PLACES OF CONTESTATION:
A STUDY OF PUBLIC BUILDINGS AT RÍO VIEJO ON THE PACIFIC COAST OF OAXACA, MEXICO

by

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Places of Contestation: A Study of Public Buildings at Río Viejo on The Pacific Coast of Oaxaca, Mexico

Thesis directed by Professor Arthur A. Joyce

The purpose of this thesis is to study the building sequence of the north central part of the acropolis of Río Viejo, a site on the Pacific coast of Oaxaca. In particular, I focus on two construction phases of a public building dated to the late Terminal Formative labeled Structure 8-sub 1 and Structure 8. Contextualizing these edifices within the construction program that erected Río Viejo's acropolis affords the opportunity to assess how they were entangled in the social context of the first regional polity in the area. To this end, I discuss three themes: 1) how the construction of Structure 8-sub 1 and Structure 8 was the result of collective works that actively created and redefined the community; 2) The formation of restricted areas as an elite strategy to try to appropriate formerly communal space; 3) the diversity of termination rituals that "closed" the acropolis. I conclude by arguing that public architecture at Río Viejo reflected the social innovations and tensions during the late Terminal Formative between traditional local communities and an emerging exclusionary regional authority.

A mis padres
Román Vidal López y
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Chapter 1: Introduction

The purpose of this thesis is to better understand the public architecture and construction sequence of the northern part of the acropolis of Río Viejo, a site on the Pacific coast of Oaxaca. As the first regional polity was developing in the area during the Terminal Formative period (150BC-250AD), a massive acropolis was constructed and became the civic-ceremonial center of the community. Although monumental architecture was not a new endeavor in the lower Río Verde valley, the acropolis of Río Viejo–henceforth also referred to by its designated name as Río Viejo Mound 1– overshadowed any previous constructions. In its final form, the building covered an area of 350 m by 200 m and supported several architectural features (Joyce et al. 2013). Understanding their construction sequence will allow us to comprehend not only how the acropolis was erected, but also how the nature of the polity centered at Río Viejo changed over time.

Excavations carried out in 2000 and 2009 focused on the central and southwestern parts of the acropolis and revealed several constructions episodes as well as several structures (Barber and Joyce 2011; Joyce and Levine 2009). Furthermore, in 2012 transect excavations in the northern part of Mound 1 uncovered the remains of a previously unknown public building, which was exposed more fully in 2013. Building upon information derived from these last two field seasons at the site, this thesis attempts to improve our knowledge of the construction sequence and occupation of the northern part of Río Viejo's acropolis. In particular, I discuss the construction sequence of two construction phases of a public building labeled Structure 8 that date to the Chacahua phase of the late Terminal Formative (AD 100-250).

By contextualizing both versions of Structure 8 within the construction program that erected Río Viejo's acropolis, this thesis affords the opportunity to comprehend how this building helped in the formation of a tenuous and brief regional polity (Joyce et al. 2016). In doing so, I will shed light on the sociopolitical and religious changes in the lower Río Verde valley during a period of political centralization focused on the site of Río Viejo.

The importance of this thesis is twofold. On the local level, it sheds light on the construction sequence of Río Viejo's Mound 1. By assessing the stratigraphy on the northern part of the acropolis, I help answer questions left open by previous investigations at Río Viejo. On a regional scale, this work will contribute to the growing body of information from the lower Río Verde valley by placing an early public building into context.

Background

Environment of the Lower Río Verde Valley

The modern Mexican state of Oaxaca is characterized by great environmental diversity, ranging from high cold mountain ranges like the Sierra Madre Oriental to hot humid tropical lowlands on the Pacific coast. Most of the state consists of rugged, high peaks interrupted in places by valleys. These highland valleys, along with lowland valleys and stretches of coastal plain, represent the only arable expanses of flat agriculturally productive land that were centers of prehispanic populations (Joyce 2010:37).

The lower Río Verde valley represents one of the physiographic regions of the state. Located *circa* 110 kilometers southwest of the better-known Valley of Oaxaca, the lower Río Verde valley is drained by the Río Verde that originates deep in the highlands (Joyce 2010:41). The Río Verde emerges from a narrow valley in the Sierra Madre del Sur onto a broad coastal floodplain 20 km northeast of the present river mouth. In addition to the river and ocean, the lower Verde region includes coastal lagoons, large estuaries, ponds, coastal plain, piedmont, and mountain zones. This ecological diversity provides human populations, past and present, with abundant resources.

A hot and humid climate dominates the area, with average year round temperatures oscillating between 25 and 28 degrees Celsius and annual rainfall of 1000 to 2000 mm near sea level (Joyce et al. 1998:3). However, temperature is driven by elevation, which changes abruptly as one approaches the piedmont and the higher peaks in the area. As with the rest of Mesoamerica, the Lower Verde weather pattern is divided into a dry and a wet season. In general, the richness and diversity of resources made the lower Río Verde valley an ideal location for human settlements on the coast of Oaxaca stretching for most of the prehispanic chronology, with the exception of the pre-ceramic phases since evidence of human occupation is not found until very late in the period.

Peopling the Lower Río Verde Valley

Archaeological and ethnographic investigations in the Lower Verde propose that prior to the Mixtec *entrada* in A.D. 1100 the inhabitants of the area spoke Chatino, a language belonging to the Otomanguean family (Joyce 2010). Glottochronological studies suggest that Chatino and Zapotec broke from a common core no later than 400

B.C. (Hopkins 1984). As a language group, Chatino is divided into at least three discrete varieties, although they may have developed after the Spanish conquest. These dialects include: Yaitepec, Taltaltepec, and Zenzontepec, named after the modern centers in which they are spoken (Greenberg 1981).

Sediment cores extracted from Laguna Pastoría, a coastal lagoon, indicate that the earliest evidence of human occupation in the lower Río Verde Valley dates to ca. 2110 BC (Goman et al. 2005). This occupation may have only been a short period of land clearance for incipient horticulture near the estuary. The paleoecological evidence coincides with survey data suggesting that the region was only sporadically occupied until the Middle Formative (Table 1.1). The only site that has yielded secure primary deposits from the Early Formative is La Consentida, located near the coastal estuaries (Hepp 2015; Figure 1.1). The site covered an area of 2.6 ha and was dominated by an earthen platform with various substructures. Based on six radiocarbon dates, La Consentida represents the earliest village not only in coastal Oaxaca, but also in much of the Pacific coast of Mexico (Hepp 2015:357).

Phase	Period	Date
Yucudzaa	Late Postclassic	1100–1522 CE
Yugüe	Early Postclassic	800–1100 CE
Yuta Tiyoo	Late Classic	500–800 CE
Coyuche	Early Classic	250–500 CE
Chacahua	Late Terminal Formative	100–250 CE
Miniyua	Early Terminal Formative	150 BCE–100 CE
Minizundo	Late Formative	400–150 BCE
Charco	Late Middle Formative	700–400 BCE
?	Early-Middle Formative	1350–700 BCE
Tlacuache	Initial Early Formative	1600–1350 BCE

Table 1.1: Lower Río Verde regional ceramic chronology with uncalibrated radiocarbon dates (see Joyce 1991b, 2010; Hepp 2015).

Human occupation of the area is more evident for the late Middle Formative Charco Phase (700-400 BCE). A political center developed at the site of Charco Redondo, which grew to 62 ha (Joyce 2013:13). Although more excavations are needed to better understand the nature of this polity, its size may suggest the emergence of social complexity based on comparisons with other contemporaneous sites in Oaxaca, like San Jose Mogote in the Valley of Oaxaca, (Marcus and Flannery 1996; Joyce 2010) or Etlatongo (Blomster 2004) and Tayata (Spores and Balkansky 2013:43–51) in the Mixteca Alta. Perhaps, Charco Redondo was a significant settlement in the political landscape of the area during the late Middle Formative.

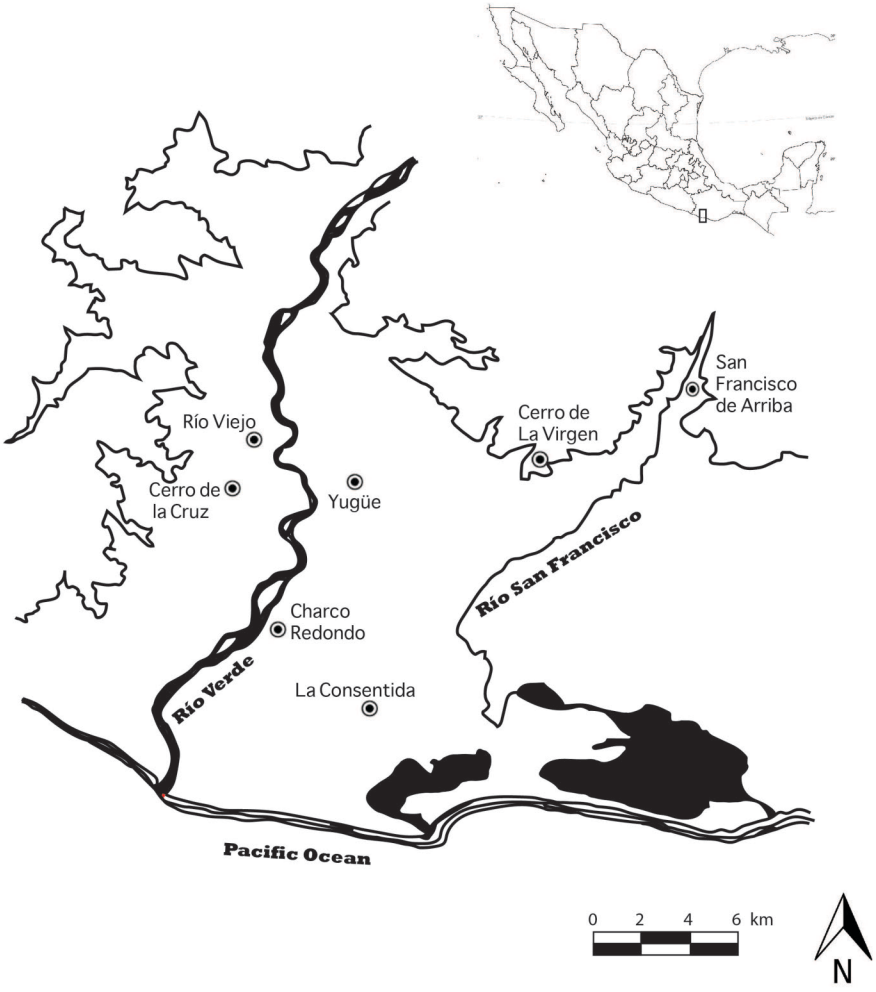

Figure 1. 1 Map of the Lower Río Verde Valley with sites mentioned in the text

Prior to the rise of Río Viejo as a regional center, the lower Verde saw the growth of two polities during the Late Formative Minizundo phase (400-150 BCE): Charco Redondo and San Francisco de Arriba. Survey data suggests that population increased during this period by a factor of four when compared to the previous Charco phase, as measured by the extent of occupation in full-coverage surveys (Joyce 2010, 2013). Of interest to this thesis, archaeological investigation shows that monumental construction occurred at both sites. At San Francisco de Arriba, most of the site's large acropolis was built at this time, which may suggest the mobilization of labor by emerging elites (Workinger 2002). However, mortuary and residential data from the contemporary sites of Cerro de la Cruz and Río Viejo indicate that there was limited social inequality (Barber and Joyce 2007; Joyce 1991b, 1994). Horizontal excavations of the upper terrace at Cerro de la Cruz exposed a communal cemetery in a public building containing the remains of forty-nine individuals, most of whom were adults; none had offerings or status markers. Also, a hearth, midden, and storerooms found on the opposite end of a patio adjacent to the cemetery suggest that some kind of ritual feasting took place in the nearby area that most likely brought together multiple households within the community. Consequently, evidence for labor projects, lack of pronounced inequality, and communal feasting points towards Late Formative identities being defined in terms of communal relationships over status differentiation.

The following period, the Miniyua phase of the early Terminal Formative period (150 BCE-100 CE), saw the increase of communal practices and social complexity. Monumental public architecture was built at the sites of Río Viejo (Joyce 1991a; Joyce et al. 1998), Yugüe (Barber 2005), and San Francisco de Arriba (Workinger 2002), among

other lesser studied sites in the region. These structures were stages for ritual performances that might have reinforced collective identities of local communities. Associated with the construction of large public spaces, ritual feasting also escalated at this time as indicated by the increase in elaborate serving vessels in the region (Levine 2002), and large cooking features associated with public buildings at Yugüe (Barber 2005). Also at Yugüe, a public structure became the location for a communal cemetery during the late Terminal Formative, but unlike the earlier one at Cerro de la Cruz, Yugüe's cemetery included people of varying status and a broader range of ages (Barber et al. 2013). For example, an adolescent individual interred wearing an iron-ore pectoral and holding an incised flute made from a deer femur, most likely a local elite and ritual specialist, was found comingled with other burials of lesser status (Barber and Olivera Sanchez 2012). Further evidence for increased social complexity comes from the hilltop site of Cerro de la Virgen where an unusual offering consisting of several small ceramic vessels, 2 miniature stone thrones, a small stone figure, and a stone mask depicting a rain deity or rain deity impersonator was deposited in a more exclusive public building (Brzezinski 2015; Joyce and Barber 2015:fig. 5; Joyce et al. 2016:fig. 3.5). This offering has been interpreted as evidence for Terminal Formative elites having specialized ritual roles that allowed them to acquire exotic goods so as to enhance their status relative to others in the community. Moreover, the inclusion of the ritual cache beneath the center of a small public building whose main façade is accessible only by a stairway hints at a growing concern, perhaps by the elites, to create more restricted ritual spaces apart from more public ones.

It is during the late Miniyua phase that construction began at Río Viejo's Mound 1 (Joyce et al. 1998). With an estimated volume of 560,050 m^3, it was one of the largest structures ever built in prehispanic Oaxaca (Joyce et al. 2013). Recent excavations, discussed below, show that it was almost entirely built during the late Miniyua and Chacahua phases (100-250 CE), which may indicate that the acropolis required the mobilization of large labor forces that were probably drawn not only from Río Viejo but also from other communities in the region (Joyce et al. 2013). Understanding the construction sequence of its northern central part, particularly in relation to Structure 8, is the purpose of this thesis.

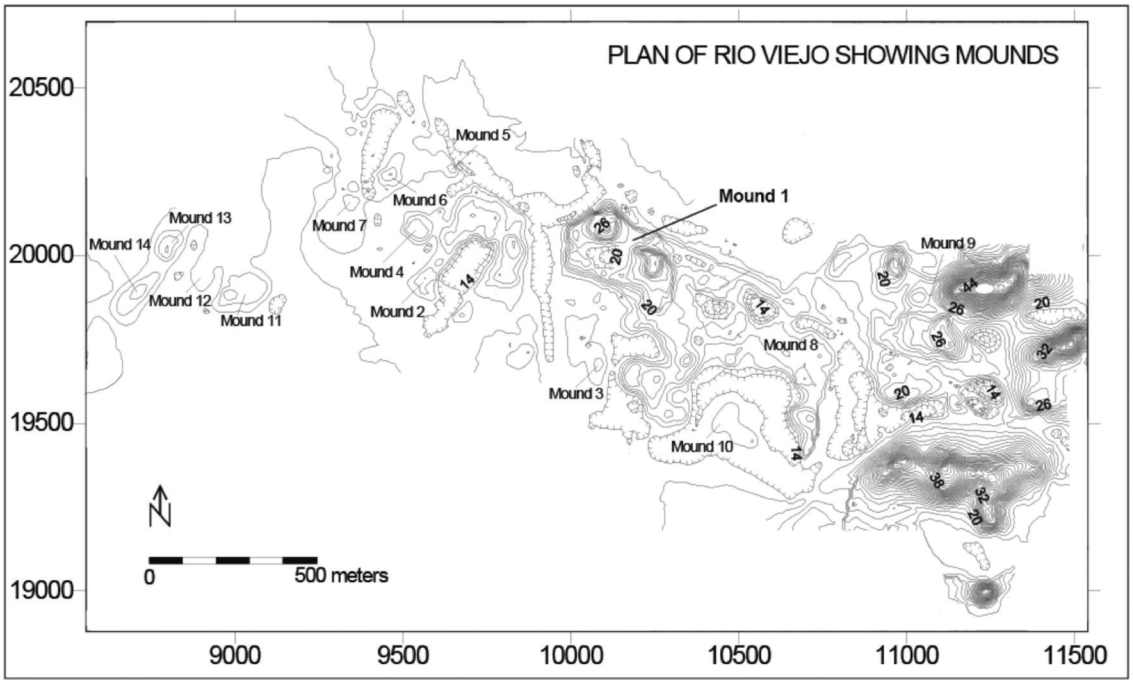

Figure 1. 2 Site map of Río Viejo (from Joyce 2010: Figure 7.12)

Despite the emergence of Río Viejo as a powerful center, its authority in the region was not singular. Local community affiliations remained strong (Joyce et al. 2016). At outlying sites such as Yugüe, Cerro de la Virgen, and San Francisco de Arriba, public ceremonies carried out on public buildings continued and increased in scale when compared with Late Formative counterparts, including mortuary rituals in cemeteries, feasting, and the emplacement of offerings (Joyce and Barber 2015). Also, public architecture throughout the region exhibits a great deal of variability in regards to construction, forms, and uses, arguing against regionally unified ritual principles. This indicates that rather than integrated under a singular regional polity, political relations among communities in the area were fluid and negotiated (Joyce and Barber 2015; Joyce et al. 2016)

The polity of Río Viejo did not last long. By the end of the Chacahua phase, the acropolis of the site was abandoned and extensive parts were burned as part of termination ceremonies, including Structure 2-sub 2 (Joyce and Barber 2011; Joyce et al. 2016). Also, Río Viejo decreased in size from 200 ha in the Chacahua phase to 75 ha in the Early Classic Coyuche phase (250-500 CE). This political collapse was also felt in other regions of Oaxaca as many urban centers collapsed by the end of the Formative period, including Monte Negro (Balkansky et al. 2004), Cerro Jazmín (Pérez Rodríguez 2011), and Cerro de las Minas (Winter 2007). The immediate causes of the collapse are not fully understood. However, it is possible that the political weakness of the Río Viejo polity, in addition to rising social inequalities in the region, could have led to intra-site conflicts undermining its political structure.

After the abandonment of Río Viejo, there is almost no evidence of monumental construction at the site, which indicates that Early Classic period rulers were unable to mobilize large labor forces as had their Terminal Formative counterparts (Joyce 2010:239–241). However, further research is needed to elucidate the nature of social relations and political authority in the Lower Verde Valley during the Coyuche phase of the Early Classic.

Previous Archaeological Investigations at Río Viejo's Acropolis

In this section I briefly review the history of archaeological research at the acropolis of Río Viejo, paying particular attention to the ways previous investigators have advanced our understanding of this colossal construction. The review attempts to contextualize the arguments presented in this thesis.

Research at Rio Viejo's Mound 1 has been carried out as part of ongoing investigations directed towards the understanding of the development of political authority in the lower Río Verde valley. Starting in the 1980s, survey and mapping were conducted on the acropolis (Joyce 1991a, 1999a). In 2000, research focused on the eastern portion of Mound 1, primarily at Structure 2 (Joyce and Levine 2009; Figure 1.3). Horizontal excavations uncovered the remains of three construction phases, dating to three different periods: the Chacahua (late Terminal Formative), Yuta Tiyo (Late Classic), and Yugüe (Early Postclassic) phases. Although the last two occupations were better preserved, primarily the Yugüe phase component, they only accounted for 1.1 m of the uppermost deposits (Joyce et al. 2013:138). The excavations in 2000 indicated that

the majority of Structure 2, and perhaps most of the acropolis, was built during the Chacahua phase.

A Terminal Formative building found during the excavations of Structure 2 was Structure 2-sub 2, a stepped platform with at least two levels (Joyce et al. 2013:142–147). On the upper one, there were remains of an adobe wall indicating the presence of one or more superstructures with adobe foundation walls. Fragments of architectural stucco suggest that the superstructures were architecturally elaborate. However, no middens, burials, storage pits, or other features commonly associated with domestic settings were present, which supports the assertion that it was a public building. Furthermore, no offerings were found that ensouled the buildings associated with Structure 2-sub 2. Similar to Structure 1 from Cerro de la Virgen, the restricted building with the unusual offering, Structure 2-sub 2 has been interpreted as evidence for the creation of spatially constrained ceremonial space indicating a degree of exclusivity that presumably marked status differentiation (Joyce et al. 2016:71–72).

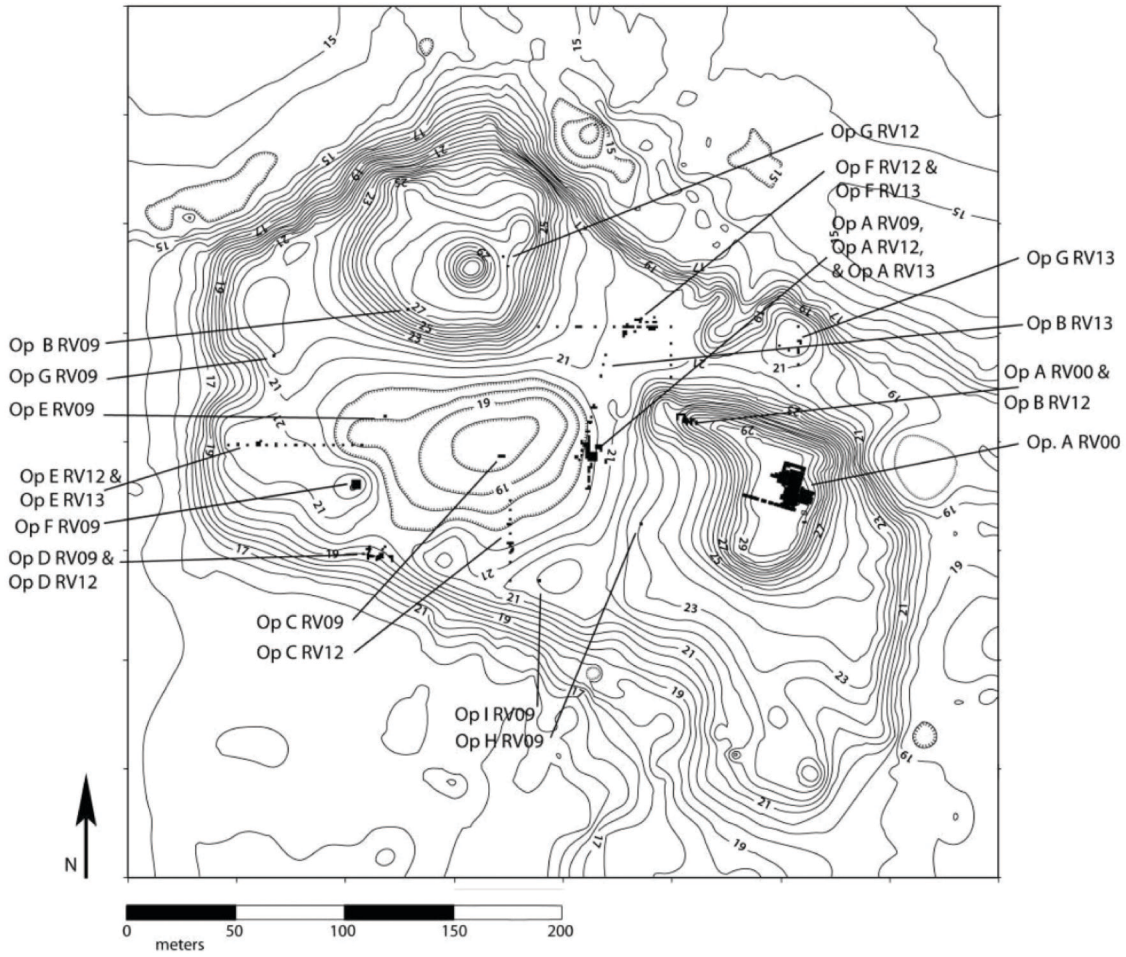

Figure 1. 3 Acropolis of Río Viejo showing locations of excavated areas (from Joyce and Barber 2015: Figure 2)

In 2009, a total of nine operations were excavated following two transects, one running north-south and the other east-west (Barber and Joyce 2011). Both transects were located along the southern half of the acropolis. One of the primary goals of the research carried out during the 2009 excavations was to determine the construction sequence and architectural use of some of the buildings at Rio Viejo's Mound 1. Of interest to this thesis, Op. RV09 A found a possible architectural element dating to the Terminal Formative. It consisted of a single course of adobe blocks surrounded by burned organic

material. According to the excavators, the feature could have been a foundation wall of a superstructure or a fallen adobe wall or pavement. (Brzezinski and Aguilar 2011; see also Joyce et al. 2013:147). However, based on further excavations, the featured is now understood to be a public space made of a surface of puddled adobe perhaps used for feasting activities (Brzezinski et al 2012).

Following the findings of previous years, in 2012 more extensive excavations were carried out throughout the acropolis. Seven different areas were scrutinized in order to either clarify noteworthy features found in past years or to provide samples of other areas of Mound 1 not previously investigated. The excavations provided information on the architectural configuration of the acropolis, primarily of elements dating to the late Terminal Formative. One of the researched areas was the northern sector where Operation F (Op. F), the basis for this thesis, was located. Op. RV12 F explored a suspected plaza of the acropolis situated in its northern part between Structure 1 and Structure 2. Since the area had not being investigated before, excavations were conducted as two transects of approximately 57 m east-west and 22 m north-south (Hill and Villanueva Ruiz 2012). The work at Op. RV12 F found evidence of three construction episodes pertaining to the Miniyua (Early Terminal Formative), Chacahua (Late Terminal Formative), and Yuta Tiyoo (Late Classic) phases, although as with Structure 2 the majority of elements dated to the Chacahua phase since only the last meter of fill pertained to later periods. However, because of the lack of good datable materials, the dating of the area remained elusive. Op. RV12 F also uncovered several stone walls that were thought to be architectural elements of structures that occupied the space of the

plaza. But, due to the nature of the transect, no horizontal excavations were carried out to expose more of these features.

In 2013, research resumed on the acropolis to further explore the nature of its occupation. Elements found but not explored in the 2012 excavations were revisited and further explored in greater detail. Among these were two stone walls (Features 55 and 67) found in Op. RV12 F that were thought to pertain to a possible structure. The results of these excavations form the core for this thesis and are explored in greater detail in following sections.

Theorizing Public Buildings in Coastal Oaxaca

First, I must emphasize that this thesis is informed by a theoretical perspective rooted in social theory, which sees society not as a static homogenous whole, but as a place of tensions, conflicts and constant negotiations (Giddens 1984). Following this notion, I see the polity of Río Viejo and the construction of the acropolis and its structures as the result of dynamic and unceasing engagements among people, practices, places, objects, and beliefs that defined the community (Barber and Joyce 2007; Joyce and Barber 2015). However, rather than seeing these components as separable independent entities, I see them as entangled in networks that at times are enabling, but also constraining (Hodder 2012). Humans and things are intertwined in ways that foster innovation and creativity but also limit social change (Joyce and Barber 2015; Olsen 2010; Pauketat 2012).

One of the most important venues where human and things became enmeshed in complex ways was in the production of large-scale labor projects meant for public use.

These constructions required the mobilization of work parties where several people came together to achieve common goals. When communities began to construct and reconstruct public architecture, new spaces were created not just in a physical sense but also in a social one, particularly in reference to social memory (McAnany 2010). As Joyce and colleagues (2013:136–137) have argued, the construction and use of socially meaningful places, like public buildings, can form and transform social identity by ordering and reordering not just space but also people's experiences and associations with those places. As meaningful social locations, public buildings entrench human action and history in the landscape and provide a physical and temporal anchor for social identities (Basso 1996).

In the Lower Verde Valley, public buildings were important in the construction of community identity since at least the Minizundo phase of the Late Formative. As the two demographic centers of Charco Redondo and San Francisco de Arriba were on the rise, monumental construction occurred at both sites (Gillespie 1987; Workinger 2002). It is very possible that the construction of these buildings bounded people to their local communities. The best evidence of this assertion for the Late Formative comes from the secondary site of Cerro de la Cruz, where a communal cemetery was found connected to a modest public building (Joyce 1994). By entangling the bodies of the dead with public constructions and the ceremonies carried out at such places, public architecture became a focal point through which local communities were constituted (Joyce and Barber 2015; Joyce et al. 2013).

