NINEVEH EAST ARCHAEOLOGICAL PROJECT

TIMOTHY P. HARRISON AND KHALED ABU JAYYAB

This report summarizes the inaugural seasons of excavation carried out at Nineveh by the Nineveh East Archaeological Project (NEAP) in fall 2024 and spring 2025. These seasons involved excavations in three areas—Areas C, V, and L, the latter being the Shamash Gate (fig. 1)—and preservation and restoration work at both the Shamash Gate and the Adad Gate. The Area C and Area V excavations, together with the restoration work at the Adad Gate, were conducted under the auspices of the University of Bologna, a NEAP consortium partner.

SHAMASH GATE EXCAVATIONS (AREA L)

Our main objectives for the fall 2024 and spring 2025 seasons were to continue systematically exposing the features of the Shamash Gate while simultaneously intensifying our efforts to protect and preserve its

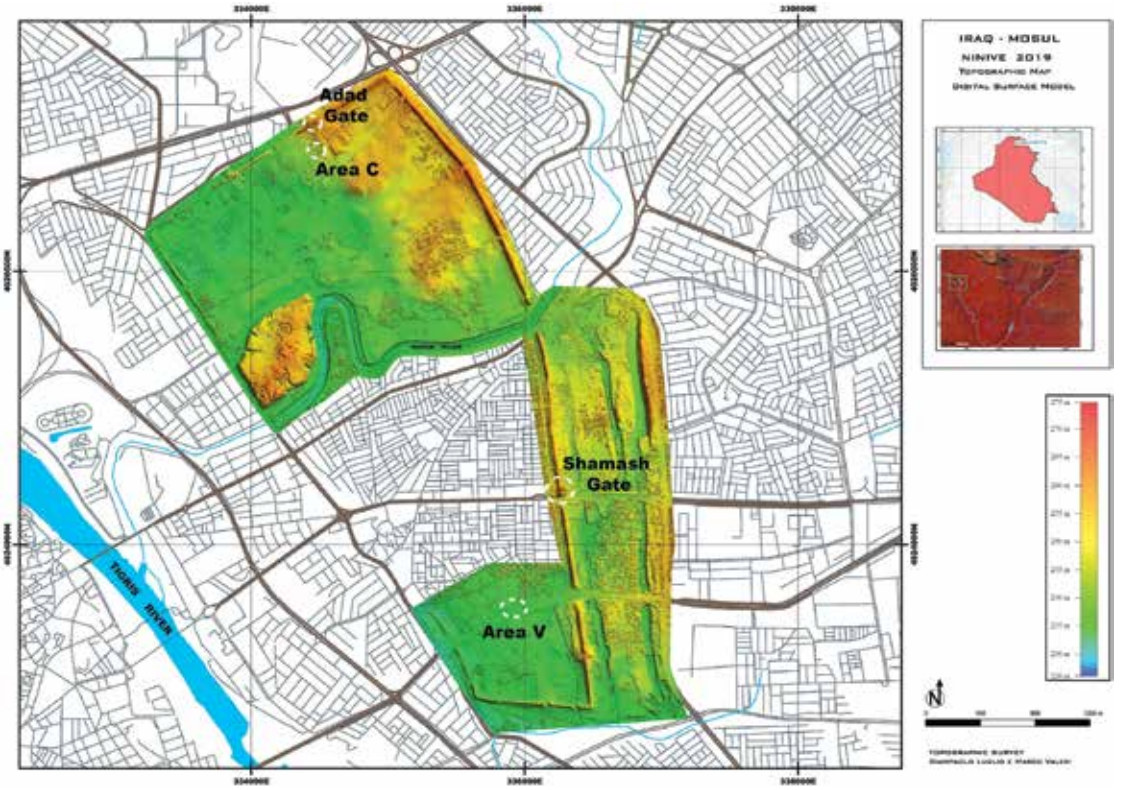

Figure 1. Map of Nineveh with the fall 2024 and spring 2025 excavation areas indicated.

