

IMTO – Italian Mission to Oman

University of Pisa

SUMHURAM

Preliminary Report

February - April 2017 (SUM17A)



PRELIMINARY REPORT (SUM17A)

February – April 2017

The first IMTO's campaign of 2017 (SUM16A), under the direction of prof. A. Avanzini, started on February 4th and ended on April 6th 2017.

Excavation was performed in three areas with different goals.

In Area F, the deep sounding made in front of the main temple was enlarged in order to provide more clear informations about the chronology of the area.

In Area G, a new building was individuated in the southern part of the area. Two furnaces for the production of iron objects were excavated.

In Area B, the furnace for the production of bronze objects was completely excavated.

In Area H, in the squares m/8-9 to make a more easy path for the tourists and to connect the Area H with Area A.

Excavations were conducted on the field by Prof. Yuri Vinogradov, dr. Alessandra Lombardi and dr. Cleto Carbonara. Mr. Said al Mashani was also present on the site.

Prof. Vinogradov, dr. Alessandra Lombard and dr. Cleto Carbonara were responsible for documentation of pottery finds and objects.

Dr. Vittoria Buffa is responsible of a study of the pottery of the Area F.

Arch. Alessandro Massa was responsible for the architectural survey, the CAD digitalization and the updating of the plans of the city.

Arch. Valter Filatondi was responsible for the restoration activities carried on in the site.

The work of IMTO has been possible thanks to the collaboration of the Office of the Adviser of His Majesty the Sultan for Cultural Affairs in Salalah and in Muscat, in particular Ghanem al Shanfari, Said al Mashani, Ali al Kathiri, Said al Amri, Said al Salmi, Hassan al Jabri. We thank them all, together with all the Museum's team, for their kind helpfulness.

Sumhuram Preliminary Report SUM17A

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INDEX

1. Archaeological Report

- Excavation in Area F: deep sounding in A20.
- Excavation in Area G: two furnaces M810 and M817. New building BG2 and street A266.
- Area B: furnace in A178 and deep-sounding in A180.
- Area H: squares m/8-9

2. Restoration Report

- Building BG1. Restoration of the walls M780, 812, 815.
- City Wall. Restoration of the wall M287.

Archaeological Report

Excavation at Area F (trench supervisor Yuri Vinogradov)

During SUM17A campaign the works at Area F (A20) were carried out in two parts – northern and western.

Northern part of the area

The main task of investigations here was connected with the problem of sequence of the construction of the walls near the staircase (M768) in the room A227 and the western wall of the Temple (M40). During SUM15C campaign three unordinary walls were found here – M753, M754 and M766. The staircase was built between M754 and M756. It was supposed after SUM16A and SUM16B that this construction belonged to the “Early Temple” of Sumhram, but such conclusion must be supported with new archaeological materials.

The excavation at the northern part of the area (fig. 1) were started at the elevation of 26.13 m, where they were stopped in SUM15C. First of all *the square near the entrance to the temple* between walls M35, M40 and M753 was studied. The size of this square is $2,90 \times 0,50-1,30$ m. The upper layer **US 946** was investigated here firstly. It was the strata of loam of grey-brownish colour and rather soft in consistence with stones of small and medium size. Finds: bones of animals and fishes, marine shells, fragments of pottery and lime plaster. The excavations were stopped here when we received the altitude of 25,45 m.

When US 946 was removed (fig. 2), it became clear that the wall M753 (fig. 3-4) is the late one. This wall was built on one façade; the width is about 0,50 m. It has the height 0,45 m only, and it was built on the layer of construction of the Late Temple (stones small and medium size). The level of the foundation of this wall is at the altitude of 25,75 m.

The reason why M753 was built here is unclear. May be, it was necessary to construct near the eastern-southern corner of the Temple a kind of the special area or the platform ($3 \times 2,90$ m).

Then *the layer between walls M753 and 754* was studied. This square (fig. 5) has a form of a long triangular, and its size is $1,30 \times 0,75$ m.

US 949 was the upper part of this filling. It was very similar with US946 – loam of grey-brownish colour and rather soft in consistence with stones of small and medium size. Finds: fragments of pottery, bones of animals and fishes. US 949 was removed till the altitude of 25,76 m.

Then **US 951** was studied. It was a rather soft red-brownish loam with stones of small size. Finds were not numerous: potsherds, bones of animals and fishes. Many fragments of lime plaster were found in the lower part of the layer. US 951 was removed till the bedrock at the altitude 25,19 m. The height of the wall M754 of the staircase M768 is 1,10 m.

After these investigations became clear that the wall M754 was built earlier than the wall M40 (fig. 6). Firstly, it was dug the trench (its width in the upper part is 0,45–0,55 m) to built M40, and this trench partly destroyed M754 and all western part of the staircase. Secondly, the lowest stone of the wall M754 partly lays under the wall M40. It means that not only the wall M754 was earlier than the wall of the Temple, but the staircase M768 and the room A227 also.

It became clear that *the wall M753 must be removed* to demonstrate this construction sequence. When this wall was removed, we started to excavate all square between walls M35 and M754. The upper layer here is US 951, but to differ it from the layer with this number investigated earlier, it was titled as **US 951a**. It was a rather soft red-brownish loam with stones of small and medium size. Numerous fragments of lime plaster were found here. It became clear now that US

951 is the layer of destruction. Finds; animal and fish bones, marine shells, fragments of pottery. US 951a was removed till the level of 25,41 m. Big pieces of lime plaster fell on this level, and it means that the floor was found here (fig. 7).

US 951 floor was studied under US 951a. It was the layer of rather compact brownish loam with small stones and small fragments of lime plaster. Finds: animal bones and potsherds. This layer was removed till the altitude 25,18 m. It's the level of the bedrock.

During investigation of these layers **two walls** (M818 and M819) were found. Together with M754 they form the new room **A276**. The part of this room ($1,55 \times 1,25 - 2,30$ m) was investigated (Fig. 8-9). It seems that this room was trapezoidal in planning. US 951 (US 951a) was the filling of the room, and it was a layer of destruction of its walls.

M754 of the staircase M768 is the southern wall of the room A276. **M818** (fig. 10-11) comes from the bend of the wall M754 to the north, under the wall M35 of the porch. The length of this wall is 1,03 m, the width – 0,67 m, the height – 0,25 m. It forms an entrance to the west (the width – 0,82 m). One step of the threshold was built of undressed stone slabs in the western part of the wall, the slabs were put on the US051 floor. The width of the threshold is 0,32 m. **M819** (fig. 12-13) is the northern wall of the room. It was joined with M818 and covered by the wall M35 of the Temple porch. Its southern façade partly comes from the wall M35, the maximum width is 0,28 m. The length of this wall is 1,55 m, the width is 0,87 m. The irregular masonry of M819 consists of undressed stones of medium size, but it was built on the bedrock.

It necessary to stress that the wall M40 in this part was put on the culture layer US951 and related floor (fig. 14-15). This layer has thickness 0,10 m in the southern part and 0,30 m in the northern. It means that the wall M40 was built later, then the room A276.

It was said above that the staircase M768 was partly destroyed by the trench for construction of the wall M40, and the room A227 with this staircase was earlier then the Temple (BF3). After new investigations we received archaeological facts, which supported this hypothesis. Room A276, connected with staircase M768, is earlier then the Temple also. Now we can maintain that BF3 was rather late construction (fig. 16).

This list of layers of the northern part of the area in connection of the periods of building activity:

US 946, US949 – layers of existence of the Late Temple.

US 951, US 951a – layers of destruction of the Early Temple.

US 951 – layer of existence of the Early Temple.

Excavations at Area F, A20, trench near the staircase of the Late Temple (trench supervisor Yuri Vinogradov)

Western part of the area (A20)

The main aim of investigation at this part was connected with the need of further study of early layers of Sumhuram. Firstly, we had to study fully the pit **US 932** (fig. 17), which was partly excavated during SUM17A campaign, when the deep sounding near the staircase of the Late Temple was made.

This deep sounding was extended to the east for 2 m and to the north for 1,65 m.. The size of the trench at the site is 2,95 × 5,10-5,20 m now. The points of altitudes at this square are 26,64 in the north-eastern angle, 26,73 m in the south-eastern corner and 26,39 m in the north-western corner. During our work we continued the system of the US-numbers, which was used in the last campaign.

Excavations were started with **US 54 floor**. This layer consists of the solid red loam. Its thickness is about 5 cm only. Finds: potsherds, fragments of animal and fish bones.

US 55 floor was investigated under US 54 floor till the altitude 26,58 m in the east and till 26,29 m in the west. It consists of solid grey and brownish loam layer with a mixture of lime and ash (?). Finds: fragments of pottery, animal and fish bones, marine shells.

After removing of US 55 floor we started the investigation of **US 918**. This layer consists of the solid grey loam with stones of small size. Finds: animal bones and potsherds. US918 was removed till the altitude 26,55 m in the eastern part and till the 26,24 m in the western part.

After removing of US918 the investigation of **US 924** was started (fig. 18-19). It was the medium compact brown loam layer with stones of small and medium size. Finds: animal and fish bones, marine shells, potsherds, fragments of lime plaster, a fragment of iron nail. It was removed till the altitude 26,35 m in the eastern part and 26,12 in the western part. Two stones were found in the central part of the site.

The stain of a trench was fixed on this level. It's **US 954** (fig. 20-21). The trench comes near the wall M46 and then turns to the north, along the wall M45. The width of the trench is 0,45 m, the depth is 0,70 m (the altitude of the bottom is 25,63 m). It was filled with very soft red-brownish loam. The trench was covered by *US 54 floor* and *55 floor* and cut all layers starting from *US 918*. It's clear that the trench was dug to build the wall M46 because its foundation lays on the same level with the trench's bottom. M46 was relative late construction, may be it was built in the same period with the Late Temple. It's clear also, that in the early stage this wall was not the border of the street. The border of the early street was the early southern wall of the room A30. And so, it was more than 4,50 m width. In all probability such wide street can lead to a public house, may be, to a sanctuary or the Early Temple.