By the Terminal Formative, collective labor projects, including public buildings, continued to be a focus of social identity. Monumental constructions were erected at the

growing regional demographic center of Río Viejo and at least nine other sites. Communal ceremonies associated with public buildings continued and expanded in scale, such as mortuary rituals in cemeteries, feasting, and the ceremonial emplacement of communal offerings. For example, at the secondary site of Yugüe several ritual offerings, the largest of which consisted of 50 cylindrical vessels, were emplaced within a public building (Barber 2013). Also, some kind of feasting practice is indicated by cooking features and non-domestic middens found just outside of the public building. At San Francisco de Arriba, people deposited ritual caches in the fills of different building phases at the site's acropolis (Workinger 2002). The most impressive cache consisted of nearly 500 beads along with greenstone and rock crystal pendants, fragments of iron ore, and miniature jars. At Cerro de la Virgen, an offering consisting of 260 vessels placed alongside granite-slabs was placed beneath a patio associated with small public buildings adjacent to the site's public plaza (Brzezinski 2015; Joyce and Barber 2015). Finally, communal cemeteries associated with public buildings have been excavated at the sites of Yugüe and Charco Redondo (Barber et al. 2013).

Nevertheless, the most impressive public construction built during the Terminal Formative was the acropolis of Río Viejo. While the acropolis was begun late in the early Terminal Formative, major occupation is not evident until the late Terminal Formative, as the site of Río Viejo was being constituted as a regional political center. It consisted of a platform rising at least 6 meters above the floodplain and supported 2 large structures on its northwestern and eastern sides, both standing at least 16 meters high. Conservative estimates for the volume of the Terminal Formative version of Mound 1 is 455,050 square meters (Joyce et al. 2013:149–157). The excavations discussed above indicate that

the acropolis was built over a small number of massive fill deposits likely emplaced in a relatively short time. Also, investigations revealed a diversity of construction techniques including unconsolidated basket loads of fill, rammed earth, puddled adobe, and two types of fill utilizing adobe blocks (Joyce et al. 2013, 2016). Variability in construction is also mirrored in the formal architecture at the acropolis, for example retaining walls which included adobe bricks and stone masonry. According to Joyce and colleagues (2015:68–69), there is no known architectural explanation for the different construction techniques. Instead they argue that the variety of fills, along with the sheer size of construction, resulted from rotating work parties drawn from multiple communities, each one carrying out their job in slightly different ways.

Participation of people in erecting the acropolis, as well as the rituals carried out there, would have entangled people with the institutions at Río Viejo, materializing a new corporate identity. It is through this lens that I understand the history of construction of the northern part of the acropolis, and the building of both versions of Structure 8. Being large edifices located at the heart of the Río Viejo acropolis, Structure 8-sub 1 and Structure 8 represented an investment of community labor. Their architectural elements discussed below suggest that they were complex constructions possibly meant for public use. Their placement between Structure 1 and Structure 2 reinforces such interpretation, given that latter represent the two largest superstructures on top of the acropolis. Contextualizing the construction of Structure 8-sub 1 and Structure 8 within the labor projects that erected the acropolis affords the opportunity to comprehend how this building helped in the formation of the Río Viejo polity.

However, something that was not enmeshed in the shared identity of the growing polity was the sacred objects that had been previously emplaced in public buildings in local traditional communities. Ritual objects, like offerings and human remains, acted as a binding substance to cement people's connection with a space, constantly helping in the formation of a shared sense of place. As Basso (1996:145) has argued, with any sense of place the pivotal question is what it is made with, the tangible and intangible elements of what constitutes it as a socialized space. This means that things like stones, dirt, offerings, rituals, beliefs, ideas, people and their ancestors become entangle during the creation of places providing the quality of its tone and substance of its style. In the Lower Verde Valley, public buildings in traditional communities acted as socially charged receptacles for the things buried there because they encapsulated the social ties constituting those local communities (Joyce and Barber 2015a; Hendon 2000:47–50). In the case of the acropolis, after several seasons of excavations - including the excavations discussed in this thesis - there is no evidence of Terminal Formative ritual caching similar to what is clearly present at outlying sites. The ceremonial objects and human remains that embedded history and community in place at secondary sites did not constitute part of the entanglements at Río Viejo. Rather, these objects were already entrapped at the public buildings in local communities and could not simply be appropriated and moved to the acropolis (Joyce and Barber 2015a:825–828). Their persistence constrained the ability of the acropolis to supersede traditional community identities and entangled people in a regional polity. This means that the sole construction of multi-group labor-intensive buildings was not sufficient to break apart people's sense of place, and perhaps belonging, tied to small buildings at local communities.

The only evidence for broader enmeshments at Río Viejo after the construction of the acropolis comes from 10 large nondomestic middens and a large oven found on the acropolis, which suggest an increase in the scale of feasting relative to the evidence from public buildings at outlying sites (Joyce and Barber 2015a:825; Joyce et al. 2016:73). The size and content of the middens, including ceramics, faunal, and macrobotanical remains, imply large-scale and repeated food consumption episodes, perhaps communal in nature. However, despite its large size (10 m in diameter), it is improbable that the oven was sufficient to cook all foods consumed in these feasting episodes given its specialized nature. Thus, it is very likely that people attending the celebrations taking place at the public buildings on the acropolis brought prepared food. These obligations could have been points of tension for feast participants since constant feasting at the regional level would have drawn them away from ceremonial activities in their respective local communities (Joyce and Barber 2015a; Joyce et al. 2013, 2016).

Consequently, rather than naturalizing a regional power, the acropolis and its buildings highlighted ongoing social contestations. At one level, the labor requirements to construct public buildings at the regional center of Río Viejo would have created points of conflict between local communities and the valley-wide polity. The increase in obligations at both local and regional levels could have stressed people's abilities to generate surpluses and led to conflicts, as it has been documented in modern Mixtec communities (Monaghan 1995:167–189, in Joyce and Barber 2015a:827). Furthermore, as people from different communities participated in the construction and use of the acropolis at Río Viejo, its lack of social markers (i.e. the interments and offerings at the public buildings in outlying sites that cemented shared identities) would have become

overtly present, particularly so in light of the ongoing ritual obligations people had with the public buildings in their respective home communities. Secondly, as local and regional elites tried to expand their position above traditional communal principles by creating restricted spaces that only a select few could enter, these attempts may have been hindered by the traditional communal aura that shrouded public buildings. Elites and commoners were engaged in negotiations and contestations between more authoritative forms of power and traditional community-based leadership. In this social milieu, Río Viejo's acropolis and public buildings did not represent the community, but the negotiations and tensions within the polity. As discussed in this thesis, the construction and use of both versions of Structure 8 highlights these issues.

As Río Viejo was collapsing politically, the acropolis and its buildings were ritually terminated or dismantled in what has been referred to as closing or termination events (Joyce et al. 2016:78). Similar to the diversity of construction techniques, these episodes show a great deal of variety. For example, there is evidence that some superstructures and platform surfaces, as the one atop Structure 2, were burned to ritually kill those buildings. After they were burned, the majority of structures were covered by fill layers and some also concealed under deposits of refuse containing high quantities of broken ceramics and stones. In some areas of the acropolis, ceramic vessels –partial and complete– covered these deposits or where interred into pits dug in the final layers of earthen fills. At least one of these pits consisted of sherds and organic material that was burned *in situ.* As with the construction techniques, it is possible that several work groups, perhaps Río Viejo's closest allies, labored in tandem to carry out the termination of the acropolis, which lasted until the early decades of the Early Classic Coyuche phase.

The evidence found at Op. RV13 F adds further diversity to the termination practices that closed the acropolis.

Thesis Organization

In this chapter I have tried to contextualize the study presented in this thesis. I briefly discussed relevant background information to better understand the geographical and historical underpinnings of the arguments proposed here. I also examined how the results of the excavations at Op. RV13 F fit within a multi-year research program oriented towards understanding the development of political authority in the Lower Verde Valley. Finally, I outlined what previous researchers have argued in regards to the acropolis and public buildings at Río Viejo. This discussion will serve as a springboard for the analysis of the construction sequence of the northern part of Mound 1, especially of Structure 8-sub 1 and Structure 8, within the broader arguments about the acropolis.

In Chapter 2, I explain the methodological approach taken in the excavations at Op. RV12 F. It follows the procedures already established by previous investigations (Barber and Joyce 2011, 2012, Joyce 1991b, 1999; Joyce and Levine 2009). I also describe the terminology employed in this thesis for naming archaeological features.

In Chapter 3, I discuss the historical construction sequence in the northern part of Río Viejo's acropolis. I present the list of stratigraphic elements found in Op. RV13 F, rectifying some of the features excavated in 2012. The discussion of the construction sequence follows the chronological order of the different features found during excavations. The dating of the strata was guided by the analysis of associated ceramic

contexts and stratigraphic relationships. I divide my discussion into the different occupational phases represented in the northern area of the acropolis.

The final chapter builds on the preceding ones to provide a contextualized interpretation of archaeological patterns associated with Structure 8-sub 1 and Structure 8. My discussion follows three themes: the formation of shared identities as the result of collective construction works, the creation of restricted space as an elite practice, and the tradition of termination rituals to ritually close Mound 1. Finally, I offer some suggestions for future research at Río Viejo's acropolis.

Chapter 2: Excavations in the Northern Part of the Acropolis: Methodology

This chapter presents the methodology followed during the research conducted in Op. RV13 F (additional information on Op. RV12 F is included when relevant). I describe the geographical context of the operation and define the excavation terminology to minimize confusion regarding the classificatory system utilized in this thesis.

Op. RV13 F consisted of 32 units that encompassed an area of 32.85 m^2 in the northern part of Mound 1 (Figure 2.1). Given that several stone walls were found by Op. RV12 F, it was decided to further expose the features labeled as Feature 55 (F55) in unit 40A and Feature 67 (F67) in unit 48A. Because of its proximity to Structure 1, one of the main superstructures on the acropolis, research in this area was deemed important to better understand its construction sequence and use. Excavations followed three main objectives:

1. Expose Terminal Formative period occupational surfaces
2. Investigate the variability in architecture and activity patterns over the exposed area.
3. Increase the understanding of the architectural features uncovered in 2012.

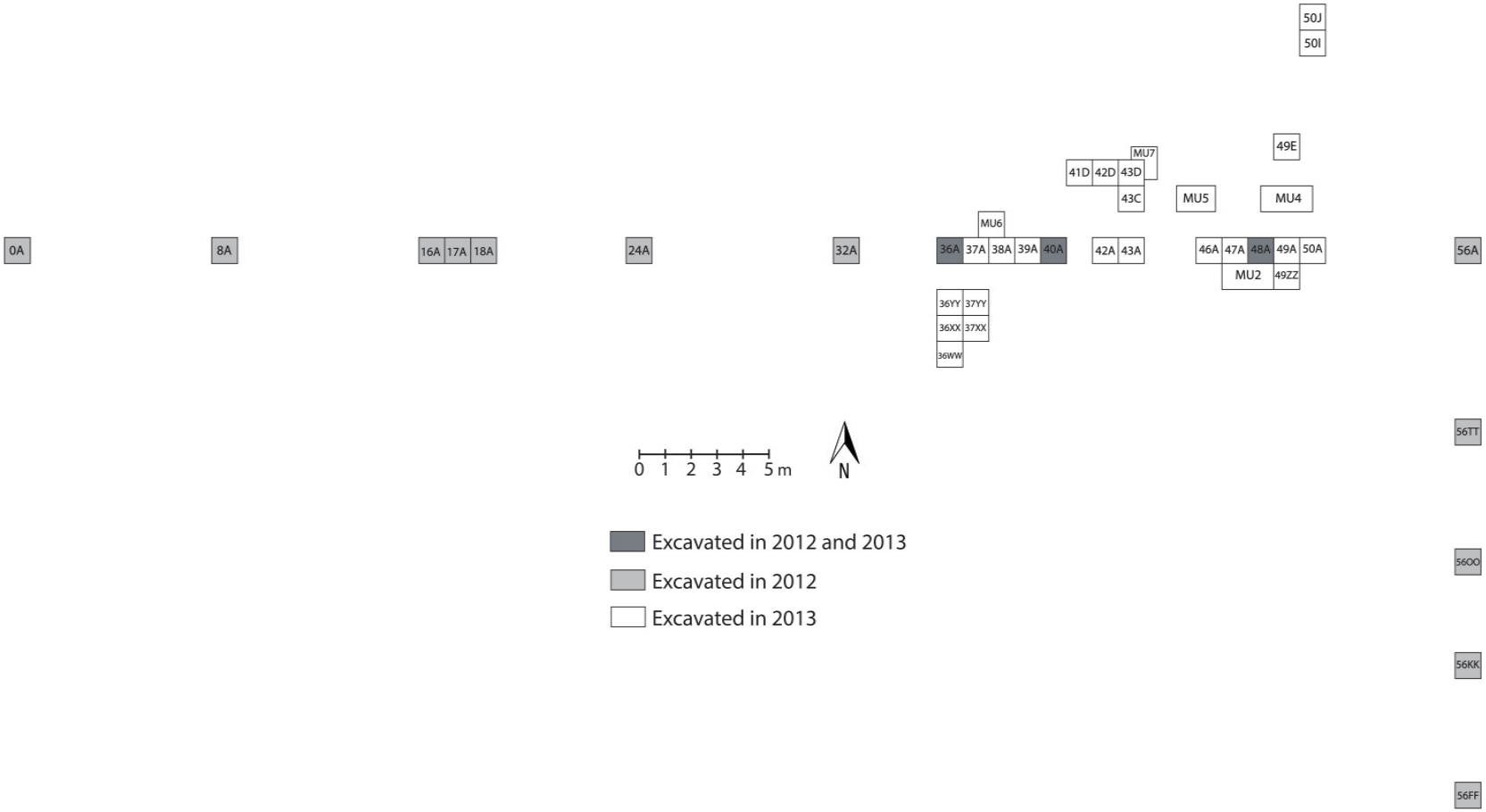

Figure 2. 1 Map of Op. RV12 F and Op. RV13 F

Excavation Methods

Excavations were carried out following standard procedures of previous research in the Lower Río Verde valley (Barber and Joyce 2011, 2012; Joyce 1999; Joyce and Levine 2009; Joyce et al. 1998). The PRV13 used the same nomenclature to label multi-year excavations in the area where provenience is codified based on site, year, operation, unit, and feature. For example, "Op. RV13 F" refers to Operation F at Río Viejo excavated in 2013. For the PRV13, an operation (Op.) indicated an excavated area that followed the same Cartesian grid as used in Op. F in 2012, regardless of the year in which it was researched. In this way, Op. RV12 F and Op. RV13F shared the same grid system oriented to magnetic north. Squares measuring 1 x 1 m within the grid were assigned specific identification numbers (unit numbers). The east-west axis was assigned letters, while the north-south axis was assigned numbers. Numbers increased from west to east and letters increased from south to north, taking as reference the southwest corner of each unit after origin Unit 0A. For example, the unit one meter east from 0A was labeled 1A, while the unit 1 meter north was 0B. Because the PRV12 transect expanded further south beyond row A, these units were given double letters decreasing to the south. For example, the unit directly south of Unit 36A was labeled as "36ZZ", and the following was "36YY". In places where features expanded more than one arbitrary unit, the excavated area was called a multi-unit (MU). There were seven multi-units in Op. RV13 F (Table 2.1)

Number of Multi-Unit	Included Units	Dimensions (E-W x N-S)	Reasons for Opening Multi-unit
MU-1	48A, 49A	1.1 x 1 m	40 cm of Unit 49A were excavated to expose stone wall F108
MU-2	47ZZ, 48ZZ	2 x 1 m	To expose a greater area of the first (F67) and second (F101) steps of Structure 8-sub 1
MU-3	36A, 37A	2 x 1 m	Reopen Unit 36A (excavated by the PRV12) to corroborate if stone wall F132 was Structure 8-sub 1's western façade
MU-4	48C, 49C, 50C	2 x 1 m	Expose another area of the upper steps (F67 and F101) of Structure 8-sub 1
MU-5	45C, 46C	1.5 x 1 m	Exposed what was believed to the middle part of Structure 8-sub 1
MU-6	37B, 38B	1 x 1 m	Tried to expose the juncture between stone wall F139 and the western stairway of Structure 8-sub 1
MU-7	43E, 44D, 44E	1 x 1.45 m	Exposed an Early Postclassic offering (F120) found northeast of Unit 43D that was found at an average of 20.20 meters above sea level (abbreviated masl)

Table 2.1: Multi-units in Op. RV13 F

Units were mostly excavated by natural or cultural stratigraphy, or in arbitrary 10 cm lots if digging thought thick fill layers. Lots of 20 cm were used when there were no changes in stratigraphy or in the case of sterile cultural fills. An exception was made during the excavations of Units MU6 and 40A (the latter one had been previously excavated by the PRV12, but was reanalyzed by the PRV13), which were not excavated in lots because they were only meant to expose the juncture of two architectural features (discussed below). Another unit that was not excavated by lots was MU7, which was meant to expose the artifacts of an Early Postclassic offering given that it was found approximately 50 cm below the modern surface underneath a single stratum that represented the modern surface.

The elevation of excavated contexts was determined by taking measurements with line-levels that were strung from metal stakes marking datum points throughout the operation and tied into a single master datum for the operation. The operation datum was later georeferenced with a total station to convert "elevations to datum" to meters above sea level (masl). Therefore, all elevations presented in this thesis are in masl. The southwest corner of each unit was also georeferenced with a total station to situate the operation in a map of the acropolis.

Fieldwork took place between the months of March and May, with subsequent initial lab analysis during the month of June. Excavations were carried out using *barretas* (metal digging bars), shovels, and trowels. The sediment was passed through a 5 mm hardwire screen. All the artifacts were sorted and bagged according to material type (e.g. *ceramica, lítica)* and a unique field specimen (FS) number was given to each artifact bag. Lab analysis primarily involved washing and sorting artifacts by material types as well as counting and weighing ceramics according to paste type. Ceramics were used to date strata according to the lower Río Verde regional chronology (Joyce 1991:121–173). However, since this thesis is mostly concerned with the construction sequences of the northern part of the acropolis and most of the artifacts were redeposited in construction fills, only brief comments are provided about the excavated artifacts when they are deemed significant.

Upon completing excavations, detailed stratigraphic drawings were made for each unit profile. Plan and profile views were also made for each architectural feature exposed. All strata were described in the field and samples of each one were taken to the lab for sediment texture analysis. The details for this analysis are given below.

Excavation Terminology

The classification scheme used to define strata and other features deposited by natural or anthropogenic processes was modified from Joyce (1991:86–94), which in turn follows Ashmore (1981:155–158). I have also taken into consideration Gendrop (1997) and suggestions by other archaeologists who have worked in the lower Verde region. The list includes both formal terms and more loosely used terms common in archaeological jargon. The purpose of this inclusion is to minimize the chance for confusion regarding the terminology used in this thesis:

1. *Architecture*: Constructed feature built on a ground surface. Individual components were assigned unique feature numbers.
2. *Structure (St):* Three-dimensional architecture divided into the following operational categories:
    a. *Substructure:* Elevated mass that supports a superstructure and consisting of one or more fill layers.
    b. *Superstructure:* Standings architecture built on top of a substructure.
    c. *Stone wall:* Generic term for an alignment of stones with verticality.
    d. *Construction fill:* Generic term for a layer of matrix used to raise living surfaces. They can be consolidated or unconsolidated.
    e. *Substratum (sub-feature):* distinct depositional entity within a stratum.
    f. *Fill within pit:* Materials used to fill a pit dug in a previous feature.
    g. *Banquette:* collection of rocks/ and or plaster built next to a wall and follows the contour of the wall.
    h. *Pavement:* A two-dimensional architecture consisting of a paved surface.

i. *Floor:* Modified surface resulting from intentional or unintentional packing or alterations to a structure's interior horizontal surface.

3. *Activity refuse:* General category to define a cluster of artifacts that may have been deposited in a single quick episode.

Description of Features

Each feature, or stratum, was labeled with the letter F followed by a unique number. Frequently, sub-strata were identified in the larger deposits, and these were further assigned with the name of the strata followed by the letter "s" and a consecutive number. For example, feature F110 had two sub-strata that were labeled as F110-s1 and F110-s2, respectively. The list of features followed the labeling system of Op. RV12 F and therefore the list does not start with F1 but with F82. Some sub-strata, such as F1-s1 and F1-s2, were also used during the excavations of Op. RV12 F but not found in the excavated context of Op. RV13 F. Selected strata were re-labeled since they were better correlated with adjacent features, or were reinterpreted.

All excavated strata were described in the field paying particular attention to the presence and relative concentration of artifacts or natural inclusions (e.g. gravel, grit, mica). Samples taken to the lab were analyzed for sediment texture to determine the relative proportion of sand, silt, and clay. Color of all sediment strata were recorded based on classifications in the Munsell soil color chart system (Munsell 2009). Color was assessed on wet sediment. Finally, all the strata and substrata were entered into a master list that included the feature number, provenience, Munsell color and sediment

description, probable date, formation process, and general comments. Table 3.1 gives a detailed list in chronological order of all the features exposed by Op. RV13 F.

Discussion

In this chapter I discussed the methodology used during the excavations of Op. RV13 F. I also listed the terminology used to describe all of the features found and fully described each stratum. In the next chapter, the correlation of each of the strata is given in chronological order to understand the construction sequence of the northern part of the acropolis where Op. RV13 F was located. Particular attention is given to the history of Structure 8 and its architectural features.

Chapter 3: Historical Sequence of Construction in the Northern Part of the Acropolis

This chapter presents a detailed account of the construction sequence of the north central area of the acropolis by presenting a detailed description of each stratum uncovered by Op. RV13 F. The discussion of the stratigraphy follows the different observed periods of occupation based on the regional chronology. An overview is presented first to guide the reader through the major construction events. The reader is instructed to follow the text while consulting the accompanying figures that illustrate the unit profiles and associated features. Also, it is highly recommended to refer to the descriptions of the strata found in Table 3.1. Appendix 1 provides a description of post-Chacahua features.