Figure 2. Aerial view of the Shamash Gate with excavation units. The dotted red lines indicate the location of tunnels in operations 7 and 8. Photo by S. Batiuk and K. Abu Jayyab.

remains. After we identified a high density of debris (which likely resulted from the 612 BCE destruction of Nineveh) at the western end of the gate, our main effort involved exposing the gate's central passageway (operation 1 in fig. 2). In 2024, this effort was accompanied by excavations in the chambers that we had begun exposing in 2023 (operations 4, 6, and 7) to clarify their outlines, and it expanded to include the south-central chamber (operation 8). In 2025, we further expanded our operations to include excavations in the eastern portion of the gate, specifically operations 11, 12, and 13 (fig. 3). Two additional operations initiated in 2025, operations 9 and 10 (fig. 3), were later abandoned because of the risk posed by the presence of previously undetected tunnels, possibly dug by the Islamic State of Iraq and Syria (ISIS).

Finally, an important part of the work at the Shamash Gate focused on the preservation and reconstruction of exposed elements of the gate, including the plastering and covering of the exposed tower walls, the construction of a roof over the central passageway, and preparation work for the reconstruction of the eastern mudbrick towers.

Operation 1

Operation 1 is the central passageway of the Shamash Gate. The fall 2024 excavations continued a multiyear project to uncover the entire passageway. Previously, the team had reached the monumental paving stones (flagstones) at the western end of operation 1, the interior portion of the gate (fig. 4). The work carried out during previous seasons had also included a probe of substantial size along the northern balk of the trench in an attempt to clarify the stratigraphic situation. This probe was largely successful, since it allowed us to understand the repaving episodes that occurred after the monumental pavement's original construction, likely during the reign of Sennacherib.

During the fall 2024 season, the team uncovered one definite, and very likely two, repaving events that took place after the original flagstone construction (fig. 5). Mixed within the rubble and destruction layer of the later surface was a nearly intact human skeleton (fig. 6). In addition to the usual ceramic and bone

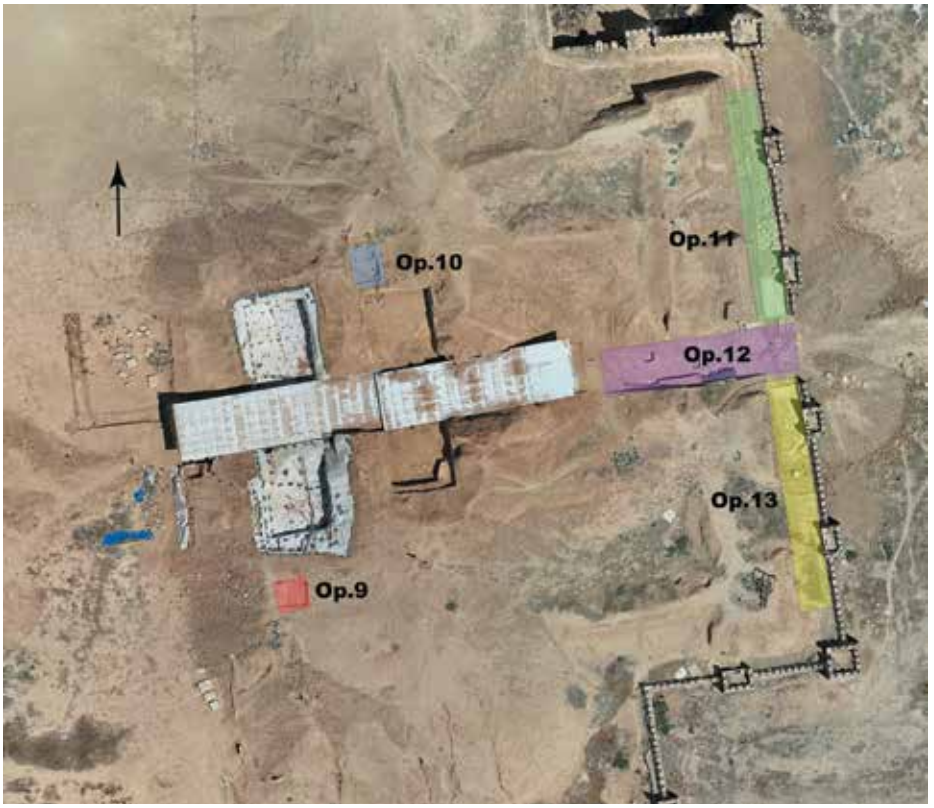

Figure 3. Orthophoto of the Shamash Gate showing operations 9 and 10. Photo by S. Batiuk and K. Abu Jayyab.

