

Figure 130. Site 28440 Plan Map

Description: Site 28441 is a small, roughly triangular-shaped terrace located on a gently sloping pahoehoe flow in the southwestern portion of the project area. The site is 4.2 m long (north-northwest by south-southeast) and 0.5 to 2.5 m wide (*Figure 131*). There is a stacked cobble and small boulder retaining wall extending along the west and south sides of the terrace that is 0.3 to 0.45 m in height. The south and portions of the west side are faced and the eastern side is level with the surface of the outcrop. The surface of the terrace is a rough cobble and pebble pavement. There is a cluster of seven flat pahoehoe slabs located on the bare lava flow adjacent to the terrace to the southeast. These slabs are located in an area 2.6 m long by 1.0 m wide. No cultural remains were present on the surface of the site.

A 1.0 by 1.0 m test unit (TU-25) was excavated into the terrace surface revealing two layers over bedrock (see *Figure 131*). Layer I consists of 0.15 to 0.32 m of tightly packed cobbles, pebbles and small boulders with no cultural remains present. Layer II is a 0.04 to 0.13 m thick deposit of very dark brown (10YR 2/2) silt with 40% gravel and pebble inclusions. No cultural remains were present.

Site 28441 is interpreted as the foundation for a temporary habitation shelter. Although the site is substantially constructed (faced sides, paved surface), its small area (10.5 sq m) and isolation suggest it likely functioned in this capacity. The site is unaltered and in fair condition. It is assessed as significant for its information content.

State No.: 28442 (T-604)

Site Type: Complex (2)

Functional Interpretation: Permanent Habitation

Topography Pahoehoe lava sloping to west and southwest

Elevation: 353-355ft

Coordinates: E=186728, N=2176009

Vegetation: Christmas berry *haole koa*, *alahe'e*, grasses

Probable Age: Prehistoric

Overall Dimensions: 18.1 by 4.8 m

Condition: Fair

Integrity: Unaltered

Description: Site 28442 is a complex of two features located in an area of sloping pahoehoe lava in the south-central portion of the project area. The features are comprised of an enclosure (Feature A) and a pavement (Feature B) located in an area 18.1 m long (north-northwest by south-southeast) and 4.8 m wide (*Figure 132*).

Feature A is located at the northern end of the site, built on and adjacent to a raised bedrock outcrop. It is roughly rectangular in shape and is 4.5 to 5.3 m long (northwest by southeast) and 2.7 to 3.0 m wide. The northwest, southwest and northeast sides are comprised of stacked cobbles and small boulder walls that are 0.8 to 1.3 m wide and 0.35 to 0.75 m in height. The majority of the walls have collapsed though an intact faced section is present along the interior side of the northeast wall. The southeast side of the enclosure is formed by the adjacent outcrop. A small blister is present within the outcrop. The interior of Feature A is filled with the collapsed wall rubble. No cultural remains were present.

Feature B is a small rectangular pavement located 13.0 m southwest of Feature A. It is built against the northeast side of a raised outcrop that is 2.9 m long, 0.35 to 0.5 m wide and 0.45 to 1.05 m in height. The pavement is 2.45 m long (northwest by southeast) and 1.5 m wide. The surface is a level cobble and pebble pavement with no cultural remains. The sides of the feature are generally level with the surrounding lava surface though the north side is 0.2 m in height.

A 1.0 by 1.0 m test unit (TU-33) was excavated into the center of the feature revealing two layers over bedrock (see *Figure 132*). Layer I consists of 0.17 to 0.42 m of tightly packed cobbles, pebbles and small boulders. Cultural remains from Layer I consist of marine gastropod shells (1 *Conus* sp. 1.6g; 1 *Thaididae* 2.1g) and an unburned *kukui* nutshell (1.9g). Layer II is a 0.14 to 0.16 m thick deposit of very dark brown (10YR 2/2) silt with 20% gravel and pebble inclusions. Cultural remains from this deposit consist of an unburned *kukui* nutshell (1.5g).

Site 28442 is interpreted as a complex of permanent habitation features. Feature A likely served as the foundation for a roofed structure based on formal type, substantial construction (faced side) and area (15.9 sq m). The Feature B pavement potentially served as the foundation for a special purposed structure due to its formal type and substantial

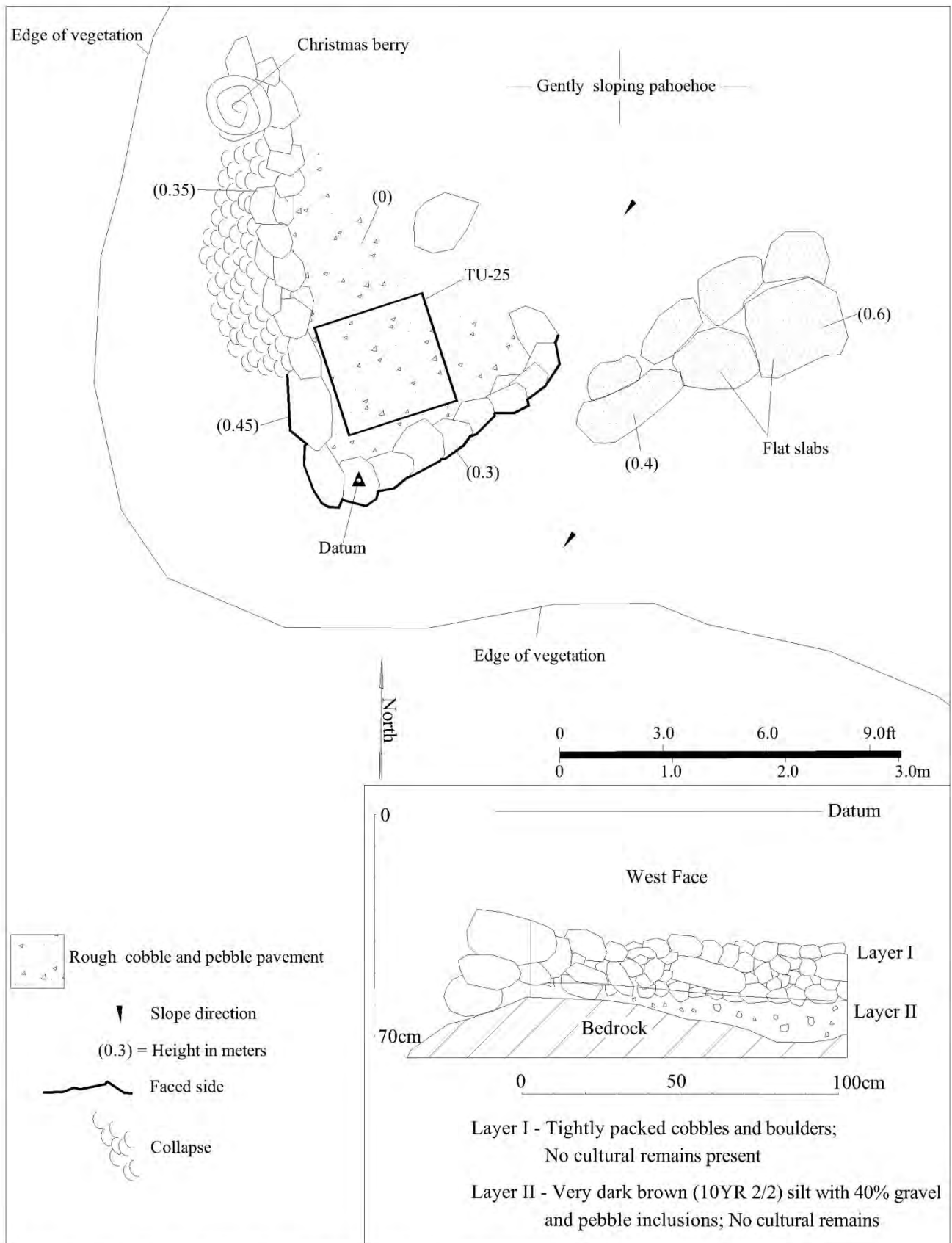


Figure 131. Site 28441 Plan Map and TU-25 West Face Profile

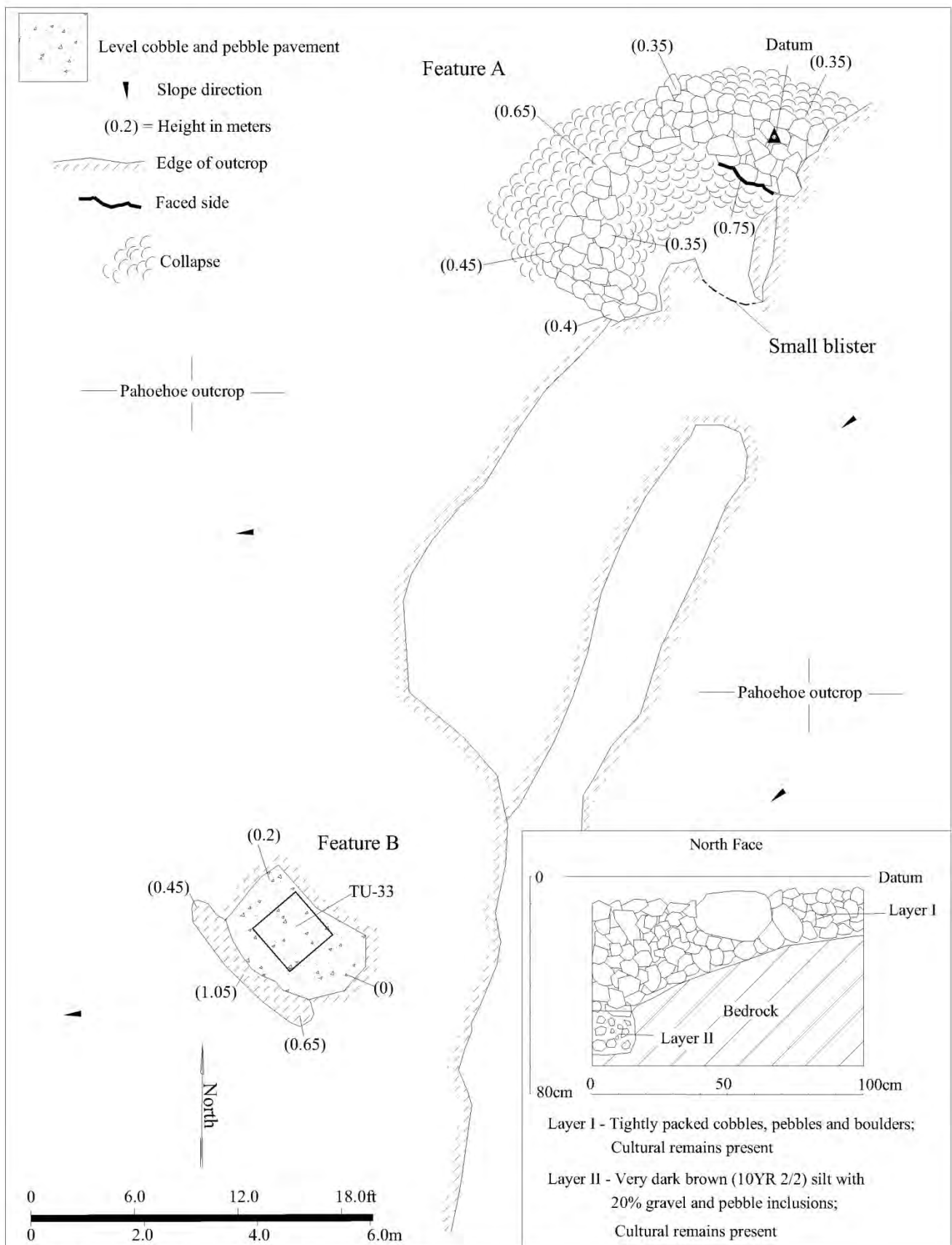


Figure 132. Site 28442 Plan Map and TU-33 North Face Profile

construction (paved surface) and small area (3.6 sq m). The site is unaltered, in fair condition and is assessed as significant for information content.

State No.: 28443 (T-1110)

Site Type: Lava Tube

Functional Interpretation: Temporary Habitation

Topography: Pahoehoe lava sloping gently to west-southwest

Elevation: 405ft

Coordinates: E=186797, N=2176204

Vegetation: Christmas berry, *haole koa*

Probable Age: Prehistoric

Overall Dimensions: 18.0 m long

Condition: Good

Integrity: Unaltered

Description: Site 28443 is a lava tube located in an area of gently sloping pahoehoe lava in the southeastern portion of the project area. The lava tube has an overall length of 18.0 linear meters and an area of 66.4 sq m. The main entrance to the tube is through a curved, horizontal entrance on the eastern side of a raised outcrop that is 4.55 m long (north-south) and 0.5 to 0.6 m in height (*Figure 133*). This opens onto a large irregularly-shaped chamber that is 12.8 m long (northeast by southwest) and 2.6 to 5.2 m wide. The floor throughout the majority of the tube, except for an area of level soil to the west of the entrance, is bare lava with areas of boulder and slab roof fall. There is a concentration of burned *kukui* nut shells on the soil surface along with a large *Cypraea sp* shell probably used as a scraper. There is an oval-shaped alignment of cobbles in the soil area that is 0.88 m long (east-west) and 0.69 m wide that appears to represent a hearth.

There is a secondary entrance to the tube located at the western end of the chamber that is 1.75 m long (north-south) and 0.5 m in height. Four inaccessible passages extend of the main chamber: one to the north, one to the northwest, and one to the south and one to the southwest. These passages could not be accessed due to low ceiling heights (0.15 to 0.2 m). The floors in these passages are bare lava and no cultural remains were observed. There is a small skylight opening in the ceiling of the northwestern passage.

Site 28443 is interpreted as a temporary habitation shelter based on its formal type and the cultural remains. The site is unaltered and in good condition. It is assessed as significant for its information content.

State No.: 28444 (T-1101, 1107, 1190)

Site Type: Lava Tube (5 chambers)

Functional Interpretation: Temporary Habitation, Burial

Topography: Soil and outcrops sloping to west and southwest

Elevation: 408-500ft

Vegetation: Christmas berry, *alahe'e*, *haole koa*, grasses

Probable Age: Prehistoric

Overall Dimensions: 163.0 m long

Condition: Good

Integrity: Unaltered

Description: Site 28444 is a lava tube system with five chambers (Features A-E) located in the southeastern portion of the project area (*Figure 134*). Feature A has an overall length of 66.8 linear meters and an area of 286.9 sq m. Feature B is 52.0 m long and 295.1 sq m in area, Feature C is 17.9 m long and 36.6 sq m, Feature D is 9.1 m long and 19.6 sq m, and Feature E is 31.9 m long and 162.8 sq m.

The Feature A chamber is situated at the western end of the site, accessed through an opening (4.7 m wide by 1.3 m high) on the west side of a sinkhole. This opens onto a linear chamber that is 23.5 m long (east-west) and 2.2 to 5.4 m wide. There is a terrace just inside the entrance along the north side with a paved cobble and pebble surface. This terrace is 3.7 m long (north-south) and 2.8 m wide with a stacked cobble and boulder retaining wall along the west side.

