

**KA'KABISH ARCHAEOLOGICAL RESEARCH PROJECT (KARP)**  
**REPORT ON THE 2016 ARCHAEOLOGICAL FIELD SEASON**

Submitted to

**The Institute of Archaeology, NICH**  
Archaeology Museum and Research Centre  
Culvert Road  
Belmopan, Belize

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**Permit Number IA/H/2/1/16(10)**

MAY 2017

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## TABLE OF CONTENTS

PROJECT PERSONNEL .....	4
ACKNOWLEDGEMENTS.....	5
 CHAPTER 1 .....	 7
OVERVIEW OF THE 2016 FIELD SEASON .....	7
<i>Kerry L. Sagebiel</i> .....	7
CHAPTER 2 .....	11
THE 2016 EXCAVATIONS OF STRUCTURE FA-8 OPERATION 16 .....	11
<i>Gabriela K. Dziki</i> .....	11
CHAPTER 3 .....	21
STRUCTURE D-10 EXCAVATIONS.....	21
<i>Helen R. Haines</i> .....	21
CHAPTER 4 .....	31
SPATIAL AND TEMPORAL DYNAMICS OF CHOMOKEIL AND ITS HINTERLANDS .....	31
<i>Alec McLellan</i> .....	31

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## ACKNOWLEDGEMENTS

*We would like to thank the Institute of Archaeology, NICH, for their assistance and permission to work in Belize. In particular we would like to thank Dr. John Morris for his advice and support, and Sylvia Batty and Melissia Badillo for help co-ordinating equipment and artefact importing and exporting. We would also like to extend our gratitude to our fellow archaeologists at the Lamanai Archaeology Project, particularly Dr. Elizabeth Graham and Claude Belanger. We look forward to continued future collaborations between our two projects.*

*As archaeological work would not be possible without the co-operation of the local people who have as much invested in our work as we do, if not more, we would also like to thank the following individuals: Ben and Margaretha Dyck of the Blue Creek Community for helping with the project logistics both during and between the field seasons; Srs. Blanco, Che, and Magana for allowing access to their land; the ladies of Las Orquideas for keeping us well fed; and all the members of the various communities, Indian Church, Indian Creek, and Shipyard, that provided us with information and assistance in myriad ways.*

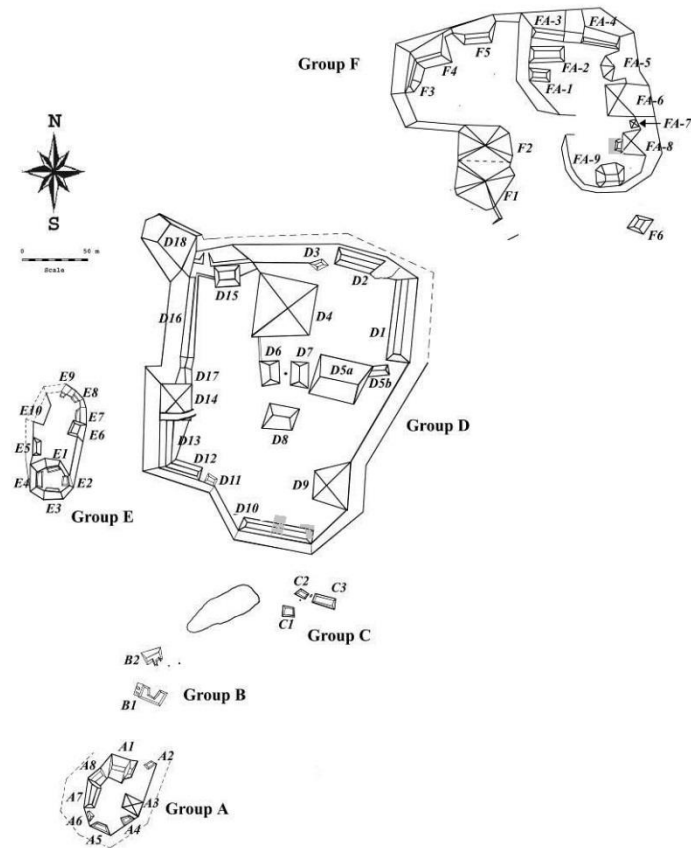
*We would like to acknowledge the generous support of the National Geographic Society Committee for Research and Exploration and the Social Science and Humanities Research Council of Canada.*



**CHAPTER 1**  
**OVERVIEW OF THE 2016 FIELD SEASON**  
*by*

***Helen R. Haines and Kerry L. Sagebiel***

During the 2016 Ka'kabish Archaeological Research Project (KARP), excavations continued in site center in both Group D and Group F (Figure 1). Survey and excavation also continued along the Ka'kabish to Lamanai transect in the inter-site settlement zone. Group F Operation 16 involved continued clearing of looters' back dirt and excavation of the front of Structure FA-8. Group D Operation 15 included extending excavations into and in front of Str. D-10. Finally, survey and surface collection continued along the Ka'kabish to Lamanai transect.



*Figure 1. Map of Ka'kabish with approximate locations of 2016 excavations in gray.*

## OPERATION 16 STRUCTURE FA-8

Excavations in 2015 and 2016 indicate that Structure FA-8 (Str. FA-8) was initially designed as a traditional pyramid temple sub-structure with a single front staircase and that it retained this form throughout its two earliest known incarnations (FA-8-4<sup>th</sup> and FA-8-3<sup>rd</sup>). The frontal staircase of FA-8-4<sup>th</sup> was cut into for the creation of Tomb FA-8/3 and it appears that this mortuary event was the impetus for the construction of FA-8-3<sup>rd</sup>. Tomb FA-8/3 is a crypt tomb with sides and a ceiling of flat slabs. This tomb, along with the two later tombs, had been cleared by looters. The vast majority of the ceramics recovered from the looters' backdirt strongly suggests that these tombs were all Early Classic.

The succeeding structure, FA-8-3<sup>rd</sup>, was constructed above Tomb FA-8/3 and conforms to the archetypal pyramid substructure. The face of the structure contained beautiful terrace facings consisting of six wide stepped panels coated with heavy stucco coating. The terrace had an overhanging superior moulding and an extended basal moulding with no evidence of stucco modelling to suggest decoration, leading to the conclusion that the stepped design was the intended decoration. A single frontal staircase with wide, rounded steps, typical of Early Classic structures at Lamanai, was placed along the central axis of the building. As with the staircase of FA-8-4<sup>th</sup>, the lower steps of were destroyed when Tomb FA-8/2 was constructed as part of, and likely the reason for, the succeeding FA-8-2<sup>nd</sup> build phase.

The Tomb FA-8/2 is similar in construction to Tomb FA-8/3 in that it more closely conforms to a crypt in design. While the building was remodelled to accommodate the addition of the burial, it was not rebuilt to the same scale as the earlier FA-8-3<sup>rd</sup>. The side terraces were built over with a simple flat face made from cut stones that may have been plastered smooth. No stucco was discovered in the collapse in front of the terrace that would suggest it supported a frieze, although it is possible that it was painted. In place of a new staircase, the mortuary chamber was covered with a stairblock made from shaped stones. However, the stairblock was never properly finished, but appears to have been extended prior to its completion to encompass the addition of Tomb FA-8/1. The extension of the stairblock was made from roughly shaped stones. It not only incorporated the new tomb but it also was extended to cover an altar stone that sits on Floor 2 in front of the building. It is probable, based on its location, that the altar was meant to be associated with the FA-8-2<sup>nd</sup> stair block. It is hypothesized that the individual who was interred in Tomb FA-8/1 died unexpectedly, before construction of FA-8-2<sup>nd</sup> was complete. Their interment in FA-8 was hastily contrived resulting in the need to stretch the stairblock to cover both tombs. However, the resulting proportions created a distended platform, not unlike a thrust stage. This platform was never finished but was remodelled to create FA-8-1<sup>st</sup>.

In order to accommodate the disproportions arising from the inclusion of Tomb FA-8/1 in the stairblock, the builders changed the form of the extension from rectangular to round, thereby creating a quasi-round structure. The new frontal addition completely covered the central portion of the original



staircase and included a rectangular outset at the front. New staircases, incorporating parts of the original steps, were constructed on the northeast and southeast quadrants of the platform. These steps were completely obscured from view from the front of the platform.

Tomb FA-8/1 is distinct from the previous two mortuary chambers. Rather than the large slabs that formed the walls and ceilings of the previous burial chambers, this tomb was constructed from small stones. While similar in dimensions to the previous two tombs, it was constructed with a corbel vaulted roof. A small piece of modelled stucco was found incorporated into the ceiling as one of the building blocks suggesting that at some point a frieze did exist, possibly on the structure itself, but that it had been destroyed. Like the FA-8/1 Tomb, the stair block extension was made of rough stones.

The altar stone was round with a diameter of approximately 1.75 metres and a thickness of 0.5 metres. Only the northern third of the stone was exposed in the initial looters' trench making a complete exploration of the stone untenable without removing a significant portion of the platform. The looters had broken the altar and the northwestern quarter of the stone was found outside of the structure in the backfill. Investigations below the stone revealed that it was flat on the bottom and no caches were located beneath it. The surface was smooth with no indications of having been carved.

The 2015 excavations of the top of the FA-8-1<sup>st</sup> platform revealed two stone-lined pits on the upper surface of the platform—one pit in the southeast quadrant and the second feature in the northeast quadrant. The southeast pit was circular and extended down to the surface of Floor 1. Interred within the pit was a lidded God Pot. Regrettably, as the vessel was incomplete it is hard to date, although the paste of the vessel suggests an Early Classic period manufacture. The pit in the northeast is oval in shape and slightly larger than the first feature. It contained two highly eroded Early Classic Aguila Orange vessels and a shell labret. The overall shape of the feature, combined with the labret suggests that at one point the pit contained a burial. Continued excavation of the surface of the platform in 2016 revealed evidence in the northeast area (a section undisturbed by looters or trees) of a low circular wall. There is not enough debris to suggest that the wall extended to any great height, and it is likely that the structure had perishable upper walls and roof.

It is clear that FA-8 is neither a pyramid-temple nor a round structure but rather an amalgamation of the two forms. Given both the composition of the structure itself, its placement in the larger built environment, and the presence of three tombs, plus other possible burials, supports the idea that Structure FA-8 was a lineage temple.

