wall to the west (sub-operation AR) exposed approximately 25m^2, the northwest corner, and portions of the western basal wall, western appendages, and interior spaces within the northwest region of the building. It is also within these lateral excavations (sub-operation AR) that the space between Structure 12 and neighboring Structure 26 were investigated. Lateral excavations along the southern basal wall to the east (sub-operation AO) revealed approximately 22m^2, the southeast corner, and an interior room with a bench located within the southwest region of the building. Finally, lateral excavations along the southern basal wall to the west (sub-operation AQ) exposed 9.5m^2, the southwest corner, and portions of another interior room with a bench located within the southwest interior of Structure 12.

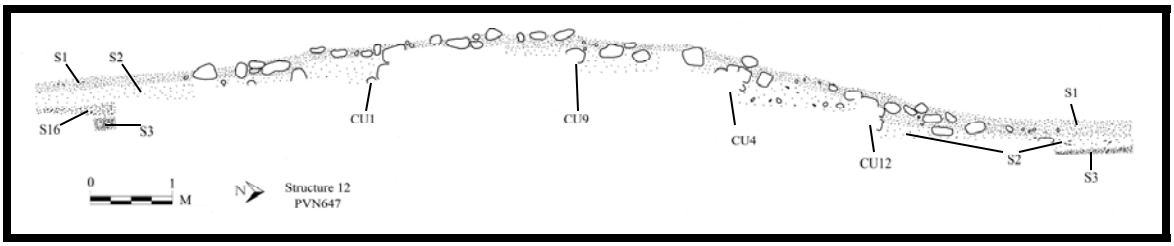

Figure A.1: Section drawing of Structure 12, PVN647.

Complete lateral excavations of Structure 12 revealed the earliest known version of the structure to be approximately 5.25m (N-S) x 6m (E-W), oriented 4/184 degrees, and roughly 0.35m in height. However, Structure 12 is constructed along an unnatural change in elevation. The northern and plaza facing basal wall is at a lower elevation than the southern facing. The southern side of the structure appears to be artificially raised and is at a consistent elevation with other surrounding southern off-plaza structures (Structures 9, 10, and 38). Later construction episodes created 2 summit room spaces, complete with benches and identifiable room entrances. Following the separation of the interior summit space, Structure 12 witnessed several major expansion episodes, which extended the northern, plaza-facing basal limits and added appendage constructions and room spaces to both the southeast and northeast regions of the building.

The final version of Structure 12 witnessed an expansion of approximately 1.5m to the north and an additional 2m to the east and west from the previously mentioned earliest known dimensions. These expansions consisted of new walls and appendage constructions. Additionally, it was observed that the final version of the building contained approximately 4 distinct room spaces.

Finally, complete lateral excavations in the region between Structure 12 and western Structure 26 suggest that they potentially articulate functionally as they are architecturally connected. Located immediately along the western exterior and near the southwest basal corner of Structure 12, the presence of densely burnt earth and unmodified river cobbles erected on angle were uncovered. The angled cobbles are immediately east of what has been preliminarily identified as the eastern basal wall of Structure 26. However, as previously mentioned, Structure 26 was not formally investigated.

Overall, Structure 12 is revealed to have the most complex building sequence from all of the structures investigated in the Site Core Main Plaza. Comprised of a total of 10 time spans, Structure 12's construction sequence is broken down into: one phase of pre-construction; six phases specifically associated with the assemblage, modification and expansion of the building itself; one phase of a connection to neighboring Structure 26 by a burnt feature along the exterior; and two phrases associated with the abandonment and burial of the building. Additionally, Structure 12 contains the most construction units (22 in total) of all the structures investigated in the Site Core Main Plaza. Furthermore, the arrangement and building techniques of the construction units are observed to be the most intricate design scheme from this region of PVN647. Of particular note, is the observation of the multiple rooms and exterior spaces created from the expansion episodes witnessed over the lifespan of the building. And finally, the incorporation of recycled artifacts into construction units (namely a fragmented metate

used as a construction material in a wall), greatly speaks to the overall uniqueness and complexity of both the design and function of this architecturally incomparable building.

Time Span	Construction Phase	Construction Units	Stratum	Feature
1	Abandonment 2		Stratum 1	
2	Abandonment 1		Stratum 2	
3	Connection to Str 26			Angled cobbles Burnt earth
4	Str 12 – 1st	NE Appendage 1 (CU19) NE Appendage 2 (CU20) NE Appendage 3 (CU21) NW Appendage (CU22)		
5	Str 12 – 1st a	West Appendage 2 (CU16) SW Appendage (CU17)		
6	Str 12 – 1st b	North Appendage (CU12) East Appendage (CU13) SE Appendage (CU14) West Appendage 1 (CU15)		
7	Str 12 – 2nd	Northeast summit wall (CU5) West summit wall (CU6) East bench (CU7) Northwest summit wall (CU8) East summit wall (CU9) South bench (CU10) Cobble surface (CU11)		
8	Str 12 – 3rd	North basal (CU4)		
9	Str 12 – 3rd a	South basal (CU1) West basal (CU2) East basal (CU3) Cobble surface (CU18)		
10	Pre-construction		Stratum 16	
11	Natural Soil Deposition		Stratum 3	

Table A.1: Time spans and construction sequences for Structure 12

Time Span 11: Natural Soil Deposition

The natural soil depositional level marks the earliest time span associated with Structure 12. This soil has been labeled Stratum 3 and is described to be hard-compacted dark brown, greasy clay (munsell 7.5YR 3/2). Due to its lack of any cultural material or evidence for previous human activity, it has been identified as the sterile depositional level. This sterile soil context is witnessed on Structure 12's northern and southern exteriors and is also witnessed in other excavations throughout the Site Core Main Plaza. Along the northern exterior of Structure 12 (sub-operation AA), Stratum 3 was observed between 0.32-0.4m below ground surface and with a maximum exposed thickness of 0.08m. Along the southern exterior of Structure 12 (sub-operation AD), Stratum 3 was observed 0.52m below ground surface and with a maximum exposed thickness of 0.2m. The exact thickness of this sterile soil context remains unknown as excavations did not continue deeper beyond these depths.

Time Span 10: Pre-construction

The earliest evidence of occupation in the area where Structure 12 will later be constructed is characterized by the presence of a soil context. Stratum 16 is described as dark gray compact, clay soil (munsell 7.5 YR 3.5/1) with slight fine white flecks of inclusions, small pebbles, and trace amounts of cultural debris in the form of eroded

pottery fragments. This soil context is only witnessed within the southern exterior (sub-operation AA) of Structure 12 and is located immediately above the sterile soil context of Stratum 3 (Time Span 11). It is observed between 0.3-0.36m below ground surface and has a measured exposed maximum thickness of 0.2m. The similarity in clay composition to the sterile context of Stratum 3 but with the inclusion of cultural debris is believed to be the result of Stratum 16 being deposited as a fill episode in preparation for the formal construction of Structure 12. Therefore, Stratum 16 is hypothesized to be transplanted sterile soil (Stratum 3) from another region of PVN647 and mixed with other soil and cultural debris to raise the naturally occurring ancient ground surface to form a universal flat plane, upon which to assemble the southern portion of Structure 12.

Time Span 9: Structure 12 – 3rd a

The first episode of construction associated with Structure 12 is marked by the assemblage of 3 basal walls. Time Span 9 witnesses the construction of the south basal wall (CU1), west basal wall (CU2) and the east basal wall (CU3).

The off-plaza facing of the south basal wall (CU1) is identified to be amongst the best constructed and best preserved wall constructions for the Site Core Main Plaza. The south basal wall is observed to be an east-west (89/269 degree) aligned wall and measured to be 6.12m in length (sub-operations AD, AO, and AQ). The mostly 2 course high and 2 course wide wall is witnessed to range in height from 0.1-0.34m and range in width from 0.43-0.58m. The south basal wall is composed quite uniformly of large sized unmodified river cobbles with a layer of fist-sized chinking stones in between the 2

courses of height. The cobbles on the bottom course were observed to be more square and rectangular in shape, than the more rounded cobbles on the top course. Both the exterior and interior facings of construction unit one appeared consistently flat by purposely selected cobbles with naturally occurring flattened surfaces. The south basal wall forms the southwest corner of Structure 12 with the west basal wall (CU2). However, this corner was not very well preserved and was observed to be significantly slumping out of place. It is unclear whether the corner was purposely taken out or had fallen out in antiquity and then attempted to be replaced or repaired. Therefore, since no definitive evidence is preserved to indicate that these 2 construction units are integrated or inter-*digitate*, they are identified as simply being constructed to abut each other. However, the south basal wall (CU1) also forms the southeast corner with the east basal wall (CU3) and they are observed to be integrated or inter-*digitate* with each other. The southeast corner is not slumping out of place and is much better preserved than the southwest corner.

The second construction unit identified during this time span is the west basal wall (CU2). This wall was observed to be a north-south (0/180 degree) oriented construction and extending 4m in length (sub-operation AR and AQ). Measured to be fairly consistent in width, ranging between 0.54-0.64m, this construction unit varied considerably in height between 0.12-0.5m. The significant range in height is due to the varied preservation of 1-3 vertical courses. Composed mostly of medium and large sized unmodified river cobbles, this basal wall also contained one modified basalt cobble. This particular basalt cobble turned out to be a recycled metate fragment placed on the top

course of the wall. This metate did not have any legs or supports on the non-grinding side and therefore was positioned with the flat back facing up as the top of the wall. This is the only instance from all of the structures investigated from PVN647 where a grinding stone was recycled into being used as a construction material associated with construction units. At its southern-most extent, the west basal wall (CU2) meets the south basal wall (CU1) to create the southwest corner for Structure 12. As previously mentioned, this corner was witnessed to be poorly preserved and possibly either ripped out or fallen out of place in antiquity. Therefore it has been deemed that the west basal wall and the south basal wall form the southwest corner by abutting each other and do not appear to have been constructed to integrate. During this earliest construction time span, the northern extent of the west basal wall does not articulate with any other construction unit, as Structure 12 is described as being a 3-sided building until the next time span.

The final construction unit witnessed during this time span is the east basal wall (CU3). This wall was observed to be oriented in a roughly north-south direction (4/184 degrees) and extend 2.6m (sub-operation AO). Consistently 1 course in height, construction unit three has a measured heighted range of 0.25-0.33m. Similarly, it has a regular width range of 0.55-0.6m and is arranged in 2 horizontal courses with sparsely spaced small stones in between, visible from the top of the wall. However, of the 2 horizontal courses, the exterior-most course is at a lower elevation than the interior course. The predominant construction material used in this east wall is medium and large-sized unmodified river cobbles. As previously stated, this east basal wall forms the southeast corner with the south basal wall (CU1). The south basal wall is observed to be

mostly 2 courses in height, however, at the southeast corner, only 1 course is preserved. It is unclear whether the southeast corner had multiple vertical courses. But it has been identified that the east basal wall (CU3) and the south basal wall (CU1) were constructed together and integrate with each other.

The result of the three construction units from this time span, which comprises the first construction sequence of Structure 12, forms a 3-sided edifice. The open side is the north, plaza-facing side. However, it is not believed that the intent was for this to be a functioning 3-sided structure, similar to other buildings investigated at PVN647.

Time Span 8: Structure 12 – 3rd

There is only one construction unit associated with this time span and serves the purpose to sealing off the northern, plaza-facing side of Structure 12. The construction unit assembled during this time span is the north basal wall (CU4) and is observed to be an east-west (91/271 degree) aligned construction (sub-operations AA, AO, and AR). This wall was measured to extend 5.8m in length, range 0.21-0.32m in height, and range 0.37-0.66m in width. Both the range in height and width is associated with the poor preservation of this wall. The northern region of Structure 12, where this wall was assembled, endures the change in elevation that is witnessed sloping downward toward the plaza of the Site Core Main Plaza. It is believed that the top course of the observed 2 vertical courses of the north basal wall have severely slipped forward toward the north and off the wall, leading to the measured range in height. Likewise, the northward slippage is believed to be the reason for the significant range in width due to the poor

preservation of the 2-3 horizontal courses of this north basal wall. Perhaps also connected to the slippage of the wall is the use of mostly medium and large-sized unmodified river cobbles. This choice of dense construction material is heavy and logically would slip out of place over time due to the combination of a downward slope and the natural of gravity.

During this time span, the north basal wall (CU4) only articulates with one preexisting construction unit: the west basal wall (CU2 – Time Span 9). The north basal wall was constructed to abut the northern-most end of the west basal wall (sub-operation AR). However, the north basal wall does not abut the north basal wall and form a conventional corner. The southern side of the north basal wall abuts the west basal wall, but then continues 1.8m to the west. Technically, the northwest region of the structure is sealed, however, with a remainder of the north basal wall extending beyond the west basal wall. The north basal wall (CU4) extends the east approximately to the same length as the parallel south basal wall, however, due to the shortness of the east basal wall (CU3 – Time Span 9), a formal northeast corner is not formed (sub-operation AO). The north basal wall simply ends in the northeast region of the building and the area between the end of this wall and the northern-most extend of the east basal wall (approximately 0.8m) remains open. It is unclear whether this open area served the purpose of an entrance into Structure 12 from the east. Later construction units are erected in this area and further complicate the space.

Time Span 7: Structure 12 – 2nd

The first major transformation of the interior space of Structure 12 takes place during this time span. This construction episode witnesses the creation of two interior room spaces in the southeast corner and the southwest corner of the building. The southeast room is formed from the assemblage of the northeast summit wall (CU5), the west summit wall (CU6), and the east bench (CU7). The southwest room is formed from the assemblage of the northwest summit wall (CU8), the east summit wall (CU9), the south bench (CU10), and a cobble surface (CU11).

The construction of the northeast summit wall (CU5) outlines the northern boundary of the room created in the southeast corner of Structure 12 (sub-operation AO). This wall is oriented east-west (92/272 degree) and extends 2.42m in length. Mostly composed of large sized unmodified river cobbles and a few limestone cobbles, this construction unit ranges 0.09-0.3m in height, even though it is observed to be only 1 course tall. The width of this wall is observed to be approximately 2 courses wide and measured to range 0.41-0.52m. It forms the northern boundary of this southeast summit room by abutting the previously constructed east basal wall (CU3 – Time Span 9) along its western facing. The location along the east basal wall is approximately 1.5m from the exterior southeast corner and approximately 1m from the northern end of the east basal wall (CU3). This northeast summit wall (CU5) also articulates with 2 other construction units from this time span: the west summit wall (CU6) and the east bench (CU7). The west summit wall (CU6) is a roughly north-south oriented wall and functions as the western boundary for this southeast room. The northeast summit wall (CU5) and the

west summit wall (CU6) form the northwest corner for this room and are observed to be integrated and therefore constructed at the same time. The east bench (CU7), which is constructed as a roughly north-south aligned bench, also articulates with the northeast summit wall (CU5) by abutting it along its southern facing where it articulates with the east basal wall (CU3). The east bench (CU7) is parallel to and constructed to abut the interior (western) facing of the east basal wall (CU3) and the interior (northern) facing of the south basal wall (CU1) where the two previous construction units meet and form the southeast corner for Structure 12.

The second construction unit associated with the formation of the southeast summit room is the assemblage of the west summit wall (CU6). This wall is observed to have a north-south (3/273 degree) alignment and measure 1.32m in length (sub-operation AD and AO). The height of this wall is observed to range 0.11-0.33m and be approximately 2 courses high. The width of this wall is observed to range 0.5-0.54m and composed of 2 horizontal courses. This wall is completely composed of unmodified river cobbles, ranging from medium to large in size. The west summit wall (CU6) is observed to articulate with 4 other construction units: the earlier south basal wall (CU1 – Time Span 9), the northeast summit wall (CU5), the east summit wall (CU9), and the south bench (CU10). The west summit wall (CU6) is located along the interior (northern) facing of the south basal wall (CU1), approximately 2.5m west of the southeast basal corner and approximately 3m to the east of the southwest basal corner. The south basal wall (CU1) was constructed first, and therefore the west summit wall (CU6) abuts this wall. As previously mentioned, the west summit wall (CU6) forms the northwest summit

room corner with the northeast summit wall (CU5). These 2 construction units were witnessed to have been assembled together, as they share the same construction materials where they meet. The remaining 2 construction units (the east summit wall (CU9) and the south bench (CU10)) as associated with the assemblage of the southwest summit room; the other summit space created during this time span. The west summit wall (CU6) is observed to abut both of these construction units on its western facing. The east summit wall (CU9) is positioned to the north of the south bench (CU10) and it is believed that this region served as the division between the 2 room spaces.

The last construction unit associated with the formation of the southeast summit room is the creation of the east bench (CU7). This construction unit is witnessed to be a roughly north-south (177/357 degree) aligned feature and extend 1.3m in length (sub-operation AO). Assembled mostly from medium to large sized unmodified river cobbles, the east bench is observed to be 1 course tall and range 0.12-0.17m in height, and have a consistent width of 0.57m. It is positioned parallel and immediately abutting the interior (western) facing of the east basal wall (CU3 – Time Span 9). It is nestled in between and abutting the south facing of the northeast summit wall (CU5) and the interior (northern) facing of the south basal wall (CU1 – Time Span 9). Construction unit seven is believed to be a bench construction due to the selection of cobbles containing naturally occurring flattened surfaces and positioning them with the flat sides facing upward. It holds the possibility of also functioning as a wall construction, however, the interior (western) facing of the east basal wall (CU3) was observed to be quite uniform and straight.

Therefore, the need to assemble a separate east summit wall when creating this southeast summit room space did not appear to be necessary.

In addition to the creation of the southeast summit room during this time span, a separate southwest summit room was also assembled. This room is formed by the preexisting south basal wall (CU1) and west basal wall (CU2), both assembled during Time Span 9. These construction units form the western and southern boundaries for the room. The first construction unit to be described associated with the formal assemblage of this room is the northwest summit wall (CU8). This wall forms the northern boundary of the southeast summit room and is observed to be an east-west (90/270 degree) oriented construction, measuring 1.44m in length (sub-operation AR). It is mostly 1 course tall, but there are 2 courses preserved in certain regions, and therefore spans 0.07-0.36m in height. This wall ranges 2-3 horizontal courses and spans 0.39-0.46m in measured width. It is composed mostly of medium to large-sized unmodified river cobbles, but there were witnessed 2 basalt cobbles and the largest measured cobble from this wall was made of limestone. The northwest summit wall (CU8) articulates with only 1 earlier assembled construction unit: the west basal wall (CU2 – Time Span 9). This summit wall abuts the interior (eastern) facing of the west basal wall (CU2) approximately 2m north of the southwest basal corner and approximately 1.5m to the south of the northern-most extent of the west basal wall (CU2). From abutting the west basal wall (CU8), this summit wall extends to the east. Immediately to the east of where this summit wall ends, is the open space believed to be an entrance into the room. This space is approximately 0.75m and the east summit wall (CU9) lies on the other side (east) of this doorway.

The east summit wall (CU9) comprises the northeastern boundary of the southwest summit room. This wall was first observed in the axial trench (sub-operation AA) and uncovered to be a north-south (4/274 degree) aligned construction and extending 1.23m in length (sub-operation AO). This well preserved summit wall is measured to be 0.1-0.2m in height and 0.33-0.44m in width. Mostly 1 vertical course is preserved, but 2 are present in some regions. Composed of small to medium-sized unmodified river cobbles, there were also witnessed pebble-sized stones in between the 2 horizontal courses. The east summit wall (CU9) articulates with 3 other construction units: the corner formed by the northeast summit wall (CU5) and the west summit wall (CU6), and the south bench (CU10). The east summit wall (CU9) abuts with the west end of the northeast summit wall (CU5). Since the northeast summit wall (CU5) corners with the west summit wall (CU6), the east summit wall (CU9) also abuts the western facing of the west summit wall and extends parallel with this wall for approximately 0.6m to the south. The final articulation witnessed with the east summit wall (CU9) is at its southern-most extend where it abuts with the south bench (CU10). The positioning of the east summit wall (CU9) can quite clearly be identified as marking the eastern-most threshold for the entrance into the southwest summit room. Immediately to the west of the east summit wall (CU9) is an open space of approximately 0.75m before the eastern-most extend of the northwest summit wall (CU8) is observed. This open space is identified to be the entrance or doorway into the southwest summit room.

The final two construction units within the southwest summit room are the south bench (CU10) and a cobble surface (CU11). First witnessed in the excavations of the

axial trench, the south bench (CU10) is located within the southeast corner of the southwest summit room (sub-operations AD and AQ). It is observed to be a square-shaped construction at a roughly east-west (99/279 degree) alignment. This 1 course tall bench was measured to be 0.82m in length, 1.11m in width, and range 0.15-0.23m in height. Medium to large-sized unmodified river cobbles and medium-sized limestone cobbles comprise the building material of this construction unit. Due to the corner location of this bench, it articulates with 4 other construction units: the south basal wall (CU1 – Time Span 9), the west summit wall (CU6), the east summit wall (CU9), and the cobble surface (CU11). The southern-most extent of the south bench (CU10) abuts the northern, or interior, facing of the south basal wall (CU1 – Time Span 9). Immediately abutting the northwestern-most corner of the south bench (CU10) is the west summit wall. The western, or exterior, facing of the west summit wall (CU6) marks the eastern boundary of this room and the south bench (CU10) is constructed abutting the backside of this wall. Therefore, the south bench is situated in the corner created by the meeting of the south basal wall (CU1) and the west summit wall (CU6). The final construction unit that articulates with the south bench (CU10) is a cobble surface (CU11). This surface is located immediately to the west of the south bench and also extends along the south basal wall (CU1). Overall, due to the uniformity in shape and positioning within the corner of the room, this construction unit has been identified as serving the function of a bench construction, associated with the occupation of the room.

The final construction unit identified in the southwest summit room and assembled during this time span is a cobble surface (CU11). It is witnessed within the

southern-most area of the room (sub-operation AQ), measures approximately 1.7m in length and 1.1m in width and composed of small, fist-sized unmodified river cobbles. However, this surface is inconsistent in preservation and was observed to be in a 'J' shape. This surface is observed to articulate with 3 other construction units within this room space. It was constructed abutting and extending the full length of the southern, interior facing of the south basal wall (CU1 – Time Span 9) from the south bench (CU10) to the eastern, interior facing of the west basal wall (CU2 – Time Span 9). This surface is witnessed to be at the same depth as the base of the south bench (CU10).

Time Span 6: Structure 12 – 1st b

The exterior of Structure 12 is significantly expanded during this 6th time span. Observed during this construction episode is the addition of multiple exterior appendages to the north, east, and west sides of the building. The longest construction unit associated with Structure 12 is assembled during this time span and is identified as the plaza-facing, north appendage (CU12). Expanding and creating a new northeast corner for Structure 12 is the formation of the east appendage (CU13) and the southeast appendage (CU14). And establishing a new northwest region for the building is the west appendage (CU15).

Expanding the plaza-facing, north region and altering the appearance (and possible function) of Structure 12 is the addition of the north appendage (CU12). This new TERRACE extends the "front porch" area of the building and is oriented in an east-west (88/268 degree) alignment and positioned parallel to the north basal wall (CU4 – Time Span 8), approximately 1.5-2m to the north (sub-operations AA, AO, AP, and AR).

North appendage (CU12) is measured to be 9m in length, range in width 0.26-0.53m, and range in height 0.15-0.35m. The range in height is due to the quality of preservation of the 1-2 courses tall appendage. The preservation of this appendage is witnessed to be amongst the poorest of all construction units for Structure 12 and is possibly also due to the downward sloping nature of this northern region leading into the main plaza area. The top of the north appendage (CU12) is approximately 0.15m lower in elevation than the base of the north basal wall (CU4 – Time Span 8). This appendage is predominantly composed of medium to large-sized unmodified river cobbles and contains only a few unmodified basalt cobbles. Some of the cobbles appeared to have been chosen due to their naturally occurring flat surfaces, which were positioned with the flatten sides facing outward. The north appendage (CU12) articulates with 2 other construction units also assembled during this time span: the east appendage (CU13) and the west appendage (CU15). The north appendage (CU12) is only one course in height at its eastern-most extend and where it connects with the east appendage (CU13) and is therefore, identified as being constructed at the same time and being integrated together. The meeting of these 2 appendages forms the new northeast corner for Structure 12. Additionally, at its western-most extent, the north appendage (CU12) is identified as being integrated with the west appendage (CU15) as they share the same corner stone to form the new northwest corner for Structure 12.

The second construction unit associated with this time span is the assemblage of the east appendage (CU13). This appendage is observed to be a north-south (1/181 degree) aligned construction and measured to be 3.4m in length, range from 0.25-0.45m

in width, and range 0.12-0.27m in height (sub-operation AP). Standing 2 courses tall, this appendage is mostly composed of medium-sized unmodified river cobbles and a few tuft stones. Although nearly parallel in orientation to the east basal wall (CU3 – Time Span 9), this appendage is positioned approximately 1m to the east of the east basal wall and does not directly articulate with it. However, this appendage does articulate with 2 other construction units identified during this time span: the north appendage (CU12) and the southeast appendage (CU14). As previously mentioned, the east appendage (CU13) joins with the north appendage (CU12) to form the new northeast corner for Structure 12. Similarly, the east appendage (CU13) is observed to inter-digitate at the corner that is formed with the southeast appendage (CU14), indicating that the two were constructed at the same time. The southeast appendage is an east-west aligned construction unit that joins the east appendage (CU13) to the parallel east basal wall (CU3). It is in this region, where the east appendage (CU13) and the southeast appendage (CU14) come together and join with the east basal wall (CU3), that it is believed a more formal entrance into Structure 12 was established.

The southeast appendage (CU14) is the final construction unit added along the eastern side of Structure 12 during this time span. This appendage is observed to be an east-west (83/263 degree) oriented construction (sub-operations AO and AP). It measures 1.11m in length, ranges 0.28-0.32m in width, and 0.11-0.22m in height. Composed mostly of medium-sized unmodified river cobbles, this appendage is 1 course in height, except at the corner formed with the east appendage (CU13), where there are 2 stacked cobbles. This corner is at the eastern extent of this construction unit and it appears that

they share the stacked cobbles and were constructed at the same time. At its western-most extent, the southeast appendage (CU14) abuts the eastern facing of the east basal wall (CU3 – Time Span 9). The southeast appendage (CU14) is assembled at the base of the east basal wall (CU3) and constructed to be only half as tall. As previously mentioned, it is hypothesized that the space formed by the southeast appendage (CU14), the east appendage (CU13), and the east basal wall (CU3) established a formal entrance along this eastern side into Structure 12.

The final construction unit assembled during this time span is the addition of west appendage 1 (CU15). This appendage is aligned in a north-south (178/358 degree) orientation and along the western exterior and parallel to the west basal wall (CU2 – Time Span 9), although they do not formally articulate. West appendage 1 (CU15) is positioned approximately 1.3m to the west of the west basal wall (CU2). It is measured to be 4.28m in length, range 0.33-0.4m in width, and range 0.2-0.34m in height. (The exact height may be taller; however, a later construction unit is assembled immediately abutting the exterior of west appendage 1, prohibiting the true base of it to be investigated.) Composed predominantly of large and extra large-sized unmodified river cobbles, along with a few medium-sized cobbles, west appendage 1 (CU15) is observed to have 1-2 courses in height preserved. Additionally, some of the largest cobbles appear to be chosen for their naturally occurring flat surfaces, positioned with the flat facing as the exterior of the appendage. This appendage is positioned at such a distance that it abuts the western extension of the north basal wall (CU4 – Time Span 8). Therefore, the "unfinished" western portion of the north basal wall (CU4) now abuts the eastern or

interior facing of west appendage 1 (CU15) during this construction episode. With regards to preservation, the northern-most extent of this construction unit is observed to be the best preserved region of this appendage. It articulates with the north appendage (CU12) to form a new northwest corner for Structure 12. These 2 appendage are observed to share the cobble identified as the corner stone, indicating that there were constructed together and at the same time. However, the southern-most extent of west appendage 1 (CU15), where the medium-sized cobbles are preserved, appears to peter out and remain in an unfinished state. (Again, later construction units are added in this south region of west appendage 1 and architecturally modify the final form of this appendage.) Therefore, during this time span, west appendage 1 (CU15) does not immediately articulate with any other construction unit at its southern-most extent.

Time Span 5: Structure 12 – 1st a

The assemblage of 2 appendages along the western exterior of Structure 12, comprise the only additions witnessed during this time span. The appendages are identified as a second west appendage, labeled west appendage 2 (CU16) and a southwest appendage (CU17).

Adding to the architectural complexity of Structure 12, is the addition of west appendage 2 (CU16), which is observed to immediately abut the exterior or western facing of west appendage 1 (CU15 – Time Span 6). This appendage is a north-south (178/358 degree) alignment and is measured to be 2.83m in length and range significantly in both width and height. As this appendage is observed to be only one course wide, it

has a width range of 0.1-0.3m. Additionally, due to preservation issues at its southern-most extent, west appendage 2 (CU16) is observed to range in 0.1-0.34m in height. At the northern-most extent, west appendage 2 (CU16) abuts against west appendage 1 (CU15), however, begins 1.5m south of the northern-most extent of west appendage 1 (CU15). Interestingly, west appendage 2 (CU16) begins along the western side of where the north basal wall (CU4 – Time Span 8) abuts the west appendage 1 (CU15) on its eastern, interior facing. West appendage 2 (CU16) extends the remaining length of west appendage 1 (CU15) to the south. At the northern-most extent, the second appendage is described as a low-lying, single cobble high construction and measured to be approximately 0.15m lower than the top of west appendage 1 (CU15). Toward the middle of the construction unit is the location where 2 courses of cobbles are still preserved and the differences in height between the 2 abutting appendages begins to lessen. At the southern-most extent, the 2 appendages are observed to be roughly the same height and west appendage 2 (CU16) articulates with the southwest appendage (CU17). (This is the location where west appendage 1 (CU15) is witnessed to peter out and appear uncompleted and ragged along the interior.) The nature of the articulation between west appendage 2 (CU16) and the southwest appendage (CU17) can be described as integrated, as the southwest appendage is an east-west aligned construction that extends slightly over 1m and abuts against the west basal wall (CU2 – Time Span 9).

The only other construction unit identified during this construction episode is the southwest appendage (CU17), located on the western exterior of Structure 12. The southwest appendage (CU17) is described to be an east-west (90/270 degree) aligned

construction, situated between the southern-most extent of west appendage 2 (CU16) and the western, exterior facing of the west basal wall (CU2 – Time Span 9) (sub-operation AR). It measures 1.1m in length, ranges 0.34-0.38m in width, and approximately 0.33m in height. The quality of preservation of this appendage construction is quite poor, as it appears to have been haphazardly assembled. Less than 5 large to extra large-sized unmodified river cobbles make up the construction materials used for this appendage, which stands only 1 course in height. As it serves the purpose of connecting the western-most construction unit, west appendage 2 (CU16) and the west basal wall (CU2), the southwest appendage (CU17) creates the seal to form a room space located within the western region of Structure 12. The space is created by the southwest appendage (CU17) to the south, the exterior facing of the west basal wall (CU2) to the east, the extended portion of the north basal wall (CU4) to the north, and the interior facing of west appendage 1 (CU15) to the west. The space measures approximately 2.5m (north-south) by 0.75m (east-west), which creates an area of approximately 1.875m2. Due to the long and slender design of this room space, the functional purpose, if there was one during the time of occupation, remains unknown.

Time Span 4: Structure 12 – 1st

Structure 12 witnesses its final additions immediately associated with its architectural design, which consist of more appendage constructions, during this time span. Three additional appendage are assembled within the northeast portion of the building: and are labeled: northeast appendage 1 (CU19), northeast appendage 2 (CU20),

and northeast appendage 3 (21). The fourth and final construction unit during this time span is the addition of an appendage within the northwest region of Structure 12 and is labeled the northwest appendage (CU22).

The first of three appendage constructions added to the northeast region of Structure 12 is northeast appendage 1 (CU19) (sub-operations AO and AP). This appendage is observed to be a roughly east-west (97/277 degree) oriented construction and is situated between the eastern-most end of the north basal wall (CU4 – Time Span 8) and the east appendage (CU13 – Time Span 6). It measures 0.91m in length, ranges 0.38-0.54m in width, and ranges 0.07-0.17m in height. Composed mostly of medium sized unmodified river cobbles, this appendage is observed to be 2 cobble courses wide, but only 1 course in height. It is constructed to abut the eastern end of the north basal wall (CU4), but is preserved at a slightly lower elevation (approximately 0.07m lower). However, the top of northeast appendage 1 (CU19) is at the same elevation as the east appendage (CU13) where it abuts the western or interior facing of the east appendage. It also articulates with another appendage construction assembled during this time span: northeast appendage 2 (CU20). This second northeast appendage is assembled abutting the location where northeast appendage 1 articulates with the north basal wall, but is positioned perpendicular to both of the east-west aligned construction units and extends to the north. Overall, this appendage appears to connect the eastern end of the north basal wall (CU4) with the east appendage (CU13), with the possible intent to complete or formalize this entrance space into Structure 12.

The second appendage construction assembled in the northeast region of Structure 12 is labeled as northeast appendage 2 (CU20). This appendage is a north-south (177/357 degree) aligned construction that is abuts at the connection of northeast appendage 1 (CU19) and the north basal wall (CU4 – Time Span 8) (sub-operation AO). It measures 1.05m in length, ranges 0.44-0.61m in width, and ranges 0.1-0.26m in height. The poorly preserved appendage is observed to be 2 courses in width and range 1-2 courses in height. Composed of medium-sized unmodified river cobbles, northeast appendage 2 (CU20) extends to the north from abutting the northern facing of northeast appendage 1 (CU19) and north basal wall (CU4), but remains unfinished at its southern-most extend. It is not conclusively appear to articulate with any other construction unit. The cobbles associated with the construction of northeast appendage 2 (CU20) transition into tumble debris before reaching the southern or interior facing of the north appendage (CU12 – Time Span 6). The orientation and architectural arrangement of northeast appendage 2 (CU20) is very similar to paralleling northeast appendage 3 (CU21) to the east.

The third addition assembled within the northeast region of Structure 12 is northeast appendage 3 (CU21). This appendage is described as a north-south (1/181 degree) aligned projection that abuts against the north, exterior facing of the north basal wall (CU4 – Time Span 8) (sub-operation AO). It measures 0.86m in length, ranges 0.28-0.53m in width, and ranges 0.1-0.21m in height. This extremely poorly preserved construction unit is observed to be 1 course in height and vary 1-2 courses in width. Composed of medium and large-sized unmodified river cobbles and one extra large

decaying limestone boulder, this 3rd northeast appendage is amongst the worst preserved construction units associated with Structure 12. It does not appear to articulate with any other construction units, as it, similar to northeast appendage 2 (CU20), quickly shifts to tumbled debris associated with decay of the building before reaching the northern-most construction unit, the north appendage (CU12 – Time Span 6), approximately 0.6m away. The overall construction design and purpose of 2 northern appendage from this region (CU20 and CU21) is not fully understood, mainly due to the probable poor construction, resulting in their extremely poor preservation over time.

The final construction unit assembled during this time span is the addition of the northwest appendage (CU22) within the northwest region of Structure 12 (sub-operation AR). Similar to some of the appendage constructions from the northeast region of the building during this time span, this northwest appendage is poorly preserved but observed to be a north-south (176/356 degree) oriented construction, positioned between 2 earlier assembled construction units. Measuring 1.21m in length, ranging 0.25-0.33m in width, and ranging 0.08-0.12m in height, northwest appendage (CU22) is situated to abut the south, interior facing of the north appendage (CU12 – Time Span 6) and the extent to abut the north, exterior facing of the north basal wall (CU4 – Time Span 8). Composed of large-sized decaying limestone cobbles and one large unmodified river cobble, this 1 course tall appendage creates a small enclosed space immediately on the inside of the building at the northwest corner. This room space measures 0.88m (north-south) by 0.7m (east-west). The calculated area is approximately 0.62m2, which is a very small occupational space. It is unknown what, if any, functional purpose this space could have

served in association with the overall activities carried out in Structure 12, however, it undeniably adds to the already architectural complexity and uniqueness of this building.

Time Span 3: Structure 12 – Connection to Structure 26

The final time span corresponding with occupation and activities carried out at Structure 12 contain no formal construction units, but is characterized by features witnessed near the southwest corner, between Structure 12 and neighboring western Structure 26. The two features identified during this time span are a grouping of unmodified cobbles roughly arranged in rows and on an angle and the second feature is a dense concentration of burnt soil.

The first feature associated with this time span is the arrangement of approximately 25 medium to large-sized unmodified river cobbles and limestone cobbles in roughly 7 rows, with some positioned at an angle (sub-operation AR). The cobbles observed to have naturally occurring flat facings (mostly medium in size) were positioned on edge and at an approximate 45 degree angle. These cobbles are measured to be 0.36m to the west of west appendage 2 (CU16 – Time Span 5) and oriented with the rows parallel to the roughly north-south orientation of this construction unit. The overall area occupied by this feature is approximately 1m (north-south) by 1.3m (east-west). It is believed that the southern extent of this cobble arrangement was defined; however, it was observed that the cobbles could have continued to the north. The immediate region to the north of the arranged cobbles was not investigated and it is possible the rows possibly continue in that direction. Uncovered immediately to the west of this feature of arranged

cobbles is presumed to be an east facing wall of Structure 26. However, only approximately 2m of this wall construction was exposed and due to time and resource limitations, nothing more of Structure 26 was formally investigated. Yet the exposure of this wall facing associated with Structure 26 marks the western-most extent of this region in between the buildings and confirms that the cobble arrangement does not extend any further to the west. Finally, positioned to the southeast of the cobble arrangement and between it and Structure 12 is the second feature associated with the time span: the dense concentration of burnt soil.

The second feature associated with this time span is the presence of a dense concentration of burnt soil near the southwest corner of Structure 12 (sub-operation AR). This burnt soil is specifically located immediately off from the corner created between west appendage 2 (CU16) and the southwest appendage (CU17). The burnt area is approximately 0.68m in length (north-south), 0.3m width (east-west), and 0.21m in height. The colors observed from this burnt soil range from bright orange to deep red. Additionally, fragments of burnt ceramics were observed in the composition of the burnt soil; indicating this feature as some type of firing or cooking facility. However, the exact function of this burnt area and the adjacent cobble arrangement remain unknown.