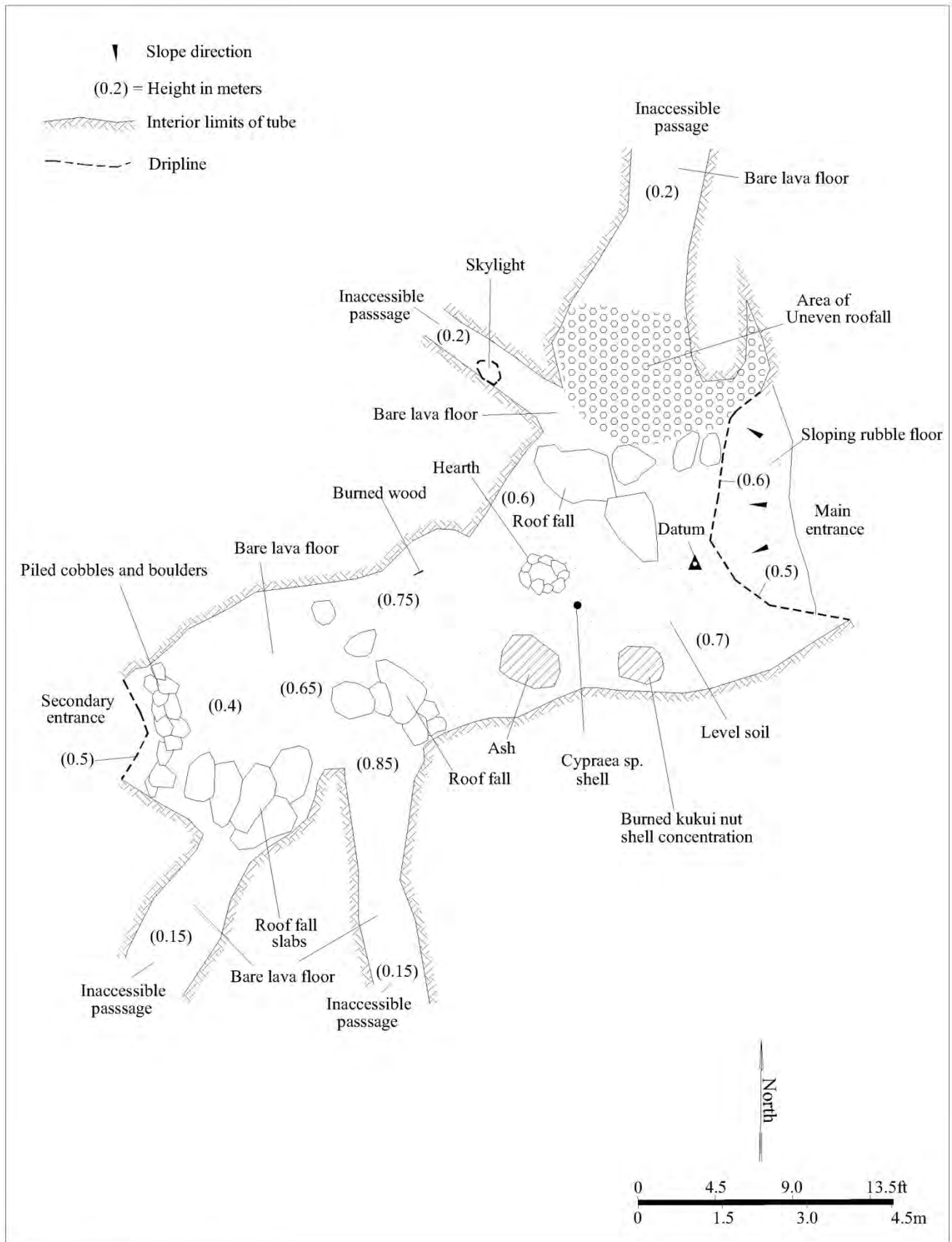


Figure 133. Site 28443 Plan Map

There is an area of level soil adjacent to the terrace to the west. Fragments of gourd, a *Cellana sp.* shell scraper, waterworn basalt pebbles, charcoal and charred wood and waterworn coral are present on the soil surface. Roof fall is present to the west of the soil. There is a concentration of cultural remains to the west of the roof fall consisting of branch coral, a pile of ochre, *kukui* nut shells, charcoal and a discoidal basalt a'a abrader or whetstone (Acc. 67.001, 211.0g, 104.0 x 89.1 x 27.6 mm). One side of the implement is highly abraded to create a flat smooth surface (*Figure 135*).



Figure 135. Site 28444, Feature A, Discoidal Basalt Abrader

There is a raised shelf located along the southern wall of the entry chamber that is 0.6 m above the main floor. This shelf has a bare lava floor and ceiling heights of 0.5 to 1.0 m. Several slabs are present on the shelf in the southwestern corner, concealing a second lower shelf. Human remains are present on this lower shelf consisting of a mandible, long bones and unidentified bone fragments. There is a low inaccessible passage that extends to the south from the raised shelf.

The passages at the west end of the entry chamber consist of a tube to the north and a tube to the southwest. The northern tube extends 14.1 m where it terminates. A low, inaccessible passage extends to the west from the north end. A second inaccessible passage extends to the west. The chamber has a floor to ceiling column with an area of roof fall to the north of the column. The floor in this tube is bare lava and the ceiling heights range from 0.5 to 1.0 m. A small skylight is present in the northern portion. No cultural remains were present in this portion of the feature.

The passage to the southwest extends in this direction for 8.9 m where it terminates. A secondary passage extends to the south from the south wall for 20.3 m where it also terminates. This passage has several low, inaccessible tubules extending off it, including three to the southeast and one to the south. The floor throughout this chamber is bare lava with scattered roof fall and the ceiling heights range from 0.2 to 0.6 m. Several crab claws are present on the surface.

The Feature B lava tube is located on the eastern side of the sinkhole leading to Feature A. The entrance is 5.5 m wide and 0.9 m in height and opens onto a linear chamber that is 52.0 m long (northeast by southwest) and 2.9 to 8.2 m wide. The eastern end of the chamber opens onto a second sinkhole. The floor throughout the tube is bare lava and the ceiling heights vary from 0.7 to 1.4 m. There is a narrow inaccessible passage extending to the west on the north side of the west entrance.

There is an area of ashy soil with scattered *kukui* nut shells on the floor adjacent to the west entrance. A coral abrader (Acc. 68.001, 25.6g, 48.1 x 45.5 x 32.4 mm) was present against the south wall next to the soil area. It exhibits a single abraded surface (Figure 136). A slab with grinding marks is present next the abrader. Numerous cultural remains are scattered on the floor 10.0 m from the soil area consisting of fragments of wood and charcoal, *Cypraea sp.* shells, a *Cellana sp.* shell scraper and a *poi* pounder fragment (Acc. 66.001, 755.0g, 111.1 x 78.5 x 55.8 mm). The pounder fragment is roughly cylindrical, abraded on the distal end and sides, and battered on the distal end. A flake scar is visible on the proximal end. Used as an abrader and possibly as an expedient *poi* pounder and/or hammerstone (Figure 137).

There is an area of roof fall against the north wall of the tube 8.0 m northeast of the *Cellana sp.* shell scraper. Charcoal and a waterworn basalt pebble are present on the floor to the east of the roof fall. There are several concentrations of goat bones and a bird bone located further to the east. There is an area of ashy soil to the east of the goat bones, with roof fall surrounding it. Cultural remains on the soil consist of *Cypraea sp.* shells and *kukui* nut shells. Several flat slabs are also present.

A vertical entrance is located to the east of the soil area that is 1.8 m long, 1.5 m wide and 1.5 m in depth below the surrounding ground surface. There is a paved terrace to the east of the vertical entrance that is 5.1 m long (northwest by southeast) and 3.1 m wide, with a low cobble and boulder retaining wall along the south side. A *papamu* is located to the west of the terrace and an area of soil with *kukui* nut shell is located to the south. The *papamu* has eleven rows with 12 depressions in each row. The eastern entrance to Feature B is located adjacent to the terrace to the east. This entrance is 2.8 m wide and 1.0 m high and opens onto the second sinkhole.

The Feature C lava tube is accessed through a 4.3 m wide by 1.0 m high opening on the east side of the second sinkhole. This chamber is irregularly-shaped and is 17.9 m long (northeast by southwest) by 5.2 m wide, with a bare lava floor with scattered roof fall and ceiling heights that average 0.6 m. The east end of this chamber opens onto a third sinkhole through an entrance that is 2.0 m wide and 0.95 m high. A goat skull is present on the floor of this chamber. There is a narrow passage that extends to the southeast along the south side of the second sink. A *papamu* is located on the ground surface above the chamber. It has eleven rows with 10 depressions in each row.

The Feature D chamber is accessed through a 3.0 m wide by 0.5 m high opening on the northeast side of the third sinkhole. This chamber is linear and is 9.1 m long (northeast by southwest) and 1.4 to 2.8 m wide with a bare lava floor and ceiling heights that range from 0.3 to 0.5 m. There is a raised shelf across the chamber at the northeast end with an entrance (0.2.0 m wide by 0.8 m high) into a fourth sinkhole. No cultural remains were present in Feature D, although there is a stacked cobble and small boulder mound built against the south side of the fourth sinkhole that likely served as a step down into the interior. A low inaccessible passage extends to the northeast from the fourth sinkhole with a bare lava floor and no cultural remains.

The Feature E chamber is located on the east side of the fourth sinkhole, accessed through a 2.75 m wide and 2.2 m high opening. The interior of Feature E is irregular in shape and is 31.9 m long (northeast by southwest) by 0.85 to 7.7 m wide. The floor is bare lava and the ceiling heights range from 0.6 to 1.2 m. There are two vertical entrances (1.2 m deep) and a small skylight opening in the ceiling of the chamber. The northeast end of the chamber terminates in a narrow inaccessible passage. Scattered roof fall is present to the southwest of this passage. A cluster of goat bones is present in a small room along the south side of the main chamber. No cultural remains were present in Feature E though there is an alignment of flat slabs on the floor 6.0 m east of the west entrance. These slabs form a short path segment.

Site 28444 is interpreted as a complex of temporary habitation shelters based on formal type, internal modifications and cultural remains. Gourd fragments in the cave potentially indicate use for water catchment. The human remains in the Feature A chamber also indicate a burial function. The site is assessed as significant for information content and for its cultural value. It is unaltered and in good condition.



Figure 136. Site 28444, Feature B, Coral Abrader



Figure 137. Site 28444, Feature B, Poi Pounder Fragment

State No.: 28445 (T-1189)
Site Type: Lava Tube
Functional Interpretation: Temporary Habitation
Topography: Pahoehoe lava sloping gently to west
Elevation: 407ft
Coordinates: E=186791, N=2176256
Vegetation: Christmas berry, *alahe'e*, *Panini* cactus, grasses
Probable Age: Prehistoric
Overall Dimensions: 8.75 m long
Condition: Good
Integrity: Unaltered

Description: Site 28445 is a small lava tube located in an area of pahoehoe lava in the southeastern portion of the project area. The site has an overall length of 8.75 m and an area of 47.2 sq m. The entrance to the tube is through a horizontal opening that is 3.2 m long (east-west) and 0.6 m wide. This opens onto a chamber that is 8.1 to 8.75 m long (west-northwest by east-southeast) and 5.0 to 5.9 m wide (*Figure 138*). The ceiling heights range from 0.55 to 0.95 m. Roof fall is present beneath and west of the dripline and along the northern wall.

The floor throughout the majority of the tube, except for three pockets of shallow ashy soil in the central portion, is bare lava. The western most soil area contains charcoal, *kukui* nut shell and a bird bone. The eastern soil area contains charcoal. Another bird bone is located to the south of the western soil area, with several *kukui* nut shells to the west of the bone. A *Cellana sp.* shell is located to the south of the eastern soil area and a *kukui* nut shell is present to the southwest of the shell, adjacent to the south wall of the tube. A *kukui* nut shell was also noted on the floor at the west end of the tube.

There is a raised shelf present along the south side of the tube, 0.5 to 0.7 m above the main floor. This shelf is 5.0 m long (east-west) and 0.42 to 0.56 m wide. The surface of the shelf slopes to the south and there is a shallow pocket of ashy soil at the eastern end.

Site 28445 is interpreted as a temporary habitation shelter. This is based on its formal type and on the presence of the cultural remains within the tube. The site is unaltered, in good condition and is assessed as significant for information content.

State No.: 28446 (T-1102)
Site Type: Trail
Functional Interpretation: Transportation
Topography: A'a lava sloping to west-southwest
Elevation: 422ft
Coordinates: E=186856, N=216215
Vegetation: Christmas berry, *alahe'e*, *haole koa*, autograph tree, grasses
Probable Age: Prehistoric
Overall Dimensions: 3.45 m long
Condition: Fair
Integrity: Unaltered

Description: Site 28446 consists of an alignment of seven flat pahoehoe slabs that extend across a finger of a'a lava, in the southeastern portion of the project area. The alignment is 3.45 m in length (east-northeast by west-southwest) and 1.45 m wide. The individual slabs range in length from 0.45 to 0.9 m and in width from 0.33 to 0.53 m (*Figure 139*). No cultural remains were present.

The Site 28446 trail is classified as a Type A trail as defined by Apple (1965) that functioned as a single file foot trail constructed during pre-Contact times. It served as a path across the a'a lava finger based on its formal type and appearance. The site is unaltered and in good condition. It is assessed as significant for its information content.

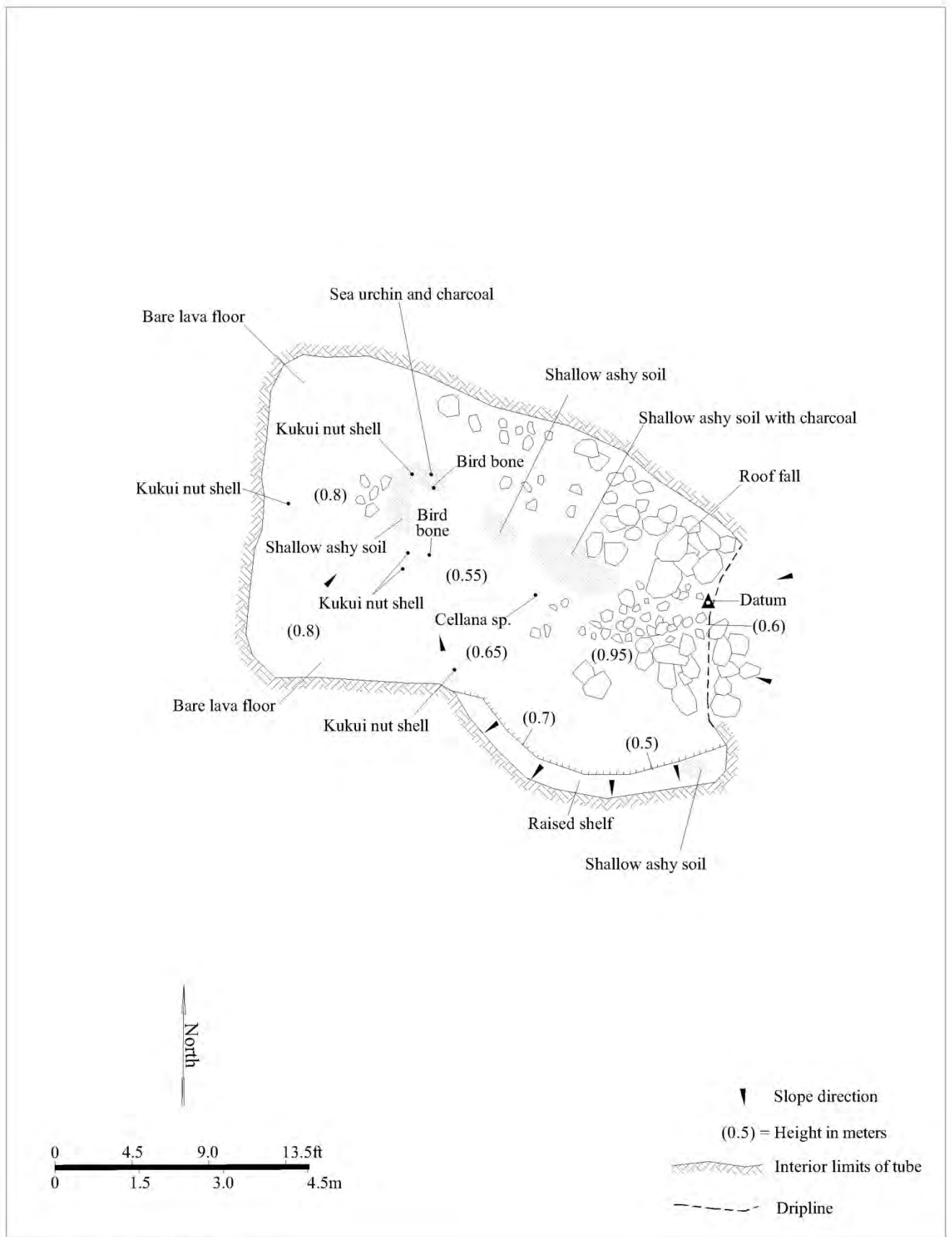


Figure 138. Site 28445 Plan Map



Figure 139. Site 28446 Trail, view to northeast

State No.: 28447 (T-1098)

Site Type: Complex (3)

Functional Interpretation: Temporary Habitation, Transportation

Topography Soil and outcrops sloping to southwest

Elevation: 410-413ft

Coordinates: E=186940, N=2176247

Vegetation: Christmas berry, *haole koa*, *alahe'e*, lantana, grasses

Probable Age: Prehistoric

Overall Dimensions: 22.2 by 8.6 m

Condition: Fair

Integrity: Unaltered

Description: Site 28447 is a complex of three features located in the southwestern portion of the project area. The features consist of two terraces (Features A and B) and a steppingstone trail (Feature C) located in an area 22.2 m long (northwest by southeast) and 8.6 m wide (*Figure 140*). Features A and B are located in an area of sloping soil and low outcrops and Feature C is situated to the northwest, in an area characterized by linear fingers of pahoehoe and a'a lava.