## **OPERATION 15 STRUCTURE D-10**

The 2016 season excavations provided important information about the configuration and construction history of what is arguably the longest range-building at Ka'kabish, Structure D-10 (Str. D-

10). Str. D-10 is a long range-structure anchoring the south side of the Group D plaza. Investigations at D-10 (Operation 15) began in 2015 with a series of units positioned to locate the front door of the superstructure and the rear wall of the structure. The 2016 field season excavations focused on determining the configuration of the upper structure (D-10-2<sup>nd</sup> ).

D-10-2<sup>nd</sup> was a roughly 60 m long range building, constructed with nine doorways and a perishable roof. It is highly probable that the room lacked interior dividing walls and was one single room. Evidence currently suggests that the sides of the room were open, although this will require verification from excavations at the undamaged west end of the building. It appears that the superstructure room of D-10-2<sup>nd</sup> may have still been in use when the substructure was remodelled to extend farther forward (north), initially in a substructure platform, then with a series of low, wide step-like terraces (D-10-1<sup>st</sup>).

Dating for the structure is imprecise due to the relative sterility of the matrices. However, it currently appears that D-10-2<sup>nd</sup> may date to the Early Classic period, while the final modification of D-10-1<sup>st</sup> may date to the Terminal or Early Post Classic period.

## **THE KA'KABISH TO LAMANAI TRANSECT: CHOMOKIEL AND ITS HINTERLANDS**

In 2016 survey and reconnaissance of the Ka'kabish to Lamanai transect focused on an area midway between Ka'kabish and Lamanai in two newly-cleared agricultural fields near a minor centre, previously referred to as Chomokeil. The goal of this transect is to examine the temporal and spatial dynamics of inter-site settlement zone between Ka'kabish and Lamanai and compare it to the core-hinterland dynamics at other Maya sites in the greater region of Northern Belize.

So far, in the inter-site settlement zone between Ka'kabish and Lamanai only two structures have evidence of Middle Formative occupation. These structures are located closer to the civic-ceremonial centre of Lamanai. At Chomokeil, the first evidence of occupation is in the Late Formative period. From the Late Formative to the Late Classic, occupation was concentrated at the monumental centre of Chomokeil. By the Terminal and Early Postclassic periods, settlement expanded into more peripheral locations, with evidence of occupation farther from the civic-ceremonial centres. However, Late Postclassic ceramics have been found at only two individual structures. Interestingly, there is more evidence of occupation in the Colonial Period, suggesting that this area was of continued importance in the post-Columbian world. Finally, two structures almost immediately adjacent to the civic and ceremonial centre of Chomokeil have evidence of occupation into the 18<sup>th</sup> and 19<sup>th</sup> centuries with English ceramics.

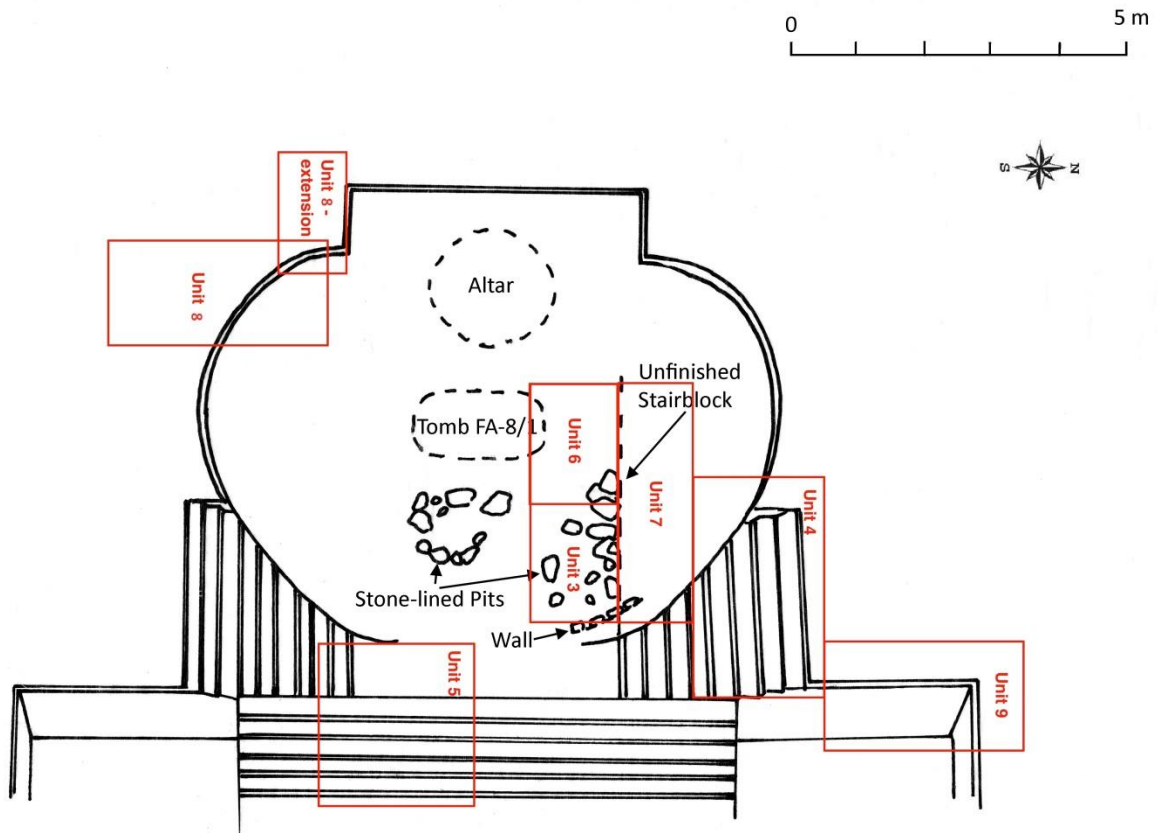
**CHAPTER 2**  
**THE 2016 EXCAVATIONS OF STRUCTURE FA-8 OPERATION 16**  
*by*

***Gabriela K. Dziki***

Group F at Ka'kabish lies to the north of the largest complex, Group D, separated from it by a road connecting Indian Church Village and San Felipe. Once likely to have been connected with Group D, Group F encompasses the largest number of temple structures at Ka'kabish, with most facing westward (Haines et al. 2016). Situated along the eastern edge of a raised platform, Structure (Str.) FA-8 was mapped as part of the Ka'kabish Archaeological Research Project (KARP) survey in 2009 as having a rectangular addition on the west (Haines et al. 2016). Attention was brought to this structure when two new looters' trenches were discovered between 2014 and 2015, one cutting right into the addition at the primary axis, east-west, while the second was found in the south where the addition joins the larger structure (Haines et al. 2016). Upon further investigation, it was clear that the looters discovered three tombs. The 2015 season focused on determining the extent of the damage done and recording of the tombs (Haines et al. 2016). Both Tombs FA-8/1 and FA-8/2 can be dated to the Early Classic Period based on the ceramics found, including Teotihuacan-style tripod vessels. Through the exploration of these trenches and clearing, it became clear that the addition in front of the structure was not rectangular, as previously thought and, therefore, demanded further investigation (Haines et al. 2016).

The 2016 season at Str. FA-8 began on the 17th of May when the first unit was opened in Operation 16. Under the supervision of Dr. Haines, excavations at structure FA-8 were led by Claude Belanger. Two students (Gabriela K. Dziki and Marielle Filion) were put on the structure together with a group of workmen (Enrique Ruano, Elmer, Adonis Perez and Mauricio Aguilar). The goal was to gather enough information about the frontal addition to structure FA-8 to be able to map it and understand the phases of building. In total, seven units were opened (Units 3–9), which uncovered the round, or rather vase-like, shape of the addition as well as the stair blocks that were put in to conceal the tombs that the looters had spoiled between 2014 and 2015 (Figure 1). Maps and drawings of the structure and excavation

units were drawn on Mylar® paper. This made it easier to understand the development of the structure, its phases, and the position of tombs as data from 2016 could be put together with the 2015 season.



*Figure 1. Operation 16 Str. FA-8-1st and Units 3–9. The units are not to scale.*

### **Unit 3**

This unit was on top of the round addition of FA-8, to the north of Unit 2 excavated in 2015. During work in 2015, a feature was noted in this unit formed of large stones, possibly indicating a burial. After clearing the backfill of 2015, this was the first unit opened on the 17th May 2016. This unit measured 1 x 1 m.

#### **Level 1**

As no screening was used, the collection of artefacts was done as the level was excavated. Thirteen artefacts were found and all were ceramic sherds dating to the Early Classic. Leaving the larger

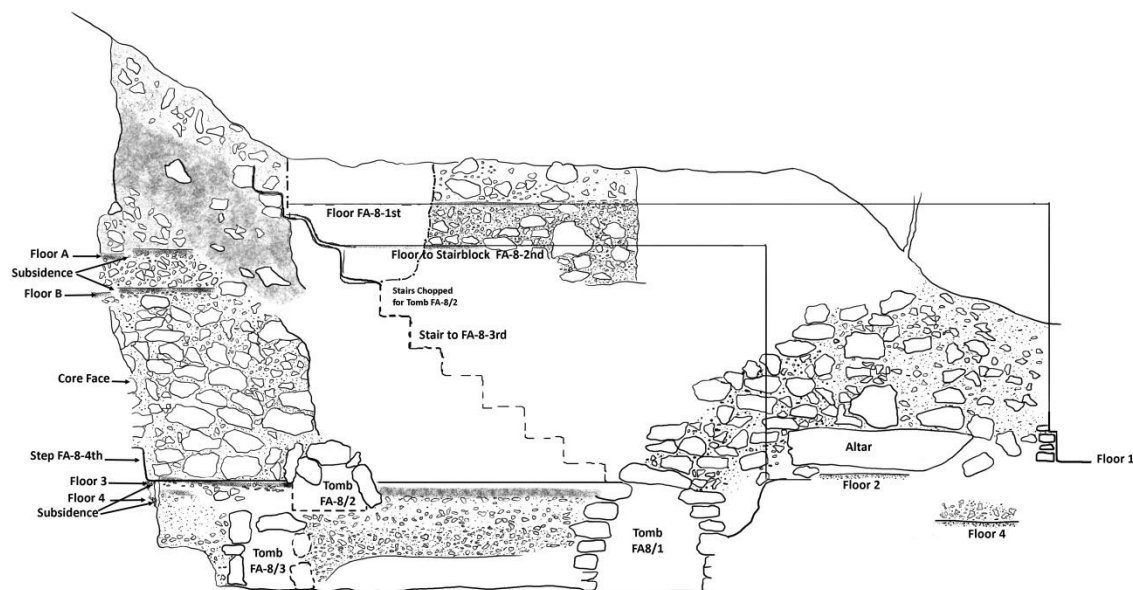
stones of the possible feature in place, the level was taken down 18 cm in the south corners in order to level the unit.