Under US 924 the layer **US 924 floor** was investigated. It was a compact grey loam strata about 0,20 m thick with small pieces of charcoal and stones of small size, divided by the thin layer of brown loam (3 cm thick only) without any finds. But finds in US924 floor were rather numerous: animal bones and potsherds. US 924 floor was removed till the altitude 26,16 in the eastern part and 25,91 m in the western part.

US 924 floor was cut with **a primitive hearth** (fig. 22) of the oval form (the investigated part is 1 × 0,75 m, 7 cm deep). It was found at the northern part of the area. The bottom of the pit was covered with stones of small size. It was filled with ash. Only some animal bones were found here. When US 924 floor was removed, we started investigation of **US 925**. It was the solid layer of brown loam with numerous stones of small size. Finds: animal and fish bones, marine shells, fragments of the lime plaster, potsherds. US925 was removed till the altitude 25,89 m in the eastern part and till the altitude 25,94 m in the western part.

Under this layer the new strata **US 925 floor** was investigated. It was the solid layer of grey-brown loam with inclusions of stones of small size and small pieces of charcoal. The preservation of this floor was rather bad. This layer was removed till the altitude 25,82 in the eastern part and till the altitude 25,83 in the western part. Finds: animal bones, fragments of pottery, fragments of the lime plaster and one bronze coin (?) of small size.

The layer US 925 floor was cut with **the primitive hearth** (fig. 23-24), part of which was excavated in the campaign of SUM 16B. This heart partly comes under the staircase of the Temple; the size of investigated part is $1,19 \times 0,52$ m, 0,31 m deep. The maximum depth of its bottom is at the altitude 25,54 m. The pit of the hearth was filled with stones of small size and ash. Finds: fragments of animal bones and no one potsherd.

The construction of **the porch of the Late Temple** was understood better in this campaign. On these two photos we may see that two roughly dressed stones were put under the first step of the staircase. The size of the southern stone is $0,46 \times 0,17 \times 0,18$ m, the size of the northern one is $0,45 \times 0,16 \times 0,23$ m.

The layer US 925 floor covered **US 927**. It was the layer of the solid brown loam with stones of small size. Finds: animal bones, marine shells, potsherds, bronze coin and fragment of the bronze object. Some fragments of amphorae of the Dressel 2-4 type were found here. US927 was removed till the altitude 25,67 m in the eastern part of the area and till the altitude 25,71 m in the western part.

On this level **the layer of very solid brown loam**, but not a bedrock, was received. The pit **US 932** was dug from this level. It was partly excavated in the campaign of SUM 16B. The grey spot of the pit (approximately $2,45 \times 1,45$ m) with stone chips and fragments of animal was fixed on this surface again. The pit **US 932** (fig. 26) was dug in this solid brown loam. It has an oval form ($2,62 \times 1,80$ m, 0,11-0,15 cm deep. The maximum depth of the bottom is at the altitude 25,53 m. The pit was filled with soft grey loam with flecks of charcoal, numerous stones of small size and pieces of burned mudbricks. Finds: animal bones and potsherds, bronze coin, fragment of the bronze needle and fragment of an bronze object of unknown purpose.

Two primitive hearth, US 932a (fig. 27-28) of the common construction (eastern and western) were situated at the northern part of the pit US 932; the size of the eastern hearth is $0,82 \times 0,69$ m, the size of the eastern one is $0,76 \times 0,69$ m. Both of them were filled with small stones and ash. Finds: animal bones and some potsherds.

After the study of the pit US 932 we started the investigation of the **layer US 970**. It was the layer of very hard brown loam with crumbled mudbricks and stones of small size. US 970 was removed till the altitude of 25,56 m. Finds: potsherds, animal and fish bones, marine shells, bronze coin, bronze object, iron nail. This layer was cut with two **primitive hearths**. The first hearth (fig. 29) was in the western part of the site. It had an oval form ($1 \times 0,75$ m). The second one ($0,72 \times 0,55$ m) was in the north-eastern part of the site.

US 972 was investigated under US 970. It was the layer of light brown loam medium compact in consistence. Finds: fragments of pottery, animal and fish bones, marine shells, small weight from the fragment of marine shell, iron nail, three bronze coins and one half of the coin. This layer was removed till the altitude 25,49 m in the eastern part and till the altitude 25,41 m in the western part.

US 972 was cut with the primitive hearth and the small trench. **The primitive hearth** was fixed in the south-east corner. It had typical construction of oval form ($1,42 \times 0,79$ m).

The trench (fig. 30) was dug in the central part of the site. Its size is $1,96 \times 0,45$ m, the depth is at the altitude 2,47 m in the southern part and 2,40 m in the northern. The trench was filled with grey loam and stones of small size. Finds: rare fragments of animal bones. Why this trench was dug here is unclear. When US 972 was removed, the layer **US 972 floor** was opened in the western part of the site. But the strata of grey loam with numerous stones of small size and stone chips was fixed in the eastern part (US 978, see lower). This stone strata comes under US 972 floor, and so it was studied firstly.

US 972 floor (fig. 31-32) was a layer of solid brown loam. Finds: potsherds, animal and fish bones, marine shells, the weight from the fragment of marine shell. It was removed till the altitude of 25,30 m.

US 972 floor covered **US 978**. It was a strata of stone chips. As usual at Sumhuram, such strata covers the bedrock. Finds: numerous animal and fish bones, potsherds, fragments of marine shells, fragment of stone (ivory?) object with geometrical ornament, crucible for bronze production, some iron objects, stone bead. It necessary to stress that in this layer numerous iron blooms were found. **The heath** of good construction was found in the upper level of this layer, in the west-eastern corner of the trench (fig. 33-34). It has an oval form (0,97 × 0,93 m). This heath is made of clay (5 cm thick) on the foundation of small stones. The surface of the construction is at the altitude of 25,33 m.

The level of bedrock was received at the altitude of 25,24 m in the eastern part of the trench and at the altitude of 24,96 m in the western part.

Two pits were dug in the bedrock. The first of them was found near the southern part of the heath in the south-western corner of the area. It comes in western direction and looks like a trench (1,65 × 0,86 m), the depth is 0,17 m (the altitude of bottom – 24,81 m). The pit was filled with ash; finds: fragments of animal bones.

The grey stain of the pit was fixed in the western part of the area. The pit **US 979** (fig. 35-37) was partly excavated here. The diameter of this pit is 2,40 m, depth is 0,30–0,35 m (the altitude of bottom is 24,63–24,71 m). More then half of the pit was excavated. Finds: numerous potsherds, animal and fish bones, marine shells, a lot of iron blooms, some iron objects (nails, fragments of knives), pendant from the fragment of pearl shell, bronze plate with an opening, fragment of the silver (?) object. The pit US 979 had *the unordinary filling*. The upper layer (0,13 cm thick) consisted from the grey loam of soft consistence with stones of small size and stone chips. The layer of the black ash with small stones (7 cm thick) laid under the grey loam. This layer covered the strata of yellow colour (4 cm thick). It seems that it consisted from crushed fish bones. No one potsherd or fragment of animal bone was found here. One more layer of the black ash with small stones (11 cm thick) laid on the bedrock (fig. 38). The pit US 979 is the earliest structure investigated at the area in this campaign. The fragment of the handle of the amphora of Dressel 2-4 was found here. It means that this pit belongs to the 1st century AD, may be to the beginning of the century.

The entrance to the room A227 was investigated also. Originally the threshold of this entrance was made on the level of 25,63 m. But when the level of the street grown because of accumulation of culture layer, new threshold was made. A big undressed stone slab (0,62 × 0,22 × 0,16 m) was put here. The upper surface of this slab is at the altitude of 26,08 m (fig. 39).

In conclusion of the report necessary to stress, that excavations at the western part of the area gave us new information about habitation at this part of the ancient city.

List of layers of this area:

US 54 and US 55 belong to the period of functioning of the Late Temple.

US918 is a layer of its construction.

US924 is the strata of destruction of the Early Temple.

US924 floor, US925, US925 floor, US927, US 932 and US 932a, US 970, US 972, US 972 floor are the layers of functioning of the Early Temple.

US 978 and the pit US 979 are the earliest archaeological complexes of this area. It's very unordinary that numerous iron blooms and iron objects were found here. It seems that this strata and this pit were connected with function of the ancient forge. In all probability this forge worked here before the Early Temple of Sumhuram.

Excavation in Area G, building BG1, rooms A262 and A264 and new structures M810 and M817 (trench supervisor: Cleto Carbonara)

The building BG1 (fig. 40) is located in the south-eastern part of the Area G, immediately to the north of the storehouses complex of Sumhuram. It is a huge building covering an area of about 10 m², and it was already object of archaeological investigation in the previous campaign SUM16B.

It has been decided to dig in the room A262 with the aim to understand if the building had several constructional phases.

A262

It is the central corridor of the building BG1. It is delimited by the walls: M778 to the North, M779 to the West, M799 to the South, M780 to the East. In the southern part of the room there is the staircase to reach the upper floors of the building. The excavations of SUM16B stopped at the elevation of 29.33 m. This elevation corresponds to US870 floor, which is partially preserved only in the northern part of the room (fig. 41).

Below US870 floor, **US947** was excavated. It is an accumulation layer made of loam loose in consistence and grayish brown in color with a lot of ashes, charcoals and some limestone blocks small and medium in size. The layer has a slop from South to North. US947 returned a big amount of animal bones big in size and a big amount of iron slags. US947 floor was found at the elevation of 29.07 m. only in the south-western corner of the room. It is a packed loam floor with some traces of plaster grayish in color. It has a thickness of 0.08 m. and a slope toward North. In the Northern part US947 floor has a plaster coating.

In the centre of the room US947 floor is not preserved. Here, the structure **M810** is coming to the light. It is oriented East-West. It is made by two rows of mudbricks and sandstone slabs ending against a conglomerate of limestone blocks medium in size (fig. 42).