Feature A is a roughly oval-shaped terrace built against the western side of a low outcrop. It is 4.7 m long (north-south) and 2.4 to 2.55 m wide. There are stacked and piled cobble and small boulder retaining walls along the north and west sides that are 0.2 to 0.6 m in height. The east side is level with the adjacent outcrop and the west and southwest sides have collapsed outward. There is a small paved area on the surface of the terrace that is 1.95 m long by 1.2 m wide. The area to the north is uneven cobbles and small boulders and the area to the south is bare lava. Several fragments of waterworn coral were present on the surface (not collected).

A 1.0 by 1.0 m test unit (TU-38) was excavated into the paved surface of Feature A revealing two layers over bedrock (see *Figure 140*). Layer I consists of 0.25 to 0.42 m of tightly packed cobbles, pebbles and small boulders. Cultural remains from Layer I consist of two *Porites* sp. coral pebble abraded fragments (Acc. 31.001, 16.5g, 40.4 x 32.5 x 21.2 mm; Acc. 31.002, 4.4g, 25.6 x 21.3 x 15.3 mm) and a waterworn *Porites* sp. coral pebble manuport

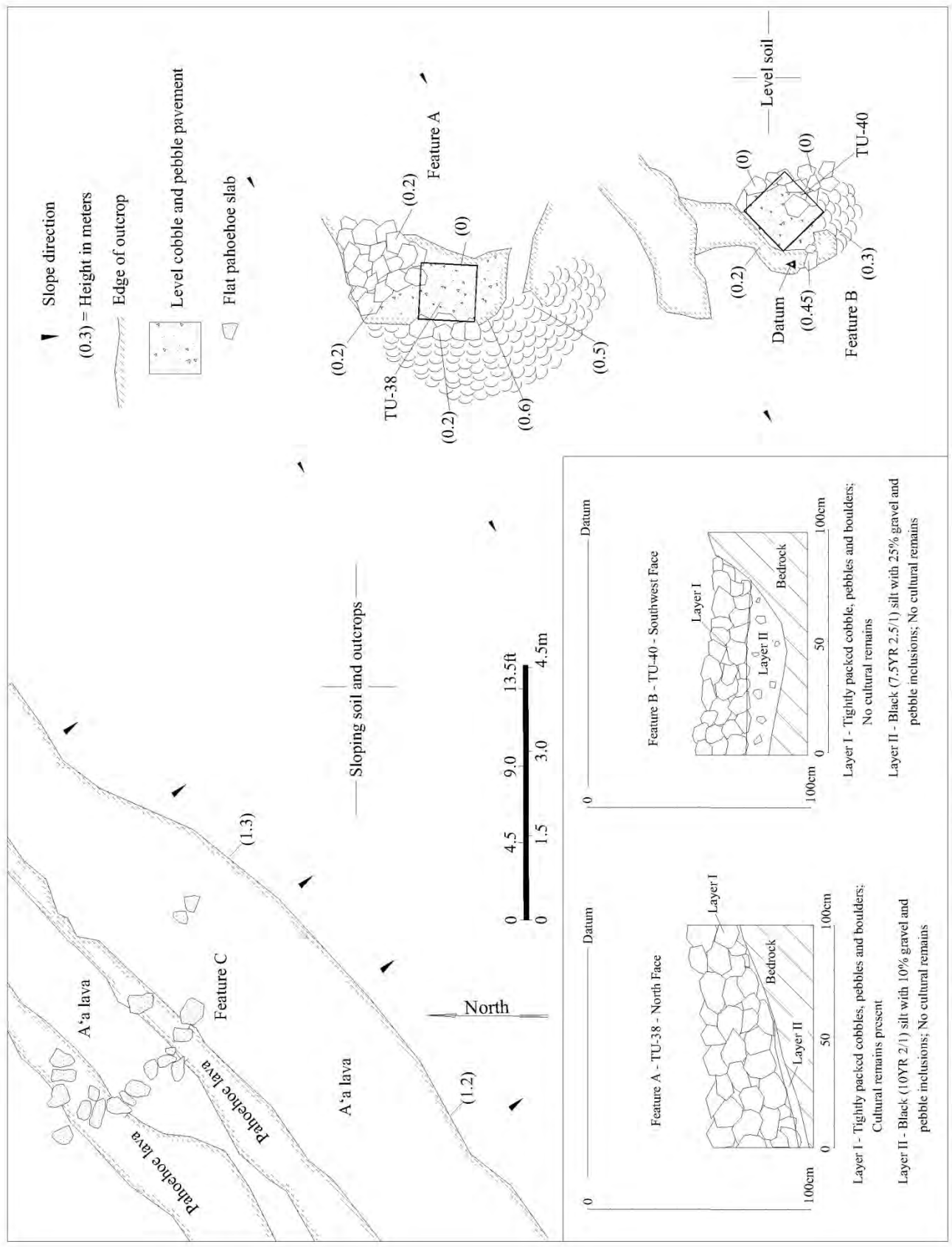


Figure 140. Site 28447 Plan Map and Profiles of TUs 38 and 40

(6.0g). Bedrock was encountered below Layer I in the eastern portion of the unit, with Layer II soil present in the western portion. Layer II is a 0.01 to 0.04 m thick deposit of black (10YR 2/1) silt with 10% gravel and pebble inclusions. No cultural remains were present.

Feature B is a small terrace located 4.0 m south of Feature A. It is oval in shape and is built against the south and east sides of a raised bedrock outcrop. It is 2.25 m long (north-south) and 1.5 m wide. The east side is level with the surface of the sloping terrain and the south side is collapsed cobbles and small boulders that is 0.3 m in height. The surface is a level cobble and pebble pavement with no cultural remains present.

A 1.0 by 1.0 m test unit (TU-40) was excavated into the center of Feature B revealing two layers over bedrock (see *Figure 140*). Layer I consists of 0.16 to 0.24 m of tightly packed cobbles, pebbles and small boulders with no cultural remains present. Layer II is a 0.1 to 0.18 m thick deposit of black (10YR 2/1) silt with 25% gravel and pebble inclusions. No cultural remains were present in Layer I.

Feature C is a trail comprised of flat pahoehoe slabs that extend across linear fingers of a'a and pahoehoe lava. The southern end of the trail is 9.8 m to the northwest of Feature A, on top of a raised a'a flow. The trail consists of 18 slab steppingstones in an area 5.1 m long (northwest by southeast) and 1.5 m wide. The individual slabs range in length from 0.17 to 0.45 m and in width from 0.13 to 0.39 m. No cultural remains were found in association with the trail.

Site 28447 is interpreted as a temporary habitation complex with an associated transportation feature. Although Feature A is paved, an attribute of substantial construction, it's very small area (11.95 sq m) and associated portable remains suggest it functioned as a temporary habitation. The Feature B terrace probably served as site furniture for habitation-related activity. The Feature C trail is classified as a Type A trail as defined by Apple (1965) functioning as a single file foot trail constructed during pre-Contact times. The site is unaltered and in good condition. It is assessed as significant for its information content.

State No.: 28448 (T-1217)

Site Type: Complex (2)

Functional Interpretation: Temporary Habitation

Topography: Soil and outcrops sloping to southwest

Elevation: 490-500ft

Coordinates: E=186876, N=2176376

Vegetation: Christmas berry, *haole koa*, *alahe'e*, grasses

Probable Age: Prehistoric

Overall Dimensions: 25.0 m by 5.4 m

Condition: Good

Integrity: Unaltered

Description: Site 28448 is a complex of two lava tubes located in the southwestern portion of the project area along the project boundary. The two tubes are separated by an oval-shaped sinkhole that is 7.0 m long (northeast by southwest), 5.3 m wide and 1.0 m in depth (*Figure 141*). The Feature A tube has an overall length of 12.2 m and an area of 34.3 sq m. The tube extends to the southwest from the sink, accessed through a horizontal opening that is 5.0 m wide and 0.4 to 0.5 m in height. This opens onto a chamber that is 3.75 to 7.2 m long (northeast by southwest) and 4.25 to 5.0 m wide. This chamber is bisected by a floor to ceiling column. The portion to the south of the column has a bare lava floor with scattered roof fall and ceiling heights from 0.2 to 0.4 m. The area to the north and west of the column has a soil covered floor with scattered charcoal and ceiling heights that range from 0.4 to 0.75 m.

Two linear passages extend off the main Feature A chamber to the west. The first is located at the northwestern corner of the chamber. It is 5.6 m long (east-west) and 0.95 to 1.75 m wide. The floor in eastern portion is soil with scattered charcoal and in the western portion it is bare lava. The second passage extends to the east from the southwest corner of the main chamber. It is 3.0 m long (east-west), then it turns to the southwest for 2.75 m where it terminates. The chamber is 0.65 to 1.0 m wide and 0.3 m in height with a bare lava floor. Roof fall is present on the floor at the eastern end.

The Feature B tube is 10.2 m long with an area of 19.6 sq m. The entrance to Feature B is through a small opening along the northeast side of the sinkhole that is 1.1 m wide and 0.45 m in height. This opens onto a roughly oval-

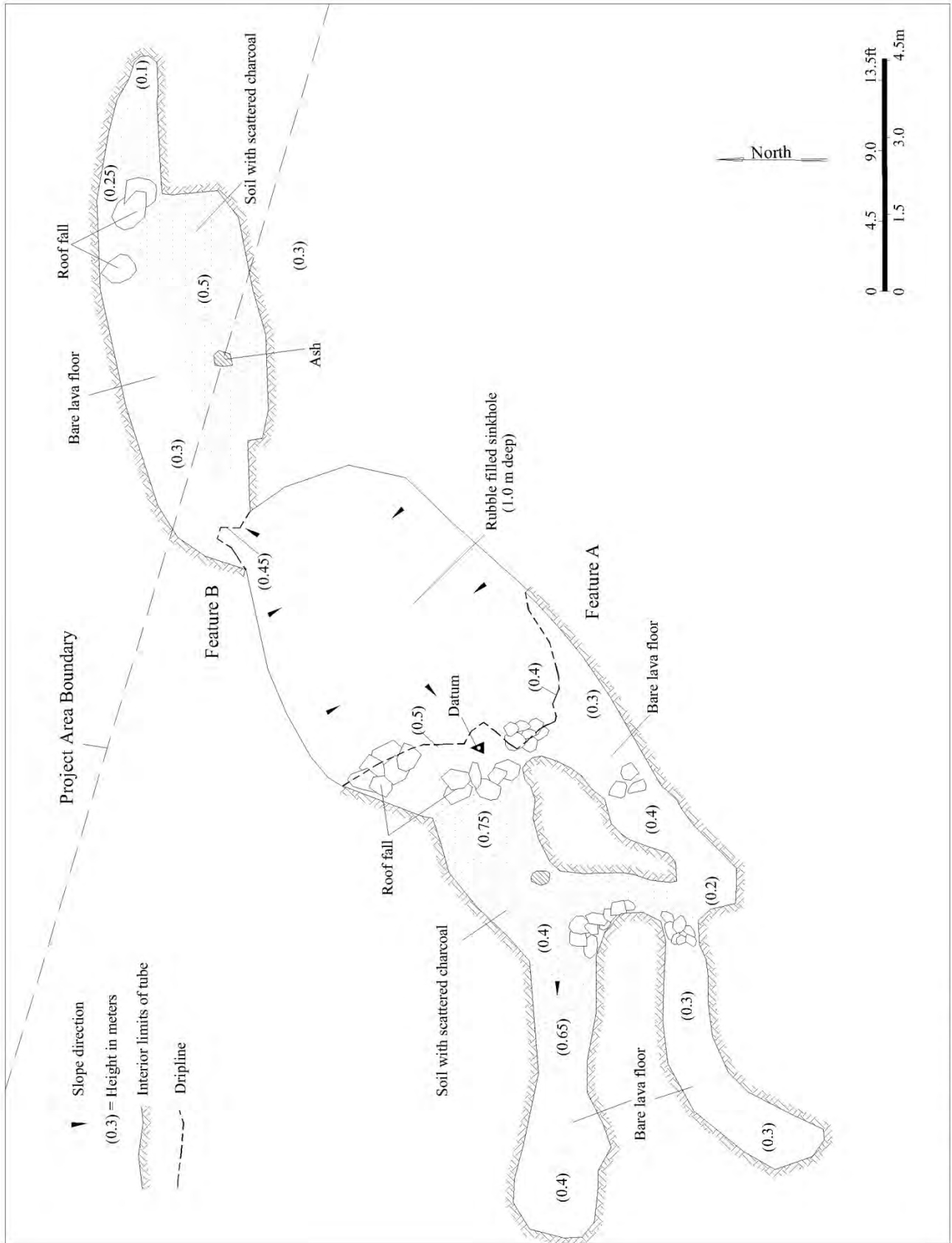


Figure 141. Site 28448 Plan Map

shaped chamber that is 6.5 to 10.2 m long (east-west) and 0.5 to 2.95 m wide. The majority of this chamber is located outside the project area to the northeast. The floor along the north side of the tube is bare lava. The remaining floor is level soil with scattered charcoal. An ash concentration is present on the floor 3.0 m east of the entrance. Several large roof fall slabs are present at the eastern end of the chamber.

Site 28448 is interpreted as a complex of temporary habitation shelters based on formal type and on the presence of the charcoal and ash. The site is unaltered, in good condition and is assessed as significant for information content.

State No.: 28449 (1221)

Site Type: Lava Tube

Functional Interpretation: Temporary Habitation

Topography: Pahoehoe lava sloping gently to west

Elevation: 460ft

Coordinates: E=186894, N=2176358

Vegetation: Christmas berry, *haole koa*, *alahe'e*, grasses

Probable Age: Prehistoric

Overall Dimensions: 7.4 m by 3.6 m

Condition: Good

Integrity: Unaltered

Description: Site 28449 is a lava tube located in an area of gently sloping pahoehoe lava in the southeastern portion of the project area. The tube has an overall length of 7.4 m and an area of 18.3 sq m. The entrance to the tube is through an opening on the side of an outcrop that is 3.6 m wide and 0.7 m in height (*Figure 142*). This opens onto a roughly oval-shaped chamber that is 7.6 m long (northeast by southwest) and from 1.65 to 3.6 m wide. The ceiling heights range from 0.4 m at the southwest end to 1.1 m in the center. There is an area of level soil with scattered roof fall to the southwest of the entrance with the remainder of the floor comprised of bare lava. Charcoal flecks are present on the surface of the soil. There are four narrow, inaccessible passages that extend off the main chamber; one to the northwest, one to the west, one to the southwest and one to the south. These passages are inaccessible due to their low heights (0.1 to 0.2 m).