### Level 2

A further 18 cm were excavated to get a better understanding of the stone feature without removing the large stones. The stones formed a circular feature which may have supported the poles of a perishable structure placed on top of FA-8-1st. The 25 artefacts found at this level were both Early Classic ceramics and stone.

### Level 3

After removing the large stones from previous levels, Unit 3 Level 3 unearthed the plaster surface of FA-8-1st (Figure 2). This floor (Floor 1) formed the top of the extended stair block built over Tomb FA-8/1. Just under Floor 1 and above the Floor 2 were two nearly complete but fragmented vessels that likely served as an offering. These were two highly eroded Early Classic Aguila Orange vessels. One was a flanged dish with a scutate lid and the other was a round bowl.



*Figure 2. Cross section of FA-8 showing the building phases of this structure.*

### Level 4

This level was taken out of the middle of the unit to find the surface to stair block FA-8-2nd. This surface (Floor 2) covers the stair block built over Tomb FA-8/2. All sherds from this level date to the Early Classic.

## Unit 4

Opened on the 17th of May 2016, this unit was excavated as a whole rather than divided into levels. Similarly to Unit 3, the reason behind it was to gain a better understanding of structure FA-8 based on 2015 observations. When the stair blocks and the round structure were added to the rectangular design of FA-8-3rd, the original stairs were cut in order to accommodate the new additions. This limited access to the top of the structure, therefore new stairs, to the south and north, were added. This unit aimed to unearth these stairs in order to study the phases and modifications made to FA-8. The bottom stairs were formed of large and neatly cut stones, decreasing in size as the steps went up. During clearing, north-west face of the pyramid substructure for FA-8-2<sup>nd</sup>. After mapping this face, it was partially removed to further explore the northwestern face of FA-8-3rd. The sherds date to the Early Classic, although two Late Formative Sierra Red jar sherds were also recovered.

## Unit 5

This unit, opened on the 17th May 2016, was placed on the western side of the rectangular temple FA-8 structure, where the round addition attaches to FA-8-3rd. The reason behind this unit was to go through the staircase of FA-8-3rd through to Tomb FA-8/3 to see whether the looters left any artefacts behind.

### Levels 1 and 2

Using a visibly diagnostic collection technique, both ceramic and stone artefacts were found in these levels. Part of the west staircase of FA-8-3rd was uncovered in these levels, with large, evenly cut stones at the lower levels. These are the stairs that were cut into in order to build the stair block that is FA-8-2nd. The floor of FA-8-1st marks the bottom of Level 2. These levels contained primarily Early Classic sherds, including Dos Arroyos Orange-polychrome. Other sherds included one Late Formative Sierra Red rim, a Classic “Lamanai-style” polychrome sherd, and a Terminal Classic/Early Postclassic Red Neck Mother sherd.

### Level 3

After going through the floor of FA-8-1st, we found that the floor for FA-8-2nd was very neatly cut. All sherds dated to the Early Classic.

#### **Level 4**

This level went through the floor for FA-8-2nd down to Tomb FA-8/3. Again, no screening was used but visible ceramics were collected. Nearly all sherds were Early Classic, including a number of decorated types such as Dos Arroyos Orange-polychrome, Yaloche Cream-polychrome, Pita Incised, Lucha Incised, and Positas Modeled. Three Late Formative Sierra Red sherds and one Terminal Formative Cabro Red dish rim were also recovered.

#### **Level 5**

This level marks Tomb FA-8/3, however, looters had removed most of the artefacts and only a few ceramic sherds and human bones were found. Most of the recovered sherds date to the Early Classic. Late Formative sherds included Sierra Red, Polvero Black, and Society Hall Red.

### **Unit 6**

This 1x1m unit was placed directly to the west of Unit 3 in order to gain a better understanding of the stone feature visible in it. It was opened on Thursday 26th May 2016.

#### **Levels 1 and 2**

The first two levels were taken down quickly because we wanted to reach the floor for FA-8-1st and get down to the level the large stones in Unit 3 were sitting on. Here, a variety of artefacts was found, 25 in total, including ceramic, stone, obsidian, and bone. No screening was used. The rock feature continued into this unit from Unit 3. The sherds were Early Classic along with one Late Formative Polvero Black sherd.

#### **Level 3**

The level was screened using a 1/4 inch screen, yielding ceramic artefacts. Like in Unit 3, a partial vessel, or possibly vessels, was found in the northwest corner, however, here the vessel was above the level of the floor for stair block FA-8-1st. These vessels consist of fragments of one or more Early Classic unslipped and modeled censers. The censer(s) are outflared bowl(s) with rows of modeled nubbins or spikes. A probable hollow, round foot with half an oval cutout at the base is likely from these vessel(s).

#### **Level 4**

Taking the unit down to the floor for FA-8-2nd, a full collection of artefacts using a 1/4 inch screen yielded both ceramic and stone artefacts. The ceramics are all Early Classic in date.

## Unit 7

Opened on Monday 30th of May 2016, Unit 7 measured 2 x 1m. Directly north of Units 3 and 6, this unit was opened in order to clarify the extent of the stone feature found in Units 3 and 6 as well as to understand how far FA-8-1st stair block extended.

### Level 1

This level is equivalent to Levels 1 through 3 in both Units 3 and 6. This was done to allow a quick excavation to reach the floor for FA-8-1st. A 1/4 inch screen was used and a full collection yielded ceramic sherds. The recovered ceramics are mostly Early Classic; however, one Postclassic red jar rim, one Postclassic orange body sherd, and one Formative black body sherd were included.

### Levels 2 and 3

These were taken down to the level of floor for FA-8-2nd. A wall of neatly cut stones started to emerge facing north. Again, using an 1/4 inch screen ceramic sherds were found. The sherds are primarily Early Classic; however, several Late Formative Sierra Red sherds along with Late Middle Formative Joventud Red and Copetilla Unslipped sherds were included.

### Level 4

On Monday 6th of June 2016 the unit was extended toward the west. This was to see how far the wall of the stair block went so that it could be drawn and put in context of the phases of Str. FA-8. Following the northern face of the stair block, this level aimed at finding the western end of this structure. The wall started with two top rows of nicely cut stones which then changed to cobbles all the way down to the stairs of structure FA-8-3rd. The floor for FA-8-2nd stopped 1.8 m from where it joins FA-8-3rd. The nicely cut stones also ended. The sherds were primarily Early Classic, including Dos Arroyos Orange-polychrome and San Blas Red-on-orange. Early types included Late Formative Sapote Striated, Sierra Red, and Chicago Orange along with a Terminal Formative Rio Bravo Red flanged dish.

## Unit 8

Opened on Friday 27th of May 2016, Unit 8 covers the southwestern quadrant of the round structure of FA-8-1st. It was placed in order to get a better understanding of the south side of the structure in order to draw a plan of FA-8-1st. On the 6th June 2016, Unit 8 was extended along the southern wall of the rectangular protuberance of FA-8-1st. This was done to see where the western protrusion of the round structure ends, giving enough information to draw the final plan of FA-8. The block-like structure may



have been constructed of two low projecting platforms of stairs, but it was destroyed when looters dug right through the middle to reach the tombs underneath. The sherds were primarily Early Classic, but also included a few early types such as Late Formative Sierra Red and Terminal Formative Rio Bravo Red as well as later types such as a Classic “Lamanai-style” polychrome plate ring base and a Late/Terminal Classic Encanto Striated jar rim.

## Unit 9

Opened on the 31st of May 2016, unit 9 explored the northwestern wall FA-8-3rd. Originally, this was an extension of Unit 4, however, upon consideration it became the final unit of the season. This unit uncovered a step-like wall design with what appears to be a central niche (Figure 3). No screening was used, but a visibly diagnostic collection strategy resulted in both ceramic and stone artefacts. The area under the niche was explored for possible caches, but nothing other than ceramic sherds and chert fragments were found. All sherds recovered date to the Early Classic.



*Figure 3. A photograph of the northwestern wall of FA-8-3rd.*

## Summary of FA-8 building phases

Through the course of the 2016 season, four phases of Str. FA-8 structure were discovered. Our knowledge of FA-8-4th is limited due to the extent of later additions. The 2016 field season unearthed the front step of this structure, but it was not possible to date it as no diagnostic ceramics were found (Haines et al. 2016). However, the position of the step suggests that FA-4th was similar to FA-8-3rd, a pyramid-temple design with a frontal staircase (Haines et al. 2016). Moreover, the staircase was cut to accommodate Tomb FA-8/3. A likely reason for the construction of FA-8-3rd was the mortuary event that necessitated the construction of Tomb FA-8/3. Constructed on top of Tomb FA-8/3, Str. FA-8-3rd has the typical pyramid-temple design with stepped panels and a frontal staircase, analogous to Classic structures at Lamanai (Haines et al. 2016).

Again, the stairs of FA-8-3rd were cut to construct Tomb FA-8/2. However, rather than rebuilding another temple-pyramid with stucco and decorations, FA-8-2nd took the form of a stair block made of shaped stones placed over the frontal staircase of FA-8-3rd and Tomb FA-8/2 (Figure 2) (Haines et al. 2016). The terraces were simple and flat with no stucco, but were possibly painted (Haines et al. 2016). This stair block was never completed, rather it was extended to accommodate the new Tomb FA-8/1 and the altar in front of the building (Figure 2). A likely sudden and unexpected death of the individual in Tomb FA-8/1 necessitated the extension before FA-8-2nd was fully completed, leading to the construction of FA-8-1st. The extension of the block created a disproportionate structure, leading to the change in form to a round design with a frontal rectangular protuberance. Unlike previous tombs which were made of large stones in a crypt-like design, Tomb FA-8/1 was made of small stones and a corbel roof (Haines et al. 2016). Similarly, the stair block extension was made of rough stones, unlike the initial FA-8-2nd stair block. In order to facilitate access to the top of the structure, stairs were added to the south and north eastern quadrants of the round FA-8-1st. Str. FA-8 at Ka'kabish is unique in the combination of both a rectangular temple-pyramid structure and a round addition.