Time Span 2: Structure 12 – Abandonment 1

The first indication of abandonment for Structure 12 is witnessed during Time Span 2 with the presence of Stratum 2. Stratum 2 was observed on the plaza-facing (north) and off-plaza (south) exteriors, as well as the interior of the building (sub-

operations AA and AD). This stratum level is described as dark grayish brown topsoil (munsell 7.5YR 3.5/1.5) and includes cultural terminal debris of broken pieces of pottery, lithic fragments, and bajareque chunks. Stratum 2 is measured to first appear between 0.05-0.17m below ground surface. It has a range exposed thickness of 0.11-0.17m. And it has a range maximum depth of 0.14-0.44m below ground surface. This particular stratum is observed in the excavations of other investigated structures in the Site Core Plaza Group and seems to indicate a contemporaneous abandonment episode for this portion PVN647.

Time Span 1: Structure 12 – Abandonment 2

The final phase of abandonment for Structure 12 is defined by the burial of the building by tumble of construction materials and topsoil. The only marker for the final decay and abandonment of the building is the observance of Stratum 1. Stratum 1 is described to be very dark gray organic topsoil (munsell 7.5YR 3/1) with cultural terminal debris of broken pottery, lithic fragments and bajareque chunks. Nearly all of the cobble tumble associated with the decay of Structure 12 is visible in this depositional layer. Due to the sloping nature of the topography to the north into the Site Core Plaza, Stratum 1 is recorded to be the thickest in the northern exterior, ranging 0.2-0.4m below ground surface. Along the southern exterior of the building, Stratum 1 is observed to have a range depth from 0.1-0.22m below ground surface. And it has a range depth of 0.09-0.18m below ground surface within the interior of Structure 12. Similar to Stratum 2, this final depositional layer was identified throughout the Site Core Plaza Group at PVN647.

Structure 16

Structure 16 is located within the northeast region of the Site Core Plaza Group. It is flanked by Structure 28 to the East, approximately 6m away, and Structure 17 to the West, approximately 5m away, although, Structure 16 does not articulate with either of these structures. Due to its close proximity to Structure 17, which was also thoroughly investigated, Structure 16 was selected for study to explore the possibility of an architectural connection between the two structures and to further the understanding of this immediate region of this plaza group. In addition, Structure 16 exhibited potential for being a good candidate for study due to a lack of any surface-visible disturbance. The goal of carrying out excavations of Structure 16 was to examine any possible relationship to neighboring Structure 17 and to gain a better understanding of the design and architectural construction styles of the buildings from the Site Core Plaza Group and from the best preserved structures, which includes Structure 16.

Excavations at Structure 16 commenced on 3 March 2008 and continued until 29 April 2008 and were all supervised by Lauren Schwartz. A 1 x 10m trench was positioned across the surface-visible center of the building at an orientation of 12/192 degrees. Excavations within this axial trench revealed the northern (sub-operation AF) and southern plaza-facing (sub-operation AE) basal architecture (**Figure A.2**). The basal walls were followed laterally to expose the full basal dimensions and interior summit features of Structure 16 and divided the building into quadrants. Lateral excavations following along the south, plaza-facing wall to the east (sub-operation AS) exposed approximately $12m^2$ and the southeast corner, along with other appendages. Lateral

excavations along the south, plaza-facing wall to the west (sub-operation AU) exposed approximately 7m^2 and the southwest corner and other interior construction units. Lateral excavations along the northern wall to the east (sub-operation AT) exposed approximately 6.5m2 and revealed a poorly preserved northwest corner. Finally, lateral excavations along the north wall to the west (sub-operation AV) exposed approximately 7m2 and the poorly preserved northwest corner.

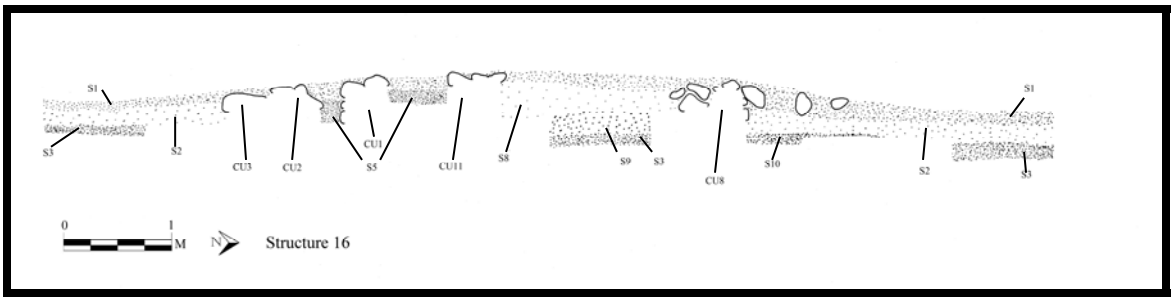

Figure A.2: Section drawing of Structure 16, PVN647.

Complete lateral excavations of Structure 16 revealed the earliest known version of the building to have a 3-sided configuration with the open side of the structure being the northern, off-plaza side. This earliest version was approximately 4m (N-S) and 3.8m (E-W), oriented 6/186 degrees, and ranged 0.35-0.55m in height. After this initial construction phase, 5 separate episodes of additions followed and expanded the footprint of Structure 16 to the east, west, and south. Second basal walls were constructed on both the west and south sides. An appendage was added along the eastern side, encompassing the southeast corner. And Structure 16 was eventually enclosed on the off-plaza side with a northern wall. One period of preconstruction preceded the total of 6 construction phases and was followed by 2 separate periods of abandonment and burial.

Time Span	Construction Phase	Construction Units	Stratum	Feature
1	Abandonment 2		Stratum 1	
2	Abandonment 1		Stratum 2 Stratum 5 Stratum 8	
3	Str 16 – 1st	Cobble alignment (CU11)		
4	Str 16 – 1st a	SE appendage (CU10)		
5	Str 16 – 1st b	South appendage (CU9)		
6	Str 16 – 2nd	North basal (CU8)		
7	Str 16 – 2nd a	South basal 2 (CU4) West basal 2 (CU5) East appendage (CU6) NE appendage (CU7)	Stratum 9 Stratum 10	
8	Str 16 – 3rd	South basal 1 (CU1) East basal (CU2) West basal 1 (CU3)		
9	Pre-construction & Natural Soil Deposition		Stratum 3	

Table A.2: Time spans and construction sequence for Structure 16.

Time Span 9: Pre-construction & Natural Soil Deposition

The presence of the natural soil deposition level comprises the earliest identified time span associated with the excavations of Structure 16. This soil has been labeled Stratum 3 and is described as hard-compacted dark brown, greasy clay (munsell 7.5YR 3/2). It has been identified for this structure, as well as throughout the Site Core Main Plaza, as the sterile soil level due to a lack of any cultural debris. Stratum 3 was witnessed in various locations of Structure 16, including both the southern and northern exteriors and within the interior of the building. On the southern exterior (sub-operation AF), Stratum 3 was witnessed at 0.28m below ground surface and had a maximum exposed thickness of 0.12m. On the northern exterior (sub-operation AE), Stratum 3 was witnessed at 0.36m below ground surface and had a maximum exposed thickness of

0.2m. Within the interior of Structure 16 (sub-operation AF), Stratum 3 was observed while conducting a summit probe in the very center of the building and was witnessed to be 0.66m below ground surface and had a maximum exposed thickness of 0.12m. The exact thickness of Stratum 3 remains unknown as excavations did not continue below these depths.

Time Span 8: Structure 16 – 3rd

The first evidence for the erection of Structure 16 occurs during Time Span 6. This time span witnessed the construction of the first south basal wall (south basal 1 – CU1), the east basal wall (CU2), and the first west basal wall (west basal 1 – CU3).

The first construction unit associated with Structure 16 is labeled as the plaza-facing, south basal wall (CU1) and was observed to be an east-west (100/280 degree) aligned wall (sub-operations AE, AS, and AU). This south wall was measured to be 3.87m in length, 0.43-0.47m in height, and 0.45-0.5m wide. Constructed mostly of large, unmodified river cobbles and a few limestone cobbles, this wall was both 2 courses in width and 2 courses in height. Chinking stones were also present in between the 2 courses of height. The south basal wall extends to the east and meets with the east basal wall (CU2) to form the southeast corner. The south basal wall also extends to the west and meets with the west basal wall 1 (CU3) and forms the southwest corner. South wall 1 (CU1) is integrated or inter-digitates at both southern corners, therefore, indicating that all three of these walls were erected during the same construction episode.

The east basal wall (CU2) is the second construction unit identified to have been erected during this time span. The east basal wall is a north-south (8/188 degree) aligned wall and observed to be 4m in length (sub-operations AS and AT). It was constructed 2 courses wide and tall, yielding a width range of 0.4-0.4m, and a height range of 0.17-0.33m. Construction materials for the east basal wall were a combination of medium-to-large, unmodified limestone and river cobbles and 2 basalt stones. No chinking stones were observed in the construction of the east basal wall. The exterior of the wall made use of the naturally occurring flatter sides of cobbles to create a uniform, straight exterior facing. However, the interior of the east wall appeared quite ragged and lacked the consistency with arranging cobbles to have a flat facing toward the interior of the building, as compared to the exterior of the wall. As previously mentioned, this construction unit forms the southeast corner and is integrated with south basal wall 1 (CU1). However, it does not form a corner at its northern-most extent with another construction unit, as this earliest version of Structure 16 was only a 3-sided edifice and was left open on the northern side.

The final construction unit associated with this time span is west wall 1 (CU3). This west wall was observed to be a north-south (4/184 degree) aligned wall and measured to be 4m in length (sub-operations AU and AV). Constructed 2 courses wide, this wall measured a width range of 0.49-0.67m and had a height range of 0.32-0.54m. The variation in height is due to preservation of 3 courses near the southern region of the wall and only 2 courses preserved at its northern-most extent. This construction unit is composed of medium-sized unmodified river and limestone cobbles. Chinking stones do

not appear to have been included in the construction of this west basal wall. A southwest corner is formed with the inter-digitation of this west basal wall and the south basal wall (CU1). This corner appeared to have been well constructed and therefore well preserved over time. Similar to the east basal wall (CU2), the west basal wall extends to the north but does not form a corner with a northern construction unit. The north, off-plaza side of Structure 16 was left open during this time span and only consisted of the west wall (CU3), the south basal wall (CU1), and the east basal wall (CU2), forming a 3-sided building.

Time Span 7: Structure 16 – 2nd a

The greatest expansion episode for Structure 16 occurs during Time Span 7. This time span witnesses the extension of the building to the south and west with the addition of new basal walls: south basal 2 (CU4) and west basal 2 (CU5). In addition, appendage constructions are added to the eastern side of Structure 16, resulting in the east exterior appendage (CU6) and NE appendage (CU7). Finally, this time span witnessed 2 different soil layers; one within the interior space of the building (Stratum 9) and the other in the open space to the north (Stratum 10).

South basal 2 (CU4) is a new basal wall extending the southern, plaza-facing exterior of Structure 16. Observed to be constructed parallel to south basal 1 (CU1 – Time Span 8), it is measured to be a 102/282 degree aligned wall (sub-operations AE, AS and AU). It is positioned 0.35m to the south from the southern facing of south basal 1 (CU1). Measuring 4.6m in length, 0.3m in height, ranging from 0.27-0.42m in width,

south basal 2 (CU4) is mostly composed of large, unmodified river cobbles and supplemented with some limestone cobbles. Chinking stones were not observed as a construction material for south basal 2 (CU4). South basal 2 form new southeast and southwest corners for Structure 16. At its eastern extent, this new southern basal wall forms the new southeast corner with the east appendage (CU5). As each construction unit is preserved to only be 1 course high in the region where they meet, it is difficult to definitively state if they are integrated or abut each other. Likewise, a new southwest corner for Structure 16 is formed by the integration of south basal 2 (CU4) and the new west basal wall, west basal 2 (CU5). These construction units are visibly witnessed to be more convincingly integrated than the meeting at the southeast corner and therefore, believed to be constructed at the same time.

The second new basal wall witnessed during this time span is the construction of a new west basal wall (CU5). West wall 2 (CU5) is measured to be approximately 4.56m in length, ranges 0.3-0.46m in width, and ranges 0.12-0.36m in height (sub-operations AU and AV). The variation in measured height for this wall is due to the variation of preserved courses. In its middle and southern regions, west wall 2 (CU5) has 2 courses preserved, however, toward the northern end, only 1 course is preserved. The construction material for this wall is mostly unmodified river cobbles and of medium-to-extra large in size. As previously mentioned, this new west basal wall forms a new southwest corner with south wall 2 (CU4). Both construction units appeared to be integrated at this new corner, and therefore identified to have been constructed at the same time.

Unlike the relatively simple construction and preservation patterns of south wall 2 (CU4), the new west basal wall (CU5) revealed a more complicated construction design and association with other construction units, aside from south wall 2. Construction unit five is observed to be parallel to west wall 1 (CU3 – Time Span 8) with a north-south orientation (3/183 degree) in its southern region (sub-operation AU). It is measured at its maximum distance to be approximately 0.47m to the west from the western facing of west wall 1 (CU3). However, this new western basal wall was not constructed as a constantly straight wall feature. Along the eastern side and approximately 2.2m north from the southwest corner formed with south wall 2 (CU4), construction unit five integrates with a WALL construction that is perpendicular (100/280 degree) to its orientation. This 0.5m in length, 0.6m in width, and 0.25m in height construction feature is identified to be integrated with the rest of construction unit five and due to its small size, is not identified to be a separate construction unit from west wall 2 (CU5). This adjunct wall construction extends to the east and abuts with west wall 1(CU3). It is in this location along the north-south alignment of construction unit five where the direction veers slightly to the east and takes on a different (5/185 degree) orientation. To the north of this perpendicular wall feature, the distance between west wall 2 (CU5) and west wall 1 (CU3) averages 0.37m. Furthermore, it is from this central location to its northern-most extent where construction unit five is only approximately 1 course in height and revealed to be in a poor state of preservation (sub-operation AV). Similar to the poor preservation of the northern-most extent of west wall 1 (CU3), west wall 2 was also observed to be in a disarray and suspected to have not been very well assembled or

designed from its inception. During this time span, the northern side of Structure 16 still remains open and hypothesized to be a 3-sided construction.

The third construction unit identified during this time span is the assemblage of an east TERRACE (CU6) in the southeast region of Structure 16 (sub-operation AS). Construction unit six is observed to be a roughly north-south (11/191 degree) aligned wall and measures 1.8m in length, 0.2-0.33m in width, and 0.08-0.15m in height. Mostly composed of unmodified river cobbles, this construction unit is observed to only have been 1 course tall with a sparse layer of chinking stone-sized small stones underneath. To its southern-most extent, construction unit six is believed to abut with south basal 2 (CU4) to form the new southeast corner established during this time span. Since both construction units are only 1 course in height where they meet, it is indiscernible to positively determine if they integrate with each other. Additionally, at its northern-most extent, this construction unit meets with the NE appendage (CU7). Due to the presumed haphazard construction and therefore, poor preservation of the NE appendage, it is difficult to firmly state that these 2 construction units are inter-grated together. The building technique and materials between the east appendage and the NE appendage do not appear to share similarities, leading to the conclusion that they were assembled separately, yet during the same time span.

The final construction unit erected during this time span is the unit that has been labeled for its specific location and possible function: the NE appendage (CU7). This roughly east-west (100/280 degree) aligned wall measures 0.82m in length, 0.34m in width, and ranged 0.26-0.32m in height (sub-operation AS). The range in height is due to

the possible preservation of 2 courses but also the use of various sized and angular, unmodified river cobbles. (The smallest measured cobble is 0.12m in length, 0.11m in width, and 0.03m in height. The largest measured cobble is 0.25m in length, 0.35m in width, and 0.18m in height.) The construction method for this NE appendage is quite unsystematic compared to other construction units from this time span. At its eastern-most extent, this construction unit corners with east appendage (CU6). As previously stated, mostly due to the poor construction style and preservation of NE appendage, the exact nature of their possible connection is not recognizable. The two construction units do not appear to be inter-grated, but more-then-likely abut each other. At its western-most extent, construction unit seven clearly abuts the earlier constructed east basal wall (CU2 – Time Span 8). The assemblage of both the NE appendage (CU7) and the east appendage (CU6) contribute to form the overall east appendage architectural element for Structure 16.

In addition to the 4 construction units witnessed during this building episode, the presence of 2 stratum layers is also witnessed: Stratum 9 and Stratum 10. Stratum 9 is described as a dark grayish brown fine soil (munsell 10YR 3.5/2) with no white flecks of inclusions or cultural debris. This stratum was identified within the axial trench in the center of the building (sub-operation AF), immediately on top the sterile soil of Stratum 3 (Time Span 9). It was first observed at a depth of 0.4m below ground surface and ended 0.66m below ground surface. Although Stratum 9 is identified to contain no ceramic or lithic fragments, it is not being associated as a non-cultural soil context due to its lack of dense, dark brown greasy clay (Stratum 3), which has been associated with the sterile

level for the Site Core Main Plaza. The soil makeup of Stratum 9 was observed to be lighter in color and of a fine texture. It appeared significantly different in color, texture, and composition compared to the sterile soil of Stratum 3, which was revealed to be immediately below Stratum 9.

The second soil context identified from this time span is Stratum 10. Stratum 10 is observed to be a dark grayish brown, fine and silty soil (munsell 10 YR 4/2) with very fine white flecks of inclusions and no cultural debris. This stratum was first witnessed 0.5m below ground surface and extended to the base of excavations at a depth of 0.62m below ground surface. The exact thickness of this soil was not established, as excavations did not continue beyond this depth. Stratum 10 was located within the northern region of Structure 16 (sub-operation AF), however, not near a preexisting construction unit identified during any of the previous time spans. Furthermore, even though Stratum 10 is not observed to contain any ceramics or cultural debris, it is not identified as a non-cultural soil context due its soil matrix being composed of a fine and silty texture. Similar to Stratum 9, the softness of the soil of Stratum 10 is different from the dense, clay composition of Stratum 3, the identified sterile soil associated with this structure. Lastly, Stratum 10 is identified as a soil level situated at a depth that precedes the assemblage of a later construction unit, the north basal wall (CU8 – Time Span 6).

Time Span 6: Structure 16 – 2nd

Prior to this time span of building expansion, it is believed that Structure 16 existed as a 3-sided building, with only basal walls assembled on the east, south, and west

sides. Time Span 6 witnesses the addition of only one construction unit: the north basal wall (CU8).

The north wall (CU8) is identified to be an east-west (100/280 degree) aligned wall, which extends 3.53m in length, ranges from 0.46-0.74m in width, and 0.22-0.55m in height (sub-operations AF, AT, and AV). Similar to other construction units from Structure 16, the north wall is composed of medium-to-large sized unmodified river cobbles, supplemented with a few limestone and basalt cobbles. In various places along the north wall (CU8) it is 1-3 courses in height and 1-2 courses wide. The large range of both the width and height of this wall is due to the construction style and state of preservation of this construction unit. Immediately upon detection via excavations, the north wall (CU8) appeared very ragged and haphazardly assembled. Most of the cobbles, later to be associated with the wall itself, were first identified to simply be wall tumble associated with the decay of the construction unit. However, upon further excavation, it was determined that the north wall suffered poor preservation over time due to presumed poor assemblage from its inception.

The north wall (CU8) articulates with three other construction units associated with previous time spans. At its eastern-most extent, the north wall abuts with the east basal wall (CU2 – Time Span 8) to form the northeast corner of Structure 16. The significant differences in building technique and preservation over time between the construction units makes it clear to observe the separate construction episodes they experienced. In its western region, the north wall (CU8) articulates with the west basal 1 (CU3 – Time Span 8) and west basal 2 (CU5 – Time Span 7). However, it is in this

western region where the north wall presents its worst form of preservation. Due to the poor quality of preservation of each of these construction units in this area of Structure 16, it is difficult to discern the exact relationship between them. However, since the 2 east basal walls are identified to have been constructed before the north wall, it appears that the north wall abuts with the eastern portion of west basal 2 (CU5) and is abuts with the northern extent of west basal 1 (CU3). Regardless of how haphazardly north wall (CU8) was constructed compared to other construction units, it marks significant changes associated with Structure 16 by deciding to seal off the off-plaza, northern side and form a 4-sided building.

Time Span 5: Structure 16 – 1st b

The addition of another appendage marks the separation of another time span associated with Structure 16. This time span witnesses the addition of south appendage (CU9) along south basal 2 (CU4 – Time Span 7). Construction unit nine is identified as an east-west (102/282 degree) aligned abutting wall extending parallel along the southern facing of south basal 2 (CU4) (sub-operations AE, AS, and AU). Although south basal 2 (CU4) is observed to measure 4.6m in length and 0.31m in height, south appendage (CU9) is shorter in length and in height and only measures 3.45m in length and ranges 0.13-0.25m in height. Witnessed to be consistently only 1 course in height, this appendage is also 1course of cobbles wide, however, is supplemented with small-to-medium sized stones that fill in the space between this new addition and south basal 2 (CU4). Therefore, the total width of south appendage averages 0.51m. Construction unit

nine is composed of a fairly equal mixture of unmodified river and limestone cobbles ranging in size from large to extra large (with the largest cobble measuring 0.47m in length, 0.3m in width, and 0.13m in height). This appendage marks the new and final form of the southern, plaza-facing façade for Structure 16.

Time Span 4: Structure 16 – 1st a

The addition of yet another appendage associated with the southern, plaza-facing region of Structure 16 comprises the building activity during Time Span 4. Abutting 2 separate construction units is the addition of the SE appendage (CU10) near the southeast corner (sub-operation AS). This appendage is identified as a single cobble east-west (99/279 degree) alignment, composed of medium-sized unmodified river cobbles. It measures 1.09m in length, 0.19m in width, and 0.1m in height. This appendage articulates with 2 other construction units, the east appendage (CU9) and south basal 2 (CU4). It is abutting the eastern end of east appendage (CU9), seeming like an extension of this previously constructed exterior area. However, due to significant differences in size, shape, and building materials it is easy to identify that they are not the same construction unit and were assembled during different construction episodes. Additionally, it is assembled immediately along and abutting the southern facing of south basal 2 (CU4) in the region where it forms the southeast corner. The appendage extends to the southeast corner and represents the final preserved form of this corner for Structure 16.

Time Span 3: Structure 16 – 1st

The final construction unit associated with Structure 16 is the addition of a cobble alignment (CU11) within the summit space of the building (sub-operations AE, AF, AS, and AT). This cobble alignment is identified to be composed of approximately 17 medium-sized unmodified river cobbles arranged at an east-west (92/272 degree) orientation. It was observed to be 2.2m in length, range from 0.55-0.63m in width, and approximately 0.08m in height. The range of width is due to construction unit eleven containing 2-3 lateral courses of preserved cobbles making up this alignment. The low height for this alignment is due to it being only a single line (or 1 course), composed of medium-sized and naturally occurring flat-shaped cobbles, floating on soil within the summit. This alignment is not suspected as having been an occupational stone surface, as the tops of the cobbles did not appear to be uniformly flat in nature. Furthermore, this cobble alignment was observed to be immediately under the ground surface within the summit, and therefore the highest construction unit associated with Structure 16. The exact purpose or function of this alignment is not known, however, it is too consistent in shape and design to be naturally occurring or the result of the cobble tumble associated with the decay and abandonment of Structure 16.

Time Span 2: Structure 16 – Abandonment 1

The first of two episodes relating to the decay and abandonment of Structure 16 is characterized by the observation of 3 separate terminal debris soil contexts: Stratum 2,

located along the exteriors of the building, and Stratum 5 and Stratum 8, located within the summit interior of Structure 16.

Stratum 2, which has been identified as a terminal debris soil context in various other locations from the Site Core Plaza Group at PVN647, is witnessed to be a dark grayish brown soil layer (munsell 7.5YR 3.5/1.5). This stratum includes cultural terminal debris in the form of broken pottery, lithic fragments, bajareque chunks, and only slight cobble tumble associated with the deterioration of wall constructions. It is observed along the southern (sub-operation AE) and northern (sub-operation AF) exteriors and on top of the sterile soil context, Stratum 3 (Time Span 9). Along the plaza-facing, southern exterior of Structure 16, Stratum 3 was first observed in front of south appendage (CU9 – Time Span 5) at a depth of 0.1m below ground surface and has an averaged exposed thickness of 0.2m in this area outside of the building. Along the northern exterior and in front of north basal wall (CU8 – Time Span 6), Stratum 3 was first observed between 0.11-0.28m below ground surface, due to the change in height of Structure 16 in this northern region. Additionally, it witnessed a range of thickness from 0.12-0.28m along the northern exterior.

Stratum 5 is identified as a dark grayish brown, fine soil (munsell 10YR 3.5/2) with densely sorted white flecks of inclusions and cultural debris. It is witnessed in 2 locations within the summit interior of Structure 16. The first location where Stratum 5 has been identified is the narrow space (approximately 0.2m) between south basal 1 (CU1 – Time Span 8) and south basal 2 (CU4 – Time Span 7). The second location is in between south basal 1 (CU1 – Time Span 8) and the cobble alignment (CU11 – Time

Span 3), approximately 0.6m apart. (Both of these locations are within sub-operation AE). In the first location, Stratum 5 is measured as being approximately 0.2m below ground surface and extending to the base of excavations at a depth of 0.42m below ground surface. In the second location, Stratum 5 is measured as appearing 0.16m below ground surface and extending to the base of excavations at a depth of 0.3m below ground surface.

The final soil layer associated with this time span is Stratum 8, which was also observed within the summit of Structure 16 (sub-operation AF). Stratum 8 is described as a dark brown gravely soil (munsell 7.5YR 3/2) with white flecks of inclusions and dense ceramic fragments. It is witnessed in the northern region of the summit, in between the north basal wall (CU8 – Time Span 6) to the north and the cobble alignment (CU11 – Time Span3) to the south. Stratum 8 was first observed between 0.1-0.14m below ground surface, with a range depth of 0.36-0.44m below ground surface. This stratum layer is witnessed on top of the sterile soil associated with Stratum 3 (Time Span 9) and immediately on top of the soil deposit of Stratum 9 (Time Span 7).

Time Span 1 – Structure 16 – Abandonment 2

The presence of Stratum 1 indicates the final phase of abandonment associated with Structure 16. Responsible for the final burial of the building, and other investigated structures from the Site Core Plaza Group, Stratum 1 is witnessed to cover the top and the northern and southern exteriors of Structure 16 (sub-operation AF and AE, respectfully). Stratum 1 is described as a very dark gray organic topsoil layer (munsell 7.5YR 3/1) with

cultural terminal debris of broken pottery, lithic fragments, and bajareque chunks. This final soil layer is observed to have a thickness range of 0.1-0.36m on the northern exterior, a range of 0.08-0.14m on the southern exterior, and a range thickness of 0.1-0.18m within the interior of Structure 16. Very little cobble tumble is associated with this strata on the southern, plaza-facing exterior, possibly due to the overall low height of the building in this region (approximately 0.26m). More cobble tumble is present on the northern exterior, immediately along the north basal wall (CU8) within this stratum. This increase in cobble tumble is more-than-likely associated with the poor construction of the north wall, leading to its significant decomposition over time.

Structure 17

Structure 17 is positioned as the northern-most structure of the Site Core Plaza Group. It is flanked to the east by Structure 16, which is approximately 5m away, although, they do not articulate. It is also flanked to the west by Structures 18 and 19, with a distance of 15m and 18m, respectfully between them. The goal of excavating Structure 17 during the 2008 field season was to continue investigating the structure by expanding from preliminary 2006 excavations. Furthermore, the goal was to gain a better understanding of the design and architectural construction styles of the buildings from the Site Core Plaza Group and from the best preserved structures, which includes Structure 17.

Structure 17 was initially investigated in July 2006 by means of a 1 x 3m test unit positioned over the hypothesized center of the building, observed from the ground

surface (21/201 degrees) and approaching the structure from the southern plaza-facing side. These preliminary investigations revealed the southern, plaza-facing basal wall. Excavations at Structure 17 continued during the 2008 season and lasted from February to April. All investigations were overseen by Lauren Schwartz. Initially a 1 x 37m trench was oriented 21/201 degrees and originated from the northern side of Structure 17 and extended through the Site Core Plaza and over Structure 12; all the while positioned across the ground-surface observed center of both buildings and included the area of the original 2006 excavations. This 37m trench was established to investigate Structures 12 and17 simultaneously and to sample the center of the Site Core Plaza, all from the same orientation. However, the excavated trench over Structure 17 only consisted of the northern-most 12 meters (sub-operation AB from the south and sub-operation AC from the north) in the 37m trench.

Excavations within this axial trench revealed northern and southern basal architecture, which was followed laterally to expose the full basal dimensions and interior summit features of Structure 17 (**Figure A.3**). All lateral excavations were carried out between March and April 2008. Lateral excavations along the southern basal wall extending to the east (sub-operation AG) exposed approximately 8m^2, the southeast corner and portions of the eastern basal wall. Lateral excavations along the southern basal wall extending to the west (sub-operation AJ) exposed approximately 9.5m^2, the southwest corner and portions of the western basal wall. Extending laterally along the northern basal wall to the east (sub-operation AH) encompassed approximately 7m^2, exposed the northeast corner and the remainder of the eastern basal wall. Extending

along the northern basal wall to the west (sub-operation AI) exposed nearly 8m^2 and revealed the northwest corner and the remainder of the western basal wall. Four sub-operations followed interior architecture and divided the summit of Structure 17 into northeast (sub-operation AL), southeast (sub-operation AM), northwest (sub-operation AK), and southwest (sub-operation AN) quadrants. A total of 26m^2 were excavated within all four of the sub-operations investigating the summit of Structure 17.

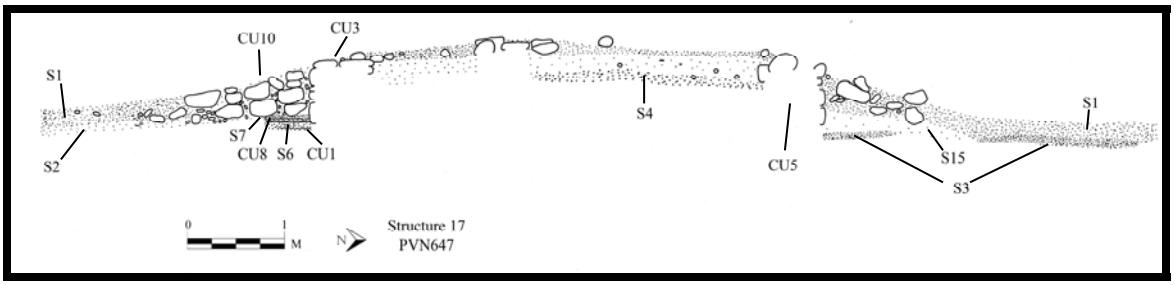

Figure A.3: Section drawing of Structure 17, PVN647.

Complete lateral excavations revealed the earliest known version of the structure to be approximately 5.75m (N-S) x 7.45m (E-W) and oriented roughly 89/269 degrees and was approximately 0.45-0.55m in height. Lateral summit excavations revealed an east-west aligned interior wall (6m long, 0.8m wide and 0.25m high), which divides the summit space into two large rectangular spaces; a northern room and a southern room.

Structure 17 is revealed to have a fairly uncomplicated building sequence and is comprised of a total of nine time spans. There are two phases of abandonment and burial, five defined phases of construction and modifications, and two phases of pre-construction. Of particular note, is the addition of a well-constructed square-shaped appendage abutting the southern, plaza-facing, basal wall. This construction element is

the only one of its kind observed by means of excavations within the Site Core Plaza Group, however, is similar to an appended construction along the plaza-facing basal wall of Structure 6 in the Southeast Plaza group. The majority of the construction material witnessed from Structure 17 is that of unmodified river cobbles but also supplemented with some limestone and basalt stones.

Time Span	Construction Phase	Construction Units	Stratum	Feature
1	Abandonment 2		Stratum 1	
2	Abandonment 1		Stratum 2 Stratum 4	
3	Str 17 – 1st	South appendage (CU10) East appendage (CU11) Cobble surface (CU9)		
4	Str 17 – 1st a		Stratum 7	
5	Str 17 – 1st b	Summit dividing wall (CU7) Floor Surface (CU8)		
6	Str 17 – 1st c		Stratum 6 Stratum 15	
7	Str 17 – 1st d	South basal (CU3) East basal (CU4) North basal (CU5) West basal (CU6)		
8	Sub-structure	Pebble surface (CU1) Wall construction (CU2)		
9	Pre-construction & Natural Soil Deposition		Stratum 3	

Table A.3: Time spans and construction sequences for Structure 17

Time Span 9: Pre-construction & Natural Soil Deposition

The earliest time span revealed in excavations for Structure 17 was the natural soil deposition level composed of Stratum 3. Stratum 3 is identified to be hard-compacted dark brown, greasy clay (munsell 7.5YR 3/2) and is only witnessed along the northern

exterior of Structure 17 (sub-operation AC). This stratum level was initially observed approximately 0.2m below ground surface but was uncovered at a depth of 0.62m below ground surface immediately under the to-be assembled Structure 17, due to northward sloping nature of later soil contexts. A maximum exposed thickness of 0.08m was recorded. Stratum 3 contained no cultural debris, indicating a sterile soil depositional level; however, since excavations did not descend any deeper into this preoccupation soil level, the exact thickness remains unknown and presumably continues below the base of excavations.

Time Span 8: Sub-structure

The first construction phase observed is not associated with the formal construction of Structure 17, but consists of a prepared pebble surface (CU1) and a wall construction (CU2). Therefore, this time span is identified as a phase consisting of only a sub-structure, due to the lack of clear evidence for the formal architectural elements having been erected for Structure 17. The construction units witnessed during this phase only represent the earliest period of formal occupation, yet no formal construction of the building.

The first construction is that of a pebble surface (CU1) and was witnessed approximately 0.8m below ground surface along the south exterior of the to-be constructed Structure 17 (sub-operation AB). This pebble surface (CU1) is observed at the base of excavations and extends for 0.72m in profile. However, due to IHAH excavation protocols, investigations did not extend below the depth of this surface.

Therefore, the deepest extent of the pebble surface (CU1), what immediately lies beneath it, and the depth of sterile soil all remain unknown in this location. Finally, this cobble surface is observed under later construction units and this positioning supports the premise that it was established during an earlier period of occupation than the formal construction of architectural elements associated with Structure 17.

The other construction unit witnessed during this time span is that of a wall construction (CU2). This wall is observed to be a roughly north-south (177/357 degree) aligned wall and measure 1.10m in length, 0.55m in width, and 0.58m in height. This wall construction is witnessed along the interior of Structure 17 (sub-operation AM) and composed of oblong, possibly slightly modified, medium-sized river cobbles that were very specifically placed. It was witnessed to be four cobble courses in height and 2 cobble courses in width, with a significant amount of soil in between the cobbles. No observable chinking stones were observed to maintain the integrity of the wall. This wall construction is of a different construction type than other walls observed at PVN647 and is amongst the best preserved for Structure 17.

Of most important note of this earliest wall construction (CU2) is that it was observed between two later construction units and at a lower depth than a third summit construction unit. The northern most extend of this wall (CU2) remains unknown, as it extends under the later summit construction unit. The fact that this wall construction is at a lower depth than certain other construction units is evidence for it being of this earliest construction occurring at Structure 17.

Time Span 7: Structure 17 – 1st d

The earliest formal construction phase for Structure 17 witnessed the primary erecting of the building, consisting of the 4 basal walls: the south wall (CU3), east wall (CU4), north wall (CU5), and west wall (CU6).

The plaza-facing basal wall of Structure 17 is the south wall (CU3) and was observed to be an east-west (89/269 degree) aligned wall (sub-operations AB, AG, AJ, AM, and AN). The south wall measures 7.45m in length, ranges 0.8-0.92m in width, and ranges 0.32-0.7m in height. The variation in the height of this wall is due to the preservation of two vertical courses in some portions of the wall and a maximum of 3 courses in others. The coursing all witnessed the presence of chinking stones and other smaller cobbles to stabilize the mostly large to medium-sized unmodified river cobbles and few limestone and tuft cobbles. The south basal wall (CU3) extends to the east to form the southeast corner with the east basal wall (CU5), and joins with the western basal wall (CU6) to form the southwest corner for Structure 17. The middle-most portions of the south basal wall are the best preserved and witnessed to be 3 courses in height, however, neither the southeast nor southwest corners are well-preserved and witnessed to be the regions where only 2 courses survived after abandonment. The south basal wall (CU3) may have been erected by integrating with the previous wall construction (CU2 – Time Span 8), as the top course of the south basal wall is observed to incorporate this earlier wall construction. However, definitive evidence for complete inter-digitation of building materials from both construction units, which would support a hypothesis of simultaneous construction, was not witnessed.

The second identified construction unit during this time span is the east basal wall (CU4) and is identified as a north-south (176/356 degree) oriented wall (sub-operations AG, AH, AL. AM). It measures 5.84m in length, ranges 0.68-0.92m in width, and ranges 0.37-0.6m in height. This wall is contains 2-3 preserved vertical courses, supplemented with chinking stones. Similar to the south basal wall (CU3), this coursing variation is due to poor preservation in certain areas of the wall, where the upper-most course is witnessed to have completely slipped off or was in the process of slipping off to the east due to gravity. The majority of the building materials for the east basal wall are that of large-sized unmodified river cobbles, with few tuft and possibly flat-faced limestone cobbles. As mentioned, this construction unit forms the southeast corner with the south basal wall (CU3). The cobbles of the southeast corner were witnessed to be integrated and therefore constructed at the same time. The east basal wall (CU4) also extends to the north and forms the northeast corner of Structure with the north basal wall (CU5). This northeast corner is observed to also have been integration, indicating a contemporaneous building episode for each construction unit.