Figure 4. Loci designation in operation 1. Photo by S. Mooney.

Figure 5. Layers of the second pavement. Photo by N. Hnetka.

Figure 6. Human remains in operation 1. Photo by N. Hnetka.

samples found across operation 1, numerous bronze objects, including three trilobate arrowheads, were recovered. Large deposits of charcoal were uncovered and sampled, including a partially carbonized beam.

A series of broken orthostats was discovered along the southern wall of the passageway. Since the debris of the orthostats was found within the destruction fill, they were likely destroyed during the sack of the city in 612 BCE.

Operation 4

Operation 4 represents the fill of the northwestern chamber, an 8 × 6 m area. Since the boundaries of this chamber had been exposed in 2023, the fall 2024 season's goal was to lower the level inside the chamber as much as possible (fig. 7). The fill in this area consisted of hard, mudbrick collapse with occasional baked bricks and random air pockets.

As Locus 7 was exposed to the elements over the course of the year, two features became apparent. First, a mudbrick formation running parallel to the eastern and western walls, about 1.5 m to the east of the western wall, was designated as Locus 10 (fig. 8). This mudbrick formation could be part of a staircase or a supporting buttress. We were able to follow the bricks running north–south for about 2 m. The formation may run farther south than is indicated in the photo, but it is increasingly disturbed.

The second feature may play a role in the disturbance of Locus 10. A large pit, which emerged in the middle of the square, overlapped to some extent the location where we would expect Locus 10 to continue south. The pit was designated as Locus 11 and the fill as Locus 12. These features were not completely excavated this season (fig. 8).