Site 28449 is interpreted as a possible temporary habitation shelter. This is based on formal type and on the presence of the cultural remains. The site is unaltered and in good condition. It is assessed as significant for information content.

State No.: 28450 (1216)

Site Type: Lava Tube

Functional Interpretation: Temporary Habitation

Topography: Pahoehoe lava sloping gently to northwest

Elevation: 472-480ft

Coordinates: E=186918, N=2176376

Vegetation: Christmas berry, *haole koa*, *alahe'e*, grasses and ferns

Probable Age: Prehistoric

Overall Dimensions: 17.8 m by 3.7 m

Condition: Good

Integrity: Unaltered

Description: Site 28450 is a lava tube located in an area of gently sloping pahoehoe lava in the southeastern portion of the project area. The tube has an overall length of 17.8 m and an area of 36.9 sq m. The entrance to the tube is located partially within the boundaries of the project area and is an oval vertical hole that is 2.45 m long (northeast by southwest), 1.45 m wide and 1.4 m deep (*Figure 143*). This opens onto a linear chamber that extends to the northeast and southwest. The passage to the northeast is located outside the boundaries of the project area and was not fully inspected or mapped. It is an oval-shaped chamber with a floor comprised of level soil with scattered marine shells, sea urchin, charcoal and goat bones. The tube narrows at the northeast and continues.

The passage to the southwest extends in this direction is 3.3 m long (northeast by southwest), 2.8 m wide and 0.5 m in height. The floor is bare lava with scattered roof fall. No cultural remains were present in this portion of the tube. The southwestern end of this chamber narrows to 0.75 m wide and 0.1 m in height and is inaccessible.

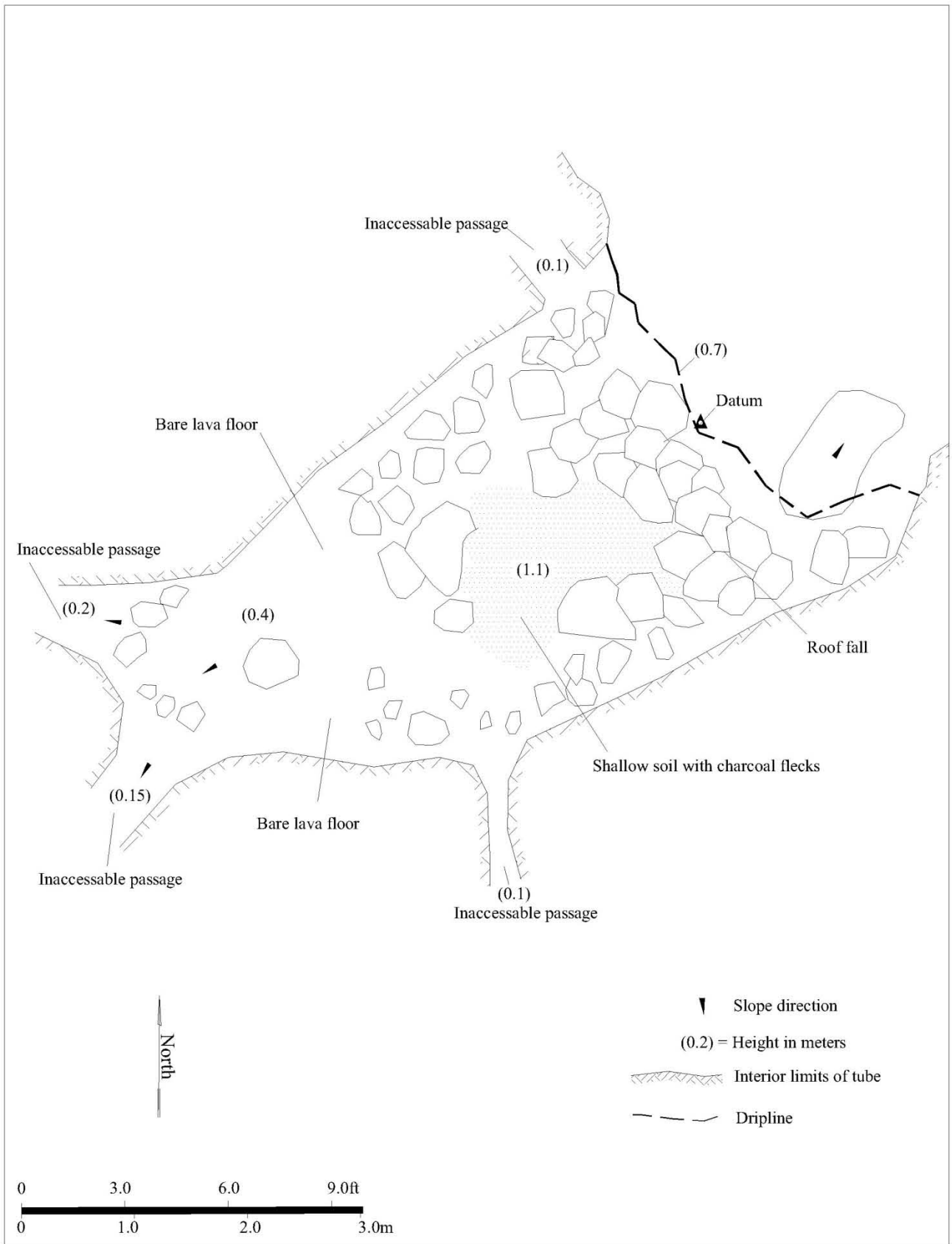


Figure 142. Site 28449 Plan Map

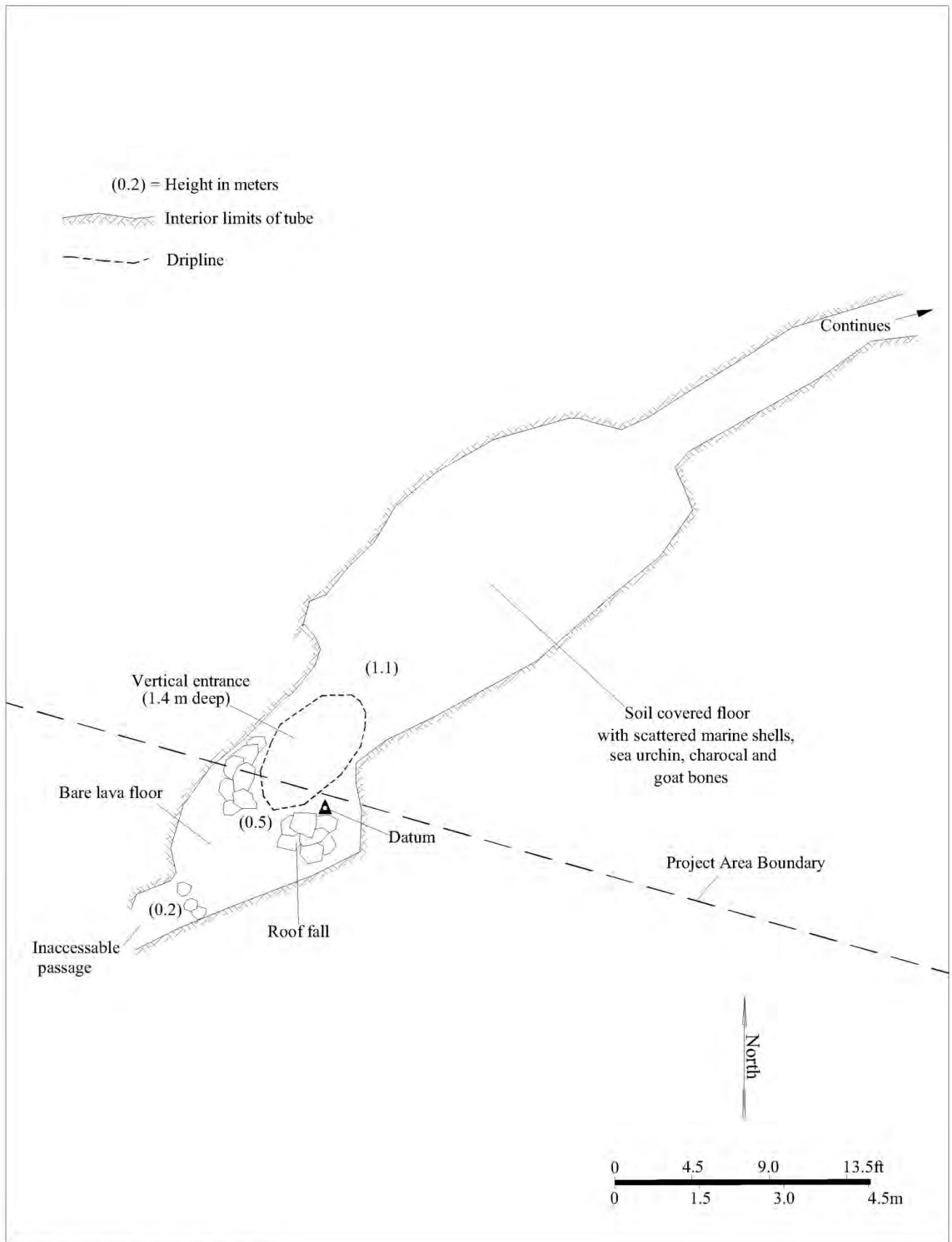


Figure 143. Site 28450 Plan Map

Site 28450 is interpreted as a temporary habitation shelter based on formal type and on the presence of the cultural remains. The site is unaltered and in good condition. It is assessed as significant for information content.

State No.: 28451 (T-1203)

Site Type: Complex (3)

Functional Interpretation: Temporary Habitation

Topography: Crest of weathered pahoehoe flow

Elevation: 451 ft

Coordinates: E=186919, N=2176339

Vegetation: Christmas berry *haole koa*, *alahe'e*, klu and various grasses

Probable Age: Prehistoric

Overall Dimensions: 12.0 m by 7.0 m

Condition: Fair

Integrity: Unaltered

Description: Site 28451 is a complex composed of three features clustered on and around a pahoehoe outcrop in the southeastern portion of the project area. The site comprised of two paved terraces (Features A-B) and a small lava blister (Feature C) encompassing an area 12.0 m long by 7.0 m wide (*Figure 144*).

Feature A is a low, irregularly-shaped paved terrace defined by short segments of retaining walls on the north and south ends. The north wall is parallel to the outcrop on the east and is constructed of piled boulders and cobbles to a maximum height of 0.25 m. The north retaining wall is 1.2 m long and 0.4 m thick. The south retaining wall defines the southwest edge of the terrace and is constructed of piled boulders and cobbles to a maximum height of 0.4 m. The south retaining wall is 1.8 m long by 0.3 m wide. The surface between the two retaining walls is roughly paved with cobbles to level the area between the ground surface on the west and the pahoehoe outcrop on the east. The pavement covers an area c. 5.0 m long by 0.1 to 2.0 m wide. The paved terrace surface extends the level surface of the pahoehoe outcrop an additional c. 5.0 sq m to the west.

TU-70, a 1.0 by 1.0 m test unit, was excavated at the southern end of the Feature A terrace (see *Figure 70*) Excavation showed that the pavement fill (Layer I) is composed of pahoehoe boulders, cobbles and pebbles with a maximum depth of 30 cm, overlying a soil deposit. No cultural material was recovered from Layer I. Layer II consists of 20 cm of very dark brown (10YR 2/2) silt with 50% cobble and pebble inclusions, overlying bedrock. Cultural material recovered from Layer II consists of marine gastropod shells (1 *Conus* sp. 0.9g; 15 *Cypraea* sp. 17.9g; 20 *Nerita picea* 3.7g; 6 Thaididae 2.6g; 1 *Trochus intextus* 0.3g), marine bivalve shells (355 *Isognomon perna* 46.0g), 3 indeterminate marine shells (1.5g), 19 urchin fragments (2.1g), 18 fragments of charred wood (3.0g) and 2 waterworn *Pocillopora* sp. coral pebble and gravel fragments (2.6g).

Feature B is a roughly triangular terrace constructed on the south side of the same pahoehoe outcrop that is incorporated by the Feature A terrace. A single segment of a retaining wall is present on the southwest side of the terrace. The retaining wall is 1.9 m long by 0.3 m wide and is constructed of piled boulders and cobbles. The terrace surface is composed of a level surface roughly paved with cobbles and pebbles, c. 3.0 m long on each side. The north end of the paved surface is flush with the adjacent outcrop surface and extends the level surface of the pahoehoe outcrop an additional c. 9.0 sq m.

Feature C is a small lava blister located 1.3 m west of the south end of the Feature A terrace. The vertical entrance is 0.5 m in diameter and provides access to a chamber 0.6 m long (W-E) by 0.4 m wide and 0.4 m high. An *Isognomon* sp. shell and several urchin fragments are exposed on the bare lava of the blister floor.

Site 28451 is interpreted as a complex of temporary habitation structures. Although paved, an attribute of substantial construction, the small area of Features A (9.2 sq m) and B (15.05 sq m) and their informal construction suggest temporary use. Feature C is interpreted as a small storage feature. The site is unaltered and in fair condition. It is assessed as significant for its information content.

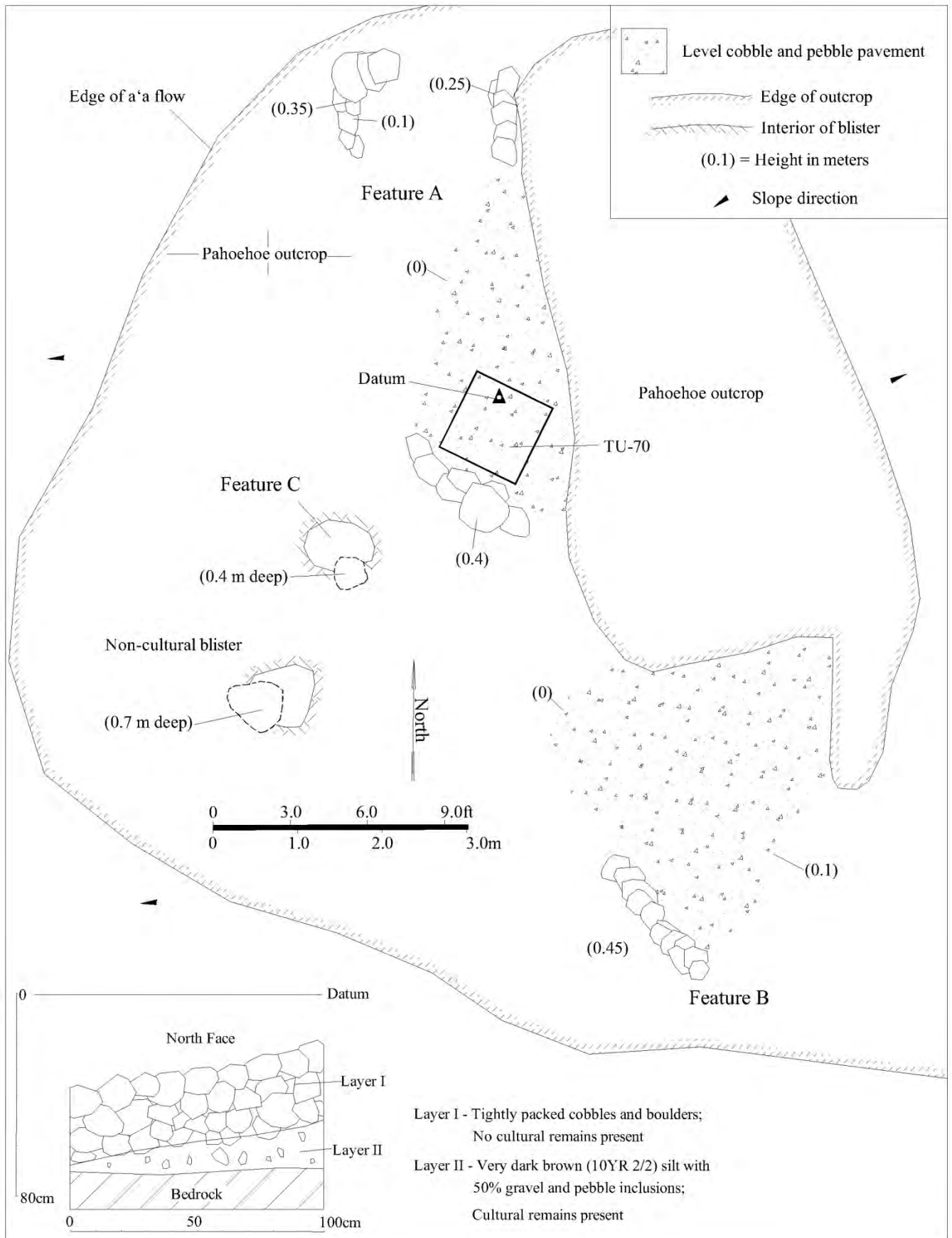


Figure 144. Site 28451 Plan Map and TU-70 North Face Profile

State No.: 28452 (T-1211)
Site Type: Terrace
Functional Interpretation: Temporary Habitation
Topography Soil and outcrops on gentle slope to south
Elevation: 485 ft
Coordinates: E = 186958, N = 2176362
Vegetation: Christmas berry, *haole koa*, *alahe'e*, autograph tree and grasses
Probable Age: Prehistoric
Overall Dimensions: 4.0 m long (E-W) by 3.5 m wide (N-S)
Condition: Fair
Integrity: Unaltered

Description: Site 28452 is a small terrace constructed on a bedrock outcrop in the southeastern portion of the project area. The terrace is 3.7 m long (northwest by southeast) and 3.1 m wide (*Figure 145*). The retaining wall is semi-circular. It is constructed of roughly stacked pahoehoe boulders and cobbles of two to four courses and a single course of aligned boulders. The wall varies in height from 0.25 to 0.6 m and in thickness from 0.25 to 1.0 m. Portions of the terrace wall along the west and northwest sides are partially collapsed. The wall defines the northwest, west and south perimeter of a level area capped by a shallow deposit of soil overlying bedrock. No cultural material was observed in association with the feature. No cultural material was observed in association with the site.