## Final thoughts

Round structures in the Maya area are considered to be a rare find (Bruhns and Bertolucci 2009:35). However, considering that the addition to Str. FA-8 was initially mapped as a rectangular structure because of looters' backdirt covering its true design, round structures could be more common in the Maya area than is known at the moment (Sidrys and Andresen 1978:649). Using conquest reports, round structures have often been ascribed to Ehecatl, God of Wind and Air (Bruhns and Bertolucci 2009:35). Due to the continued use of Str. FA-8 as a burial structure, as well as its position amongst other mortuary structures (Haines and Helmke 2016), it has been hypothesized that Str. FA-8 is a lineage temple. This is

further supported by Aimers and colleagues (Aimers et al. 2000:81) who argue that round platforms in the Maya area were used as stages for performances related to ancestor veneration. Moreover, no evidence of links with Ehecatl have been found at Str. FA-8. The change in construction design from FA-8-3rd temple pyramid to FA-8-2nd stair block may suggest deeper socio-political issues, as the labour to build another pyramid-style structure would have been far greater than that of building a stair block (Haines et al. 2016). Ka'kabish continues to pose more and more questions about the Maya, with the round addition to Str. FA-8 challenging the notion of strict rectangular designs with a more flexible approach to architecture.

### ***Acknowledgements***

*First and foremost, I would like to thank Dr. Haines for the opportunity to be a part of this fieldwork and this puzzle that is Str. FA-8. I will be forever thankful to Claude Belanger for his patience in teaching and for the incredible amount I learned from him. I would also like to thank my Str. FA-8 partner Marielle for her help and timely water reminders. Finally, my deepest gratitude goes out to our wonderful workmen—Mauricio, Elmer, Adonis and Enrique—for their incredibly fast work and for fashioning an umbrella out of palm leaves so that I would not sizzle in the sun.*

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## **CHAPTER 3**

### **STRUCTURE D-10 EXCAVATIONS**

*by*

***Helen R. Haines***

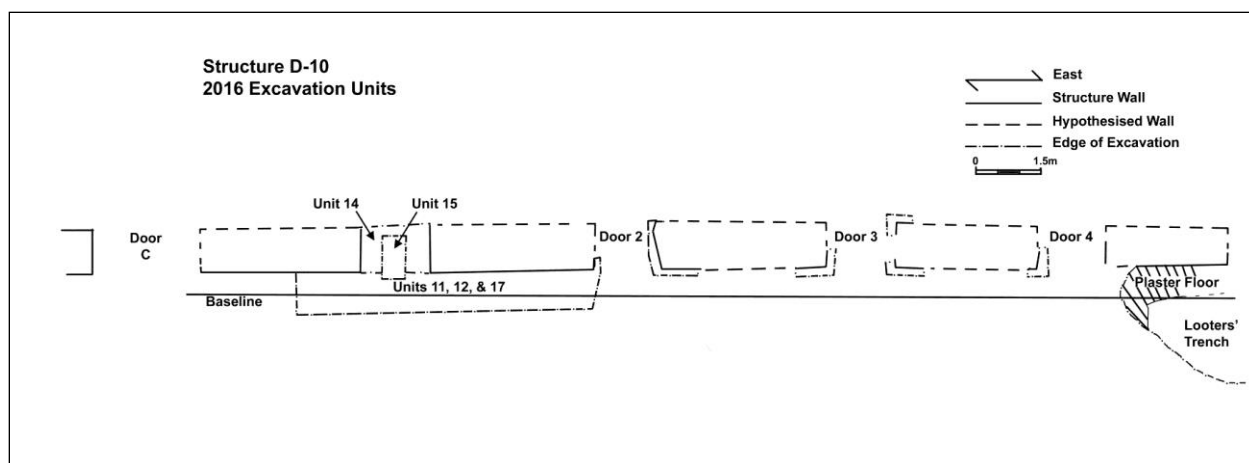
Structure D-10 (Str. 10) is a long range-structure anchoring the south side of the Group D plaza. The structure is approximately 58.8 metres long although this number is based on where the existing slope joins the plaza surface and not the dimensions for the original, and as yet unlocated, substructure. The structure is also estimated to be approximately 10 metres wide, although this number again is imprecise as the rear wall of the substructure flows into the slope of the plaza.

Investigations at D-10 (Operation 15) began in 2015 with a series of units positioned to locate the front door of the superstructure, the rear wall of the structure (and subsequently the width of the upper structure [Baker 2016]). The 2016 field season excavations focused on determining the configuration of the upper structure. To this end a series of units were laid across the top of the structure (Units, 11, 12, 14, 15, 17, and 18), while additional units were placed in the front of the structure to try and determine the configuration of the substructure (Units 10, 13, and 16).

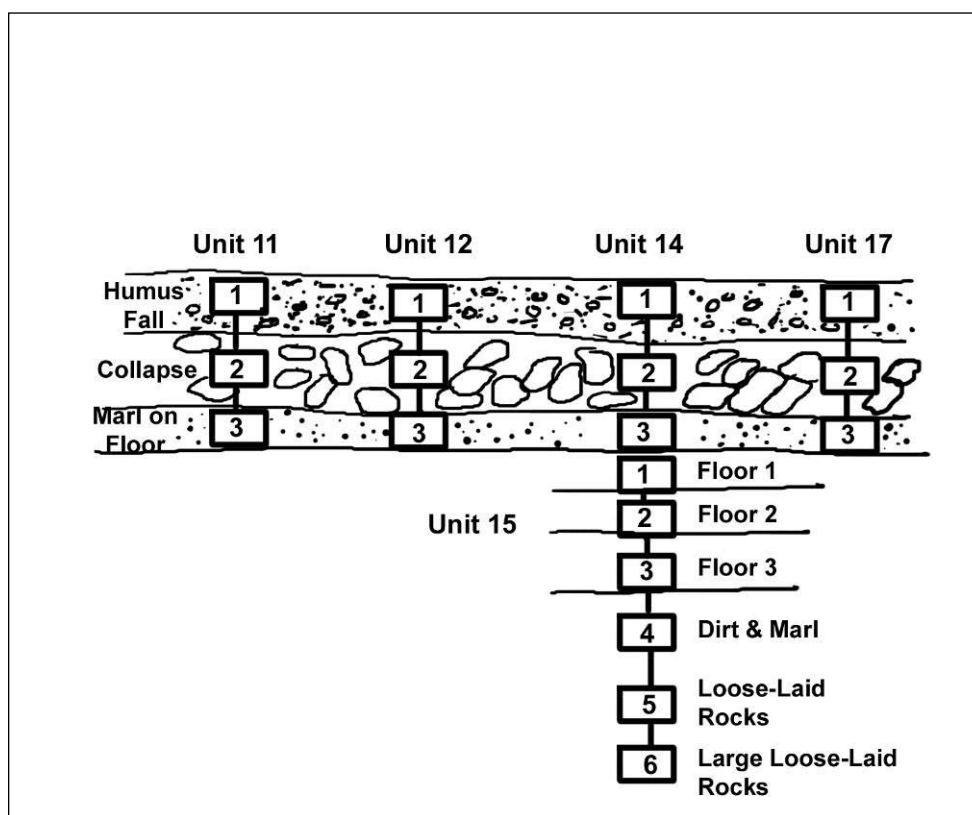
### **Super-Structure Investigations**

Excavations during the 2016 season focused on the northeast quadrant of the structure. Unit 11 was placed immediately to the east of the previous year's Unit 5. Unlike, Unit 5, however, Unit 11 was not intended to stretch the width of the room, but follow the inner face of the previously identified wall. Consequently, the unit was only 1 metre north/south and 2 metres east/west. Unit 12 was also a 1 x 2 metre unit immediately to the east of Unit 11. The west edge of a doorway was found in Unit 11, 3.65 metres from east edge of centre doorway (Doorway C) located in 2015 (Figure 1). A further 1.60 metres eastward, in Unit 12, the east side of the new doorway (Door 1) was located. The space between the two doorjambs was excavated as Unit 14, with a smaller unit (15) being excavated into the floor.

Units 11, 12, and 14 all consisted of the same three levels; a layer of humus (Level 1), a layer of collapsed stones in a white soft earth matrix (Level 2), and a 10-cm layer of hard white marl immediately above the surface of the floor (Figure 2). The angle of many of the stones in Level 2 suggested that the rear wall of the building had caved inward. No soffit, or otherwise angled stones were found, suggesting that the room did not have a vaulted ceiling but rather supported a pole-and-thatch roof. This theory is further supported by the overall lack of construction materials recovered.



*Figure 1. Plan map of Structure D-10 Superstructure Room; Front Wall, North East Quadrant.*



*Figure 2. Harris Matrix of Units in D-10 Superstructure Room (not to scale)*

Unit 17 continued the excavations along the inner-edge of the wall. At roughly 3.65 metres, the western edge of another door was encountered (Door 2). Using the known width of Door 1 as a reference (1.65 m), and the established length of the wall segment (3.65 m), a series of shallow clearings were done at intervals along the upper surface of the structure to determine the presence of more doors. Using this method, we established the presence of an additional two doors. As such, the current configuration of the superstructure room consists of a 2.5-metre-wide central door, with four additional doors each roughly 1.65 metres wide spaced at 3.65 metre intervals. No interior walls were encountered between the Door C and Door 2, suggesting that the room is one long open space.

Excavations at the east end of the superstructure, in what was a looters' trench, revealed another long portion of wall and a broken plaster floor that corresponds in elevation with the plaster floor in the central area. No east end-wall was encountered in this excavation area, although it is possible that it was destroyed by the looting activities. However, an open-ended columned range structure was documented at the nearby site of Blue Creek (Driver 1996), so it is also possible that the building was open on the east and west sides.

A small unit (Unit 15) measuring 0.50 x 1 metres was placed in the centre of Door 1. This unit was situated 20 cm behind the front of the wall and extended across a crack in the plaster floor that was thought to be a possible subsidence split. During the 2015 field season, Unit 8, which also penetrated the floor of the upper room, encountered a buried building (D-10-3<sup>rd</sup>; Figure 3). It was thought that the crack in the floor also might be related to the interior structure. However, this proved not to be the case, and while Unit 15 did encounter similar layers to those found in Unit 8, it was deemed too far north to have intercepted the building. Consequently, the origin of the crack remains undetermined.

## **Substructure Investigations**

Investigations on the substructure occurred in two separate locations. The first (Unit 10) was placed in front of the structure, roughly 2 metres east of the centre line. The second area, consisting of Units 13 and 16, focused on a looters' trench in the northeast end of the structure.

Unit 10 was remarkably uninformative. Rather than locating the structure and/or portions of the front staircase as expected, the unit came down into a hard, and relatively sterile, white matrix that may be melted stucco (Figure 4). The unit was closed after proceeding roughly 40 cm into this level and the focus of the substructure investigations shifted to the northeast corner (Figure 5).