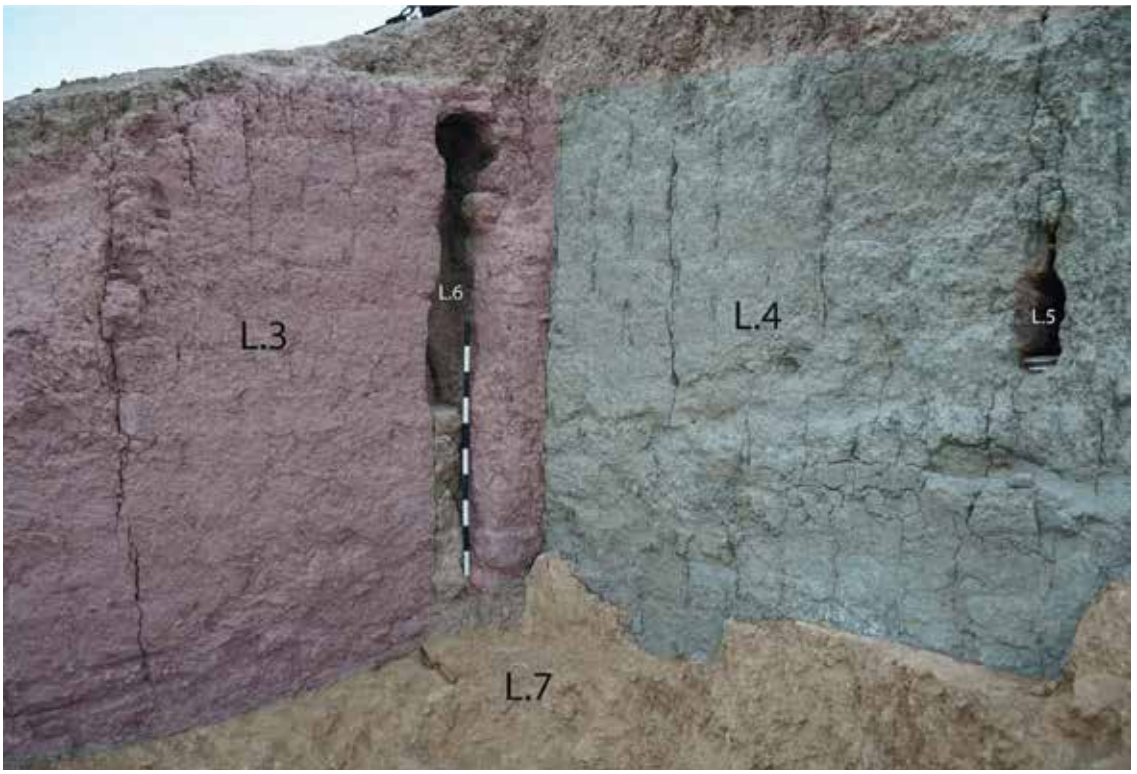

Figure 7. Northeastern corner of operation 4. Some of the original plastering on the eastern wall is still intact. Photo by N. Hnetka.

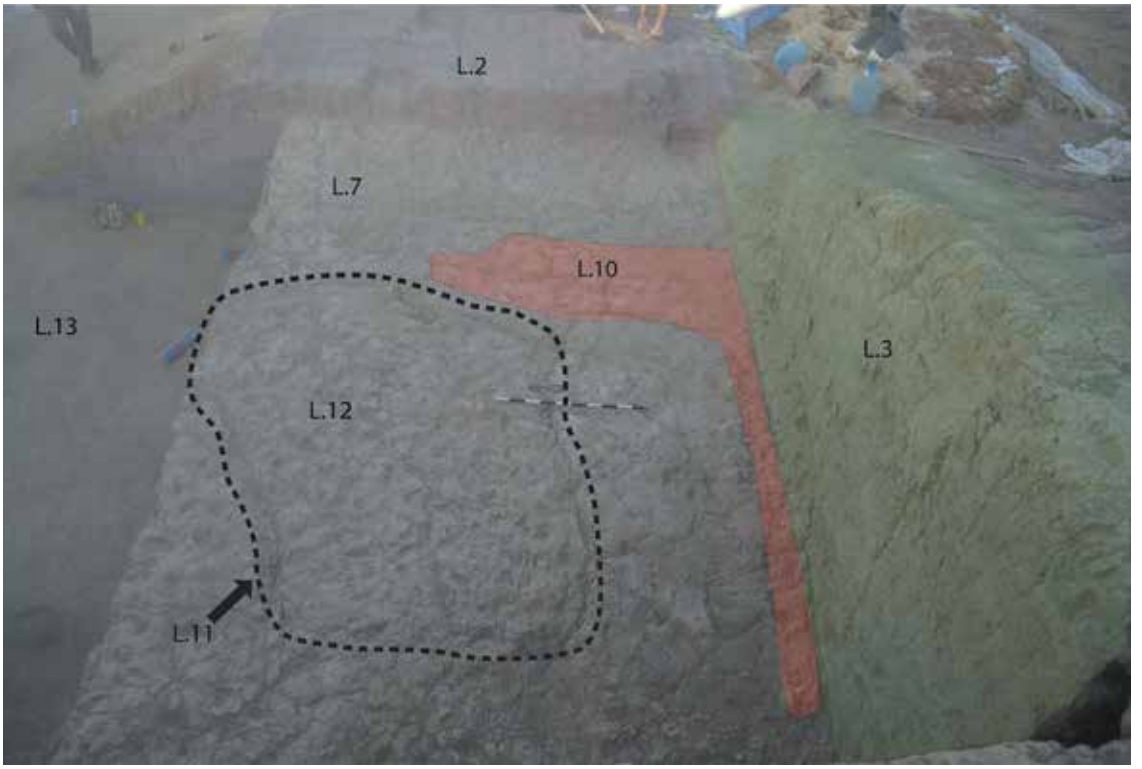

Figure 8. Operation 4 on October 24, 2024, facing west. Photo by N. Hnetka.

Operation 6

Operation 6 represents the excavation of the room fill of the southwestern tower. Its dimensions roughly matched those of the northwestern chamber (8 × 6 m). The objective for the fall 2024 season was to continue the work of the previous (2023) season to find the full boundary of the Shamash Gate's southwestern chamber (fig. 9). Previously, we were able to find conclusively the southern and eastern walls of the room (Loci 3 and 2, respectively), but the face of the western wall, though known and declared a locus, remained elusive. The eroded topography and significant disturbance from the battle to liberate Mosul made this task difficult. The fall 2024 and spring 2025 excavations also successfully defined most of the eastern and southern walls, and an exploratory trench was opened to find the face of the western wall (Locus 7), which was articulated despite the difficult conditions of the soil. Additionally, tunneling disturbance (Locus 14), uncovered the prior year, was fully excavated and defined. However, further excavation in this area will be challenging because of the existence of tunnels that pass through the entire square at a deeper level.