The north basal wall (CU5) is the third construction unit identified during this time span and defines the northern extent of Structure 17 (sub-operations AC, AH, AI, AK, and AL). This wall is oriented east-west (88/268 degrees) and measures 5.84m in length, ranges 0.61-0.65m in width, and ranges 0.15-0.64m in height. The height of this wall is observed to be the largest degree of variation in preserved wall height for this structure. The marked variation in height is due to the preservation of a range of 1-3 vertical courses. The north basal wall (CU5) is composed mostly of large to medium-

sized unmodified river cobbles, and supplemented with tuft and decaying limestone cobbles. The wall was observed to be supported by fist-sized chinking stones and other smaller cobbles. Similar to the east basal wall (CU4), the north basal wall is best preserved within the 2 lower-most courses. The top-most course has fallen or is in the process of falling out of place in various locations along the entire wall and due to various reasons. The most prominent explanation is due to recent natural disturbances of tree roots and animal burrows within the summit of the building; both of which have pushed the top course of cobbles out of their original positioning. The northeast corner of Structure 17 is created by the integration of the east basal wall (CU4) and the north basal wall. Likewise, this construction unit extends to the west and articulates with the west basal wall (CU6) to form the northwest corner. It is worth noting that the northeast corner has 2 preserved courses of cobbles; however, the northwest corner is significantly lower and is only witnessed to be approximately 1 course in height. The western-most extent of the north basal wall (CU5) displayed the poorest preservation and most evidence of natural disturbance.

The final construction unit witnessed during this time span is that of the west basal wall (CU6) (sub-operations AI, AJ, AK, and AN). This wall is oriented north-south (177/357 degrees) and measures 7.44m in length, ranges 0.62-0.79m in width, and ranges 0.21-0.56m in height. The west basal wall (CU6) is observed to range 2-3 vertical courses in height but is only 1 course in height at the northwest corner. It is mostly composed of large unmodified river cobbles and contains the least amount of chinking stones of all of the basal wall constructions from Structure 17. As previously mentioned

this west basal wall articulates with the north basal wall (CU5) and forms the northwest corner, although poorly preserved due to natural disturbance. The southwest corner of Structure 17 is also formed by the integration of the west basal wall with the south basal wall (CU3) and is amongst the best preserved basal corners observed from Structure 17.

Time Span 6: Structure 17 – 1st c

Two separate soil contexts are deposited during this time span along the north and south exteriors of Structure 17. Stratum 6 is witnessed along the south, plaza-facing exterior, while Stratum 15 is observed along the north exterior.

The first soil deposit of Stratum 6 is witnessed in profile and immediately above the pebble surface (CU1 – Time Span 8) along the exterior of the south basal wall (CU3 – Time Span 7). It is approximately 0.75m below ground surface and had an observed thickness of 0.06m (sub-operation AB). This soil layer was composed of dark grayish brown soil (munsell 10YR 4/2) with very fine white flecks of inclusions and trace amounts of cultural material. The highest extent of this soil layer is approximately 0.02m above the base of the south basal wall (CU3 – Time Span 7) and is identified as being deposited after the construction of this wall. It is not definitively known whether Stratum 6 is the result of activities associated with occupation or purposely deposited as a formal fill layer in preparation for later construction episodes in this region along the southern exterior. Therefore, it is simply identified as a soil layer.

The second soil context identified during this time span is that of Stratum 15 and it is observed immediately above the sterile soil of Stratum 3 (Time Span 9) and along the

exterior of the north basal wall (CU5 – Time Span 7). It is first visible between 0.2-0.38m below ground surface and extends to a range depth of 0.32-0.62m below ground surface (sub-operation AC). Stratum 15 is described as very dark brownish-gray dense soil (munsell 10 YR 3/2) with high clay content and white flecks of inclusions. This soil is fairly similar in composition to the sterile soil context of Stratum 3, observed immediately below it. However, Stratum 15 contains trace amounts of cultural material, but is also witnessed to abut and cover the deepest course of cobbles associated with the north basal wall (CU5 – Time Span 7). Therefore, it is hypothesized that the north basal wall (CU5) was assembled first and Stratum 15 was purposely deposited to aid the support at the very base of this wall and to level out the surface along the northern exterior of Structure 17.

Time Span 5: Structure 17 – 1st b

There are two additions to Structure 17 observed during Time Span 5. The first is an east-west aligned summit dividing wall (CU7) and the second, a prepared white surface (CU8) along the interior of the south basal wall (CU3 – Time Span 7).

The summit dividing wall (CU7) is an east-west (89/269 degrees) oriented construction and extends the entire interior length of Structure 17 (sub-operations AB, AK, AL, AM, and AN). It measures 6m in length, ranges 0.78-0.91m in width, and ranges 0.15-0.29m in height. This dividing wall is composed of a combination of medium to large-sized unmodified river cobble, limestone, tuft, and basalt stones and no evidence of chinking stones was observed. This wall is 1.1m north of the interior of the

southern basal wall (CU3 – Time Span 7) and abuts with the interior of the east basal wall (CU4 – Time Span 7) at its eastern extent and abuts with the interior of the west basal wall (CU6 – Time Span 7) at its western most extent. There is no evidence for the integration of this dividing wall with either of the basal walls, indicating its later construction. Likewise, this dividing wall is perpendicular to and at a higher elevation than the earlier wall construction (CU2) associated with the sub-structure from Time Span 8. The base of the summit dividing wall (CU7) is at the same depth as the top of the sub-structure wall (CU2) and there is no evidence that they integrate.

The second construction unit identified during this time span is a prepared floor surface (CU8), located along the plaza-facing, or exterior, of the south basal wall (CU3) (sub-operation AB). This prepared white floor surface is observed in profile to be situated immediately on top of Stratum 6 (Time Span 6) and measures to be only 0.02m in thickness. The makeup of this surface appears to be crushed and processed limestone yet is quite crumbly and its preservation is only moderately compacted. This surface is visible only in profile and is abutting the exterior of the south basal wall (CU3 – Time Span 7) and extends away from that wall to the south 0.9m. The surface is well preserved at its northern-most extent (immediately against the south basal wall (CU3)) and its preservation deteriorates approximately 1m away from the wall. It should be noted that this white prepared surface (CU8) is the second prepared layer that is observed in profile (along with Stratum 6 – Time Span 6). This prepared surface and soil layer is observed to be establishing the base for a later construction unit to be assembled immediate above it.

Time Span 4: Structure 17 – 1st a

The soil depositional level of Stratum 7 is the only observable occurrence during this time span and is in preparation for the construction episodes to occur during Time Span 3. Stratum 7 is a layer composed of grayish brown soil (munsell 10YR 5/2) with fine white flecks of inclusions, very small pebbles, and cultural debris. It first appears approximately 0.34m below ground surface and has a measured thickness of 0.03m. This layer is observed in profile to be deposited immediately above the prepared white surface (CU8 – Time Span 5), also abutting the south basal wall (CU3 – Time Span 7) and extending to the south 0.9m (sub-operation AB). It is undetermined as to whether this soil layer is purposeful in its location as a formal fill episode, or if it is present due to occupation and activities carried out on top of the prepared white surface (CU8), which it covers. Therefore, it is identified as a stratum level that occurred immediately above the prepared white surface (CU8) abutting the south basal wall.

Time Span 3: Structure 17 – 1st

The final time span associated with the occupation of Structure 17 witnesses the addition of two appendages along the south (CU10) and east (CU11) exterior basal walls, and a small-cobble surface (CU9) within the summit interior.

The larger of the two appendages, the south appendage (CU10), is positioned along and abuts the exterior of the south basal wall (CU3 – Time Span 7). The south appendage (CU10) is shaped as a square and measures 1.3m north-south and east-west, and has a height range of 0.2-0.4m (sub-operation AJ). It is positioned 2.2m east from

the southwest corner and 3.9m west from the southeast corner of Structure 17. Medium and large-sized unmodified river cobble compose the majority of the construction material of this plaza-facing appendage, but it is also supplemented with limestone and tuft cobbles. The presence of chinking stones was also observed in between the larger cobbles. The south appendage (CU10) is constructed on top of the depositional soil layer of Stratum 7 witnessed within Time Span 4. The previous layering of surfaces and soil deposits are hypothesized to be in preparation for the construction of the south appendage. The location of this appendage is significant as being positioned along the plaza-facing side of Structure 17 and is the only one of its form within the Site Core Plaza Group. However, there is a similar appendage feature in a nearly analogous position along the plaza-facing exterior of Structure 6 within the Southeast Plaza Group.

The second appendage addition witnessed during this time span is along and abutting the east basal wall (CU4 – Time Span 7) and is identified as the east appendage (CU11). This appendage is observed to be oriented north-south (176/356 degrees) and measures 1.3m in length (sub-operation AG). It has a height range of 0.14-0.22m, a width of 0.47m, and it is positioned 1.1m north of the southeast corner and 3.1m south of the northeast corner of Structure 17. The 9 medium-sized unmodified river cobbles that compose this appendage are preserved to be 2 courses wide and only 1 course in height. However, there are 2 cobbles preserved to be stacked on top of each other at the northeast-most extent of this addition. It is unclear whether this appendage served as a "step" feature along the eastern side of Structure 17 as there is little preserved evidence

for an entrance in the immediate area with the corresponding architecture of the east basal wall (CU4 – Time Span 7).

The final construction unit witnessed during this last time span of additions and modifications is the presence of a small cobble surface, labeled cobble surface (CU9), within the summit of Structure 17. This cobble surface (CU9) is located immediately along the north facing of the summit dividing wall (CU7 – Time Span 5) and at its eastern-most extent, before it abuts with the interior of the east basal wall (CU4 – Time Span 7). It extends 1.16m east-west along the north facing of the summit dividing wall (CU7) and extends away from the summit dividing wall to the north 0.95m. Composed of small and fist-sized unmodified river cobbles of roughly all the same dimensions, this cobble surface (CU9) is witnessed at the same elevation along the summit dividing wall (CU7). In accordance with IHAH protocols, excavations did not penetrate this prepared surface and therefore, its fullest depth or potential underlying context remain unknown.

Time Span 2: Structure 17 – Abandonment 1

The first indications for abandonment for Structure 17 are witnessed during this time span. The evidence for abandonment consists of the presence of two separate stratum levels: Stratum 4 within the summit interior and Stratum 2 observed along the exterior of Structure 17.

Stratum 4 is witnessed within the summit interior of Structure 17 (sub-operations AB, AC, AK, and AN). It was first observed between 0.03-0.14m below ground surface and continued to a range depth of 0.32-0.38m below ground surface, which is the base of

excavations within the summit interior. This stratum level consisted of a brown fine soil (munsell 7.5YR 4/2) with inclusions of fine white flecks and cultural terminal debris in the form of broken pieces of pottery, lithic fragments, and small cobbles associated with construction tumble (wall fall). Therefore, no evidence remained to associate this specific strata level with a period of formal occupation and use of the building due to the cultural and tumble composition.

The second strata level associated within this time span is that of Stratum 2, witnessed on the southern exterior (plaza-facing) of Structure 17 (sub-operations AB, AG, and AJ). This stratum level consists of dark grayish brown topsoil (munsell 7.5YR 3.5/1.5) and is witnessed across most of the investigated structures and open spaces within the Site Core Plaza Group. Stratum 2 also included cultural terminal debris of broken pieces of pottery, lithic fragments, bajareque chunks, and cobble tumble associated with the south basal wall (CU3) and the south appendage (CU10). The fallen construction cobbles are small to medium in size and smaller than those witnessed within Stratum 1 associated with the final period of abandonment for Structure 17. Stratum 2 was first witnessed 0.2m below ground surface and exposed to be approximately 0.10m thick. However, the base of this strata level was not achieved in the southern excavations along the exterior of Structure 17.

Time Span 1: Structure 17 – Abandonment 2

Time Span 1 represents the final phase of abandonment for Structure 17, as indicated by the burial of the building by topsoil and tumble of construction materials as

the building decayed. Stratum 1 is the final soil deposition layer and the only element from this time span.

Stratum 1, which was recovered throughout the Site Core Plaza Group, is described as very dark gray organic topsoil (munsell 7.5YR 3/1) with cultural terminal debris of broken pottery, lithic fragments, and bajareque chunks. Additionally, the majority of the cobble tumble from Structure 17, especially along the northern exterior, is present in this stratum layer. This final depositional layer is observed to range from 0.16-0.18m thick on both the north and south (plaza-facing) exteriors and 0.03-0.14m thick within the interior of Structure 17.

Structure 18

Located within the northwest region of the Site Core Plaza Group, Structure 18 is the western-most investigated structure within this group and is positioned approximately 15m west of Structure 17. Additionally, Structure 18 is flanked by Structure 19 to the north (6m away), Structure 20 to the west (7m away), and Structures 34 and 35 to the southwest (approximately 21m and 12m away, respectively). Structure 18 was selected for investigation for its location and being representative of the western portion of the Site Core Plaza. Moreover, the surface-visible preservation and lack of disturbance made Structure 18 the best candidate for study, compared to neighboring structures in this region of the Site Core, which appeared to have been disturbed or formally looted. The goal of excavations of Structure 18 was to further reveal architectural designs and construction styles from the Site Core Plaza Group.

Investigations of Structure 18 were initiated in 22 April 2008 and directed by Honduran student Roberto Ramirez. Ramirez established a 1 x 8m axial trench oriented 170/350 degrees and revealed the northern and southern basal architecture (sub-operations CA and CB, respectively) (**Figure A.4**). The north and south basal walls were followed laterally to expose partial basal dimensions and interior features. Lateral excavations along the southern wall extending to the east revealed the southeast corner, east basal wall, northeast corner, and portions of the north basal wall and the interior of Structure 18 east of the axial trench (sub-operation CC); a total exposure of 18m^2. Likewise, lateral excavations to the west along the southern basal wall revealed the southwest corner, west basal wall, northwest corner, and portions of the north basal wall and the interior of the structure west of the axial trench investigations (sub-operation CD); in total, an additional exposed 18m^2.

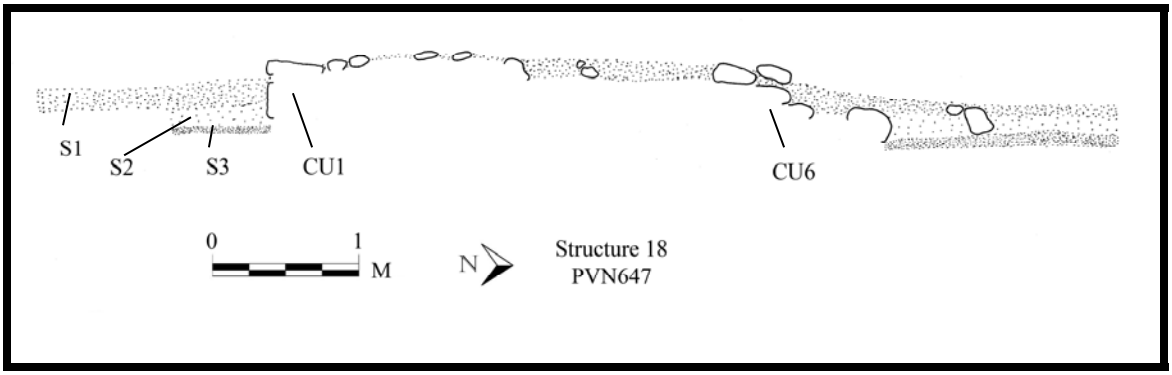

Figure A.4: Section drawing of Structure 18, PVN647.

Due to logistical reasons, Ramirez's excavation direction ended on 28 April after revealing approximately 5 of the 9 identified construction units from Structure 18.

Excavation direction was taken over by Lauren Schwartz and continued from 5-14 May 2008. The goal of these investigations concentrated on clarifying an interior wall feature identified by Ramirez and exposing 2 flanking appendage features abutting the east and west basal walls, respectively, that were previously unknown.

The combination of all lateral excavations revealed the earliest known version of Structure 18 to be approximately 4.5m (N-S) x 4.3m(E-W) and oriented 70/250 degrees and approximately 0.5m in maximum height. Lateral excavations within the western half of the summit (sub-operation CD) revealed a north-south aligned wall construction that is hypothesized to be the initial version of the western-most wall for the building during one of the earliest versions of the structure. Approximately in the middle of the interior of the structure was uncovered the remnants of a poorly preserved plaster surface (sub-operations CB and CC). Along the exterior of the building were uncovered traces of a bajareque prepared surface along the central portion of the west basal wall; as well as the 2 appendage features positioned along the east and west basal walls near the southeast and southwest corners. Structure 18 was constructed to this final, preserved form by means of one main construction phase, followed by two episodes of modification and expansion. These three construction phases are preceded by one period of preconstruction and two separate periods of abandonment, decay, and burial; resulting in a total of 6 observed time spans for Structure 18.

Time Span	Construction Phase	Construction Units	Stratum	Feature
1	Abandonment 2		Stratum 1	
2	Abandonment 1		Stratum 2	
3	Str 18 – 1st	Bajareque surface (CU7) East appendage (CU 8) West appendage (CU9)		
4	Str 18 – 1st a	West basal 2 (CU5) North basal (CU6)		
5	Str 18 – 1st b	South basal (CU1) East basal (CU2) West basal 1 (CU3) Plaster surface (CU4)		
6	Pre-construction & Natural Soil Deposition		Stratum 3	

Table A.4: Time spans and construction sequence for Structure 18.

Time Span 6: Pre-construction & Natural Soil Deposition

The presence of Stratum 3 represents the earliest time span identified for Structure 18. This natural soil deposition level, observed throughout the Site Core Main Plaza, consists of hard-compacted dark brown, greasy clay (munsell 7.5YR 3/2). It is observed to be devoid of any cultural debris or evidence for previous human activity, and therefore identified as the sterile depositional level. Along the north and south exteriors of Structure 18, Stratum 3 was witnessed at 0.22m and 0.34m below ground surface (sub-operations CB and CA, respectively), with an exposed maximum thickness of 0.1m. The exact thickness of this sterile level remains unknown as excavations did not continue below these depths.

Time Span 5: Structure 18 – 1st b

The earliest evidence for formal construction associated with Structure 18 is observed with the south basal wall (CU1), the east basal wall (CU2), the first of two

western walls (CU3), and the preservation of a fragmented prepared plaster surface (CU4).

The south basal wall (CU1) is identified to be amongst the best built and best preserved construction unit of Structure 18 from this time span. This roughly east-west (69/249 degree) aligned wall (sub-operations CA, CC, and CD) was observed to be 4.3m in length. The mostly 2 course high wall was observed to range from 0.28-0.4m in height and 0.62-0.72m in width. The south basal wall is composed of a combination of large unmodified river cobbles and medium-sized limestone cobbles. At the eastern most extent, the south basal wall (CU1) articulates with the east basal wall (CU2) to form the southeast corner. This corner is amongst one of the best preserved for Structure 18 and was witnessed to clearly inter-digitate with the east basal wall (CU2), indicating that they were constructed at the same time. At the western extents of south basal wall (CU2), it articulates with west wall 1 (CU3). It is hypothesized that the south basal wall (CU1) and west wall 1 (CU3) were constructed contemporaneously, as there were at least 2 cobbles that appeared to be integrated between the two distinct construction units. The region along the northern facing of the southern basal wall (CU1), where it integrates with west wall 1 (CU3), is not the western-most extent of the southern basal wall. The remainder of the southern basal wall (CU1) west of the connection with west wall 1 (CU3), which includes the region of the later established southwest corner, is not as well-preserved as the rest of the construction unit. The western-most approximately 0.6m of the south basal wall (CU1) does not articulate with any other construction unit during this time span and simply comes to an end.

The east basal wall (CU2) of Structure 18 was observed to be a north-south (164/344 degree) aligned wall (sub-operation CC). This wall was 4.5m in length, witnessed a height range of 0.19- 0.4m, and a width range of 0.36-0.42m. The variation in recorded height is due to the observation that portions of the east wall were 2 courses in preserved height, while the remainder of the wall was witnessed to be only 1 course in height. The construction material for this wall included 3 medium-sized, slightly modified and flat-sided river cobbles in the middle of the wall, but was mostly composed of medium and large unmodified river cobbles, with a few limestone cobbles, and the sporadic inclusion of chinking stones. The east basal wall (CU2) extends to the north but does not articulate with any other construction unit during this time span. However, the east wall (CU2) and the south wall (CU1) are identified to have been constructed at the time, as they are witnessed to inter-digitate with each other. As previously stated, these construction units form the southeast corner of Structure 18.

The third wall assembled during this time span is west wall 1 (CU3). This wall was assembled in a very similar orientation to the east wall (CU2) and was observed to be a roughly north-south (164/344 degree) aligned wall and 3.4m in length (sub-operation CD). It witnessed a height range of 0.33-0.43m and a width range of 0.56-0.7m. The fairly consistent height for this wall is due to the nearly complete preservation of both of the 2 vertical courses, which were a combination of large to extra large unmodified river cobbles and limestone cobbles. Interestingly, the bottom course was composed of mostly unmodified river cobbles and the top course was composed of mostly limestone cobbles. West wall 1 (CU3) extends to the north but does not articulate with any other construction

unit during this time span simply comes to an end. However, west wall 1 (CU3) articulates with the south wall (CU1) and possibly with the fragmented plaster surface (CU4) within the summit interior of Structure 18. As previously stated, the positioning of 2 cobbles shared between west wall 1 (CU3) and the south wall (CU1) serve as evidence that they were constructed simultaneously. The fragmented plaster surface (CU4) is mentioned to possibly be associated with west wall 1 (CU3) because they are in very close proximity to each other (approximately 0.07m to the east), however, were not observed to formally touch. Furthermore, the fragmented plaster surface (CU4) is observed to be 0.02m below west wall 1 (CU3). Since they were not observed to formally meet anywhere along west wall 1 (CU3) and the fragmented plaster surface (CU4) does not appear to continue under west wall 1(CU3), it is indeterminable to distinguish which construction unit was constructed first.

The final construction unit identified during this time span is the presence of a fragmented plaster surface (CU4) located within the interior of the summit space of Structure 18 (sub-operations CB and CC). Due to the poor preservation in certain portions of this plaster surface, a general area of 0.82 x 0.56m was recorded to represent the full extent of the exposed surface. Loose fragments of the plaster had an average thickness of 0.15m and were of a white, densely compacted consistency with fine black flecks of inclusions. The fragmented nature of the preserved portions of the surface could possibly be due to its close proximity to the natural ground surface, as it was uncovered at an average depth of 0.01m below ground surface. Even at its farthest extents, the surface was not observed to make formal contact with any other identified construction

unit. The closest construction unit is west wall 1 (CU3) to the west at an approximate 0.07m distance away. The result of Structure 18 during this time span is that it is a 3-sided construction, as no construction unit it witnessed along the northern region of the building.

Time Span 4: Structure 18 – 1st a

Structure 18 witnesses the addition of 2 walls during Time Span 4. The assemblage of a second west wall – west wall 2 (CU5) and the north wall (CU6) simultaneously expands and encloses the interior dimensions of Structure 18.

The construction unit that expanded the boundaries of Structure 18 is the addition of west wall 2 (CU5), assembled 0.75m west of the original western-most boundary – west wall 1 (CU3 – Time Span 5). This wall was observed to be a roughly north-south (167/347 degree) aligned wall (sub-operation CD) and is 4.31m in length. West wall 2 (CU5) has a range width of 0.56-0.7m, a range height of 0.14-0.42m, and predominantly made up of large-sized unmodified river cobbles. Even though the river cobbles appear to have been unmodified, at least half of the cobbles from west wall 2 (CU5) were observed to have naturally occurring flatter surfaces and, therefore, purposely selected and positioned to be facing outward (west) from Structure 18. The height range of west wall 2 (CU5) is due to the varying preservation of both of the 2 courses that makeup the wall. Additionally, this wall forms the northwest corner of Structure 18 with the north wall (CU6) as they were observed to be integrated, and therefore, constructed at the same time. The north wall was not constructed as well as west wall 2 but the presence of inter-

digitating cobbles indicates a shared construction episode. West well 2 (CU5) also joins with south wall (CU1 – Time Span 5) to form the southwest corner for Structure 18. As previously mentioned, the south wall originally ended and did not articulate with any other construction unit at its final extent during Time Span 5. Yet, during this time span, west wall 2 (CU5) is assembled to articulate with the end of the south wall (CU1) and create the southwest corner of Structure 18. However, this corner was not very well preserved and contained a lot of tumbled cobbles. Therefore, the exact relationship of articulation between the western-most 0.6m of the south wall (CU1 – Time Span 5) and west wall 2 (CU6) was difficult to discern. Since west wall 2 (CU5) is identified as a later construction, it is believed it was assembled to simply abut the preexisting south wall.

The second addition to Structure 18 constructed during this time span is the north wall (CU6). This wall is a roughly east-west (71/251 degree) aligned wall (sub-operations CB, CC, and CD) and measures 3.83m in length, ranging in height from 0.1-0.14m, and averaging a width of approximately 0.7m. Construction materials for this north wall were a mixture of large to extra large unmodified river cobbles and limestone. The consistency with the height of this wall is due to only 1 preserved vertical course being identified from all of the tumbled cobbles and construction materials from the northern limits of Structure 18. Due to its poor preservation, the ways in which the north wall (CU6) articulates with other construction units was challenging to recognize. The three construction units that the north wall (CU6) articulate with are the east wall (CU2 – Time Span 5), west wall 1 (Time Span 5), and west wall 2 (Time Span 4). At its eastern-

most extent, the north wall forms the northeast corner with the east wall. The north wall did not show clear evidence of abutting the east wall, considering the east wall was constructed first. Overall, the northeast corner is suspected as not having been well established at the time of assemblage, and therefore, not able to withstand decay over time. Similarly the northwest corner of Structure 18 is formed by the north wall and west wall 2. The northwest corner did not observe the best preservation of all of the corners for Structure 18, but it was identified that the construction materials from the two walls were integrated. The final construction unit that the north wall (CU6) articulates with is west wall 1 (CU3 – Time Span 5). Due to the extreme poor preservation of the north wall (and especially in the middle section of the wall), the nature of the relationship between it and the northern extents of west wall 1 was difficult to determine. The goal may have been to construct the north wall to abut the pre-established west wall 1, however, it remains unclear. Approximately, the north wall was assembled approximately 1m to the north of the fragmented plaster surface (CU4 – Time Span 5). However, it is not witnessed that the formally articulate in any way. Overall, the north wall represents the poorest assembled construction unit for all of Structure 18.

Time Span 3: Structure 18 – 1st

Time Span 3 represents the final observed episode of construction and expansion of Structure 18. A total of 3 construction units are associated with the exterior of the building and consist of 2 flanking appendage features along the east and west sides (CU8

and CU9, respectfully) near the southern corners, and a prepared bajareque/burnt earth surface (CU7) along the western exterior.

The first of 2 appendage constructions associated with this time span is the east appendage (CU8). It is described as a u-shaped construction abutting the exterior of the east basal wall (CU2 – Time Span 5) at the southeast corner (sub-operation CC). The u-shape of this appendage is characterized by it being composed of 3 distinct walls (2 parallel to each other and one connecting the 2 parallel walls) and all being constructed at the same time. It is roughly oriented north-south (164/344 degree) and is measured to be 1.8m in length. This appendage is 1 course tall and composed of unmodified river cobbles, small to medium in size. The largest cobble from this construction unit appears to have a naturally occurring flat-facing and is positioned with that flat-facing to the exterior as the cornerstone and marks the southeastern-most extent of Structure 18. The east appendage is observed to abut and extend approximately 0.7m to the east of the east basal wall (CU2), but with an average construction wall width on all 3 sides of 0.4m and height range of 0.19-0.36m. Therefore, the complete calculated area of the east appendage is approximately 1.26m^2, with an interior area of 0.48m^2 consisting of soil fill material and no cobble construction.

Similar in construction and orientation to the east appendage (CU8) is the west appendage (CU9), which is also observed to be a u-shaped construction feature abutting west wall 2 (CU5 – Time Span 4) at the southwest corner (sub-operation CD). It has an observed roughly north-south (160/340 degree) orientation and is measured to be 1.9m in length. This west appendage is 1 course tall and composed of a total of 15 cobbles, all of

which are unmodified river cobbles of various sizes (small to large), except the southwest cornerstone cobble is a large limestone cobble. This appendage is observed to abut the earlier southwest corner formed by west wall 2 (CU5 – Time Span 4) and the south wall (CU1 – Time Span 6) and extend to the west 0.54m. It has an average construction wall width of 0.4m on all 3 sides and height range of 0.09-0.11m. The complete calculated area of the west appendage is approximately 1.06m2; with an interior area of 0.56m2 consisting of soil fill material and no cobble construction.

Overall, the east appendage (CU8) and the west appendage (CU9) share very similar construction and orientation characteristics and represent symmetrical appendages to the east and west southern corner regions of Structure 18. However, their exact purpose or function in relation to the building is not entirely clear.

The final construction unit observed during this final time span associated with construction or modification, is the presence of a bajareque or burnt earth prepared surface (CU7) on the western exterior of the structure, along west wall 2 (CU5 – Time Span 4) and north of west appendage (CU9) (sub-operation CD). This prepared surface is measured to be approximately 0.44m in length and 0.6m in width and 0.35m north of the northern-most extent of the west appendage (CU9). It was observed to be in very close proximity (1 to 2 cm) to west wall 2 (CU5 – Time Span 4), however, does not formally make contact in any way. The prepared surface is made up of a densely compacted, dark reddish brown (munsell 5YR 3/4) composition, forming a uniform and un-fragmented surface. Due to established IHAH excavation protocols, a thickness of the surface could not be measured, as excavations are not permitted to penetrate beneath the top level of the

prepared surface. However, the top of the prepared surface was observed to be at a similar depth as the base of west wall 2 (CU5 – Time Span 4), indicating that this surface was not constructed before the assemblage of west wall 2. The possibility exists that they were constructed at the same time; however, due to a lack of evidence indicating simultaneous construction, this bajareque surface is being designated as a later addition, after the construction of west wall 2. Furthermore, this area of the prepared surface appears to be the only portion preserved, as it was not observed in any other location along west wall 2 or in any other location in and around Structure 18.

Time Span 2: Structure 18 – Abandonment 1

The first indication of abandonment associated with Structure 18 is by the presence of a terminal debris soil context witnessed along the exterior of the building (sub-operations CA and CB). This stratum level has been identified as Stratum 2 and is observed along the exterior of the north basal wall (CU6) and the south basal wall (CU1), as well as in other investigated regions of the Site Core Plaza Group at PVN647. Similar to the other locations, this stratum is described as being a dark grayish brown soil layer (munsell 7.5YR 3.5/1.5) and includes cultural terminal debris in the form of broken pottery, lithic fragments, bajareque chunks, and only slight cobble tumble associated with the decay of the walls. Stratum 2 is situated on top of Stratum 3 (Time Span 6) and was witnessed to range in thickness from 0.12-0.2m and was observed to range 0.08-0.2m below ground surface.

Time Span 1: Structure 18 – Abandonment 2

The final phase of abandonment associated with Structure 18 is indicated by Stratum 1, which is the final soil layer responsible for the burial of the building. This stratum level is observed both on top and along the northern and southern exteriors of Structure 18 (sub-operation CA and CB), as well as associated with other investigated structures from the Site Core Plaza Group. It is described as a very dark gray organic topsoil layer (munsell 7.5YR 3/1) with cultural terminal debris of broken pottery, lithic fragments, and bajareque chunks. Very little cobble tumble is associated with this strata, possibly due to the overall low height of Structure 18 (maximum preserved height of 0.43m). This final depositional layer is observed to have a thickness range of 0.08-0.22m on both the north and south exteriors and a range thickness of 0.1-0.14m within the interior of Structure 17.

Structure 33

Identified to be the most off-plaza structure investigated within the Site Core Plaza Group, Structure 33 is located in the southeast region and categorized as being on the outer-most margins of this group. Most likely due to its low-lying nature, Structure 33 was not detected from the ground surface during the preliminary 2006 field season, but was identified and fully excavated in 2008. Structure 33 is positioned 2m south of Structure 14; 10m east of the southeast corner of Structure 11; and 3m to the northeast of the northeast corner of Structure 10. None of these neighboring structures were formally investigated and no additional buildings were observed from the ground surface to the

immediate east and southeast of Structure 33. It is approximately 30m northwest of the East Group. Therefore, Structure 33 was selected for investigation to better understand the design, function, and architectural construction styles of a building that is located on the periphery of the Site Core Plaza Group. Additionally, Structure 33 was chosen for study because from the ground surface it appeared to have been undisturbed, and therefore in good preserved condition.

Excavations at Structure 33 commenced on 25 April 2008 and continued until 19 May 2008. All excavations of Structure 33 were carried out by Lauren Schwartz. Investigation of Structure 33 was initiated with a 1 x 9m axial trench, oriented 94/274 degrees and positioned across the ground surface observed center of the building (sub-operations AW and AX) (**Figure A.5**). Excavations within the axial trench revealed the eastern and western basal architecture. Both of these basal walls were followed laterally to reveal the northern and southern basal walls and eventually the complete interior of Structure 33 (sub-operations AY and AZ). The west basal wall was followed laterally to the south to reveal the southwest corner of Structure 33, the complete southern basal wall, the southeast corner, and all interior summit features south of the axial trench. In total this exposed approximately 15.5m2 and the entire southern half of the building (sub-operation AY). The remainder of the west basal wall was followed laterally to the north to reveal the northwest corner, all northern basal architectural constructions, the northeast corner, and all interior summit features north of the axial trench. In total these excavations exposed approximately 12.5m2 and the entire northern half of Structure 33 (sub-operation AZ).

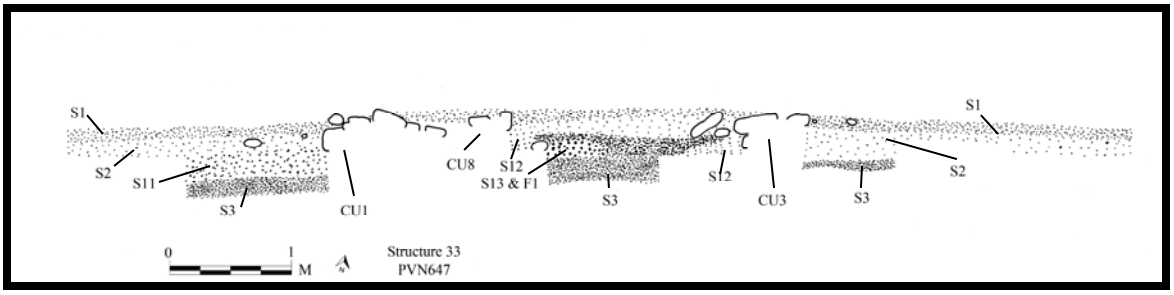

Figure A.5: Section drawing of Structure 33, PVN647.

Complete excavations of Structure 33 revealed the earliest known version of the building to be approximately 4.6m (N-S) x 3.45m E-W), oriented approximately 5/185 degrees, and measuring 0.2m in height. Structure 33 contained only one interior architectural construction: a summit dividing wall in the western region of the interior and roughly aligned north-south. Additionally, the remains of a burial feature were recovered from within the summit interior of Structure 33. This burial feature was the only formally investigated feature of its type recovered from all excavations conducted at PVN647.

The final version of Structure 33 witnesses the addition of multiple extensions to the northern facing of the building. Approximately 2 north basal appendage constructions were added over time to Structure 33. Each addition abutted the previous and extended the overall northern boundary of the building approximately 2.5m to the north. One final appendage addition is positioned beginning at the northwest corner and extending to the east along the northern-most appendage addition. However, this appendage addition is not observed to extend the full length to the northeast corner and ends half-way along the northern exterior. With the addition of this last appendage, the

northern-most construction unit associated with Structure 33 is only 2m away from neighboring Structure 14 to the north. Structure 14 was not formally investigated; however, there was no preserved architectural evidence from Structure 33 to reveal the buildings were structurally linked to each other.

Overall, Structure 33 is revealed to have low-lying basal architecture and relatively simple interior summit constructions. Of the most intriguing construction design from this building are the northern appendage additions, which were revealed to be layered and assembled immediately abutting to each other to extend the northern facing of Structure 33. This form of architectural design is not witnessed in any other investigated structure from PVN647.

Time Span	Construction Phase	Construction Units	Stratum	Feature
1	Abandonment 2		Stratum 1	
2	Abandonment 1		Stratum 2	
3	Str 33 – 1st	Summit wall (CU8)		
4	Str 33 – 1st a		Stratum 14	
5	Str 33 – 1st b		Stratum 13	Burial (F1)
6	Str 33 – 1st c	NW appendage (CU7)		
7	Str 33 – 1st d	North appendage 2 (CU6)		
8	Str 33 – 1st e	North appendage 1 (CU5)		
9	Str 33 – 1st f	North Wall (CU4)		
10	Str 33 – 2nd	East Basal (CU3)		
11	Str 33 – 2nd a	West Basal (CU1) South Basal (CU2)		
12	Pre-construction		Stratum 11 Stratum 12	
13	Natural Soil Deposition		Stratum 3	

Table A.5: Time spans and construction sequence for Structure 33 (formally Structure A)

Time Span 13: Natural Soil Deposition

The natural soil depositional level marks the earliest time span associated with the excavations of Structure 33. This soil context is witnessed in other locations within the Site Core Plaza Group and is labeled Stratum 3. It is described as hard-compacted dark brown, greasy clay (munsell 7.5YR 3/2) and is identified as the sterile soil level, as it is devoid of any cultural material. Stratum 3 was witnessed on both the eastern and western exteriors (sub-operations AX and AW, respectively) of Structure 33, as well as in the summit interior (sub-operation AX). Along the western exterior, Stratum 3 was first observed approximately 0.4m below ground surface and extended to a depth of 0.6m below ground surface. Along the eastern exterior, Stratum 3 was first observed 0.3-0.4m below ground surface and had an average exposed thickness of 0.1m. Within the interior of Structure 33, Stratum 3 was observed approximately 0.4m below ground surface and had an average exposed thickness of 0.21m. The complete depth of Stratum 3 remains unknown as excavations did not continue any deeper beyond the depths previous mentioned. But it is presumed that this sterile context continues below the base of excavations.

Time Span 12: Pre-construction

Before the formal construction of Structure 33 is witnessed, Stratum 11 and Stratum 12 were recognized in two separate regions that would later be designated as exterior and interior to the not-yet constructed building. These soil contexts are hypothesized to have been deposited before the construction of Structure 33 because they

are observed at depths lower than any identified construction units, but are not considered sterile soil because they contain cultural debris.

Stratum 11 is located along the western exterior of Structure 33 (sub-operation AW). It is described as a slightly dense, very dark gray soil (munsell 10YR 3/1) with fine white flecks of inclusions and very few to no small pebbles. As previously mentioned, Stratum 11 is witnessed to contain broken pottery and cultural material in the form of lithic fragments and bajareque chunks. Stratum 11 is witnessed immediate above the identified sterile soil context, Stratum 3 (Time Span 13), and first appears approximately 0.2m below ground surface and extends to a depth of 0.4m below ground surface. The depositional location places Stratum 11 immediately above the sterile soil of Stratum 3 and immediately at the base of the western-most (not yet assembled) construction unit associated with Structure 33.