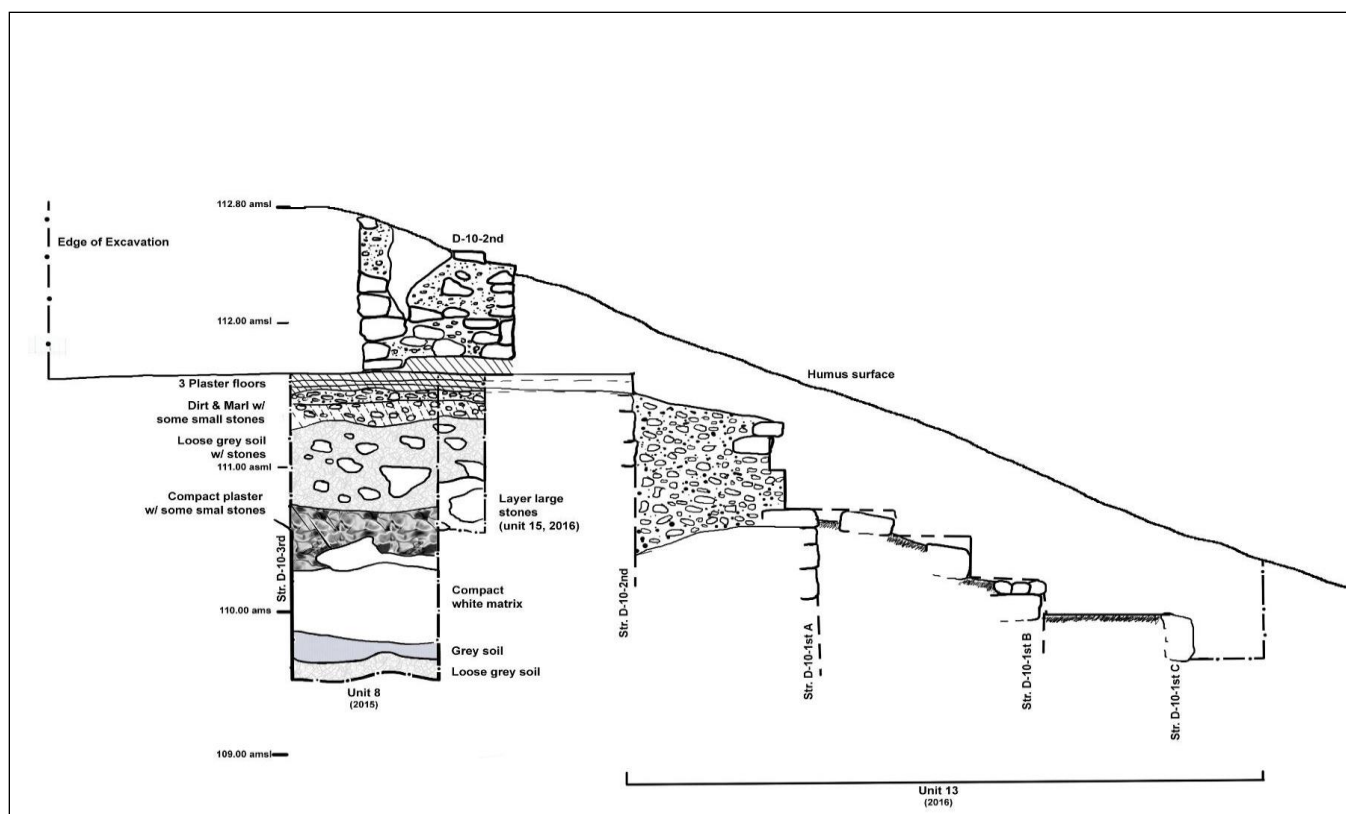


Figure 3. Composite profile of Str. D-10 showing three construction episodes (D-10-1<sup>st</sup>, D-10-2<sup>nd</sup>, and D-10-3<sup>rd</sup>) along with two subsequent additions to D-10-1<sup>st</sup> (B and C) that extended the front of the platform.

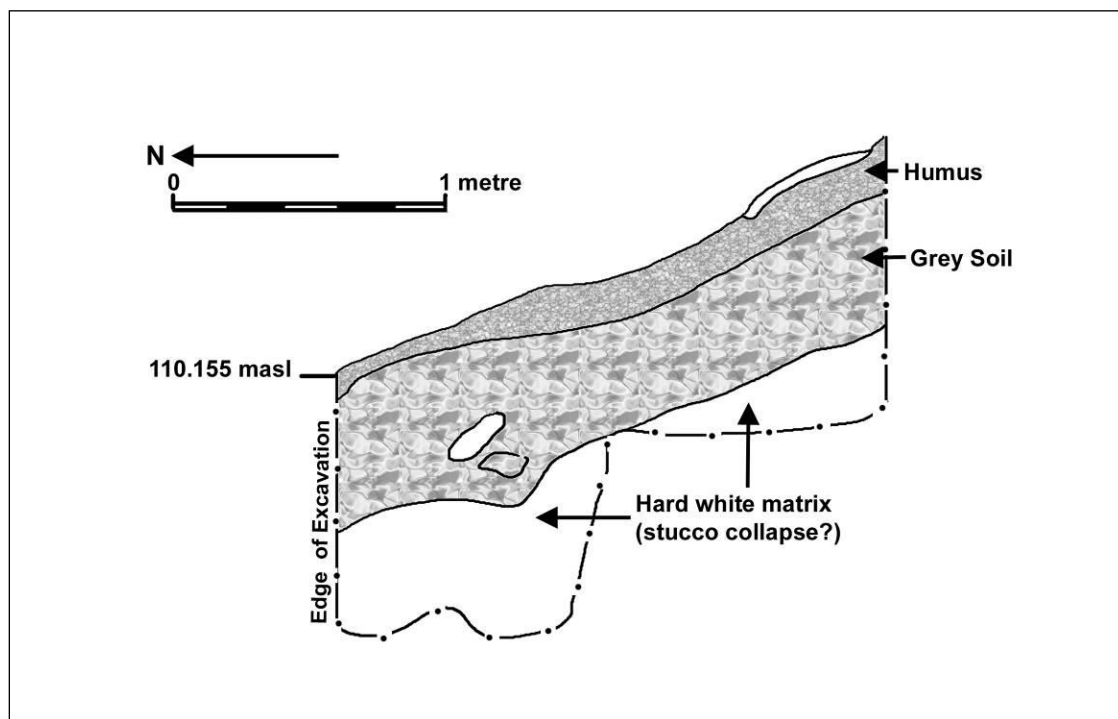
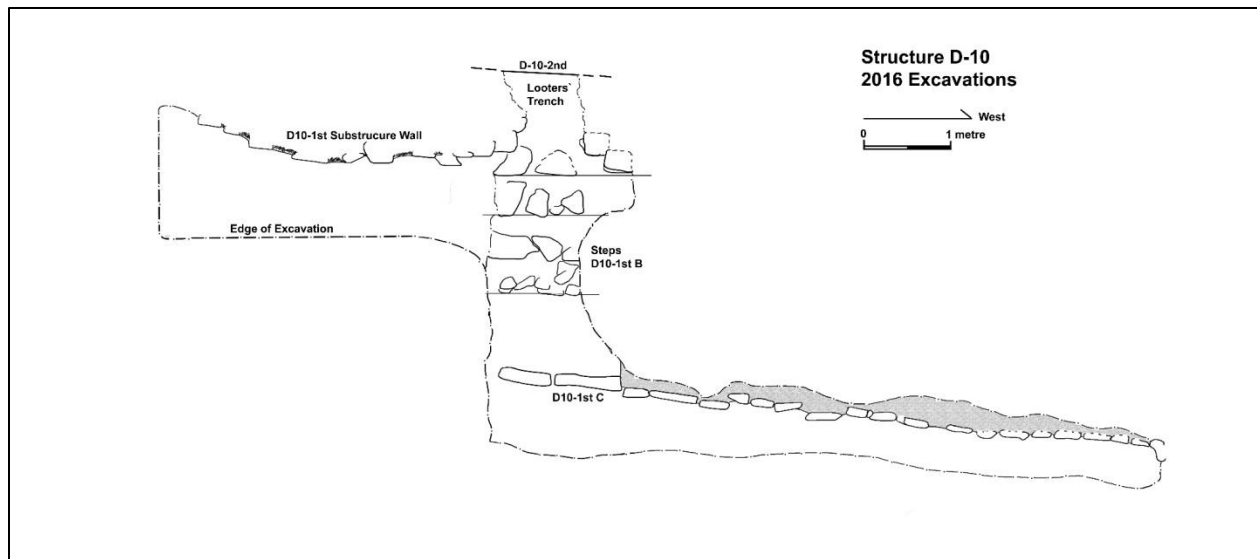


Figure 4. Profile East Wall Unit 10, Structure D-10





*Figure 5. Plan Map of North-East Corner of Substructure (Units 13 and 16).*

A small looters' trench located roughly two-thirds the way up the slope of the substructure revealed an exposed cut stone face. Clearing around this opening to the east exposed a roughly cut face of stones heavily canted forward. These stones were the face of the upper substructure terrace. Exploration of this face revealed that the corners of the substructure were rounded.

Extending the excavation northward down the face of the structure in a roughly 1-metre-wide trench revealed a series of crudely fashioned wide steps or terraces. These steps/terrace facings appeared to be a later addition to the D-10-1<sup>st</sup> structure (see Figure 5). Unit 16 was placed to follow the final step/terrace face (D-10-1<sup>st</sup> c) west in the hopes of encountering the front staircase.

Unit 16 ran for an additional 6 metres without encountering any additional noteworthy architecture. The trench averaged roughly 50 cm wide and focused on exposing the upper surfaces and faces of the stones. The stones used in the facing were long and narrow, ranging between 30 to 50 cm long and roughly 10 cm thick. They were placed upright and were roughly 40 cm high. The matrix behind the stones was not investigated but left for future trenching excavation units.

## Summary

The 2016 season excavations provided important information about the configuration and construction history of what is arguably the longest range-building at Ka'kabish. The structure appears to have been built in two major construction episodes, although little is currently known about D-10-3<sup>rd</sup> beyond its existence.

D-10-2<sup>nd</sup> was a roughly 60 m long range building, constructed with nine doorways and a perishable roof. It is highly probable that the room lacked interior dividing walls and was one single room. Evidence currently suggests that the sides of the room were open, although this will require verification from excavations at the undamaged west end of the building.