Table 3.2: List of Stratigraphic Features in Operation F of PRV13

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F1-s3	36A, 36WW, 36XX, 36YY, 37A, 37XX, 37YY, 38A, 39A, 40A, 41D, 42A, 42D, 43D, 43C, MU6	Sandy clay loam, 10YR 2/2	Yugüe or later	Modern soil	Features F1-s1 and F1-s2 were excavated by the PRV12 west of the PRV13 areas in Units 0A, 8A, 16A, 17A, 18A, 24A. F1-s3 was very similar to F1-s4, but with more sand than loam. Grain size is coarse to medium. High concentrations of small and angular stones and low concentration of ceramics. The division between this feature and F1-s4 in Unit 42A is hard to differentiate. (Figure 3.5, 3.11, and 3.19).
F1-s4	42A, 43A, 46A, 47A, 48A, 49A, 49E, 50A, 49ZZ, MU2, MU4, MU5	Sandy clay, 10 YR 2/2	Yugüe or later	Modern soil	Grit inclusions. High concentration of ceramics. The feature is compact (Figure 3.2, 3.4, 3.10, 3.12, 3.14, 3.16, and 3.18).
F82	50I, 50J	Sandy clay, 10 YR 2/1	Yugüe or later	Modern soil	Feature with organic material that covers F83; darker than F83 (Figure 3.15).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F120	43D, MU7	Silty clay, 10 YR 3/2	Yugüe	Fill within offering pit	Wide shallow pit intrusive into F9-s1, F9-s2 and F122-s2. The offering was deposited in a surface that had been previously burned. It consisted of four ceramic vessels, seven obsidian blades, nine copper bells, a copper plaque, a cylindrical ceramic object, and a carved bone (Figure 3.5).
F92	49ZZ	N/A	Late Chacahua	Stone slabs	Medium size Stone slabs possibly covering pit F91. Found in the stratigraphic break between F1-s4 and F91. Not visible in profile (Figure 3.22).
F88	49E	Sandy clay, 10 YR 3/2	Late Chacahua	Fill within pit	Narrow shallow pit intrusive into F57-s1 and F58-s1. Some grit inclusions. Some pieces of burned daub were found at the bottom of the pit (Figure 3.4).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F118	42D, 43C	Sandy clay loam, 10 YR 3/2	Late Chacahua	Fill within pit	Wide shallow pit intrusive into F9-s1, F122-s1, and F122-s11. Some concentrations of ceramic sherds and round rocks (possibly river cobbles). Sediment is not compact. Inclusions of grit and small angular rocks (Figure 3.5).
F119	43C	Sandy clay loam, 10 YR 3/4	Late Chacahua	Fill within pit	Wide shallow pit intrusive into F9-s1 and F122-s11. High concentrations of ceramic sherds and angular rocks. Fewer gravel inclusions than F9-s1. Some granite rocks of medium size (Figure 3.5).
F166	36A, 37A	Clay loam	Late Chacahua	Fill within pit	Wide pit of medium depth inclusive into F9-s1 and F9-s4. Sand is coarse and not compacted. Some ceramic sherds are found at the bottom of the pit (Figure 3.11).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F90	46A, MU2	Silty clay, 10 YR 3/4	Late Chacahua	Fill within pit	Wide shallow pit intrusive into F57-s1 and F58-s1. High concentrations of ceramic sherds and angular granite rocks (Figure 3.2, and 3.10).
F89	MU4	Sandy clay loam, 10 YR 3/4	Late Chacahua	Fill within pit	Narrow shallow pit intrusive into F57-s1 and F58-s1. Its lower part is wider than its upper part. High concentrations of angular granite rocks and round rocks, possibly river cobbles (Figure 3.18).
F91	49ZZ, 50A	Silty clay, 10 YR 4/4	Late Chacahua	Fill within pit	Wide shallow pit intrusive into F57-s1 and F58-s1. High concentrations of ceramic sherds and small rocks, possibly from the river. Might have been deposited at the same time as F90 (Figure 3.2 and 3.16).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F152	36YY, 37YY	Sandy clay loam, 10 YR 4/3	Late Chacahua	Fill within pit	Wide shallow pit intrusive into F9-s1, F9-s16, F9-s10, F131 y F165. Sediment is loosely compacted and with a moderate concentration of ceramic sherds at the bottom of the pit. Small pieces of clay are visible (Figure 3.19).
F83	50I, 50J	Silty clay loam, 10 YR 2/1	Late Chacahua	Fill within pit	Wide pit of variable depth intrusive into F84-s1, F84-s2, F84-s3 y F84-s4. Inclusions of pulverized shell and grit. At the bottom of the pit some small angular rocks were found (Figure 3.15).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F57-s1	42A, 43A, 46A, 47A, 48A, 49A, 49E, 49ZZ, 50A, MU2, MU4, MU5	Silty clay, 10YR 4/3	Late Chacahua	Construction fill	Some concentrations of angular rocks and coarse sand. Sediment is slightly compacted. Small shell inclusions. It was cut by several pits. Feature F57-s2 was excavated at Unit 56OO by the PRV12, southwest of where PRV13 units where located (Figure 3.2, 3.4, 3.9, 3.12, and 3.16).
F9-s1	36A, 36WW, 36XX, 36YY, 37XX, 37YY, 37A, 38A, 39A, 40A, 41D, 42D, 43C, 43D, MU6	Sandy clay loam, 10YR 3/3	Late Chacahua	Construction fill	Inclusions of grit and some angular rocks. Small to medium concentration of ceramic sherds. It was cut by several pits (Figure 3.5, 3.19, and 3.11)
F9-s2	43D	Silty clay, 10 YR 3/2	Late Chacahua	Construction fill	Very compacted, with some grit inclusions. Higher concentration of artifacts than F9-s1 (Figure 3.5).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F9-s3	41D, 42D	Sandy clay, 10 YR 4/3	Late Chacahua	Construction Fill	Very compacted with few coarse sand inclusions. High concentrations of ceramics (Figure 3.5).
F9-s4	36A	Loam, 10YR 3/4	Late Chacahua	Construction fill	Laminated sediment slightly compacted. Grit inclusions (Figure3.11).
F9-s5	36A	N/A	Late Chacahua	Construction fill	Somewhat compacted with grit inclusions. The division between this feature and F9-s6 is hard to differentiate (Figure 3.11).
F9-s6	36A	Sandy clay, 10 YR 4/4	Late Chacahua	Construction fill	Less compacted than F9-s5 and with grit inclusions. This feature is laminated in its lower part (Figure 3.11).
F9-s7	36A, 37A	Sandy clay, 10 YR 3/4	Late Chacahua	Construction fill	Associated with high concentrations of ceramic sherds. Inclusions of shell, grit as well as small pieces of dark clay (Figure 3.11).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F9-s8	36A, 37A	Sandy clay, 10 YR 4/3	Late Chacahua	Construction fill	Less compacted than F9-s7. Associated with high concentrations of sherds. Some inclusions of grit and small pieces of clay (Figure 3.11).
F9-s9	36A, 37A	Sandy clay, 10 YR 4/4	Late Chacahua	Construction fill	More compacted than F9-s8. (Figure 3.11).
F9-s10	36WW, 36XX, 36YY, 37A, 37XX, 37YY	Silty clay loam, 10 YR 3/4	Late Chacahua	Construction fill	Many inclusions of coarse sand. Laminations of fine sand and clay are visible throughout the feature (Figure 3.19 and 3.11).
F9-s11	36WW, 37XX	Sandy clay, 10 YR 4/3	Late Chacahua	Construction fill	Clay is somewhat compacted, but less than F9-s12. Grit inclusions (Figure 3.19).
F9-s12	36WW	Sandy clay loam, 10 YR 4/3	Late Chacahua	Construction fill	Clay is somewhat compacted. Grit inclusions (Figure 3.19).
F9-s13	36WW	Silty clay loam, 10 YR 3/4	Late Chacahua	Construction fill	Some grit inclusions and small pieces of clay. At the bottom of the feature there is a low concentration of small ceramic sherds and burned daub (Figure 3.19).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F9-s14	36WW, 36XX	Sandy clay loam, 10 YR 4/4	Late Chacahua	Construction fill	Many grit inclusions. More compacted than F9-s1 and F9-s10 (Figure 3.19).
F9-s15	36XX, 36YY	Silty clay loam, 10 YR 4/4	Late Chacahua	Construction fill	Some grit inclusions. The feature is laminated (Figure 3.19).
F9-s16	36XX, 36YY	Sandy loam, 10 YR 4/3	Late Chacahua	Construction fill	Coarse sand. The sediment is loose (Figure 3.19).
F9-s17	36WW, 36XX	Sandy clay loam, 10 YR 4/4	Late Chacahua	Construction fill	More compacted than F9-s10. Some inclusions of burned daub (Figure 3.19).
F9-s18	43D, MU7	Sand, 5 YR, 3/3	Late Chacahua	Bottom of an offering pit	Burned surface delimiting the bottom of an offering pit. The burning event occurred previous to the placement of the offering (Figure 3.5).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F165	36XX, 36YY	Sandy clay, 10 YR 4/3	Late Chacahua	Fill within Pit	Wide pit of medium depth intrusive into F136-s2, F136-s3, F136-s4, F136-s5, and F136-s6. High concentrations of ceramic sherds and pulverized shell. Two stone slabs were found within the pit, possibly representing the opening of the pit where an articulated feline was found (F162). It was not possible to discern the limits of the pit (Figure 3.19).
F162	36YY	N/A	Late Chacahua	Possible offering consisting of an articulated skeleton of a feline	It was not possible to assess if the feline was placed within the pit filled with F165. The superior part of the skull was damaged during the excavation process (Figure 3.8, 3.19 and 3.21).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F163	36XX	Silty clay, 10 YR 4/4	Late Chacahua	Fill within pit	Narrow shallow pit intrusive into F136-s2, and F136-s3. Concentrations of pulverized shell were found at the bottom of the pit. Some small granite pebbles and small pieces of clay are visible (Figure 3.19).
F153	36XX, 36YY	Sandy Clay, 10 YR 4/4	Late Chacahua	Fill within pit	Narrow shallow pit intrusive into F131, and F135. The pit also cuts into wall F134. High concentration of ceramic sherds (Figure 3.19).
F154	37XX	Sandy clay loam, 10 YR 4/2	Late Chacahua	Fill within pit	Narrow shallow pit intrusive into F131, and F136-s4. Some inclusions of burned daub and pulverized shell (Figure 3.19).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F155	37XX	Sandy clay loam, 10 YR 4/2	Late Chacahua	Fill within pit	Shallow wide pit intrusive into F131, and F134. Sediment is not compacted and with many grit and pulverized shell inclusions. Moderate concentration of ceramic sherds. A rock was found within the pit. Similar to F154 (Figure 3.19).
F93	46A, 47A	Silty clay, 10 YR 4.5/6	Late Chacahua	Fill within pit	Shallow wide pit intrusive into F58-s1. High concentrations of ceramic sherds and round rocks (possibly river cobbles). Some grit inclusions (Figure 3.2 and 3.10).
F94	46A	Silty clay, 10 YR 4.5/6	Late Chacahua	Fill within pit	Shallow wide pit intrusive into F58-s1. High concentrations of ceramic sherds and round rocks (possibly from the river). Very similar to F93 (Figure 3.10).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F142	MU6	Sandy Clay, 10 YR 4/4	Late Chacahua	Fill within pit	Narrow shallow pit intrusive into F131, F135, and F138. Moderate concentration of ceramic shreds. Some grit inclusions (Figure 3.11).
F110-s1	50A	Silty clay loam, 10 YR 4/4	Late Chacahua	Construction fill	This sediment covers wall F95, floor F112. Somewhat compacted and with small pieces of clay (Figure 3.16).
F110-s2	50A	Sandy loam	Late Chacahua	Construction fill	Coarser than F110-s1. Associated with a single ceramic sherd (Figure 3.16).
F117	43A	Silty clay loam, 10 YR 4/4	Chacahua	Construction fill or possible fill within pit	Intrusive into F58-s1. High concentration of ceramic sherds with some inclusions of grit and small granite rocks (Figure 3.9).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F159	36YY	N/A	Late Chacahua	Pile of rocks	Unorganized pile of rocks that possibly were part of a dismantled wall. Some rocks have flat sides. Visible in the plan view of Units 36YY, 36XX, 36WW, 37YY, and 37XX, but not in profile. The rocks were removed to continue the excavation of Unit 36YY (Figure 3.19).
F131	36A, 36WW, 36YY, 37A, 37XX, 37YY 38A, 39A, 40A, MU6,	Sandy clay loam, 10 YR 4/3	Late Chacahua	Construction fill	Not compacted. High concentration of ceramic sherds. It was found above the burned surface of F167 and features F135, F136-S4, F136-s8, and F141-s1 (Figure 3.11 and 3.19).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F132	36YY, 37A 37YY	N/A	Chacahua	Stone wall	Single row of stones with a northeast-southwest orientation of 15° east of magnetic north. It probably represents a construction cell or a provisional wall to retain sediment during construction episodes (Figure 3.8, 3.19 and 3.11).
F168	41D, 42D	Silty clay, 7.5 YR 5/6	Chacahua	Probable floor	Compacted earthen floor and with some inclusions of carbon from the same event as the burning of the floor. Probably associated with the occupational surface of Structure 8 (Figure 3.5 and 3.20).
F137	MU6	N/A	Chacahua	Rock	Possible northwest corner of stone wall F132 (Figure 3.11).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F164	36WW	Sandy clay, 10 YR 4/3	Chacahua	Fill within pit/possible refuse	Narrow shallow pit intrusive into F136-s6 and stone wall F139. High concentration of ceramic sherds. Some big gray ware ceramic sherds are visible (Figure 3.19).
F136-s1	36WW	Sandy clay loam, 10 YR 3/4	Chacahua	Construction fill	Moderate concentration of ceramic sherds with inclusions of small angular rocks (Figure 3.19).
F136-s2	36WW, 36XX	Silty clay, 10YR 4/3	Chacahua	Construction fill	High concentration of ceramic sherds, but less than F136-s3. Some grit inclusions. This feature is laminated (Figure 3.19)
F136-s3	36WW, 36XX	Sandy clay loam, 10 YR 4/3	Chacahua	Construction fill	High concentration of ceramic sherds. Many inclusions of pulverized shell. Less compacted than F136-s4 and F136-s1. Very similar to F136-s5. This feature is highly laminated (Figure 3.19).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F136-s4	36WW, 36XX, 37XX	Clay, 10 YR 4/3	Chacahua	Construction fill	The clay is somewhat silty and with yellow patches similar to the organic inclusions of F138. There are very little pieces of darker clay. This feature is laminated (Figure 3.19).
F136-s5	36WW, 36XX, 37XX	Sandy clay loam, 10 YR 4/3	Chacahua	Construction fill	High concentration of ceramic sherds with several inclusions of pulverized shell. Very similar to F136-s3. This feature is laminated (Figure 3.19).
F136-s6	36WW, 36XX, 36YY, 37XX	Clay, 10 YR 4/3	Chacahua	Construction fill	Very compacted, but less than F141-s1. Few grit inclusions. This feature is laminated (Figure 3.19).
F136-s7	36XX	Silty clay, 10YR 4/3	Chacahua	Construction fill	Less compacted than F136-s6 and with some inclusions of pulverized shell, burned daub and grit. This substratum may be a pit (Figure 3.19).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F136-s8	36A, 37A	Clay, 10 YR 4/3	Chacahua	Construction fill	This substratum covers the upper part of stone wall F132. Some inclusions of pulverized shell and burned daub (Figure 3.11).
F141-s1	36A, 36XX, 36YY, 37A, MU6	Clay, 10 YR 4/3	Chacahua	Construction fill	Very hard and compacted clay. This feature covered most of west façade of Structure 8-sub 1. Probably also used to create a solid foundation for the construction of Structure 8 (Figure 3.7, 3.19 and 3.11).
F141-s2	36XX	Clay, 10YR 4/3	Chacahua	Construction fill	Less compacted than F141-s1. Inclusions of pulverized shell and grit. Some small granite rocks are visible at the bottom of the stratum (Figure 3.7).
F141-s3	36XX	Silty clay, 10YR 4/3	Chacahua	Construction fill	Less compacted than F141-s1. No inclusions (Figure 3.7 and 3.19).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F141-s4	36XX	Sandy clay loam, 10 YR 4/3	Chacahua	Construction fill	Coarse sand with some inclusions of pulverized shell. Some carbon is observed comingling with the matrix of the feature (Figure 3.19).
F140	MU6	Clay, 10 YR 4/4	Chacahua	Construction fill	Compacted clay with some grit inclusions (Figure 3.11)
F160-s1	36XX	Silty clay, 10 YR 3/4	Chacahua	Construction fill	Somewhat compacted, but less than F141-s1. No inclusions (Figure 3.7 and 3.19)
F160-s2	36XX	Silty clay, 10YR 4/3	Chacahua	Construction fill	This feature directly covers bench F157 and flagstone F158. Somewhat compacted (Figure 3.7 and 3.19).
F160-s3	36XX	Sandy loam, 10 YR 3/4	Chacahua	Construction fill	Feature that directly covers banquette F157 and flagstone pavement F158. High concentrations of small ceramic sherds and inclusions of pulverized shell (Figure 3.7 and 3.19).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F160-s4	36XX	Silty clay, 10YR 4/3	Chacahua	Construction fill	Compacted and without inclusions (Figure 3.7 and 3.19).
F160-s5	36XX	Sand, 10YR 4/2	Chacahua	Construction fill	Loose sand (Figure 3.7 and 3.19).
F122-s1	42D, 43C, 43D	Silty clay, 10 YR 4/3	Chacahua	Construction fill	Somewhat compacted with a high concentration of silt. Some grit inclusions (Figure 3.5).
F122-s2	42D, 43C, 43D	Sandy clay, 10 YR 4/3	Chacahua	Construction fill	The matrix may contain some silt (Figure 3.5).
F122-s3	41D, 42D	Silty clay, 10 YR 3/4	Chacahua	Construction fill	Many inclusions of pulverized shell and burned daub (Figure 3.5).
F122-s4	41D, 42D, 43D	Clay, 10 YR 3/4	Chacahua	Construction fill	Compacted and without inclusions (Figure 3.5).
F122-s5	41D, 42D	Sandy clay, 10 YR 4/3	Chacahua	Construction fill	Less compacted than F122-s4. Many inclusions of pulverized shell. The division between this feature and F122-s3 is hard to follow. Perhaps they represent the same stratum although F122-s5 has more shell in it (Figure 3.5).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F122-s6	41D	Silty clay, 10 YR 4/3	Chacahua	Construction fill	The clay is found in small compacted pieces. Some inclusions of pulverized shell (Figure 3.5).
F122-s7	41D	Sandy clay, 10 YR 3/4	Chacahua	Construction fill	Few inclusions of pulverized shell. Less compacted than F122-s3, and F122-s4 (Figure 3.5).
F122-s8	41D, 42D	Clay, 10 YR 4/4	Chacahua	Construction fill	Compacted but less than F122-s4. No inclusions (Figure 3.5).
F122-s9	42D	Sandy clay loam, 10 YR 4/4	Chacahua	Construction fill	Many inclusions of pulverized shell and some grit inclusions (Figure 3.5).
F122-s10	42D, 43D	Silty clay, 10 YR 4/3	Chacahua	Construction fill	This feature covers the first exposed step of the west stairway of Structure 8-sub 1. Some inclusions of pulverized shell and grit (Figure 3.5).
F122-s11	43D, MU7	Sand, 5 YR, 3/3	Chacahua	Bottom of an offering pit	Burned surface that represents the bottom of offering pit F120-s1 (Figure 3.5).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F100	MU4	N/A	Chacahua	Stone alignment	It has a northeast-southwest orientation 30° east of magnetic north. It is made of a single row of stones facing west. Due to its small exposure, it was not possible to assess its use. It likely represents part of an ephemeral construction cell to retain construction fill F58-s1 while Structure 8 was being built (Figure 3.18).
F58-s1	43A, 46A, 47A, 48A, 49A, 49E, 49ZZ, MU2, MU4, MU5	Silty clay, 10 YR 5.5/4	Chacahua	Construction fill	Fill retained by stonewall F95, part of the east façade of Structure 8. Some grit and pulverized shell inclusions (Figure 3.2, 3.4, 3.9, 3.10, 3.12 and 3.18).
F58-s2	49E	Silty clay, 10 YR 3/4	Chacahua	Construction fill	Less compacted than F58-s1. No inclusions. A stone was found within this feature in the north profile (Figure 3.4).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F58-s3	46A, 47A, 48A	Silty clay, 10 YR 4/4	Chacahua	Construction fill	Somewhat compacted without inclusions (Figure 3.2 and 3.10).
F58-s4	MU4	Sandy loam, 10 YR 3/4	Chacahua	Construction fill	Somewhat compacted (Figure 3.18).
F58-s5	MU4	Silty clay, 10 YR 3/4	Chacahua	Construction fill	Less compacted than F58-s1. An unfired adobe block in the north profile was found within the feature (Figure 3.18).
F113	49A, 50A	Clay, 10 YR 3/4	Chacahua	Clay support of stone wall	Compacted clay found on top of floor F112. It may have served as support to cement stone wall F95 (Figure 3.2 and 3.16).
F96	49A, MU4	Clay, 10 YR 3/4	Chacahua	Clay mortar of stone wall F95	Very compacted and without inclusions (Figure 3.2 and 318).
F95	49A, MU4	N/A	Chacahua	Stone wall	Second and last construction phase of Structure 8. It has a northeast-southwest orientation of 23° east of magnetic north. It has a flat side facing east, with at least two rows of stones. It cuts floor F112 (Figure 3.2 and 3.18).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F112	49A, 49ZZ, 50A	Sand, 5 YR 5/8	Chacahua	Floor	Coarse sand associated with the occupation of Structure 8. The floor was placed previous to the creation of stone wall F95 (Figure 3.2 and 3.16).
F109	49E	N/A	Chacahua	Refuse	High concentration of ceramic sherds, shell, and some animal bones that may represent a trash midden deposited between strata F59-s17 and F59-s18. It may also represent the remains of a single episode of food consumption during the construction of Structure 8. It is not visible in profile (Figure 3.17).
F111	49ZZ, 50A	Silty clay, 5 YR 3/3	Chacahua	Possible floor	Very compacted clay without inclusions. Thin surface that may represent a floor or a burned occupational surface associated with Structure 8. Hard to follow in profile (Figure 3.2 and 3.16).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F59-s1	48A, 49A, 49ZZ, MU2, MU4	Sandy loam, 10YR 4/6	Chacahua	Construction fill	Thin layer of loam with very fine sand without associated materials. Fill that covers Structure 8-sub 1. Sub-strata F59-s3, F59-s6, and F59-s7 were reassigned as F76. PRV12 utilized labels F59-s4, F59-s8, F59-s9 y F59-s10 to name features in unit 56A, while F59-s11 and F59-s12 were utilized at Unit 56OO (Figure 3.2 and 3.18).
F59-s2	48A, 49A, 49ZZ, 50A, MU2, MU4	Silty clay loam, 10 YR 5.5/4	Chacahua	Construction fill	Thin sediment between sandy features. Somewhat compacted but more than F59-s1 (Figure 3.2, 3.16 and 3.18).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F59-s5	48A, 49A, 49ZZ, 49E, MU2, MU4	Sandy loam, 10 YR 4/4	Chacahua	Construction fill	Associated with few ceramic sherds. It has some small pieces of clay in its matrix. This feature encompasses PRV12's F59-s1, F59-s2, and F59-s5 designations (Figure 3.2, 3.4 and 3.18).
F59-s13	49A, 49ZZ, 50A, MU2	Silty clay, 10 YR 5/3	Chacahua	Construction fill	Somewhat compacted with inclusions of mica. This substratum encompasses PRV12's F59-s1, F59-s3, F59-s7, and F59-s8 designations (Figure 3.2 and 3.16).
F59-s14	49A, 49ZZ, 50A	Sandy loam, 10 YR 5/6	Chacahua	Construction fill	Fine sand with mica inclusions visible at Unit 50A but not at Unit 49ZZ (Figure 3.2 and 3.16).
F59-s15	49E	Silty clay loam, 10 YR 4/3	Chacahua	Construction fill	Somewhat compacted with some grit inclusions (Figure 3.4).
F59-s16	49E	Sand, 10 YR 3/4	Chacahua	Construction fill	Very find and loose sand with small pieces of clay (Figure 3.4).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F59-s17	49E	Silty clay, 10YR 4/3	Chacahua	Construction fill	Very compacted and with some grit inclusions (Figure 3.4).
F59-18	49E	Sandy loam, 10 YR 3/4	Chacahua	Construction fill	Somewhat compacted and with some small pieces of clay. Few ceramic sherds, especially in the east profile (Figure 3.4).
F59-s19	50A	Sandy loam, 10 YR 3/4	Chacahua	Construction fill	Fine sand with small pieces of clay. Somewhat compacted (Figure 3.16).
F59-s20	50A	Sandy loam, 10 YR 3/4	Chacahua	Construction fill	Less compacted than F59-s19. With fewer small pieces of clay than F59-s19 3.16).
F59-S21	50A	Silty clay, 10 YR 4/4	Chacahua	Construction fill	Very fine and loose silt (Figure 3.16).
F59-S22	50A	Silty clay, 10 YR 4/4	Chacahua	Construction fill	Silt is finer than F59-s21 (Figure 3.16).
F59-s23	50A	Sandy clay, 10 YR 4/4	Chacahua	Construction fill	Somewhat compacted fine sand with some inclusions of pulverized shell (Figure 3.16).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F84-s1	50I, 50J	Silty clay, 10 YR 3/4	Chacahua	Construction fill	This fill covers features F85 and F86. High concentration of ceramic sherds and burned daub. Inclusions of pulverized shell. Some small pieces of clay (Figure 3.15).
F84-s2	50I, 50J	Loamy sand, 10 YR 4/4	Chacahua	Construction fill	Sand with small pieces of clay. Less compacted than F84-s3 (Figure 3.15).
F84-s3	50I, 50J	Loamy sand, 10 YR 3/4	Chacahua	Construction fill	Some inclusions of white angular rocks and small pieces of burned daub (Figure 3.15).
F84-s4	50I, 50J	Silty clay, 10 YR 4/3	Chacahua	Construction fill	Very compacted and with inclusions of burned daub, pulverized shell, granite rocks, and some ceramic sherds. This feature covers the interior of stone wall F86. In the southeast corner of Unit 50I, the feature covers a medium size rock (Figure 3.15).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F84-s5	50I, 50J	Silty clay, 10 YR 4/3	Chacahua	Construction fill	More compacted than F84-s4. This sub-stratum is the last one that directly covered F86 after parts of the wall had already collapsed (Figure 3.15).
F84-s6	50J	Sand, 10 YR 4/4	Chacahua	Construction fill	Very find sand with small pieces of somewhat compacted clay (Figure 3.15).
F84-s7	50J	Silty clay, 10 YR 4/4	Chacahua	Construction fill	Some medium and small pieces of clay (Figure 3.15).
F84-s8	50J	Sand, 10 YR 4/4	Chacahua	Construction fill	Very fine and loose sand. Without inclusions. Similar to F84-s6 but without small pieces of clay (Figure 3.15)