The second soil context identified during this time span is Stratum 12, located within the summit interior of Structure 33 (sub-operation AX). Stratum 12 is witnessed to be a slightly dense, very dark gray soil (munsell 10YR 3/1) with dense white flecks of inclusions, very few to no small pebbles but containing broken pottery and cultural material in the form of lithic fragments and bajareque chunks. The soil color and composition of Stratum 12 is very similar to Stratum 11, however Stratum 12 is observed to contain significantly more white flecks of inclusions. Stratum 12 is identified in 2 locations within the summit interior. In the first location it is witnessed to appear approximately 0.22m below ground surface and immediately below the base of an interior construction unit that is assembled later during the occupation of Structure 33

(CU8 – Time Span 3). In this region it is measured to extend to a depth of 0.32m below ground surface. In the second location, approximately 1.2m to the east from the first location where it was observed, Stratum 12 appeared approximately 0.3m below ground surface and immediately below the base of a different construction unit that is assembled during a later time span (CU3 – Time Span 10). In this second region, Stratum 12 is observed for approximately 0.03-0.05m and appears immediately above the sterile soil, Stratum 3, witnessed in the summit interior of Structure 33 (Time Span 13). It is believed that in this second location, Stratum 12 was witnessed to be disturbed in order to inter a burial during later occupation phases of the building (F1 – Time Span 5). It is possible that Stratum 11 and Stratum 12 were purposeful soil fill units and deposited at the same time in preparation for the formal construction episodes of Structure 33.

Time Span 11: Structure 33 – 2nd a

The earliest formal construction phase associated with the assemblage of Structure 33 is witnessed with the identification of 2 basal walls: the west wall (CU1) and the south wall (CU2).

The west basal wall (CU1) was observed to be a roughly north-south (4/184 degree) aligned wall (sub-operations AW, AY, and AZ). It was measured to be approximately 4.07m in length, ranged 0.82-0.97m in width, and ranged 0.21-0.27m in height. Composed mostly of medium to large-sized unmodified river cobbles and a few large limestone cobbles, the west basal wall (CU1) was observed to mainly 1 course in height. However, the unique construction design of this wall is that the exterior facing

cobbles were observed to be arranged on-end, so that the length of each cobble faced outward, as oppose to the more observed practice of assembling long, narrow cobbles in stacks, or courses, to achieve the height of the wall. One river cobble associated with the exterior facing is believed to have been purposely faced, as the smoothness did not appear to be naturally occurring. The relatively wide width of the west basal wall (CU1) is due to 3 preserved horizontal courses. The interior facing of west wall (CU1) was witnessed to range 1-3 courses in vertical height and the cobbles were not witnessed to be positioned on-end, as was observed along the exterior facing. No chinking stones were observed as a construction material for this wall. The west basal wall (CU1) extends to the south and joins with the south basal wall (CU2) to form the southwest corner of Structure 33. These construction units are observed to be integrated and therefore constructed at the same time. The west basal wall (CU1) extends to the north but does articulate with any other construction unit during this time span.

The other construction unit associated with the initial assemblage of Structure 33 and identified during this time span is the south basal wall (CU2). This wall was observed to be a roughly east-west (93/273 degree) alignment and measure 3.45m in length, range 0.53-0.64m in width, and range 0.1-0.18m in height (sub-operation AY). The south basal wall is composed mostly of medium to large-sized unmodified river cobbles and is preserved to be only 1 vertical course in height. It is the size of the large cobbles that account for the variation in preserved height. The range of measured width of the south basal wall is due to the observation of 2 preserved horizontal courses. Unlike the west basal wall (CU1), the south basal wall (CU2) is not observed to have any

cobbles positioned on-end along its exterior facing. And unlike the west basal wall, it is not observed to have a formal interior facing, as it appeared ragged and without a flat interior facing. At its western-most extent, the south basal wall (CU2) forms the southwest corner of Structure 33 with the west basal wall (CU1). As each construction unit is preserved to be only 1 course in height where they meet to form the corner, it is concluded that they are integrated and therefore contemporaries. The south basal wall (CU2) extends to the east but does not articulate with any other construction unit during this construction episode.

Time Span 10: Structure 33 – 2nd

Only one construction unit is erected during this construction episode: the east basal wall (CU3). This wall is a north-south (179/359 degree) oriented wall that measures 4.09m in length, ranges 0.6-0.76m in width, and ranges 0.1-0.17m in height (sub-operations AX, AY, and AZ). The east basal wall is composed of unmodified river cobbles, ranging in size from medium to large. No chinking stones were observed; however, approximately half of the cobbles used in the wall were considerably rounded by natural erosion. Similar to the south basal wall (CU2), the east basal wall (CU3) stood only 1 course in vertical height, but 2-3 courses in horizontal width. The exterior facing of the east basal wall (CU3) makes use to medium-sized cobbles with naturally occurring flattened sides. The interior of the wall, again similar to the south basal wall (CU2), remains without a formal facing and appears ragged and uneven. At the southern-most extent of the east basal wall (CU3), it forms the southeast corner for Structure 33 with the

south basal wall (CU2) by means of abutment. However, the two construction units do not meet to form a right-angled corner, typically associated with the exterior of a structure. The shape of the southeast corner is more of an inset corner, created by the east basal wall (CU3) being constructed approximately 0.25m beyond where the south basal wall (CU2) ended. However, the possibility exists that the true shape of the southeast corner did not preserve well over time and that construction materials associated with the corner may have eroded away. At its northern-most extent, the east basal wall (CU3) does not articulate with any other construction unit during this construction phase.

Time Span 9: Structure 33 – 1st f

This time span is marked by the assemblage of the final basal wall associated with Structure 33. The north wall (CU4) is a roughly east-west (88/268 degree) aligned construction unit and it seals off the northern boundary of the building (sub-operation AZ). It measures 2.53m in length, ranges 0.36-0.46m in width, and has an observed minimum height of 0.2m. Composed mostly of large-sized unmodified limestone cobbles and supplemented with unmodified river cobbles, the north wall (CU4) is witnessed to be constructed 2 vertical courses in height. However, due to later construction units being erected immediately abutting the exterior of the north wall, prohibiting the access to the base of the construction unit, the true height of this wall could not be accurately measured. The interior of the north wall (CU4) was left ragged and without a formal facing, therefore the exact height could not be accurately measured from the interior facing of the wall. It was observed to be only 1 horizontal course in

width. At its eastern-most extent, the north wall (CU4) abuts with the western facing of the preexisting east basal wall (CU3 – Time Span 10). During this construction episode, a formal northeast corner is not formed. The north wall (CU4) abuts the interior (west facing) of the east basal wall (CU3) approximately 0.3m south of the end of the east basal wall. Likewise, at the western-most extent of the north wall (CU4), it abuts the interior (east facing) of the previously constructed west basal wall (CU1 – Time Span 11). Again, even though these construction units articulate in the northwest region of Structure 33, they do not yield a formal northwest corner for the building. The north wall (CU4) abuts with the interior (west facing) of the west basal wall (CU1) approximately 0.25m south of the end of the west basal wall.

Time Span 8: Structure 33 – 1st e

Assembled during this construction episode is the first appendage addition witnessed at Structure 33. North appendage 1 (CU5) is observed to be an east-west (90/270 degree) alignment, positioned immediately abutting the exterior of the north wall (CU4 – Time Span 9) (sub-operation AZ). This appendage measures 2.26m in length, ranges 0.4-0.5m in width, and a ranges 0.11-0.14m in height. Although, similar to the challenges faced with properly measuring the height of the north wall (CU4 – Time Span 9), the exact base of north appendage 1 (CU5) could not be established due to a later construction unit being assembled immediately abutting the exterior and blocking access to the base of CU5. Therefore, only 1 vertical course is visible from the top of north appendage 1 (CU5) and it remains unknown how many, if any, potential courses were

assembled underneath. North appendage 1 (CU5) is observed to be only 1 horizontal course in width and assembled from medium to large-size unmodified river cobbles. As previously mentioned, north appendage 1 (CU5) is constructed immediately abutting the exterior (north facing) of north wall (CU4 – Time Span 9). It also articulates by abutting with the interior (west facing) of the east basal wall (CU3 – Time Span 10) at its eastern-most extent. The result is a more formal northeast corner to the building than previously existed. Similarly, north appendage 1 (CU5) abuts the interior (east facing) of the west basal wall (CU1 – Time Span 11) at its western-most extent. The result in this region is a more formal northwest corner. However, in both regions, these are not the final versions of either of these northern corners.

Time Span 7: Structure 33 – 1st d

A second appendage addition is appended to the north facing of Structure 33 during this time span. North appendage 2 (CU6) is assembled immediately abutting the appendage added in the previous construction phase, north appendage 1 (CU5 – Time Span 8). This second appendage is an east-west (90/270 degree) aligned construction and measures 2.36m in length, approximately 0.3m in width, and ranges 0.2-0.26m in height (sub-operation AZ). This appendage contained some of the largest cobbles used in this northern region of Structure 33. Constructed of a combination of large to extra-large unmodified river cobbles and limestone cobbles, north appendage 2 (CU6) was recovered to be mostly 1 course in height, however, at the western-most extent, there is evidence for it once standing at least 2 courses in vertical height. Positioned abutting against the north

facing of north appendage 1 (CU5 – Time Span 8), this appendage extends to the east to abut with the east basal wall (CU3 – Time Span 10) and forms the northeast corner for Structure 33. This is the final version of this corner. To the west, however, north appendage 2 (CU6) does not extent to the end of the building but comes to an end approximately 1.5m from the end of the west basal wall (CU1 – Time Span 11). They do not articulate, as not other construction unit occupies this space during time construction episode.

Time Span 6: Structure 33 – 1st c

The final modification to the northern exterior of Structure 33 is the northwest appendage (CU7), which is added near the northwest corner (sub-operation AZ). The northwest appendage is described as an east-west (88/268 degree) aligned construction unit, which is situated between the northern-most extent of the west basal wall (CU1 – Time Span 11) and the western-most extent of north appendage 2 (CU6 – Time Span 7). It is positioned approximately 0.2m north of the exterior (north) facing of north appendage 1 (CU5 – Time Span 8) and constitutes the northern-most construction unit associated with Structure 33. Northwest appendage (CU7) measures 1.47m in length, 0.53 in width, and ranges 0.14-0.18m in height. It is composed of a total of 5 large, unmodified limestone cobbles and is only 1 course in both vertical height and horizontal width. As previously mentioned, at its eastern-most extent, the northwest appendage (CU7) abuts with the western-most extent of north appendage 2 (CU6 – Time Span 7) but is not positioned completely in-line with north appendage 2. The northwest appendage

(CU7) is positioned approximately 0.15m to the north and stands approximately 0.1m shorter than the top of north appendage 2. Also as previously discussed, at its western-most extent, the northwest appendage (CU7) articulates with the northern-most extent of the south basal wall (CU1 – Time Span 11) and forms the northwest corner. However, similar to the southwest corner of Structure 33 (see Time Span 9); the northwest corner was not witnessed to be a typical right-angle construction associated with the basal corners of buildings. The northwest corner appears to be another inset construction associated with articulating all of the previously assembled construction units in this region of the building. Due to the complex construction design and the northwest region of Structure 33 being the closest access to the main plaza of PVN647, it is possible that the northwest corner and corresponding construction units were associated with an entry point into the building.

Time Span 5: Structure 33 – 1st b

Structure 33 witnesses the interment of the most complete human burial recovered from all investigated areas at PVN647 during Time Span 5. Identified in the northern region of the summit interior, the burial feature (F1) and the surrounding soil context, Stratum 13, comprise the only elements observed during this occupation episode.

The partial remains of a human burial were witnessed in approximately the center of the summit interior of Structure 33 (sub-operation AX). The initial appearance of bone fragments associated with F1 was witnessed approximately 0.3m below ground surface and entire feature achieved a maximum depth of approximately 0.4m below ground

surface. The burial context was positioned approximately 0.8m south from the center of the interior (south) facing of north wall (CU4 – Time Span 9). The approximate limits of the burial feature were 1.5m east-west and 1m north-south, with an occupied area of approximately 2.25m^2.

Even though this burial feature (F1) comprises the most complete human bone fragments recovered from PVN647, they were severely brittle and incomplete. Upon exposure to the natural elements, the bones immediately become dried out and crumbled before being completely excavated out of their original context. Therefore, an approximate 400 countable bone fragments were recovered from this feature. However, only 11 bones were identifiable as being from specific parts of the body. The following fragmented bones were identified in association with this burial feature: 3 humerus'; 4 femurs; 2 tibias; 2 fibulas; a left mandible, maxilla, zygomatic arch, and temporal portion of a skull. Based upon the number of identified long bones, it is hypothesized that this burial contained the partial remains of 2 individuals. However, the cranial remains from only 1 identifiable skull were recovered. In situ with the recovered left maxilla were preserved 6 teeth, including 3 molars. An additional 13 other teeth, including 4 additional molars, were recovered from the surrounding burial context but were not immediately located with the skull fragments. No other recovered remains were identified as cranial fragments.

Based upon the arrangement of the teeth and other skull portions, 1 humerus, 1 femur, and the tibias and fibulas, it is believed that at least one individual was positioned horizontally in an east-west orientation and laying on that individual's right side, with the

top of the partially preserved skull to the west. This individual's front was directed to the south and the back would be facing the interior (south) facing of the north wall (CU4). Based upon the positioning and close proximity to the skull remains of the tibias and fibulas, it is believed that this individual was arranged in a fetal positioned, with the legs bent and tucked near to the torso. From the other 2 humerus' and femurs, it is unclear of the positioning or orientation of the hypothesized second individual. No other identifiable bones were recovered to indicate their specific arrangement.

Stratum 13 is also identified during this time span and is the soil context surrounding the burial feature (F1). This stratum is described as a gray dense soil (munsell 7.5YR 5/1) with fine white flecks of inclusions and cultural and human remains. As it is witnessed to surround the burial feature, it is located within the summit interior of Structure 33 (sub-operation AX). Similar to the depositional positioning of the burial feature, Stratum 13 was first witnessed approximately 0.3m below ground surface and extends to an approximate depth of 0.4m below ground surface. Stratum 13 is observed to be immediately above the sterile soil level of Stratum 3 (Time Span 13) but also situated at a similar depth as Stratum 12 (Time Span12). Stratum 12 is witnessed on both the east and west boundaries and at a corresponding depth as Stratum 13 and the burial context. It is hypothesized that Stratum 12 was disturbed during this time span in order to inter the burial feature (F1), which included the surrounding soil context of Stratum 13.

Also witnessed during this time span and in association with the burial feature (F1) and the surrounding Stratum 13 is the presence of approximately 5 large unmodified river cobbles and 12 other cobbles ranging in size from medium to large. These cobbles

were witnessed to have been placed horizontally and immediately to the west and southwest and at the same depth (approximately 0.32m below ground surface) as the majority of the preserved bones of the burial. The skull and teeth remains were the closest to the cobbles at a distance of only 0.08m away. Due to their depth and positioning, it is unlikely they are related to tumble associated with the abandonment of Structure 33. The cobbles were not witnessed to have been positioned in any identifiable arrangement or alignment; however, they are suspiciously clustered in close proximity and at a similar depth to the burial feature. They are not being identified as a formal construction unit, as no they contain no discernible shape nor function. Nonetheless, they are mentioned due to their possible significance relating to the burial feature (F1), as no other cobbles unassociated with tumble from decay are witnessed within the summit interior of Structure 33.

Time Span 4: Structure 33 – 1st a

The occupation phase immediately following the internment of the burial feature (F1), witnesses the deposit of a soil context on top of the burial and surrounding soil. This soil deposit is identified as Stratum 14. Stratum 14 is witnessed in the summit interior and immediately on top of the burial feature (F1) and Stratum 13 (both from Time Span 5) (sub-operation AX). It is described as a dark gray dense soil (munsell 7.5YR 3.5/1) with moderate white flecks of inclusions, small pebbles, and cultural material in the form of broken pottery and lithic fragments. Stratum 14 is first witnessed approximately 0.2m below ground surface and extends to a maximum depth of 0.4m

below ground surface. At its western-most extent, Stratum 14 is parallel with and abuts Stratum 12 (Time Span 12), which is believed to have been disturbed in order to inter the burial (F1). At its eastern-most extent, Stratum 14 is witnessed to also be parallel with and abut Stratum 12 again and also extend to the top of the sterile soil level of Stratum 3 (Time Span 13). In the center-most portion observed of Stratum 14, it is immediately on top of Stratum 13 and the burial context (Time Span 5).

In summary, it is hypothesized that Stratum 12 (Time Span 12) was disturbed during the previous occupational phase (Time Span 5) in order to inter the burial (F1) and the immediately surrounding soil context of Stratum 13. However, the entire identified context from Time Span 5 did not take up all of the disturbed area. After the burial feature and Stratum 13 were deposited, Stratum 14 was deposited to fill in the remaining exhumed Stratum 12 context and level out this summit interior region of Structure 33.

Time Span 3: Structure 33 – 1st

The final construction unit associated with the assemblage of Structure 33 is the addition of a summit wall (CU8) in the western region of the summit interior and it comprises the only identified element during this time span. The summit wall (CU8) is observed to be a north-south (5/185 degree) oriented wall, positioned parallel to the west basal wall (CU1 – Time Span 11) (sub-operations AX, AY, and AZ). The distance between the summit wall (CU8) and west basal wall (CU1) ranges from 0.2-0.35m. Measured to range 0.26-0.38m in width and range 0.11-0.13m in height, the summit wall (CU8) is observed to be comprised of mostly medium-sized unmodified river cobbles and

supplemented with unmodified limestone cobbles. The summit wall (CU8) is witnessed to be arranged to be 1 course in height and 2 courses in width. Unlike other observed summit walls from PVN647, this construction unit does not appear to formally articulate with any other previously assembled walls. The summit wall (CU8) is not witnessed to abut the identified interior (southern) facing of the north wall (CU4 – Time Span 9) at its northern-most extent. Similarly, it is not witnessed to abut the identified interior (northern) facing of the south basal wall (CU2 – Time Span 11) at its southern-most extent. Therefore, a gap measuring approximately 0.37m is witnessed to the north between the summit wall (CU8) and the interior of the north wall (CU4). Likewise, a gap measuring approximately 0.35m is witnessed to the south between the summit wall (CU8) and the interior of the south basal wall (CU2). However, both the northern and southern extents of the summit wall (CU8) are not witnessed to be clear and distinct, as cobbles have slumped out of position. The construction unit is identified as ending due to no other cobbles being preserved that serve as evidence to definitively conclude that this latest construction was assembled to completely fill the space between the interior of the south basal wall (CU2) and the interior of the north wall (CU4). The final observation noticed of the summit wall (CU8) is that it is assembled at a similar elevation to the west basal wall (CU1), which is identified as the highest construction unit from Structure 33. All other construction units exposed from Structure 33 were observed to be at a lower elevation than the summit wall.

Time Span 2: Structure 33 – Abandonment 1

The first indication of abandonment and decay at Structure 33 is witnessed by the presence of the terminal debris soil context identified as Stratum 2. It is observed on both the eastern and western exteriors, as well as the interior of the building (sub-operations AW and AX). Stratum 2 is described to be dark grayish brown topsoil (munsell 7.5YR 3.5/1.5) and includes cultural terminal debris of broken pieces of pottery, lithic fragments, and bajareque chunks. Additionally, Stratum 2 contains the majority of the tumbled cobbles associated with the construction of the east basal wall (CU3 – Time Span 10) within the eastern portion of the summit interior. It is first observed 0.1m below ground surface on both the eastern and western exteriors of Structure 33. However, on the eastern exterior, Stratum 2 is witnessed as deep as 0.4m below ground surface, but only witnessed to extent 0.24m below ground surface on the western exterior. Therefore, Stratum 2 had a maximum exposed thickness of 0.3m along the eastern exterior, but only a maximum exposed thickness of approximately 0.15m along the western exterior. Along the eastern exterior, Stratum 2 is witnessed to be positioned immediately above the sterile soil context of Stratum 3 (Time Span 13). Along the western exterior, Stratum 2 is witnessed to be immediately above the soil deposit of Stratum 11 (Time Span 12). Within the interior of Structure 33, Stratum 2 was first observed between 0.03-0.12m below ground surface and extends to a depth of 0.2-0.26m below ground surface. It is witnessed to be positioned immediately above the Stratum 14 (Time Span 4), but also Stratum 12 (Time Span 12). Stratum 2 is observed throughout the Site Core Plaza Group

and has been concluded to represent the initial episode of abandonment for this region of PVN647.

Time Span 1: Structure 33 – Abandonment 2

The final abandonment episode, as indicated by the complete burial of Structure 33, is witnessed with the presence of Stratum 1; identified throughout the Site Core Plaza Group as the final soil deposit for this region of PVN647. Stratum 1 is described as very dark gray organic topsoil (munsell 7.5YR 3/1), containing cultural terminal debris of broken pottery, lithic fragments and bajareque chunks. It is observed to blanket the entire surface of the building and have a range depth of 0.03-0.12m below ground surface. As it is measured to be a quite shallow depositional layer, Stratum 1 does not contain any significant cobble tumble associated with the decay of Structure 33.

Southeast Plaza Group – Structures 6, 7, and 13

The Southeast Plaza Group consists of 5 surface-visible structures and is situated in the southeastern-most region of PVN647. The 2006 survey of the group identified 4 buildings (Structures 6, 7, 8, and 13). The expanded 2008 survey of PVN647 revealed the existence of a low-lying 5th structure within the northwest region of this group and is identified as Structure 46. This region was selected for study due its densely clustered buildings; constructed in a conventional patio group formation, all facing an interior patio space. Only the best preserved buildings, Structures 6, 7, and 13 were investigated. Structures 8 and 46 appear from the surface to have suffered looting or damage and were consequently not researched. Excavations carried out in 2006 were conducted by Lauren Schwartz. All 2008 excavations were supervised by Lauren Schwartz, but were conducted by then Wellesley College undergraduate and Kenyon-Honduras Anthropology Program member Gabriella Soto.

Stratum Designations for Southeast Plaza Group:

Stratum one: Very dark gray organic topsoil (munsell 10YR 3/1)

Stratum two: Dark grayish brown dense sterile clay (munsell 2.5Y 4/2)

Stratum three: Dark grayish brown soil (munsell 10YR 4/2) with ceramic fragments.

Stratum four: Dark gray soil (munsell 10YR 4/1) with cultural debris.

Stratum five: Dark grayish brown, dense soil (munsell 10YR 4/2) with ceramic fragments.

Stratum six: Yellowish brown soil (munsell 10YR 5/4) with ceramic fragments.

Stratum seven: Light brownish gray soil (munsell 10YR 6/2) with cultural debris.

Stratum eight: Pale brown fine and silty soil (munsell 10YR 6/3) with cultural debris.

Stratum nine: Dark Gray soil (munsell 7.5YR 4/1) with pebble inclusions.

Stratum ten: Dark gray dense soil (munsell 7.5YR 4/1) with large pebble inclusions.

Stratum eleven: Brown dense sterile soil (munsell 7.5YR 4/2) with pebble inclusions and no cultural debris.

Stratum twelve: Very dark grayish, dense brown soil (munsell 10YR 3/2) with ceramic fragments.

Fill Designations for Southeast Plaza Group:

Fill one: Grayish brown dense soil (munsell 2.5YR 5/2) with cultural debris.

Fill two: Light brownish gray silty soil (munsell 10YR 6/2) with slight cultural debris.

Fill three: Yellowish brown soil (munsell 10 YR 5/5) with dense ceramic fragments.

Fill four: Unmodified river cobbles, extra small and small in size.

Fill five: Gray silty soil (ash) (munsell 10YR 5.5/2) with fine white flecks of inclusions.

Structure 6

Structure 6 represents the largest and northern-most structure within the Southeast Plaza Group at PVN647. It is flanked to the southeast by Structure 7, which is approximately 2m away, though they are suspected to be architecturally connected. It is also flanked to the west (approximately 4.5m away) by Structure 46, which was not investigated, though they do not seem to have been architecturally linked. Approximately

3m to the southwest of Structure 6 is Structure 13, which was also extensively investigated. Structures 6 and 13 are not revealed to be architecturally articulating. Structure 6 was initially investigated in July 2006 by means of a 1 x 3m test pit positioned by approaching the structure from the southern plaza side. These initial investigations revealed the southern-most plaza-facing masonry basal constructions and that it was of good preservation quality. Therefore, the excavation goals of Structure 6 during the 2008 field season were to continue investigations of the structure by expanding the 2006 excavations, to reveal the full architectural form and possible relationships to neighboring Structures 7 and 13. The results would aid in better understanding the architectural designs and techniques in practice within this plaza group.

Excavations at Structure 6 resumed on 24 March 2008 and continued through 15 May 2008. A 1 x 15m axial trench orientated approximately 18/342 degrees was positioned over the approximate center of the platform, as determined from the ground surface, and all the while aligned with the 2006 test excavations. Excavations within this axial trench revealed northern (sub-operation BB) and southern (sub-operation BA) basal architecture, which was followed laterally to expose the full basal dimensions and interior summit features of Structure 6 (**Figure A.6**). All lateral excavations occurred during April and May 2008. Lateral excavations along the north basal wall to the west (sub-operation BH) exposed approximately 6m^2 and revealed the northwest basal corner. Lateral excavations along the north basal wall to the east (sub-operation BN) revealed the northeast basal corner, interior constructions, and portions of the east basal wall and exposed approximately 13.5m^2. Lateral excavations along the south basal wall to the

west (sub-operations BL) exposed 21.5m^2 and revealed the southeast corner, partial interior constructions, and architectural assemblages articulating with neighboring Structure 7. Extending along the south basal wall to the west (sub-operation BJ) exposed approximately 11m^2 and revealed the southwest corner and portions of the west basal wall. The west basal wall was exposed within approximately 6m^2 (sub-operation BI).

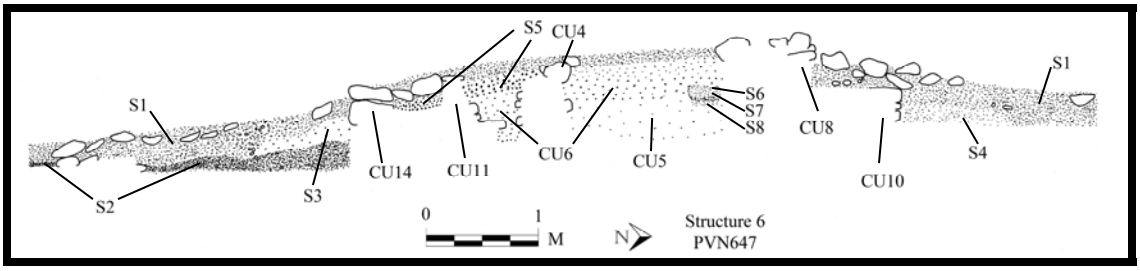

Figure A.6: Section drawing of Structure 6, PVN647.

Complete lateral excavations of Structure 6 revealed the earliest known version of the structure to be approximately 4.5m (N-S) x 6m (E-W) and oriented approximately 22/338 degrees and was approximately 0.44m in height. The earliest time spans associated with the construction sequence of Structure 6 include four low lying walls (~ 0.30m high) within the summit room. A partial human burial was revealed at approximately 1.2m below the ground surface and under the southern interior summit wall. The positioning of the burial under the southern summit wall indicates that it was interred before the summit room was constructed.

The final version of Structure 6 consists of several extensions and additions to the original version of the structure, which expanded it to the north, south, and west. In total, 13 time spans are associated with Structure 6. One time span represents the natural soil

designation and another time span is associated with a substructure. Subsequently, three additional time spans account for the pre-construction activities and occupation deemed to have occurred before the formal erecting of the building. The following three time spans represent the beginnings of the structure, when it may have been configured as a 3-sided construction. The subsequent four construction episodes account for the sealing of the structure as a 4-sided edifice and the expansion sequences along the exteriors. Other low-lying wall constructions were observed along the eastern and southeastern exterior of Structure 6 and appear to serve as some form of an architectural connection to Structure 7, positioned to the southeast in the plaza group. However, these constructions are not assigned construction unit designations, as it is unclear to which building their assemblage histories are best associated. Lastly, one period of abandonment and burial of Structure 6 represents the final time span associated with the building. The majority of the construction material is that of unmodified river cobbles but also supplemented with some tuff, limestone, and basalt stones.

Time Span	Construction Phase	Construction Units	Stratum	Feature
1	Abandonment		Stratum 1	
2	Str 6 – 1st	East appendage 2 (CU20)	Stratum 3 Stratum 4	
3	Str 6 – 1st a	East appendage 1 (CU18) South appendage 4 (CU19)		
4	Str 6 – 1st b	North appendage (CU14) West appendage (CU15) South appendage 3 (CU16) Bajareque surface (CU17)		
5	Str 6 – 1st c	North summit (CU11) West wall (CU12) South appendage 2 (CU13)		
6	Str 6 – 2nd	South appendage 1 (CU10)		
7	Str 6 – 2nd a	East wall (CU9)	Stratum 5	
8	Str 6 – 2nd b	West summit (CU7) South summit (CU8)		
9	Pre-construction 1	Fill 1 (CU6)		
10	Pre-construction 2		Stratum 6 Stratum 7 Stratum 8	Burial (F1)
11	Pre-construction 3	Fill 2 (CU5)		
12	Sub-structure	Wall construction 1 (CU1) Wall construction 2 (CU2) Wall construction 3 (CU3) Wall construction 4 (CU4)		
13	Natural Soil Deposition		Stratum 2	

Table A.6: Time spans and construction sequence for Structure 6

Time Span 13: Natural Soil Deposition

The presence of Stratum 2 represents the earliest time span associated with Structure 6. This natural soil depositional level, which is observed throughout the Southeast Plaza Group, is described as dark grayish brown dense sterile clay (munsell 2.5Y 4/2), with large pebble-sized stones in certain locations. It is labeled as the sterile soil context in this region due to its lack of any cultural debris or trace of human occupation or activity. Stratum 2 is present along the northern exterior of the to-be assembled Structure 6 and is first witnessed at a range depth of 0.12-0.34m below the

ground surface. Stratum 2 had an exposed maximum thickness of 0.32m, yet it is likely that it continues deeper below the base of excavations.

Time Span 12: Sub-structure

The first identified phase of construction is not directly associated with Structure 6, but includes the assembly of four distinct wall constructions (CU1-CU4). This time span represents the formation of a sub-structure, as none of these four wall assemblages demonstrate a clear, stratigraphic, architectural, or functional association to the later assembled Structure 6. Therefore, the construction units associated with this time span identify an early period of occupation in this region, but are not associated with the formal erecting of Structure 6.

This first construction unit identified during this time span is labeled as wall construction 1 (CU1) and is described as a roughly northeast-southwest (37/217 degree) aligned wall. It is observed at the very base of excavations (more than 0.8m below ground surface) and with a visible measured length of 0.64m, a range width of 0.08-0.31m, and a range height of 0.02-0.08m (sub-operations BA and BJ). Wall construction 1 is observed to only be 1 course in height and 1 horizontal course in width and composed of small and medium-sized unmodified river cobbles.

Wall construction 2 (CU2) is the second construction unit identified during this early time span of occupation before the formal assemblage of Structure 6. This sub-structure wall is observed to be a roughly northwest-southeast (160/340 degree) aligned wall construction, which extends approximately 0.3m below the later west summit wall

(CU 7 – Time Span 8). Wall construction 2 (CU2) is witnessed to measure approximately 1.3m in length, range 0.27-0.36m in width, and 0.12m in height (sub-operations BA and BI). These measurements possibly only represent a portion of CU2, as it continued under a later construction unit (CU7 – Time Span 8) and therefore the potential full extent of this wall construction was not exposed. It was observed to be only 1 course in height and in horizontal width and assembled from small and medium-size unmodified river cobbles, supplemented with limestone cobbles.

The third construction unit identified during this time span is labeled as wall construction 3 (CU3) and is identified as a roughly northwest-southeast (131/311degree) aligned wall near the base of excavations (more than 0.8m below ground surface). The exposed portion of this wall construction measured approximately 1.78m in length, ranged 0.2-0.22m in width, and 0.19m in height (sub-operations BB and BN). Wall construction 3 (CU3) was observed below a later construction unit, the north summit wall (CU10 – Time Span 5) and extends beyond the limits of excavations. Therefore, the visibly measured portion of this wall construction is likely to represent only a segment of the entire construction unit. From the portion that was observable, wall construction 3 (CU3) was preserved to be 2 cobble courses in height and assembled from small and medium-sized unmodified river cobbles.

The final construction unit observed in association with this building episode of a sub-structure to Structure 13 is identified as wall construction 4 (CU4). This wall construction is observed to be a roughly northwest-southeast (129/309 degree) oriented wall. It was measured to be approximately 1.52m in length, range 0.32-0.42m in width,

and 0.29-0.42m in height (sub-operations BB and BI). Wall construction 4 (CU4) was assembled from a range of small to large-sized unmodified river cobble and supplement with limestone cobbles and arranged between 2-3 cobble courses in height and only 1 horizontal course in width. Unlike the other three construction units from this time span, wall construction 4 (CU4) was completely exposed in excavations. However, this wall construction was also observed at a higher elevation than any of the other construction units and was observed between approximately 0.3-0.64m below the ground surface. Finally, it is likely the final construction unit assembled during this early time span because it is also observed to overlap immediately on top of wall construction 2 (CU2). None of the other construction units articulate with each other and an exact relationship between all four of these early sub-structure wall constructions during this time span remains unknown. Furthermore, their association with the formal assemblage of Structure 6 also remains unclear. However, due to the observation that these wall constructions occur at significantly lower depths below the ground surface and extend under primary construction units associated with Structure 6, it is strong evidence that occupation was occurring within this region of the Southeast Plaza Group and before the formal raising of Structure 6.

Time Span 11: Pre-construction 3

Following the observation of early construction units during Time Span 12, a fill unit (CU5) is deposited with the purpose of burying the earlier wall constructions and is identified as a period associated with the pre-construction efforts of Structure 6. The fill

unit (CU5) is described as light brownish gray silty soil (munsell 10YR 6/2) with slight cultural debris (sub-operation BA). It is observed within the summit interior of the to-be constructed Structure 6 and is first witnessed approximately 0.8m below the ground surface (sub-operations BA and BB). This fill episode has a maximum exposed thickness of 0.2m and marks the base of excavations (approximately 0.82m below the ground surface). The precise depth of this fill unit remains unknown, as excavation logistics prohibited the safe continuation of investigations below this context. However, the depositing of this fill episode (CU5) buried most of wall constructions 1 and 2 (CU1 and CU2 – Time Span 12). The fill unit (CU5) is observed to be bounded between the southern facings of wall constructions 2 and 4 (CU2 and CU4 – Time Span 12) and the northern facing of the later constructed south summit wall (CU8 – Time Span 8).

Time Span 10: Pre-construction 2

A second episode of pre-construction is marked by the activities associated with the interment of a partially preserved burial (F1) and the presence of three distinct soil contexts: Stratum 6, 7, and 8. The three stratum occur in sequential order, yet for the purposes of identifying the burial activity, all components of the burial event are discussed as one time span.

The initial act of this pre-construction time span is the interment of the partially preserved human burial (F1). The burial context (F1) is first observed approximately 0.49m below ground surface and has an exposed measured thickness of approximately 0.03m (sub-operations BA and BJ). The exact location of the partial interment is under

the construction of a later assemblage: the south summit wall (CU8 – Time Span 8). Therefore, the partial remains of the burial were not formally excavated for concern of the integrity of the construction units assembled directly above the context. However, two partial bones, guardedly identified as human long bones, were observed in profile and marked the context as a partially preserved burial. Furthermore, the location of this interment (F1) was observed to be within the fill context observed during Time Span 11 (CU5). It is likely that in this specific region, the fill context was exhumed in order to inter the burial remains.

The first of three distinct soil context identified during this episode of pre-construction is Stratum 8. Stratum 8 is described as a pale brown fine and silty soil (munsell 10YR 6/3) with cultural debris and is observed as the surrounding soil context immediately associated with the partial burial remains (F1). It is measured to range at a similar depth as the interment context; approximately 0.49m below ground surface, with a maximum exposed thickness of 0.03m (sub-operation BA). Also similar to the burial context, Stratum 8 is witnessed immediately under the construction unit of the south summit wall (CU8 – Time Span 8). However, unlike the partial burial context (F1), Stratum 8 has a horizontal exposure of approximately 0.2m and extends from the south, immediately under the south summit wall (CU8 – Time Span 8) to the north.

Stratum 7 marks the soil context identified immediately above Stratum 8 and partial burial context (F1) and is described as light brownish gray soil (munsell 10YR 6/2) with cultural debris. It was first observed approximately 0.47m below the ground surface and has an exposed maximum thickness of 0.02m (sub-operation BA). Similar to

Stratum 8 and the partial burial (F1), Stratum 7 is observed in profile immediately under the south summit wall (CU8 – Time Span 8) and extending to the north approximately 0.2m. Stratum 7 is very similar to the fill unit (CU5) from Time Span11 and is possibly the replacement of the exhumed soil for the purpose of depositing the burial (F1). The uppermost extend of Stratum 7 is observed at the same depth as the top of the fill unit (CU5 – Time Span 11).

The final element associated with this time span and the activities relating to the interment of the partial burial (F1) is labeled as Stratum 6. Stratum 6 is described as yellowish brown soil (munsell 10YR 5/4) with ceramic fragments and is located immediately above Stratum 7 (sub-operation BA). Stratum 6 is first observed approximately 0.34m below ground surface and has an exposed maximum thickness of 0.1m. Furthermore, it is measured to have a maximum exposed horizontal width of approximately 0.36m and does not extend to the south and under the later construction unit of the south summit wall (CU8 – Time Span 8). Stratum 6 contains a slightly greater density of ceramic fragments than other stratum contexts and the distinct color of the soil context could be due to the fragmentation of the ceramic pieces. It is possible that Stratum 6 represents the disintegration of ceramic vessels associated with the burial context and placed on top of the interment context (F1), Stratum 8, and Stratum 7.