Site 28452 is interpreted as a foundation for temporary habitation shelter based on its formal type and small area (11.4 sq m). The site is unaltered and in fair condition. It is assessed significant for its information content.

State No.: 28453 (T-1205 A-C; T-1207 A-B)
Site Type: Lava Tube Complex
Functional Interpretation: Temporary Habitation
Topography Pahoehoe flow with a moderate slope to the southwest
Elevation: 460-495ft
Coordinates: E=186964, N=2176309
Vegetation: Christmas berry *alahe'e*, *haole koa*, klu, air plant, ferns and fountain grass
Probable Age: Prehistoric
Overall Dimensions: 139.7 m long (continues beyond project area boundary)
Condition: Good
Integrity: Unaltered

Description: Site 28453 is a lava tube complex located in the southeastern portion of the project area. The lava tube (Feature A) is breached at its southwest end, where two detached segments (Features B-C) are located 9.0 to 12.0 m southwest of the larger tube (*Figure 146*). The *makai* (southwest) end of the lava tube complex is within the project area boundary and the full *mauka* (northeast) extent of the tube complex has not been mapped or determined. A total length of 139.7 m of the lava tube system was mapped for this project, which includes the southwest-most detached lava tube segments. The northeastern 33.8 m of the lava tube as mapped are outside the project area boundaries. All three features contain cultural modifications and subsistence debris. Feature A is 124.3 m long with an area of 833.0 sq m, Feature B is 9.0 m long with an area of 20.4 sq m and Feature C is 11.8 m long with an area of 20.1 sq m.

Feature A is the main portion of the lava tube, 124.3 m of which have been mapped, including 33.8 m at the northeast end that is outside the project area boundary. The tube continues northeast for an undetermined distance. The width of the main passage of the lava tube varies from c. 2.4 to 27.8 m and access to most of the passage requires crawling or stooping. The ceiling height varies from 0.2 to 1.6 m, but is generally less than a meter high. The tube is accessible from four overhang entries and from three vertical entries.

The southwest end is accessible from a low overhang with a dripline 1.0 m above the lava tube floor. Collapsed roof fall debris covers the floor inside the entrance and the light zone extends c. 2.5 m northeast of the entrance and dim light for an additional c. 2.5 m. No cultural material is present within the light or twilight zone of the southwest entrance. The passage continues an additional c. 13.0 m over a rough bare lava floor capped by scattered roof fall debris to an overhead vertical entry or skylight 1.2 m above the floor and 1.5 m long by 1.0 wide. A *kukui* nutshell is exposed on the floor 4.0 m southwest of the vertical entry, within the twilight zone.

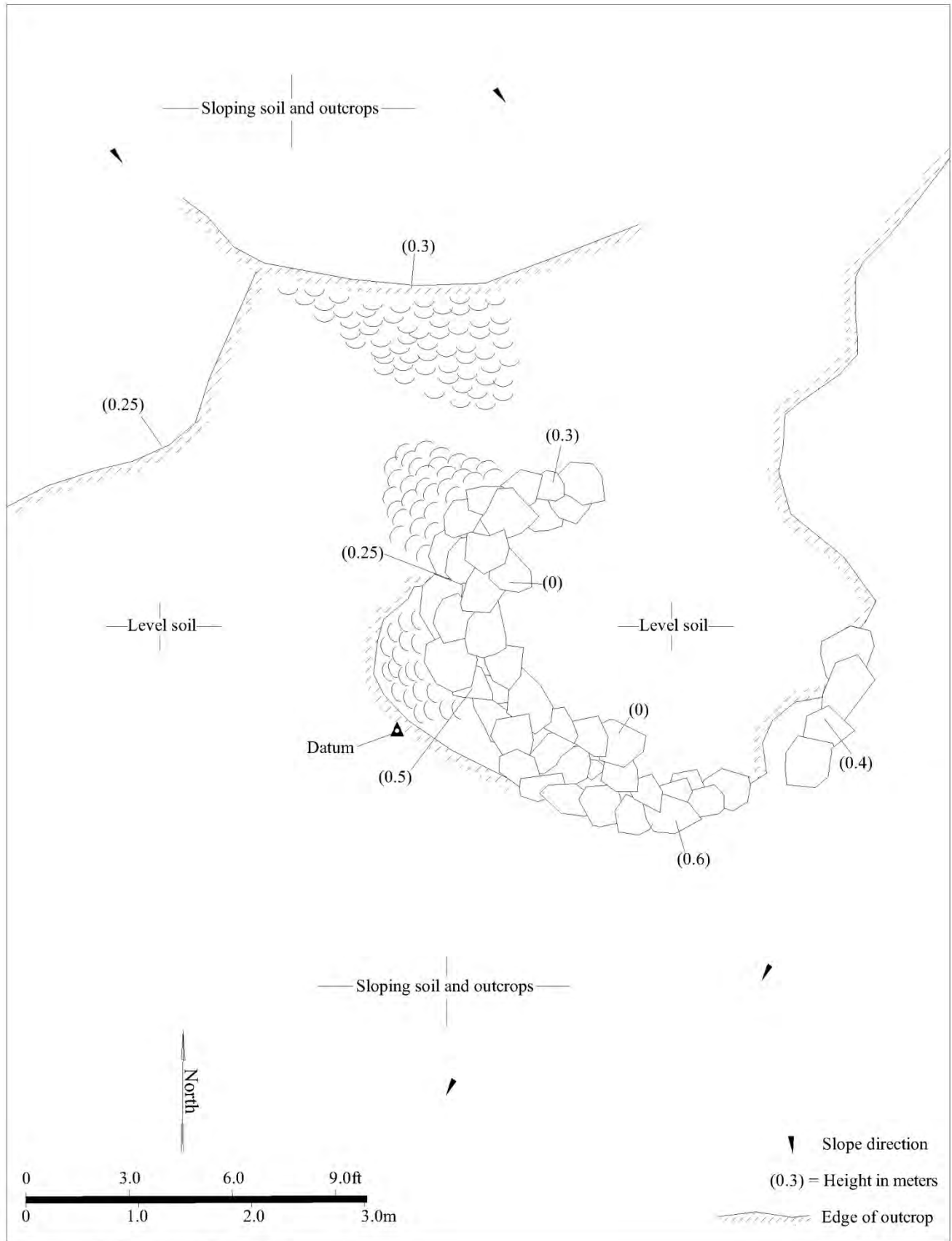


Figure 145. Site 28452 Plan Map

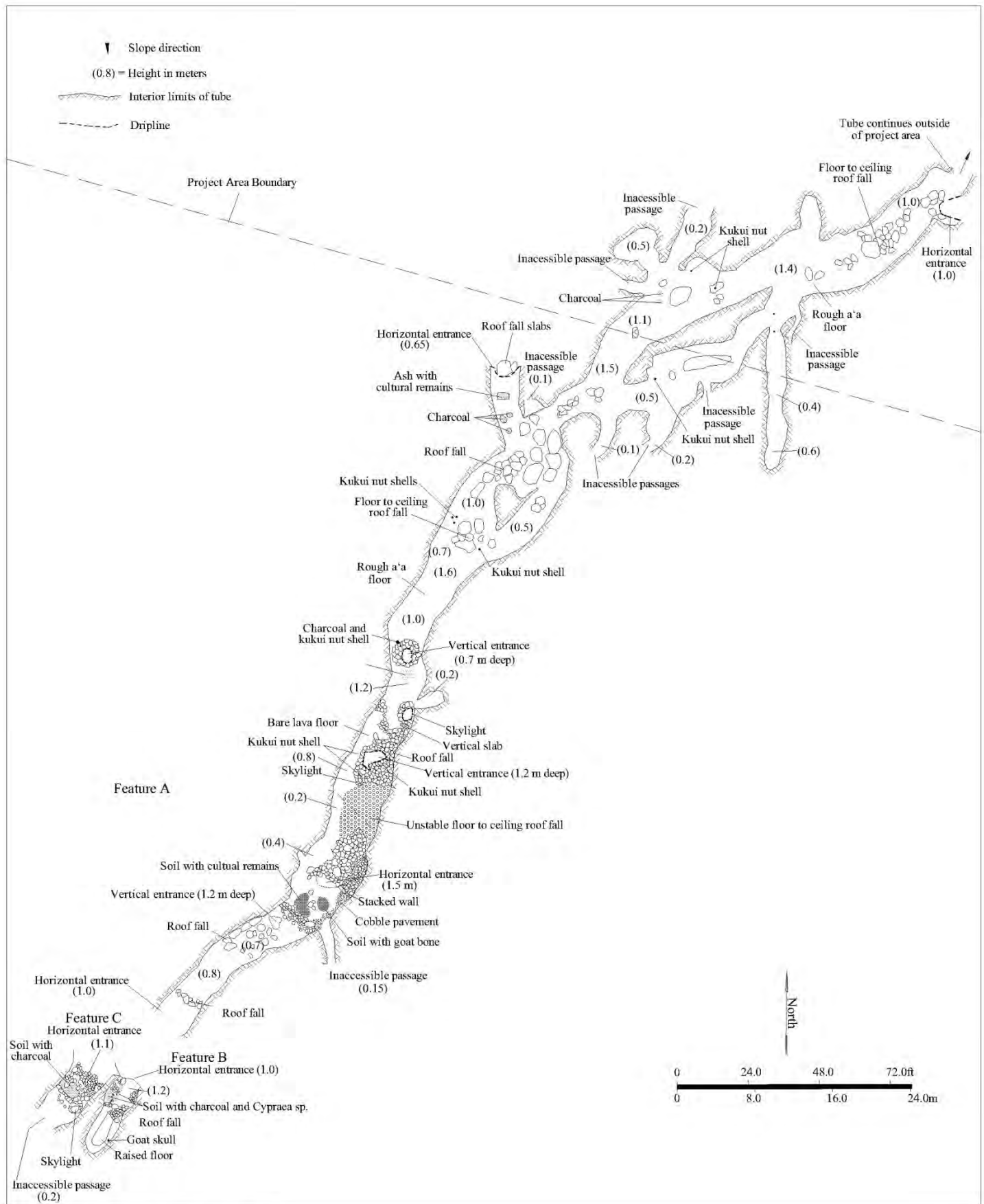


Figure 146. Site 28453 Plan Map

The light zone around the skylight extends northeast where light from a second overhang entrance extends southwest over 13.0 m of this portion of the passage. A wall constructed of three courses of stacked boulders intersects the east side of the lava tube wall, c. 1.0 m northeast of the skylight. The wall is 2.0 m long by 0.4 m wide and frames the southwest extent of an activity area centered on the second overhang entry. A shallow pebble pavement is present on the north side of the wall and the east side of the tube. The pavement is irregularly linear, no more than 1.5 m wide, and fills the irregular surface of the lava tube floor. Two patches of shallow soil deposit cover the central portion of the tube floor on the north side of the wall. The soil deposits are less than c. 2.0 sq m in extent and contain goat bone fragments, indeterminate mammal bone fragments, *kukui* nutshells, charcoal fragments and a *Cypraea* shell fragment. This area is bounded on the northeast by a well-stacked wall built of four courses of boulders that defines the northern extent of the pebble pavement and which is partially constructed outside the lava tube in the collapsed sinkhole of the second overhang entry. The north wall is 3.2 m long by 0.4 m wide 1.0 m in height. It creates a retaining wall for the collapsed fill to the north, along the east side of the tube. Boulders from collapsed debris have been displaced to clear an activity area and facilitate access to and from the overhang entry on the west side of the passage. The second horizontal overhang entrance is essentially a collapsed rubble-filled sinkhole c. 7.0 m long by a maximum of 2.7 m wide. The lava tube passage continues northeast beyond the overhang entrance on the north side of the sinkhole.

The passage northeast from the second overhang entry is largely blocked by roof fall debris but is barely passable along the west wall of the passage. The distance between the second overhang entry and the second vertical entry is c. 10.4 m. The second vertical entry is 1.2 m above the lava tube floor and c. 2.0 m long by 1.2 m wide. On the lava tube floor and on the collapsed roof fall between these two entrances urchin exoskeleton fragments, *kukui* nutshells and charcoal fragments are visible. To the north of the vertical entry, some of the collapsed debris appears to have been intentionally moved to fill dips in the floor and piled for no obvious purpose. A skylight to the north of the second vertical entrance provides illumination for much of the passage.

The passage from the skylight to the third vertical entry is 5.0 m, and between the two is a patch of shallow soil with no obvious cultural material in association. The third vertical entry is 1.5 m long by 0.8 m wide and 0.7 m above the lava tube floor. Collapsed roof fall litters the floor under the entry. On the north side of the third vertical entry a *kukui* nutshell and charcoal fragment were observed on the tube floor. A skylight 3.0 m north of the third vertical entry has a tree growing out of it and marks the location of additional *kukui* nutshells and charcoal on the tube floor in an area where the floor is overlain by rough a'a. The dark zone begins c. 6.0 m north of the skylight and continues over the next c. 60.0 m of the main passage. *Kukui* nutshells and charcoal fragments are sparsely scattered on the floor surface over the 60.0 m dark zone and dangerously unstable roof fall debris hampers but does not prevent access.

A side passage that intersects the main lava tube from the northwest is located 21.5 m from the skylight with the small tree growing from it. The intersecting passage leads to a low horizontal entrance overhung by a precariously-perched large slab boulder. Access requires crawling through a 0.5 to 0.65 m gap under the slab. The light zone of this third horizontal entrance extends c. 3.0 m from the dripline. The floor in the light zone is covered with rubble, within which is a cleared space containing an ash concentration with charcoal fragments, an avian bone, *kukui* nutshells, and an *Isognomon* shell. Charcoal fragments are scattered on the floor in the twilight zone of the small passage and the dark zone resumes at the intersection with the main lava tube passage. Small fragments of wood were observed on the floor of the main passage 18.0 m southwest of the fourth horizontal entry. The fourth overhang entrance is c. 64.0 m northeast of the skylight with the tree and is 2.5 m wide, with a dripline 1.0 m above the tube floor. The light zone extends 2.0 to 4.5 m southwest and the twilight zone is an additional 2.0 m. No cultural material was observed in the light zone or partially-lit zone of the fourth horizontal entrance. The lava tube continues to the northeast of the fourth overhang entry, but mapping efforts were discontinued since additional these portions of the tube are well beyond the project boundary.