Operation 7

Operation 7 continued the previous year's excavations of the fill in the north-central chamber of the gate. The defining walls of the chamber had been identified during the fall 2023 season. The dimensions of the chamber are roughly 6 m (E–W) × 7 m (N–S). The fill in the chamber was composed of a mixture of collapsed and melted mudbrick, with baked bricks randomly distributed throughout. The fact that the deposits along the walls of the chamber were harder than the fill in the center of the room could be attributed to the heavier erosion that affected the center of the trench.

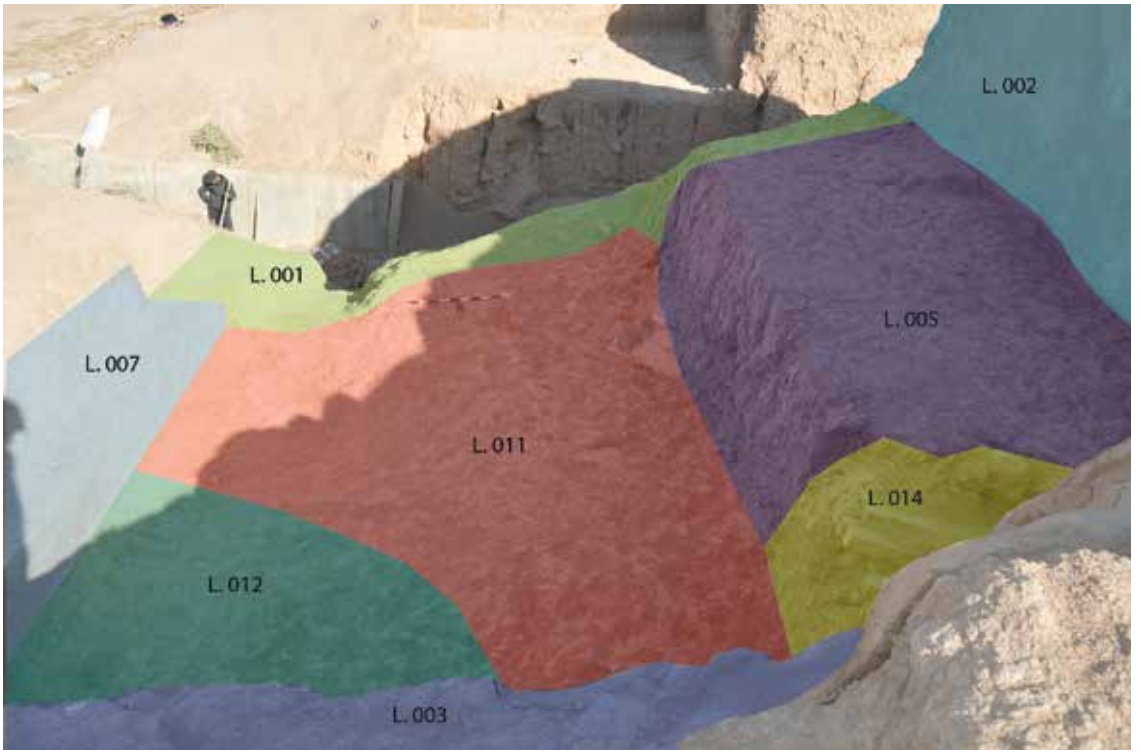

Figure 9. Loci of operation 6, viewed from the south. Photo by S. Mooney.

At a depth of roughly 2 m from the tops of the walls, we came across two tunnels that ran north–south under the northern wall of the chamber and continued partially beneath its fill (fig. 10). The nature and extent of these tunnels was difficult to determine; a first impression suggested they were either tunnels dug by ISIS, similar to others found across the site, or part of Austen Henry Layard's tunneling along the face of the orthostats in the 1840s. Alternatively, the tunnels could be ancient passageways through arches that held up a second floor in the chamber. These passageways could have run under the northern wall of the chamber to connect this hall to a second, adjacent room to the north (the abandoned operation 10).