Time Span 9: Pre-construction 1

The final period labeled as an episode of pre-construction occurring before the formal erecting of Structure 6 is marked by another fill unit (CU6). This second fill unit

(CU6) is described as grayish brown dense soil (munsell 2.5YR 5/2) with cultural debris and is observed in two regions within what will later be the summit interior of Structure 6 (sub-operations BA and BB). South of wall constructions 2 and 4 (CU2 and CU4 – Time Span 12), the fill episode (CU6) is observed immediately above the earlier fill episode (CU5 – Time Span 11) and the burial interment and associated soil contexts (F1 and Stratums 6, 7, and 8 – Time Span 10). It is first witnessed approximately 0.27m below ground surface and has a measured thickness range of 0.14-0.19m. In this southern region, the fill unit (CU6) buries wall constructions 1 and 2 (CU1 and CU2 – Time Span 12) and partially covers wall construction 4 (CU4 – Time Span 12). North of wall constructions 2 and 4 (CU2 and CU4 – Time Span 12), the fill unit (CU6) is bounded by the later assemblage of the north summit wall (CU10 – Time Span 5) and observed at the base of excavations (approximately 0.75m below ground surface). In this location the fill unit (CU6) buries wall construction 3 (CU3 – Time Span 12) and has a measured exposed thickness of approximately 0.63m. The purpose of depositing this fill unit is likely to cover the earlier constructions before the formal building of Structure 6.

Time Span 8: Structure 6 – 2nd b

The earliest formal construction activity associated with Structure 6 is comprised of the assemblage of two wall constructions, which will later be associated with delimiting the summit interior boundaries and are therefore labeled the west summit wall (CU7) and the south summit wall (CU8).

The west summit wall (CU7) is witnessed to be a roughly north-south (23/203 degree) aligned construction (sub-operations BI and BJ). It is measured to be 2.38m in length, range 0.27-0.3m in width, and range 0.1-0.47m in height. The variation in measured height of this west summit wall is due to an approximate 1m area where it is observed to stand only 1 preserved course in height. In all other locations, it is observed to be 3 cobble courses in height and makes use of chinking stones. It is constructed to be only 1 horizontal course in width and overall is composed of medium and large-sized unmodified river cobbles, supplemented with basalt stones. During this early phase of construction, the west summit wall (CU7) only articulates with one other construction unit: the south summit wall (CU8). The only two construction units from this construction episode are witnessed to be integrated and therefore assembled at the same time.

The only other construction unit associated with this initial assemblage period of Structure 6 is the south summit wall (CU8). This construction is witnessed to be a roughly east-west (112/292 degree) aligned wall and measuring 4.47m in length, ranging 0.18-0.27m in width, and preserved to be approximately 0.4m in height (sub-operations BA, BJ, and BL). Composed of medium and large-sized unmodified river cobbles and a few basal stones, this wall is preserved to be between 1 and 2 courses in both vertical height and horizontal width. Only the summit interior facing or north facing of this wall construction is observable, as the south facing or non-summit facing is obstructed by later construction units, which are assembled immediately abutting the south facing of this summit wall. The south summit wall (CU8) is witnessed to be integrated with the west

summit wall (CU7) where they meet to form the southwest interior corner of the summit interior of Structure 6. As no other construction units, other than these two walls have been assembled, the south summit wall (CU8) does not articulate with any other construction units during this time span.

Time Span 7: Structure 6 – 2nd a

There is only one construction unit added and one soil context associated with this time span. Structure 6 is further established with the assemblage of the east wall (CU9) and the deposit of Stratum 5.

The east wall (CU9) is observed to be a roughly north-south (23/203 degree) oriented construction and preserved to be approximately 1.38m in length, average 0.75m in width, and range 0.13-0.23m in height (sub-operation BL and BN). This wall is composed mostly of medium-sized unmodified river cobbles and supplemented with a few large-sized cobbles and basalt stones. The east wall (CU9) is preserved to be only one course in height and roughly two horizontal courses in width. The overall assemblage of this wall is noticeably poorer than the quality of the west summit (CU7) and south summit (CU8) walls. The east wall (CU9) forms the southeast interior summit corner by articulating with the eastern-most extent of the south summit wall (CU8). They are abutting and are not witnessed to be integrated. Therefore, this east wall establishes the eastern boundary of the summit interior of Structure 6. This wall does not articulate with any other construction unit during this time span.

The second element associated with this time span is the deposit of a soil context within the southern portion of the summit interior of Structure 6. Stratum 5 is described as dark grayish brown, dense soil (munsell 10YR 4/2) with ceramic fragments and other culture debris and is located immediately on top of Stratum 6 (Time Span 10) (sub-operation BA). It is first detected approximately 0.13m below ground surface and extends to a maximum depth of 0.28m below ground surface. This soil context is observed to abut the base of the south summit wall (CU8 – Time Span 8) and extent to the north and slightly cover the top of wall construction 4 (CU4 – Time Span12). Stratum 5 is not observed north of wall construction 4 (CU4). The density of this soil context could support the possibility that Stratum 5 indicates an occupational level; however, it is remains unclear if this soil is a purposeful deposit and therefore an intentional fill unit. For this reason it is simply labeled a stratum designation.

Time Span 6: Structure 6 – 2nd

The addition of one construction unit along the exterior of the south, plaza-facing side of Structure 6 comprises the only building activity during this time span. South appendage 1 (CU10) is described as a roughly east-west (114/294 degree) aligned wall construction and is assembled immediately abutting the south-facing of the south summit wall (CU8 – Time Span 8). It measures approximately 3.6m in length, ranges 0.25-0.32m in width, and stands approximately 0.58m in height (sub-operations BA, BJ, and BL). Composed of medium and large-sized unmodified river cobbles and some basalt stones, south appendage 1 (CU10) is preserved in places to be 4 cobbles courses in height and

mostly one horizontal cobble course in width. Only portions of the height of this first appendage construction are visible as later construction units block complete exposure of the base of the wall. South appendage 1 (CU10) articulates with only one construction unit; the south facing of the south summit wall (CU8 – Time Span 8) by means of abutment. At its eastern-most extent, the two construction units are in alignment where a southeast corner is form by the south summit wall (CU8) and the east wall (CU9 – Time Span 7). South appendage 1 (CU10) extends 3.6m to the west along the south facing of the south summit wall (CU8) but does not articulate with it where it forms a corner with the west summit wall (CU7 – Time Span 8). During this time span, south appendage 1 (CU10) does not articulate with any other construction units.

Time Span 5: Structure 6 – 1st c

Prior to this period in the assemblage history of Structure 6, it is believed to be a 3-sided construction with construction units erected on the east, south, and west sides. Structure 6 is not only sealed as a 4-sided edifice during this time span with the addition of the north summit wall (CU11), but it is also expanded to the west with the addition of a west wall (CU12) and to the south with south appendage 2 (CU13).

The north summit wall (CU11) is described as a roughly east-west (115/295 degree) aligned wall, extending approximately 5.61m in length, ranging 0.3-0.7m in width, and ranging 0.1-0.4m in height (sub-operations BB, BH, and BN). The significant range in measured height is due to the observation that the north summit wall is preserved to be only 1 cobble course in height at its eastern-most extent and approximately 2

cobbles course in height to the west. However, a later construction unit (north appendage (CU14 – Time Span 4)) blocks visibility of the north facing of the western portions of the north summit wall, and an exact measurable height is not discernible. Yet, the north summit wall (CU11) is constructed on top of the earlier wall construction 3 (CU3 – Time Span 12), as it projects beneath the base of the north summit wall within the summit interior of Structure 6. The north summit wall (CU11) is amassed from medium and large-sized unmodified river cobbles and supplemented with limestone and basalt cobbles. This wall also varies between 1-2 horizontal courses in width and makes use of chinking stones. As the north summit wall (CU11) seals Structure 6 into being a 4-sided building, it articulates with the west summit wall (CU7 – Time Span 8) and the east wall (CU9 – Time Span 7). It abuts with each of these construction units to form the northwest and northeast corners, respectfully. Though complete visibility at the northwest corner is obstructed due to the addition of a later construction unit, it does appear that the north summit wall (CU11) extends beyond the abutment with the northern-most portion of the west summit wall (CU7 – Time Span 8) and articulates with another construction unit, the west wall (CU12). The northeast corner is observed to be less-than-well preserved; yet not falling or slipping out of place. Finally, the north summit wall (CU11) articulates with the west wall (CU12), which is also assembled during this time span. Again, as a later construction blocks visibility in this northwest exterior region, it is unclear exactly how the north summit wall (CU11) and the west wall (CU12) articulate. However, from the tops of each construction unit, they appear to be integrated and therefore constructed simultaneously.

The second construction unit appended during this time span is the west wall (CU12). This wall is described as a roughly north-south (20/200 degree) aligned construction, which extends approximately 4.94m in length, ranges 0.42-0.7m in width, and ranges 0.1-0.32m in height (sub-operations BH, BI, and BJ). It is positioned roughly parallel to the west summit wall (CU7 – Time Span 8), however, approximately 0.5m to the west of the western facing of the west summit wall. The west wall (CU12) is composed of a mixture of medium, large, and extra large-sized unmodified river cobbles, limestone, basalt, and tuff stones. The extra large stones appeared to have been intentionally selected for their rectangular shape and were placed with the flattened sides in a horizontal positioning. Certain limestone cobbles may have been formally modified to have flattened facings; however, the edges have been eroded and it is unclear if the flatness is naturally occurring or intentional. Regardless, the result established a flattened, slightly uniform platform on the top of the construction. The west wall (CU12) is observed to range 1-2 cobble courses and vertical height and 1-3 cobble courses in horizontal width. The largest cobbles represent the portions of the wall that stand only 1 cobble course in height and width. Furthermore, the significant range in overall width is due to the observation that the wall is wider at its northern-most extent and where it establishes the northwest basal corner of Structure 6 with the north summit wall (CU11). The west wall (CU12) is narrower at its southern-most extent where it forms the southeast basal corner of Structure 6 with south appendage 1 (CU10 – Time Span 6). As previously mentioned, the west wall (CU12) appears from the top of the construction unit to integrate with the north summit wall (CU11) to form the northeast basal corner. The

articulation with south appendage 1 (CU10 – Time Span 6) appears to be in the form of abutment, as the west wall (CU12) is constructed after south appendage 1.

The final construction unit identified during this time span is associated with the furthered expansion along the plaza-facing south side of Structure 6. South appendage 2 (CU13) is assembled immediately abutting the south facing of south appendage 1 (CU10 – Time Span 6) at its western extent and approximately 0.3m from the southwest basal corner (sub-operation BJ). This second appendage along the south facing of Structure 6 is in the general shape of a square and measures 0.72-0.91m northeast-southwest (29/209 degrees), 1.4m southeast-northwest (119/299 degrees) and ranges 0.26-0.34m in height (sub-operation BJ). Composed of mostly of large unmodified river cobbles and supplemented with tuff stones, south appendage 2 (CU13) is observed to be approximately 3 horizontal cobble courses northeast-southwest, 4 horizontal cobble courses southeast-northwest, and 1-2 preserved cobble courses in height. It articulates with only one other construction unit during this time span and immediately abuts the south facing of the previous appendage, south appendage 1 (CU10 – Time Span 6). The shape and location of this appendage construction is exceptionally significant as its characteristics are not observed on any other investigated structure within the Southeast Plaza Group. However, a similar appendage is observed within the Site Core Plaza Group and on an analogous building with regards to its positioning with respect to an open plaza.

Time Span 4: Structure 6 – 1st b

Expansion constructions along the north, south, and west exteriors of Structure 6 comprise the construction units added during this time span. Identified as being assembled during this building episode are the north appendage (CU14), west appendage (CU15), south appendage 3 (CU16), and a bajareque surface (CU17) along the south, plaza-facing exterior of Structure 6.

Along the north facing of Structure 6, the north appendage (CU4) is appended, partially abutting the north facing of the north summit wall (CU11 – Time Span 5). The north appendage (CU14) is observed to be a roughly east-west (111/291 degree) aligned wall construction, measuring approximately 4.57m in length and ranging 0.1-0.2m in height. This appendage is witnessed to vary in width due to it being of greater thickness (approximately 2-3 cobble courses in width) at its western-most extent (sub-operations BB and BH) and preserved to only be approximately 1 cobble course in width at its eastern-most extent (sub-operation BN). Therefore, the width measurements of the north appendage (CU14) in the eastern-most 1.3m ranges 0.17-0.4m in width and in its western-most 3.23m, ranges 0.47-0.55m in measurable width. It is also in the western-most region of this north appendage that it immediately abuts with the north summit wall (CU11 – Time Span 5). It also abuts with the northern-most extent of the west wall (CU12 – Time Span 5) but they do not meet at the exact northwest basal corner of Structure 6. The western-most extent of the north appendage (CU14) begins approximately 0.4m from the end of the west wall (CU12). Therefore, the preserved version of the northwest basal corner appears as an indented corner. However, the

preservation in this region of Structure 6 is slightly poor and the true formation of the northwest basal corner could have slipped out of positioning. The eastern portion of the north appendage (CU12) does not articulate with the north facing of the north summit wall (CU11 – Time Span 5) and observed to be free-standing and un-articulating with any other construction unit in this region. It is unclear if this was by intentional design or if simply soil fill was used in the approximately 0.25-0.3m in between the two construction units. Unmodified river cobbles are visible from the top of the north appendage (CU14) in the western region of the construction and may have been the chosen construction material to fill in the space, instead of soil. However, the cobbles of the northern facing of the north appendage (CU14) appear to have been chosen for their naturally occurring flat facings and intentionally positioned. The majority of the construction materials of the north appendage (CU14) are that of medium and large-size unmodified river cobbles and some basalt stones.

Further expanding the western exterior of Structure 6 is the addition of the west appendage (CU15) at the southwest basal corner. The west appendage (CU15) is described as a roughly north-south (22/202 degree) oriented rectangular construction, which abuts the west facing of the west wall (CU12 – Time Span 5). It is observed to measure approximately 1.46m in length, 0.9m in width, and range 0.08-0.16m in height. Composed mostly of small and medium-sized unmodified river cobbles, with some limestone and basalt cobbles, the west appendage (CU15) is observed to be preserved 1-2 cobble courses in height and approximately 3 cobble courses in horizontal width. The low design and abutting positioning of this appendage against the west wall (CU12 –

Time Span 5) suggests a possible function as that of an occupation surface. Regardless of its purpose, the north appendage (CU15) is positioned at the southwest basal corner and extends along nearly half the length of the west wall (CU12 – Time Span 5).

The third construction unit amassed during this time span, which also extends the exterior of Structure 6, is the addition of south appendage 3 (CU16) along the south, plaza-facing exterior (sub-operations BA, BJ, and BL). South appendage 3 (CU16) is in the form of a wall and is a roughly east-west (114/294 degree) aligned construction. It measures approximately 4.5m in length, ranges 0.31-0.51m in width, and ranges 0.09-0.33m in height. Composed of medium and large-sized unmodified river cobbles, supplemented with limestone and basalt stones, south appendage 3 (CU16) is identified to range 1-2 cobble courses in vertical height and horizontal width. This third southern appendage (CU16) is positioned immediately abutting the south facing of south appendage 1 (CU10 – Time Span 6). At its western-most extent, south appendage 3 (CU16) abuts the eastern facing of the square-shaped south appendage 2 (CU13 – Time Span 5) and extends to the east, paralleling the first appendage (CU10 – Time Span 6), making the final addition along this plaza-facing façade. However, south appendage 3 (CU16) does not abut the first south appendage (CU10) for the entire length of that construction unit and does not articulate with the southeast basal corner, established during Time Span 5. Approximately 1m west of the southeast basal corner, south appendage 3 (CU16) no longer immediately abuts the south appendage 1 (CU10) and is observed to be approximately 0.3-0.35m to the south. This pattern of articulation between partially abutting wall-form construction units is somewhat similar to the north

facing of Structure 6. The overall quality of preservation of south appendage 3 (CU 16) is best where it abuts with south appendage 2 (CU13 – Time Span 5) and declines in structural integrity to the east, where it is observed to not articulate with any other formal construction units.

The final construction unit identified during this construction episode is the presence of a partially preserved bajareque surface (CU17) along the south, plaza-facing exterior of Structure 6. This bajareque surface is observed to measure approximately 0.32m in length and 0.19m in width and is first observed approximately 0.4m below ground surface (sub-operation BA). I.H.A.H. regulations prohibit the action of excavating through intentional surfaces and therefore an exact thickness of the surface is not measurable, nor is any potential cultural or soil context beneath the surface observable. The bajareque surface (CU17) is located approximately 0.2m to the south from the south appendage 3 (CU16) facing and near where it abuts with the square-shaped south appendage 2 (CU13 – Time Span 5). It is unclear from the preserved but fragmented portion of the surface as to whether it once abutted against either of the south appendage construction units, or was assembled prior to either of their assembling. However, it is likely that the surface represents an occupation level associated with the plaza.

Time Span 3: Structure 6 – 1st a

Structure 6 includes the addition of construction units along the east and south exteriors during this time span. An additional appendage construction is assembled along

the east exterior and is labeled east appendage 1 (CU18); while an additional cobble appendage is added along the south, plaza-facing exterior: south appendage 4 (CU19).

The east exterior of Structure 6 witnesses the assemblage of a square-shaped cobble construction near the southeast basal corner, along the eastern exterior of the east wall (CU9 – Time Span 7). The construction is identified as east appendage 1 (CU18) and is measured to be approximately 1.2m in length (24/204 degrees), range 0.79-0.84m in width (114/294 degrees) and range 0.05-0.11m in height (sub-operation BL). This first east appendage is comprised mostly of medium and a few large-sized unmodified river cobbles, assembled to be only 1 course in vertical height and horizontal width. The cobbles appear to be designed in a level formation and possibly function as some form of an occupational platform. The exact location of east appendage 1 (CU18) is amassed abutting and at the base of the exterior of east wall (CU9 – Time Span 7), where it forms the southeast basal corner. East appendage 1 (CU18) slightly articulates with the eastern-most extent of south appendage 3 (CU16 – Time Span 4), however, the southern appendage is not very well preserved in this location and it is difficult to discern an exact form of articulation. However, since south appendage 3 (CU16) is identified to have been constructed before east appendage 1 (CU18), it is concluded that at the most, these construction units simply abutted each other. East appendage 1 (CU18) does not articulate with any other construction units during this time span.

The second construction unit observed during this time span is the addition of what is being identified as an appendage along the southern exterior of Structure 6 (sub-operations BA and BL). The south appendage 4 (CU19) is loosely labeled to be in a wall

formation, as it consists of a single line of cobbles. It is measured to be a roughly east-west (115/295 degree) aligned construction and measures approximately 1.39m in length, ranges 0.49-0.54m in width, and ranges 0.27-0.3m in height. South appendage 4 (CU19) is composed of an equal number of medium and large-sized unmodified river cobbles and is observed to be only one cobble course in height and width. Its exact location is within the space observed between the paralleling south appendage 1 (CU10 – Time Span 6) and south appendage 3 (CU16 – Time Span 4). Its western-most extent is observed to be near the western-most extent of south appendage 3 (CU16) and where that construction unit abuts against south appendage 2 (CU13 – Time Span 5). South appendage 4 (CU19) is aligned as a single row of cobbles, however, may have functioned as a cobble fill unit in the space between the other paralleling south appendages. Furthermore, it may have been amassed during an earlier construction episode and at the same time as south appendage (CU16), however, as it is preserved, it is difficult to definitively make that claim. It is observed to be preserved at a higher height than south appendage 3 (CU16), yet at a lower height than south appendage 1 (CU10).

Time Span 2: Structure 6 – 1st

Only one construction unit along the east exterior and two separate stratum contexts are observed during this final episode of construction and additions of Structure 6. The construction unit is labeled east appendage 2 (CU20) and the soil contexts are identified as Stratum 3 and 4.

The addition of another appendage construction to Structure 6 occurs along the east exterior and takes on the appearance of being a continuation of east appendage 1 (CU18 – Time Span 3). East appendage 2 (CU20) is observed to be roughly north-south (23/203 degree) aligned construction, which measures approximately 2.71m in length and ranges 0.08-0.15m in height (sub-operation BL and BN). This appendage construction is witnessed to be 3 cobble courses wide for 1.92m, beginning from its southern-most extent, and preserved to be only 1 cobble course wide in its northern-most 0.79m. Therefore, the measured width range in the southern region where it is at its widest is 0.6-0.7m. Its measured width range in the northern region where it is preserved as a single line of cobbles is 0.24-0.34m. East appendage 2 (CU20) is composed of a mixture of medium and large-sized unmodified river cobbles and contains a few basal cobbles. It is positioned roughly parallel to the east wall (CU9 – Time Span 7) and approximately 0.65m to the east of the east facing of that construction unit. At its southern-most extent, south appendage 2 (CU20) abuts against the northeast corner of the square-shaped east appendage 1 (CU18 – Time Span 3). However, the later east appendage 1 (CU20) is observed to stand taller than the earlier east appendage 1 (CU18). It is possible that these two construction units were amassed during a simultaneously construction episode, yet due to the lack of evidence that they were constructed to integrate serves as the justification to associate them into distinct time spans. East appendage 2 (CU20) does not articulate with any other construction units.

The first of two distinct soil context observed during this construction phase is labeled as Stratum 3 and is described as dark grayish brown soil (munsell 10YR 4/2), and

containing ceramic fragments and other cultural debris. Stratum 3 is observed in only one location within Structure 6 and that is immediately along the northern exterior of the building (sub-operation BB). Specifically, Stratum 3 is located abutting the north appendage (CU14 – Time Span 4) and is immediately above the sterile soil context of Stratum 2 (Time Span 13). However, Stratum 3 is observed to extend away to the north from north appendage (CU14) approximately 1m before dissipating and no longer detectable. Stratum 3 is measured to range between 0.04-0.24m in thickness and range between 0.15-34m below ground surface. These marked ranges are likely due to the sloping nature of the ground surface in the northern direction and away from the mound of Structure 6. Stratum 3 partially covers the base of the north appendage (CU14) and is only observed in this region of the structure.

The second soil context identified during this episode is Stratum 4, which is described as dark gray soil (munsell 10YR 4/1) with cultural debris. This soil context is only observed along the southern, plaza-facing exterior of Structure 6 (sub-operation BA). It is positioned immediately above the bajareque surface (CU17 – Time Span 4) and abutting the facing of south appendage 3 (CU16 – Time Span 4). Stratum 4 is measured to first appear between 0.24-0.36m below ground surface, range in thickness 0.12-0.16m, and extend for a horizontal length of 1.08m to the south from the facing of south appendage 3 (CU16). It is unclear is this soil context is intentional for covering the bajareque surface (CU17); however, it is predominantly located in the region where the fragmented surface is located.

Time Span 1: Structure 6 – Abandonment

The presence of Stratum 1 marks the episode of abandonment of Structure 6. Stratum 1 is described to be very dark gray organic topsoil (munsell 10YR 3/1) with cultural terminal debris in the form of broken pottery, lithic fragments, bajareque chunks, and tumbled cobble building materials. It is identified as the soil context responsible for the final burial of the building, as it blankets the entire surface of the mound. Along the southern, plaza-facing exterior of Structure 6, Stratum 1 is observed to extend approximately 0.32m below ground surface. This depth marks the base of excavations and therefore the base of this soil context in the exterior region remains unknown. In this southern exterior region, Stratum 1 is observed to be immediately above Stratum 4 (Time Span 2). Within the interior and summit regions of Structure 6, this soil context is measured to have a range depth of 0.06-0.2m and is located immediately above Stratum 6 (Time Span 10) within the southern region of the summit and above Stratum 5 (Time Span 7) within the northern region of the summit. Finally, Stratum 1 is observed along the northern exterior of Structure 6 and measured to range 0.11-0.36m in thickness. In this region, Stratum 1 is observed immediately above Stratum 3 (Time Span 2) and above Stratum 2 (Time Span 13) approximately 1m away from preserved, final-phase architecture of Structure 6. Stratum 1 is recognized throughout the Southeast Plaza Group.

Structure 7

Structure 7 is the second-largest building investigated within the Southeast Plaza Group and is positioned as the eastern-most structure within the group. It is flanked to the northwest by Structure 7, which is situated approximately 2m away and has been revealed to be architecturally articulating in the space in between. Structure 8 is approximately 8m to the west and across the open patio space from Structure 7. Structure 8 displayed surface-visible evidence of intentional disturbance and was not investigated. Structure 13 is located approximately 9m to the northwest and across the open patio from Structure 7. No surface-visible constructions were detected in the region immediate south and southwest of Structure 7. The natural terrain to the east of Structure 7 and outside the immediate space of the patio group sharply slopes downward to a seasonal quebrada located approximately 20m to the east. Due to the good degree of surface-visible preservation and lack of damage, the aim of investigating Structure 7 was to examine any possible relationship with neighboring Structure 6. Furthermore, the goal of examining Structure 6 was to better comprehend the variety and design of the architecture and the use of spaces within the Southeast Plaza Group.

Excavations at Structure 7 commenced on 24 March 2008 and continued through 19 May 2008. Investigations were initiated with a 1 x 9m axial trench orientated 92/268 degrees and positioned across the platform's approximate center as viewed from the ground surface (**Figure A.7**). Excavations within this axial trench revealed western (sub-operation BC) and eastern (sub-operation BD) basal architecture, which was followed laterally to expose the full basal dimensions and interior summit features of Structure 7.

To be specific, the west basal wall was followed laterally to the south to reveal the southwest corner, the south basal wall, and the summit interior south of the axial trench. In total, this exposed approximately 10m^2 and the majority of the southern half of Structure 7 (sub-operation BG). The remainder of the west basal wall was followed laterally to the north to reveal the northwest corner and the northwestern summit interior. In total, this exposed approximately 7m^2 (sub-operation BK). The east wall was followed laterally to the north to reveal the northeast corner, the east wall, and all architectural constructions north of Structure 7. In total this exposed approximately 13m^2 and the majority of the eastern facing of Structure 7 and all un-articulating architectural elements (sub-operation BM). Finally, a free-standing west wall was followed laterally to the south and exposed the southwestern-most extent of the wall and an additional free-standing wall construction. In total this exposed approximately 6m^2 and the southwest region and all un-articulating, architectural elements associated with Structure 7 (sub-operation BE).

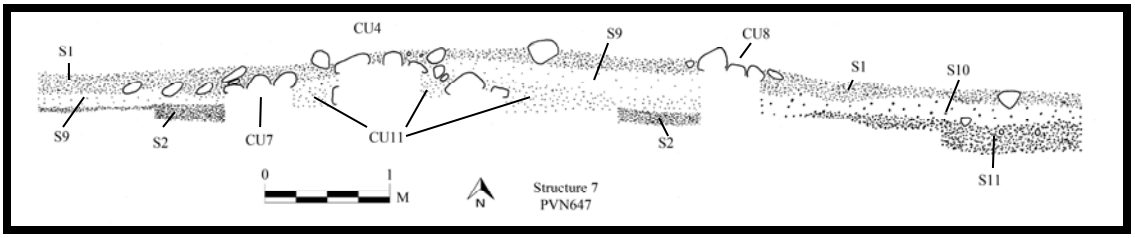

Figure A.7: Section drawing of Structure 7, PVN647.

Complete excavations reveal that the earliest known version of Structure 7 consisted of a 3-sided stone-faced platform. This 3-sided assemblage was possibly open to the east and only had 3 wall constructions on the north, south, and plaza-facing west

side. The dimensions of this initial version was approximately 5.25m (N-S) x 3.6m (E-W), ranged 0.17-0.33m in height, and oriented approximately 83/263 degrees.

The final version of Structure 7 includes the original architectural elements from the earliest known version (mentioned above) as well as a poorly assembled east wall addition and wall constructions within the northern portion of the summit interior. Additionally, north-south aligned, paralleling and free-standing wall constructions are assembled along the western exterior of Structure 7. In all, Structure 7 consists of 16 construction units, amassed over time within nine separate construction phases. The earliest phase of construction consists of one episode of pre-construction, followed by six phases of construction and modifications, and one phase of abandonment. Finally, in close proximity to Structure 6, there was also observed various low-lying wall constructions along the northern and northwestern exterior of the building. The relationship of these assemblages to Structures 6 and 7 is difficult to discern, therefore, they are not assigned construction unit designations. The main construction materials associated with Structure 7 are that of unmodified river cobbles, with the use of some limestone and basalt stones.

Time Span	Construction Phase	Construction Units	Stratum	Feature
1	Abandonment		Stratum 1	
2	Str 7 – 1st	SW wall (CU16)	Stratum 9	
3	Str 7 – 1st a	Fill 3 (CU11) - inside Fill 4 (CU12) North wall (CU13) NW appendage (CU14) South appendage (CU15)	Stratum 10	
4	Str 7 – 1st b	East basal (CU8) North summit (CU9) West wall (CU10)		
5	Str 7 – 2nd	West TERRACE (CU7)		
6	Str 7 – 2nd a	North basal (CU6)		
7	Str 7 – 2nd b	NW basal (CU3) West basal (CU4) South basal (CU5)		
8	Sub-structure	Wall construction 1 (CU1) Wall construction 2 (CU2)		
9	Pre-construction & Natural soil deposition		Stratum 2 Stratum 11	

Table A.7: Time spans and construction sequence for Structure 7.

Time Span 9: Pre-Construction and Natural Soil Deposition

The earliest time span associated with Structure 7 includes two soil contexts: Stratum 2 and 11. Both of these soil contexts are identified to be natural soil depositional levels and representative of a period of pre-construction, however, they vary with regard to non-cultural inclusions and coloring of the soil.

Stratum 2 is described as dark grayish brown dense sterile clay (munsell 2.5Y 4/2) and is devoid of any cultural debris. It is witnessed in two distinct locations in association with Structure 7. The first location is along the western, plaza-facing exterior of the not-yet amassed Structure 7 (sub-operation BC). In this location, Stratum 2 is fist observed approximately 0.16m below ground surface and extends to a maximum excavated depth of 0.43m below ground surface. This measurement represents the base

of excavations and therefore, the complete horizontal extent of this soil context remains unknown. Additionally, Stratum 2 is witnessed in the region that would later in the construction history of Structure 7 to be considered within the interior of the building (sub-operation BD). In this location, Stratum 2 is observed to first appear approximately 0.46m below ground surface. This soil context in this region has a horizontal exposure of approximately 0.51m. As Stratum 2 is identified to be one of two sterile soil contexts associated with Structure 7 during this time span, excavations did not continue farther into this context. It is believed to continue deeper below the base of excavations. Stratum 2 is identified in other investigated locations within the Southeast Plaza Group.

The second natural soil depositional context associated with Structure 7 is Stratum 11 and is located within the western exterior of the building (sub-operation BD). Stratum 11 is described to be brown dense sterile soil (munsell 7.5YR 4/2) with pebble inclusions and no cultural debris. The pebble inclusions are measured to be roughly of pebble and large pebble size. Stratum 11 appears between 0.26-0.34m below ground surface and has a maximum exposed depth of 0.5m below ground surface. Due to the lack of cultural debris and the density of the soil, Stratum 11 is labeled as a varying context of sterile soil from the more recurrent Stratum 2 within this plaza grouping. Furthermore, the depth of Stratum 11 represents the base of excavations and the complete extent of this context remains unknown.

Time Span 8: Sub-structure

The earliest construction phase of assemblages associated Structure 7 includes the amassing of two wall constructions (CU1 and CU2) and is labeled as an early sub-structure.

The first of two assemblages is identified as wall construction 1 (CU1) and is located within the interior of the to-be assembled Structure 7 (sub-operation BC). Wall construction 1 (CU1) is observed to be a roughly north-south (6/186 degree) aligned construction and measured to be approximately 1.19m in length, range 0.43-0.56m in width, and range 0.09-0.14m in preserved height. This construction is preserved to stand only one course in vertical height and two courses in horizontal width. Composed on large and extra large unmodified river cobbles and basal stones, wall construction 1 (CU1) articulates with the other construction unit identified during this time span. It abuts with wall construction 2 (CU2) at its southern-most extent.

Wall construction 2 (CU2) is identified as the second assemblage during this time span. This assemblage is observed to be a roughly north-south (6/16 degree) oriented construction (sub-operation BC). It is measured to be 0.55m in length, 0.24m in width, and 0.13m in height. Wall construction 2 (CU2) is composed of only two large-sized unmodified river cobbles and abut against the southern-most extent of wall construction 1 (CU1). These two assemblages are slightly off-set from each other and are therefore distinguished to represent two separate construction units. As they represent the first and only identified construction units associated with the earliest occupations in and around Structure 7, the do not articulate with any other construction units during this time period.

Furthermore, they are located within what is to be the interior of Structure 7; however, it is unclear of their early intent and association with the later assembled Structure 7.

Time Span 7: Structure 7 – 2nd b

The initial construction activities associated with the formal erecting of Structure 7 witness the identification of 3 basal walls: the northwest basal (CU3), the west basal (CU4), and the south basal (CU5).

The northwest basal wall (CU3) is observed to be a roughly east-west (101/281 degree) oriented wall (sub-operations BK and BM). It is measured to be 1.38m in length, 0.76m in width, and range 0.13-0.23m in height. The slight range in height is due to the northwest basal wall (CU3) standing only one cobble course in vertical height. This basal wall is composed of a combination of unmodified river cobbles, basalt, and limestone cobbles, ranging from small to large in size. During this time span, the northwest basal wall (CU3) articulates with one other construction unit: the west basal wall (CU4). They are observed to be integrated at the western-most extent of the northwest basal wall (CU3), and therefore constructed simultaneously. At its eastern-most extent, this construction unit is not observed to articulate with any other construction unit at this time.

The second construction unit identified during this time span is the west basal wall (CU4). This wall is witnessed to be a roughly north-south (11/191 degree) aligned wall (sub-operations BC, BG, and BK). It is measured to be approximately 5.27m in length, range 0.28-0.67m in width, and 0.09-0.33m in height. Composed of a mixture of

medium and large-sized unmodified river cobbles, basalt and limestone cobbles, the west basal wall (CU4) is observed to be preserved as one course in vertical height and range 1-2 courses in horizontal width. At its northern-most extent the west basal wall articulates with the northwest basal wall (CU3). They articulate by means of being integrated and therefore assembled during a similar construction episode. During this time span, these two construction units form a northwest basal corner for Structure 7. Additionally, the west basal wall (CU4) articulates with the south basal wall (CU5), which is also observed to be amassed during this time span. These construction units are witnessed to be integrated as well, and form a southwest basal corner for Structure 7.

The third and final construction unit observed to be assembled during this construction episode is the south basal wall (CU5). This basal wall is witnessed to be a roughly east-west (97/277 degree) oriented construction and is measured to be approximately 3.68m in length, range 0.43-0.51m in width, and range 0.08-0.17m in height (sub-operations BF and BG). The south basal wall (CU5) is mostly composed of unmodified river cobbles and supplemented with some basalt cobbles. These cobbles vary in size from small to large and are arraigned to be two cobble courses in horizontal width and range 1-2 cobble course in vertical height. The large-sized cobbles are observed to primarily amass the exterior, southern facing; while medium-sized cobbles make up the interior, northern facing of this wall. During this time span, the south basal wall (CU5) articulates with only one other construction unit: the west basal wall (CU4). They are observed to be integrated and therefore assembled simultaneously.

Time Span 6: Structure 7 – 2nd a

Only one construction unit is erected during this time span: the north basal wall (CU6). This wall is observed to be a roughly east-west (97/277 degree) aligned construction (sub-operation BM). The north basal wall (CU6) is measured to be approximately 1.7m in length, range 0.18-0.29m in width, and range 0.13-0.33m in height. It is composed of a combination of unmodified river cobbles, basalt and limestone cobbles of varying sizes, ranging from medium to large. Additionally, this wall includes extra small or "fist-sized" stones as chinking stones placed in between the larger cobbles. However, this north basal wall (CU6) stands only one cobble course in both vertical height and horizontal width. Finally, this basal wall articulates with a previously assembled construction unit during this time span. The western-most extent of the north basal wall (CU6) is observed to abut with the eastern-most extent of the northwest basal wall (CU3 – Time Span 7). It appears that the north basal wall (CU6) is amassed as a continuation of the northwest basal wall (CU3) with the intent of creating a better defined interior space of Structure 7. The eastern-most extent of the north basal wall (CU6) is not observed to articulate with any other construction unit during this assemblage episode. However, the establishment of the north basal wall (CU6) establishes Structure 7 as a 3-sided building during this phase of occupation.

Time Span 5: Structure 7 – 2nd

This construction period also witnesses the assemblage of only one construction unit: the west appendage (CU7). The west appendage (CU7) is witnessed to be a north-

south (11/191 degree) aligned construction (sub-operations BC, BG, and BK). This appendage is measured to be approximately 2.97m in length, ranges 0.14-0.18m in width, and ranges 0.08-0.19m in height. It is observed to be amassed as a single line of small-sized unmodified river cobbles, supplemented with a few basalt stones. It is positioned immediately at the base and abutting the western facing of the west basal wall (CU4 – Time Span 7). However, the west basal wall (CU4) is longer in length and the west appendage (CU7) is positioned along most of the southern portion of the west basal wall (CU4). The northern-most extent of the west appendage (CU7) is located approximately 1.3m south of the northwest corner of Structure 7, formed by the northern-most extent of the west basal wall (CU4 – Time Span 7). And the southern-most extent of the west appendage (CU7) is parallel with the southern-most extent of the west basal wall (CU4). The west appendage (CU7) does not articulate with any other construction unit during this time span.

Time Span 4: Structure 7 – 1st b

Both the exterior and interior of Structure 7 witness significant additions during this time span. The 3-sided building is somewhat closed off with the addition of an east basal construction (CU8). Additionally, along the western exterior, a free-standing construction is established: west wall (CU10). Finally, within the interior, north summit (CU9) is amassed during this construction phase.

The east basal (CU8) construction is described as a roughly north-south (177/357 degree) aligned construction unit (sub-operation BD, BF, and BM). It is measured to be

approximately 2.25m in length, range 0.12-0.60m in width, and approximately 0.17m in height. The marked range in recorded width is due to the overall poor preservation of the construction unit. The east basal (CU8) construction is observed to be preserved only one cobble course in vertical height, and range 1-2 cobble courses in horizontal width. It is composed of a combination of small to large-sized unmodified river cobbles, basalt and limestone cobbles. This construction unit portrays no uniform characteristics and appears incredibly haphazardly assembled. It is loosely hypothesized to form a southeast corner by articulating with the south basal wall (CU5 – Time Span 7). The form of articulation between these identified construction units is that of abutment. Additionally, the east basal (CU8) construction is loosely considered to spatially articulate with the north summit (CU9) construction. There is no preserved architectural connection between these construction units, as there is a space of approximately 0.2m that separates them from formally articulating. However, due to the poor preservation of both the east basal (CU8) construction and the north summit (CU9) construction, it is hypothesized that there likely was a cobble (or more) that formed an abutment association between the two. The east basal (CU8) construction does not articulate with any other construction unit during this time span.