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F84-s9	50I, 50J	Silty clay, 10YR 4/3	Chacahua	Construction fill	Compacted clay with some inclusions of pulverized shell, burned daub, and small angular rocks. Some small pieces of dark clay. In the east profile of Unit 50J, a rock can be observed (probably from the collapse of F86) between features F84-s5 and F84-s9 (Figure 3.15).
F84-s10	50J	Sandy clay, 10 YR 4/4	Chacahua	Construction fill	Less compacted than F84-s9. Some inclusions of burned daub and ceramic sherds. It is completely surrounded by F84-s9 (Figure 3.15).
F84-s11	50J	Sandy clay, 10 YR 4/4	Chacahua	Construction fill	Less compacted than F84-s9. No inclusions (Figure 3.15).
F84-s12	50I, 50J	Sandy clay, 10 YR 4/3	Chacahua	Construction fill	Inclusions of pulverized shell and high concentrations of medium and small pieces of clay (Figure 3.15).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F84-s13	50J	Sandy clay, 10 YR 4/3	Chacahua	Construction fill	Associated with high concentrations of ceramic sherds, burned daub, carbon, and pulverized shell at the bottom of the feature in the east profile. In the north profile of Unit 50J, several rocks can be observed (probably from the collapse of F86) (Figure 3.15).
F84-s14	50I, 50J	Loamy sand, 10 YR 4/3	Chacahua	Construction fill	Medium and large pieces of clay are found within the feature. Several inclusions of pulverized shell and some inclusions of burned daub. Similar to F84-s7, some rocks (probably from the collapse of F86) are found within the feature (Figure 3.15).
F84-s15	50J	Silty clay, 10 YR 4/4	Chacahua	Construction fill	Less compacted than F84-s11 and F84-s16. No inclusions (Figure 3.15).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F84-s16	50I, 50J	Silty clay, 10 YR 4/4	Chacahua	Construction fill	Very compacted and with some small pieces of dark clay. Few inclusions of burned daub (Figure 3.15).
F84-s17	50I, 50J	Clay, 10 YR 4/3	Chacahua	Construction fill	Less compacted than F84-s14. Some small pieces of clay but less than F84-s12 and F84-s14. Few inclusions of burned daub from bajareque architecture (Figure 3.15).
F84-s18	50I	Clay, 10 YR 4/4	Chacahua	Construction fill	Very compacted and without inclusions (Figure 3.15).
F84-s19	50I, 50J	Clay, 10 YR 3/3	Chacahua	Construction fill	Less compacted than F84-s18, but more than F84-s12. Some inclusions of burned daub. A rock (probably from the collapse of F86) is found within the feature (Figure 3.15).
F84-s20	50I, 50J	Silty clay, 10 YR 4/3	Chacahua	Construction fill	More compacted than F84-s16 and with more pieces of clay (Figure 3.15).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F84-s21	50I, 50J	Silty clay, 10 YR 4/4	Chacahua	Construction fill	Less compacted than F84-s20 and without inclusions. It has an incline toward the north to support the weight of stone wall F86 (Figure 3.15).
F84-s22	50I	Silty clay, 10 YR 4/3	Chacahua	Construction fill	Less compacted than F84-s20 and without inclusions (Figure 3.15).
F85-s1	50I	Silty clay, 10 YR 4/3	Chacahua	Construction fill	Fill retained by the retaining wall F86. Some grit inclusions (Figure 3.15).
F85-s2	50I	Clay, 10 YR 4/3	Chacahua	Construction fill	Inclusions of burned daub (Figure 3.15).
F85-s3	50I	Clay, 10 YR 4/4	Chacahua	Construction fill	Compacted and without inclusions (Figure 3.15).
F85-s4	50I	Silty clay, 10 YR 3/4	Chacahua	Construction fill	More compacted than F85-s3. No inclusions (Figure 3.15).
F85-s5	50I	Silty clay, 10 YR 4/3	Chacahua	Construction fill	More compacted thin F85-s2. Some inclusions of burned daub (Figure 3.15)
F87-s1	50I, 50J	Silty clay, 10 YR 4/4	Chacahua	Clay mortar of stone wall F86	Very compacted clay. No inclusions (Figure 3.15).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F87-s2	50I, 50J	Clay, 10 YR 4/4	Chacahua	Clay mortar of stone wall F86	Less compacted than F87-s1. No inclusions (Figure 3.15).
F86	50I, 50J	N/A	Chacahua	Stone wall	It has an east-west orientation of 95° east of magnetic north. It has a flat side facing north, with at least eleven rows of stones. This wall could represent part of the north façade of Structure 8-sub 1 or the subsequent Structure 8. It was found with a convex incline profile (Figure 3.15).
F121	40A	Silty clay loam, 10YR 4/3	Chacahua	Fill within pit	Narrow pit intrusive into F138-s1, F149-s1, F149-s2, F163-s3, and F63-s1. Some inclusions of pulverized shell. Few ceramic sherds are visible at the bottom of the pit (Figure 3.1).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F167	39A, 40A	Sandy clay, 7.5YR 5/6	Chacahua	Probable floor?	Burned deposit. It was badly preserved and hard to follow in the west profile. Probable floor of a superstructure on top of Structure 8-sub 1 (Figure 3.1 and 3.11).
F135	37A, 38A, 39A	Sandy clay, 10 YR 4/3	Chacahua	Construction fill	Some inclusions of granite rocks and ceramic sherds (Figure 3.11).
F156	36YY, 37XX, 37YY	Clay, 10 YR 4/4	Chacahua	Clay mortar	Very compacted clay with some grit inclusions. Mortar used on F134 (Figure 3.8 and 3.19).
F134	36YY, 37XX, 37YY	N/A	Chacahua	Stone wall	Possible expansion of the building on top of Structure 8, or a provisional wall. It has a northwest-southeast orientation 112° east of magnetic north. Made with a single row of stones facing south. It uses as base the upper part of stone wall F139 (Figure 3.8, and 3.19).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F161	36YY, 37YY	Clay, 10 YR 4/3	Chacahua	Clay mortar	Very compacted clay with some inclusions of a darker clay. Mortar used on stone wall F133 (Figure 3.8 and 3.19).
F133	36YY, 37YY	N/A	Chacahua	Stone wall	The stones possibly were the foundation of a building on top of Structure 8. It has a northwest-southeast orientation 100° east of magnetic north. It has a single row of stones facing south (Figure 3.8 and 3.19).
F98	43A, 46A, MU2, MU5	Silty clay, 10 YR 5/4	Chacahua	Floor	Second earthen floor on Structure 8-sub 1, overlaying F99. It was not burned. Very compacted clay with an uneven surface (Figure 3.2, 3.9, 3.10 and 3.12).
F99-s1	43A, 46A, MU2, MU5	Clay, 5 YR 3/3	Chacahua	Floor	First floor of Structure 8-Sub 1. Burned (Figure 3.2, 3.9, 3.12 and 3.14).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F99-s2	46A, MU2, MU5	Clay, 10 YR 3/4	Chacahua	Floor	First floor of Structure 8-sub 1. The clay of this feature was not burned and it is found below F99-s1 (Figure 3.2, 3.10 and 3.12).
F99-s3	MU5	Clay, 5 YR 4/6	Chacahua	Floor	First floor of Structure 8-sub 1. The clay of this feature was burned and it is found below F99-s2 (Figure 3.12 and 3.13).
F138-s1	37A, 38A, 40A	Clay, 10 YR 4/4	Chacahua	Puddled adobe (Structured fill 1) ((Joyce et al. 2013:139)	Very compacted clay mixed with organic inclusions. This fill is retained by stone wall F139 (Figure 3.1 and 3.11).
F138-s2	40A	Silty clay, 10YR 6/4	Chacahua	Puddled adobe (Structured fill 1)	More compacted than F18-s1 (Figure 3.1).
F138-s3	40A	Sandy clay, 10YR 6/4	Chacahua	Puddled adobe (Structured fill 1)	Very compacted clay with very find sand (Figure 3.1).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F63-s1	40A	Silty clay loam, 10YR 4/3	Chacahua	Construction fill	Some inclusions of pulverized shell. Some yellow stains are visible in the matrix similar to the organic inclusions of F138-s1; perhaps F63-s1 represents a sub-stratum of F138-s1 (Figure 3.1).
F63-s2	40A	Sandy clay loam, 10 YR 4/3	Chacahua	Construction fill	Some inclusions of shell (Figure 3.1).
F63-s3	40A	Clay, 10 YR 4/4	Chacahua	Construction fill	Compacted clay without inclusions (Figure 3.1).
F56	40A	N/A	Chacahua	Stone feature	Primarily made out of irregular rocks placed in a semi-circle that extends across Unit 40A from north to south. Due to its small exposure it was not possible to assess its use. Probably it represents a construction cell in order to retain fill F138 (Figure 3.1).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F116	46A	N/A	Chacahua	Stone alignment	The stones may form a construction cell associated with the building of Structure 8-sub 1. To the south, it retains the fill F114-s3 and F114-s4. Possibly built on top of F115-s1 (Figure 3.10).
F114-s1	43A, 46A, MU5	Sand, 10 YR 5/4	Chacahua	Construction fill	Second unconsolidated construction fill to build Structure 8-sub 1. Somewhat compacted fine sand with high concentrations of small pieces of clay, especially to the north (Figure 3.9, 3.10 and 3.12).
F114-s2	46A	Silty clay, 10YR 4/6	Chacahua	Construction fill	Possibly, it represents a high concentration of clay within F114-s2 (Figure 3.10).
F114-s3	43A, 46A, MU5	Silty clay, 10 YR 5/4	Chacahua	Construction fill	Some small pieces of darker clay are found within a lighter clay matrix (Figure 3.9, 3.10 and 3.12).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F114-s4	46A	Clay loam, 10 YR 4/3	Chacahua	Construction fill	Coarser than the other sub-strata. The limits of the substratum are hard to follow (Figure 3.10).
F114-s5	46A	Sandy clay loam, 10 YR 4/4	Chacahua	Construction fill	Very similar to F114-s4, but with a concentration of fine sand (Figure 3.10).
F114-s6	43A, MU5	Clay loam, 10 YR 4/4	Chacahua	Construction fill	Compacted. Fewer quantities of small pieces of clay than other substrata. Associated with a cluster of rocks and burned daub in the east profile (Figure 3.9 and 3.12).
F114-s7	43A	Silty clay, 10 YR 4/3	Chacahua	Construction fill	More compacted than F114-s6. Few inclusions of burned daub, especially to the south (Figure 3.9).
F114-s8	43A	Clay, 10 YR 4/4	Chacahua	Construction fill	No inclusions (Figure 3.9).
F114-s9	MU5	Silt loam, 10 YR 4/4	Chacahua	Construction fill	Some small pieces of clay similar to F114-s1 (Figure 3.12).
F114-s10	MU5	Silty clay, 10 YR 4/4	Chacahua	Construction fill	Very compacted clay (Figure 3.12).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F114-s11	MU5	Silt loam, 10 YR 4/3.5 4/4.5	Chacahua	Construction fill	Fine sand with no inclusions of small pieces of clay (Figure 3.12).
F114-s12	MU5	Silty clay, 10YR 3/4	Chacahua	Construction fill	Somewhat compacted with some small pieces of a darker clay (Figure 3.12).
F114-s13	MU5	Clay loam, 10 YR 3/4	Chacahua	Construction fill	Very compacted and without inclusions (Figure 3.12).
F114-s14	MU5	Loamy sand, 10 YR 4/3	Chacahua	Construction fill	Very fine loose sand and without inclusions (Figure 3.12).
F115-s1	43A, 46A, MU5	Clay, 10 YR 3/4	Chacahua	Construction fill	First unconsolidated construction fill to build Structure 8-sub 1. Compacted and with some inclusions of carbon (Figure 3.9, 3.10 and 3.12).
F115-s2	43A, 46A	Sand, 10 YR 4/4	Chacahua	Construction fill	Fine sand with some small pieces of clay (Figure 3.9 and 3.10).
F115-s3	46A	Sandy clay, 10 YR 4/4	Chacahua	Construction fill	The pieces of clay are bigger and more compacted than those in F115-s4 (Figure 3.10).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F115-s4	43A, 46A	Sandy loam, 10 YR 3/4	Chacahua	Construction fill	Very find sand with some pieces of clay. Some roots are visible (Figure 3.9 and 3.10).
F115-s5	46A	Clay, 10 YR 5/4	Chacahua	Construction fill	Very compacted (Figure 3.10).
F115-s6	46A	Sand, 10 YR 4/3	Chacahua	Construction fill	Loose find sand (Figure 3.10).
F115-s7	46A	Sand, 10 YR 4/4	Chacahua	Construction fill	Very fine sand looser than F115-s6 (Figure 3.10).
F115-s8	46A	Clay, 10 YR 4/3	Chacahua	Construction fill	Very compacted with some small pieces of darker clay (Figure 3.10).
F158	36XX	N/A	Chacahua	Flagstone pavement	Medium flat stones perpendicular to banquette F157 and found extending west from the base of the banquette. It continues to the west, possibly creating a flagstone patio that constitutes the surface of the plaza found in Op. RV12 F (Figure 3.7, 3.8 and 3.19).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F157	36XX	N/A	Chacahua	Banquette	Banquette consisting of flat stones parallel to the base of wall F139, and probably contemporary to it. The banquette steps up from the flagstones of F158 with an average height of 30 cm. Its alignment follows the same direction as stone wall F139 (Figure 3.7,and 3.8).
F143	38A, MU6	Clay, 10YR 4/3	Chacahua	Clay mortar	Very compacted clay without inclusions (Figure 3.7).
F139	36WW, 36XX, 36YY, 37A, 38A, MU6	N/A	Chacahua	Stone wall	Stone wall of 1.7 m in height that forms the west façade of Structure 8- sub 1. It has a northwest-southeast orientation of 15° east of magnetic north. It faces west, with at least ten rows of stones (Figure 3.7 and 3.11).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F129-s1	41D, 42D	Silty clay, 10 YR 4/4	Chacahua	Clay plaster above steps	Very compacted and with some inclusions of grit and pulverized shell. Located on top of steps F125, F126, and F127 of the western stairway of Structure 8-sub 1 (Figure 3.5).
F129-s2	41D, 42D	Sand, 10 YR 3/4	Chacahua	Clay plaster above steps	Coarse sand with many inclusions of pulverized shell. Located on top of steps F125, F126, and F127 of the western stairway of Structure 8-sub 1 (Figure 3.5).
F128	41D, 42D, 43D	Clay, 10YR 4/3	Chacahua	Mortar of clay	Very compacted clay without inclusions. Mortar used to cement the stones of the western stairway of Structure 8-sub 1 (Figure 3.5).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F127	41D	N/A	Chacahua	Step of Structure 8-sub 1 western stairway	Fifth step (from the top down) of the west stairway of Structure 8-sub 1. It has a northeast-southwest orientation of 10° east of magnetic north. It faces west and only a single stone of this step was exposed (Figure 3.5 and 3.6).
F126	41D	N/A	Chacahua	Step of Structure 8-sub 1 western stairway	Fourth step (from the top down) of the west stairway of Structure 8-sub 1. It has a northeast-southwest orientation of 13° east of magnetic north. It faces west and is made out of two courses of stones (Figure 3.5 and 3.6).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F125	42D	N/A	Chacahua	Step of Structure 8-sub 1 western stairway	Third step (from the top down) of the west stairway of Structure 8-sub 1. It has a northeast-southwest orientation of 13° east of magnetic north. It faces west and is made out of two courses of stones (Figure 3.5 and 3.6).
F124	42D, 43D	N/A	Chacahua	Step of Structure 8-sub 1 western stairway	Second step (from the top down) of the west stairway of Structure 8-sub 1. It has a northeast-southwest orientation of 12° east of magnetic north. It faces west and is made out of two courses of stones (Figure 3.5 and 3.6).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F123	43D	N/A	Chacahua	Step of Structure 8-sub 1 western stairway	First step (from the top down) of the west stairway of Structure 8-sub 1. It has a northeast-southwest orientation of 10° east of magnetic north. It faces west and is made out of two courses of stones (Figure 3.5 and 3.6).
F107	49E	Silty clay, 10YR 4/3	Chacahua	Architectural feature/ or refuse?	Very compacted and with a high concentration of pulverized shell on its surface, similar to F97. It was not excavated and it is not visible on profile (Figure 3.4).
F106-s1	49E	Silty clay, 10YR 4/3	Chacahua	Clay mortar	Very compacted clay without inclusions. Mortar of step 101 in Unit 49E (Figure 3.4)
F106-s2	49E	Silty clay, 10YR 4/3	Chacahua	Clay mortar	Less compacted and darker than F106-s1 (Figure 3.4).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F97	48A, 49A, 49ZZ, MU2	Silty clay, 10YR 4/3	Chacahua	Plaster covering step	Very compacted. It creates a uniform surface above the second (F101) and third (F102) steps of the east stairway of Structure 8-sub 1. It also covers what may be the fifth step of the stairway (Figure 3.2).
F105	47A, 48A, 49A, 49ZZ, MU2	Clay, 10 YR 4/3	Chacahua	Clay mortar	Clay mortar associated with east stairway of Structure 8-sub 1.Very compacted but less than F97. In some instances it may have yellow inclusions, possibly the remains of an organic inclusions. It is not visible in profile (Figure 3.2).
F104	49ZZ	N/A	Chacahua	Step of Structure 8-sub 1 eastern stairway	Possible fifth step (from the top down) of the east stairway of Structure 8-sub 1. Only its uniform clay surface was exposed. Not visible in profile (Figure 3.3).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F103	49A, 49ZZ, MU2	N/A	Chacahua	Step of Structure 8-sub 1 eastern stairway	Fourth step (from the top down) of the east stairway of Structure 8-sub 1. It has a northeast-southwest orientation of 14° east of magnetic north. It faces east and is made out of two courses of stones. When some stones of step F102 were removed, also some stones of this step were removed (Figure 3.2 and 3.3).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F102	48A, 49A, MU2	N/A	Chacahua	Step of Structure 8-sub 1 eastern stairway	Third step (from the top down) of the east stairway of Structure 8-sub 1. It has a northeast-southwest orientation of 15° east of magnetic north. It faces east and is made out of stones. In Unit MU2, it is covered by plaster F97 creating a uniform surface. Some stones of this step were removed, perhaps for later constructions (Figure 3.2 and 3.3).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F101	47A, 48A, 49E, MU2	N/A	Chacahua	Step of Structure 8-sub 1 eastern stairway	Second step (from the top down) of the east stairway of Structure 8-sub 1. It has a northeast-southwest orientation of 18° east of magnetic north. It faces east and is made out of two rows of stones. In Unit MU2, it is covered by plaster F97 creating a uniform surface. PRV12 might have removed the plaster on top of this step in Unit 49A (Figure 3.2 and 3.3).
F67	47A, MU4, MU2	N/A	Chacahua	Step of Structure 8-sub 1 eastern stairway	First step (from the top down) of the east stairway of Structure 8-sub 1. It has a northeast-southwest orientation of 15° east of magnetic north. It faces east and is made out of two rows of stones. On the surface created by this step, two floors were found (F98, F99-s1, and F99-s2) (Figure 3.2 and 3.3).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F74	48A	Clay, 10 YR 4/3	Chacahua	Construction fill	Somewhat compacted clay with inclusions of medium sand. This fill is retained by the east stairway (Figure 3.2)
F98-s1	MU2	Silty clay, 10YR 5/4	Chacahua	Construction fill	Very compacted and with some inclusions of pulverized shell (Figure 3.2).
F98-s2	MU2	Silty clay, 10YR 6/4	Chacahua	Construction fill	Less compacted than F98-s1 and with some inclusions of pulverized shell (Figure 3.2).
F76	48A, 49A, 49ZZ, MU2	Loamy sand, 10 YR 4/6	Chacahua	Construction fill	Sand with small pieces of clay. No archaeological material was found within this stratum. This construction fill of Structure 8-sub 1 may have been deposited in a construction cell. Contemporary with F98-s1 and F98-s2 (Figure 3.2).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F108	48A, 49A	N/A	Chacahua	Stone alignment	It has a northwest-southeast orientation, perpendicular to F103. Associated with construction of Structure 8-sub 1. It might have created a construction cell to retain fill F76 to the north, and fill F98 to the south (Figure 3.2).
F151	40A	Sandy clay, 10 YR 3/4	Chacahua	Construction fill	Medium sand with some inclusions of granite rocks. This sediment covers stone alignment F146 (Figure 3.1).
F150-s1	40A	Silty clay, 10 YR 4/4	Chacahua	Construction fill	Compacted clay but less than F138. No inclusions. This fill covers stone alignment F145 (Figure 3.1).
F150-s2	40A	Sandy clay loam, 10 YR 4/4	Chacahua	Construction fill	Medium sand without inclusions (Figure 3.1)
F150-s3	40A	Sandy clay loam, 10 YR 3/4	Chacahua	Construction fill	Medium sand with some inclusions of pulverized shell (Figure 3.1).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F150-s4	40A	Clay, 10 YR 4/4	Chacahua	Construction fill	Compacted clay with some inclusions of pulverized shell (Figure 3.1).
F146	40A	N/A	Chacahua	Stone alignment	Stone alignment below the puddled adobe F138. It has a northeast-southwest orientation of 20° east of north. It does not have a flat face. It may represent a construction cell (Figure 3.1).
F149-s1	40A	Sandy clay loam, 10 YR 4/3	Chacahua	Construction fill	Medium sand with several inclusions of pulverized shell. Forms part of several alternating layers of clay and sand above stone alignment F130. Possibly puddled of adobe (Figure 3.1).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F149-s2	40A	Silty clay, 10YR 4/3	Chacahua	Construction fill	Compacted clay with some inclusions of pulverized shell probably from sub-stratum F149-s1. Forms part of several alternating layers of clay and sand above stone alignment F130. Possibly puddled adobe (Figure 3.1).
F148	40A	Clay, 10 YR 4/3	Chacahua	Construction fill	Compacted clay with some inclusions of pulverized shell, probably from stratum F149 (Figure 3.1).
F147	40A	Silty clay, 10 YR 4/3	Chacahua	Construction fill	Compacted clay without inclusions. Very similar to F148 (Figure 3.1).
F130	40A	N/A	Chacahua	Stone alignment	It has a northeast-southwest orientation of 17° east of north. It has a flat side facing west, made out of two row of stones. Found above stone alignment F145. It was not possible to discern its use (Figure 3.1).

Stratum / Feature no.	Unit	Munsell Color and sediment description	Probable date	Formation	Comments
F145	40A	N/A	Chacahua	Stone alignment	It has a northeast-southwest orientation of 19° east of north. It has a flat side facing west, made out of two courses of stones. Only its superior part was exposed and therefore it was not possible to discern its use (Figure 3.1).

Overview

Op. RV13 F revealed various episodes of construction on the north part of the acropolis pertaining to a that was labeled as Structure 8, following the already established nomenclature sequence for structures on top of Mound 1 at Río Viejo (Baillie 2012:fig. 2.1). Contrary to the limited transect excavations of the PRV12 in Op. F (that revealed 3 occupational phases pertaining to the Miniyua, Chacahua, and Yuta Tiyoo phases), the larger block excavations of PRV13 found evidence of a single primary phase of occupation dated to the Chacahua phase of the late Terminal Formative casting some doubt on the chronological interpretations of the PRV12. Moreover, the PRV13 also excavated an offering dated to the Early Postclassic, even though there was no evidence of an extensive occupation dating to that phase in the northern part of the acropolis, such as the five platforms excavated on top of Structure 2 (Joyce et al. 2001). Also, unlike the work of the previous year, the PRV13 found better ceramic contexts that increased the

accuracy of the assessment that this part of Mound 1 was mainly constructed during the Chacahua phase. However, most of the excavated contexts were not primary contexts but construction fill, which introduces a degree of uncertainty to the dating of several of the elements described below.

The earliest elements excavated in Op. RV13 F were from the first version of Structure 8 (i.e., Structure 8-sub 1) and pertained to the Chacahua phase. These features (F130 and F145) could represent an early version of a stairway located to the west of the structure. However, due to its minimal exposure on Unit 40A, it was not possible to securely discern if indeed F130 and E145 were part of the earliest version of the structure. Other interpretations could be that they were merely retaining walls to consolidate fill within the building to provide stability, or features designed to stabilize substructures during breaks in construction as suggested by Joyce and colleagues (2013:141–142).

Work in this area of the acropolis intensified when Structure 8-sub 1, a building of at least 7 m x 13 m, was built. This edifice is a clear representation of the construction of public architecture in the acropolis, as it is understood after several seasons of fieldwork. The measurements are tentative since the corners of the structure were not found. The maximum height of Structure 8-sub 1 was estimated to be 2.40 m, taking as its base flagstones F157 adjacent to the west façade and the maximum height of F99 the probable occupational floor of the structure. The building had at least two stairways, one in its east side with at least four steps (F67, F101, F102, and F103) and one in its west side with at least 5 steps (F123, F124, F125, F126, and F127); the bases of the stairways were not found so it is highly probable that each one had more steps. In addition, the

remains of a burned floor (F99) and a re-plastering episode (F98) were found in the uppermost part of the occupational surface of the building. Due to the poor preservation of the superior part of Structure 8-sub 1 and the minimal quantity of primary contexts associated with the building, it was not possible to assess its specific purpose. However, the absence of domestic trash, along with its placement on the center of the civic ceremonial center of Río Viejo suggests that the edifice had a public use.

A second construction phase of the building excavated in Op. RV13 F was designated as Structure 8. This second stage also dated to the Chacahua phase of the late Terminal Formative. The expansion primarily extended its width, since its height only increased by 30 cm, reaching a maximum height of 20.00 masl. However, it was not possible to define the measurements of Structure 8 since its façade was minimally exposed in Unit 49A (F95) and 50I (F86). It could have been a stepped building similar to Structure 2 (Joyce et al. 2013:Fig. 5.4). The remains of a floor associated with the occupation of Structure 8 were also found (feature F168).

After its use, Structure 8 was ritually terminated by covering it with construction fills F131, F9, and F57. After that, numerous pits (F83, F89, F90, F91, F93, F94, F118, F119, F152, F163, and F165) were dug into those strata and filled with large quantities of ceramic sherds and rocks. Similar termination features have been found in other areas of the acropolis associated with late Terminal Formative architecture (Joyce and Barber 2015). These termination pits resemble closing features in other parts of Mesoamerica (Stanton et al. 2008).

Probably as part of the same termination event, an articulated feline was deposited within pit F162. Although other pits (F88, F142, F153, F154, F155, and F166)

were dug contemporaneously with the former ones, few ceramic sherds were found in the latter, which may indicate that they involved different termination rituals, or were used for different purposes.

Regional political organization at Río Viejo collapsed during the Early Classic (400-900AD) and the acropolis fell into a prolonged period of disuse (Joyce 2008; Joyce et al. 2013). Although previous work at the acropolis has shown that Mound 1 was reutilized during the Late Classic (Brzezinski et al. 2012; Joyce 1999), Op. RV13 F did not find evidence of use dating to this period in the northern part of the acropolis.

During the Yugüe phase of the Early Postclassic (800-1100 AD), the acropolis was reutilized, but for very different purposes. Excavations on Mound 1 Structure 2 suggest that commoners built houses on top of what had been the center of the civic-ceremonial center of the polity (Joyce et al. 2001). At Op. RV13 F, only a small offering was found containing a copper plate, nine copper bells, four small ceramic vessels, seven obsidian blades and a carved bone. The feature was deposited in a pit whose surface was burned as preparation for its placement. The nature of this offering, in particular the copper bells, may indicate that the commoners living at the acropolis were relatively prosperous.

Construction and Occupation during the Miniyua Phase

The only possible evidence of this time period in the northern part of the acropolis was found during the excavations of Op. RV12 F (Hill and Villanueva Ruiz 2012). The earliest evidence of construction in this area perhaps dates to the early Terminal Formative, or the Miniyua phase in the local chronology. It corresponds to a potential "V" shape potential drainage feature made of stone slabs with a consistent width (Hill and Villanueva Ruiz 2012:424).

However, due to the minimal exposure of this element given its depth of 5.64 m below the modern surface (15.77 masl), it was hard to fully assess how it related with other later Formative architectural features. It might have been associated with a potential low platform whose nature is unknown, or drained a possible plaza between Structure 1 and Structure 8-sub 1. Given the minimum diagnostic artifacts associated with this element, it was not possible to securely date it. The 15.77 masl elevation of the drainage supports the idea that it may predate Chacahua features that on average are located around 17 masl.

After this first occupation, the northern part of the acropolis saw an episode of construction that raised the level of the acropolis at least 2 meters from roughly 15 masl to 17 masl. It consisted of unconsolidated fills (Op. RV12 F, features F34, F35, F36, F37, F38, F39, F40, F41, F42, F43, F44, F45, F46, F47, F48) primarily made of sandy loams and sands, perhaps acquired from the nearby riverbanks. However, due to the modern depth of these deposits it was not possible to measure their horizontal area.

The following section explores in greater detail all of the excavated features of Op. RV13 F.

Construction and Occupation During the Chacahua Phase

Structure 8- sub 1

Structure 8-sub -1 was a building with façades including at least two stairways on the east and west sides. Because the north and south sides were not exposed during excavations, it was not possible to discern with certainly its complete form. However, it is possible to postulate well-informed inferences based on the elements uncovered. Excavations at Op. PRV13 F suggest that the earliest construction event for this building may date to the Chacahua phase. Evidence for this was found in Unit 40A (Figure 3.1), when stone alignments F145 and F130 were built. Due to its lack of wide horizontal

exposure, it was not possible to discern their original use. Possibly, the stone alignments represent two steps of a former version of the west stairway as they share similar orientations. However, F145 and F130 could also represent retaining walls that stabilized unexcavated construction fills. Another interpretation could be that stone alignments F145 and F130 stabilized sediments during inactive periods of construction or they could be the foundations of ephemeral constructions that protected builders during the construction of Structure 8-sub 1. Similar interpretations have been posited for stone alignments within the construction fill of Structure 2-sub2 (Joyce et al. 2013:142). F145 was found at a depth of 18.57 masl and it was made of stones with an orientation of 19° east of north. Only the upper part of the stones was exposed. F130 was found above F145 and has an orientation of 17° east of north. It was made of larger stones than those of F145 whose superior part was excavated by the PRV12, labeling it as F55 (see Hill and Villanueva Ruiz 2012).

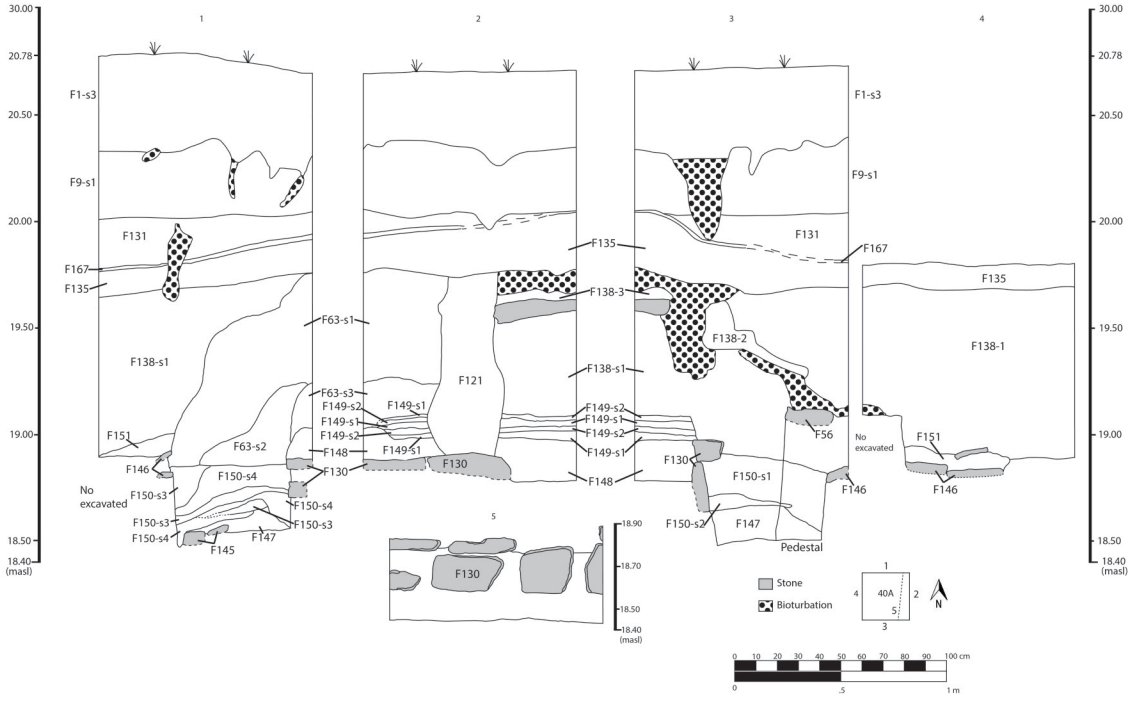

Figure 3. 1 Excavation profiles of Op. RV13 F Unit 40

After F45 and F130 were built, and perhaps as the first major construction episode of this building, several construction fills were placed in the northern part of Mound 1. F145 was covered by very compacted clay sediment (F147), while F130 was covered by similar clays (F148) but with inclusions of pulverized shell (Figure 3.1). It is possible that F148 and F147 may be sub-strata of the same element. Stone alignment F130 was also covered with different layers of sand mixed with pulverized shell (F149-s1) and compacted clays (F149-s2). These two sub-strata were excavated by the PRV12, and were labeled as F18 and F19. However, due to the improvements in our understanding of the stratigraphy, the PRV13 consolidated these elements and assigned them a new designation (F149). After their placement and at some moment before laying construction fill F147, stone alignment F146 was built. This element may represent a construction cell that retained construction fill F150, or perhaps had similar uses as proposed for stone alignments F130 and F145. However, only the interior part of the alignment was exposed and it is possible that F146 may face west. Fill retained by F146 was labeled F150 and it covered stone alignment F145. Above F146, construction fill F151 made of sandy clay was deposited.

In Units 48A and 49A, the remains of stone wall F108 were exposed (Figure 3.2). F108 may represent a construction cell associated with the east stairway of Structure 8-sub 1. F108 retained construction fills F76 in the north and F98 in the south. During the excavations of PRV12 in Unit 48A, another construction fill was excavated and labeled F74. This fill may be contemporaneous to F76 and F98.

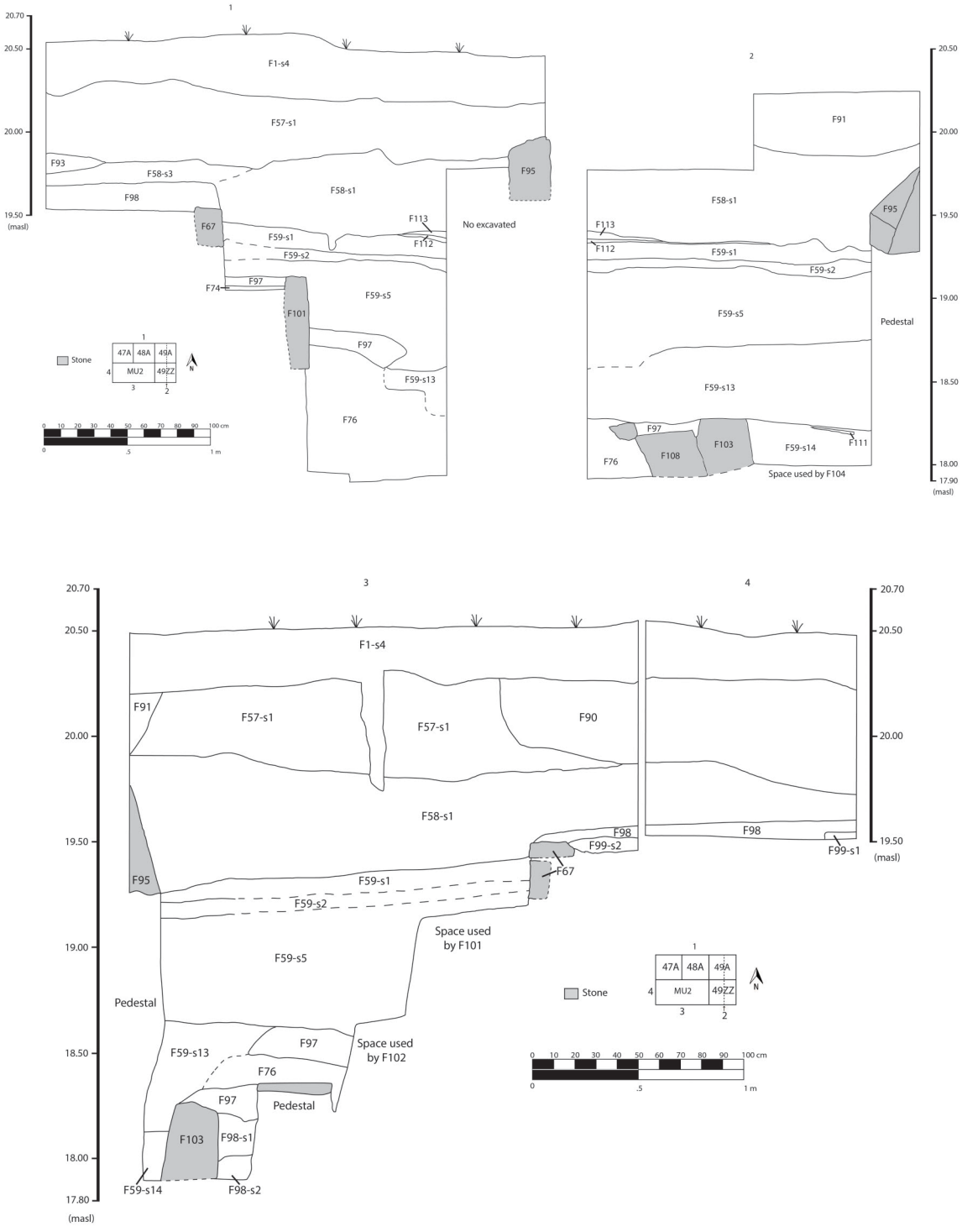

Figure 3. 2 Excavation profiles of Op. RV 13 F Units 47A, 48A, 49A, 49ZZ, and MU2

On its eastern side, in Units 47A, 48A, 49A, 49ZZ and MU2, Structure 8-sub 1 had a stairway that may have extended along the central part of the eastern side of the building (Figure 3.3). The combined works of PRV12 and PRV13 exposed four steps of this stairway. PRV12 exposed the first two superior steps labeling them as F67-s1 and F67-s2. PRV13 exposed more of the stairway and changed its designations; the first step from the top down continued to be designated F67 and the second step was assigned a separate feature number, F101. In addition, PRV13 found the remains of a third (F102) and fourth (F103) step. In Units 49ZZ and 50A, excavations exposed what could be the remains of mud plaster on top of a potential fifth step (F104), though this is not visible in profile. The steps were made using a mud mortar (E105) of very compacted clay with some yellow inclusions that may represent organic inclusions. The steps had a northwest-southeast orientation with an average orientation of 15.6° east of north and were made of two rows of rocks. These were covered by plaster F97 in order to create a uniform surface. The third step (F102) was found badly damaged with some of its stones moved out of their original placement. The destruction may have been part of a termination ritual, or the removal of materials for subsequent constructions. In Multi-Unit MU4, the remains of the first step (F67) were also exposed.