It appears that the superstructure room of D-10-2<sup>nd</sup> may have still been in use when the substructure was remodelled to extend further forward (north), initially in a substructure platform, then with a series of low, wide step-like terraces.

Dating for the structure is imprecise due to the relative sterility of the matrices. However, it currently appears that D-10-2<sup>nd</sup> may date to the Early Classic period, while the final modification of D-10-1<sup>st</sup> may date to the Terminal or Early Post Classic period (Tables 1–4).

**Table 1. Operation 15 Sherd dates from Units 11, 12, 14, and 17**

UNIT	LEVEL	LOT NO.	CERAMIC DATES	DIAGNOSTIC SHERDS	NO. OF SHERDS
11	1	N/A	N/A	N/A	0
12	1	N/A	N/A	N/A	0
14	1	1000	N/A	N/A	0
17	1	N/A	N/A	N/A	0
11	2	995	Terminal Classic/ Early Postclassic	Lamanai-style chalices, Tinaja Red, collared jar, eroded misc. Postclassic jars (Early Classic, Late Formative admixture)	191
12	2	996	Terminal Classic/ Early Postclassic	Lamanai-style chalice (Early Classic admixture)	32
14	2	1001	Classic	Lamanai-style polychrome	4
17	2	1081	Late Formative?	Sierra Red	8
11/12	3	1010	Terminal Classic/ Early Postclassic	Red Neck Mother, eroded misc. Postclassic jars, Cubeta Incised, Lamanai-style polychrome (Early Classic admixture)	273
14	3	1002	Early Classic?	Aguila Orange	4
17	3	1082	Terminal Classic/ Early Postclassic	Red Neck Mother, Achote Black	78

**Table 2. Operation 15 Sherd dates from Unit 15**

UNIT	LEVEL	LOT NO.	CERAMIC DATES	DIAGNOSTIC SHERDS	NO. OF SHERDS
15	1	1014	Indeterminate	none	4
15	2	1015	Early Classic	Balanza Black	8
15	3	1016	Early Classic	Dos Arroyos Orange-polychrome	28
15	4	1017	Indeterminate	none	2
15	5	1018	N/A	N/A	0
15	6	1019	Early Classic	Aguila Orange, Balanza Black, Dos Arroyos Orange-polychrome (Late Formative, Early Middle Formative admixture)	104

**Table 3. Operation 15 Sherd dates from Unit 10**

UNIT	LEVEL	LOT NO.	CERAMIC DATES	DIAGNOSTIC SHERDS	NO. OF SHERDS
10	1	991	Terminal Classic/ Early Postclassic	Red Neck Mother, TC/EPC orange (Early Classic, Late Middle Formative admixture)	76
10	2	992	Colonial? Late/Terminal Classic	possible Colonial jar, LC/TC eroded bolstered bowl (lots of Early Classic admixture)	122
10	3	993	Terminal Classic/ Early Postclassic	eroded chalice (lots of Early Classic admixture)	332
10	4	994	Early Classic	Aguila Orange, Balanza Black	74

**Table 4. Operation 15 Sherd dates from Units 13 and 16**

UNIT	LEVEL	LOT NO.	CERAMIC DATES	DIAGNOSTIC SHERDS	NO. OF SHERDS
13	0	1012	Terminal Classic/ Early Postclassic	TC/EPC orange (Early Classic, Late Formative, Late Middle Formative admixture)	95
13	1	997	Colonial? Terminal Classic/ Early Postclassic	Possible Colonial jar, Red Neck Mother, collared jars, misc. eroded PC jars, eroded chalice (Early Classic admixture)	176
13	2	998	Terminal Classic/ Early Postclassic	collared jar, TC/EPC orange (Early Classic, Late Formative admixture)	104
13	3	1013	Late Postclassic, Terminal Classic/ Early Postclassic	Red Neck Mother, misc. eroded PC jars, chalices, TC/EPC orange, LPC red, includes a red Postclassic incised vase and a Postclassic Chen Mul Modeled bird effigy, possible censer (Figures 6 and 7) (Early Classic, Late Formative admixture)	700
16	1	1020, 1021, 1080	Terminal Classic/ Early Postclassic	comals, chalices, collared jars, misc. eroded Postclassic jars, Red Neck Mother, TC/EPC orange (Early Classic admixture)	289



*Figure 6. Postclassic Chen Mul Modeled bird effigy censer front view*



*Figure 7. Postclassic Chen Mul Modeled bird effigy censer top view*

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**CHAPTER 4**  
**SPATIAL AND TEMPORAL DYNAMICS OF CHOMOKEIL AND ITS HINTERLANDS**  
*by*

***Alec McLellan***

In support of the long-term research goals at both Ka'kabish and Lamanai, archaeologists are mapping and recording the location, distribution, organization, and occupation of pre-Columbian structures in the hinterlands between these two sites (Baker 1994; McLellan 2010, 2011, 2013, 2015; Patterson 2007). In 2016, researchers continued these efforts, focusing their survey and reconnaissance mid-way between Ka'kabish and Lamanai in two newly-cleared agricultural fields near a minor centre, previously referred to as Chomokeil. These studies have created a clearer and more accurate portrayal of the spatial and temporal dynamics of this part of the Maya world, which is of interest for its unique cultural history; one that survived the Maya collapse (A.D. 600–900), flourished during the transition to the Postclassic period (AD 900–1500) and continued to be a focus of settlement in the Spanish Colonial Period. With a more concise recreation of the time-space systematics of Ka'kabish, Lamanai, and the inter-site settlement zone, this study aims to reveal the processes that promoted the continuity in evidence in this region.

## **Research Questions**

The single and overarching research question of this study is—how do the temporal and spatial dynamics of Ka'kabish, Lamanai, and the inter-site settlement zone compare to the core-hinterland dynamics at other Maya sites in the greater region of Northern Belize? To address these dynamics, there are several supporting questions:

- 1) What is the character of the settled landscape between Ka'kabish and Lamanai (number of structures, patterns and distribution of settlement; modifications to the natural environment)
- 2) How does the chronology of the inter-site settlement zone compare with the chronology within the core of these major centres?
- 3) How does the distribution and density of occupation in the inter-site settlement zone change over time, and how does this compare to occupation of the centres?
- 4) To what extent is there consistency or variation in surface material culture in the region within and between these two major centres?

## Methods

Similar to other studies in the Maya subarea, archaeologists in the inter-site settlement zone used common survey techniques, including topographic mapping, archaeological reconnaissance, and surface collections to identify natural, cultural, and chronological features (see Robin et al. 2012:39). At Ka'kabish and Lamanai, several surveyors walked in 5 meter intervals, across open and recently cleared and ploughed agricultural fields. Figure 1 shows the location of these fields. Field A is accessible via a road that connects the modern communities of Indian Creek and Shipyard. Field B is south of a road that leads to the village of Indian Church—the base of operations for this study.

Figure 1 also shows a relatively modern representation of the current coverage of jungle between Ka'kabish and Lamanai. Most of the area is cleared of forest for maize agriculture, which is planted for several seasons, until it is subsequently used for cattle pastoralism. In some cases, these fields are immediately surveyed by archaeologists, as the conditions for archaeological recovery decays after multiple successive seasons of agricultural intensification. Figure 2 shows the field conditions encountered south of the road mid-way between Ka'kabish and Lamanai in Field A. Several structures are visible in this image, which are identified by the disturbed remains of the sub-surface platforms commonly used by the Maya. The limestone fill of the individual structures are scattered over raised 'mounds' on the landscape.

Figure 3 shows the area immediately south of the road between the modern settlements of Shipyard, and Indian Creek, in Field A. It consists of similar site formation processes as Field A. In this image, several structures are visible in the distance, surrounding the architectural centre of Chomokeil, which is still covered by forest. Chomokeil is identifiable in the image by the raised treeline on the horizon. Also, because of the forest setting of the civic and ceremonial centre of Chomokeil, archaeologists did not collect any ceramic, lithic, or faunal materials from the surface. Although, it should be noted that due to its easy access, which is in proximity of several modern roads and villages, every structure at Chomokeil has been trenched and looted.





*Figure 1: Map of the Geographic Location of the Survey Zone*



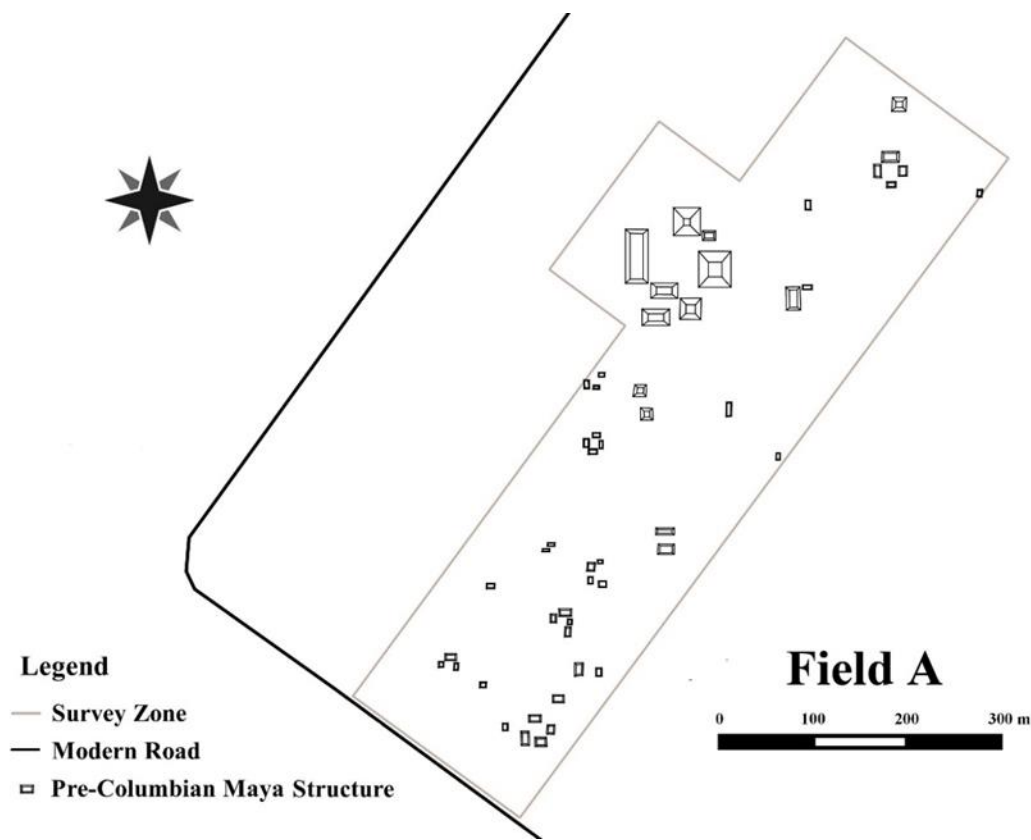
*Figure 2: Conditions of the Agricultural Fields in Field A*