Along the western exterior of Structure 7, a free-standing wall assemblage is witnessed and is identified as west wall (CU10). West wall (CU10) is described as a roughly north-south (12/192 degree) aligned cobble construction (sub-operations BC, BE, and BK). It measures 4.34m in length, ranges 0.68-0.83m in width, and ranges 0.1-0.36m in height. West wall (CU10) is roughly aligned in the same orientation as the west basal

wall (CU4 – Time Span 7) and the west appendage (CU7 – Time Span 5). It is located approximately 0.4m west of the west facing of west appendage (CU7 – Time Span 5). Similar to the west appendage (CU7), the northern-most extent of this west wall (CU10) is roughly in line with the northern-most extent of the west appendage (CU7). However, the west wall (CU10) extends much further to the south and is observed to be the southern-most extending construction unit associated with all of Structure 7. The west wall (CU10) is composed of a combination of medium and large-sized cobbles and includes a few cobbles of an extra large size. Extra small or "fist sized" chinking stones are also utilized. The types of cobbles in this construction unit are a mixture of unmodified river cobbles, basalt and limestone cobbles. Finally, the west wall (CU10) is preserved to stand only one cobble course in vertical height and two cobbles courses in horizontal width. As this construction unit is identified to be a free-standing assemblage, it does not architecturally articulate with any other construction units associated with Structure 7.

The final appendage added to Structure 7 during this construction episode is the north summit (CU9). The north summit (CU9) is identified as a roughly east-west (101/281 degree) oriented construction, located within the northeast interior region of Structure 7 (sub-operation BM). This construction is measured to be approximately 2m in length, ranges 0.2-0.22m in width, and ranges 0.1-0.23m in height. The north summit (CU9) construction is composed of medium and large-sized unmodified river cobbles and basalt and limestone cobbles. It is positioned to the south of the north basal wall (CU6 – Time Span 6) and is aligned at roughly the same orientation (a difference of 4 degrees).

Due to this slightly variation of orientation, the average distance between the construction units is approximately 0.42m. The north basal wall (CU6) is slightly wider at its western-most extent and therefore, is in closer proximity to the north summit (CU9) construction in this region. Also in close proximity to the north summit (CU9) construction is the east basal (CU8) construction, also from this time span. The east basal (CU8) construction lies approximately 0.2m to the south of the eastern-most extent of the north summit (CU9) construction and they are not observed to architecturally articulate. However, it is plausible that construction materials associated with an architectural linkage once existed, yet did not survive the abandonment and decay of Structure 7 over time. The north summit (CU9) is not observed to articulate with any other construction units during this time span.

Time Span 3: Structure 7 – 1st a

The greatest number of amendments made to Structure 7 occurs during Time Span 3. Three distinct construction units are added within the northern region of the building and are identified as: Fill 4 (CU12), north wall (CU13), and northwest appendage (CU14). An additional assemblage is appended along the southern exterior and is labeled as south appendage (CU15). Finally, two soil contexts are identified and one is designated as a fill episode, Fill 3 (CU11), and the second is identified as a stratum layer and is designated as Stratum 10.

The first of three construction units added along the northern exterior of Structure 7 is identified as Fill 4 (CU12). This fill unit is described as an amassing of mostly extra

small to small-sized unmodified river cobbles. One extra large limestone cobble is preserved on the top of this construction unit and it does not appear that much soil is preserved in between the stone construction materials. The measurements of the area occupied by this fill unit are approximately 1m in length, 0.2-0.4m in width, and 0.18m in height (sub-operation BM). This fill unit is located in the space in between the northern-most extent of the north summit (CU9 – Time Span 4) construction and the southern facing of the north basal wall (CU6 – Time Span 6). This construction unit (CU12) is designated as a fill unit due to the alleged functional nature of the concentration of cobbles in between the previously existing construction units. The cobbles do not appear to be arranged in a uniform alignment, which could indicate an intentional wall construction unit.

The second construction unit identified within this northern region of Structure 7 is the identification of a north wall (CU13), which abuts the north facing of the north basal wall (CU6 – Time Span 6). The north wall (CU13) is described as a roughly north-south (18/198 degree) aligned wall (sub-operation BM). It measures approximately 2.3m in length, ranges 0.26-0.5m in width, and ranges 0.07-0.18m in height. It is arranged to be one cobble course in vertical height and ranges 1-2 cobble courses in vertical width. This wall is composed of mostly small and medium-sized unmodified river cobbles, arranged so that the western facing makes use of the naturally occurring flattest facings of the cobble construction materials. Most of the smaller cobbles are observed to be arranged on the eastern facing of the wall and are not as uniformly positioned. This north wall (CU13) is positioned so that the southern-most extent of the construction unit abuts

the north facing of the north basal wall (CU 6 – Time Span 6), approximately 1m to the west of the eastern-most extent of the north basal wall (CU6). The north wall (CU13) is not observed to articulate with any other construction units associated with Structure 7.

The last construction unit witnessed within the northern region of Structure 7 during this time span is the addition of a northwest appendage (CU14). The northwest appendage (CU14) is described as a roughly east-west (101/281 degree) oriented construction, positioned along the northern facing of the northwest basal wall (CU3 – Time Span 7) (sub-operations BK and BM). It measures approximately 1.2m in length, ranges 0.32-0.4m in width, and 0.13m in height. This appendage is composed of approximately 4 medium and large-sized unmodified river cobbles, supplemented with extra small and "fist size" stones, and is arranged in a singular line abutting the northwest basal wall (CU 3). The appendage's western-most extent is where the northwest basal corner is established during Time Span 7 and extends to the east, yet ends before articulating with the northern facing of the north wall (CU13). The northwest appendage (CU14) is not observed to articulate with any other construction units associated with Structure 7.

An additional appendage is appended during this time span, yet along the southern exterior and near the southwest basal corner of Structure 7. This construction unit is identified as the south appendage (CU15) and is a roughly north-south (5/185 degree) aligned construction (sub-operation BG). This appendage measures approximately 1.3m in length, ranges 0.28-0.32m in width, and ranges 0.09-0.12m in height. It is composed mostly of large and extra large-sized unmodified river cobbles and

is arranged to be one cobble course in vertical height and horizontal width. The south appendage (CU15) is positioned abutting the south basal wall (CU5 – Time Span7) at the southwest basal corner where it is integrated with the west basal wall (CU4 – Time Span 7). It is roughly aligned with the west basal wall (CU4) and appears as an extension from this construction unit. The south appendage (CU15) does not architecturally articulate with any other construction unit associated with Structure 7.

The other fill episode, Fill 3 (CU11), witnessed during this time span is composed of soil and is located within the summit interior of Structure 7 (sub-operations BC and BD). This soil fill unit is described as yellowish brown soil (munsell 10 YR 5/5) with dense ceramic fragments. The largest presence of this fill context is located between the west basal wall (CU4 – Time Span 7) and the east basal (CU8 – Time Span 4) construction and immediately above the sterile soil context of Stratum 2 (Time Span 9). This fill unit is exposed for approximately 2.4m horizontally and first appears in this area between the ranges of 0.2-0.36m below ground surface and continues to a range depth of 0.42-0.55m below ground surface. Therefore, this fill unit buries the early wall constructions (CU1 and CU2 – Time Span 8). This fill unit is also present on the west facing of the west basal wall (CU4 – Time Span 7) and the east facing of the west wall (CU10 – Time Span 4) (sub-operation BC). In this specific region, the fill unit is only exposed for a horizontal width of 0.32m, which is the distance between the two construction units. It first appears in this area approximately 0.18m below the ground surface and extends to a depth of 0.36m below ground surface. This depth represents the base of excavations in this region between the two construction units. Therefore, it is

unclear if this fill unit extends below the depth of final excavations. It is worth noting, that this fill unit (Fill 3) buries the west appendage (CU7 – Time Span 5) and covers the top of this construction unit.

Stratum 10 marks the final observed element associated with this time span. Stratum 10 is described as dark gray dense soil (munsell 7.5YR 4/1) with large pebble inclusions and slight cultural inclusions of ceramic debris (sub-operation BD). This soil context is located along the eastern exterior of Structure 7 and below the base of the east basal (CU8 – Time Span 4) construction. It is positioned immediately above the sterile soil context identified as Stratum 11 (Time Span 9) and slightly shares a similar soil color and composition as this natural soil depositional layer. Stratum 10 is exposed for approximately 1.8m horizontally and is first observed between 0.06-0.22m below ground surface and continues to a depth range of 0.24-0.4m below ground surface. The variation in observed depth of Stratum 10 is likely due to the downward sloping nature of the ground surface to the east and away from Structure 7. Due to the poor assemblage of the east basal (CU8 – Time Span 4) construction, it is possible that Stratum 10 is an intentional deposit in order to provide structural support to the slumping construction unit. This hypothesis is supporting by the dense, clay composition of the stratum context, which could have assisted the structural integrity of the haphazardly amassed east basal (CU8) construction. However, it is conservatively being referenced as a stratum layer due to the extensive horizontal presence of the context.

Time Span 2: Structure 7 – 1st

The final additions to Structure 7 are observed to be a free-standing wall construction within the southwest exterior and identified as southwest wall (CU16). Additionally, a soil context is observed within the summit interior space of the building and labeled as Stratum 9.

The southwest wall (CU16) is described as a north-south (1/181 degree) oriented wall, which is free-standing within the southwest-most region of Structure 7. This wall measures approximately 1.14m in length, ranges 0.36-0.61m in width, and ranges 0.11-0.19m in height. The southwest wall (CU16) is composed of approximately 12 small and medium-sized unmodified river cobbles, arranged to stand only one cobble course in vertical height, and roughly 2-3 cobble courses in horizontal width. However, due to the poor preservation of this short construction, it is unclear if it was assembled to have a uniform width. It is positioned along the west side of the roughly north-south aligned west wall (CU10 – Time Span 4). Due to the orientation difference (approximately 11 degrees) between these two free-standing construction units, the range distance between them is approximately 0.25-0.55m. The southwest wall (CU16) is closer to the southern extent of the west wall (CU10 – Time Span 4) and therefore is deemed the southwestern-most construction unit associated with all of Structure 7. Finally, similar to the west wall (CU10) the southwest wall (CU16) is observed to be preserved to have a facing assembled to the west, or the plaza- facing of Structure 7. The southwest wall (CU10) does not articulate with any other construction unit.

The presence of a soil context within the summit interior of Structure 7 marks the final element observed during this time span. Stratum 9 is described as dark Gray soil (munsell 7.5YR 4/1) with pebble inclusions and cultural debris. This soil context is observed within the summit interior between the east and west summit bounding construction units (west basal (CU4 – Time Span 7) and the east basal (CU8 – Time Span 4)). A horizontal exposure of Stratum 9 is approximately 2.4m and positioned immediately above the fill unit deposited during Time Span 3 (Fill 3). Stratum 9 is first observed between 0.07-0.14m below ground surface and continues to a depth of 0.2-0.36m below ground surface. This soil begins at the base of the east basal (CU8 – Time Span 4) construction and partially covers the top course of cobbles associated with the eastern facing of the west basal (CU4 – Time Span 7) construction. Finally, this soil context is similar in color and inclusions, yet different in composition and texture from Stratum 10 (Time Span 3), located along the eastern exterior of Structure 7. Similar to Stratum 10, it is unclear if Stratum 9 is an intentional soil fill unit. Therefore, due to the lack of clarity on its possible purpose, it is labeled as a soil layer.

Time Span 1: Structure 7 – Abandonment

The presence of Stratum 1 indicates the decay and abandonment of Structure 7. Stratum 1 is witnessed to bury other buildings within the Southeast Plaza Group and also covers the top and the eastern and western exteriors of Structure 7 (sub-operation BD and BC, respectfully). Stratum 1 is described as very dark gray organic topsoil (munsell 10YR 3/1) with cultural terminal debris of broken pottery, lithic fragments, and bajareque

chunks. This final soil layer is observed to have a thickness range of 0.06-0.22m on the eastern exterior, a range of 0.2-0.36m on the western exterior, and a range thickness of 0.7-0.14m within the interior of Structure 7. Very little cobble tumble is associated with this strata within the summit interior and along the eastern, off-plaza exterior. The lack of cobble tumble in these regions is suspected to be due to the low density of construction units within the summit interior and the one cobble horizontal coursing of the east basal (CU8 – Time Span 4) construction. More cobble tumble is present along the western, plaza-facing exterior. This increase in cobble tumble is possibly associated with the greater density of cobble construction units within the western regions of Structure 7.

Structure 13

Structure 13 represents the western-most structure that was formally investigated within the Southeast Plaza Group. It is positioned approximately 3m to the southwest of Structure 6 and approximately 9m to the southeast and across the plaza from Structure 7; both of which were also extensively investigated. Structure 13 is also located approximately 1.5m south of Structure 46 and approximately 2.5m north of Structure 8; however, neither of these structures was formally investigated due to preservation and other logistical reasons. From the ground surface, Structure 13 is a very low-lying structure with very simple appearing architectural elements, as only an outline of the buildings walls were all that were visible. Furthermore, it did not display any surface-visible evidence of being a disturbed context, compared to other buildings within this plaza group. Therefore, Structure 13 was selected for study and the goal of excavations

of was to investigate the architectural elements and activity spaces and its function and relationship to the other structures chosen for investigation within the Southeast Plaza Group.

Excavations at Structure 13 were initiated on 9 May 2008 and continued through 16 May 2008. A (1 x 8 m) trench orientated approximately 90/270 degrees was positioned across the platform's approximate center as viewed from the ground surface (**Figure A.8**). Excavations within this axial trench revealed eastern (sub-operation BO) and western (sub-operation BP) basal architecture, which was followed laterally to expose the full basal dimensions and interior summit features of Structure 13. The east basal wall was followed laterally to the north to reveal the northeast basal corner, the north basal wall, the northwest corner, and the summit interior north of the axial trench. In total this exposed approximately 10m^2 (sub-operation BQ). The east basal wall was followed laterally to the south to reveal the southeast corner, the south basal wall, the southwest corner, and the summit interior south of the axial trench. In total this exposed approximately 7.5m^2 (sub-operation BR).

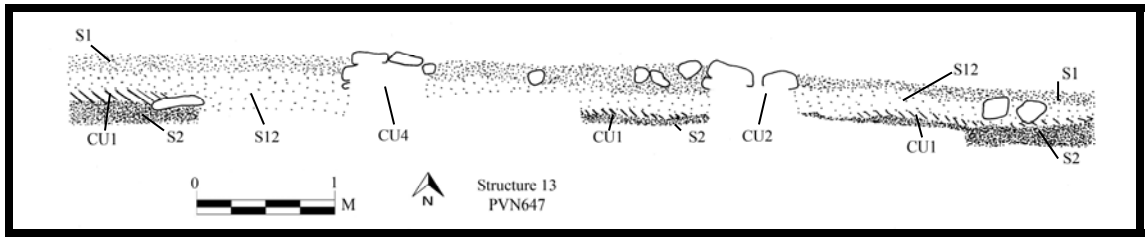

Figure A.8: Section drawing of Structure 13, PVN647.

The earliest and final version of Structure 13 is in the form of a 4 sided-platform oriented approximately 20/340 degrees. The dimensions of Structure 13 are 2.75m (E-W) x 3.0m (N-S) and 0.25m in height. The shape and design of Structure 13 is a simple 4-sided building and with no preserved interior summit features. Therefore, the construction sequence is straightforward, with four masonry construction units and one soil fill unit assembled and occupied within a total of five separate construction phases. One phase each marks the natural soil context and pre-construction periods, two phases represent construction and occupation, and one period is associated with the abandonment of Structure 13. Structure 13 was constructed using a combination of limestone, basalt, and tuff stones, but primarily unmodified river cobbles.

Time Span	Construction Phase	Construction Units	Stratum	Feature
1	Abandonment		Stratum 1	
2	Str 13 – 1st		Stratum 12	
3	Str 13 – 1st a	East basal (CU2) North basal (CU3) West basal (CU4) South basal (CU5)		
4	Pre-construction	Fill 5 (CU1)		
5	Natural soil deposition		Stratum 2	

Table A.8: Time spans and construction sequence for Structure 13

Time Span 5: Natural Soil Deposition

The earliest time span associated with Structure 13 is the natural soil deposition level and is identified as Stratum 2. Stratum 2 is described to be a dark grayish brown dense sterile clay (munsell 2.5Y 4/2) and is witnessed along the east exterior (sub-operation BO), within the summit interior and along the west exterior (sub-operation BP).

Along the east exterior, Stratum 2 was initially revealed approximately 0.6m below the ground surface. A maximum thickness of 0.2m was exposed of Stratum 2 in this region. Within the interior of the to-be assembled building, Stratum 2 was initially exposed approximately 0.4m below the ground surface and a maximum thickness of 0.07m was exposed in this region. Along the west exterior, Stratum 2 was initially revealed approximately 0.3m below the ground surface and a maximum thickness of 0.2m was exposed in this region. Stratum 2 contained no cultural material and therefore deemed the sterile soil context associated with Structure 13. The exact thickness of this sterile context remains unknown as excavations did not descend any deeper than the previously stated exposed depths. However, Stratum 2 is presumed to continue below the base of excavations.

Time Span 4: Pre-construction

Prior to the formal construction of Structure 13, a fill unit is observed within the interior and exterior regions of where the building will later be assembled. This fill unit (CU1) is identified to be an ash lens and is described as a gray silty soil (munsell 10YR 5.5/2) with fine white flecks of inclusions. It is positioned immediately above the sterile soil context of Stratum 2 (Time Span 5) and is predominantly observed to be a thin layer, with a range thickness of 0.02-0.06m. This fill unit is first observed approximately 0.34m below the ground surface within the interior and approximately 0.3m below the ground surface along the west exterior of the to-be constructed Structure 13 (sub-operation BP). The nearest masonry construction unit to CU1 associated with Structure

13 in this region is the west basal wall (CU4 – Time Span 3) and is positioned approximately 0.2m above this ash layer. This fill unit (CU1) is also observed along the eastern exterior of the to-be assembled Structure 13. In this region, the ash layer is first observed at a depth of approximately 0.42m below the ground surface nearest to the east basal wall (CU2 – Time Span 3) and is at the base of excavations (sub-operation BO). However, further to the east and away from the to-be assembled building, the ash layer (CU1) is observed to be approximately 0.26m below the ground surface and have a range exposed thickness of 0.05m. Furthermore, in this location, approximately 1m to the east of where Structure 13 will be constructed, CU1 is witnessed to be located immediately above the sterile soil context of Stratum 2 (Time Span 5). It is hypothesized that this fill unit (CU1) was deposited in preparation for the formal construction efforts of Structure 13.

Time Span 3: Structure 13 – 1st a

The earliest construction phase associated with the formal assemblage of Structure 13 includes all of the identified masonry construction units associated with the building. These construction units are labeled the east basal wall (CU2), the north basal wall (CU3), the west basal wall (CU4), and the south basal wall (CU5).

The east basal wall (CU2) is observed to be a roughly north-south (22/202 degree) aligned wall (sub-operations BO, BQ, and BR). This plaza-facing wall is was measured to be approximately 2.7m in length, ranged 0.45-0.65m in width, and ranged 0.19-0.3m in preserved height. It is composed mostly of medium and large unmodified river cobbles

supplemented with basalt and limestone cobbles. The east basal wall (CU2) is preserved to be 1-2 courses in height, which includes the presence of chinking stones, and is preserved to be 2 horizontal courses in width. This wall extends to the south and ends to establish the southeast basal corner of Structure 13. The south basal wall (CU5) abuts the east basal wall (CU2) along its western facing. The east basal wall (CU2) extends to the north and articulates with the north basal wall (CU3) to form the northeast basal corner, which takes the form of an inset corner. The north basal wall (CU3) abuts with a portion of the northern-most extent of the east basal wall (CU2), yet they do not fully overlap and the result is the formation of an inset corner.

The additional construction unit assembled during this time span is the north basal wall (CU3). This wall is observed to be a roughly east-west (105/285 degree) oriented wall and measures 2.65m in length, ranging 0.6-0.66m in width, and ranging 0.08-0.12m in height (sub-operation BQ). Witnessed to be preserved only 1 course in height and 2 horizontal courses in width, the north basal wall (CU3) is predominantly assembled from medium and large unmodified river cobbles and supplemented with basalt and tuff stones. At its eastern extent, the north basal wall (CU3) abutted with the east basal wall (CU2) to form the northeast basal corner of Structure 13. The northeast corner is designed as an inset corner and is the result of the east basal wall (CU2) not fully overlapping with the width of the north basal wall (CU3). The north basal wall (CU3) extends to the west and forms the northwest basal corner with the west basal wall (CU4). Similar to the northeast basal corner, the northwest basal corner appears to be a variation on the typical right-angled corner; yet it is unclear if the rounded form of the northwest corner is the result of

a purposeful construction design or the deterioration of preservation over time. It is observed that the north basal wall (CU3) abuts with the northern-most extent of the west basal wall (CU4).

The west basal wall (CU4) is the third construction unit identified during this primary episode of construction. The west basal wall (CU4) is a roughly north-south (20/200 degree) oriented wall. It is measured to be approximately 3m in length, range 0.56-0.61m in width, and range 0.12-0.16m in height (sub-operations BP, BQ, and BR). Composed mostly of medium and large unmodified river cobbles and supplemented with basalt and tuff stones, the west basal wall (CU4) is preserved to be 1 course in height and range 1-2 horizontal courses. This west basal wall forms the northwest basal corner with the north basal wall (CU3). This corner is preserved in a rounded form and fashioned from the north basal wall (CU3) abutting the north extent of the west basal wall (CU4). Additionally, the west basal wall (CU4) forms the southwest basal corner with the south basal wall (CU5). This corner is witnessed to be integrated, indicating that the west basal wall (CU4) and the south basal wall (CU5) were constructed together.

The final construction unit observed within this time span and witnessed to have been assembled in association with Structure 13 is the south basal wall (CU5). The south basal wall (CU5) is observed to be a roughly east-west (106/286 degree) aligned wall and measure 3.42m in length, range 0.68-0.84m in width, and range 0.16-0.21m in height (sub-operation BR). Preserved to be 1 course in height and 2 horizontal courses in width, this south basal wall is primarily composed of medium and large-sized unmodified river cobbles and supplemented with basalt and limestone cobbles. At its western extent, the

south basal wall (CU5) forms the southwest basal corner with the west basal wall (CU4). These walls are observed to integrate or inter-digitate and therefore were assembled at the same time. The south basal wall (CU5) also forms the southeast basal corner with the east basal wall (CU2). The southeast basal corner is formed by the abutting of the south basal wall (CU5) with the western facing of the east basal wall (CU2).

Time Span 2: Structure 13 – 1st

The presence of Stratum 12 is the only element observed within this time span. Stratum 12 is described as very dark grayish, dense brown soil (munsell 10YR 3/2) with ceramic fragments and other cultural debris. It is present throughout the summit interior of Structure 13 and within the eastern and western exteriors (sub-operations BO and BP). Along the eastern exterior of Structure 13, Stratum 12 was first observed approximately 0.12m below the ground surface (sub-operation BP). In this region, Stratum 12 is observed immediately above the fill unit (CU1 – Time Span 4) and with an exposed range thickness of 0.04-0.2m. Also, Stratum 12 is witnessed to begin approximately at the same depth as the base of the east basal wall (CU2 – Time Span 3) within this eastern exterior. And approximately 1.5m to the east and away from the east basal wall (CU2 – Time Span 3) and within this soil context, two large and un-articulating cobbles are present. Therefore, it is not entirely clear if this soil context is associated with the final occupation activities of Structure 13 or is the marker of the beginning of an abandonment episode.

Furthermore, along the western exterior of Structure 13, Stratum 12 was first observed approximately 0.14m below the ground surface (sub-operation BO). In this region, Stratum 12 is also observed immediately above the fill unit (CU1 – Time Span 4) and with an exposed range thickness of 0.07-0.3m. The top of Stratum 12 within this western exterior region is observed approximately 0.05m above the base of the west basal wall (CU4 – Time Span 3). Yet again, it is unclear if this stratum context represents an occupational depth or if Stratum 12 is the first indication of abandonment and burial of Structure 13.

Finally, within the summit interior of Structure 13, Stratum 12 is first observed approximately 0.2m below the ground surface and has an observed range thickness of 0.05-0.12m. Stratum 12 is witnessed to appear at depths lower than the bases of the east basal wall (CU2 – Time Span 3) and the west basal wall (CU3 – Time Span 3) along their respective summit interior facings.

Time Span 1: Structure 13 – Abandonment

The indication for the abandonment and decay of Structure 13 is marked by the presence of Stratum 1, which is the soil context responsible for the complete burial of the building. Stratum 1 is described as very dark gray organic topsoil (munsell 10YR 3/1) with cultural terminal debris in the form of broken pottery, lithic fragments, bajareque chunks, and tumbled cobble building materials. It is observed to blanket all of Structure 13 and has a range depth of 0.05-0.2m. Stratum 1 is located immediately above Stratum 12 (Time Span 2).

West Group – Structure 22

Group Overview

The West Group represents the final grouping described at PVN647 and is the comprised of approximately 6 mound features (labeled as Structures 21-23, 29, 39, and 40). Very little was depleted to investigate the true nature of these mounds. From the surface they appear to be earthen mounds ranging from 1.5-2.5m in height and have no surface-visible cobbles representative of purposeful construction features; a very unique construction technique, if in fact formal structures. Furthermore, they are roughly aligned in a north-south linear arrangement and do not adhere to any discernible plaza or patio grouping pattern. Due to their suspicious nature, only the mound labeled as Structure 22 was investigated during the 2008 field season.

Structure 22

The apprehensively labeled Structure 22 is located roughly in the center of identified mounds within the West Group and was selected for its most promising display of possibly being a purposely constructed feature. Structure 22 contained what appeared to be 4 surface-visible corners. Due to time and monetary constraints, only a 1 x 1 meter test-pit probe was positioned directly in the middle of the mound; in the center of what would possibly be a summit space (see Appendix C for Test Pit Program descriptions and results). The probe revealed no formal architecture or even pebbles larger than 0.03-0.05m in size. Additionally, only a handful of artifacts were recovered after a maximum excavation depth greater than more than 1m was achieved. Due to the lack of sufficient

architectural or artifact evidence from the test-pit probe, no further investigations were carried out on Structure 22 or anywhere else within the West Group.

East Group – Structure 3

Group Overview

The plaza group located east of the Site Core Plaza Group is comprised of approximately 9 mounds (Structures 1-5 and 41-44) and is the location for the largest amount of evidence of the earliest occupation at PVN647. This Group is clustered on top of a modified earthen platform, approximately 1m in height (identified as Structure 1), however, does not display any discernible patio or plaza style design or formation. Very little has been studied from this region of the site and, to date, only Structure 3 has been formally investigated from this group during the 2006 field season.

Structure 3

Structure 3 is roughly located within the center of the raised platform mound (Structure 1). An axial trench measuring 1 x 10 m wide was situated over Structure 3 in a roughly east-west 105/285 degree) orientation (sub-operations D and E). Architecture consisting of a 1 course high, unmodified river cobble construction feature was uncovered in the northern half of the trench and was followed over the top of the summit. No other construction features were witnessed from these investigations and excavations did not extend laterally from the axial trench. Due to time and financial constraints, but mostly because of sparsely identified architectural construction features and poor

preservation observed from the surface, no other investigations were carried out within this East Group. Finally, due to the nature of early occupational evidence (as early as the Middle Preclassic by means of ceramic typology), further investigations would not have been comparable to the primarily Late Classic occupation for the majority of the structures investigated at PVN647.

Appendix B – Artifacts from PVN647 - 2008 Field Season

	Densities (per m^3) for Soil Contexts for all Structures from Site Core Plaza Group at PVN647				
	TD = Terminal Debris				
Str.	Subop	Soil m^3 TD	m^3 Fill	m^3 Sterile	m^3 Total
12	AA	2.50	0.05		2.55
12	AD	1.85		0.15	2.00
12	AO	5.80			5.80
12	AP	2.65			2.65
12	AQ	2.30	0.2		2.50
12	AR	7.25	0.3		7.55
	Str. 12 Total	**22.35**	**0.55**	**0.15**	**23.05**
16	AE	1.85			1.85
16	AF	2.00			2.00
16	AS	2.65			2.65
16	AT	1.80			1.80
16	AU	1.65	0.4		2.05
16	AV	1.75	0.6		2.35
	Str. 16 Total	**11.70**	**1**	**0**	**12.70**
17	AB	1.90			1.90
17	AC	2.15			2.15
17	AG	3.20			3.20
17	AH	2.20			2.20
17	AI	1.98			1.98
17	AJ	2.65			2.65
17	AK	1.25	0.3		1.55
17	AL	1.90			1.90
17	AM	1.60	0.9		2.50
17	AN	0.90			0.90
	Str. 17 Total	**19.73**	**1.2**	**0**	**20.93**
18	CA	0.95			0.95
18	CB	1.80			1.80
18	CC	4.75			4.75
18	CD	4.80			4.80
	Str. 18 Total	**12.30**	**0**	**0**	**12.30**
33	AW	1.10			1.10
33	AX	1.65			1.65
33	AY	3.20			3.20
33	AZ	2.85			2.85
	Str. 33 Total	**8.80**	**0**	**0**	**8.80**
	SCP Group Total	**74.88**	**2.75**	**0.15**	**77.78**
	SE Group Total	**37.08**	**2.3**	**0.3**	**39.68**
	PVN647 Total	**111.96**	**5.05**	**0.45**	**117.455**

Table B.1: Densities (m^3) for soil contexts for all structures by sub-operation from Site Core Plaza Group at PVN647.

	Densities (per m^3) for Soil Contexts & Pottery for all Structures from Site Core Plaza Group at PVN647										
	TD = Terminal Debris		# = Count								
		Soil		Pottery - PROCESSED				Pottery - ANALYZED			
Str.	Suboperation	m^3 TD	m^3 Fill	# TD	m^3 TD	# Fill	m^3 Fill	# TD	m^3 TD	# Fill	m^3 Fill
12	AA	2.50	0.05	4,379	1,751.60	325				341	6,820.00
12	AD	1.85		3,235	1,748.65			475	256.76		
12	AO	5.80		8,594	1,481.72			332	57.24		
12	AP	2.65		2,650	1,000.00			171	64.53		
12	AQ	2.30	0.2	2,256	980.87	600				692	3,460.00
12	AR	7.25	0.3	9,452	1,303.72	661		381	52.55	650	2,166.67
	Str. 12 Total	**22.35**	**0.55**	**30,566**	**8,266.57**	**1,586**	**2,883.64**	**1,359**	**60.81**	**1,683**	**3,060.00**
16	AE	1.85		1,919	1,037.30			385	208.11		
16	AF	2.00		4,349	2,174.50			778	389.00		
16	AS	2.65		5,534	2,088.30			680	256.60		
16	AT	1.80		3,095	1,719.44						
16	AU	1.65	0.4	1,432	867.88	380		7	4.24	377	942.50
16	AV	1.75	0.6	4,054	2,316.57	400		1,228	701.71		
	Str. 16 Total	**11.70**	**1**	**20,383**	**10,203.99**	**780**	**780.00**	**3,078**	**263.08**	**377**	**377.00**
17	AB	1.90		888	467.37			104	54.74		
17	AC	2.15		2,151	1,000.47			292	135.81		
17	AG	3.20		1,644	513.75			216	67.50		
17	AH	2.20		1,322	600.91			180	81.82		
17	AI	1.98		1,479	748.86						
17	AJ	2.65		2,701	1,019.25						
17	AK	1.25	0.3	1,639	1,311.20	561		358	286.40		
17	AL	1.90		2,037	1,072.11			198	104.21		
17	AM	1.60	0.9	1,770	1,106.25	330				219	243.33
17	AN	0.90		1,218	1,353.33			56	62.22		
	Str. 17 Total	**19.73**	**1.2**	**16,849**	**9,193.49**	**891**	**742.50**	**1,404**	**71.18**	**219**	**182.50**
18	CA	0.95		1,188	1,250.53			197	207.37		
18	CB	1.80		790	438.89						
18	CC	4.75		6,185	1,302.11			715	150.53		
18	CD	4.80		6,459	1,345.63			146	30.42		
	Str. 18 Total	**12.30**	**0**	**14,622**	**4,337.15**	**0**	**0.00**	**1,058**	**86.02**	**0**	**0.00**
33	AW	1.10		1,488	1,352.73			318	289.09		
33	AX	1.65		2,110	1,278.79			150	90.91		
33	AY	3.20		7,059	2,205.94			802	250.63		
33	AZ	2.85		3,531	1,238.95			1,254	440.00		
	Str. 33 Total	**8.80**	**0**	**14,188**	**6,076.40**	**0**	**0.00**	**2,524**	**286.82**	**0**	**0.00**
	SCP Group Total	**74.88**	**2.75**	**96,608**	**38,077.59**	**3,257**	**1,184.36**	**9,423**	**125.85**	**2,279**	**828.73**
	SE Group Total	**37.08**	**2.3**	**27,371**	**13,509.93**	**1,301**	**565.65**	**2,023**	**54.56**	**44**	**19.13**
	PVN647 Total	**111.96**	**5.05**	**123979**	**1,107.40**	**4,558**	**902.57**	**11,446**	**102.24**	**2,323**	**460.00**

Table B.2: Counts and densities (m^3) of pottery by context for all structures by sub-operation from Site Core Plaza Group at PVN647.

	Densities (per m^3) in Terminal Debris by Pottery Type for all Structures from Site Core Plaza Group at PVN647											
	TD = Terminal Debris		# = Count									
		Soil	Pottery	Pottery	Pre Classic				Late & Terminal Classic			
Str.	Suboperation	m^3 TD	Processed	Analyzed	Bowl	Jar	Plate	Comal	Bowl	Jar	Plate	Comal
12	AA	2.50	4,379	0								
12	AD	1.85	3,235	475	29	286			14	146		
12	AO	5.80	8,594	332	31	178	1		12	109		1
12	AP	2.65	2,650	171	10	37			3	120		1
12	AQ	2.30	2,256	0								
12	AR	7.25	9,452	381	34	166	2		23	156		
	Str. 12 # Total	**22.35**	**30,566**	**1,359**	**104**	**667**	**3**	**0**	**52**	**531**	**0**	**2**
	Str. 12 Density		**1,367.61**	**60.81**	**4.65**	**29.84**	**0.13**	**0.00**	**2.33**	**23.76**	**0.00**	**0.09**
16	AE	1.85	1,919	385	8	13			65	298		1
16	AF	2.00	4,349	778	15	90			76	588	8	1
16	AS	2.65	5,534	680	17	131			30	501	1	
16	AT	1.80	3,095	0								
16	AU	1.65	1,432	7		7						
16	AV	1.75	4,054	1,228	25	73			120	1,004	5	1
	Str. 16 # Total	**11.70**	**20,383**	**3,078**	**65**	**314**	**0**	**0**	**291**	**2,391**	**14**	**3**
	Str. 16 Density		**1,742.14**	**263.08**	**5.56**	**26.84**	**0.00**	**0.00**	**24.87**	**204.36**	**1.20**	**0.26**
17	AB	1.90	888	104	5	39			6	54		
17	AC	2.15	2,151	292	2	52			40	198		
17	AG	3.20	1,644	216	16	46			24	129		1
17	AH	2.20	1,322	180	8	23			8	140		1
17	AI	1.98	1,479	0								
17	AJ	2.65	2,701	0								
17	AK	1.25	1,639	358	14	135	2		17	186	4	
17	AL	1.90	2,037	198	3	88			13	94		
17	AM	1.60	1,770	0								
17	AN	0.90	1,218	56						56		
	Str. 17 # Total	**19.73**	**16,849**	**1,404**	**48**	**383**	**2**	**0**	**108**	**857**	**4**	**2**
	Str. 17 Density		**854.20**	**71.18**	**2.43**	**19.42**	**0.10**	**0.00**	**5.48**	**43.45**	**0.20**	**0.10**
18	CA	0.95	1,188	197	2	7			12	176		
18	CB	1.80	790	0								
18	CC	4.75	6,185	715	12	37			39	627		
18	CD	4.80	6,459	146	9	39			8	87		3
	Str. 18 # Total	**12.30**	**14,622**	**1,058**	**23**	**83**	**0**	**0**	**59**	**890**	**0**	**3**
	Str. 18 Density		**1,188.78**	**86.02**	**1.87**	**6.75**	**0.00**	**0.00**	**4.80**	**72.36**	**0.00**	**0.24**
33	AW	1.10	1,488	318	19	200				99		
33	AX	1.65	2,110	150	3	12			16	113		6
33	AY	3.20	7,059	802	10	42			47	699	2	2
33	AZ	2.85	3,531	1,254	11	100			35	1,106	2	
	Str. 33 # Total	**8.80**	**14,188**	**2,524**	**43**	**354**	**0**	**0**	**98**	**2,017**	**4**	**8**
	Str. 33 Density		**1,612.27**	**286.82**	**4.89**	**40.23**	**0.00**	**0.00**	**11.14**	**229.20**	**0.45**	**0.91**
	SCP Group Total	**74.88**	**96,608**	**9,423**	**283**	**1,801**	**5**	**0**	**608**	**6,686**	**22**	**18**
	SCP Group Density		**1,290.26**	**125.85**	**3.78**	**24.05**	**0.07**	**0.00**	**8.12**	**89.30**	**0.29**	**0.24**
	SE Group Total	**37.08**	**27,371**	**2,023**	**12**	**52**	**0**	**0**	**234**	**1,718**	**6**	**1**
	SE Group Density		**738.16**	**54.56**	**0.32**	**1.40**	**0.00**	**0.00**	**6.31**	**46.33**	**0.16**	**0.03**
	PVN647 Total	**111.96**	**123,979**	**11,446**	**295**	**1,853**	**5**	**0**	**842**	**8,404**	**28**	**19**
	PVN647 Density		**1,107.40**	**102.24**	**2.63**	**16.55**	**0.04**	**0.00**	**7.52**	**75.07**	**0.25**	**0.17**

Table B.3: Counts and densities (m^3) of pottery from terminal debris by vessel type for all structures by sub-operation from Site Core Plaza Group at PVN647.