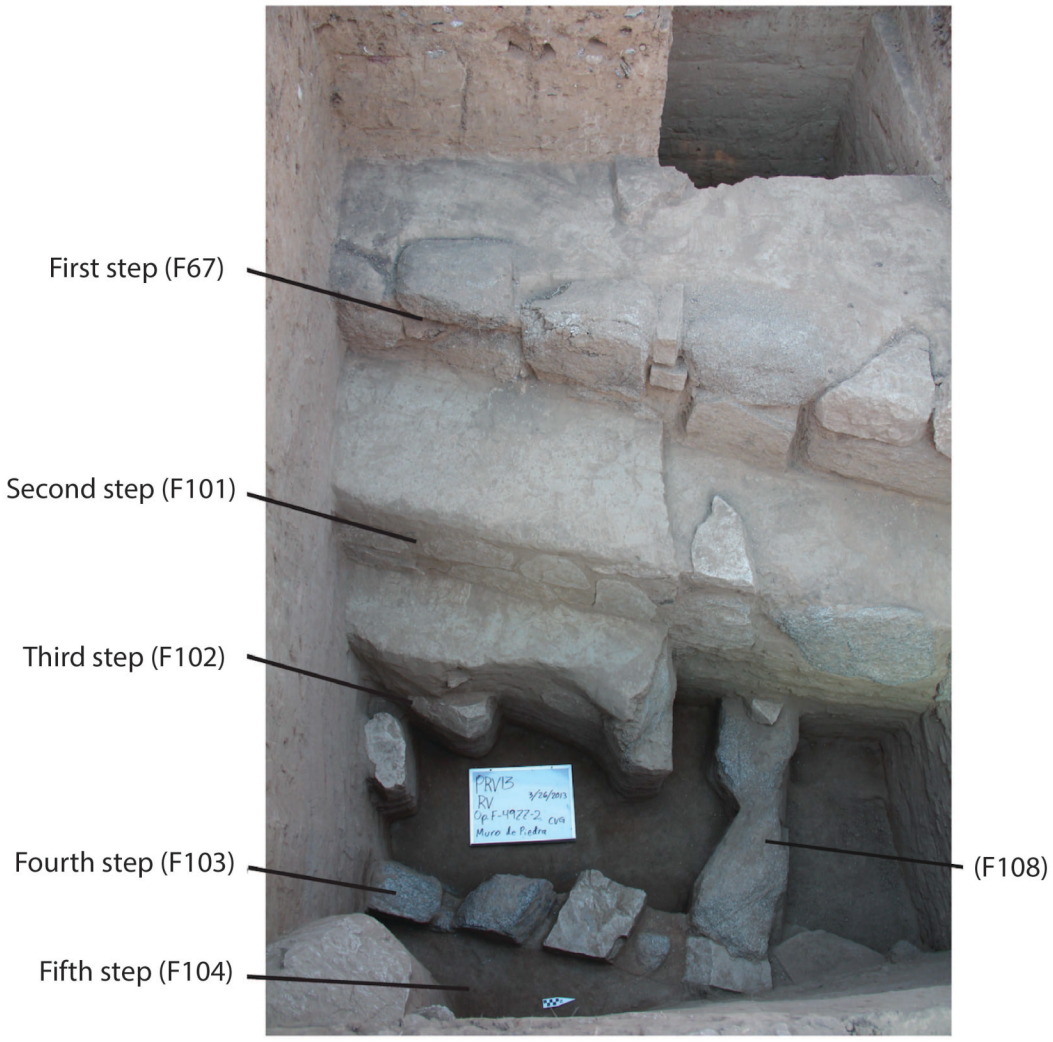

Figure 3. 3 East stairway of Structure 8-sub 1

During the excavations of Unit 49E a stone wall was found with a similar orientation as the first step of the east stairway, but at the depth of the second step, and was labeled F101 (Figure 3.4). Thus, stone wall F101 may be the retaining wall for the east façade of Structure 8-sub 1. This suggests that the foundation of the east stairway could be found between MU4 and Unit 49E. F101 was built using clay mortar F106 and

it consists of at least four rows of stones. Adjacent to the wall, feature F107 was found. It was made of silty clay similar to mud plaster F97 that covered the steps of the east stairway. However, its primary use could not be assessed. It is possible that F107 was an architectural feature.

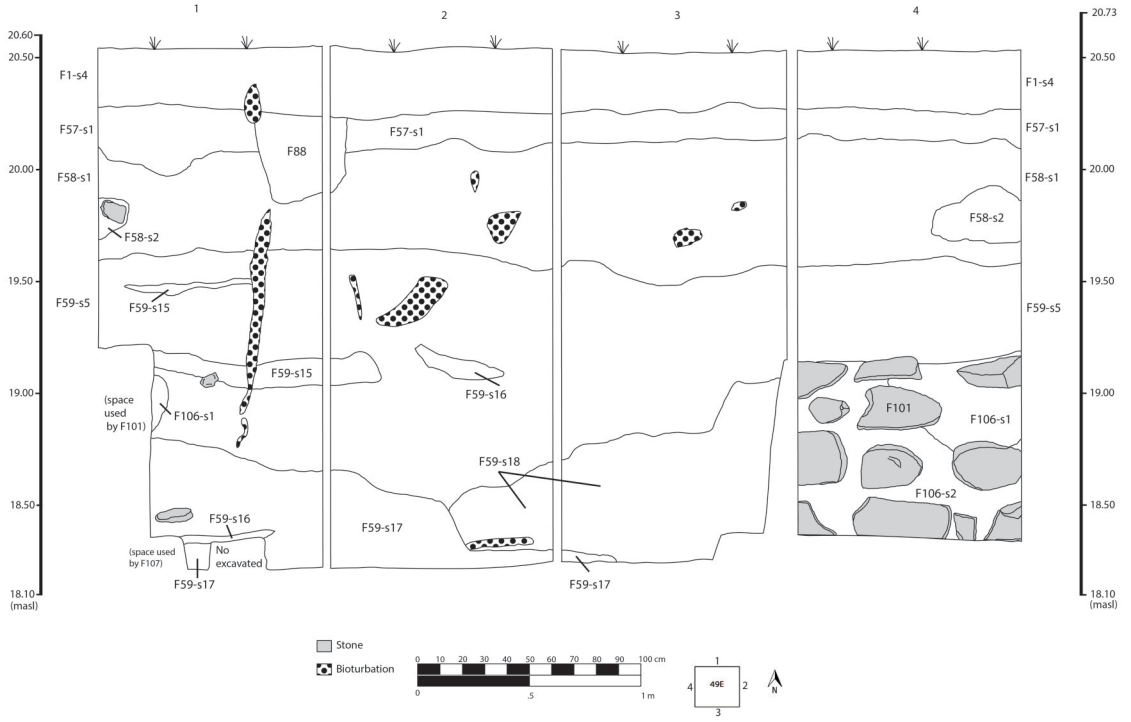

Figure 3. 4 Excavation profiles of Op. RV13 F Unit 49E

In the west part of Structure 8-sub 1, another stairway was found in Units 41D, 42D, 43D, and 43C (Figure 3.5). The remains of at least 5 steps were uncovered and were labeled as F123, F124, F125, F126, and F127, respectively (Figure 3.6). On average the steps had an orientation of 11.6° east of north and faced west. Each step was made with one or two rows of stones held together by a clay mortar designated as F128. Owing to its

depth of 18.49 masl (or 2.15 meters below the modern surface), only one rock of the fifth step was exposed. In spite of its generally good preservation, a few stones were missing from the steps. Contrary to the plastering of the east stairway, the west one was covered by interspersed layers of sand and clay, designated as F129-s1 and F129-s2 respectively.

In terms of Structure 8-sub 1's main east façade, it was not possible to expose any elements apart from the stairway and stone wall F101. Perhaps the east stairway was isolated to the center of the structure, with a retaining wall completing the façade (see Fig. 4.1 for an idealized reconstruction of Structure 8-sub 1). In contrast, excavations on the west side of the platform exposed both the stairway and a retaining stone wall of at least 2 m in height designated F139 (Figure 3.7 and Figure 3.8). F139 was found in Units 36XX, 36WW and 37XX and it was made of at least 10 rows of stones of different sizes oriented to 15° east of north and held together by clay mortar (F143). Since the west stairway was not sufficiently exposed nor the wall of the west façade, it was not possible to assess the articulation of these two elements; maybe it is located somewhere north of MU6. At the bottom of stone wall E139 and running parallel, there was a banquette made of large flat stones (F157). Perhaps it was used as a low stage for people to stand on during gatherings, as has been suggested for similar architectural elements at the Temple of the Warriors in the Maya city of Chichen Itza (Headrick 2015). Another possibility could be that the banquette was used as a standing post for someone to guard the west entrance of the building. The base of the bench was located on top of stone pavement (F158) that may be the surface of a patio or plaza excavated by the PRV12. A similar patio made out of granite stone slabs was discovered at the Late Formative site of Cerro de la Cruz, located 1.5 km south of Río Viejo (Joyce 1994).

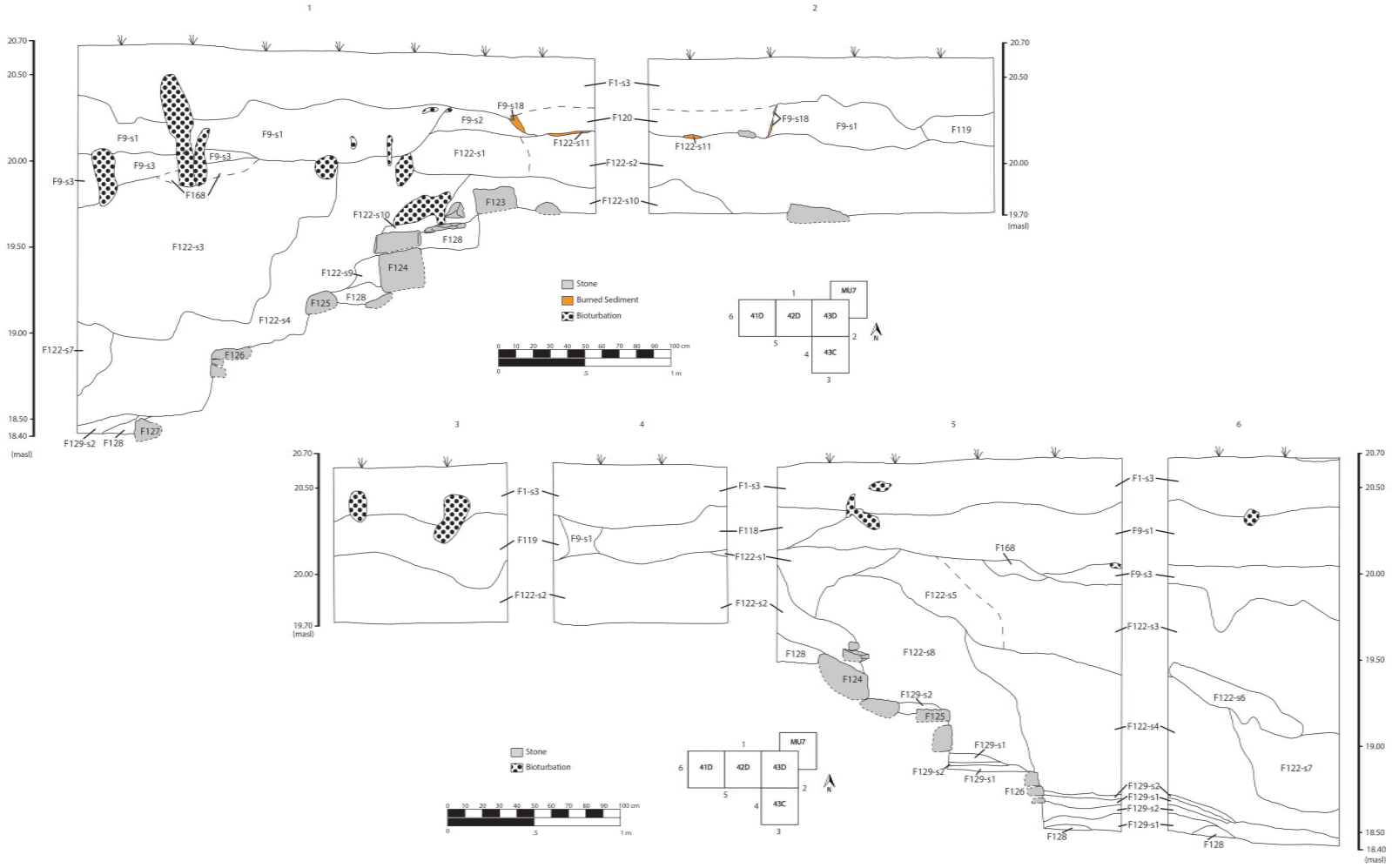

Figure 3. 5 Excavation profiles of Op. RV13 F Units 41D, 42D, 43D, 43C

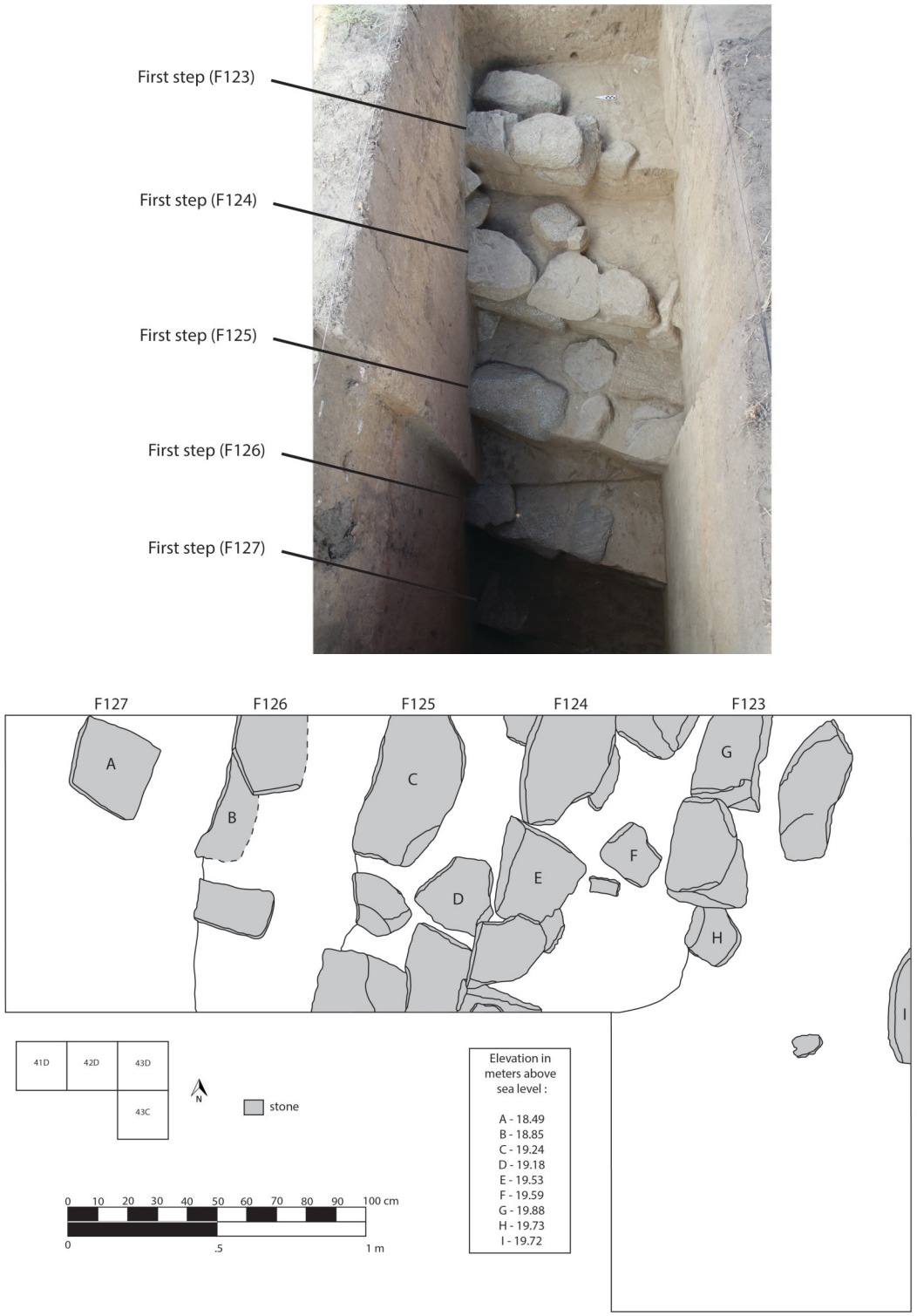

Figure 3. 6 West stairway of Structure 8-sub 1

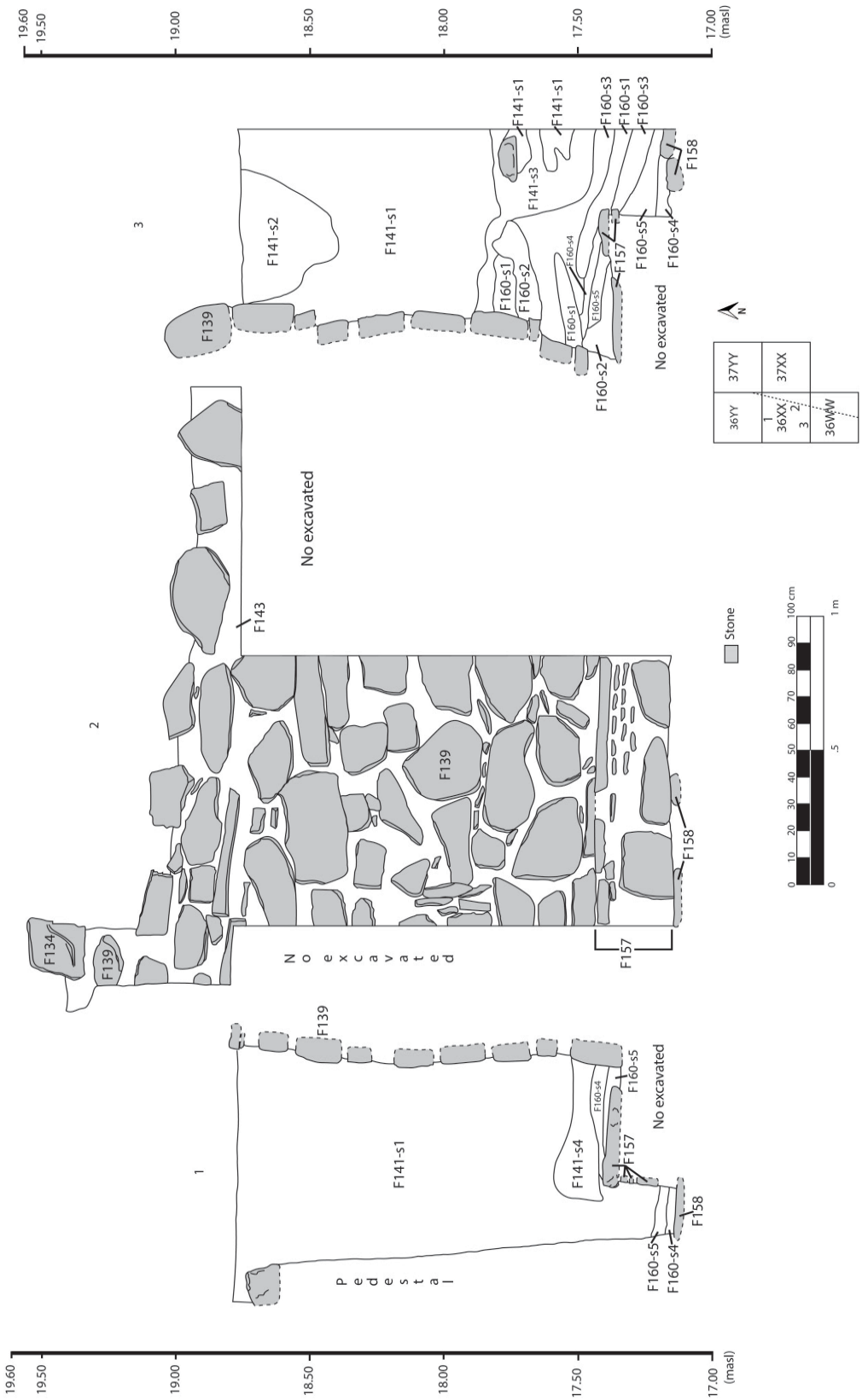

Figure 3. 7 Excavation profiles of Op. RV13 F Unit 36XX

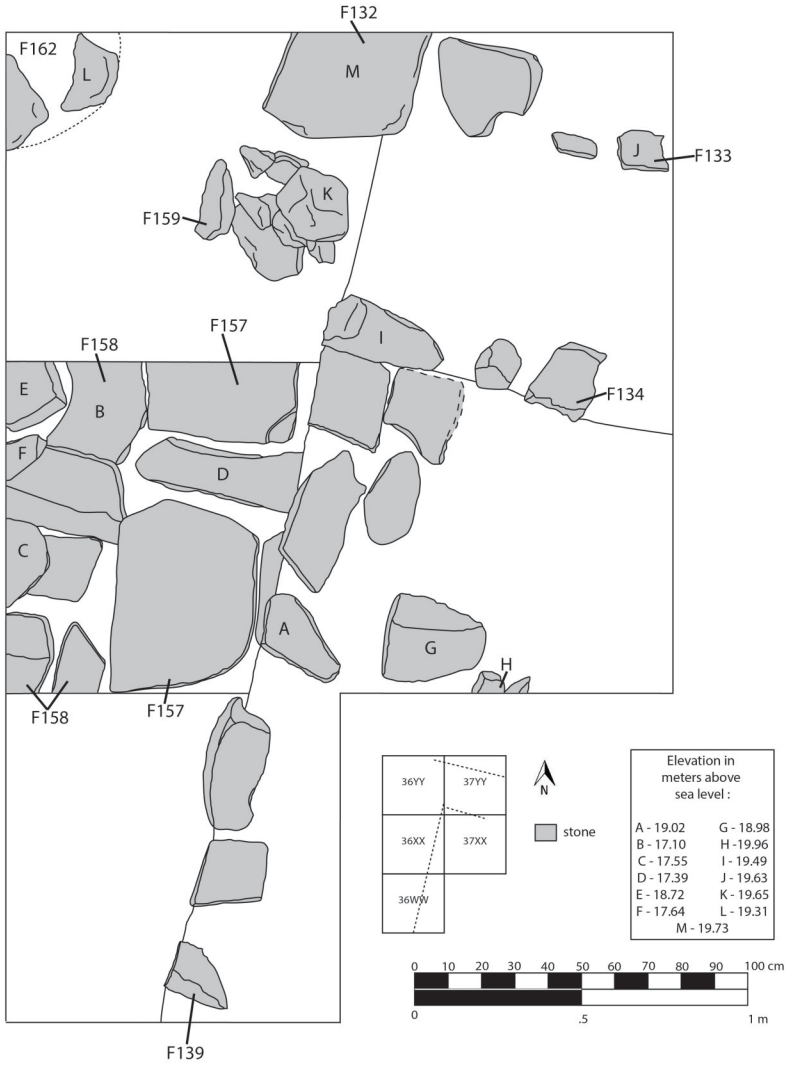

Figure 3. 8 Plan view of Op. RV13 F. Units 36YY, 36XX, 36WW, 37YY, 37XX

In Units 43A, 46A and MU5, within Str 8-sub 1 and to the northwest of retaining wall F139, the PRV13 located two unconsolidated fills (Figures 3.9, 3.10, and 3.12). F115 was made of eight sub-strata, primarily of clay, sand, and sandy loam. The second construction fill was F114, found on top of F115 in Units 43A, 46A, and MU5. It consisted of different sub-strata of silty clay, sand, and loam.

In Unit 46A a stone alignment (F116) was exposed, perhaps as temporary support during seasons of construction or part of a construction cell (Figure 3.10). PRV12 in Unit 40 uncovered another stone alignment (F55) with a semicircular shape, but due to its bad preservation and its minimal exposure, it was not possible to evaluate its function (Hill and Villanueva Ruiz 2012). Perhaps, similar to F116, it was meant to retain construction fills of Structure 8-sub 1, or had a more ephemeral use between construction episodes. Also, in Unit 40A, another unconsolidated construction fill (F63) was found (Figure 3.1). Directly on top of this fill, the only structured fill of Structure 8-sub 1 was found. F138 was composed of very compacted clay mixed with a type of grass that left orange stains in the sediment, which could have been puddled adobe. The grass acted like temper to decrease cracking upon drying (Austin 1990:418). Structured fill F138 was retained by the west façade of Structure 8-sub 1, as can be observed in Unit 37A (Figure 3.11).