Feature B represents the southeast terminal end of the lava tube complex and is separated from the main tube passage (Feature A) by a distance of 9.0 m, where the tube either failed to form or is inaccessible underground. It is adjacent to the east side of the Feature C lava tube segment. Feature B is a short detached segment of the main lava tube, 7.8 m long and 2.0 to 3.0 m wide. The entrance is an overhang with a dripline 1.0 m above the floor. The light zone extends 7.0 m from the entrance and includes nearly the entire chamber. All of the associated cultural debris and modifications occur within 3.5 m of the entrance. The chamber floor is bare lava overlain by a shallow pavement of cobbles and pebbles on either side of the entrance. The bare lava is exposed in the central part of the

passage, leading to a low pile of boulders and cobbles on a raised bench of bedrock that dominates the floor surface in the rear of the chamber. Ashy silt covers the west side of the chamber in an area 2.5 m long (NE-SW) by 1.3 m wide. The sediment deposit contains a *Cypraea* shell and charcoal fragments. A second pile of boulders and cobbles marks the southwest edge of the soil deposit and is 0.25 m high. Goat bones are exposed on the chamber floor on the southwest edge of the raised bench. The raised bench extends to the ceiling at the back of the chamber and the passages on either side are not traversable.

Feature C represents the southwest terminal end of the lava tube complex and is separated from the main tube passage (Feature A) by a distance of 11.8 m, where the tube either failed to form or is inaccessible underground. It is adjacent to the west side of the Feature B lava tube segment. Feature C is also a short detached segment of the main lava tube, 4.5 m long and 3.5 m wide. The entrance is an overhang with a dripline 0.6 m above the floor and portions of the collapsed roof partially obscure the entrance. The south end of the roof fall debris is defined by a retaining wall composed of boulder and cobble slabs that frame the north edge of a soil deposit overlying the chamber floor. A *kukui* nutshell and two fragments of unburned wood are associated with the ashy soil deposit. Large slabs of roof fall are present on the chamber floor along the east and west edges of the soil deposit. An alignment of boulders frames the southwest end of the soil deposit. On the east side of the boulder alignment a skylight provides a second light source at the rear of the chamber. The entire chamber is within the light zone. The rear of the chamber is choked with collapsed debris and is not traversable.

Site 28453 is interpreted as a temporary habitation based on formal type and associated cultural material. The site is unaltered and in good condition. It is assessed significant for its information content.

State No.: 28454 (1213)

Site Type: Lava Tube

Functional Interpretation: Temporary Habitation

Topography: Pahoehoe lava sloping gently to west and southwest

Elevation: 480-485ft

Coordinates: E=187012, N=2176344

Vegetation: Christmas berry, *haole koa*, *alahe'e*, grasses and ferns

Probable Age: Prehistoric

Overall Dimensions: 39.5 m by 4.9 m

Condition: Good

Integrity: Unaltered

Description: Site 28454 is a lava tube located in an area of gently sloping pahoehoe lava in the southeastern portion of the project area. The tube has an overall length of 39.5 m and an area of 117.3 sq m. The entrance to the tube is located just within the boundary of the project area and is an oval-shaped vertical hole that is 1.45 m long (northeast by southwest), 0.65 to 0.9 m wide and 0.8 m deep (*Figure 147*). This opens onto a linear chamber that extends to the northeast and southwest. The tube is from 12.5 to 4.9 m wide. The northeast and southwest ends of the tube continue through low inaccessible passages that are 0.1 to 0.25 m in height.

Roof fall is located adjacent to the entrance to the northeast and southwest with the floor throughout the rest of the tube comprised of bare lava. There is a cluster of small mammal bones located 1.2 m north of the entrance and a cluster of *kukui* nut shells 1.0 m to the south. Goat bones are located adjacent to the *kukui* shells to the south.

Site 28454 is interpreted as a possible temporary habitation shelter. This is based primarily on its formal type and on the *kukui* nut shells. The site is unaltered and in good condition. It is assessed as significant for information content.

State No.: 28455 (T-1851)

Site Type: Trail

Functional Interpretation: Transportation

Topography: A'a lava sloping to west-southwest

Elevation: 488ft

Coordinates: E=187046, N=2176335

Vegetation: Christmas berry, grasses

Probable Age: Prehistoric

Overall Dimensions: 4.9 m long

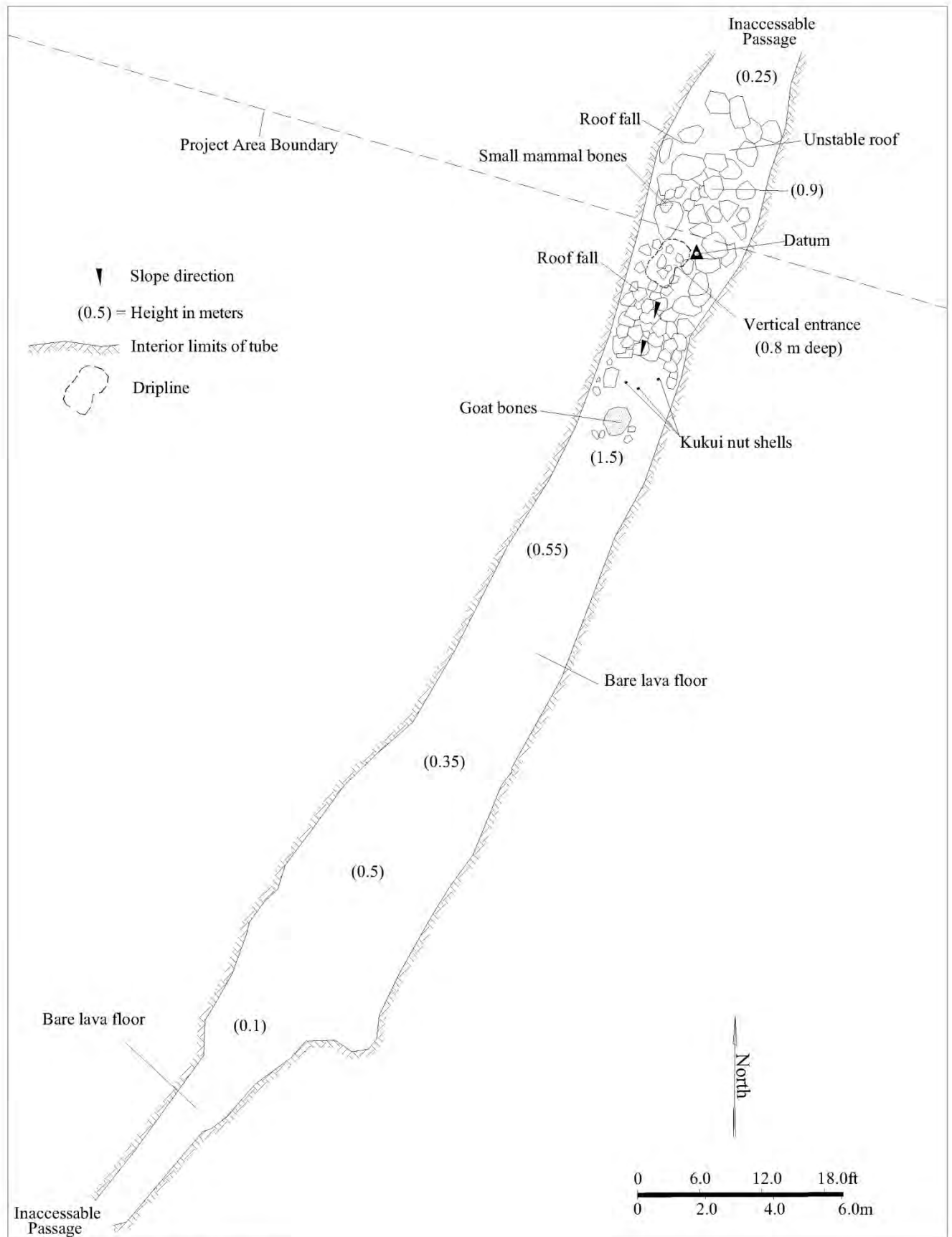


Figure 147. Site 28454 Plan Map

Condition: Good

Integrity: Unaltered

Description: Site 28455 consists of a linear alignment of eight flat pahoehoe slabs that extend across a finger of a'a lava between two pahoehoe lava flows in the southeastern portion of the project area. The alignment is 4.9 m in length (north-northwest by south-southeast). The individual slabs range in length from 0.24 to 0.4 m and in width from 0.14 to 0.37 m (*Figure 148*). No cultural remains were present.

The Site 28455 trail is classified as a Type A trail as defined by Apple (1965) functioning as a single file foot trail constructed during pre-Contact times. It functioned as a path across the a'a lava finger based on its formal type and appearance. The site is unaltered and in good condition. It is assessed as significant for its information content.



Figure 148. Site 28455 Trail, view to south-southeast

State No.: 28456 (T-1845)

Site Type: Complex

Functional Interpretation: Permanent Habitation, Transportation

Topography: A'a flow overlying pahoehoe flow on gentle slope to west

Elevation: 478 ft

Coordinates: E=187033, N=2176301

Vegetation: *Bidens amplexans* (*kokolau*), Christmas berry, *alahe'e*, *noni*, autograph tree, fountain grass

Probable Age: Prehistoric

Overall Dimensions: 11.4 m long (N-S) by 9.5 m wide (W-E)

Condition: Good

Integrity: Unaltered

Description: Site 28456 is a complex composed of a terrace (Feature A) and a steppingstone trail (Feature B) located in the southeastern portion of the project area (*Figure 149*). Feature A is a roughly L-shaped terrace located at the south end of the complex. Its two retaining walls are located on the north and west sides of the feature. It is 4.8 m long north-south) and 2.8 to 4.2 m wide. The retaining walls are composed of up to four courses of stacked

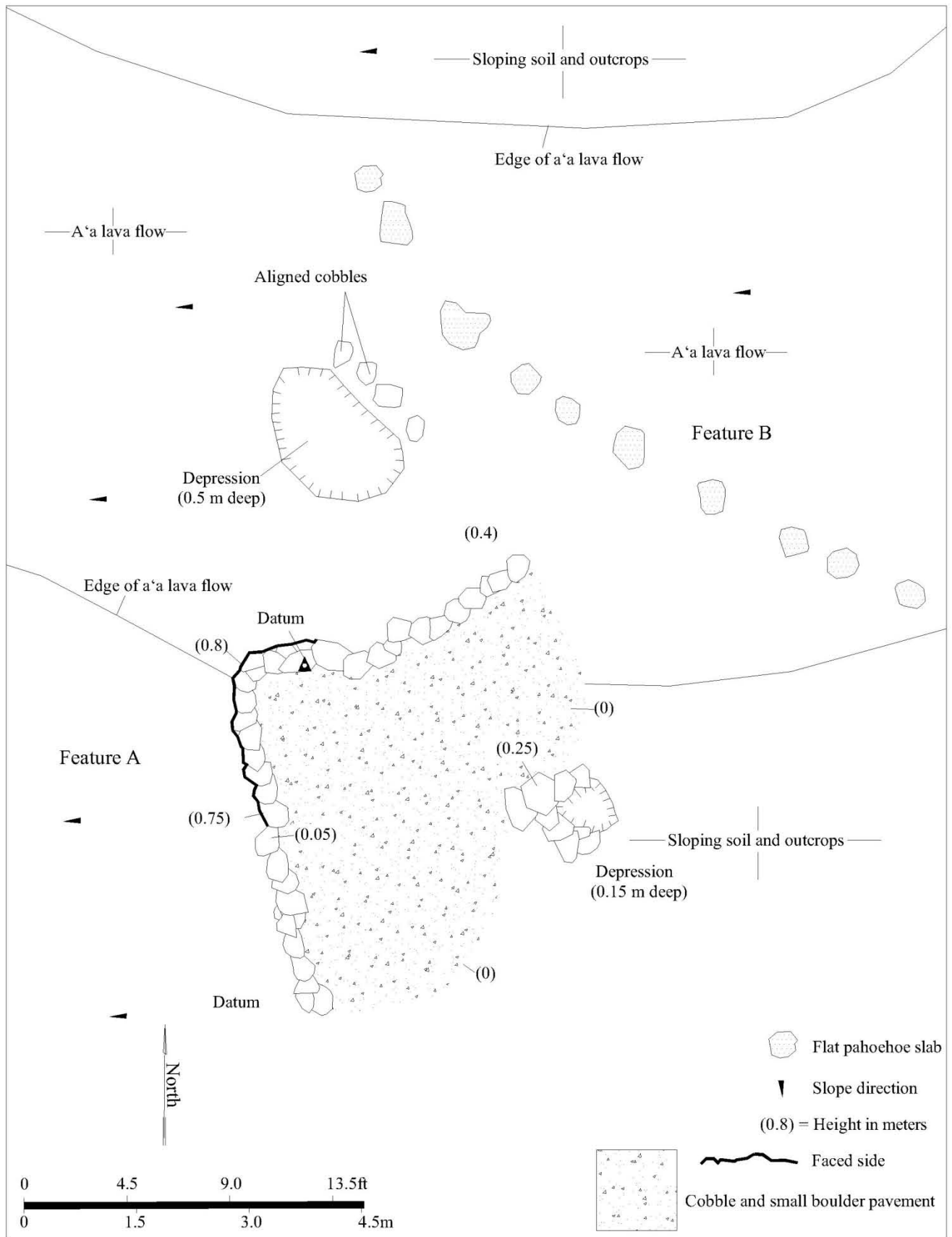


Figure 149. Site 28456 Plan Map

pahoehoe and a'a boulders and cobbles, to a maximum height of 0.75 m. The exterior northwest corner of the retaining wall is faced. The terrace surface is mostly level with the top of the retaining wall and is paved with small boulders and cobbles, covering c. 20.0 sq m. Cobbles and boulders piled to a maximum height of 0.25 m partially frame the edge of a shallow depression 0.15 m deep along the east-central side of the terrace. A larger depression 0.5 m deep, is located 1.5 m north of the north side of the terrace and is framed on the northeast side by an alignment of four flat pahoehoe slabs covering a distance of 1.6 m. No cultural remains are present.

Feature B is a steppingstone trail segment, composed of ten tabular pahoehoe slabs that traverse an a'a flow from northwest to southeast, roughly parallel to the Feature A terrace. The trail covers a distance of 11.4 m and intersects pahoehoe outcrops at the southeast and northwest ends. The slabs are not evenly spaced. Some slabs are as close as 0.2 m, while others are as distant as 1.0 m. The steppingstones are slightly elevated (0.03 to 0.18 m) above the surface of the a'a flow and provide a relatively flat path across the sharp a'a cobbles. The individual slabs range in length from 0.38 to 0.64 m and in width from 0.3 to 0.5 m. No cultural remains are present. Site 28456 is interpreted as a permanent habitation complex based on its formal type, substantial construction (faced walls) and area (20.1 sq m). Feature A is interpreted as the foundation of a permanent residential structure, while Feature B is interpreted as a Type A steppingstone trail. The site is unaltered and in excellent condition, and is assessed significant for its information content.

State No.: 28457 (T-1215.4)

Site Type: Cairn

Functional Interpretation: Marker

Topography: Weathered pahoehoe flow

Elevation: 510 ft

Coordinates: E=187000, N=2176289

Vegetation: Christmas berry, *haole koa*, *alahe'e*, *noni*, klu, grasses

Probable Age: Prehistoric

Overall Dimensions: 0.45 m by 0.3 m

Condition: Fair

Integrity: Unaltered

Description: Site 28457 is a probable cairn situated on the surface of a weathered pahoehoe flow in the southeastern portion of the project area. The site consists of a pahoehoe slab set vertically on the flow supported at base by several cobbles (*Figure 150*). It is 0.45 m long, 0.3 m wide and 0.5 m in height. No cultural remains were found in association with the site.