Below US947 floor, three layers were excavated. **US956** in the southern part of the room. It was found at the elevation of 28.99 m. US956 is an accumulation layer located in the southern part of A262. It is made of loam with a clay matrix, medium compact in consistence and reddish brown in color. Some limestone chips have been noted in it. Several lenses of burnt loam with charcoals have been also noted. In particular a wide lens of ashes covered **US956 floor** that is a packed soil reddish in color with a slope from South to North. US956 floor was found at the elevation of 28.51 m. US956 returned a good amount of iron slags and animal bones. In the centre of the eastern side of the room a semi-rounded pit cut US956 floor. It is about 15 cm deep. It was filled by **US961**, a layer made of burnt loam very loose in consistence and dark gray in color with a lot of charcoals and ash. The pit was also filled by few limestone blocks small in size was in it. US961 returned few animal bones, crumbled shells and iron slags. Its bottom was found at the elevation of 28.37 m.

In the centre of the room A262, **US957** was excavated. It is an accumulation layer made by loam loose in consistence and gray in color. It was found at the elevation of 28.81 m. A lot of traces of burnt with ashes and charcoals was found in it. The layer returned a good amount of iron slags and animal bones big in size. It filled and covered the southern side of the structure M810. US957 It was found inside and to the South of the structure M810. US957 partially covered the northern part of US956.

US958 was excavated in the northern part of A262. It was found at the elevation of 29.01 m. It is an accumulation layer covering the northern side of the structure M810 and the northern part of the US957. US958 is mainly composed by loam loose in consistence and dark gray in color with few small calcareous stones and a lot of traces of burnt, ash, and charcoals. Also a good amount of animal bones come from this layer. US958 returned also a good amount of Iron slags and fragments of glass. No floors were found relating to US958. It stops at the elevation of 28.53 m.

Below US958, **US962** (fig. 43) was excavated. It is an accumulation layer covering the lower part of the northern side of the structure M810. It is mainly composed by loam with clay matrix, medium compact in consistence and yellowish brown in color. Some limestone blocks small, medium and big in size were found in it. US962 returned a good amount of animal bones and crumbled shells. Also iron slags come from this layer. US962 rests on a floor made by a packed soil grayish brown in color with a light slope from South to North. US962 floor was found at the elevation of 28.42 m.

M810 (fig. 44-45) was interpreted as a furnace for the iron working. The big amount of traces of burnt, ashes and burnt loam covering and filling it, and also the big amount of iron slags (fig. 46) found around the structures support this interpretation. The furnace is composed by a corridor delimited by two parallel walls built with mudbricks and sandstone slabs. The bottom of this corridor is made of clay. To the west of the corridor there is a small chamber almost rectangular in shape. It is covered by limestone blocks with a small opening on the top. The chamber and the corridor are separated by a limestone slab. On the northern side of the corridor there is a small rectangular opening maybe used as exit for the slags. Always on the northern side, outside the furnace there is a limestone basin rectangular in shape and with traces of rust on the bottom.

A264

It is the south-western room of the building BG1. It is delimited by the walls: M778 to the North, M788 to the West, M801 to the South and M779 to the East. The excavation of SUM16B stopped at the level of US892 floor, at the elevation of 29.85 m (fig. 47).

Below US892 floor, **US965** was excavated. It is an accumulation layer with an exceptional thickness of about 0.80 m. US965 is mainly composed by loam with a clayish matrix, reddish brown in color and compact in consistence. Some crumbled mudbricks and few limestone blocks small in size have been noted in it. US965 also returned a small amount of animal bones and crumbled marine shells, and few iron slags. **US965 floor** (fig. 48) consists of a packed soil reddish in color with some mudbricks along the northern side and in the south-western corner of the room. It was found at the elevation of 29.01 m.

US965 covered **US973**. It is an accumulation layer found in the whole area of the room A264. US973 is mainly composed by loam with a clayish matrix, reddish brown in color and medium compact in consistence. Some iron slags, charcoals and ashes, and few limestone blocks small in size have been noted in it. The layer is also characterized by the presence of some crumble mudbricks. US973 also returned a good amount of animal bones and marine shells. No floor is related to US973. At the elevation of 28.75 m, on the eastern side of the room, starts to emerge a

structure mainly composed by clay, mudbricks and few sandstone slabs. This new structure is similar to M810 excavated in A262 and has been named **M817** (fig. 49). M817 was filled and partially covered by **US977**. This layer was covered by US973 and it was found at the elevation of 28.61 m. US977 was found in the whole area of the room A264. It is an accumulation layer made by loam loose in consistence and gray in color. A lot of traces of burnt with ashes and charcoals was found in it. The layer returned a good amount of iron slags and a good amount of animal bones big in size and marine shells. US 977 rests on a not well preserved floor made of compact loam reddish in color, with some mudbricks to the south of the structure M817. To the East some traces of burnt has been noted on it. It was found at the elevation of 28.37 m. and slightly slopes from South toward North.

M817 (fig. 50) is very similar to the structure M810 found in A262. So it is possible to interpret also it as a furnace for the iron working. It is made by two parallel walls of mudbricks and clay. It is impossible to establish the shape and the size of the fire chamber because the western part of M817 comes under the western wall of A264. It looks like it was covered by slabs. On the southern side there is a small opening rectangular in shape (fig.51). On the northern side there is a limestone mortar truncated-cone shaped.

Excavation in Area G: street A266 (trench supervisor: Cleto Carbonara)

A266 is a street running from the square A260 to the north to the storehouses complex to the south. It is located to the west of the building BG1 and to the east of the new building BG2. A266 is 9.65 m long and 3.57 m wide. It was already partially excavated in the previous campaign SUM16B (fig. 52).

The first excavated layer is **US890**. It is an accumulation layer about 0.15 m thick and with a slope from south to the north. It is mainly composed by loam reddish brown in color and loose in consistence. A good amount of limestone blocks and sandstone blocks and slabs big, medium and small in size, was found in the western and northern part of the street. Few charcoals have been noted in this layer. US890 also returned a good amount of animal bones and pottery shards. US890 rests on a floor made by a packed soil grayish in color and compact in consistence. **US890 floor** (fig. 53) has a slope from south to the north and its elevation changes from 30.21 m to 30.09 m.

Below US890, **US874** was excavated. US874 was already partially excavated in the previous campaign. During SUM16B, US874 floor was reached only in the southern part of the street A266, near the north-western corner of the building BG1. US874 floor was found at the elevation of 29.75 m.

US874 is an accumulation layer about 0.40 m thick. It is grayish brown in color and compact in consistence. Several limestone blocks were found in the southern part of A266 and in its north-western part. US874 is also characterized by the presence of charcoals and traces of lime. US874 also returned a good amount of animal bones and marine shells. Some iron slags also come from this layer. US874 wasn't completely excavated. The works in the street A266 stopped to the elevation of 30.05 m (fig. 54).

The street A266 linked the square A260, located at its northern end, to the storehouses complex to the south. It is delimited by the wall M788 to the East, M823 to the West, and M116 to the South. A fourth wall (M827) with a North-South orientation and leaning on M823 and M116, closes the north-western part of A266 (fig. 55).

Excavation in Area G, new building BG2 (trench supervisor: Cleto Carbonara)

During the archaeological campaign SUM17A, the area located to the West of the street A266 has been excavated. Here, before the excavations, a situation of collapse of limestone and sandstone blocks big and medium in size it was visible. Also some stone alignments with different orientations were visible (fig. 56).

The excavations start from the northern part of the area. Here the **US966** has been excavated. It is an accumulation layer consisting of a collapse of sandstone and limestone blocks big and medium in size, mixed with loam very loose in consistence and light reddish brown in color. US966 returned few animal bones and some iron slags. US966 stopped at the elevation of 30.47 m. No floors were found related to this layer.

US966 covers to the East the remains of a squared room, named **A273** (fig. 57). It is delimited by the walls M820 to the South, M828 to the East, M829 to the North and M830 to the West. The entrance to A273 is on the western side and it has a East-West orientation. In A273, **US981** has been excavated. It is an accumulation layer with a light slope from West to the East. It consists in loam medium compact in consistence and reddish-brown in color, mixed with few calcareous stones small in size. A concentration of collapsed sandstone blocks and slabs was located in the western part of the room. Some traces of burnt are located in the south-western corner of the room and along its northern wall. Seven *Oliva Bulbosa* shells come from the south-western corner of the room. They probably were used as beads. US981 rests on a packed soil reddish-gray in color interpreted as floor. **US981 floor** (fig. 58-60) has a light slope from the West to the East. Its elevation changes from 30.13 to 30.08 m. US981 floor was cut by a fireplace with an irregular shape about 0.18 m deep. It was filled by burnt loam loose in consistence with small limestone blocks. In the south-eastern corner of the room there are two alignments set in perpendicular way.

To the West of A273, **US974** (fig. 18) has been excavated. It was covered by US966. US974 is an accumulation layer mainly composed by loam very loose in consistence and red in color, mixed with some calcareous stones small in size. US974 covered the northern face of the wall M820. US974 rests on a floor which has a slope from the South to the North. **US974 floor** (fig. 58-59) is a packed soil grayish in color and its elevation changes from 30.42 to 30.36 m.

A274

From the level of US974 floor, through a threshold and an opening in the western part of M820 (fig. 59), it was possible to enter in the room A274. It is a rectangular long corridor with a North-South orientation. It is delimited by the walls M820 to the North, M821 to the West, M822 to the South, and M824 to the East. In A274, **US975** has been excavated. It is an accumulation layer mainly composed by loam with a clayish matrix, reddish-brown in color and loose in consistence. Loam was mixed with limestone blocks small and medium in size. In the northern part of the room there were some traces of burnt and ashes. The southern part of the room was interested by a collapse of mudbricks and sandstone blocks. **US975 floor** (fig. 61) is a packed soil compact in consistence and grayish in color. In the southern part of the room the floor was covered by sandstone slabs on which a big storage jar was set. Its elevation changes from 30.39 m to the south, to 30.31 m to the north. The western part of the corridor is occupied by a staircase leading southward. It is composed by six steps in the northern part and a kind of platform made with mudbricks to the south (fig. 62). Along the eastern wall of the room, M824,

there are two whale vertebrae and a rounded stone with a flat top that probably were used as columns (fig. 63).