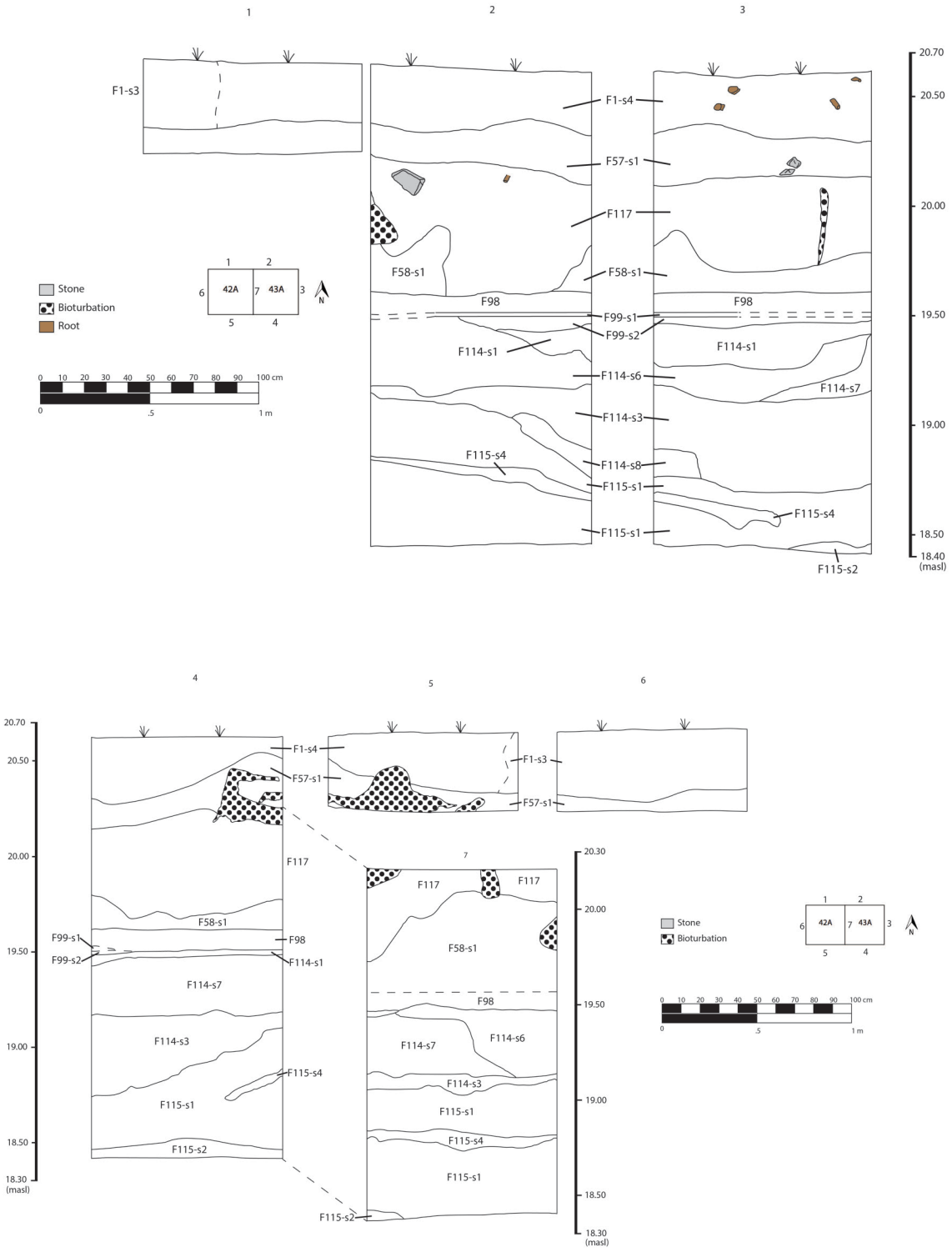

Figure 3. 9 Excavation profiles of Op. RV13 F Units 42A and 43A

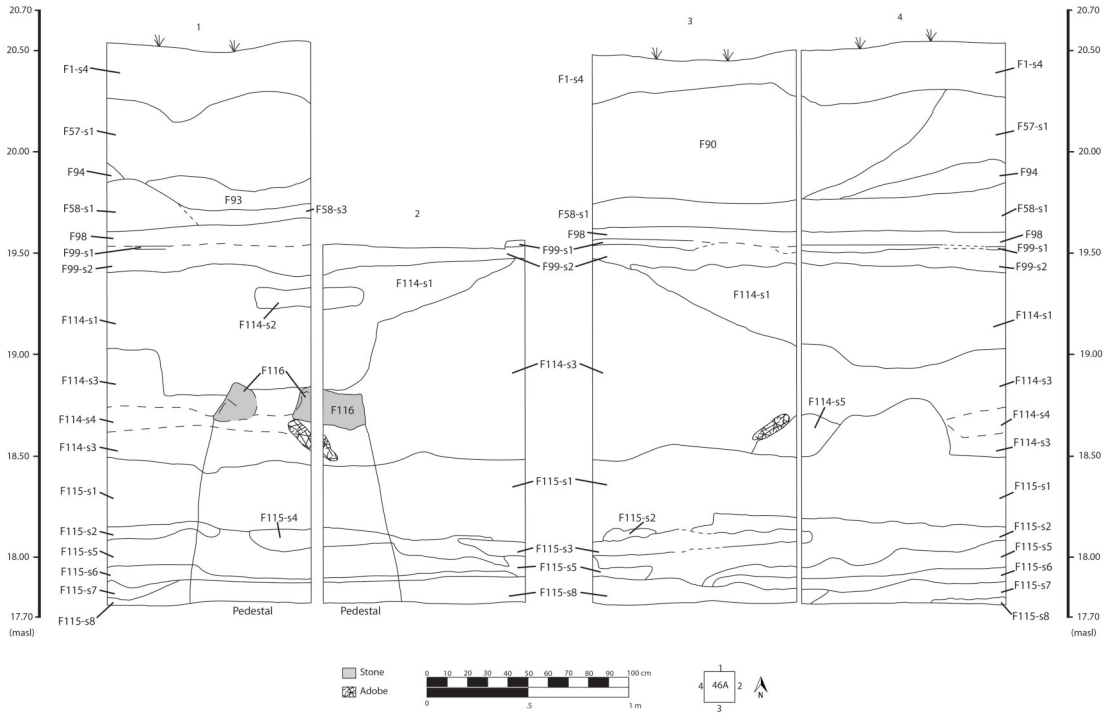

Figure 3. 10 Excavation profiles of Op. RV13 F Units 46A

It terms of occupational surfaces, the PRV13 exposed 2 floors associated with the top of structure 8-sub 1. The first one was F99 visible in Units 43A (Figure 3.9), 46A (Figure 3.10), MU2 (Figure 3.2), and MU5 (Figure 3.12). This element had three sub-strata; the deepest one F99-s3 was found at a depth of 19.43 masl in Unit MU5 (Figure 3.13). It consisted of a very compacted clay surface that presented signs of burning in some areas. The second sub-stratum (F99-s2) was found on top of F99-s3 and was made of very compacted clay. The last resurfacing episode of the first floor (F99-s1) was found at a depth of 19.53 masl in Unit 46A; it was made of compacted clay with signs of burning (Figure 3.14). The second occupational surface of Structure 8-sub 1 was F98, found at a depth of 19.60 masl. Although it was found on top of F99, and therefore may

represent another resurfacing episode of this element, it was decided to give it a different number because it was distinctive enough from the resurfacing episodes of F99.

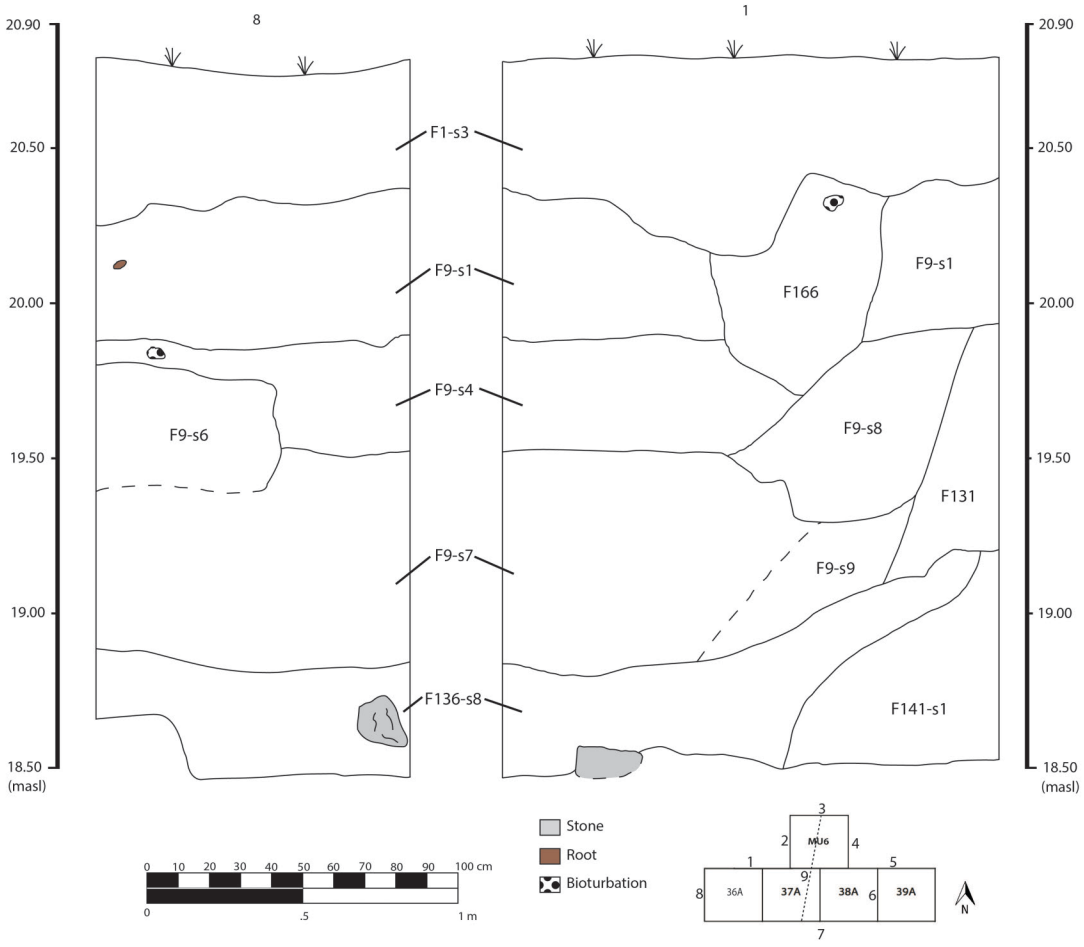

Figure 3. 11 Excavation profiles of Op. RV13 F Units 36A, 37A, 38A, 39A, and MU6

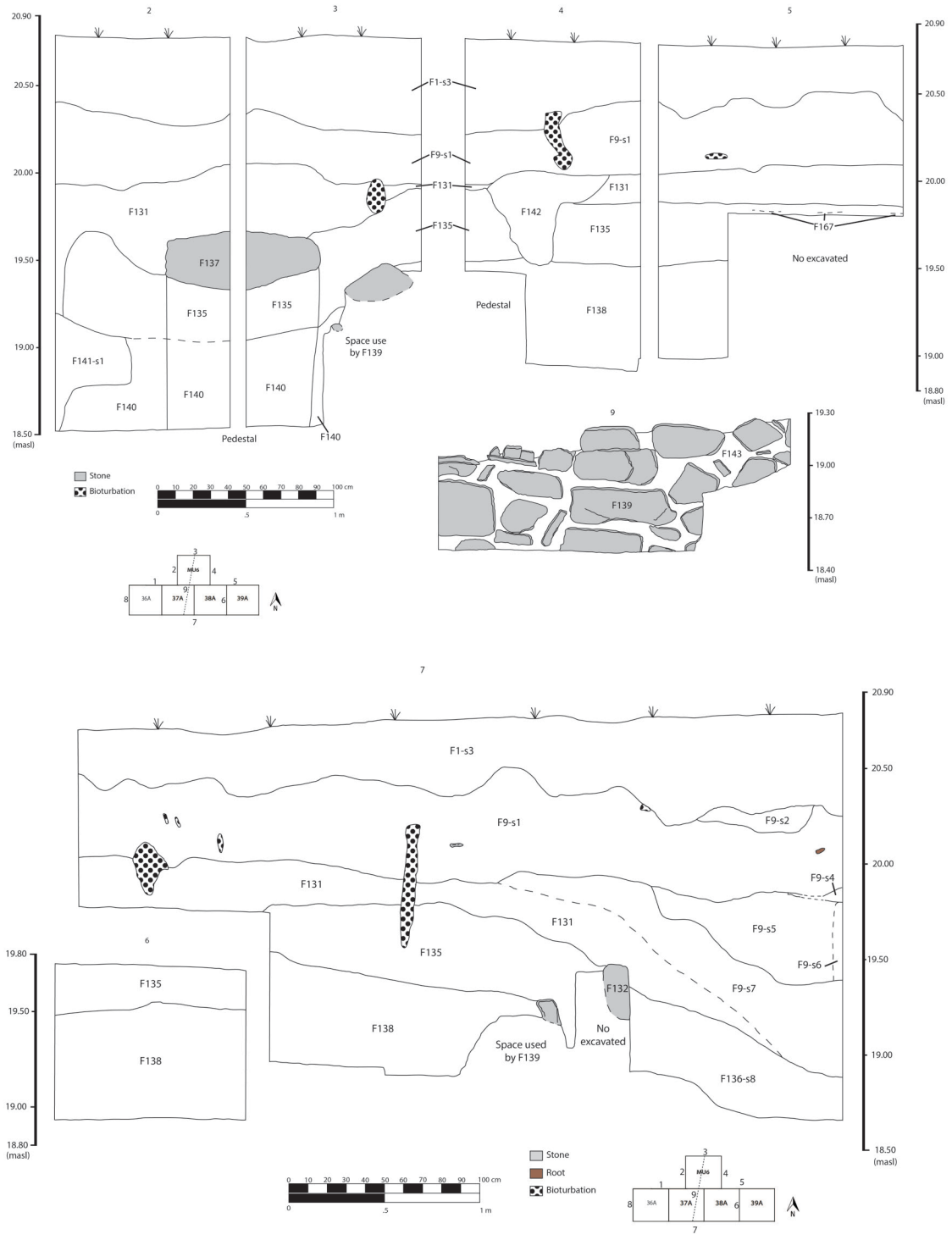

Figure 3. 11 Excavation profiles of Op. RV13 F Units 36A, 37A, 38A, 39A, and MU6

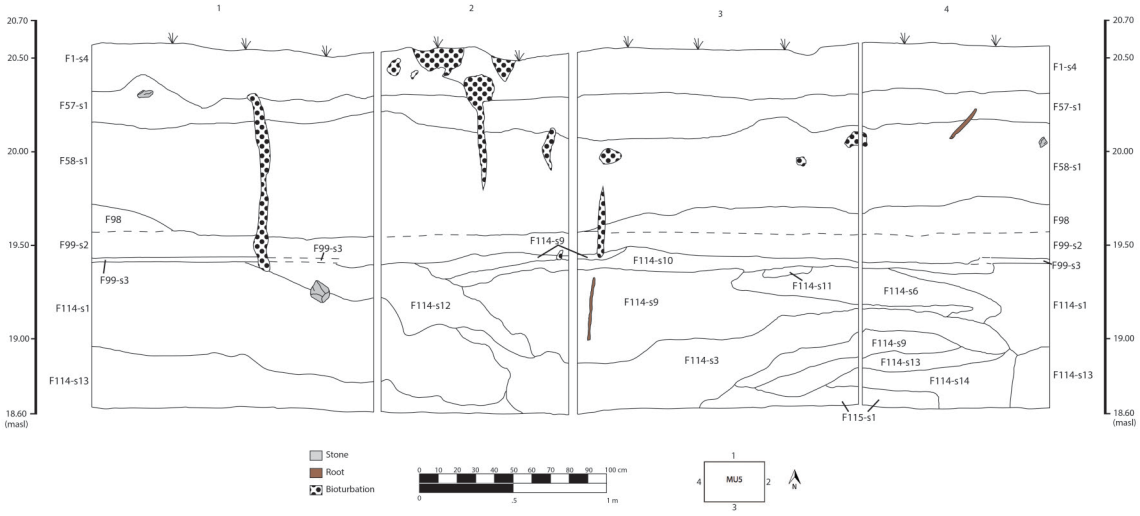

Figure 3. 12 Excavation profiles of Op. RV13 F Unit MU5

Figure 3. 13 Photo of F99-s3 in Op. RV13 F Unit MU5

It is possible that Structure 8-sub 1 had a superstructure south of the west stairways. The remains of a possible foundation wall (F133) were located on Unit 37YY (Figure 3.8). It was made of stones facing southwest and put together with clay mortar F161. To the south of F133, in Units 37YY and 37XX, a parallel stone wall was found (F134), also facing southwest and held together by clay mortar F156 (Figure 3.8). F134 probably represents an expansion to the possible superstructure on top of Structure 8-sub 1. Nevertheless, given the minimal exposure of both features it is also possible that they may represent stone walls that retained sediment between periods of construction, or foundations for ephemeral structures for workers to take shelter during construction. However, it is more likely that they represent the foundation of a superstructure given their respective elevations. F133 was found at 19.63 masl, while F134 was found at 19.49 masl. Since the occupational floor of Structure 8-sub 1 (F99) was at 19.50 masl, this would suggest that stone walls F133 and F134 were located at the level of the presumed occupational surface on top of Structure 8-sub 1.

Figure 3. 14 Photo of F99-s1 in Op. RV13 F Unit 46

Stone wall F133 and F134 retained clay fill F135. Directly on top of this fill, in Unit 40A, PRV12 found the remains of floor F167 (Figure 3.1). PRV13 found the same floor in Unit 39A. Because of this, floor F167's designation was changed from F12-s2, given by the PRV12, to F167. Thus, it is possible that that F167 may be the floor associated to the superstructure made by stone wall F133 and F134.

At some point during the use of the possible superstructure, or before finalizing the use of Structure 8-sub 1, a narrow pit (F121) was dug, perhaps as part of a

termination ritual or in order to mine construction materials. This pit was visible in the eastern profile of Unit 40A (Figure 3.1). This concluded the occupation of Structure 8-sub 1. The following construction episode, also dating to the Chacahua phase, was designated as Structure 8.

There was a stone wall (F86) located in Units 50I and 50J whose relation with other architectural features was hard to discern given the area excavated (Figure 3.15). The stones of this feature were put together using clay mortar F87 and retained fill F85 made primarily of clays and silty clay. It is possible that stone wall F86 represents the northern retaining wall of Structure 8-sub 1. However, it was not possible to find the foundation of the wall and thus assess its height, given that excavations were halted at 16.83 masl due to possible risk of collapse. This would suggest that, if indeed stone wall F86 represents the northern wall of Structure 8-sub 1, the base of F86 would be located well below the foundation of all of the other architectural features of the building. Another possibility is that stone wall F86 is associated with the subsequent construction phase of Structure 8 discussed below.

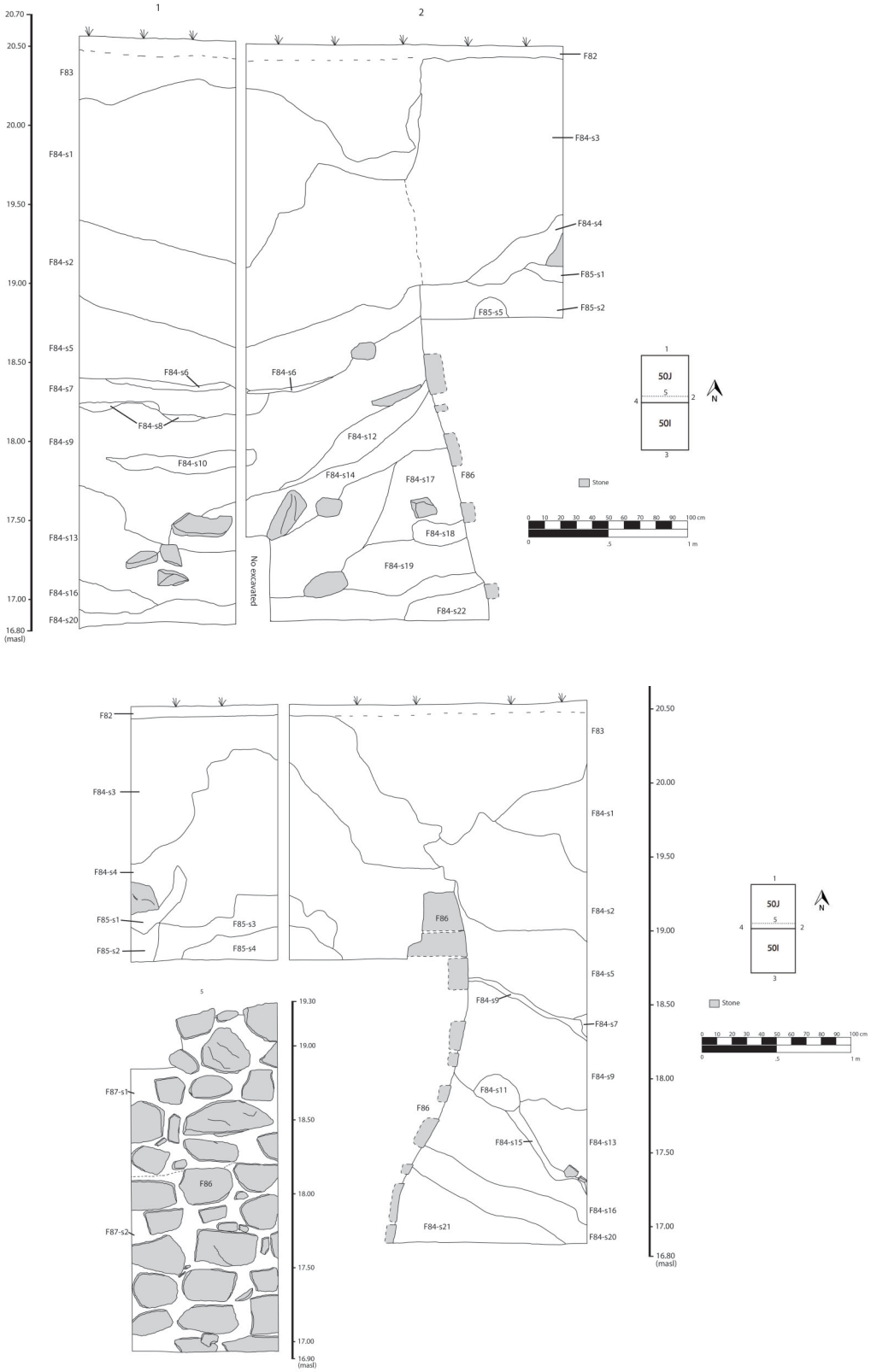

Figure 3. 15 Excavation profiles of Op. RV13 F Units 50I and 50J

At some point, stone wall F86 located in Units 50I and 50J started to developed a bulge in its superior part. The occupants of the acropolis responded by covering the wall with unconsolidated fill (F84). Among the various sub-strata of F84, several stones were found, perhaps from the top part of F86. This suggests a rapid mobilization of labor given that F86 required prompt intervention. Since only a 3.70 x 1 m area of element F86 was exposed, it was not possible to assess the total extension of this construction episode. However, it suggests that the northernmost area of the acropolis was built with a small number of massive construction fills placed in a short period. It is interesting to note that the majority of F84 sub-strata lacked cultural artifacts.

Structure 8

The second construction phase started when the inhabitants of Río Viejo covered Structure 8-sub 1 by depositing construction fill F59 on top of its eastern stairway (Figure 3.2). The fill covered a relatively extensive area since Op. RV12 F excavations (Hill and Villanueva Ruiz 2012) found F59 in Unit 56A, 6 meters east from where PRV13 excavations were located (Op. RV12 features F59-s1 to F59-s10). In Unit 50A, between sub-strata F59-s14 and F59-s20, a thin reddish clay layer was found (F111) (Figure 3.16). Due to its minimal exposure, it was not possible to assess the use of this thin stratum; perhaps it was a temporary occupational surface during the construction of Structure 8. Also, in Unit 49E, between strata F59-s17 and F59-s18 and at a depth of 18.45 masl, the remains of a probable midden were found containing ceramic sherds, shell, and some animal bones (F109) (Figure 3.17). Similar clusters of artifacts have been found between the construction fills of Structure 2-sub 2 and have been interpreted as small middens

evidencing short-term activity areas where workers possibly prepared their meals during the construction of buildings (Joyce et al. 2013:142).

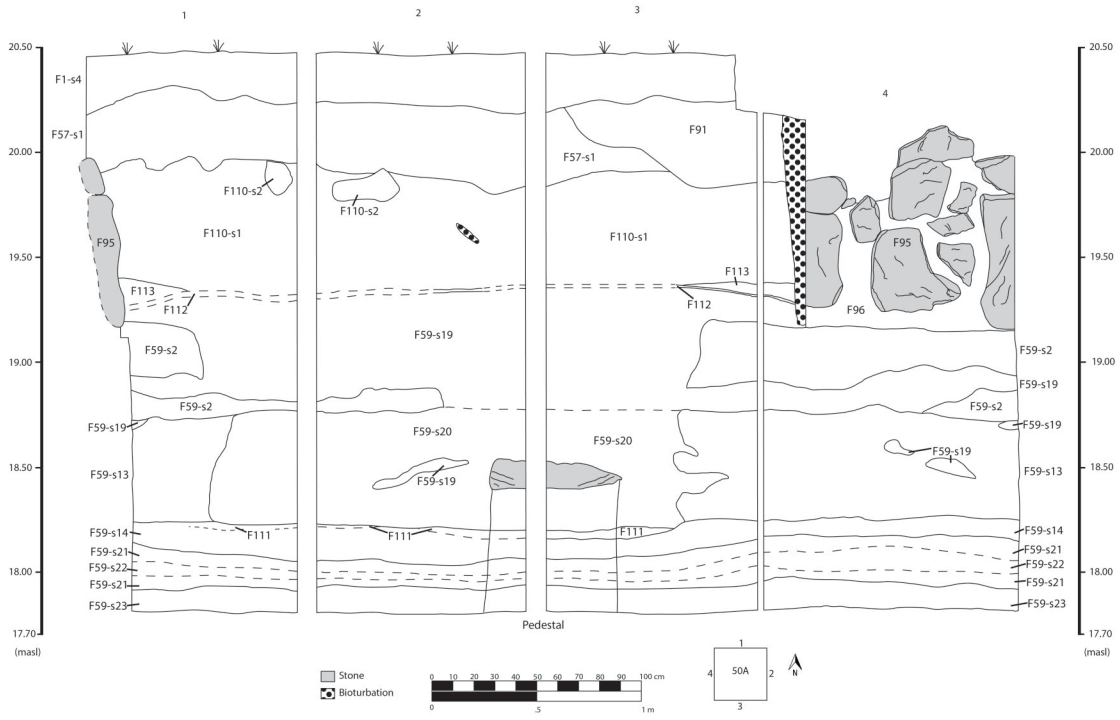

Figure 3. 16 Excavation profiles of Op. RV13 F Unit 50A

Once construction fill F59 was deposited, the builders of Structure 8 possibly created a temporary occupational surface made of compacted sand (F112) (Figure 3.2 and 3.16). This surface served as the foundation for the new façade of Structure 8, composed of stone wall F95 made of stones with a 23° east of north orientation facing east (Figure 3.16). This wall was erected using a clay mortar (F96) and stabilized by a clay support in its base (F113). It is possible that stone wall F95 represents the upper body of a stepped platform similar to Structure 2-Sub 2 (Joyce et al. 2013:Fig. 5.4). As stated it above, it is

also possible that stone wall E86 in Units 50I and 50J may represent a second body of Structure 8 (Fig. 3.15). If so, stone wall F86 and F95 may be part of the new façade of the building.

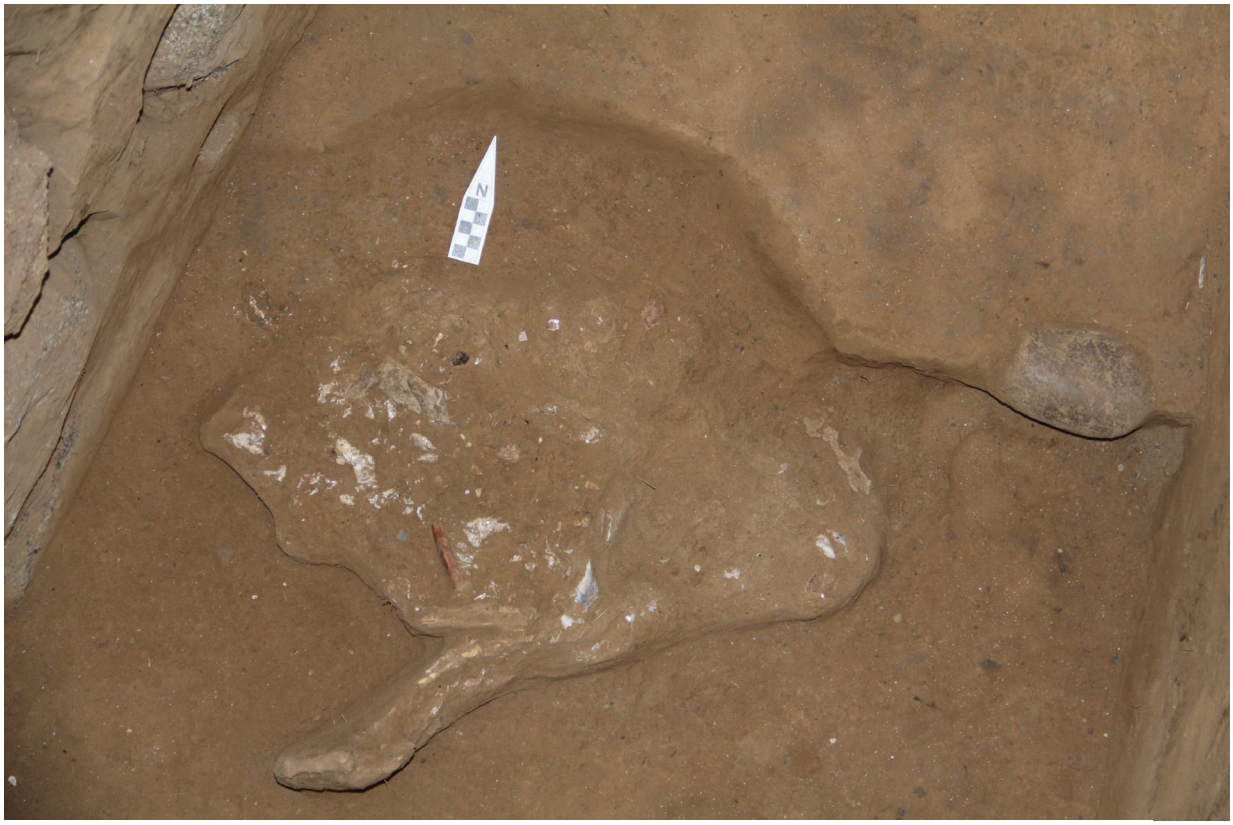

Figure 3. 17 Probable midden found in Op. RV13 F Unit 49E

In contrast to the façade, several construction fills of Structure 8 were found, all unconsolidated. To the east, stone wall F95 retained fill F58 made primarily of silty clay. In unit MU4, within sub-stratum F58-s1 stone alignment F100 was unearthed (Figure 3.18). It is probable that F100 represents a construction cell to stabilize F58, or had a more ephemeral use.