Site 28457 is interpreted as a probable marker based on its formal type and appearance; however, unclear what the site is marking. It is unaltered and in fair condition. The site is assessed as significant for its information content.

State No.: 28458 (T-1059)

Site Type: Complex

Functional Interpretation: Ceremonial

Topography: Pahoehoe flow on gentle slope to west

Elevation: 485-490 ft

Coordinates: E=187072, N=2176274

Vegetation: Christmas berry *haole koa*, *Clusia rosea*, *'ilima*, *noni* and grasses

Probable Age: Prehistoric

Overall Dimensions: 21.0 m by 11.0 m

Condition: Good

Integrity: Unaltered

Description: Site 28458 is a complex of three features located in the southeastern corner of the project area. The site consists of a large tiered terrace (Feature A), a pavement (Feature B) and a small terrace (Feature C) in an area 21.0 m long by 11.0 m wide (*Figure 151*). The features are centered on a pahoehoe flow and incorporate several outcrops.

Feature A is a large irregularly-shaped tiered terrace. The retaining walls on the west and south sides are constructed of two courses of stacked and faced boulders (40-70 cm in maximum dimension) to a maximum height of 1.0 m. The lower tier is on the west and is 6.2 m long (northwest-southeast) by 3.5 m wide and covers 21.7 sq m. The lower



Figure 150. Site 28457 Cairn , view to west

tier consists of a level surface paved with boulders and cobbles. Two large depressions, each c. 1.5 m in diameter are located in the north half of the lower tier. The upper tier is on the east side of the lower tier and its surface is c. 0.5 m higher than the lower tier. The surface of the upper tier is uneven and covered with disorganized boulders that appear to represent the base of an unpaved, unfinished surface. The northeast edge of the upper tier is composed of an alignment of boulders 0.6 m in height. The upper tier covers an irregularly-shaped area c. 20.0 sq m in extent. Together the upper and lower tiers of the terrace cover c. 41.7 sq m.

Feature B is a pavement with a wall that frames the paved surface on the northwest and the raised sides of a pahoehoe outcrop frame the northeast and south sides. The pavement is a level surface of cobbles and pebbles. Feature B is 7.5 m long (N-S) by 6.0 m wide and covers c. 45.0 sq m. A triangular waterworn basalt cobble was nestled within the wall and was collected (Acc. 60.001 – *Figure 152*). It weighs c. 4.5 kg and is 18.1 cm long by 19.2 cm wide and 9.8 cm thick. A pecked and ground groove encircles the middle, conjectured to be used to suspend the boulder from a rope, to hurl at enemy canoes during times of conflict (Holmes 1981). The groove is 42.8 mm wide and 11.9 mm deep.

Feature C is a small terrace built into the outcrop adjacent to the northeast corner of Feature B. The retaining wall frames the west, south and east sides of the terrace and is constructed of three courses of stacked and faced boulders and cobbles to a maximum height of 0.7 m. The terrace surface is capped by a level pavement of cobbles and pebbles that is flush with the outcrop along its north side.

Site 28458 is interpreted as a complex of ceremonial features. The large Feature A tiered terrace is interpreted as a *heiau* based on its formal type, tiers, pits (potentially for idols or offerings) substantial construction and area (41.7 sq m). The structure appears to be unfinished based on the unpaved nature of the upper tier. Alternatively, this appearance could be attributable to stone removal; but this is deemed less likely because there are ample unused stones surrounding the feature. The Feature B pavement and Feature C small terrace are interpreted as ancillary special purpose features of the ceremonial site. The site is unaltered and is in good condition. It is assessed significant for its information content and for its cultural value to the Hawaiian people.

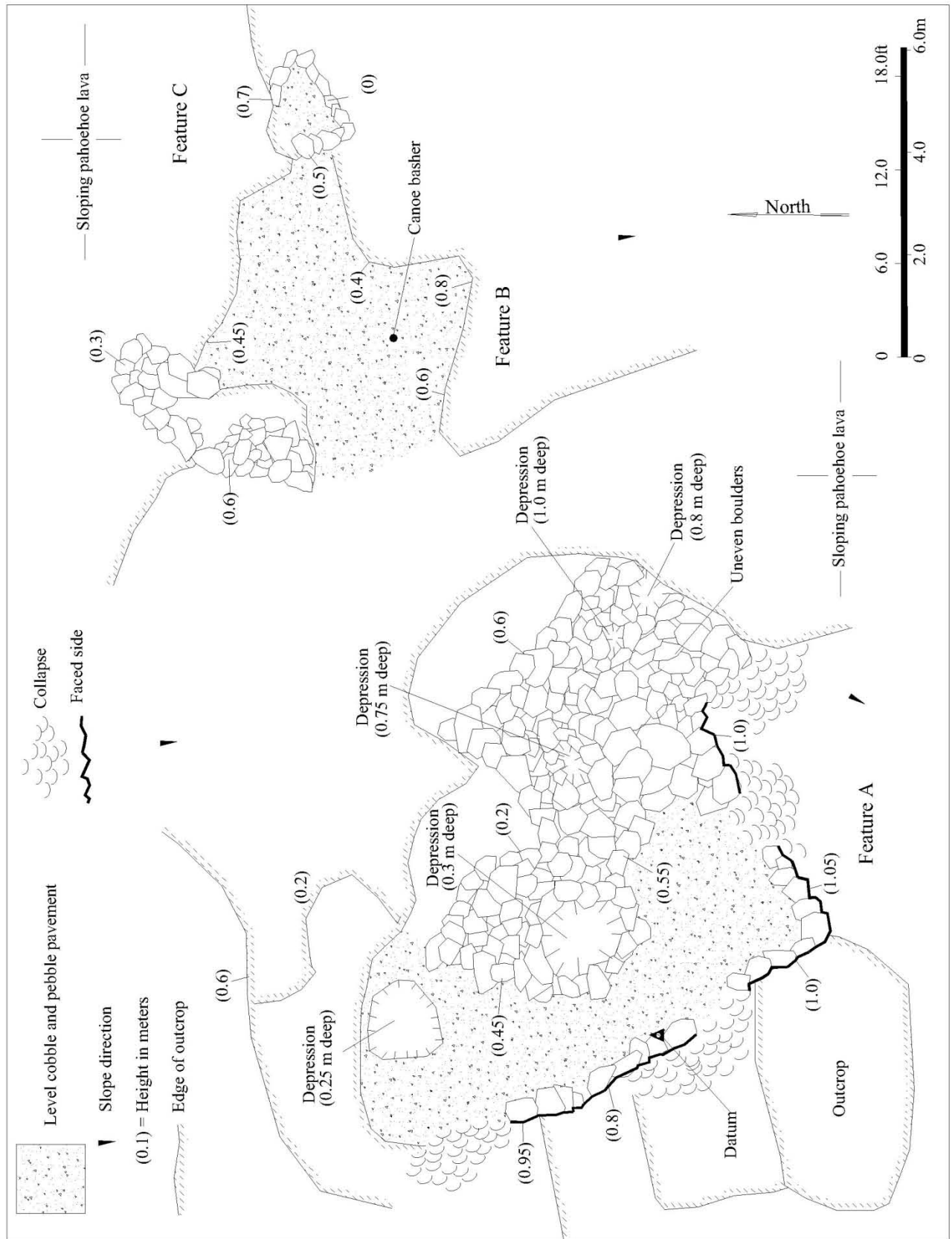


Figure 151. Site 28458 Plan Map



Figure 152. Site 28458, Feature B Canoe Basher

State No.: 28459 (T-1046)

Site Type: C-shape

Functional Interpretation: Temporary Habitation

Topography Soil and outcrops in relatively flat area south of a moderate slope to the northwest

Elevation: 540 ft

Coordinates E=187113, N=2176291

Vegetation: Christmas berry, *haole koa*, klu, *alahe'e*, monkey pod, *Clusia rosea*, air plant and grasses

Probable Age: Prehistoric

Overall Dimensions: 3.9m by 3.7 m

Condition: Fair

Integrity: Unaltered

Description: Site 28459 is a C-shaped enclosure constructed on the west side of a bedrock outcrop c. 10 m northwest of Palani Road in the southeastern portion of the project area. The enclosure is 3.9 m long (northeast by southwest) and 3.7 m wide, open to the south (*Figure 153*). The wall is constructed of crudely stacked pahoehoe boulders and cobbles of two to three courses, which varies in height from 0.3 m to 0.6 m. The wall varies in thickness from 0.4 to 0.5 m. Portions of the enclosure wall along the north and east sides are partially collapsed. The wall encloses a level area of exposed soil. No cultural material was observed in association with the feature.

Site 28459 is interpreted as a temporary habitation shelter based on its formal type, insubstantial construction and small area (14.4 sq m). The site is unaltered and in fair condition. It is assessed significant for its information content.

State No.: 28460 (T-709, T-711, T-715.4, T-677.1-2, T-676.3)

Site Type: Complex (13)

Functional Interpretation: Permanent Habitation, Transportation

Topography: Pahoehoe flow on gentle slope to west

Elevation: 460-475 ft

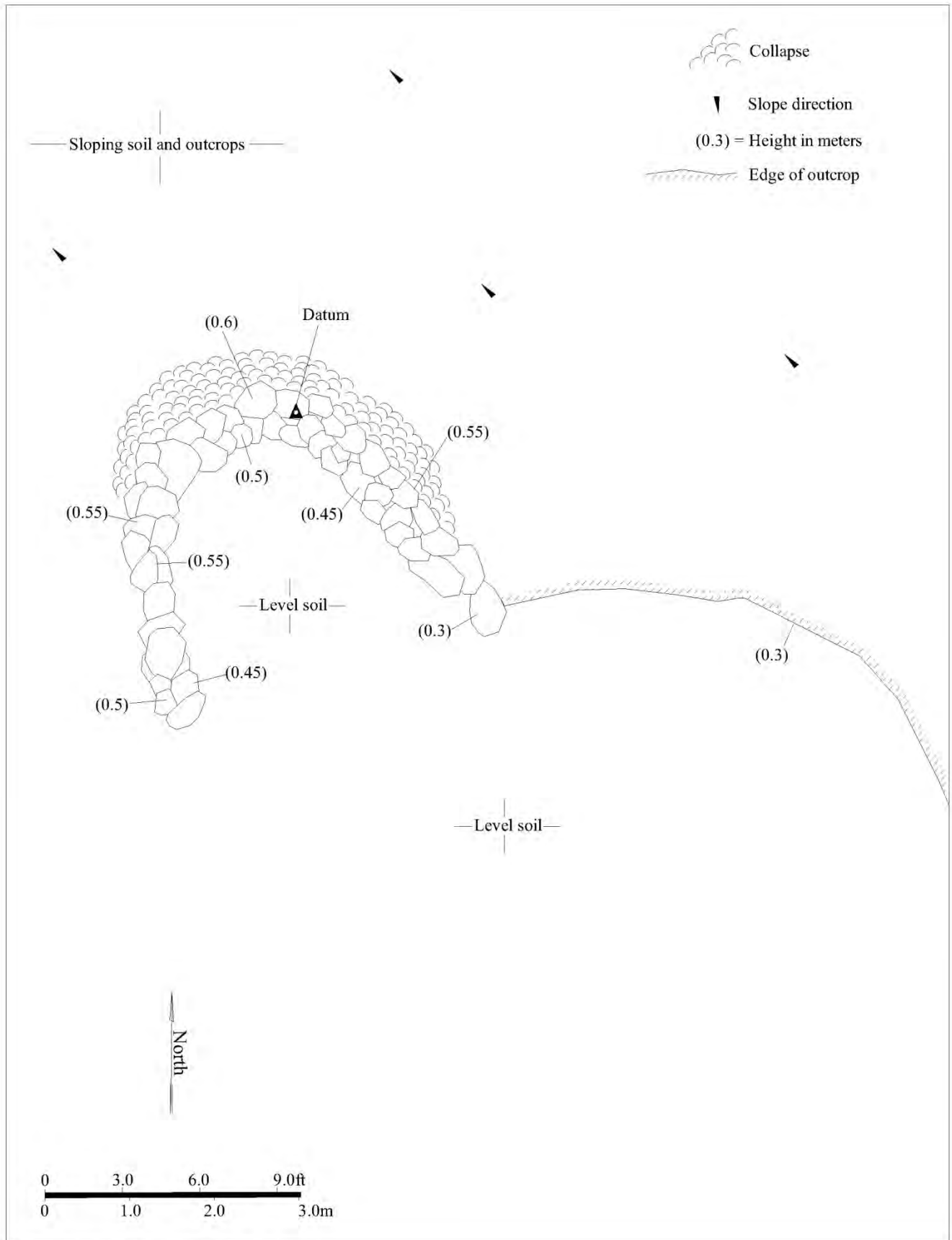


Figure 153. Site 28459 Plan Map

Coordinates: E=187050, N=2176186

Vegetation: Christmas berry, *haole koa*, air plant, various grasses and vines

Probable Age: Prehistoric

Overall Dimensions: 32.0 m by 19.0 m

Condition: Fair

Integrity: Unaltered

Description: Site 28460 is a complex composed of 13 features located in the southeastern portion of the project area. The site consists of five terraces (Features A, E, J, K and M), a steppingstone trail segment (Feature B), four enclosures (Features C, D, G and I), a pavement (Feature F), and two walls (Features H and L) located in an area 32.0 m long (north-south) by 19.0 m wide (*Figure 154*). No cultural material was present on the surface of any of the features. Features F and G were tested to determine function.

Feature A is tiered terrace composed of a small paved terrace and an upper unpaved terrace that covers the majority of a level soil deposit accumulated on a pahoehoe outcrop. The lower tier is located at the north end of the upper tier and consists of a retaining wall that defines its north, south and west sides. The east side of the lower tier is defined by the pahoehoe outcrop. The retaining wall is constructed of stacked and faced boulders and cobbles that have largely collapsed. The lower tier is paved with a level deposit of cobbles and pebbles and covers an area c. 2.5 m long by 1.5 m wide (3.75 sq m). The upper tier is defined by a low retaining wall 0.3 m high on its northwest side and by a second retaining wall 0.8 m high on its south side. The retaining wall on the south side is constructed of three to four courses of stacked cobbles and boulders. The retaining walls of the upper terrace, together with the edge of the pahoehoe outcrop on the west, the eastern end of the Feature B trail and the Feature E outcrop on the east, and the lower terrace on the north define the perimeter of the Feature A upper terrace, encompassing an area of roughly 70.0 sq m. The surface of the upper tier unpaved and consists of level soil.

Feature B is a pahoehoe slab and cobble steppingstone trail segment that begins and ends wholly within the site boundaries. The trail is 8.0 m long (northeast-southwest) and varies in width from 0.3 to 2.0 m. The slabs are generally closely spaced, and from one to six stones wide. The individual steppingstones range in length from 0.25 to 0.75 m long and 0.15 to 0.45 m. The trail leads from the east-central part of the Feature A terrace and terminates on the south-central side of the Feature E terrace.

Feature C is the southwest compartment of a double enclosure and is open to the west. The southeast end of the south wall of the enclosure abuts the south end of a pahoehoe outcrop. The west face of the outcrop forms the back wall of the compartment. The north wall of the compartment is shared with Feature D. The floor inside the compartment is level soil. The north wall is 0.9 m high and the pahoehoe outcrop face is 1.15 m high. The compartment walls are constructed of piled boulders and cobbles, encompassing an area 3.5 m long (N-S) by 1.9 m wide.