A275

A275 is a small squared room located to the east of A274 and to the south of A273. It is delimited by the walls: M820 to the north, M823 to the east, M826 to the south and M824 to the west. An opening located at the northern end of M824 links A275 with A274. In A275, **US980** has been excavated. It is an accumulation layer made by loam grayish in color and loose in consistence, with ashes and stones small in size. A collapse of sandstone slabs is located along in the eastern part of the wall. US980 returned few fragmentary animal bones. US980 rests on a packed soil reddish-gray in color and compact in consistence (fig. 64-65). It was found at the elevation of 30.27 m.

A277-A278

They are two small rooms located to the east of A274 and to the north of A275. They are delimited by the walls: M826 to the north, M823 to the east, M822 to the south and M824 to the west. The two rooms are separated by the wall M825 with a East-West orientation, leaning on M823 and M824. A277 is the northern room. It is squared in shape, and through an opening with a threshold in M826, it was linked with A275. A278 is a small and narrow corridor to the south. There are no doors linking this corridor with other rooms. The same layer, **US982**, has been excavated in the both rooms. It is an accumulation layer that covered M825. It consists of loam reddish-brown in color and loose in consistence mixed with sandstone and limestone blocks small in size. Charcoals and traces of burnt were in the south-western corner of A275. **US982 floor** is a packed soil reddish-brown in color and compact in consistence. It was found at the elevation of 30.12 m in A277. In A278, US982 stops at the elevation of 30.52 m on a bad preserved packed soil grayish in color (fig. 66).

The new building BG2 is located in the southern part of the Area G. It is not very big in size, about 6 x 3.40 m², and it doesn't follow the typical plan of the residential building of Sumhuram. BG2 has a corridor with a staircase on its western side with a North-South orientation. to the east there are three rooms, among which the southern one is only a small corridor without opening, with an East-West orientation. Another room (A273) was added later to the building. For the construction technique, it was almost completely built with sandstone slabs, and for a preliminary analysis of the pottery, many shards of greenish and bluish glazed and some fragments of Black and Gray, it is possible to assign the building to the last occupational phase of Sumhuram.

Excavation in Area B: furnace in A178 and deep sounding in A180 (trench supervisor: Cleto Carbonara)

The excavations in A178 were already carried out in previous campaigns, SUM13A, SUM13C and SUM14A. The furnace that comes below the wall M245 was found during SUM13A and partially excavated during SUM14A. It is a simple hole 0.45 m deep dug in the floor with an irregular shape (fig. 69). Its northern side is straight, while the eastern, western and southern side are rounded. Its walls are covered with plaster, but this coating unfortunately is preserved only

on the western side of the structure. Also the bottom of the furnace shows a plaster coating. The lower part of the furnace is filled by **US984**. It is an accumulation layer about 0.07 m thick, made by loam very loose in consistence and grayish in color. A lot of ash and charcoals were found on the bottom of the furnace. US984 returned few pottery shards and few bones and burnt shells. Mudbricks and pieces of burnt clay also come from this layer. In the furnace it was also found a complete crucible (fig. 70-71).

The deep-sounding in A180 was dug in the south-western corner of the room. This sounding has the aim of understanding the real extension of the furnace northward and its relationship with the wall M245. Here **US983** has been excavated. It is a very thick accumulation layer with clayish matrix. It is mainly composed by loam reddish-brown in color and compact in consistence mixed with sandstone blocks small and medium in size, fragments of mudbricks and charcoals. It covers directly the bedrock found at the elevation of 28.40 m. It covers also a wall oriented East-West found along the northern limit of the sounding, M831 (fig. 72-73).

The furnace doesn't extend northward. Its northern limit has been found below the wall M245. This wall was partially built above the furnace, but didn't destroy its structure. Its southern face was built on the level of US546 floor, while the face to the north founds on the bedrock.

Excavation in Area H, square m/8-9 (Trench supervisor: Alessandra Lombardi)

The archaeological investigations in Area H have been carried out during four weeks and half (6th February-7th March).

This area, placed in front of the modern access to the city (fig. 74), was been partially excavated during two previous campaigns: SUM13B and SUM16A.

The main aims of this investigation were:

1. the clarification of the wall structures partially exposed there (especially M774 and M596);
2. the unification with the important and well documented Area A, placed at the north side of the city;
3. a better arrangement of an area located exactly along the tourists path.

At the beginning of this excavation campaign (fig. 75), the situation in Area H showed various differences in height: the "wall" M774 was exposed, in its eastern face, for a row of limestone blocks, above which a thick stratum of grey hard plaster was spread out, clearly in order to house the two remaining limestone large slabs (originally in number of five). At this level the remains of the plastered floor US612 (=US858) were still visible (elevation: 29.21 m).

On the contrary, on the western face of M774, the level coincided with the hard grey plaster of the wall itself (elevation 29.37 m), which expanded in west direction and continued under the west section. This layer of plaster coincides with the US856 floor, identified in the previous campaign (fig. 76).

On the other side of the area, the exact northern limit of the wall M596 was not well defined.

The archaeological investigations were focused in the space between these two parallel structures (M774 and M596) and at north of them, to verify the presence of possible orthogonal walls, which could delimit a closed room. A very hard layer, composed of greyish compact soil mixed to white plaster with animal bones of small size compacted inside, was removed,

revealing the exact north limit of the wall M596, which coincides with a slightly recessed limestone squared block (fig. 77). This layer was nothing but the thickness of the hard floor made of plaster (US612), already identified during the SUM13B campaign, which incorporated also the north sector of the wall M596.

US612 covered a soft occupation layer (US953), dark grey-brown in colour, made out of loam mixed to ashes, a large amount of animal bones (also of big size), some shards and marine shells. This layer ended in a compacted surface (a probable floor), with large burn stains of black-reddish colour. At the limit with the west section an oval small pit (US959), 50x37 cm in size and 13/14 cm in depth, which cuts US953, has been discovered (fig. 78). Its internal walls are made of porous stone (calcarene or sandstone), its bottom is very hard with a thin crust brown-rust in colour, while its filling was constituted by the US953 itself.

The surface of US953 floor appears irregular with sensible differences in elevation (from 29.08 to 28.92 m). This explains the fact that another compact stratum (US960), dark grey in colour, composed by hard mortar with pebbles inside and stone flakes, has been found above US953, near the north face of M774. It was probably a mortar stratum (4/5 cm in thickness), placed in the area for levelling certain irregularities (fig. 79).

The digging, in this sector, has stopped at this level, which coincides with the floor (US579) of the street A206 in area A. The two areas (A and H) are finally unified (fig. 80) at least from an ideal point of view, being their archaeological relations not completely clear: the floor US579 unearthed in street A206 has not been found beyond the limit of the southern wall of BA13.

The excavation has been carried out, as far as the bedrock, only in the sector between the walls M774 and M596, starting from the southern previous section (cut in SUM13B) to the north limit of M774.

In this “corridor”, partially investigated during the SUM13B campaign, under the US960, several occupation layers have been found. The first one, US964, light brown in colour, was compact and rather uniform with white sediments. This US produced some animal bones and a few pottery fragments. In some parts it appears sandy, constituted by Aeolian deposit compacted in ancient times, an element which indicates a period of abandon of this area during the city life. This layer ended in well preserved and uniform floor, US964 floor (elevation: 28.80 m), of packed earth, light brown-grey in colour with pebbles and small bones compacted inside (fig. 81). A rounded plastered basin (M811) for the preparation of lime (1.10x1.00x0.30 m in size) was probably in use at the same time than the floor US964. The structure M811, similar to others discovered in Area A, was leaning on the wall M596. It was made of packed earth, which forms its perimeter wall (from a max of 38.0 cm to a min of 10.0 cm in thickness, on the south side, in correspondence with the section made in SUM13B); all its surfaces (perimeter wall and internal cavity) were covered by white lime. The basin extended, in its southern side, with some large stones, one of which preserves a grey plaster (fig. 82). The upper cavity of M811 was filled by the US963: a very soft filling grey-greenish in colour, with white inclusions (gypsum or lime).

The US964 floor covered another thick occupation layer (US968) with related floor, characterized by dense traces of use: large amount of animal bones, also of big size (probably of bovine), pottery shards, iron slags and charcoals. This layer is reddish-light brown in colour with whitish sediments. At its bottom, near the floor, a large amount of stones of small and medium size have been found, stones which appears intentionally laid into the filling in order to regularize the ground. The US968 produced a fragment of a small cup in *terra sigillata* (US968,1).

This layer ends in a compact but irregular surface (US968floor, elevation: 28.52 m), which could be one of the steps in the levelling of the bedrock, upon which the walls have its foundations (fig. 83).

Lastly, a very compact layer (US969) of levelling above the bedrock has been discovered. It is a thin layer of compacted earth mixed to large pieces of clay mortar. Inside a large amount of stones of small and medium size, found especially in the northern part of the area, many charcoals, a few animal bones and two shards (one of which is an amphora wall) have been found. The bedrock surface shows, as usual, many irregularities (elevation: from 28.50 to 28.38 m) (fig. 84).

As results from the above exposed data, Area H, certainly during its ancient phases, housed an “industrial district”, as clearly shown by the plastered basin M811 and traces of burnt around the small oval pit (US959) in the northern sector. The two parallel walls, M596 and M774, founded on the last “levelling layer” US969, not defined a closed room, but probably only an open working sector. This interpretation of the area is coherent also with the results emerged during the SUM13B campaign.

In a more recent phase, during which the city was subjected to important changes, also the area H was object of a general re-organization, probably after a gap of un-precise duration. This is suggested by the two last plastered floors (US612 and US856), which obliterated the previous arrangement, among which the basin M811 and the southern part of the wall M774, which appears partially collapsed in ancient times (fig. 85). This last element supports the hypothesis of a period of decay in this area. The possibility that this wall was connected with the southern aligned wall M597, revealed inconsistent: between the two walls there were many collapsed stones (among which a large slab of the same kind of the two ones found above M774), inside the Aeolian sand, lacking completely the foundation stones row (fig. 86). If this gap was a possible opening towards the large western room is not clear.

Therefore, during the more recent phase (at the level of US856floor) the wall M774 consisted only in a row of limestone large slabs, emerging from the floor itself, whose function remains unclear. It was probably a street furniture, or a decor inside an extended urban area.