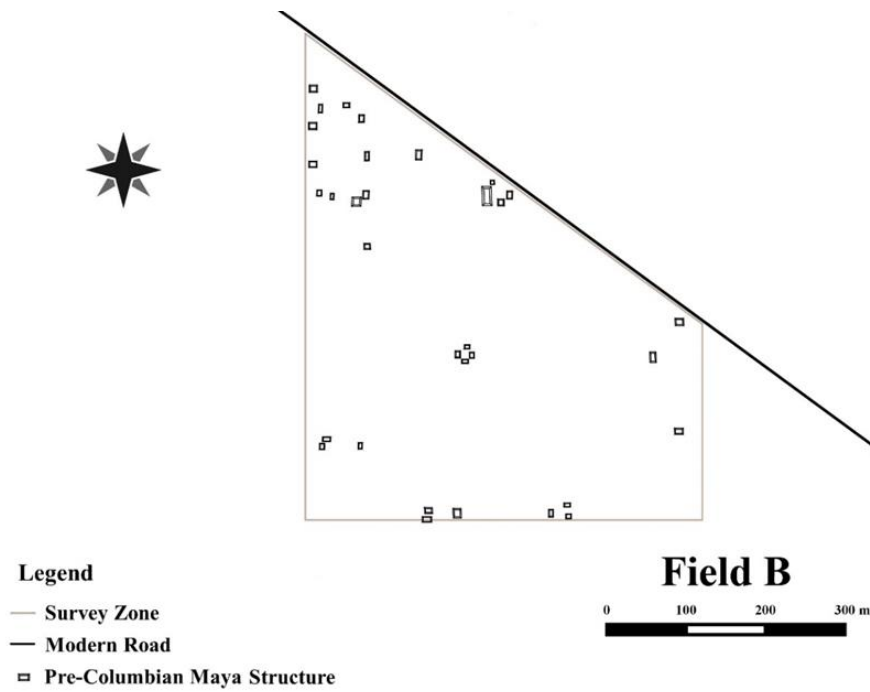
*Figure 3: Conditions of the Agricultural Fields in Field B*

## Data

In total, 52 structures were identified in Field A (Figure 4). This field is roughly 0.2 km<sup>2</sup>. In Field B, 33 structures were identified (Figure 5). Field B is only slightly larger than Field A, covering roughly 0.21 km<sup>2</sup>. In general, structures identified in both fields were mostly oriented north-south and east-west. They ranged in size from as small as 3 x 3 m to 30 x 30 m, with a height anywhere from less than 1m to 20 m. For interpretive purposes, the civic-ceremonial centre of Chomokeil was defined by the seven structures that were identified in the jungle setting. These structures were left out of the time-space reconstruction in the following section because of a lack of chronological indicators. As expected, and commonly reported at other sites in the Maya world, the density of occupation decreases farther from the civic-ceremonial centre, with more sporadic evidence of structures in Field B (see Rice and Culbert 1990). Also, similar to other studies in the Maya area, the size of the structures also decreases farther from the centre. However, these are preliminary observations, and require further testing. Also, based on initial reconnaissance, there is evidence for settlement immediately west of Field A, but time and financial restraints precluded investigation. It is also important to note that settlement was identified half a kilometre north of Chomokeil, and likely represented the outermost extent of occupation in this area.



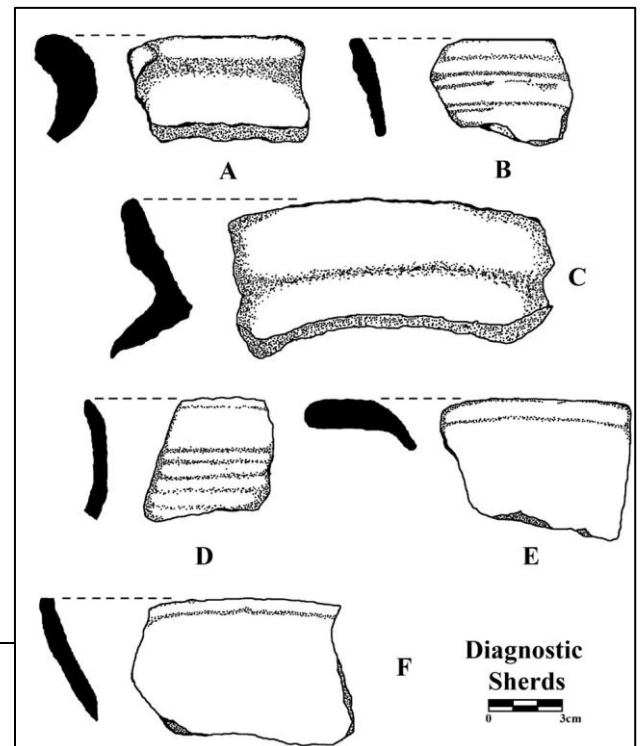
*Figure 4: Inter-site Settlement Zone North of the Modern Road*



*Figure 5: Inter-site Settlement Zone South of the Modern Road*

## Ceramics

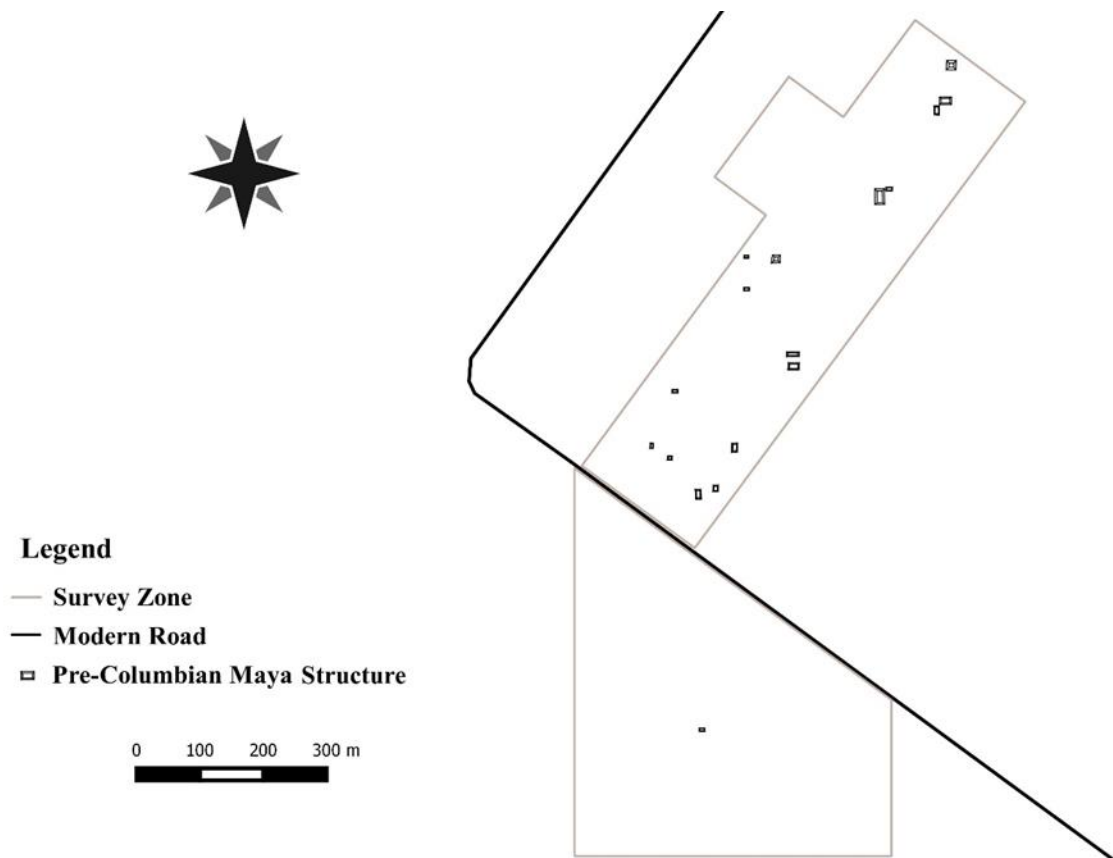
In Field A, archaeologists collected 2,124 ceramic sherds. In Field B, archaeologists collected 533 sherds. These artifacts were analysed by Dr. Kerry Sagebiel. For the purposes of this section, there are several illustrations of some of ceramic types that were used for the chronological reconstruction of Field A and B (Figure 6).



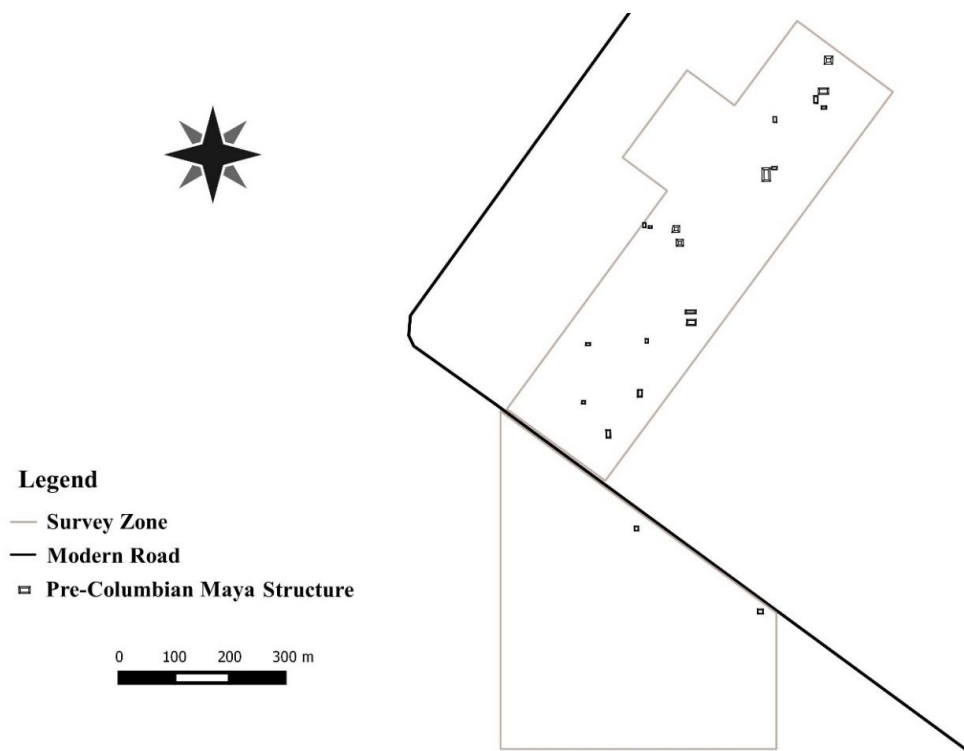
*Figure 6: A) Red Neck Mother B) Colonial Jar C) Dumbcane Straited D) Cubeta Incised E) Postclassic Chalice F) Colonial Jar*