The first possibility may be supported by the fact that the eastern tunnel appears to connect to an apparent ISIS tunnel seen in the cross section of the room visible in the passageway. Moreover, both tunnels align with tunnels on the other side of the passageway. Potentially ruling out the ISIS-tunnel hypothesis is the lack of a connection between the tunnels north and south of the passageway; that is, the tunneling seems to stop abruptly at the edges of the north-central and south-central chambers, respectively. This lack of connection leads us to think that these features were either tunnels dug by Layard, who followed the orthostats along the interiors of the chambers, or passageways through arches supporting a second floor of the chamber and providing access to other chambers in the central towers. The presence of bricks laid at an angle following an arch that corresponds to the angle of the bricks forming the top of the tunnel/arch in the hollow under the northern wall of operation 7 may support this ancient-passageway hypothesis.

We decided to halt excavations in this area because of the risk of collapse. As a final action, we packed the western tunnel with sandbags (the eastern tunnel already had a collapsed dirt fill) and shifted operations to the south-central chamber. In future seasons, we will aim to explore the hypotheses pertaining to the tunnels through excavations in the room to the north and clarification of the sections of the room along the passageway.

Figure 10. Potential ISIS tunnels or ancient passageways running through the northern wall of the north-central chamber (operation 7), viewed from the south. Photo by S. Batiuk.

Operation 8

Operation 8 corresponds to the south-central chamber of the tower gate system (see fig. 2). This operation was the only new one we opened during the fall 2024 and spring 2025 seasons. It was deemed prudent to carry out excavations in this area before lowering the passageway further, since doing so would render this area more difficult to access. The fact that the south-central chamber is bounded to the south by the highest-preserved towers of the gate has caused severe erosion in the fill of the chamber, requiring that this area also be leveled to prevent continuous erosion and deposition into the central passageway of the gate.

Excavations in the erosional gully of the fill uncovered a large orthostat fragment that seemed to be completely out of place. Excavations in this area also recovered an unexploded mortar shell. Similar to the fills in other chambers, the fill here consisted of secondary deposition comprising a mixture of ancient remains and modern materials. The line of the chamber's southern wall remained unclear at the end of the fall 2024 season, but we believe that we located the face of the eastern wall. The western wall was not defined either. The difficulty in locating the faces of the walls stems from the same issues that have hindered the detection of the wall faces of the other chambers in the southern portion of the gate system (operation 6). First, the composition of the mudbricks differs from that in the northern part of the gate system, causing the bricks to blend into the erosional matrix of the southern chambers and become less discernable. Second, the fighting and bombardment during the liberation of the city appears to have affected the structural integrity of the southern half of the gate system more so than in the north, causing cratering and burning in this area of the gate complex. Third, the impact of this recent activity has increased the potential for erosion and gullying, further masking the features of the southern wing of the gate.

Operations 9 and 10

Operations 9 and 10 were initiated early in the spring 2025 season but were quickly abandoned. In the case of operation 10, we encountered what appears to be an undocumented ISIS tunnel, oriented east–west,

that represented a safety risk to excavations in this area. In the case of operation 9, we decided that a more pertinent objective was to focus on the main, eastern entrance of the gate so that this area could be linked with the excavations to the west.

Operations 11, 12, and 13 (Eastern Area of the Shamash Gate)

The Shamash Gate excavations during the spring 2025 season (fig. 3) focused on the gate's eastern area, with the aim of detailing the main features of the eastern approach to the gate, in preparation for the restoration of the area's mudbrick towers (first restored by Tariq Madhloum in the 1960s) scheduled to commence during the fall 2025 season. The area was divided into three operations (fig. 11): the northern alleyway between the stone and mudbrick fortification walls (operation 11), the eastern portion of the central passageway (operation 12), and the southern alley between the stone and mudbrick fortification walls (operation 13).