At the same time, the northern end of the parallel wall M596 was plastered and incorporated in the floor US612.

Lastly, the huge accumulation (fig. 87) located to the south-west of the structure M774 has been removed. It was a thick destruction layer (US948) with a large amount of collapsed stones, originating from the perimeter walls of a large (un-numbered) room. This room, already partially identified in the IMTO general plan of this urban sector, was built against the southern city walls, developing in length. The numerous stones of different size were mixed with crumbly earth and very soft Aeolian deposit, animal bones (among which some whale vertebrae, probably inserted inside the walls), marine shells and pottery fragments. This layer produced also a very nice bronze figurine representing a horned animal, probably a gazelle (see object card MB993).

The removal of this accumulation has allowed us to expose the north-western walls of this long room; from the west: M806, M807, M808 and M809 (where the walls M808 and M809 constitute the two elements of an offset in the northern perimeter wall) have been cleaned on their top (figs 88-89). While the removal of US971 at the south-eastern corner of this room has revealed the eastern wall M816 (fig. 90).

At the same time, also the collapse of large limestone blocks – belonging to an un-excavated building identified on the surface and located to the south of BA13 – has been removed, allowing

a good view of the western half of the site from the bench placed near the south access to the city (fig. 91).

Figures



Fig. 1: Northern part of the area before excavations, view from the west



Fig. 2: Northern part of the area after removing of US 946. View from the east



Fig. 3: The wall M753, view from the north



Fig. 4: The wall M753, view from the north



Fig. 5: The area between walls M753 and 754, view from the north



Fig. 6: Contact walls M754 and M40, view from the north



Fig. 7: Fragments of lime plaster on US 951 floor, view from the east



Fig. 8: Part of the room A276, view from the west



Fig. 9: Part of the room A276, view from the west



Fig. 10: The wall M818 (the threshold of the room A276), view from the east



Fig. 11: The wall M818 (the threshold of the room A276), view from the northt



Fig. 12: The wall M819 under the wall M35 of the porch, view from the south



Fig. 13: The wall M819, view from the south



Fig. 14: Culture layer under the wall M40, view from the east



Fig. 15: Culture layer under the wall M40, view from the east



Fig. 16: Part of the staircase M768 cut with the trench of the wall M40, view from the north



Fig. 17: The area before excavations, view from the west



Fig. 18: US 924, view from the west



Fig. 19: US 924, view from the east



Fig. 20: The trench US 954. view from the east



Fig. 21: The trench US 954, view from the west



Fig. 22: Primitive heath in the northern part of the area, view from the west



Fig. 23: Primitive heath under the porch of the Temple, view from the east



Fig. 24: Primitive heart under the porch of the Temple, view from south



Fig. 25: Part of the feeling of the pit US 932, view from the south



Fig. 26: The primitive heath and the pit US 932, view from the west



Fig. 27: The eastern primitive heath (US 932a,)



Fig. 28: The western primitive heath (US 932a)



Fig. 29: The first primitive heath of US 970, view from the south



Fig. 30: The trench of US 972, view from the south-west



Fig. 31: US 972 floor and US 978, view from the west



Fig. 32: US 978 and US 972 floor, view from the east



Fig. 33: The heath in the south-western corner of the trench, view from the north-east



Fig. 34: The heath in the south-western corner of the trench, view from the south-east



Fig. 35: The pit US 979, view from the east



Fig. 36: The pit US 979, view from the west



Fig. 37: The pit US 979, view from the north



Fig. 38: The filling of the pit US 979, view from the south



Fig. 39: The entrance to the room A227 from the street, view from the north



Fig. 40 General view of building BG1 from North



Fig. 41 A262 before SUM17A excavations



Fig. 42 US947 floor with the emerging structure M810



Fig. 43 A262 : US956fl ; M810 and US962



Fig. 44 M810 and US962 floor



Fig. 45 M810



Fig. 46 Iron slags sample from US957



Fig. 47 A264: US892 floor before SUM17A excavations



Fig. 48 A264: US965 floor



Fig. 49 Discovering M817 in A264



Fig. 50 M817 and US977 floor in A264



Fig. 51 Opening on the southern side of M817



Fig. 52 Street A266 before SUM17A excavations



Fig. 53 US890 floor



Fig. 54 Street A266 from North



Fig. 55 South-western corner of A266



Fig. 56 Area to the West of the street A266



Fig. 57 Excavated area after the removal of US966



Fig. 58 A273 after excavation and US974 floor



Fig. 59 US974 floor with the entrances to A273 and A274



Fig. 60 US981 floor with fireplace and two perpendicular stone alignments



Fig. 61 US975 floor



Fig. 62 Particular of the staircase



Fig. 63 Whale vertebrae and rounded stone along M824



Fig. 64: Entrance to A275 and US980 floor



Fig. 65: US980 floor and entrance to A277



Fig. 66: A277 and A278 after excavation



Fig. 67: General view of building BG2



Fig. 68: A178 before excavation



Fig. 69: Furnace in A178 after excavation



Fig. 70: Complete crucible from the furnace



Fig. 71: Findings from the furnace



Fig. 72: Deep sounding in A180 from north



Fig. 73: Deep sounding in A180 from east



Fig. 74 – The southern modern access to the city of Sumhuram.



Fig. 75 – Area H at the end of SUM16A campaign, from the east.



Fig. 76 – The plastered floor US856, from the north.



Fig. 77 – The north limit of wall M596, from the north.



Fig. 78 – US953 floor with pit US959, from south-west.

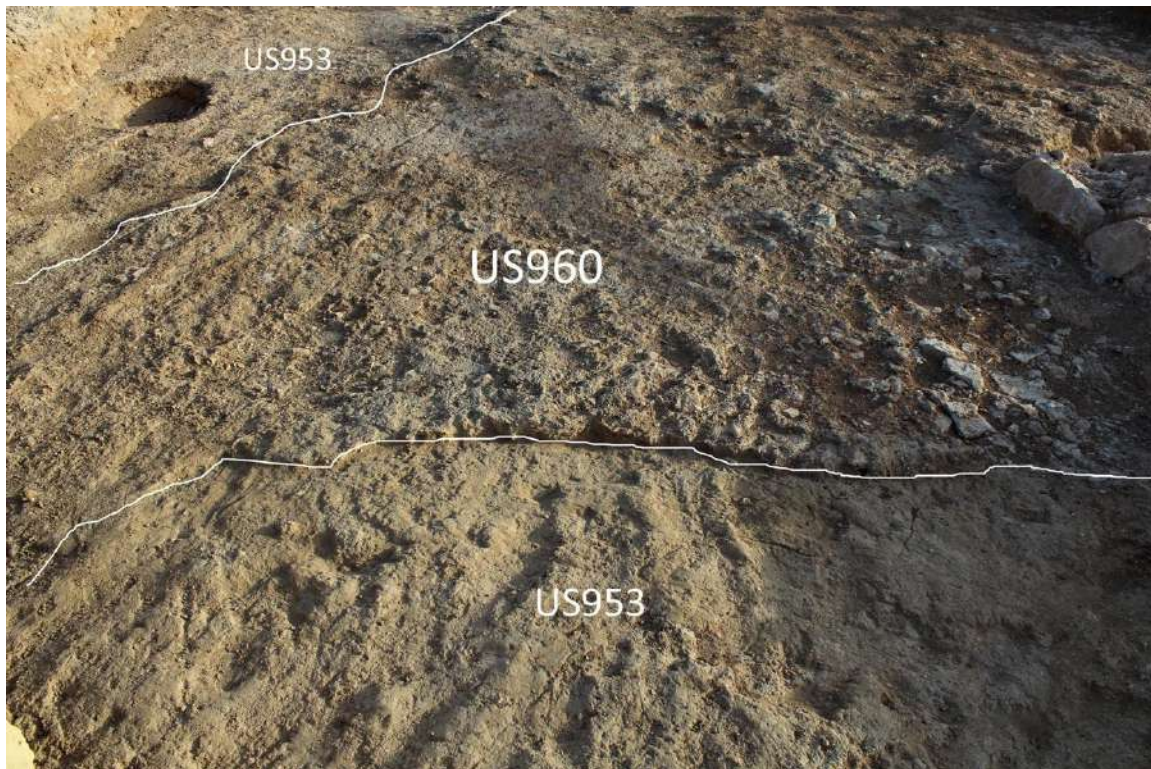


Fig. 79 – Floor US960, covering US953 floor.



Fig. 80 – Area H and Area A unified at the end of the SUM17A campaign, from south-east.



Fig. 81 – US964floor, with basin M811, from the north.



Fig. 82 – Basin M881, from the south.



Fig. 83 – US968floor from the west.



Fig. 84 – The bedrock irregular surface, from the south.



Fig. 85 – Wall M774, collapsed at the south limit, from south-east.



Fig. 86 – Collapsed stones south of M774, from south-east.



Fig. 87 – Accumulation to the south-west of the wall M774.



Fig. 88 – Emerging walls M806, M807, M808 from the east.



Fig. 89 – The corner between M808 and M809, from the north.




Fig. 90 – Wall M816, from the west.




Fig. 91 – General view of Area H, from the east.