	Densities (per m3) of Non-Pottery Ceramic Artifacts in Terminal Debris for all Structures from Site Core Plaza Group at PVN647														
	TD = Terminal Debris		# = Count												
								Censers							
Str.	Suboperation	Soil m3 TD	Candeleros	Figurines	Ocarinas	Complex	Modeled	Scored Lids	Pierced Ladles	Stamps	Molds	Potstands	Worked Sherd	Used Sherd	Sherd Disk
12	AA	2.50		1											1
12	AD	1.85											2	5	
12	AO	5.80	1	2					1			1			
12	AP	2.65						1				1		1	
12	AQ	2.30		2	1			1							
12	AR	7.25	1	2				3	1		1				
	Str. 12 # Total	**22.35**	**2**	**7**	**1**	**0**	**0**	**9**	**2**	**0**	**1**	**2**	**2**	**6**	**1**
	Str. 12 Density		**0.09**	**0.31**	**0.04**	**0.00**	**0.00**	**0.40**	**0.09**	**0.00**	**0.04**	**0.09**	**0.09**	**0.27**	**0.04**
16	AE	1.85		2		1	1	4		1		4	1	3	
16	AF	2.00		1	1	5		5				27	2	3	
16	AS	2.65		3	2		7	1				8	2	3	
16	AT	1.80		4					1	1					
16	AU	1.65					1	2							
16	AV	1.75		3			2	1				9	8	1	
	Str. 16 # Total	**11.70**	**0**	**13**	**3**	**6**	**11**	**13**	**1**	**2**	**0**	**48**	**13**	**10**	**0**
	Str. 16 Density		**0.00**	**1.11**	**0.26**	**0.51**	**0.94**	**1.11**	**0.09**	**0.17**	**0.00**	**4.10**	**1.11**	**0.85**	**0.00**
17	AB	1.90		1	3			1				9	3	4	
17	AC	2.15						1				6	8	3	
17	AG	3.20		1				1				1	2	4	
17	AH	2.20					1					1			
17	AI	1.98		3						1	1				
17	AJ	2.65	1					1		1					
17	AK	1.25							1						
17	AL	1.90	1	1			1	1	1						
17	AM	1.60				1	1				1		1		
17	AN	0.90	2		1										
	Str. 17 # Total	**19.73**	**4**	**6**	**4**	**1**	**3**	**5**	**2**	**2**	**2**	**17**	**14**	**11**	**0**
	Str. 17 Density		**0.20**	**0.30**	**0.20**	**0.05**	**0.15**	**0.25**	**0.10**	**0.10**	**0.10**	**0.86**	**0.71**	**0.56**	**0.00**
18	CA	0.95		3											
18	CB	1.80		2											
18	CC	4.75		6		2			2			4	2	7	
18	CD	4.80		2	2	1	2	2	1		1			1	
	Str. 18 # Total	**12.30**	**0**	**13**	**2**	**3**	**2**	**2**	**3**	**0**	**1**	**4**	**2**	**8**	**0**
	Str. 18 Density		**0.00**	**1.06**	**0.16**	**0.24**	**0.16**	**0.16**	**0.24**	**0.00**	**0.08**	**0.33**	**0.16**	**0.65**	**0.00**
33	AW	1.10		1								3			
33	AX	1.65		2	2							7			
33	AY	3.20		3	1		1	2				4	4	2	
33	AZ	2.85	4	5				3	1			11	3	4	
	Str. 33 # Total	**8.80**	**4**	**11**	**3**	**0**	**1**	**5**	**1**	**0**	**0**	**25**	**7**	**6**	**0**
	Str. 33 Density		**0.45**	**1.25**	**0.34**	**0.00**	**0.11**	**0.57**	**0.11**	**0.00**	**0.00**	**2.84**	**0.80**	**0.68**	**0.00**
	SCP Group Total	**74.88**	**10**	**50**	**13**	**10**	**17**	**34**	**9**	**4**	**4**	**96**	**38**	**41**	**1**
	SCP Group Density		**0.13**	**0.67**	**0.17**	**0.13**	**0.23**	**0.45**	**0.12**	**0.05**	**0.05**	**1.28**	**0.51**	**0.55**	**0.01**
	SE Group Total	**37.08**	**6**	**10**	**2**	**3**	**2**	**3**	**6**	**0**	**1**	**18**	**16**	**8**	**2**
	SE Group Density		**0.16**	**0.27**	**0.05**	**0.08**	**0.05**	**0.08**	**0.16**	**0.00**	**0.03**	**0.49**	**0.43**	**0.22**	**0.05**
	PVN647 Total	**111.96**	**16**	**60**	**15**	**13**	**19**	**37**	**15**	**4**	**5**	**114**	**54**	**49**	**3**
	PVN647 Density		**0.14**	**0.54**	**0.13**	**0.12**	**0.17**	**0.33**	**0.13**	**0.04**	**0.04**	**1.02**	**0.48**	**0.44**	**0.03**

Table B.4: Counts and densities (m^3) of non-pottery ceramics for all structures by sub-operation from Site Core Plaza Group at PVN647.

	Densities (per m^3) of Lithic (all Stone) Artifacts in Terminal Debris for all Structures from Site Core Plaza Group at PVN647							
	TD = Terminal Debris		# = Count					
Str.	Suboperation	Soil m^3 TD	Obsidian	Chert	Metates	Manos	Hacha	Pigment Stones
12	AA	2.50	1,135	74	1	4		
12	AD	1.85	609	57	5	2		
12	AO	5.80	1,620	159	2	3		
12	AP	2.65	547	40	2	1		
12	AQ	2.30	673	25		2		3
12	AR	7.25	2,272	142	6	2		
	Str. 12 # Total	**22.35**	**6,856**	**497**	**16**	**14**	**0**	**3**
	Str. 12 Density		**306.76**	**22.24**	**0.72**	**0.63**	**0.00**	**0.13**
16	AE	1.85	284	34		1		
16	AF	2.00	1,103	86	1	1		
16	AS	2.65	628	55	3	1		
16	AT	1.80	311	29				
16	AU	1.65	165	11				
16	AV	1.75	751	37				
	Str. 16 # Total	**11.70**	**3,242**	**252**	**4**	**3**	**0**	**0**
	Str. 16 Density		**277.09**	**21.54**	**0.34**	**0.26**	**0.00**	**0.00**
17	AB	1.90	214	21		1		
17	AC	2.15	569	78				
17	AG	3.20	311	19	3			
17	AH	2.20	389	33		1		
17	AI	1.98	351	30	1			
17	AJ	2.65	438	22	2	1		
17	AK	1.25	410	22		1		
17	AL	1.90	534	22				
17	AM	1.60	289	27				
17	AN	0.90	234	15				
	Str. 17 # Total	**19.73**	**3,739**	**289**	**6**	**4**	**0**	**0**
	Str. 17 Density		**189.56**	**14.65**	**0.30**	**0.20**	**0.00**	**0.00**
18	CA	0.95	109	7				
18	CB	1.80	146	6				
18	CC	4.75	608	41	1	1		
18	CD	4.80	761	32				
	Str. 18 # Total	**12.30**	**1,624**	**86**	**1**	**1**	**0**	**0**
	Str. 18 Density		**132.03**	**6.99**	**0.08**	**0.08**	**0.00**	**0.00**
33	AW	1.10	291	9				
33	AX	1.65	473	25			1	
33	AY	3.20	809	37	1		1	
33	AZ	2.85	520	21				2
	Str. 33 # Total	**8.80**	**2,093**	**92**	**1**	**0**	**2**	**2**
	Str. 33 Density		**237.84**	**10.45**	**0.11**	**0.00**	**0.23**	**0.23**
	SCP Group Total	**74.88**	**17,554**	**1216**	**28**	**22**	**2**	**5**
	SCP Group Density		**234.44**	**16.24**	**0.37**	**0.29**	**0.03**	**0.07**
	SE Group Total	**37.08**	**1,686**	**165**	**1**	**3**	**0**	**0**
	SE Group Density		**45.47**	**4.45**	**0.03**	**0.08**	**0.00**	**0.00**
	PVN647 Total	**111.96**	**19,240**	**1,381**	**29**	**25**	**2**	**5**
	PVN647 Density		**171.85**	**12.34**	**0.26**	**0.22**	**0.02**	**0.04**

Table B.5: Counts and densities (m^3) of lithic artifacts for all structures by sub-operation from Site Core Plaza Group at PVN647.

	Densities (per m^3) of Faunal, Floral, & all other Artifacts in Terminal Debris for all Structures from Site Core Plaza Group at PVN647								
	TD = Terminal Debris		# = Count						
Str.	Suboperation	Soil m^3 TD	Bone	Jute	Bajareque	Pendant	Bead	Earspool	Other
12	AA	2.50			85				
12	AD	1.85			24				1
12	AO	5.80	4		42				1
12	AP	2.65			17				
12	AQ	2.30			12				
12	AR	7.25			102				
	Str. 12 # Total	**22.35**	**4**	**0**	**282**	**0**	**0**	**0**	**2**
	Str. 12 Density		**0.18**	**0.00**	**12.62**	**0.00**	**0.00**	**0.00**	**0.09**
16	AE	1.85			15				
16	AF	2.00			12				
16	AS	2.65			31		1		
16	AT	1.80		1	1				
16	AU	1.65		2	18				
16	AV	1.75			4				
	Str. 16 # Total	**11.70**	**0**	**3**	**81**	**0**	**1**	**0**	**0**
	Str. 16 Density		**0.00**	**0.26**	**6.92**	**0.00**	**0.09**	**0.00**	**0.00**
17	AB	1.90			5				
17	AC	2.15			13				
17	AG	3.20			14				
17	AH	2.20			40				
17	AI	1.98			22				
17	AJ	2.65			10	1			
17	AK	1.25	10	5	16				1
17	AL	1.90		2	4				
17	AM	1.60			22				
17	AN	0.90			3				
	Str. 17 # Total	**19.73**	**10**	**7**	**149**	**1**	**0**	**0**	**1**
	Str. 17 Density		**0.51**	**0.35**	**7.55**	**0.05**	**0.00**	**0.00**	**0.05**
18	CA	0.95							
18	CB	1.80							
18	CC	4.75			12				1
18	CD	4.80			6				
	Str. 18 # Total	**12.30**	**0**	**0**	**18**	**0**	**0**	**0**	**1**
	Str. 18 Density		**0.00**	**0.00**	**1.46**	**0.00**	**0.00**	**0.00**	**0.08**
33	AW	1.10			3	1			
33	AX	1.65							
33	AY	3.20	126		3				
33	AZ	2.85			2			1	
	Str. 33 # Total	**8.80**	**126**	**0**	**8**	**1**	**0**	**1**	**0**
	Str. 33 Density		**14.32**	**0.00**	**0.91**	**0.11**	**0.00**	**0.11**	**0.00**
	SCP Group Total	**74.88**	**140**	**10**	**538**	**2**	**1**	**1**	**4**
	SCP Group Density		**1.87**	**0.13**	**7.19**	**0.03**	**0.01**	**0.01**	**0.05**
	SE Group Total	**37.08**	**1**	**3**	**691**	**0**	**0**	**0**	**0**
	SE Group Density		**0.03**	**0.08**	**18.64**	**0.00**	**0.00**	**0.00**	**0.00**
	PVN647 Total	**111.96**	**141**	**13**	**1,229**	**2**	**1**	**1**	**4**
	PVN647 Density		**1.26**	**0.12**	**10.98**	**0.02**	**0.01**	**0.01**	**0.04**

Table B.6: Counts and densities (m^3) of faunal, floral, and all other artifacts for all structures by sub-operation from Site Core Plaza Group at PVN647.

	Densities (per m^3) of Soil Contexts for all Structures from Southeast Plaza Group at PVN647				
	TD = Terminal Debris				
Str.	Suboperation	Soil m^3 TD	m^3 Fill	m^3 Sterile	m^3 Total
6	BA	1.90	0.7		2.60
6	BB	3.30	0.2		3.50
6	BH	1.50			1.50
6	BI	2.20	0.3		2.50
6	BJ	3.15			3.15
6	BL	3.48			3.48
6	BN	2.65			2.65
	Str. 6 Total	**18.18**	**1.2**	**0.0**	**19.38**
7	BC	1.55	0.3		1.85
7	BD	1.50	0.7	0.3	2.50
7	BE	1.65			1.65
7	BF	0.45			0.45
7	BG	2.18	0.1		2.28
7	BK	2.10			2.10
7	BM	2.18			2.18
	Str. 7 Total	**11.60**	**1.1**	**0.3**	**13.00**
13	BO	1.50			1.50
13	BP	1.30			1.30
13	BQ	2.85			2.85
13	BR	1.65			1.65
	Str. 13 Total	**7.30**	**0.0**	**0.0**	**7.30**
	SE Group Total	**37.08**	**2.3**	**0.3**	**39.68**
	SCP Group Total	**74.88**	**2.75**	**0.15**	**77.78**
	PVN647 Total	**111.96**	**5.05**	**0.45**	**117.46**

Table B.7: Densities (m^3) for soil contexts for all structures by sub-operation from Southeast Plaza Group at PVN647.

	Densities (per m^3) of Pottery for all Structures from Southeast Plaza Group at PVN647										
	TD = Terminal Debris		# = Count								
		Soil		Pottery - PROCESSED				Pottery - ANAYLZED			
Str.	Suboperation	m^3 TD	m^3 Fill	# TD	m^3 TD	# Fill	m^3 Fill	# TD	m^3 TD	# Fill	m^3 Fill
6	BA	1.90	0.7	932	490.53	315	450	107	56.32		
6	BB	3.30	0.2	1,308	396.36	20	100	154	46.67		
6	BH	1.50		1,328	885.33			59	39.33		
6	BI	2.20	0.3	1,225	556.82	123	410	68	30.91		
6	BJ	3.15		1,727	548.25			38	12.06		
6	BL	3.48		1,699	488.22			0			
6	BN	2.65		2,734	1,031.70			471	177.74		
	Str. 6 Total	**18.18**	**1.2**	**10,953**	**4,397.21**	**458**	**381.667**	**897**	**49.34**	**0**	**0**
7	BC	1.55	0.3	910	587.10	304	1,013.33	0			
7	BD	1.50	0.7	1,140	760.00	539	770	137	91.33	44	130.476
7	BE	1.65		1,663	1,007.88			48	29.09		
7	BF	0.45		151	335.56			0			
7	BG	2.18	0.1	2,622	1,205.52			203	93.33		
7	BK	2.10		1,279	609.05			93	44.29		
7	BM	2.18		1,943	893.33			29	13.33		
	Str. 7 Total	**11.60**	**1.1**	**9,708**	**5,398.43**	**843**	**766.36**	**510**	**43.97**	**44**	**40.00**
13	BO	1.50		1,350	900.00			616	410.67		
13	BP	1.30		1,108	852.31						
13	BQ	2.85		2,410	845.61						
13	BR	1.65		1,842	1,116.36						
	Str. 13 Total	**7.30**	**0.00**	**6,710**	**3,714.29**	**0**	**0.00**	**616**	**84.38**	**0**	**0.00**
	SE Group Total	**37.08**	**2.3**	**27,371**	**13,509.93**	**1,301**	**565.65**	**2,023**	**54.56**	**44**	**19.13**
	SCP Group Total	**74.88**	**2.75**	**96,608**	**38,077.59**	**3,257**	**1,184.36**	**9,423**	**125.85**	**2,279**	**828.73**
	PVN647 Total	**111.96**	**5.05**	**123,979**	**1,107.40**	**4,558**	**902.57**	**11,446**	**102.24**	**2,323**	**460.00**

Table B.8: Counts and densities (m^3) of pottery by context for all structures by sub-operation from Southeast Plaza Group at PVN647.

	Densities (per m^3) of Pottery for all Structures from Southeast Plaza Group at PVN647											
	TD = Terminal Debris		# = Count									
		Soil	Pottery	Pottery		Pre Classic			Late & Terminal Classic			
Str.	Suboperation	m^3 TD	Processed	Analyzed	Bowl	Jar	Plate	Comal	Bowl	Jar	Plate	Comal
6	BA	1.90	932	107	2	10			7	88		
6	BB	3.30	1,308	154		5			8	139	2	
6	BH	1.50	1,328	59					10	49		
6	BI	2.20	1,225	68					14	53		1
6	BJ	3.15	1,727	38					6	32		
6	BL	3.48	1,699	0								
6	BN	2.65	2,734	471	3	6			97	365		
	Str. 6 # Total	**18.18**	**10,953**	**897**	**5**	**21**	**0**	**0**	**142**	**726**	**2**	**1**
	Str. 6 Density		**602.48**	**49.34**	**0.28**	**1.16**	**0.00**	**0.00**	**7.81**	**39.93**	**0.11**	**0.06**
7	BC	1.55	910	0								
7	BD	1.50	1,140	137	1	20			14	102		
7	BE	1.65	1,663	48		2			7	39		
7	BF	0.45	151	0								
7	BG	2.18	2,622	203	4	7			15	174	3	
7	BK	2.10	1,279	93	2	2			11	78		
7	BM	2.18	1,943	29					3	26		
	Str. 7 # Total	**11.60**	**9,708**	**510**	**7**	**31**	**0**	**0**	**50**	**419**	**3**	**0**
	Str. 7 Density		**836.90**	**43.97**	**0.60**	**2.67**	**0.00**	**0.00**	**4.31**	**36.12**	**0.26**	**0.00**
13	BO	1.50	1,350	616					42	573	1	
13	BP	1.30	1,108	0								
13	BQ	2.85	2,410	0								
13	BR	1.65	1,842	0								
	Str. 13 # Total	**7.30**	**6,710**	**616**	**0**	**0**	**0**	**0**	**42**	**573**	**1**	**0**
	Str. 13 Density		**919.18**	**84.38**	**0.00**	**0.00**	**0.00**	**0.00**	**5.75**	**78.49**	**0.14**	**0.00**
	SE Group Total	**37.08**	**27,371**	**2,023**	**12**	**52**	**0**	**0**	**234**	**1,718**	**6**	**1**
	SE Group Density		**738.16**	**54.56**	**0.32**	**1.40**	**0.00**	**0.00**	**6.31**	**46.33**	**0.16**	**0.03**
	SCP Group Total	**74.88**	**96,608**	**9,423**	**283**	**1,801**	**5**	**0**	**608**	**6,686**	**22**	**18**
	SCP Group Density		**1,290.26**	**125.85**	**3.78**	**24.05**	**0.07**	**0.00**	**8.12**	**89.30**	**0.29**	**0.24**
	PVN647 Total	**111.96**	**123,979**	**11,446**	**295**	**1,853**	**5**	**0**	**842**	**8,404**	**28**	**19**
	PVN647 Density		**1,107.40**	**102.24**	**2.63**	**16.55**	**0.04**	**0.00**	**7.52**	**75.07**	**0.25**	**0.17**

Table B.9: Counts and densities (m^3) of pottery from terminal debris by vessel type for all structures by sub-operation from Southeast Plaza Group at PVN647.

Densities (per m^3) of Non-Pottery Ceramic Artifacts in Terminal Debris for all Structures from Southeast Plaza Group at PVN647

TD = Terminal Debris # = Count

Str.	Suboperation	Soil m^3 TD	Censers												
			Candeleros	Figurines	Ocarinas	Complex	Modeled	Scored Lids	Pierced Ladles	Stamps	Molds	Potstands	Worked Sherd	Used Sherd	Sherd Disk
6	BA	1.90		2		2						5	1		
6	BB	3.30													
6	BH	1.50		1								1			
6	BI	2.20	1									2			
6	BJ	3.15										1			1
6	BL	3.48		4	1		1	1							
6	BN	2.65	3									3	6		1
	Str. 6 # Total	**18.18**	**4**	**7**	**1**	**2**	**1**	**1**	**0**	**0**	**0**	**12**	**7**	**0**	**2**
	Str. 6 Density		**0.22**	**0.39**	**0.06**	**0.11**	**0.06**	**0.06**	**0.00**	**0.00**	**0.00**	**0.66**	**0.39**	**0.00**	**0.11**
7	BC	1.55			1										
7	BD	1.50													
7	BE	1.65		1				1							
7	BF	0.45													
7	BG	2.18	2	1			1					3	3	2	
7	BK	2.10						1	1				1	1	
7	BM	2.18													
	Str. 7 # Total	**11.60**	**2**	**2**	**1**	**0**	**1**	**2**	**1**	**0**	**0**	**3**	**4**	**3**	**0**
	Str. 7 Density		**0.17**	**0.17**	**0.09**	**0.00**	**0.09**	**0.17**	**0.09**	**0.00**	**0.00**	**0.26**	**0.34**	**0.26**	**0.00**
13	BO	1.50				1						2		1	
13	BP	1.30							5		1	1	5	4	
13	BQ	2.85		1											
13	BR	1.65													
	Str. 13 # Total	**7.30**	**0**	**1**	**0**	**1**	**0**	**0**	**5**	**0**	**1**	**3**	**5**	**5**	**0**
	Str. 13 Density		**0.00**	**0.14**	**0.00**	**0.14**	**0.00**	**0.00**	**0.68**	**0.00**	**0.14**	**0.41**	**0.68**	**0.68**	**0.00**
	SE Group Total	**37.08**	**6**	**10**	**2**	**3**	**2**	**3**	**6**	**0**	**1**	**18**	**16**	**8**	**2**
	SE Group Density		**0.16**	**0.27**	**0.05**	**0.08**	**0.05**	**0.08**	**0.16**	**0.00**	**0.03**	**0.49**	**0.43**	**0.22**	**0.05**
	SCP Group Total	**74.88**	**10**	**50**	**13**	**10**	**17**	**34**	**9**	**4**	**4**	**96**	**38**	**41**	**1**
	SCP Group Density		**0.13**	**0.67**	**0.17**	**0.13**	**0.23**	**0.45**	**0.12**	**0.05**	**0.05**	**1.28**	**0.51**	**0.55**	**0.01**
	PVN647 Total	**111.96**	**16**	**60**	**15**	**13**	**19**	**37**	**15**	**4**	**5**	**114**	**54**	**49**	**3**
	PVN647 Density		**0.14**	**0.54**	**0.13**	**0.12**	**0.17**	**0.33**	**0.13**	**0.04**	**0.04**	**1.02**	**0.48**	**0.44**	**0.03**

Table B.10: Counts and densities (m^3) of non-pottery ceramics for all structures by sub-operation from Southeast Plaza Group at PVN647.

	Densities (per m^3) of Lithic (all Stone) Artifacts in Terminal Debris for all Structures from Southeast Plaza Group at PVN647							
	TD = Terminal Debris		# = Count					
Str.	Suboperation	Soil m^3 TD	Obsidian	Chert	Metates	Manos	Hacha	Pigment Stones
6	BA	1.90	91	7				
6	BB	3.30	52	3				
6	BH	1.50	156	4		1		
6	BI	2.20	186	14				
6	BJ	3.15	58	11				
6	BL	3.48	66	12				
6	BN	2.65	159	19		1		
	Str. 6 # Total	**18.18**	**768**	**70**	**0**	**2**	**0**	**0**
	Str. 6 Density		**42.24**	**3.85**	**0.00**	**0.11**	**0.00**	**0.00**
7	BC	1.55	39	5				
7	BD	1.50	154	9				
7	BE	1.65	97	8				
7	BF	0.45	7					
7	BG	2.18	179	19				
7	BK	2.10	61	13	1			
7	BM	2.18	159	8		1		
	Str. 7 # Total	**11.60**	**696**	**62**	**1**	**1**	**0**	**0**
	Str. 7 Density		**60.00**	**5.34**	**0.09**	**0.09**	**0.00**	**0.00**
13	BO	1.50	25	4				
13	BP	1.30	44	7				
13	BQ	2.85	74	6				
13	BR	1.65	79	16				
	Str. 13 # Total	**7.30**	**222**	**33**	**0**	**0**	**0**	**0**
	Str. 13 Density		**30.41**	**4.52**	**0.00**	**0.00**	**0.00**	**0.00**
	SE Group Total	**37.08**	**1,686**	**165**	**1**	**3**	**0**	**0**
	SE Group Density		**45.47**	**4.45**	**0.03**	**0.08**	**0.00**	**0.00**
	SCP Group Total	**74.88**	**17,554**	**1216**	**28**	**22**	**2**	**5**
	SCP Group Density		**234.44**	**16.24**	**0.37**	**0.29**	**0.03**	**0.07**
	PVN647 Total	**111.96**	**19,240**	**1,381**	**29**	**25**	**2**	**5**
	PVN647 Density		**171.85**	**12.34**	**0.26**	**0.22**	**0.02**	**0.04**

Table B.11: Counts and densities (m^3) of lithic artifacts for all structures by sub-operation from Southeast Plaza Group at PVN647.

	Densities (per m^3) of Faunal, Floral, and all Other Artifacts in Terminal Debris for all Structures from Southeast Plaza Group at PVN647								
	TD = Terminal Debris		# = Count						
Str.	Suboperation	Soil m^3 TD	Bone	Jute	Bajareque	Pendant	Bead	Earspool	Other
6	BA	1.90	1		149				
6	BB	3.30		3	13				
6	BH	1.50			27				
6	BI	2.20			61				
6	BJ	3.15			34				
6	BL	3.48			46				
6	BN	2.65			227				
	Str. 6 # Total	**18.18**	**1**	**3**	**557**	**0**	**0**	**0**	**0**
	Str. 6 Density		**0.06**	**0.17**	**30.64**	**0.00**	**0.00**	**0.00**	**0.00**
7	BC	1.55			15				
7	BD	1.50			43				
7	BE	1.65			6				
7	BF	0.45							
7	BG	2.18			27				
7	BK	2.10			7				
7	BM	2.18			10				
	Str. 7 # Total	**11.60**	**0**	**0**	**108**	**0**	**0**	**0**	**0**
	Str. 7 Density		**0.00**	**0.00**	**9.31**	**0.00**	**0.00**	**0.00**	**0.00**
13	BO	1.50			3				
13	BP	1.30			2				
13	BQ	2.85			10				
13	BR	1.65			11				
	Str. 13 # Total	**7.30**	**0**	**0**	**26**	**0**	**0**	**0**	**0**
	Str. 13 Density		**0.00**	**0.00**	**3.56**	**0.00**	**0.00**	**0.00**	**0.00**
	SE Group Total	**37.08**	**1**	**3**	**691**	**0**	**0**	**0**	**0**
	SE Group Density		**0.03**	**0.08**	**18.64**	**0.00**	**0.00**	**0.00**	**0.00**
	SCP Group Total	**74.88**	**140**	**10**	**538**	**2**	**1**	**1**	**4**
	SCP Group Density		**1.87**	**0.13**	**7.19**	**0.03**	**0.01**	**0.01**	**0.05**
	PVN647 Total	**111.96**	**141**	**13**	**1,229**	**2**	**1**	**1**	**4**
	PVN647 Density		**1.26**	**0.12**	**10.98**	**0.02**	**0.01**	**0.01**	**0.04**

Table B.12: Counts and densities (m^3) of faunal, floral, and all other artifacts for all structures by sub-operation from Southeast Plaza Group at PVN647.

Appendix C

Test Pitting Program at PVN647

2008 Field Season

The following is a detailed description of the results from the test pitting program carried out during the 2008 season at PVN647. The location, research purpose, and excavation results from each test unit are described. A total of 15 test units were distributed according to a stratified-random sampling process throughout the defined site area of PVN647 (**Figure C.1**). Criteria for test unit location included evidence of occupation by the presence of clusters of cobbles, artifact scatters, or proximity to other known constructions. Additionally, the approximate center of the Site Core Plaza Group and the Southeast Plaza Group were sampled. Investigations were carried out in 0.1m excavation levels until evidence of purposeful construction or occupation was identified or sterile soil was observed. Due to time and financial constraints, no pottery from the test pitting program has been analyzed, however all artifact materials have been processed. Included with the discussion of each test pit is a summary of processed artifacts by class and excavation drawings.

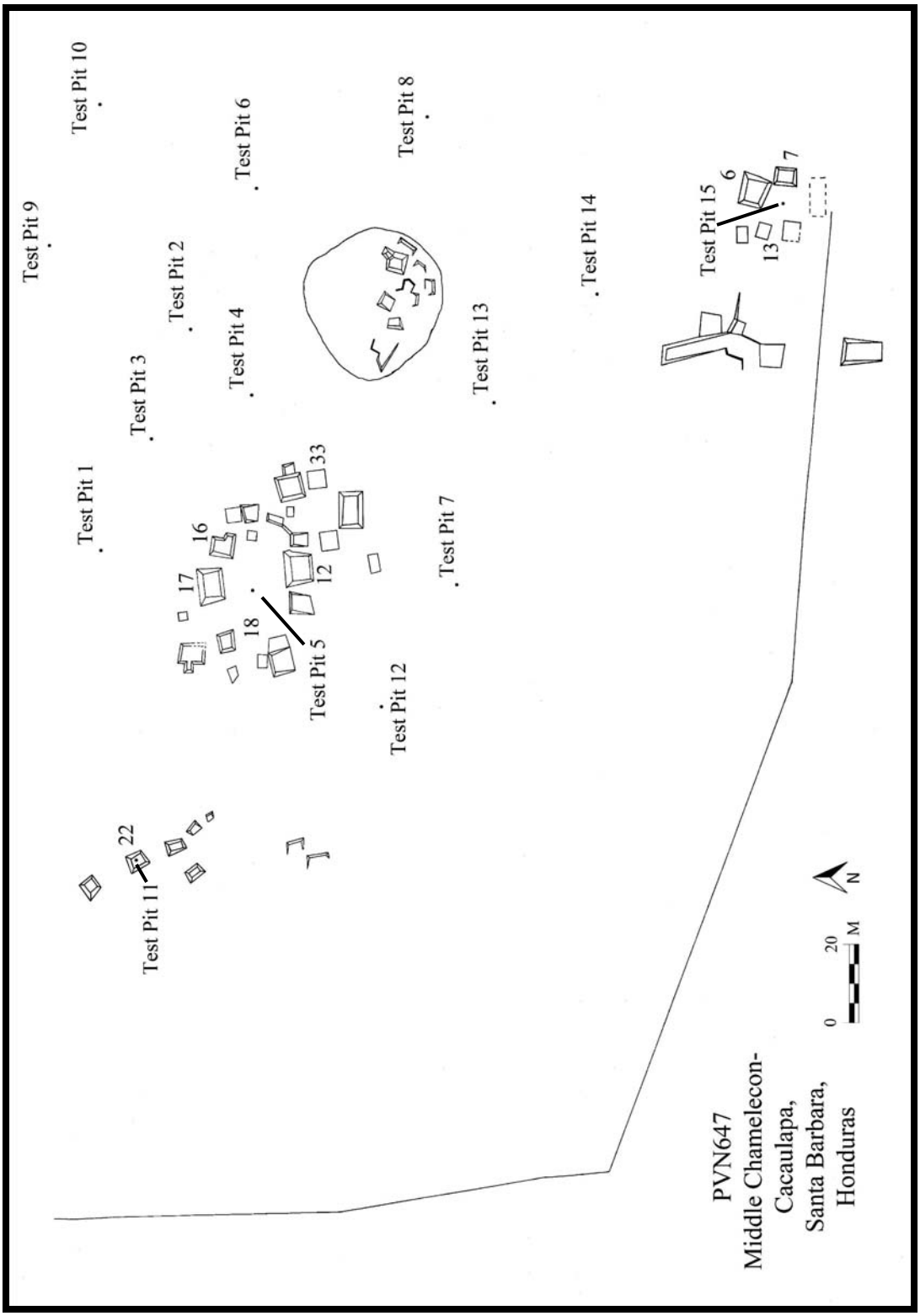

Figure C.1: Site Map of PVN647 with investigated structures numbered and test pit locations.

Test Pit 1

Test Pit 1 (TP1) is a 1 x 1m test unit (sub-operation CE) and is located roughly due north of the Site Core Plaza Group (**Figure C.1**). Specifically, it is situated approximately 25m north of Structures 16 and 17 and 30m northwest of Test Pit 3 (TS3). The area of TP1 was selected for sampling as evidence of small cobbles on the ground surface served as an indication for a hypothesized destroyed structure having once occupied the location. Excavations of TP1 were conducted in one day, 7 May 2008, and supervised by the author. Investigations reached a maximum depth of roughly 0.22m below ground surface (an approximate total of $0.22m^3$ of matrix was excavated) and only two soil strata were discerned. Only fist-sized and small cobbles were encountered and no evidence for intentional construction was observed (**Figure C.2**). Results from processed artifacts indicate high densities of ceramic sherd fragments and obsidian (**Table C.1**). Though the significance of these calculations remain unknown, it is hypothesized the densities are the result of debris associated with occupation of the Site Core Plaza Group.

Stratum Designations for Test Pit 1:

Stratum one: Very dark gray organic topsoil (munsell 7.5YR 3/1)

Stratum two: Dark brown dense sterile clay (munsell 7.5YR 3/2)

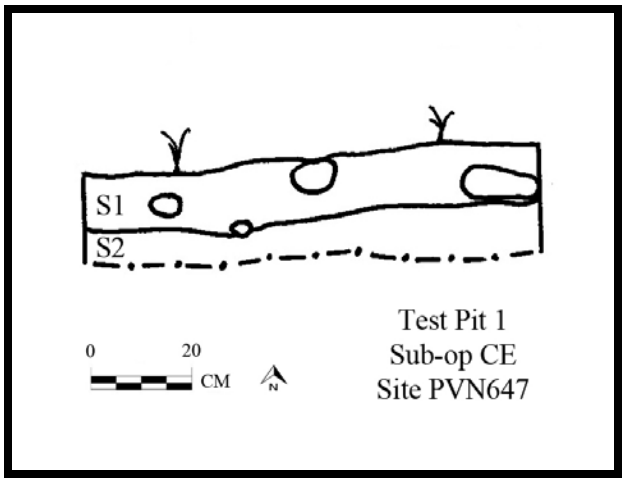

Figure C.2: Section drawing of Test Pit 1 from PVN647.

Artifact Class	Object total from Test Pit 1	Object per m^3 from Test Pit 1
Ceramic sherds	476	2163.64
Obsidian	97	440.9
Chert	11	50
Bajareque	2	9.09

Table C.1: Summary of processed artifact totals and densities by class from Test Pit 1 at PVN647.

Test Pit 2

Test Pit 2 (TP2) is a 1 x 1m test unit (sub-operation CF) and is located in the northeast region of PVN647. It is approximately 30m north of "Structure 1", the 1m high earthen mound associated with the East Group. Additionally, it is positioned roughly 27m southeast of Test Pit 3 (TS3), 18m northeast of Test Pit 4 (TS4), 38m northwest of Test Pit 6, (TS6), and 40m southwest of Test Pit 9 (TS9) (**Figure C.1**). Sampling of the area of TS2 was due to the presence of a ceramic sherd artifact scatter located on the ground surface, as well as the area being in the suspected plow zone. Investigations of TS2 occurred from 7-9 May 2008 and were supervised by the author. Excavations reached a maximum depth of roughly 0.38m below ground surface (an approximate total

of 0.38m^3 of matrix was excavated) and two strata were distinguished (**Figure C.3**). No preserved intentional constructions or features were observed. Significantly high densities of ceramic sherd fragments and obsidian were recovered from TS2 (**Table C.2**), and are likely the result of debris washed away from the constructed areas along the downward sloping nature of the terrain in this northeast region.

Stratum Designations for Test Pit 2:

Stratum one: Very dark gray organic topsoil (munsell 7.5YR 3/1)

Stratum two: Dark brown dense sterile clay (munsell 7.5YR 3/2)

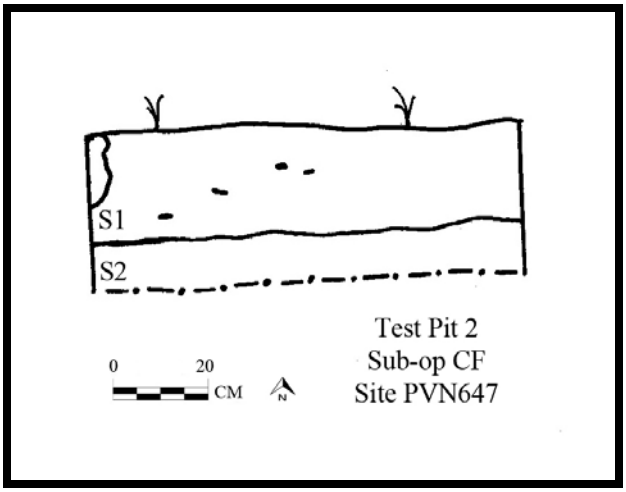

Figure C.3: Section drawing of Test Pit 2 from PVN647.

Artifact Class	Object total from Test Pit 2	Object per m^3 from Test Pit 2
Ceramic sherds	1494	3931.58
Obsidian	170	447.37
Chert	1	2.63

Table C.2: Summary of processed artifact totals and densities by class from Test Pit 2 at PVN647.

Test Pit 3

Test Pit 3 (TP3) is a 1 x 1m test unit (sub-operation CG) and is located northeast of the Site Core Plaza Group (**Figure C.1**). It is approximately 27m northeast of Structure 16, 30m southeast of Test Pit 1 (TS1), 27m northwest of Test Pit 2 (TS2), and 27m northwest of Test Pit 4 (TS4). TP3 was positioned in between TS1 and TS2, as a concentration of cobbles were hypothesized to be the remains of a destroyed structure in the area. No artifacts were observed on the ground surface in the immediate area. Excavations of TP3 took place in one day, 7 May 2008, and were supervised by the author. Investigations reached a maximum depth of roughly 0.28m below ground surface (an approximate total of $0.28m^3$ of matrix was excavated) and two soil strata were detected. No evidence for intentional construction was observed (**Figure C.4**). Only ceramic sherd fragments and obsidian were recovered from TS3 and in high densities (**Table C.3**). The significance of these calculated densities is unclear, though are posed to be the result of debris wash from the Site Core Plaza Group in this northeast area of PVN647.