In 1968, Madhloum identified two construction phases at the gate: a foundational phase that likely dated to Sennacherib's expansion of the city, and a later restoration of the gate. Madhloum based his conclusions primarily on the excavation of spaces between the stone and mudbrick walls, where he noted the presence of a flat and regular chalky stone pavement overlain by an irregular limestone pavement. We were able to expose these previously excavated areas and expand the excavations westward into the central gate passageway (fig. 11), and we have corroborated Madhloum's identification of two phases of gate construction (Harrison and Abu Jayyab 2024). Our current excavations in the passageway have allowed for a more nuanced understanding of the gate's phasing. Although past excavations revealed the presence of both a stone pavement (probably Sennacherib's original construction surface) and a packed-earth and pebble pavement, the reason for the repaving remained unclear. One possibility is that the stone pavement, made primarily of limestone and alabaster slabs, was vulnerable to erosion from rainfall and water runoff. Our recent excavations in the western portion of the central passageway, which revealed the existence of a drainage system that would have reduced surface runoff and surface erosion (see fig. 3), support this possibility, since a drainage system implies that managing water flow was a major concern when the floor of the passageway was renovated.

A final stage in the construction history of the gate became apparent with the excavation of added walls running along the northern and southern portions of the passageway. These walls were built on top of the second pavement, and they thus represent a later addition that postdated the repaving of the passageway. Traces of the walls were found in spring 2024 in the central portion of the gateway passage (Harrison and Abu Jayyab 2024, 50), but their true extent became clear only during this year's work (fig. 11). The walls were roughly 70 cm thick and seem to have covered the orthostats that lined the gate. They also seem to have blocked entrances to the towers from the passageway. The purpose of the walls was likely to restrict movement into the gate, perhaps as an added defensive measure. A similar narrowing of the central passageway has been observed at other gates at Nineveh, notably the Halzi Gate, and it has been suggested that this narrowing of the central passageways of Nineveh's gates coincided with the siege of the city prior to its final fall in 612 BCE.

Shamash Gate Conservation

Several steps were taken during the fall 2024 season to preserve and maintain the Shamash Gate's integrity. We plastered the exposed faces of the towers' mudbrick walls, including the preserved portion of one of the gate's central archways (fig. 12a). All exposed excavation areas were covered with heavy-duty tarps secured by sandbags and dirt (fig. 12b). A temporary roof shelter was then erected over the central passageway (figs. 3, 12c–d).

Figure 11. Excavations in the eastern portion of the Shamash Gate. Photo by K. Abu Jayyab.