Object Index Card

Registration Nr. SUM17A US948, 1 MB993			
Provenance Area H (m8) US948			
Definition Animal figurine	State of preservation good	Measures l. 4.1 w. 1.4 h. 4.0 th. diam.	Shape
Material Bronze	Preserved part complete		Section
Description <p>Figurine of horned animal in good state of preservation, except for the tail which is lacking. The animal is represented moving, probably running, with the right anterior leg slightly raised and the posterior ones stretched.</p> <p>The head is turned onward and this element contributes to the general moving aspect. The muzzle is triangular shaped and pointed; the long horns (h. 1.2 cm) are straight and branched.</p> <p>It is difficult to define exactly the animal species; the thin and pointed muzzle points to a gazelle, but the shape of horns appears unfitting for this species.</p> <p>On the whole, this figurine is well proportioned with a realistic appearance.</p>			
Responsible A. Lombardi		Date 19.02.2017	

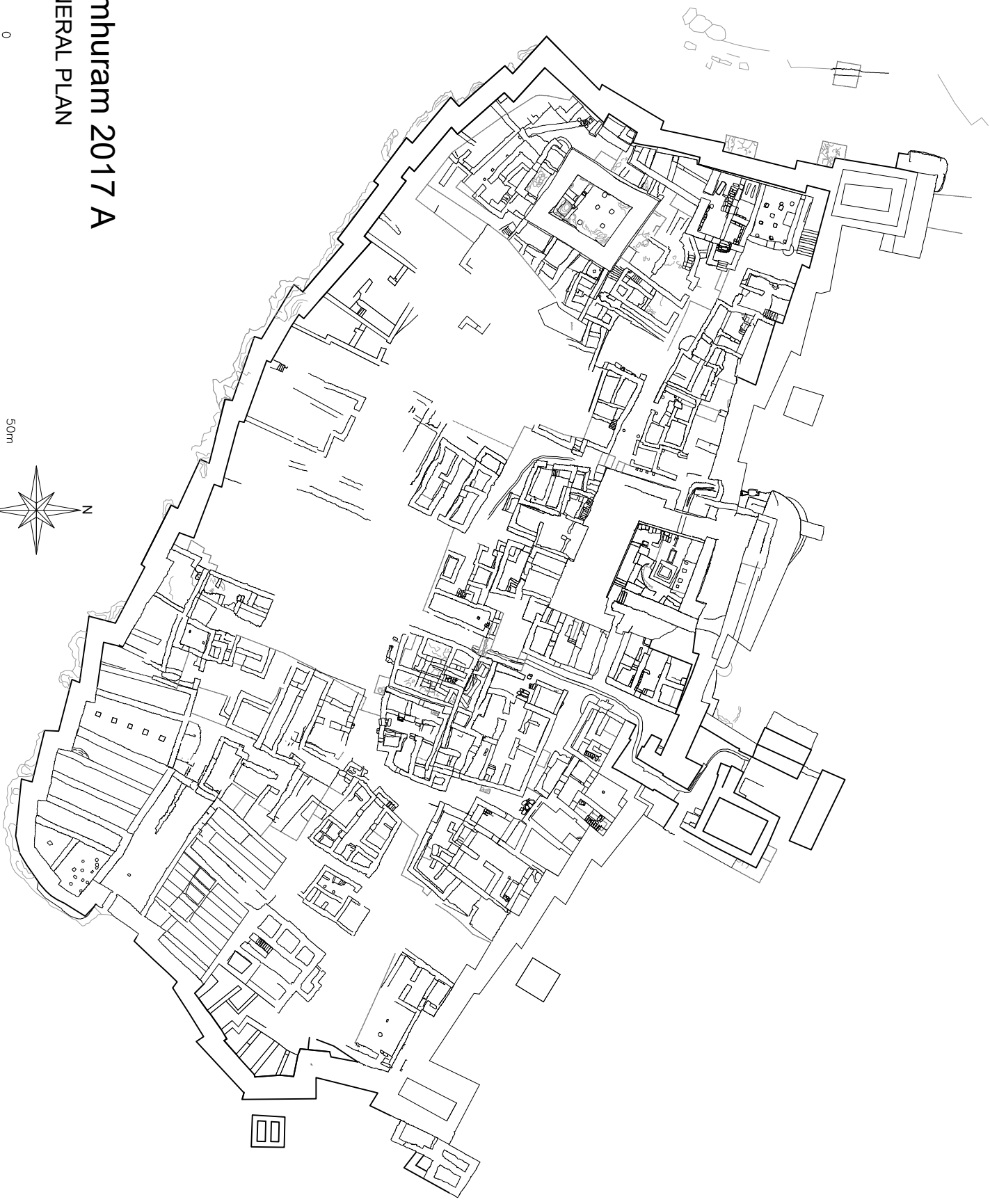
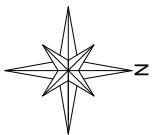
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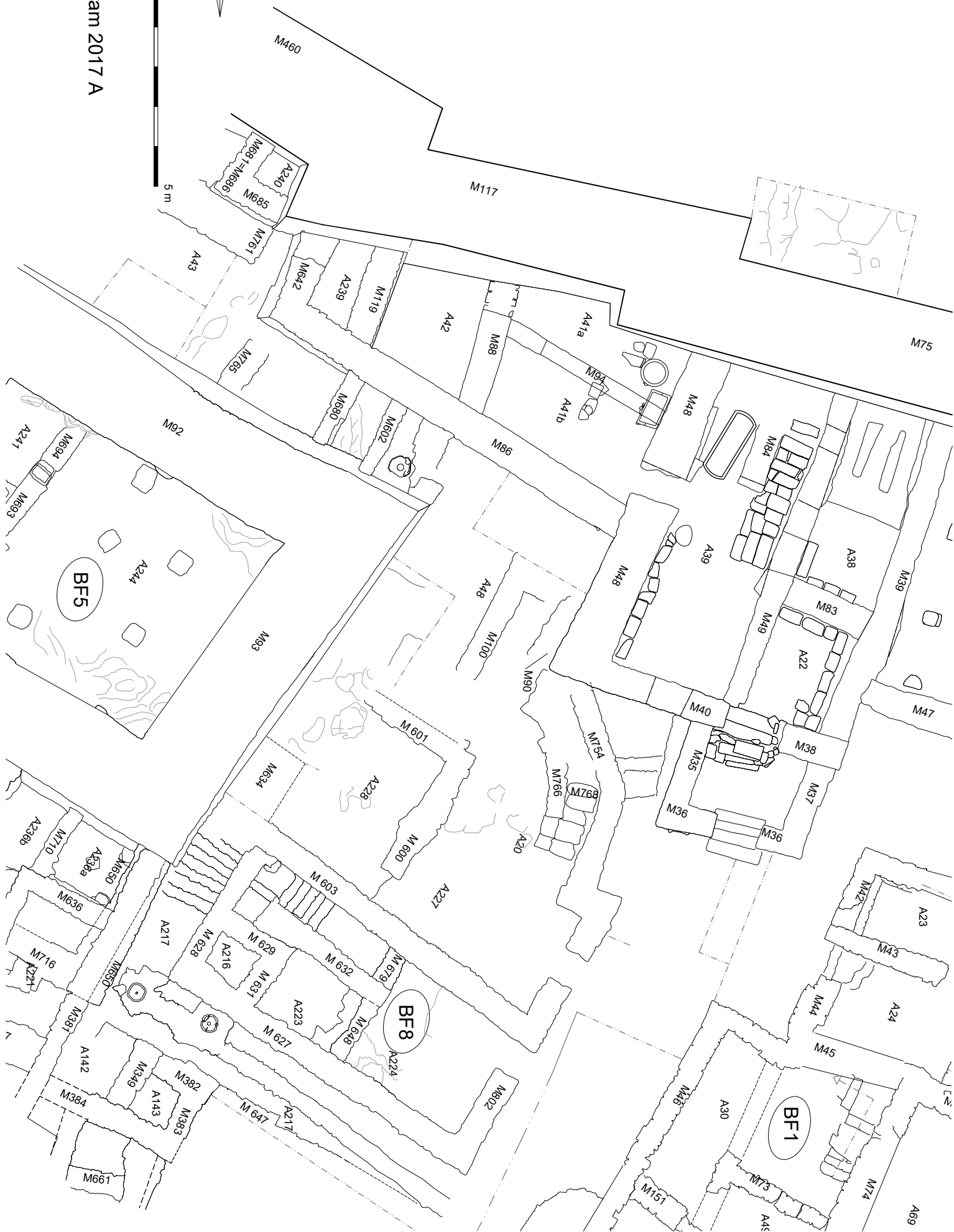
Registration Nr. SUM17A, US984,1; G253			
Provenance Area B, n/12			
Drawing code Nr.			
Definition crucible	State of preservation Good	Measures l. w. h. 7.7 th. diam. 6.5	Shape
Material Vitrified clay	Preserved part complete		Section
Description Complete crucible with flat and squared rim and globular body. The base is rounded with evident vitrification marks. The exterior is smoothed. The interior has several bronze encrustation on it.			
Responsible C.C.		Date 03/04/17	

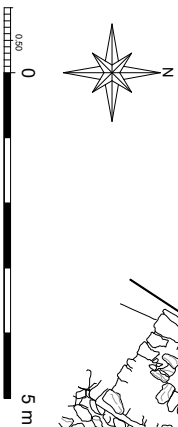
Object Index Card

Registration Nr. SUM17A, US950,1; S2992			
Provenance Area B, o/14			
Drawing code Nr.			
Definition capital	State of preservation Good	Measures l. w. 24.4 h. 35.5 th. diam.	Shape Truncated-Pyramid
Material limestone	Preserved part Almost complete		Section Squared
Description Almost complete limestone pillar truncated-pyramid in shape and squared in section. The base is flat and squared in shape. The top is flat and rectangular with chipping marks on it. The external wall is decorated by five rectangular bands protruding from the base to the top.			
Responsible C.C.		Date 03/04/17	