Stratum Designations for Test Pit 3:

Stratum one: Very dark gray organic topsoil (munsell 7.5YR 3/1)

Stratum two: Dark brown dense sterile clay (munsell 7.5YR 3/2)

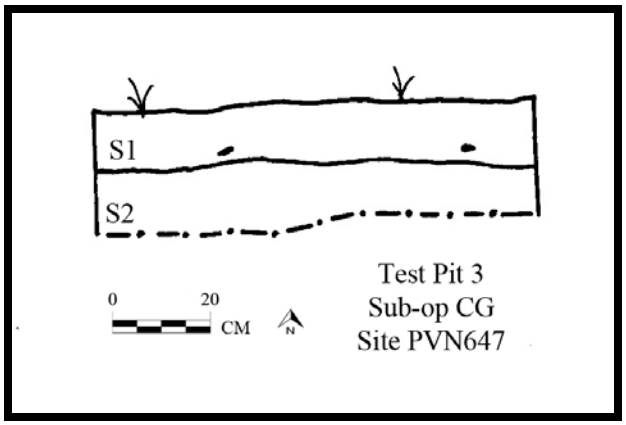

Figure C.4: Section drawing of Test Pit 3 from PVN647.

Artifact Class	Object total from Test Pit 3	Object per m^3 from Test Pit 3
Ceramic sherds	304	1085.71
Obsidian	128	457.14

Table C.3: Summary of processed artifact totals and densities by class from Test Pit 3 at PVN647.

Test Pit 4

Test Pit 4 (TP4) is a 1 x 1m test unit (sub-operation CH) and is located east of the Site Core Plaza Group and northwest of the East Group (**Figure C.1**). It is positioned approximately 22m northeast of Structure 33; 20m northwest of 'Structure 1'; 18m southwest of Test Pit 2 (TS2); 27m southeast of Test Pit 3 (TS3); and 50m west of Test Pit 6 (TS6). Though no traces of cobbles were observed from the surface in the area of TP4, the region was selected for sampling due to the presence of artifacts and the proximity to the adjacent structure groupings and other test units. Excavations of TP4 were conducted from 7-9 May 2008 and supervised by the author. Investigations reached a maximum depth of roughly 0.26m below ground surface (an approximate total of $0.26m^3$ of matrix was excavated) and only two soil strata were discerned. No evidence for intentional construction was observed (**Figure C.5**) and results from processed

artifacts indicate relatively high densities of ceramic sherd fragments and obsidian (**Table C.4**), which are likely the result of debris from the Site Core Plaza Group and the East Group.

Stratum Designations for Test Pit 4:

Stratum one: Very dark gray organic topsoil (munsell 7.5YR 3/1)

Stratum two: Dark brown dense sterile clay (munsell 7.5YR 3/2)

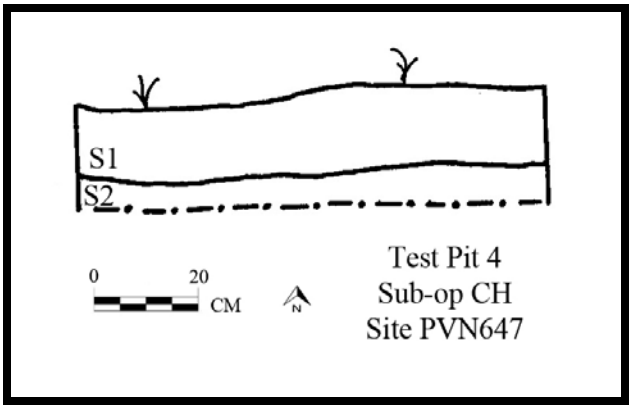

Figure C.5: Section drawing of Test Pit 4 from PVN647.

Artifact Class	Object total from Test Pit 4	Object per m^3 from Test Pit 4
Ceramic sherds	166	638.46
Obsidian	25	96.15
Chert	5	19.23

Table C.4: Summary of processed artifact totals and densities by class from Test Pit 4 at PVN647.

Test Pit 5

Test Pit 5 (TP5) is the only 2 x 2m test unit (sub-operation CI) in the test pitting program and is located roughly in the center of the Site Core Plaza Group (**Figure C.1**). Specifically, it is positioned approximately 4m south of Structure 17 and 4m north of

Structure 12. TP5 is aligned with the axial trenches (21/201 degrees) associated with excavations of Structures 12 and 17 and was selected in order to sample the center of the plaza for evidence of buried architecture or prepared surfaces. Investigations of TS5 began as a 1 x 1m test unit, however, expanded to include three additional 1 x 1m test units due to the exposure of a cobble feature. Excavations of TS5 were conducted from 9-15 May 2008, supervised by the author, and reached a maximum depth of roughly 0.38m below ground surface (an approximate total of 1.52m^3 of matrix was excavated). A total of four strata were discerned in association with TS5 and the cobble feature.

The cobble feature is described as a circular assemblage composed of medium-to-large unmodified river cobbles with evidence of burning in select locations (**Figure C.6-C.8**). It measures roughly 1.4 north-south and 1.3m east-west, and ranges 0.2-0.25m in height. The northwest region of the cobble feature does not contain cobbles and the soil in the area indicates that burning occurred immediately in and around the feature. Hardened bajareque is present in a curved formation in the northeast exterior of the cobble feature. It is unclear if the preservation of this bajareque indicates that the feature was faced all around the exterior with bajareque. Results from processed artifacts indicate moderate densities of ceramic sherd fragments and obsidian; though the significance of these calculations remain unknown (**Table C.5**).

Stratum Designations for Test Pit 5:

Stratum one: Very dark gray organic topsoil (munsell 7.5YR 3/1)

Stratum two: Dark grayish brown soil (munsell 7.5YR 3.5/1.5) with small pebble inclusions.

Stratum three: Brown soil (munsell 7.5YR 4/2) with small pebble inclusions.

Stratum four: Dark brown dense sterile clay (munsell 7.5YR 3/2) with no inclusions.

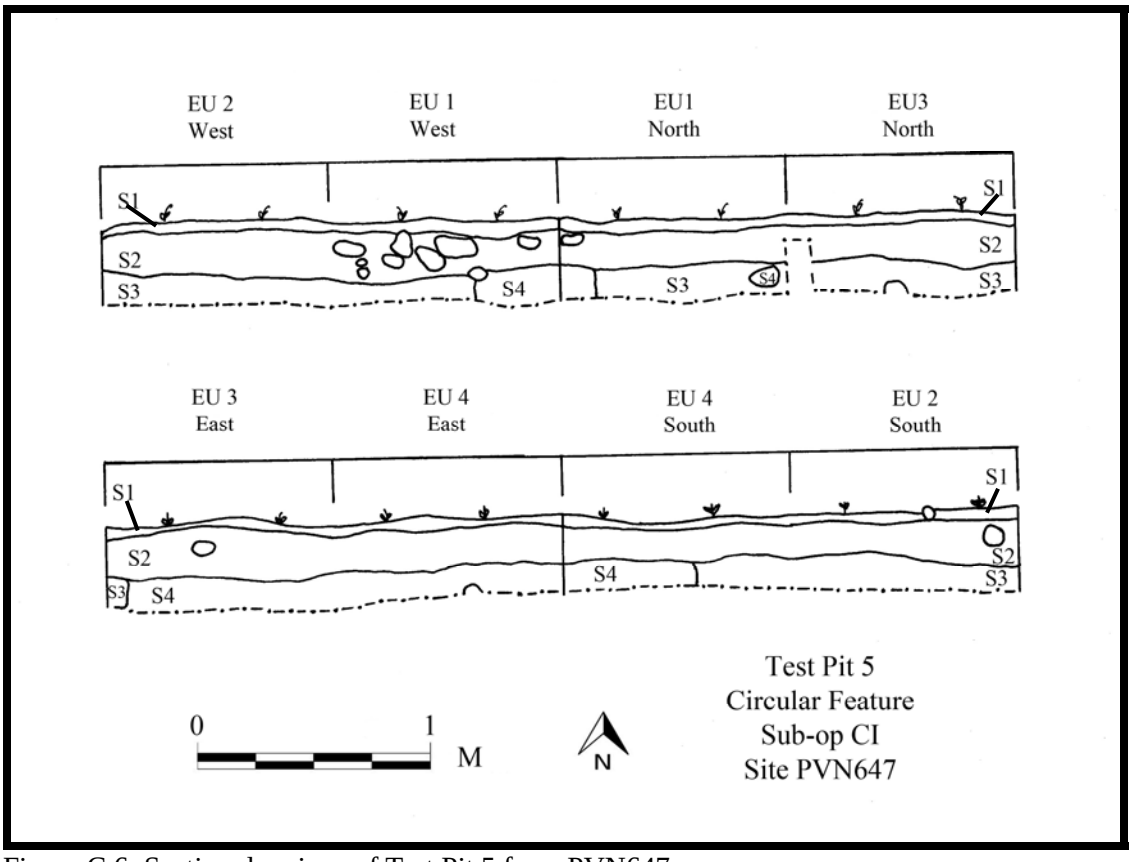

Figure C.6: Section drawings of Test Pit 5 from PVN647.

Figure C.7: Plan-view photograph of cobble feature in Test Pit 5 from PVN647.

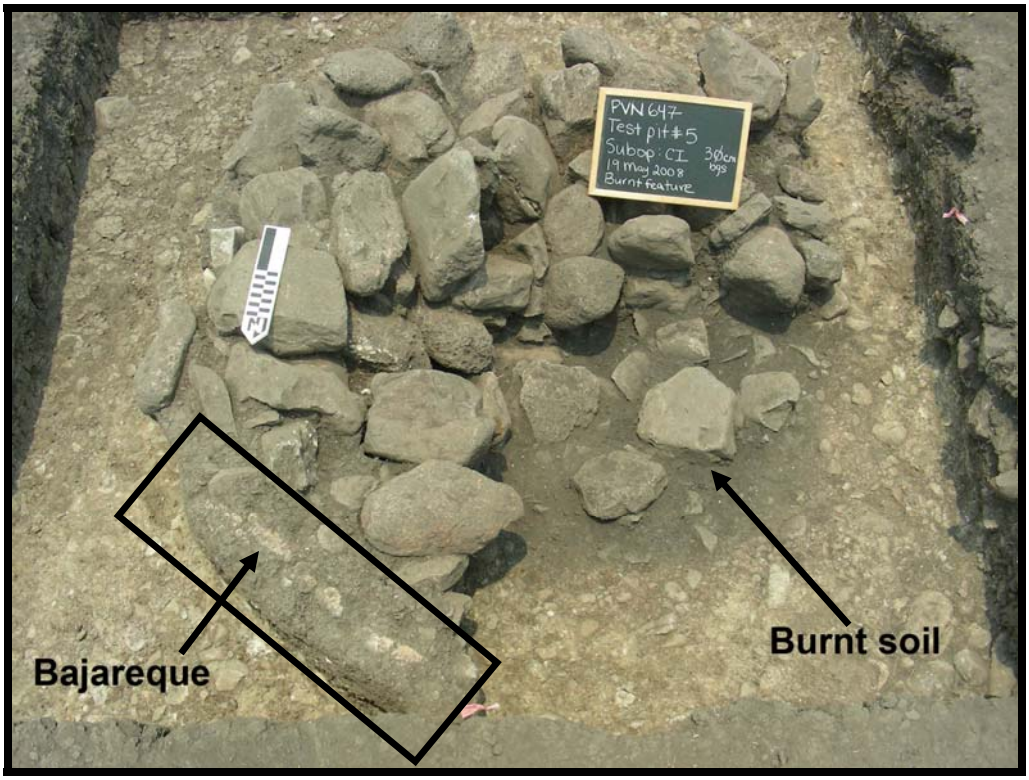

Figure C.8: Photograph of cobble feature in Test Pit 5 from PVN647
with bajareque and burnt soil.

Artifact Class	Object total from Test Pit 5	Object per m^3 from Test Pit 5
Ceramic sherds	582	382.9
Obsidian	53	34.87
Bajareque	14	9.21

Table C.5: Summary of processed artifact totals and densities by class from Test Pit 5 at PVN647.

Test Pit 6

Test Pit 6 (TP6) is a 1 x 1m test unit (sub-operation CJ) and is located in the northeast region of PVN647 and specifically 23m northeast of the earthen mound of 'Structure 1' of the East Group (**Figure C.1**). It is also positioned approximately 36m southeast of Test Pit 2 (TS2), 41m southwest of Test Pit 10 (TS10), and 41m northwest of Test Pit 8 (TS8). The area of TP6 was sampled as a concentration of artifacts (sherds and chert) were present on the ground surface. Excavations of TP6 were conducted in one day, 9 May 2008, and supervised by the author. Investigations reached a maximum depth of roughly 0.26m below ground surface (an approximate total of $0.26m^3$ of matrix was excavated) and only two soil strata were discerned. No cobbles were encountered and only two strata were documented (**Figure C.9**). Results from processed artifacts indicate high densities of ceramic sherd fragments and obsidian, and low densities of chert and bajareque (**Table C.6**). The variety of artifacts present in this test unit may be reflective of debris wash due to the downward slope of the terrain in this northeast region of PVN647.

Stratum Designations for Test Pit 6:

Stratum one: Very dark gray organic topsoil (munsell 7.5YR 3/1)

Stratum two: Dark brown dense sterile clay (munsell 7.5YR 3/2)

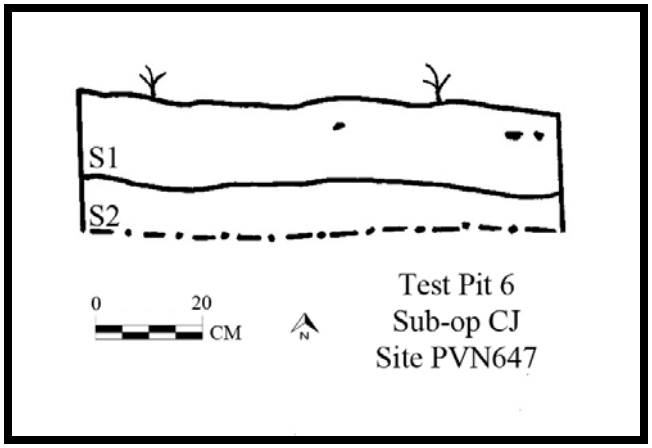

Figure C.9: Section drawing of Test Pit 6 from PVN647.

Artifact Class	Object total from Test Pit 6	Object per m^3 from Test Pit 6
Ceramic sherds	272	1046.15
Obsidian	42	161.54
Chert	1	3.85
Bajareque	4	15.38

Table C.6: Summary of processed artifact totals and densities by class from Test Pit 6 at PVN647.

Test Pit 7

Test Pit 7 (TP7) is a 1 x 1m test unit (sub-operation CK) and is located roughly due south of the Site Core Plaza Group (**Figure C.1**). Specifically, it is situated approximately 32m south of Structure 12, 34m southeast of Test Pit 12 (TS12), and 42m west of Test Pit 13 (TS13). The area of TP7 was selected to sample the region immediately south of the Site Core Plaza Group and because a grouping of small cobbles

located on the ground surface were tested for possibly being the remains of a destroyed structure. Excavations of TP7 were conducted over the course of two days, 9 and 12 May 2008, and supervised by the author. Investigations reached a maximum depth of roughly 0.24m below ground surface (an approximate total of 0.24m^3 of matrix was excavated) and only two soil strata were discerned. Only small stones were observed and none indicated formal construction features (**Figure C.10**). Results from processed artifacts indicate very low densities of ceramic sherd fragments and obsidian. (**Table C.7**).

Stratum Designations for Test Pit 7:

Stratum one: Very dark gray organic topsoil (munsell 7.5YR 3/1)

Stratum two: Dark brown dense sterile clay (munsell 7.5YR 3/2)

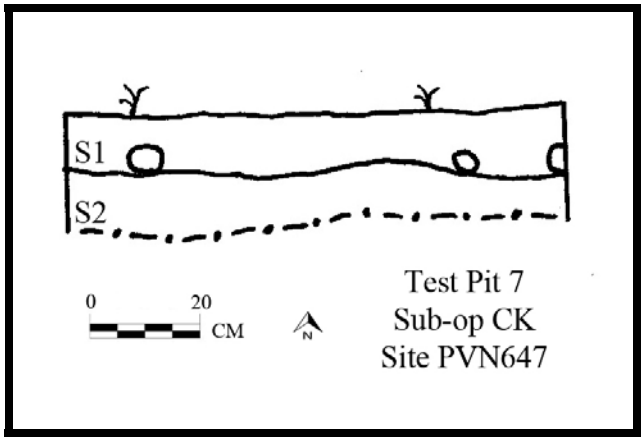

Figure C.10: Section drawing of Test Pit 7 from PVN647.

Artifact Class	Object total from Test Pit 7	Object per m^3 from Test Pit 7
Ceramic sherds	3	4.17
Obsidian	14	58.33

Table C.7: Summary of processed artifact totals and densities by class from Test Pit 7 at PVN647.

Test Pit 8

Test Pit 8 (TP8) is a 1 x 1m test unit (sub-operation CL) and is located roughly due east of the East Group (**Figure C.1**). Specifically, it is situated approximately 28m east of 'Structure 1' of the East Group, 41m southeast of Test Pit 6 (TS6), and 56m northeast of Test Pit 14 (TS14). The purpose of TP8 was to sample the region to the east of the East Group and was selected due to the presence of an artifact scatter on the group surface. Excavations of TP8 were conducted in one day, 12 May 2008, and supervised by the author. Investigations reached a maximum depth of roughly 0.37m below ground surface (an approximate total of $0.37m^3$ of matrix was excavated) and three soil strata were observed. No evidence of formal construction was discerned in the test unit (**Figure C.11**). Results from processed artifacts indicate moderate-to-high densities of ceramic sherd fragments and obsidian and minimal chert (**Table C.8**). The densities may reflect the distance from the primary occupation area of the Site Core Plaza Group, as this test unit is one of the farthest from this particular setting of PVN647.

Stratum Designations for Test Pit 8:

Stratum one: Very dark gray organic topsoil (munsell 7.5YR 3/1)

Stratum two: Very dark gray soil with some dense clay (munsell 10YR 3.5/1)

Stratum three: Dark brown dense sterile clay (munsell 7.5YR 3/2)

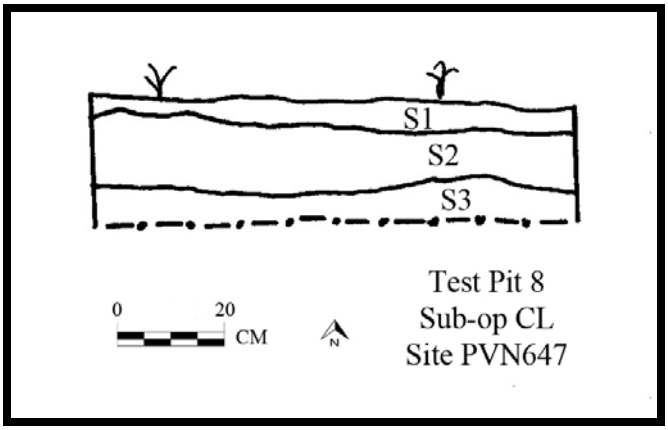

Figure C.11: Section drawing of Test Pit 8 from PVN647.

Artifact Class	Object total from Test Pit 8	Object per m^3 from Test Pit 8
Ceramic sherds	248	670.27
Obsidian	83	224.32
Chert	3	8.11

Table C.8: Summary of processed artifact totals and densities by class from Test Pit 8 at PVN647.

Test Pit 9

Test Pit 9 (TP9) is a 1 x 1m test unit (sub-operation CM) and is located in the northeast region of PVN647 (**Figure C.1**). It is specifically situated roughly 70m east of Test Pit 1 (TS1), 40 m north of Test Pit 2 (TS2) and 34m northwest of Test Pit 10 (TS10). The area of TP9 represents the most northern region sampled at PVN647 and selected due to artifact scatters observed on the group surface. Excavations of TP9 were carried out over the course of two days, 12 and 13 May 2008, and supervised by the author. Investigations reached a maximum depth of roughly 0.24m below ground surface (an approximate total of $0.24m^3$ of matrix was excavated) and only two soil strata were discerned. No evidence for intentional construction was observed (**Figure C.12**).

Results from processed artifacts indicate moderate densities of ceramic sherd fragments and obsidian; and low density of chert (**Table C.9**).

Stratum Designations for Test Pit 9:

Stratum one: Very dark gray organic topsoil (munsell 7.5YR 3/1)

Stratum two: Dark brown dense sterile clay (munsell 7.5YR 3/2)

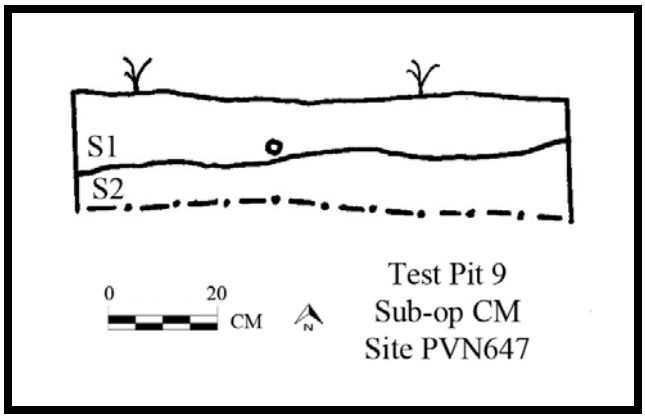

Figure C.12: Section drawing of Test Pit 9 from PVN647.

Artifact Class	Object total from Test Pit 9	Object per m^3 from Test Pit 9
Ceramic sherds	169	704.17
Obsidian	72	300
Chert	3	12.5

Table C.9: Summary of processed artifact totals and densities by class from Test Pit 9 at PVN647.

Test Pit 10

Test Pit 10 (TP10) is a 1 x 1m test unit (sub-operation CN) and is located in the northeast region of PVN647 (**Figure C.1**). TS10 is the most northeastern test unit and is positioned approximately 34m east of Test Pit 9 (TS9), 55m northeast of Test Pit 2 (TS2), and 41m north of Test Pit 6 (TS6). The area of TP10 was selected for sampling as

evidence in the form of small cobbles indicated a possible destroyed structure may exist below the surface, though not artifacts were present on the ground surface. Excavations of TP10 were conducted in one day, 13 May 2008, and supervised by the author. Investigations reached a maximum depth of roughly 0.23m below ground surface (an approximate total of 0.23m^3 of matrix was excavated) and only two soil strata were discerned. Only pebbles and small cobbles were encountered and no evidence for intentional construction was observed (**Figure C.13**). Results from processed artifacts indicate low densities of ceramic sherd fragments and obsidian and may be the result of the far distance from any structure grouping (**Table C.10**).

Stratum Designations for Test Pit 10:

Stratum one: Very dark gray organic topsoil (munsell 7.5YR 3/1)

Stratum two: Dark brown dense sterile clay (munsell 7.5YR 3/2)

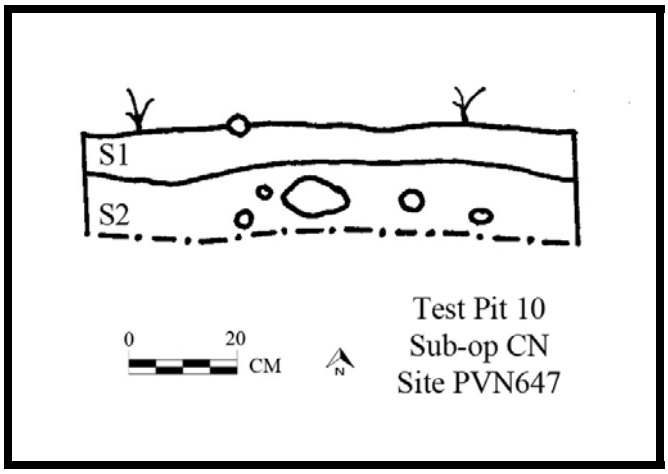

Figure C.13: Section drawing of Test Pit 10 from PVN647.

Artifact Class	Object total from Test Pit 10	Object per m^3 from Test Pit 10
Ceramic sherds	13	56.52
Obsidian	17	73.91

Table C.10: Summary of processed artifact totals and densities by class from Test Pit 10 at PVN647.

Test Pit 11

Test Pit 11 (TP1) is a 1 x 1m test unit (sub-operation CO) and is located in the center of what is labeled Structure 22 in the West Group at PVN647 (**Figure C.1**). The goal of TP11 was to sample Structure 22 in order to confirm if the mound is representative of a formal construction. Excavations of TP11 were conducted over the course of two days, 14 and 15 May 2008, and supervised by the author. Investigations reached a maximum depth of roughly 0.70m below ground surface (an approximate total of $0.70m^3$ of matrix was excavated) and revealed at least six strata contexts. Though, TS11 represents the deepest excavations of all test units, no evidence of formal construction was encountered (**Figure C.14**) nor any artifact materials. The mound of Structure 22 does not include any clear cobble lines indicating walls or discernable corners. The totality of surface observations and results from excavations indicate that Structure 22 may not be representative of a formal prehistoric construction and possibly the result of purposely mounded soil associated with more modern activities. The sterile dense clay observed in nearly all other investigations at PVN647 was not achieved in excavations of TS11, as the depth of the test unit proved prohibitive to continue deeper beyond 0.70m below the ground surface. As the mound was reasoned to not be a formal construction from antiquity, the expansion of the test unit in order safely excavate to the

clay level was deemed unnecessary. Furthermore, as no artifacts were recovered, all observed soil contexts from TS11 are 'sterile' strata.

Stratum Designations for Test Pit 11:

Stratum one: Dark grayish brown, organic topsoil (munsell 10YR 4/2) with pebbles

Stratum two: Very dark gray soil (munsell 10YR 4/3.5) with gravel and pebble inclusions and white flecks.

Stratum three: Brown, dense soil (munsell 10YR 4/3) with no gravel or pebble inclusions.

Stratum four: Dark brown, dense soil (munsell 10YR 3/5/3) with no gravel or pebble *inclusions.*

Stratum five: Brown dense partly clay (munsel 10YR 5/3) with slight gravel inclusions

Stratum six: Dark brown dense sterile clay (munsell 7.5YR 3/2) with no inclusions.

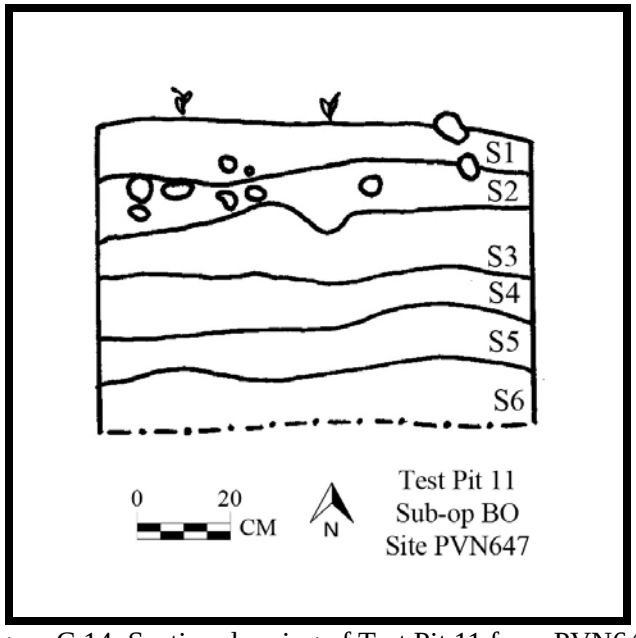

Figure C.14: Section drawing of Test Pit 11 from PVN647.

Test Pit 12

Test Pit 12 (TP12) is a 1 x 1m test unit (sub-operation CP) and is located roughly south-southwest of the Site Core Plaza Group (**Figure C.1**). Specifically, it is situated approximately 33m southwest of Structure 12 and 34m northwest of Test Pit 7 (TS7). The area of TP12 was selected for sampling due to a cluster of small cobbles on the ground surface indicating that a possible destroyed structure once occupied the location. Excavations of TP12 were conducted in two days, 15 and 16 May 2008, and supervised by the author. Investigations reached a maximum depth of roughly 0.39m below ground surface (an approximate total of $0.39m^3$ of matrix was excavated) and three soil strata were encountered. Only fist-sized and small cobbles were revealed, yet no evidence for intentional construction was discerned (**Figure C.15**). Results from processed artifacts indicate very high densities of ceramic sherd fragments and obsidian, and very low density of chert (**Table C.11**). The noticeable high densities of sherds and obsidian may represent a midden deposit located southwest of the main plaza as the region is quite level and not associated with a wash area, like the setting to the northeast of the Site Core Plaza Group.

Stratum Designations for Test Pit 12:

Stratum one: Very dark gray organic topsoil (munsell 7.5YR 3/1)

Stratum two: Very dark grayish brown (munsell 10YR 3/2)

Stratum three: Dark brown dense sterile clay (munsell 7.5YR 3/2)

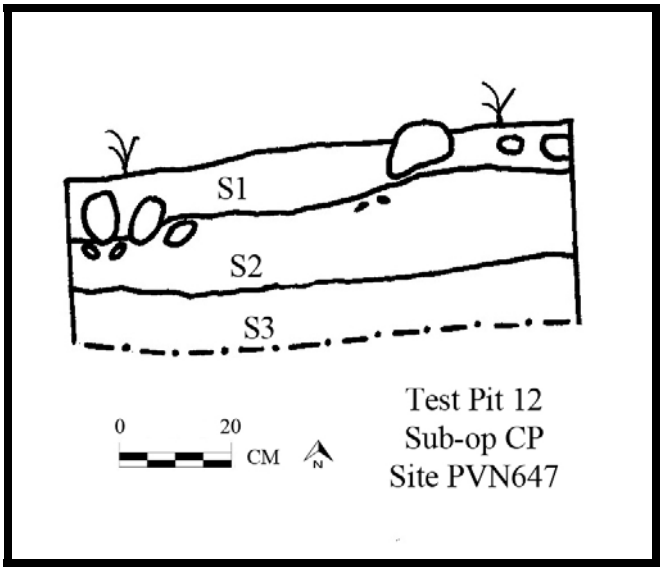

Figure C.15: Section drawing of Test Pit 12 from PVN647.

Artifact Class	Object total from Test Pit 12	Object per m^3 from Test Pit 12
Ceramic sherds	507	1300.00
Obsidian	135	346.15
Chert	3	7.7

Table C.11: Summary of processed artifact totals and densities by class from Test Pit 12 at PVN647.

Test Pit 13

Test Pit 13 (TP13) is a 1 x 1m test unit (sub-operation BS) and is located roughly southwest of the East Group (**Figure C.1**). Specifically, it is situated approximately 20m southeast of 'Structure 1' of the East Group, 42m east of Test Pit 7 (TS7), and 35m northwest of Test Pit 14 (TS14). The area of TP13 was selected for sampling as a possible destroyed structure may have existed in the region, as indicated by the presence of a cluster of cobbles on the ground surface. Excavations of TP13 were conducted in one day, 15 May 2008, and supervised by Gabrielle Soto. Investigations reached a

maximum depth of roughly 0.22m below ground surface (an approximate total of 0.22m^3 of matrix was excavated) and only two soil strata were discerned. No additional cobbles were encountered and therefore no intentional construction is believed to have existed in the area sampled by TS13 (**Figure C.16**). Results from processed artifacts indicate moderate densities of ceramic sherd fragments and obsidian, which may be the result of debris from the Site Core Plaza Group (**Table C.12**).

Stratum Designations for Test Pit 13:

Stratum one: Very dark grayish brown organic topsoil (munsell 10YR 3/2)

Stratum two: Dark brown dense sterile clay (munsell 7.5YR 3/2)

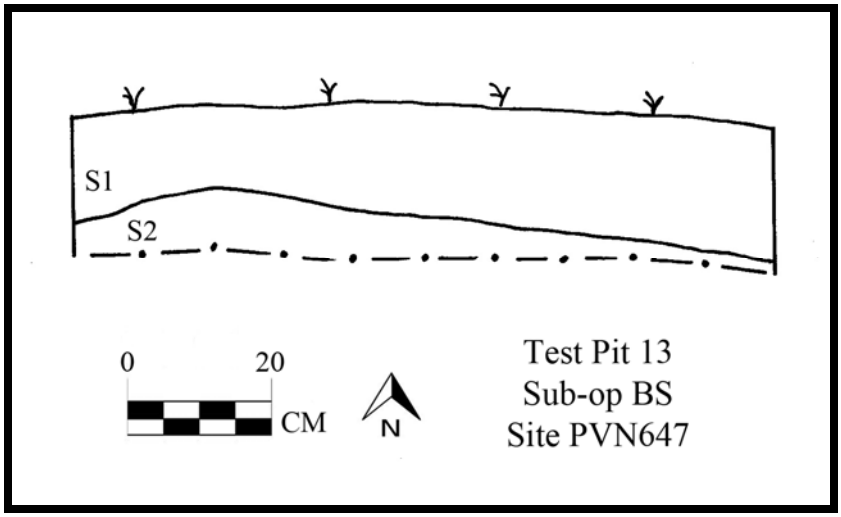

Figure C.16: Section drawing of Test Pit 13 from PVN647.

Artifact Class	Object total from Test Pit 13	Object per m^3 from Test Pit 13
Ceramic sherds	73	331.82
Obsidian	27	122.73
Bajareque	1	4.55

Table C.12: Summary of processed artifact totals and densities by class from Test Pit 13 at PVN647.

Test Pit 14

Test Pit 14 (TP14) is a 1 x 1m test unit (sub-operation BT) and is located approximately due south of the East Group and northwest of the Southeast Plaza Group (**Figure C.1**). Specifically, it is positioned roughly 35m south of 'Structure 1' of the East Group, 35m southeast of Test Pit 13 (TS13), 56m southwest of Test Pit 8 (TS8) and 40m northeast of Structure 6 of the Southeast Plaza Group. The area of TP14 was selected for sampling as it represents a mid-point between the East Group and the Southeast Plaza Group and because an artifact scatter was observed on the ground surface. Excavations of TP14 were conducted in one day, 15 May 2008, and supervised by Gabrielle Soto. Investigations reached a maximum depth of roughly 0.22m below ground surface (an approximate total of $0.22m^3$ of matrix was excavated) and only two soil strata were observed. No evidence for purposeful construction was observed (**Figure C.17**). Results from processed artifacts indicate a high density of obsidian and moderate densities of ceramic sherd fragments and chert (**Table C.13**). The significance of the high density of obsidian materials from this particular region remain unknown.

Stratum Designations for Test Pit 14:

Stratum one: Very dark grayish brown organic topsoil (munsell 10YR 3/2)

Stratum two: Dark brown dense sterile clay (munsell 7.5YR 3/2)

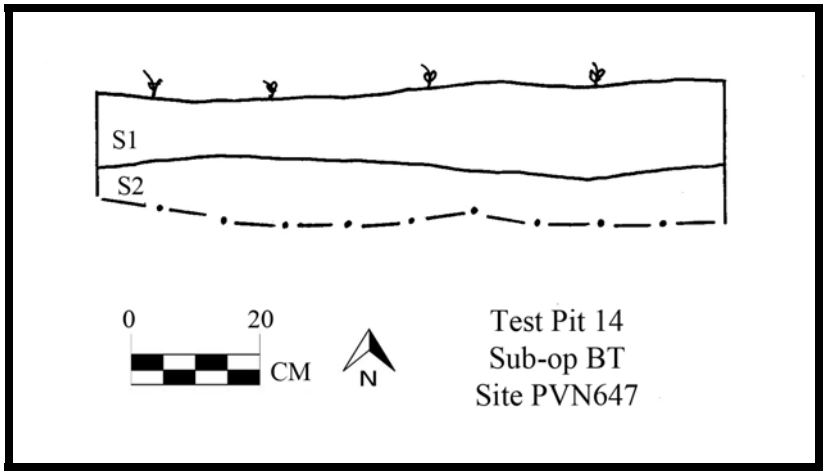

Figure C.17: Section drawing of Test Pit 14 from PVN647.

Artifact Class	Object total from Test Pit 14	Object per m^3 from Test Pit 14
Ceramic sherds	30	136.36
Obsidian	110	500
Chert	6	27.28

Table C.13: Summary of processed artifact totals and densities by class from Test Pit 14 at PVN647.

Test Pit 15

Test Pit 15 (TP15) is a 1 x 1m test unit (sub-operation BU) and is located in the approximate center of the Southeast Plaza Group (**Figure C.1**). Specifically, it is situated roughly 2.5m south of Structure 6 and 2.5m west of Structure 7. The area of TP15 was selected in order to sample the center of the plaza for evidence of buried architecture or

prepared surfaces. Excavations of TP15 were conducted in one day, 22 May 2008, and supervised by Gabrielle Soto. Investigations reached a maximum depth of roughly 0.41m below ground surface (an approximate total of 0.41m^3 of matrix was excavated) and only two soil strata were documented. Only a large root was encountered and no evidence of formal construction was observed in the specific area of TS15 (**Figure C.18**). Results from processed artifacts indicate moderate-to-low densities of ceramic sherd fragments and obsidian (**Table C.14**).

Stratum Designations for Test Pit 15:

Stratum one: Very dark gray organic topsoil (munsell 7.5YR 3/1)

Stratum two: Dark brown dense sterile clay (munsell 7.5YR 3/2)

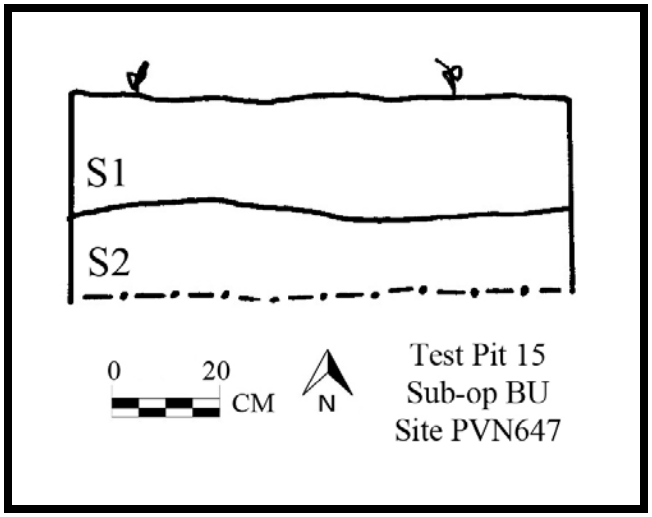

Figure C.18: Section drawing of Test Pit 15 from PVN647.

Artifact Class	Object total from Test Pit 15	Object per m^3 from Test Pit 15
Ceramic sherds	71	338.1
Obsidian	11	52.38
Chert	1	4.76

Table C.14: Summary of processed artifact totals and densities by class from Test Pit 15 at PVN647.