## Discussion

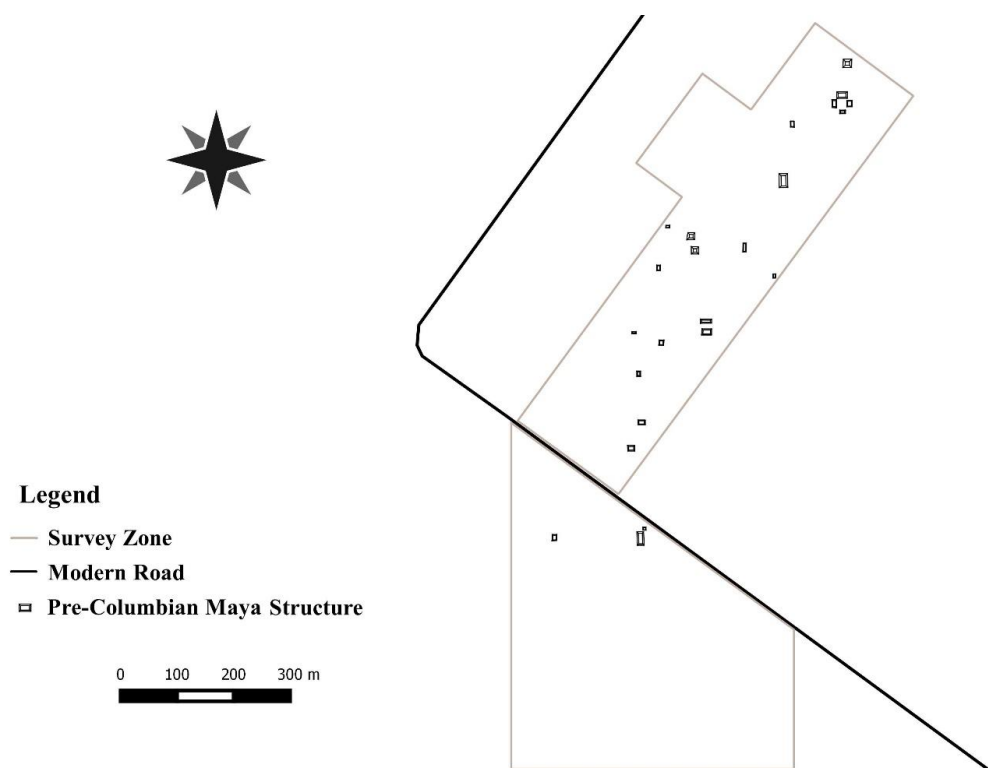
So far, in the inter-site settlement zone between Ka'kabish and Lamanai only two structures have been identified that indicate evidence of Middle Formative occupation. These structures are located closer to the civic-ceremonial centre of Lamanai. In the middle of Ka'kabish and Lamanai, at Chomokeil, the first evidence of occupation is in the Late Formative period (Figure 7). From the Late Formative to the Late Classic, occupation is concentrated at the monumental centre of Chomokeil (Figures 8 and 9. By the Terminal and Early Postclassic periods, settlement expanded into more peripheral locations, with evidence of occupation farther from the civic-ceremonial centres (Figures 10 and 11). Into the Late Postclassic period, archaeologists only identified diagnostic ceramics from two individual structures (Figure 12). Most interestingly, there is more evidence of occupation in the Colonial Period, suggesting that this area was of continued importance in the post-Columbian world (Figure 13). Also, two of the structures in Field A, almost immediately adjacent to the civic and ceremonial centre of Chomokeil show evidence of occupation into the 18<sup>th</sup> and 19<sup>th</sup> centuries, with English types of ceramics.



*Figure 7: Late Formative Occupation in the Inter-Site Settlement Zone*



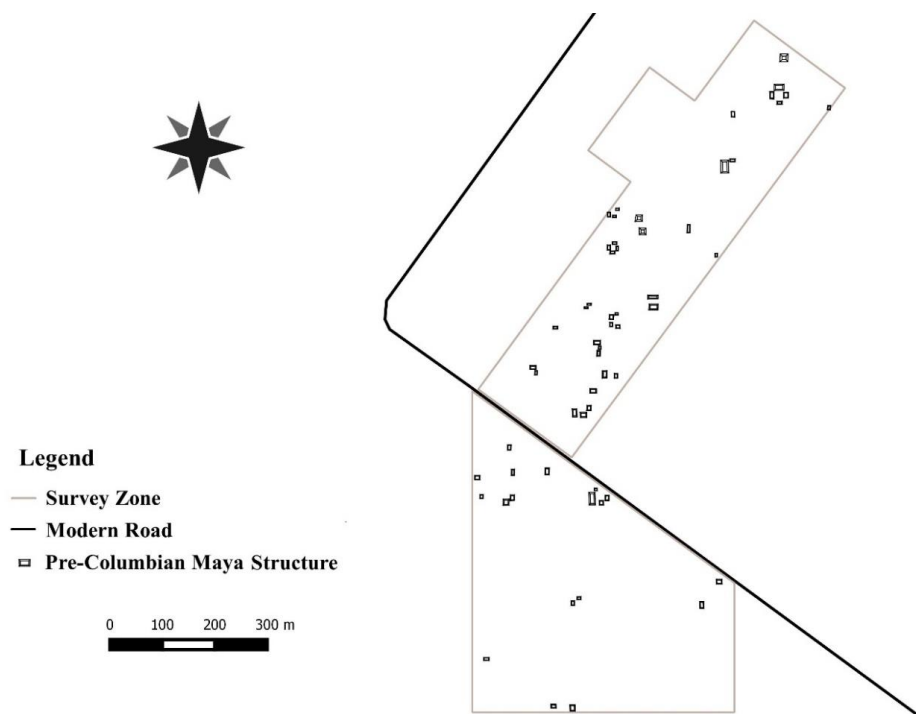
*Figure 8: Early Classic Occupation in the Inter-Site Settlement Zone*



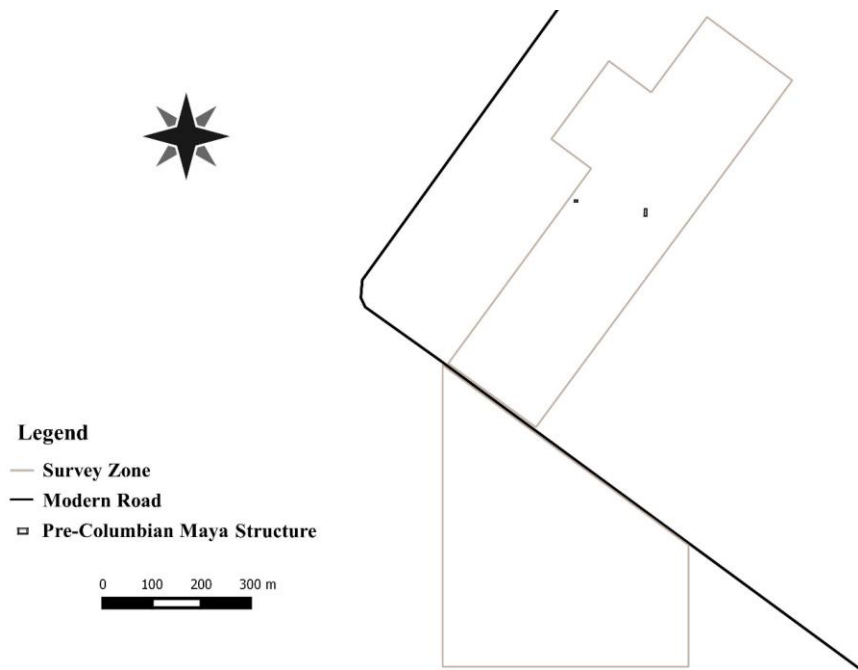
*Figure 9: Late Classic Occupation in the Inter-Site Settlement Zone*



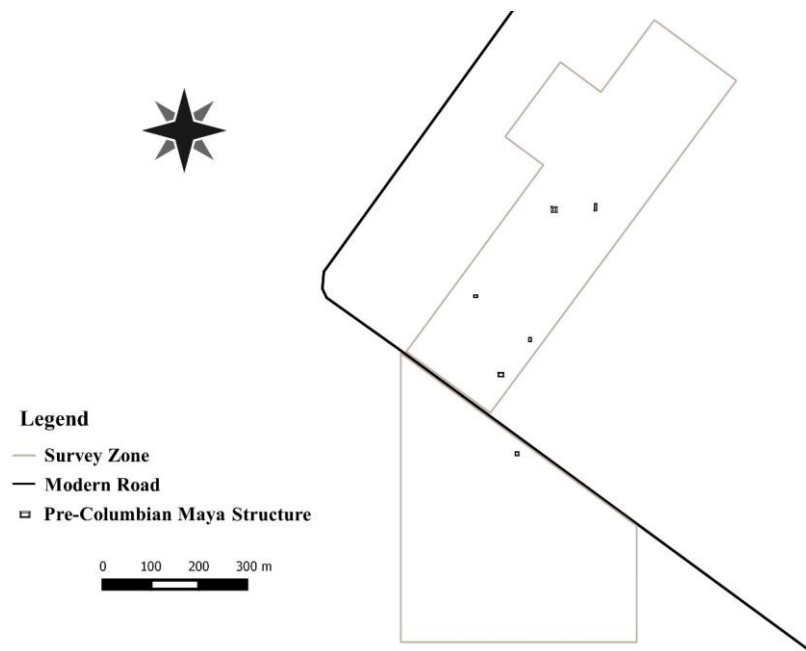
*Figure 10: Terminal Classic Occupation in Field A and B*



*Figure 11: Early Postclassic Occupation in Field A and B*



*Figure 12: Late Postclassic Occupation in Field A and B*



*Figure 13: Colonial Occupation in Field A and B*



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