Sumhuram 2017 A
GENERAL PLAN

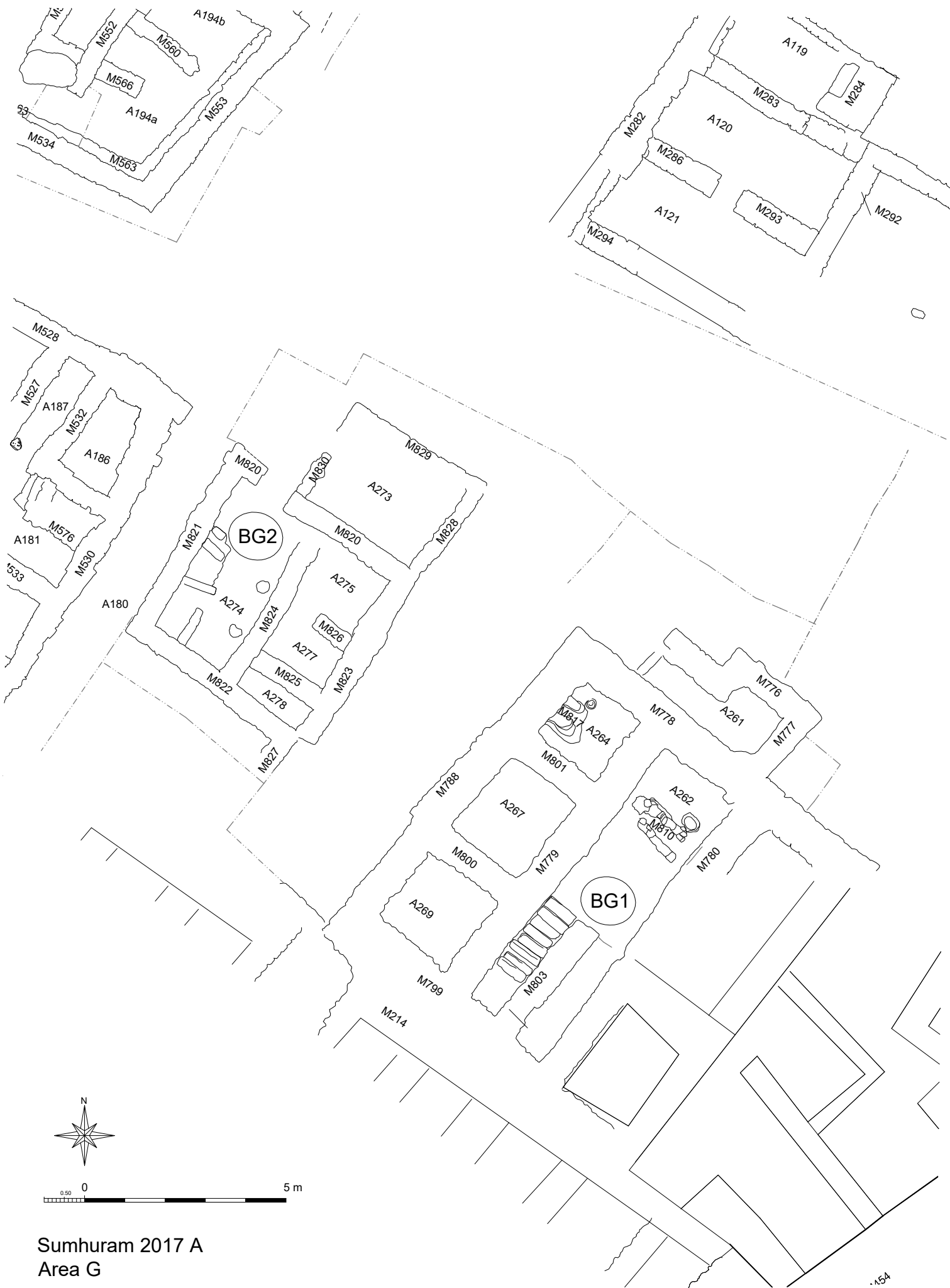


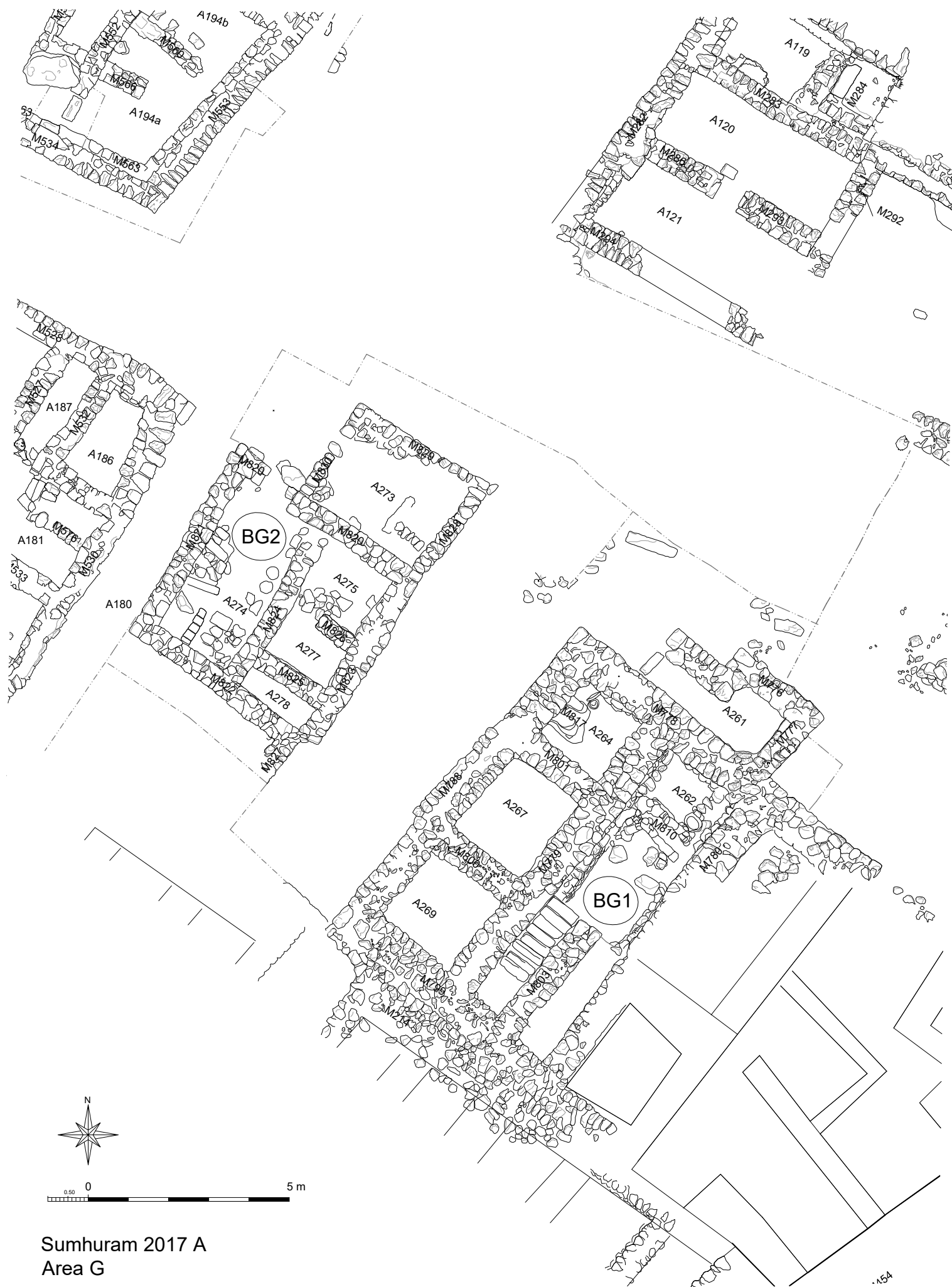




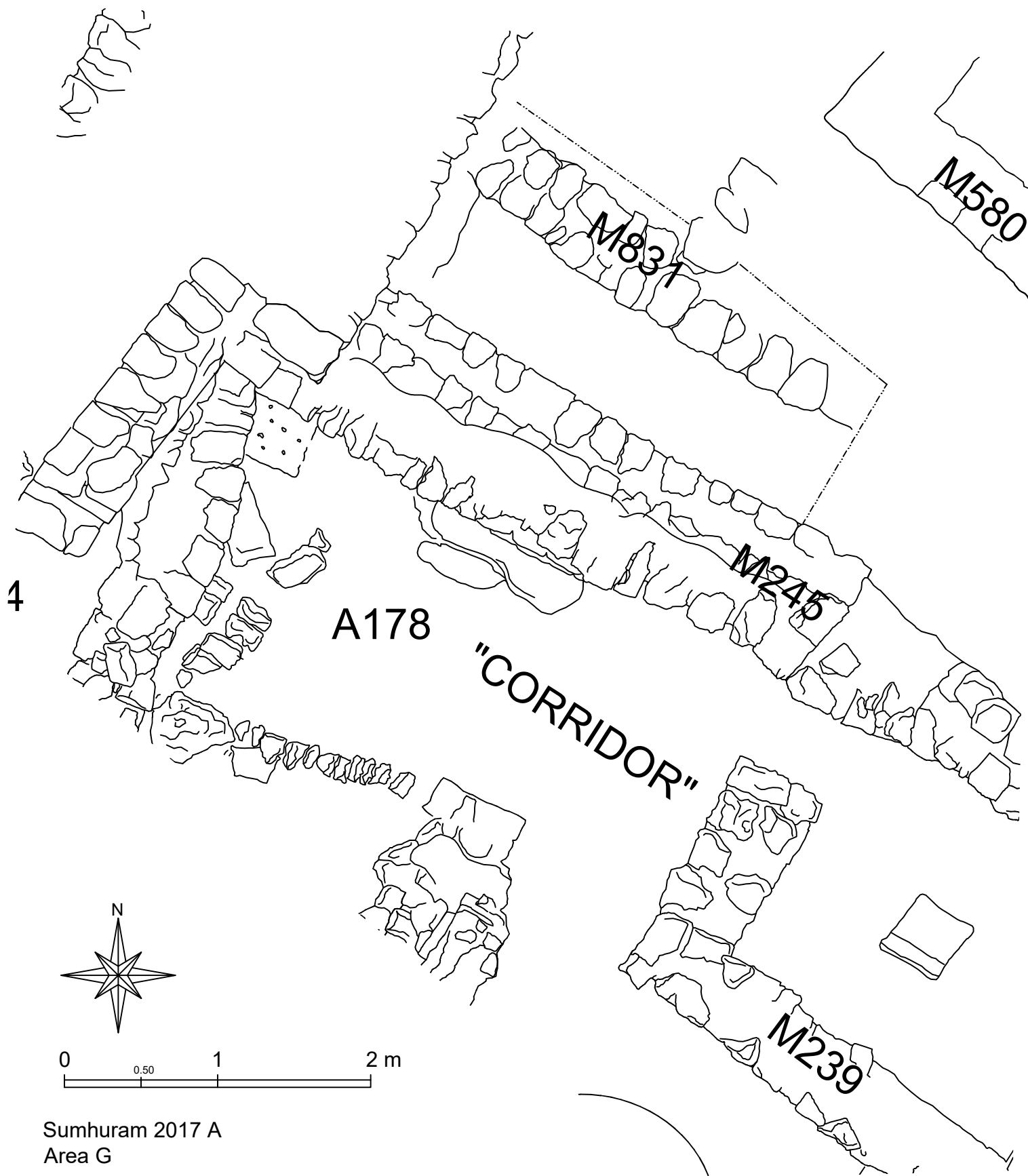
Sunhuram 2017 A
Area F

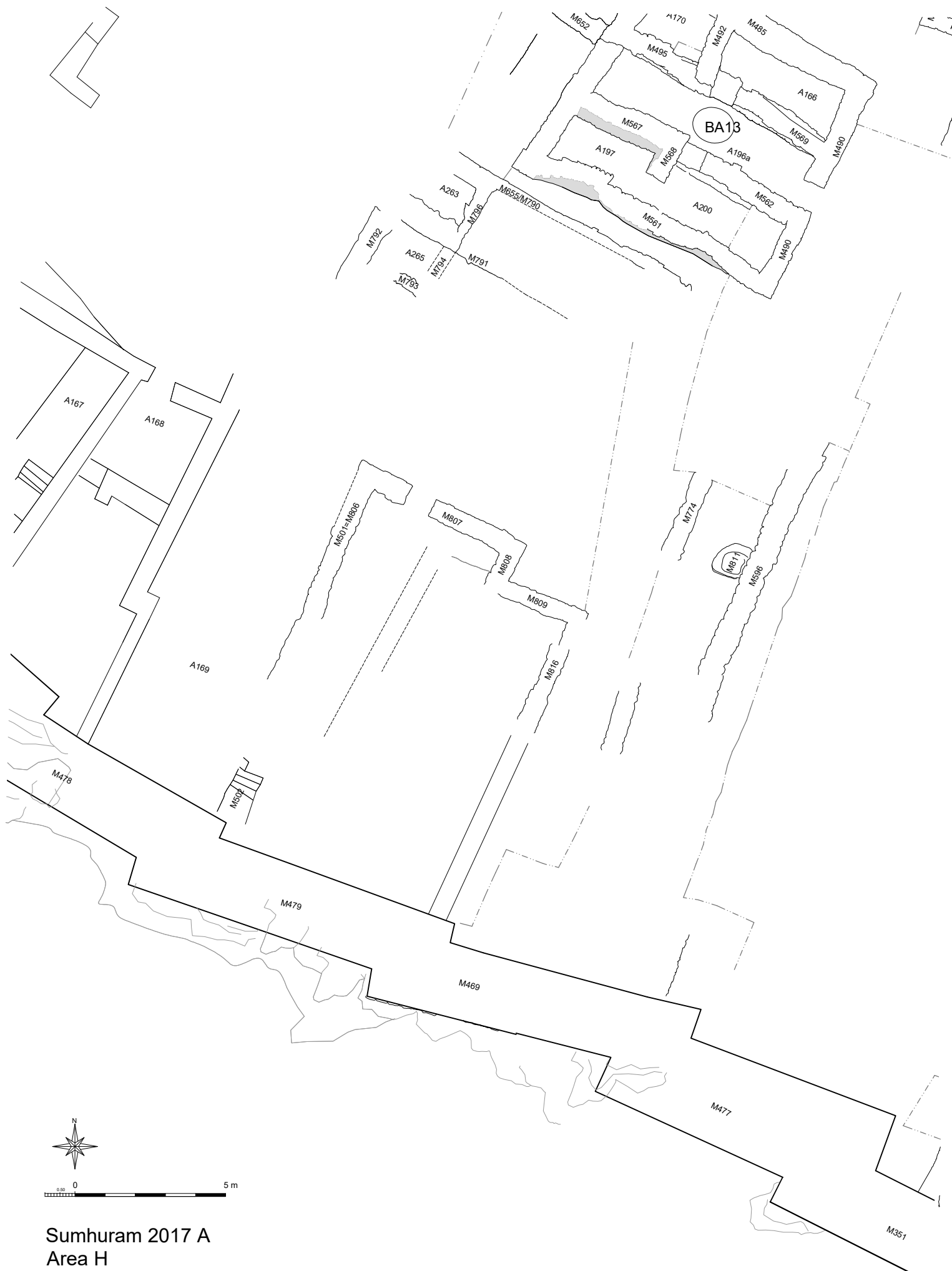






Sumhuram 2017 A
Area G





Sumhuram 2017 A
Area H



Sumhuram 2017 A
Area H

**RESTORATION WORKS AT SUMHURAM
(ARCHAEOLOGICAL PARK OF KHOR RORI)**

(Sultanate of Oman)

CAMPAIGN from February to April 2017

IMTO

Italian Mission To Oman



Technical Report

04th February – 06th April 2017

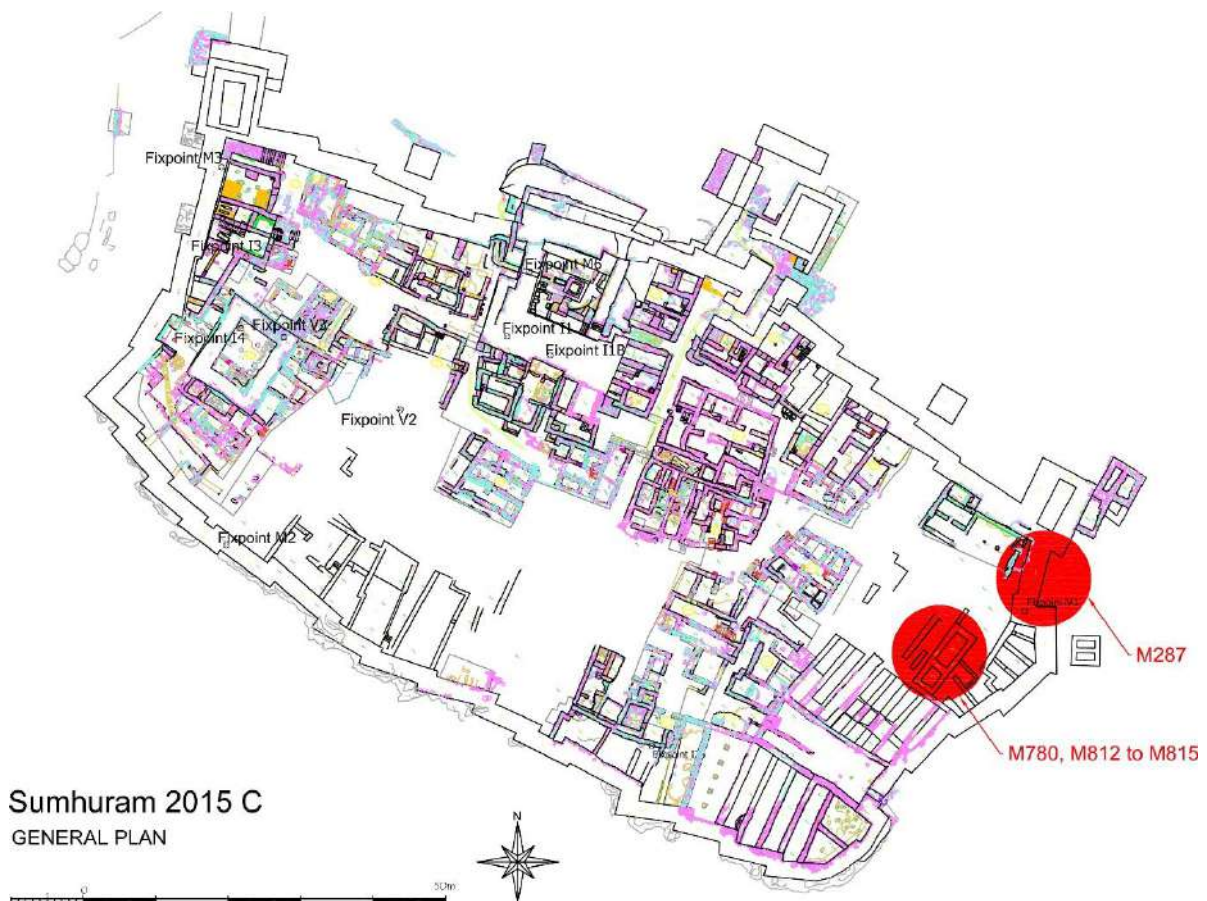
Valter Filatondi

Introduction

The restoration activities, during the campaign, regards the restoration of the following walls:

- The restoration of the M780, M812, M815;
- The restoration of the walls M287;
- Other small works inside the city as reported below.

The following map shows all the locations:



Worker Teams

Two teams of workers have engaged to work out all the needed operations to complete the reconstruction of the above-mentioned areas. One team of six people was engaged to prepare the mortar and the second one of eight people has engaged for the restoration of the walls. One mason was also engaged to coordinate the teams.

Working progress status

In order to check the advancement of the works, we daily took a significant number of pictures of the areas. The number of the pictures and the point of viewing from which they are taken from, are those considered necessary for a good comprehension about the working progress status.

Mortar preparation

The mix for the mortar we used for the connection between the stones is the following:

- **75** grams of brown colour with **225** grams of yellow colour.

The oxide colours, mentioned above, plus 4 buckets of sand composes the mix of the mortar with eight scoops (**600grams**) of lime powder.

The percentage of lime on sand is 1:6, and then we have two different kinds of mortar:

- **Stone mortar**, used for the external leaves of stones, obtained by the mix of sieved sand, hydrated lime, brown and yellow oxides for the chromatic tone.
- **Filling mortar**, used for the back filling of the structure, made with the same components, except the use of raw sand instead of sieved sand without any brown and yellow oxides.

Rising up of the walls M780, M812, M814

On 04th February 2017 the situation on site was the following.



On 18th March 2017, after the restoration, the situation on site was the following.



Restoration of the wall M287

On 09th March 2017, the wall was as shown on the picture below.



After the cleaning of the wall, on 13th March 2017, the situation was as shown below.



Restoration works at the Archaeological Park of Khor Rori (Sultanate of Oman)
Diary of activities (04th February– 06th April 2017)

On 29th March 2017, after the restoration the situation of the wall was as shown on the picture below.