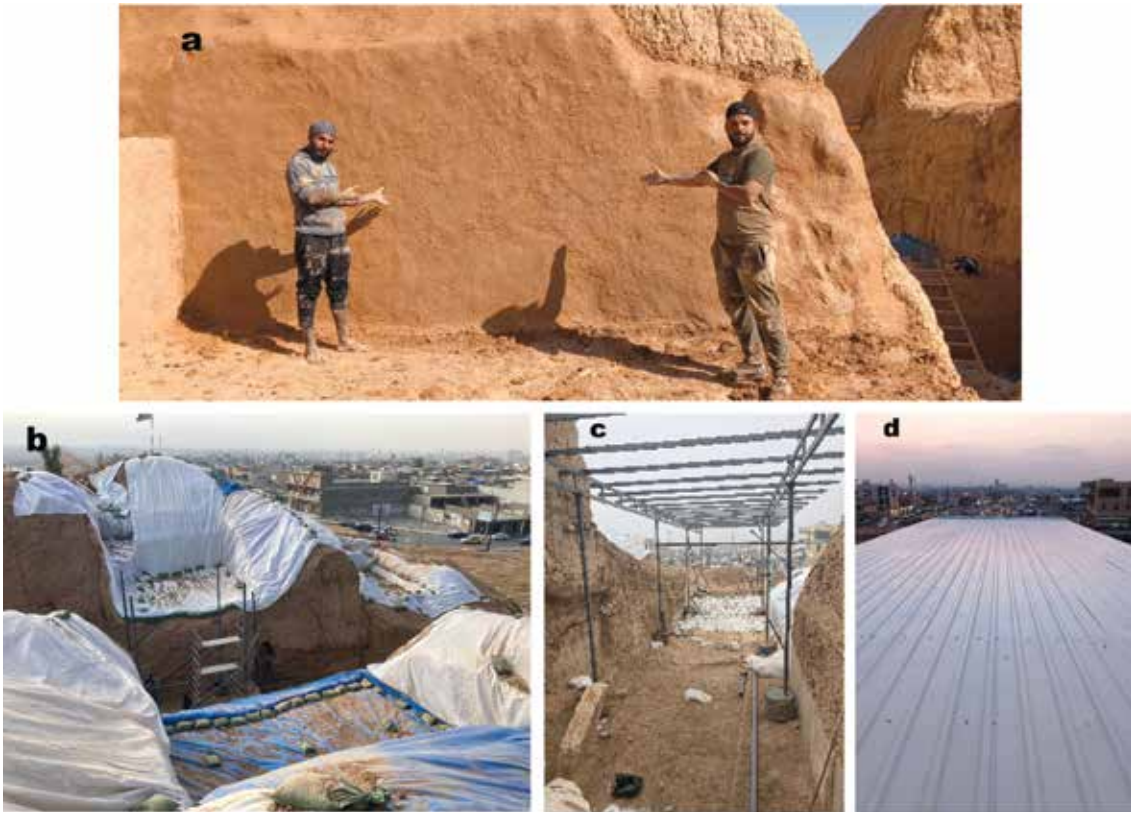

Figure 12. Plastering, covering, and roofing the Shamash Gate. Photos by K. Abu Jayyab.

ADAD GATE CONSERVATION

Further conservation and restoration was conducted at the Adad Gate (Area D; see fig. 1) under the supervision of Serafino Rosso. Numerous exposed sections of the ancient wall were replastered; the entrance ramp was repaired (fig. 13); and a new, more durable information panel was installed at the gate's entrance.

AREA C EXCAVATIONS

Area C (see fig. 1) lies between ISIS-dug Trenches 2 and 3, placed along the northern side of Trench 2. During the spring 2025 season, excavations in this area under the supervision of Eleonora Mariani were expanded northward and westward to clarify the extent and architectural plan of the structure, already partially exposed in the 2019–23 campaigns (fig. 14). The excavations focused on the building's northern rooms, which proved to be poorly preserved as a result of heavy modern disturbance.

AREA V EXCAVATIONS

Area V, located in southern Nineveh (see fig. 1), was excavated during the fall 2024 season under the supervision of Francesca Cavaliere. A 9 × 4 m extension was opened to the north to clarify the extent of the large courtyard and its relation to possible adjacent rooms excavated in this area in previous seasons. The

Figure 13. The restored entrance ramp to the Adad Gate. Photo by S. Rosso.

remainder of the courtyard was exposed (fig. 15), along with thousands of pottery sherds, part of a destruction layer that sealed the courtyard.

Three doorways were uncovered along the courtyard's north side. The western and central doors were paved with baked bricks, while the eastern doorway had a beaten-earth threshold. The spring 2025 excavations also further delineated a drainage channel that continued northward out of the excavated area.

ARTIFACT CONSERVATION

During the fall 2024 and spring 2025 seasons, conservation efforts continued to focus on the cleaning and conservation of fragments of the Ashurbanipal stela recovered from the destruction debris above the floors of the Shamash Gate. The conservation and treatment of small finds included a series of cuneiform tablets recovered in previous seasons from Area C and a significant number of metal objects recovered in the course of the 2024 and 2025 seasons.

Conservation work was performed on eleven of the stela fragments found at the Shamash Gate (fig. 16). The fragments were cleaned using the same procedure established in previous seasons. Thick, mud accretions were reduced with a scalpel, after which detailed cleaning was performed with a dental scaler and wooden skewers. As needed, the stone was consolidated during cleaning with Conservare HCT, an aqueous hydroxylating nanolime consolidant. Photos of the cleaned text were sent to epigrapher Gianni Marchesi, who confirmed their legibility.

Figure 14. General view of the Area C excavations, from the southwest looking northeast. Photo by E. Mariani.

Figure 15. General view of Area V at the end of the spring 2025 season; the three doorways are visible to the right (north). Photo by F. Cavaliere.

Figure 16. Stela fragment no. 801 before and after cleaning. Photo by J. Unruh.

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