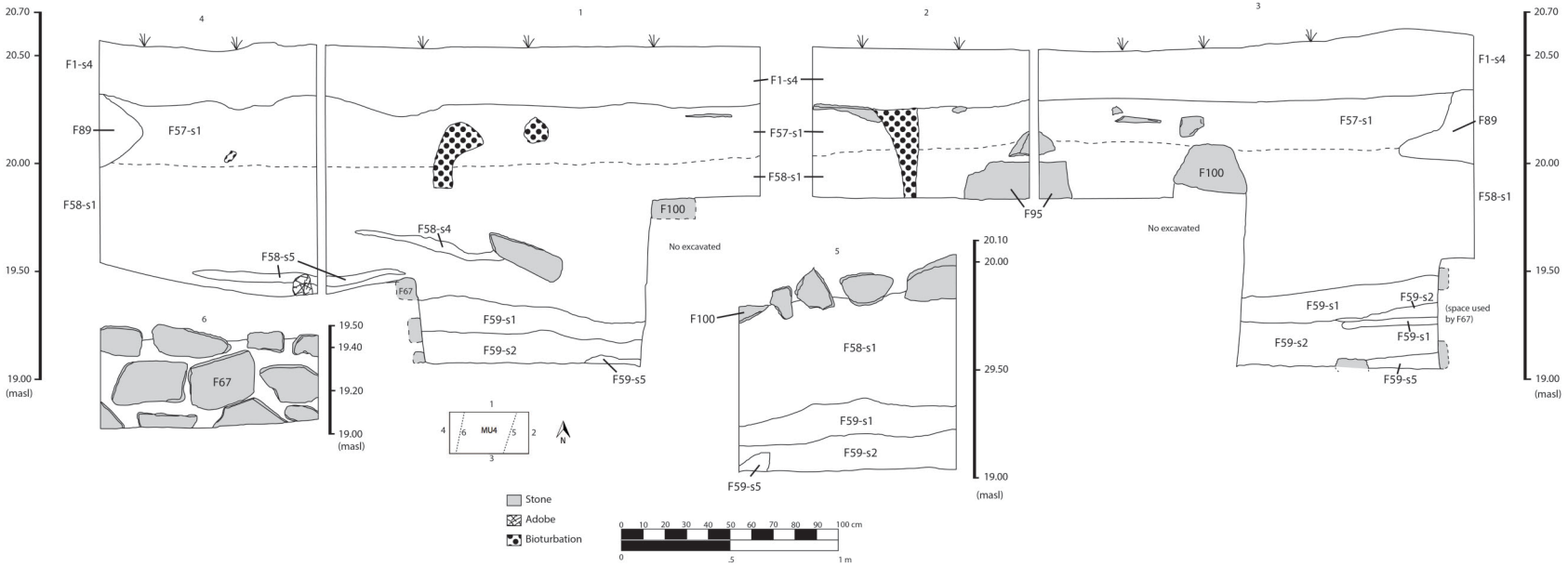

Figure 3. 18 Excavation profiles of Op. RV13 F Unit MU4

To the west, construction fill F122 covered the west stairway of Structure 8-sub 1 (Figure 3.5) in Units 42D, 42D, 43D and 43C. This fill elevated the occupational surface of the northwestern part of the acropolis to circa 20 masl, probably the occupational level of Structure 8. Also, several strata covered the west façade of structure 8-sub 1. The deepest one was F160 that covered the flagstones at the base of the banquette in Unit 36XX (Figure 3.19). Directly on top, elements F140 and F141 were deposited; they created a very compacted clay layer of about 1.50 m that possibly gave stability and support to subsequent constructions. On top of F141, construction fill F136 was placed. Several of its sub-strata were laminated in a similar way as those found by the PRV12 on top of the possible plaza west of Structure 8 (Hill and Villanueva Ruiz 2012). It is likely that erosional and then redepositional processes formed the laminations, although this cannot be confirmed without further geoarchaeological studies. During the deposition of F136-s6, a pit (F164) may have been dug as part of a dedicatory ritual that was filled with a high concentration of large gray ceramic sherds (Figure 3.19). Another interpretation may be that the pit represented a temporary midden during the construction of Structure 8, similar to feature F109 in Unit 49E.

Neither PRV12 nor PRV13 excavations found the most recent west façade of Structure 8 that retained the construction fills discussed above. Given the excavated units, it is possible that the front part of Structure 8 could be located between Units 32A and 36A. However, as I believe that Structure 8 was a stepped platform, there may be more than a single stone wall in different units west of the PRV13 units. Furthermore, PRV13 found a small portion of a probable occupational level of Structure 8 (Figure 3.20). This was found at circa 20 masl in Units 41D and 42D and was called F168. It presented signs

of burning, similar to those found on Structure 2-sub 2 and Op. RV09 A (Joyce et al. 2013:147–149), probably associated with termination rituals.

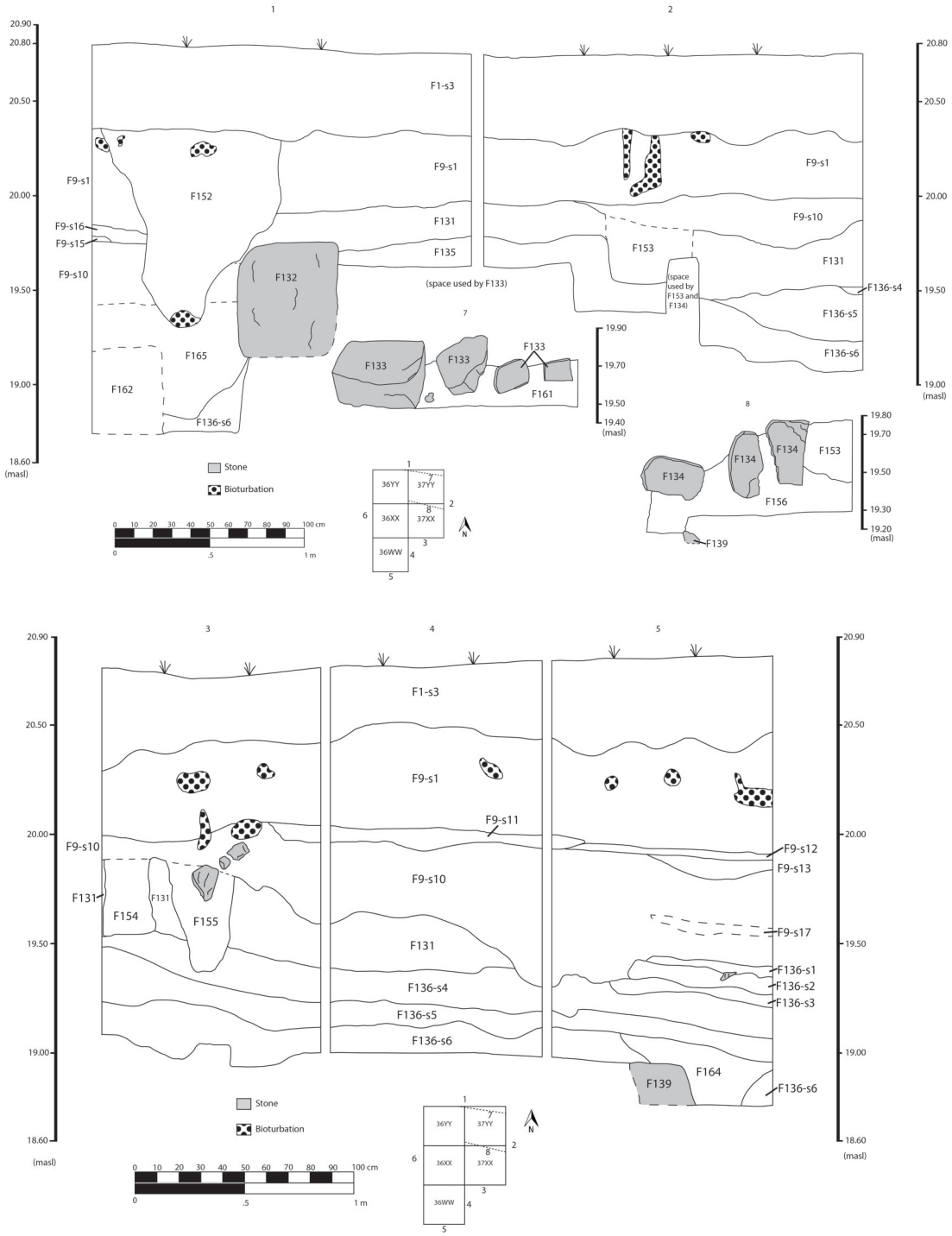

Figure 3. 19 Excavation profiles of Op. RV13 F Units, 36YY, 36XX, 36WW, 37YY, and 37XX

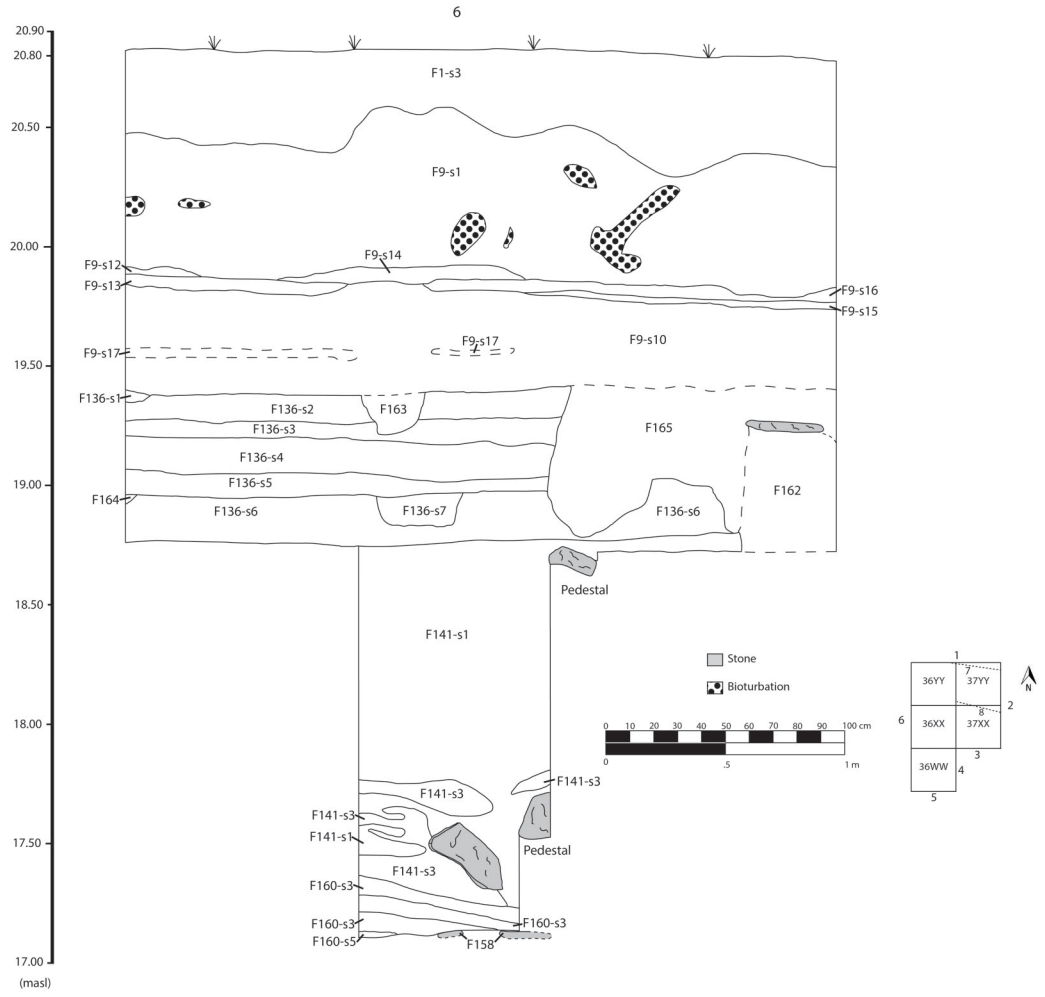

Figure 3. 19 Excavation profiles of Op. RV13 F Units, 36YY, 36XX, 36WW, 37YY, and 37XX

At some point during the construction of Structure 8, or at a different construction episode of the acropolis, stone wall F132 was placed on top of construction fill F136-s8 in Unit 37A. F132 had a flat face facing west and it may have been a construction cell or provisional wall to retain sediment (Figure 3.11). However, the stone wall was poorly

preserved, and given its placement, F132 was removed in Unit 37 in order to expose the western retaining wall (F139) of Str. 8-sub 1. It is possible that F132 may be associated with a large stone found on MU6.

Due to small exposure of its elements, it was not possible to fully assess the nature or use of Structure 8. Given that it was the second version of a building located in front of Structure 1 of the acropolis, it is possible that Structure 8 represented a scaling up effort to further the creation of spatial divisions, as will be suggested in the next chapter.

Figure 3. 20 Probable floor (F168) of Structure 8

Late Chacahua Phase Strata after the Occupation of Structure 8

After the occupation of Structure 8, several termination rituals were carried out, similar to those documented by the PRV12 in Operations A and D (Brzezinski et al. 2012; Rivas 2012). First, the upper part of the structure was covered with construction fill F131. This element covered most of the western part of Structure 8 given that it was found in Units 36A, 37A, 38A, 39A, 40A, 41D, 42D, 43C, 43D, MU6, 36YY, 36WW, 37XX, and 37YY. Additionally, sometime during the late Chacahua phase, the northwest corner of stone wall F132 was dismantled and its rocks stacked creating element F159 (Figure 3.8). Several of these rocks had flat faces reinforcing the interpretation that they were part of one of the nearby stone alignments. Also, during the late Chacahua phase, in Unit 43A, fill F117 was deposited on top of F58-s1, but given its small exposure, it was not possible to assess its formation process. Possibly it is contemporary with F131 and it was part of the same effort to cover Structure 8. During the same episode when F131 and F117 were deposited, construction fill F110 was placed in order to cover the east façade of the building. The covering of Structure 8 may be linked with the termination rituals throughout the acropolis.

Once Structure 8 was fully covered, the termination rituals continued with the digging of several pits that were filled with sediments rich in ceramic sherds and small rocks (F93, F94, F163). Similar pits were found in Ops. RV12 A and D (Brzezinski et al. 2012; Rivas 2012). Other pits (F155, F154, F153, F142) were dug from the surface of F131 in Units 37XX, 36XX, 36YY, and MU6 that were possibly contemporaneous with those associated with the termination rituals, but lacked the dense concentrations of ceramic sherds in their fill and so consequently might have been used for other purposes.

Probably during the same termination rituals, pit F165, found in Units 36XX and 36YY, was dug and filled with a sediment rich in ceramic sherds. Within feature F165, two medium sized slabs were found, possibly the opening of a pit dug into F165 where the articulated skeleton of a feline was found (F162) (Figure 3.21). It is possible that the feline was placed as part of the same termination/abandonment program. If indeed F162 represents a termination cache, the feline is the only offering dated to the Terminal Formative found within the confines of Op. RV13 F.

Figure 3. 21 Offering F162 containing the articulated skeleton of a feline

Termination rituals in the northern part of the acropolis ended when the inhabitants of Río Viejo deposited the last construction fills pertaining to the late

Chacahua phase. In the western part of Op. F, PRV13 excavated element F9. Sub-strata F9-s10 and F9-s6 presented similar laminations as F136, possibly the result of erosion caused by rainwater. Contemporaneous to F9, but in the eastern part of Op. F, construction fill F57 was deposited. Once fills F9 and F57 were placed, another series of pits were dug (F118, F119, F90, F89, F91, F152 and F83) and filled with high concentrations of ceramic sherds and small round rocks. These pits probably also formed part of the termination program to end the use of Structure 8. Pits F88 and F166, also excavated from strata F9 and F57, did not present similar quantities of ceramics and therefore could have had different uses apart from termination rituals or might date to more recent occupations at the acropolis. Pits with low quantities of ceramic sherds that were dug into late Chacahua phase fills have been found elsewhere on the acropolis (Barber and Joyce 2011; Joyce and Levine 2009).

Finally, in Unit 49ZZ, the PRV13 found three medium sized slabs, labeled as F92 (Figure 3.22). These were found between the division of a Chacahua phase and a Yugüe phase element and therefore their temporality remains uncertain. Also, due to its small exposure, and perhaps issues surrounding its preservation, it was not possible to assess the use of the slabs.

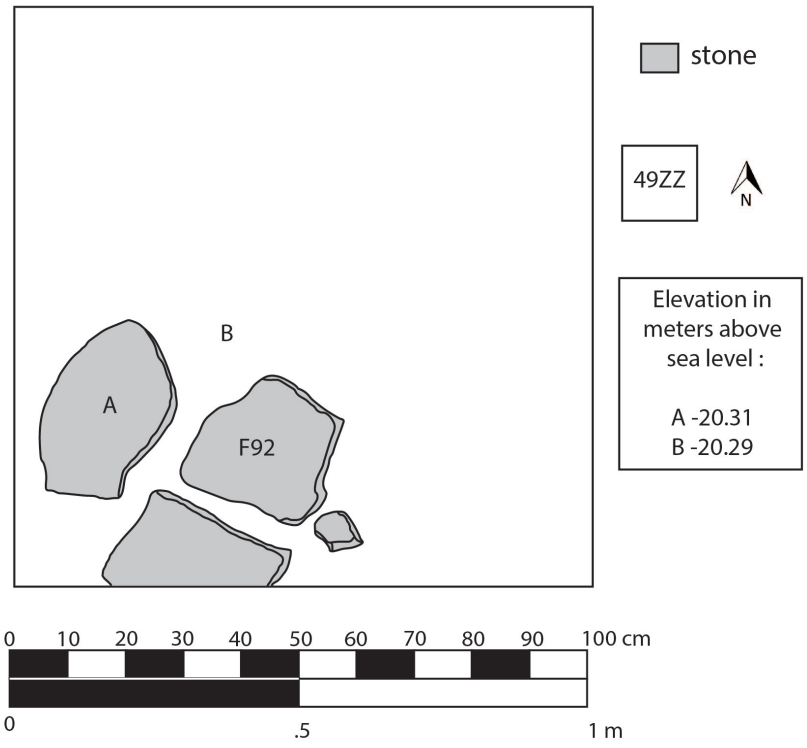

Figure 3. 22 Stone slabs of F92 found in Op. RV13 F Unit 49ZZ

Discussion

In this chapter I presented the results of the excavations carried out at Op. RV13 F. Primarily, I focused on the construction sequence of Structure 8. Its architectural elements suggest that it represented a significant community labor project that had a complex construction sequence. Also, based on its elaborate nature and the lack of domestic refuse, it probably had a public use. Its placement in front of Structure 1 reinforces such interpretation. Perhaps, Structure 8 delimited the eastern side of a

possible plaza excavated during Op. RV12 F. However, due to the lack of primary contexts it was not possible to securely assess the exact use of this Terminal Formative building.

Similar structures that created restricted spaces within larger architectural complexes have been found in other parts of Oaxaca. Given the possible location of Structure 8 in relation to other architectural elements in the northwest part of the acropolis, it resembles constructions on the side of the patio opposite to temple platforms in the temple-patio-altar (TPA) complexes at Monte Alban (Winter 1989:45–46). This is because these complexes, like System M and System IV, had long narrow edifices in front of them that created restricted space. However, this is not to say Río Viejo's Mound 1-Structure 8 and the Valley of Oaxaca buildings were historically related, but that the social practices that gave rise to these constructions could have been similar. TPAs created restricted and hidden ceremonial spaces, often associated with elites (Joyce 2010:220). In a comparable way, the possible placement of Structure 8 approximately 36 m in front of a ritually charged location as Structure 1 suggests that it may have created a boundary that restricted access to certain people with the right credentials. A similar interpretation has been advance by Robles García (2014) for Structure 12 at Atzompa.

Inserting buildings at liminal spaces and boundaries may be a strategy to create and delimit more restricted places. In the case of Structure 8, it was located in front of the possible access of Río Viejo's Mound 1-Structure 1. Perhaps Structure 8 was a deliberate act to confine otherwise public communal areas on top of the acropolis, and create boundaries through which people entered more limited spaces. Contextualizing the construction of Structure 8 within the Terminal Formative program that erected Mound 1

allows us to understand how this building might have created spatial divisions through which social distinctions were constituted. These divisions may have contributed to social tensions that made the polity of Río Viejo such a brief social experiment (Joyce 2013; Joyce and Barber 2015a; Joyce et al. 2016). The nature of these implications is discussed in the next chapter.

Chapter 4: The View of Río Víejo from the Lens of Structure 8

This chapter synthetizes the archaeological data associated with the construction of both phases of Structure 8, a public building on top of Río Viejo's acropolis. The main objective is to better understand how this edifice helps advance our understanding of the late Terminal Formative period Río Viejo polity. In Chapter 1, I outlined the framework that I utilize here to discuss how Structure 8-sub 1 and Structure 8 was entangled in the cultural context of the first regional polity in the lower Verde Valley. To this end, I discuss how their history and architectural elements reflect the formation of communal shared identities, the creation of restricted space, and lastly, the termination rituals that closed the acropolis. In so doing, I propose that archaeologists should consider stratigraphic patterns as consecutive interrelations among people and material things that at times afford but also constrain human action (Hodder 2012).

The Social Construction of Structure 8-sub 1 and Structure 8

In the lower Río Verde Valley public buildings during the Late and Terminal Formative period were important social markers that intertwined people and things. As the result of collective work projects where a large portion of the community participated, communal architecture helped in the creation of social identities by emphasizing the cooperative aspect of work. For example, at the site of Yugüe, Barber (2005, 2013) found evidence that through the construction and ritual use of the main platform, residents were able to create and maintain a local community identity. The repeated ritual activities that took place in public buildings, including entombing people affiliated with the community, caching offering like ceramic vessels, and feasting practices were essential to

maintaining the necessary bonds that integrated the community. As repositories of referential objects like ritual caches or the bones of ancestors, edifices were thus involved in the constant practices that created local traditions and strengthened people's connections within their societies. Thus, local communities were instantiated in collective works focused on public buildings (Joyce and Barber 2015a).

Even the communal identity of Río Viejo during the Late Formative, prior to its ascension as a regional polity, was centered on a public building. Mound 9-Structure 4 was a massive platform probably built at the very end of the Late Formative (Joyce 1991:364–374; Salazar Chavez and Lopez Carranco 2015). It consisted of a massive rectangular platform measuring at least 125 x 200 meters and 5 meters high, and supported four substructures (Joyce et al. 2016:66). Like the majority of public buildings throughout the region, it was raised incrementally through consecutive small construction episodes during the early Terminal Formative Miniyua phase. This suggests that Río Viejo, like other sites with mounded architecture around the lower Río Verde valley, might have had a sense of local community anchored in the constant construction, investment, and use of public buildings. However, the situation changed when Río Viejo grew into a regional center.

Towards the end of the early Terminal Formative, the ceremonial center of the community shifted approximately 600 m west of Mound 9. The new ritual epicenter was built at the acropolis, or Mound 1. The massive work to erect the acropolis took place within a construction program that completely reoriented Río Viejo (Joyce et al. 2013). Since earlier public buildings were located on the eastern part of the site, the construction of Mound 1 reordered space. This reorientation was not just physical but also social

(McAnany 2010). The construction and use of the acropolis might have transformed social identities centered on the old order by restructuring people's experiences and associations with the newer building. This means that in constructing the acropolis, a new sense of place and belonging might have been built. Based on the small number of massive fill deposits and the diversity of construction techniques it has been argued that the social identities concentrated on the acropolis might have been regional in nature, or at least extend beyond the Río Viejo community (Joyce et al. 2013, 2016; Joyce and Barber 2015a). I maintain that Structure 8-sub 1 and Structure 8 were part of the transformative project that attempted to create this new regional identity.

Situated at the heart of the acropolis, both versions of Structure 8 were important, elaborate buildings that helped in the reorientation of social relations during Río Viejo's ascension to regional importance. The earlier version, labeled as Structure 8-sub 1 (Figure 4.1), was erected on top of a large platform likely constructed during the early Chacahua phase (AD 100-250). Structure 8-sub 1 measured at least 7 m x 13 m, and had a possible height of 2 meters above occupational level of the acropolis. This version of the building had at least two stairways leading to the top of the edifice, which was made of a clay floor. Both stairways appeared to have been isolated to the central part of the eastern and western sides rather than extending throughout the entire façade. The east stairway had at least four steps and the west one had at least five. However, it is very likely that both stairways had more steps since the excavations did not uncover their foundations. Furthermore, the west façade had a banquette of approx. 30 cm in height that ran parallel to the main wall. The banquette rested on a flagstone patio that extended to the west of the building, perhaps a plaza for public rituals. Unconsolidated fills

comprised most of the construction techniques used in the building of Structure 8-sub 1. However, Op. RV13 F E138 could be a structured fill that used some type of organic temper to help during the drying process. Also, low stone walls could have been utilized as construction boxes to retain fills. All of these features suggest that Structure 8-sub 1 was architecturally ornate. Since no middens, storage pits, or other features commonly associated with domestic settings were found, it is highly probable that the building was meant for public use.

The second version, Structure 8, was also a significant construction endeavor (Figure 4.2). It completely covered the previous one with several fills that were retained by a new façade. However, its nature was hard to assess because of its minimal exposure. Perhaps it was a stepped platform similar to Structure 2-sub 2. If so, a lower northern wall was at least 2.5 m high, and an upper east wall was at least 1 m high. However, at this time it cannot be ruled out that the lower wall (F86) might be associated with Structure 8-sub 1 rather than with Structure 8. If F86 was indeed part of Structure 8, the building possibly covered an area of *circa* 15 x 14 m. All of the fills in this construction were unconsolidated. Thus, the evidence suggests that Structure 8 might have been a major expansion of the previous version. Labor parties were therefore summoned one more time for its construction. However, the nature of these labor parties cannot be assessed at this moment given the lack of understanding of the exact measurements of the building. It is possible that only people from within the community of Río Viejo were involved.

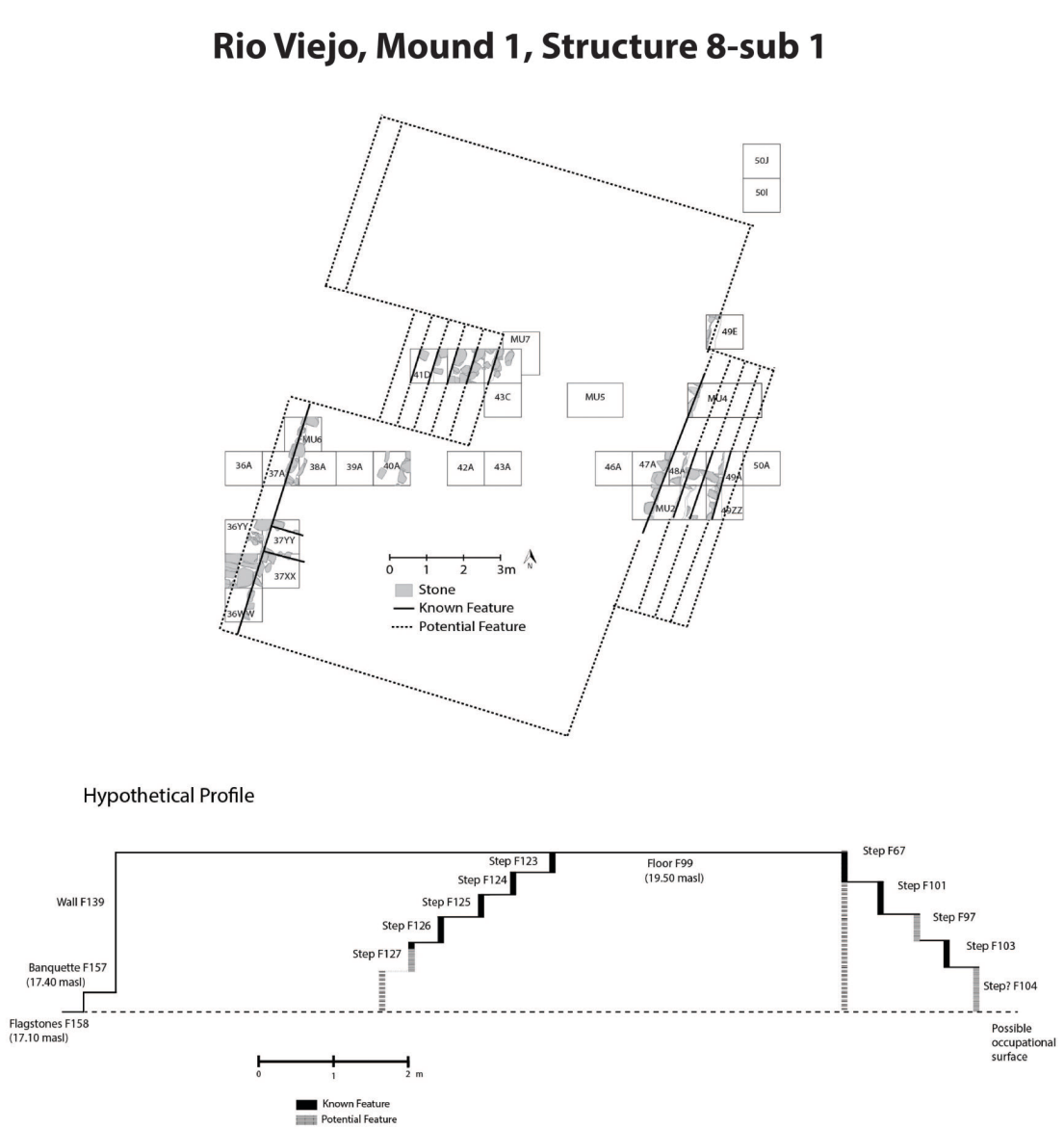

Figure 4. 1 Hypothetical reconstruction of Structure 8-sub 1

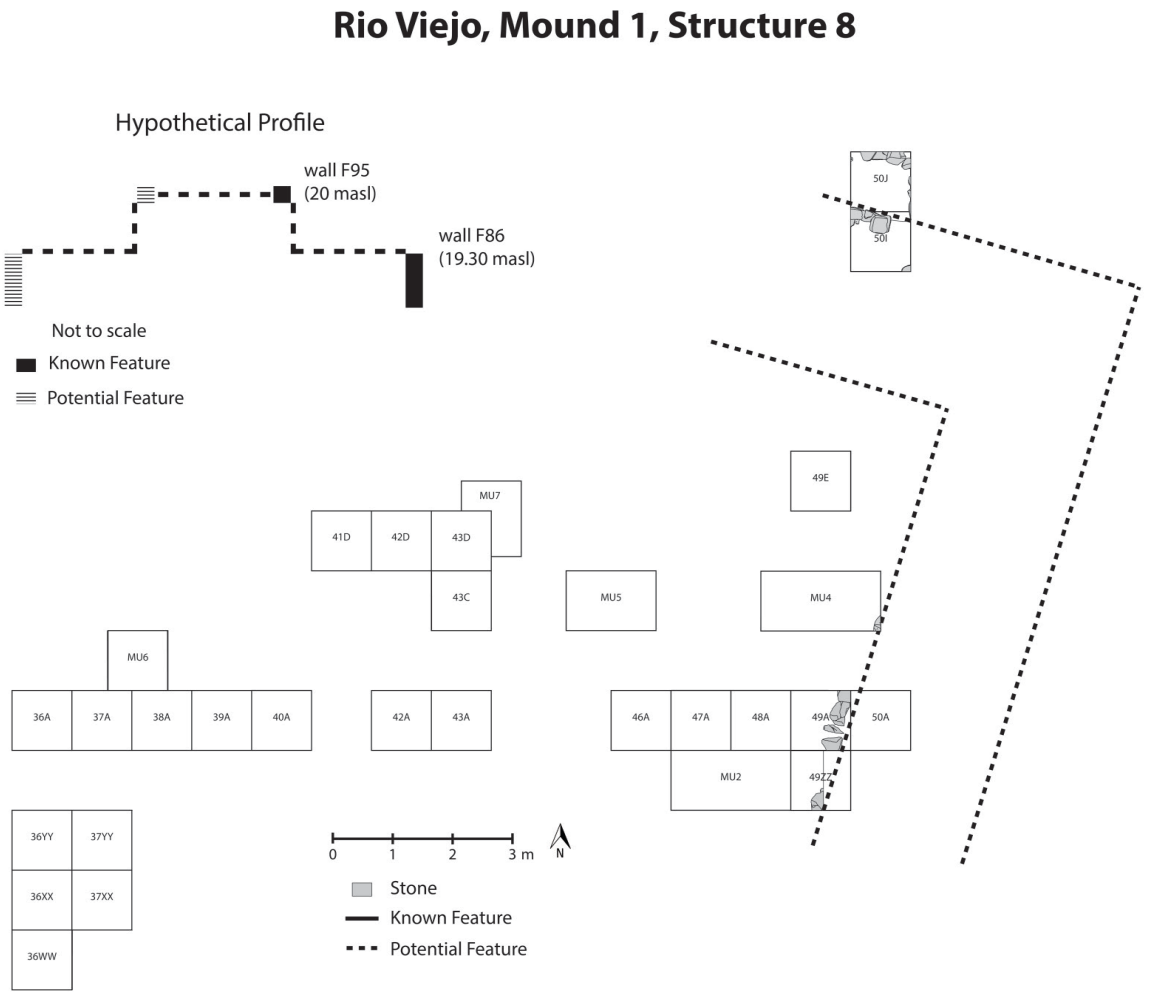

Figure 4. 2 Hypothetical reconstruction of Structure 8

The construction of the acropolis and all of its buildings including both versions of Structure 8, along with events that took place on them, acted as practices of affiliation that constituted new social formations and contributed to the creation of newer corporate identities centered on Río Viejo (Joyce et al. 2013). The continuous actions and ceremonies associated with monumental public buildings, including remodeling episodes, caching of offerings, mortuary rituals in public cemeteries, and feasting practices were salient in the production of regional social identities because they represented significant material and social investments from their participants. Labor obligations actively constructed and redefined communities (Carballo 2012). The construction of both versions of Structure 8 exemplified this point. By bringing people together for its construction, Structure 8-sub 1 and Structure 8 promoted situations of repeated interactions among labor forces that helped in the social construction of the community. The embellishment of Structure 8-sub 1 could have also been a sense of pride among its builders. Finally, whatever activity was taking place on Structure 8-sub 1 and Structure 8 could have also persuaded participants to relate with the buildings and thus with the community of Río Viejo.

However, the acropolis and its buildings also represented tensions that hindered their ability to fully actualize new corporate ties (Joyce and Barber 2015a; Joyce et al. 2016). The agentic forces that made possible the construction of this building were in constant competition against those in traditional communities. The very same labor-intensive tasks that helped create the acropolis and its structures could have placed stressful obligations on people that also needed to care for buildings in their respective communities (Joyce et al. 2016:74). Therefore, the labor requirements of the acropolis

and its buildings, including Structure 8-sub 1 and Structure 8, could have created points of tension between local communities and the valley-wide polity. Their lack of collective markers like dedicatory caches or communal cemeteries only helped to highlight the distance between an ostentatious but socially empty regional building and communally rich constructions at local communities (Joyce and Barber 2015a). For example, the lack of any consecratory ritual caches on the excavated areas of Structure 8-sub 1 and Structure 8 contrast sharply with the rich offerings from Complex A at Cerro de la Virgen that included 260 ceramic vessels placed in granite-slab compartments (Brzezinski 2015). The connection between the traditional community of Cerro de la Virgen and Complex A might have been stronger than the one felt by the people of Río Viejo for Structure 8-sub 1 and Structure 8. In fact, evidence from outlying sites suggests that practices of affiliation and community identity did not extend much beyond local communities (Joyce et al. 2016:75). Thus, the buildings at Río Viejo, rather than fully reinforcing communal ties, might have been constant reminders of growing social tensions.

Restrictive Space on the Acropolis

Furthermore, rising inequality and political power could have been another source of tension present at the acropolis and its buildings (Joyce et al. 2013:156). Practices like the construction of monumental buildings and ceremonial caching in local places around the valley celebrated communal bonds and help create a sense of identity. However, the elites of Río Viejo might have used the opportunity afforded by the construction of the acropolis to start a new experiment to modify existing social relations by creating exclusionary spaces. For example, Structure 2-sub 2 was a stepped platform supporting

an adobe superstructure that presumably was a temple (Joyce et al. 2016, 2013). Its location on top of Structure 2 suggests that it was a more restricted ceremonial space on the acropolis. Further evidence that by the Terminal Formative elites were trying to create more exclusive public buildings comes from Structure 1 at Cerro de la Virgen, a small public building only reached by a stairway ascending from Complex A, and Substructure 2 at Yugüe, a small public platform (Barber 2005; Brzezinski 2015; Joyce et al. 2016:70–72).

Similar to the elaborate and exclusive Structure 2-sub 2 (Joyce et al. 2013:142–147), Structure 8-sub 1 could have played a liminal role in creating restricted space on the northern part of the acropolis. Its two somewhat narrow stairways might indicate limited entrance to its upper part. Perhaps Structure 8-sub 1 was a private venue for exclusionary rituals. If so, it could have stressed social tensions by harnessing communal force for the construction of architecture that served to exclude much of the populace from ceremonial activities. Creating more restricted localities that only a selected few could enter would have stressed the specialized roles and knowledge that elites were harnessing by alienating the rest of the community (R. Joyce 2004:20; Joyce et al. 2016; McAnany 2010). Claiming places that were visually important in the social landscape would have elevated their status even more (Love 1999:146).

Another way in which Structure 8-sub 1 might have helped create restricted space at the acropolis was by limiting access to Structure 1. Situated approximately 36 meters in front of the base of Structure 1, Structure 8-sub 1 might have been the point of entry to the former, restraining admittance only to select groups (Figure 4.3). I posit that entry to the late Terminal Formative version of Structure 1 might have been from its southeastern

side given that on its northern and western flanks the acropolis dropped sharply into the valley floor. Excavations at the sunken patio south of Structure 1 uncovered about 5 meters of construction fill dating to the Late Classic, thus suggesting that this area too drooped into the valley floor during the Terminal Formative (Hedgepeth 2011; Joyce et al. 2016:66). Hence, Structure 8-sub 1 could have restricted access to Structure 1 by creating a physical barrier people had to go through before entering the latter. However, this interpretation is speculative given the lack of understanding of the space between both structures. Op. RV12 F characterized the area as a possible plaza due to the lack of architectural features. If indeed Structure 8-sub 1 constrained access to the possible plaza or to Structure 1, this would suggest that Structure 8-sub 1 was at the heart of political tensions between communal traditions of public building and the exclusionary forces that were trying to appropriate such practices. In particular, Structure 8-sub 1 might suggest that the Río Viejo elites were audacious in trying to separate themselves by harnessing communal labor to create a structure that celebrated exclusivity and restriction.

Nevertheless, the political authorities of Río Viejo were constrained by their collective ties. The communal aura of socially significant public buildings prevented the expansion of exclusionary forces by celebrating corporate relationships over hierarchical control. Long-held traditions that entangled communal works with a shared sense of identity created entrapments that exclusionary forces were unable to break apart (Joyce and Barber 2015a). Even though Structure 8-sub 1 could have been used in the creation of restricted space, its placement on the acropolis turned it into a manifestation of communal affiliations. As part of the acropolis, both versions of Structure 8 were expressions of the tensions between traditional forms of political authority and identity

that were corporate and local, and emerging authorities that were more exclusionary and regional (Joyce et al. 2013). Thus, the acropolis and its buildings accentuated the social anxiety between conflictive forms of authority.

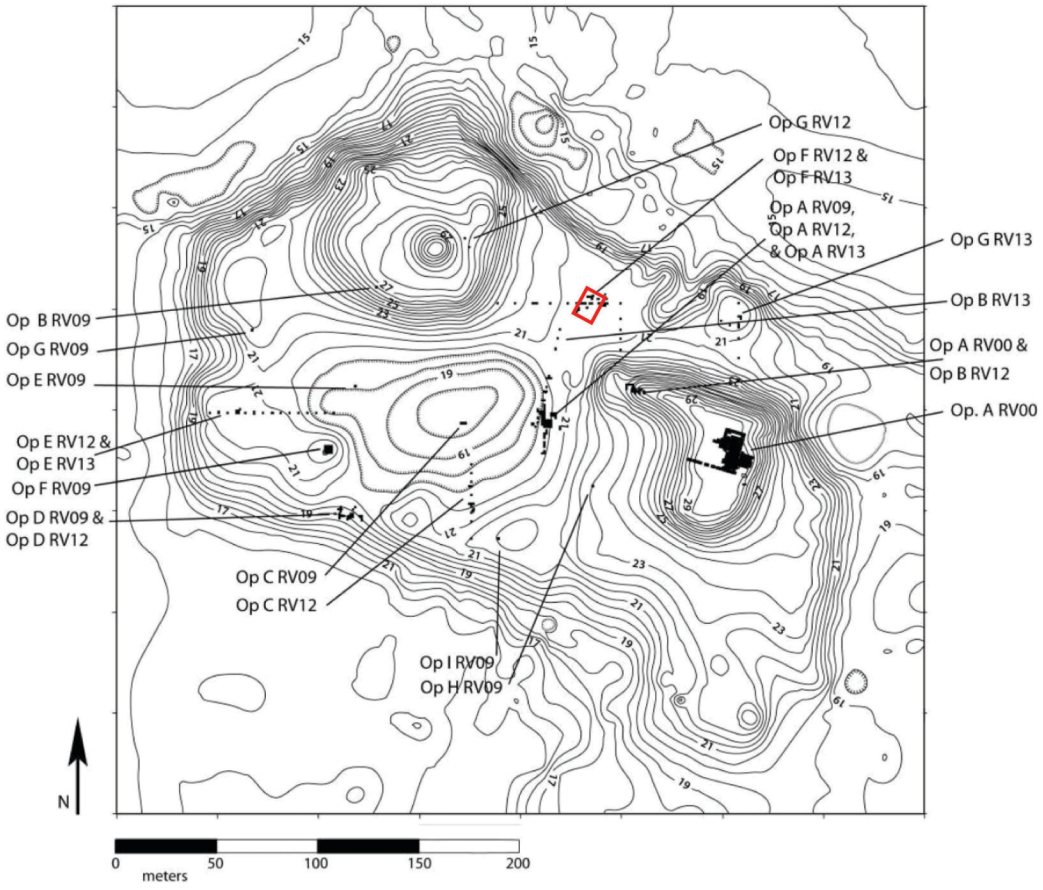

Figure 4. 3 Placement of Structure 8-sub 1 (modified from Joyce and Barber 2015a:Figure 2)

Ritual Closure of the Acropolis

As the seat of tenuous and contested regional entanglements, Río Viejo did not last long (Joyce et al. 2016). While the causes of the collapse are still not well understood, the acropolis was abandoned by around 250 CE. The evidence suggests that

Mound 1 and its public buildings were formally dismantled. The fact that the acropolis was ritually terminated, however, may suggest that it had originally being animated and that the ensouling offerings are yet to be found. Some buildings like Structure 2-sub 2 or the area excavated by Op. RV09 A were ritually terminated by activities involving fire (Joyce et al. 2013:147–149). Others like Op. RV12 A were capped by several layers of construction fill from which numerous pits were dug and later filled with broken pieces of ceramics, rocks, and sediments (Brzezinski et al. 2012). However, resurfacing levels and floors on top of the burned earthen surface in Op. RV09 A indicate that the abandonment of the acropolis may have taken place over the course of a few decades rather than being a sudden event (Joyce et al. 2013:149).

In the northern part of the acropolis, termination rituals also took place over several years. After its use, Structure 8 was covered by different layers of construction fill. As with other parts of the acropolis, several pits were dug into these deposits and filled with abundant quantities of ceramic sherds and rocks. However, contrary to semi-complete vessels found in Op. RV12 A, the remains of ceramics found at Op. RV13 F did not represent complete specimens. They were smaller pieces, incapable of being refitted. After these pits were filled, more construction fill layers were added, reinforcing the interpretation that the closing of the acropolis expanded over several years.

Op. RV13 F further expanded the diversity of termination rituals at the acropolis. F162 was an offering involving one of the most powerful Mesoamerican symbols, the feline (Saunders 1998). A complete articulated skeleton of a felidae was found inside a possible pit. Contemporary dedicatory/termination offerings involving felines have been found elsewhere in Mesoamerica, for example at the Moon Pyramid in Teotihuacan

(Sugiyama and Lopez Lujan 2007; Sugiyama et al. 2013). These offerings have been understood as arenas where people expressed and left behind material traces linked with their beliefs. Particularly, the use of wild carnivores has been interpreted as potent ideological tools emblematic of military institutions that tried to bolster the authority of the polity (Sugiyama and Lopez Lujan 2007:142; Sugiyama et al. 2013:470–471). This means that important symbols like the Moon Pyramid at Teotihuacan required powerful offerings in order to be consecrated and terminated since they represented significant state constructions. At Río Viejo, the fact that a feline was used in the termination rituals of Structure 8 may suggest that it was perceived as a potent building. Casting a dominant image might have counteracted the essences emanated from the closure of the structure. Since felines were very often an elite symbol (Benson 1998), this may suggest that Structure 8 was regarded as pertaining to an elite agenda, reinforcing the interpretation that the building might have been used as a way for elites to restrict space at the acropolis. Furthermore, the use of a feline in the ritual closure of Structure 8 indicates that the abandonment of the acropolis was a coordinated event, not a rapid act of violence. Burial 6 at the Moon Pyramid in Teotihuacan, dated to AD 250±50, provides a perfect contrast to the situation in Río Viejo. While the powerful Teotihuacan polity was gathering canines, felines, eagles, and serpents to consecrate a massive expansion to one of the most important buildings located at the heart of the city (Sugiyama et al. 2013), the people at Río Viejo were depositing a feline as part of the termination rituals to close the civic ceremonial center of the tenuous regional authority.

The diversity found in the termination pits, added to the size of fills that covered the public architecture, may insinuate that the termination practices that closed the

acropolis were diverse and perhaps involved different groups of people. This assertion is of interest when compared to the diversity of construction techniques. It is almost as if for one last time, even if briefly, people came together at the acropolis to terminate the important symbol of the Terminal Formative polity.

After the abandonment and dismantling of the acropolis, Mound 1 was left to slowly disintegrate for 250 years. In Op. RV13 F there was no evidence of Classic period occupation. However, Joyce and colleagues (2013:157) have suggested that other parts of Mound 1 were mined for raw materials. The change in use suggests that the meanings associated with this important symbol that took considerable labor to construct during the Terminal Formative had been profoundly modified in later periods. It is not until the Yugüe phase of the Early Postclassic that there is more evidence of occupation in the northern part of the acropolis (see Appendix 1). A small offering containing four miniature ceramic vessels, a cylindrical ceramic object, at least seven obsidian prismatic blades, a worked bone, a copper plate and nine copper bells was found in a pit whose surface had been burned prior to its deposition. Since previous research at Río Viejo has suggested that during this phase the acropolis was used primarily by commoners (Joyce et al. 2001), this would indicate that the offering could have had a more private aura, very different from previous public occupation of Structure 8-sub 1 and Structure 8.

Concluding Remarks

In this thesis I discussed the public architecture and construction sequence of Structure 8 on the northern part of the acropolis of Río Viejo. One of the primary findings was the corroboration that, as with the rest of the acropolis, the majority of the northern

part of Mound 1 was built during the Chacahua phase pertaining to the late Terminal Formative. With the rise of Río Viejo as the primary urban center in the lower Río Verde Valley region, construction of monumental architecture increased at the site. In the area where Op. RV13 F was located, Structure 8-sub 1 and Structure 8 epitomized such a building episode. As part of the construction and use of the Río Viejo's acropolis, these buildings represented a project of community labor. Their architectural elements, primarily of Structure 8-sub 1, suggest that they had a complex building sequence possibly meant for public use. Their placement in front of Structure 1 reinforces such interpretation.

Understanding the acropolis and its structures, including both construction phases of Structure 8, as the result of collective work events allows us to interpret their complex building sequence as the entanglements between traditional public buildings and emerging forms of power that were more exclusionary (Joyce et al. 2013; Joyce and Barber 2015a). These enmeshments created tensions that on one hand helped in the formation of shared identities through mutual participation in the construction of buildings, but on the other reminded people of the social differences elites were trying to promote. Thus, Structure 8-sub 1 and Structure 8 might have brought people together during their construction, but separated them during their use as a restricted ritual space. This insight allows us to perceive public buildings in Mesoamerica beyond the narrow perspective that suggests that monumental architecture was used to stabilize and normalize hierarchy. By socializing the practice of erecting and using public buildings like Structure 8-sub 1 and Structure 8, this thesis makes the proposition that embellished collective works at Río Viejo disguised ongoing social tensions.

The lack of dedicatory offerings and ceremonial caching at Mound 1 reinforces the idea of a tenuous regional identity anchored at Río Viejo's public buildings (Joyce and Barber 2015a). The use of socially valued goods in communal practices in the region, particularly caches in public buildings, transformed these items into offerings that emphasized local corporate identities. The fact that thus far very few if any Terminal Formative social valuables have been found at the acropolis, including the area where Op. RV13 F was located, suggests that it was a poor marker of a regional identity. People were just not fully persuaded to identify with the buildings at Río Viejo, like Structure 8-sub 1 and Structure 8, that lack social tone and substance. Perhaps, the inhabitants of the region were constantly anchoring their identity in the elaborate caches found at traditional local communities like the impressive offerings found at Yugüe and Cerro de la Virgen (Barber 2013; Joyce and Barber 2015a; Joyce et al. 2016). It is rather surprising that the only Terminal Formative offerings associated with the buildings at the acropolis are termination caches. It is as if there was one last tango to ritually close what it could not be. The diversity in termination rituals, including the feline offering found in Op. RV13 F, suggests that several work forces might have played a role in the closure of the acropolis. However, the assortment might also be related to the specific function of buildings on top of the acropolis.

To conclude, this thesis has tried to analyze how a monumental building was embedded in evolving political and social structures. Contextualizing Structure 8-sub 1 and Structure 8 within the building program that erected Río Viejo's acropolis affords the opportunity to comprehend how these buildings resonated within the social milieu of the time. If architecture as a social space is a collective product that reflects its time, it can be

argued that the acropolis of Río Viejo along with its buildings, including both versions of Structure 8, echoed a time of great innovation but one that was filled with political uncertainty. In trying to escalate traditional practices like monumental construction and elevate their status, the elites of Río Viejo gained great buildings but lost the regional community.

Future Research

Future investigations will assist in expanding our knowledge of the architecture found in the northern part of Mound 1. Of upmost importance, delimiting the exact measurements of the two versions of Structure 8 will be beneficial to fully assess the extent of this colossal construction. Calculating their sizes would help carry out energetic studies to estimate the labor requirements for their construction. This work would build on Joyce and colleagues (2013) study, which projected the labor requirements for the entire acropolis.

Further excavations in the area where Op. RV13 F was located could help clarify how the different architectural elements relate to each other. For example, they could help elucidate if in Unit 40 there is a previous version of Structure 8 or if the elements found there represent part of the construction sequence of Structure 8-sub 1. Also, excavations could help delimit the exact number of steps contained within each of the stairways and whether they extended throughout the entire façade or were isolated to the central part. Assessing the extension of the stairways may reinforce the interpretation that Structure 8-sub 1 was an exclusive or more public venue. Likewise, further excavations could refine how the west stairway and the west façade of Structure 8-sub 1 articulated.

They could also help to expose more of the banquette that follows the west façade. Research in the northern and southern façades could also add further architectural elements.

Detailed analysis of the artifacts found during the excavations of Op. RV12 F and Op. RV13 F will help confirm some of the propositions stated in this thesis. Zooarchaeological analysis of the feline skeleton found in F162 can identify the specific species. They can also assess if the animal was captured immediately prior to its placement as an offering or kept in captivity in anticipation of the ritual. Studies of the differences between the termination offerings can shed light on the nature of the ritual closing of the acropolis. Thorough investigations of the artifacts of the Postclassic offering can elucidate its meaning.

Finally, more information is needed to explain the exact relationship between Structure 8, the plaza found in Op. RV12 F, and Structure 1. Clarifying this relationship would be instrumental to assess the proposition that both versions of Structure 8 were used to create restricted space. Analysis of the termination pits and their ceramics could add valuable information in this regard. Furthermore, future research at Río Viejo will contextualize in greater detail the public architecture at the acropolis.

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APPENDIX 1: POST-TERMINAL FORMATIVE FEATURES

Contrary to Op. RV12 F excavations that did not find primary contexts dating to the Early Postclassic, Op. RV13 F uncovered a Yugüe phase offering (F120) in MU7 (Figure A.1.1). It was first exposed during the excavations of Unit 43D, but given that the offering was found very close to the surface, in was not possible to assess *in situ* the southwest corner of the offering. Also, since MU7 was opened on the very last day of excavations, time constrained the ability to locate more Yugüe phase elements associated with the offering.

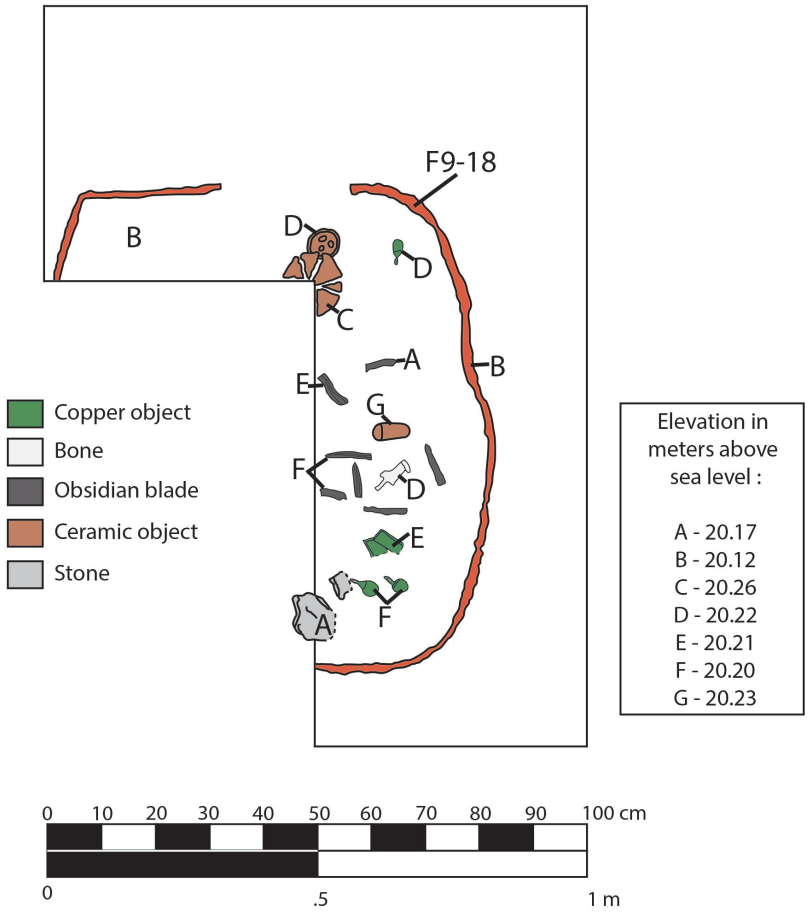

Figure A.1. 1 Yugüe phase offering found at Op. RV13 F

Before the offertory items were placed, a pit was dug and its surface burned, creating a thin orange surface labeled as E9-s18 and E122-s11. However, the offering was not placed directly in the burned surface since its items were found comingled with a silty clay fill called E120. It contained four miniature ceramic vessels, a cylindrical ceramic object, at least seven complete obsidian prismatic blades, a carved bone, a copper (or copper alloy) plate and nine copper (or copper alloy) bells (Figure A.1.2). Detailed studies of the artifacts have not yet been carried out.

Figure A.1. 2 Items found in offering F120

One of the vessels found in the offering probably dates to the Yuta Tiyoo phase of the Late Classic, and perhaps was a heirloom for the people living at Mound 1 during the Early Postclassic (Carroll 2015:838). Copper objects are very rare in the area, since they have only been found at the Late Postclassic site of Tututepec (Levine 2007:309–316). Hosler (1994:233–243) argues that the tinkling of copper bells was associated with the sounds of rainfall, thunder, and rattlesnakes, turning bells into important symbols of fertility. Thus, it is possible that the offering might have been a gift to the divine in request for agricultural fecundity. Moreover, previous research at Río Viejo indicates that during the Early Postclassic the acropolis was used primarily by commoners (Joyce et al. 2001). This would indicate that the offering could have been a commoner's cry to the divine for good yearly harvests. The fact that Early Postclassic commoners had access to socially valuable commodities like copper bells and were able to transform them into alienable goods hints at their wealth (see Hedgepeth 2009 for a more in-depth discussion of Early Postclassic commoner economy).

Sometime during the Yugüe phase, or after, processes for the formation of the modern surface started to occur; Op. RV13 F detected at least 3 soils, E1-s3, E1-24, and E82. These strata were very compacted and presented some degree of deflation. Moreover, they also had signs of ranching and agricultural disturbances, like modern episodes of the burning of vegetation. In fact, the ash of a very recent burning event presented an obstacle when the PRV13 field crew tried to take photographs, as the wind constantly dragged the ash inside of the excavated units.

Evidence of post Terminal Formative occupation on the area of the acropolis where Op. RV13 F was located was very limited. However, it allows us to comprehend

how the use of the space changed throughout time. Primarily, these contexts suggest that construction at Río Viejo's Mound 1 was very limited during the years following the Terminal Formative political collapse. Furthermore, the finding of offering F120 is significant because it adds information on the beliefs and economic status of the people living at Río Viejo during the Early Postclassic. It is unknown whether they where aware that what lied underneath their feet were the remains of beautiful buildings that once had been focal points in a community.