Feature D is the northeast compartment of a double enclosure and is also open to the west. It shares a wall with the Feature C enclosure and abuts a pahoehoe outcrop at its northeast end. The compartment is constructed of stacked and faced boulders and cobbles, a short segment of which is still preserved on the exterior of the northeast end. The majority of the enclosure wall has collapsed but is preserved to a maximum height of 0.5 m. The floor of the enclosure exposed bedrock overlain in places by a shallow soil deposit. The enclosure is a maximum of 6.5 m long (northeast by southwest) and a maximum of 3.5 m wide.

Feature E is a modified outcrop containing a small paved terrace with a retaining wall on its south side, a cobble-filled area on the northeast east of the outcrop that levels an irregular surface and a wall constructed against the southeast side of the outcrop to a height of 0.75 m. The small terrace retaining wall is 2.0 m long and borders a paved surface 2.0 long by 1.4 m wide, encompassing an area of less than 3.0 sq m. The pavement consists of a level surface of cobbles and pebbles to cover the irregular outcrop surface. The modified north edge of the outcrop consists of a rough cobble pavement 2.0 m long (northwest-southeast) to level the outcrop surface. A waterworn *Porites* sp. coral pebble is exposed on the ground surface below the modified northeast end of the outcrop. The wall constructed on the southeast side of the outcrop is composed of two to three courses of stacked and faced boulders and cobbles to a maximum height of 0.75 m and is adjacent to the outcrop on its north side. The Feature B steppingstone trail begins at the southeast corner of the wall. The entire level area covered by the modified outcrop is roughly 5.5 m long by 5.0 m wide, encompassing 27.5 sq m.

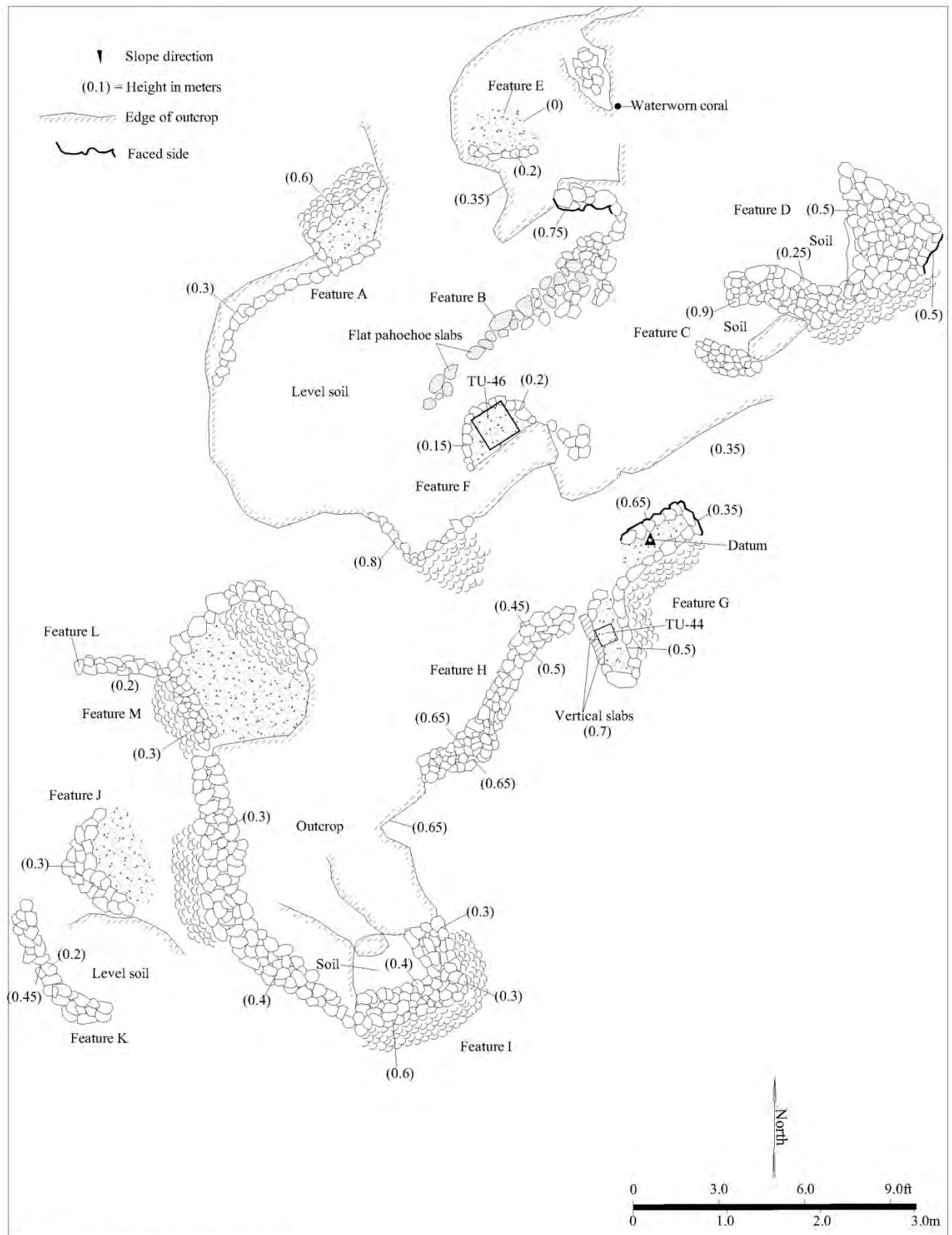


Figure 154. Site 28460 Plan Map

Feature F is a semi-circular pavement framed on its northwest side by a semi-circular alignment of boulders and cobbles, and on the southwest side by a section of raised outcrop. The level pavement is constructed of boulders and cobbles. The alignment and pavement cover an area 2.5 m long by 1.5 m wide. Feature F was tested to determine function.

TU-46, a 1.0 by 1.0 m test unit, was excavated in the center of the Feature F pavement (*Figure 155*). Excavation showed that the pavement fill (Layer I) is composed of pahoehoe boulders and cobbles with a maximum depth of 10 cm, overlying a soil deposit. No cultural material was recovered from Layer I. Layer II is a c. 8 cm thick deposit of black (10YR 2.5/1) silt with 20% cobble and gravel inclusions, overlying bedrock. Cultural material recovered from Layer II consists of 9 fragments of unburned *kukui* nutshells (2.7g).

Feature G is an L-shaped wall remnant constructed of stacked and faced pahoehoe boulders, cobbles and slabs set on edge. Two to three courses of the wall are preserved to a height of 0.35 to 0.7 m. Most of the east face of the exterior wall has collapsed and a segment of the west face is missing. The northern wall segment is 3.0 m long (northeast-southwest) by 0.7 m wide and the south wall segment is 1.6 m long by 0.8 m wide; the intersecting portion is missing. The core of the wall remnant is composed of cobble fill. Feature G was tested during the inventory survey to determine its function.

TU-44, a 0.5 by 0.5 m test unit, was excavated over the south end of the Feature G wall in the section faced by pahoehoe slabs and filled with pahoehoe cobbles (see *Figure 155*). Excavation showed that the wall (Layer I) has a maximum height of 54 cm and overlies a soil deposit. No cultural material was recovered from Layer I. Layer II consists of 2-4 cm of black (10YR 2.5/1) silt with 25% cobble and gravel inclusions, overlying bedrock. Cultural material recovered from Layer II consists of 60 fragments of unburned *kukui* nutshells (100.0g).

Feature H is a free-standing serpentine wall constructed of piled boulders and cobbles that extends southwest from the northwest corner of Feature G for 7.3 m. It is c. 1.0 m thick and varies in height from 0.45 to 0.65 m. The wall is constructed against the east edge of a pahoehoe outcrop and protrudes above the outcrop surface.

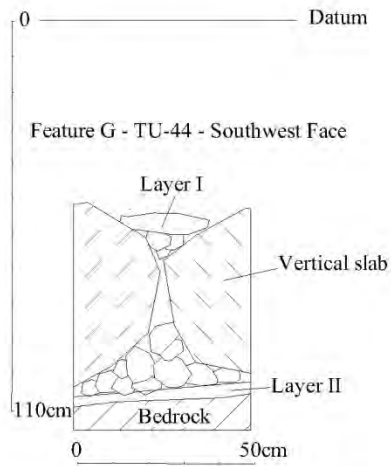
Feature I is a small enclosure constructed against the southern edge of the outcrop southwest of the Feature H wall. The enclosure is defined by an L-shaped wall on its south and east sides. The east wall is 2.6 m long by 1.0 m wide and the south wall is 2.5 m long and 1.0 m wide. The interior floor contains a level soil deposit. The exterior faces of the enclosure wall have collapsed. The west side and part of the north side of the enclosure are defined by the outcrop and a small opening in the northwest corner is blocked by two adjacent boulders. The enclosure covers an area 3.5 m long by 2.5 m wide, encompassing 8.75 sq m. Piled cobbles frame the southwest side of the outcrop from the south end of the enclosure, running northwest-southeast for a distance of 9.5 m, to a maximum height of 0.4 m and terminate at the south corner of the Feature M terrace.

Feature J is a small paved terrace. The retaining wall is constructed of piled cobbles and boulders on its south and west perimeter to a maximum height of 0.3 m. The terrace is framed on the southeast side by an outcrop. The enclosing wall is 2.0 m long on the south side and 2.2 m long on the west side. The level paved surface is composed of pebbles and cobbles that cover an area 2.0 m long by 1.4 m wide (2.8 sq m).

Feature K is a small terrace located 1.0 m south of Feature J. The retaining wall forms a shallow arc oriented northwest-southeast that is 4.0 m long, 0.5 to 1.0 m wide and 0.45 m high. A level soil deposit c. 1.0 m wide is present on the northeast side of the retaining wall. The terrace covers an area of c. 8.0 sq m.

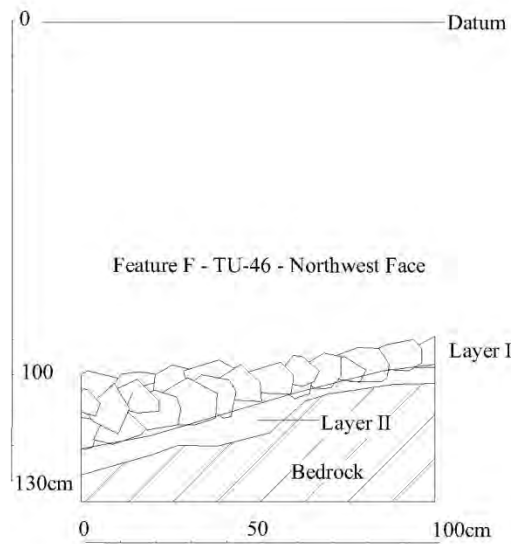
Feature L is a low wall segment that intersects the west side of the Feature M terrace. The wall is 2.5 m long (W-E) by c. 0.5 m wide and a maximum of 0.2 m high. The wall frames an area bounded on the east by Feature M and the walled western edge of the pahoehoe outcrop described with Feature I. It is open to the west. The partially framed open area is 4.5 m long by c. 2.5 m wide, encompassing roughly 11.25 sq m.

Feature M is a small walled terrace. Two retaining walls define the parallel southwest and northeast sides. These are constructed of piled boulders and cobbles to a maximum height of 0.3 m. The southwest retaining wall is 2.5 m long and 0.8 m wide. The northeast wall has largely collapsed. An alignment of large boulders encloses the northwest side of the terrace and bridges the gap between the two retaining walls. The outcrop edge defines the



Layer I - Tightly packed cobbles and boulders;
No cultural remains present

Layer II - Black (7.5YR 2.5/1) silt with 20%
gravel and pebble inclusions;
Cultural remains present



Layer I - Tightly packed cobbles and boulders;
No cultural remains present

Layer II - Black (7.5YR 2.5/1) silt with 25%
gravel and pebble inclusions;
Cultural remains present

Figure 155 Site 28460, Profiles of TUs 44 and 46

south and part of the east side of the terrace. The terrace's level surface is paved with cobbles and pebbles, covering an internal area 4.0 m long by 3.0 m wide (12.0 sq m).

Site 28460 is interpreted as a complex of permanent habitation structures. The Feature A, E and M terraces are interpreted as the foundations for residential structures based on formal type, substantial construction (paved surface) and area (Feature A = 36.0 sq m, Feature E = 27.5 sq m, Feature M = 207 sq m). Features F and J are interpreted as special purpose structures due to their substantial construction (paved surface) and small areas (Feature F = 3.3 sq m, Feature J = 7.1 sq m). The Feature B trail is interpreted as an intra-site path. The remaining features of the site likely functioned as activity areas. The site is unaltered, in fair condition and is assessed as significant for information content.

State No.: 28461 (T-723, 726)

Site Type: Complex (6)

Functional Interpretation: Permanent Habitation

Topography Soil and outcrops sloping to southwest and south

Elevation: 433ft

Coordinates: E=186927, N=2176188

Vegetation: Christmas berry, *kiawe*, *alahe'e*, *haole koa*, grasses

Probable Age: Prehistoric

Overall Dimensions: 22.8 m by 4.5 m

Condition: Fair

Integrity: Unaltered

Description: Site 28461 is a complex of six features located in the southeastern portion of the project area. The features are located in an area 22.8 m long (northwest by southeast) by 4.5 m wide and consist of three terraces (Features A, B1 and E), a lava blister (Feature B2), pavement (Feature C) and a modified outcrop (*Figure 156*).

Feature A is a terrace located in the northwestern portion of the site, built against the southern side of a raised bedrock outcrop. It is roughly rectangular in shape and is 3.9 m long (northwest by southeast) and 1.9 to 3.7 m wide. The west, south and east sides are comprised of stacked and faced cobbles and small boulders and are 0.25 to 0.4 m in height. The southwest, southeast and northeastern corners have collapsed and the northern side abuts the edge of the outcrop. The surface of the terrace is level cobbles and small boulders with a paved area in the center. No cultural remains were present on the surface.

A 1.0 by 1.0 m test unit (TU-24) was excavated into the center of the terrace, revealing two layers over bedrock (*Figure 157*). Layer I consists of 0.19 to 0.27 m of tightly packed cobbles and small boulders with no cultural remains present. Layer II is a 0.07 to 0.18 m thick deposit of very dark brown (7.5YR 2.5.2) silt with 40% gravel and pebble inclusions. Cultural remains from Layer II consist of 12 unburned *kukui* nutshells (10.8g) and 104 fragments of charcoal (10.7g).

Feature B1 is a crude terrace located 6.25 m southeast of Feature A, built against the east and southeast side of a raised bedrock outcrop. The feature is roughly linear in shape and is 7.6 m long (north-northwest by south-southeast) and 1.0 to 2.8 m wide. The majority of the feature is uneven small boulders (0.45 m in height), although there is stacked and faced section present at the southern end. The faced sides are 0.35 to 0.5 m in height and there is a level cobble and pebble paved area adjacent to the wall to the east. No cultural remains were present on the surface.

There is a void along the eastern side of the terrace adjacent to the paved area. A 1.0 by 1.0 m test unit (TU-22) was excavated next to this void, revealing two layers over bedrock and a small, low lava blister (see *Figure 157*). Layer I consists of 0.2 to 0.31 m of loosely packed cobbles and small boulders with no cultural remains present. Layer II soil was present beneath Layer I and consists of 0.05 to 0.13 m of a very dark brown (7.5YR 2.5.2) silt with 10% gravel and pebble inclusions. Cultural remains from Layer II consist of two volcanic glass tertiary flakes (0.4g, < 20.0 mm), marine gastropod shells (2 *Cypraea* sp. 1.4g; 1 Thaididae 0.7g), 7 unburned *kukui* nutshells (7.2g) and 50 fragments of charcoal (6.5g).

The Feature B2 lava blister was noted within TU-22, extending into outcrop adjacent to Feature B1. This blister is oval in shape and is 6.8 m long (north-northwest by south-southeast), 3.1 m wide with a soil floor and ceiling heights that range from 0.2 to 0.25 m. No cultural remains were present on the surface.

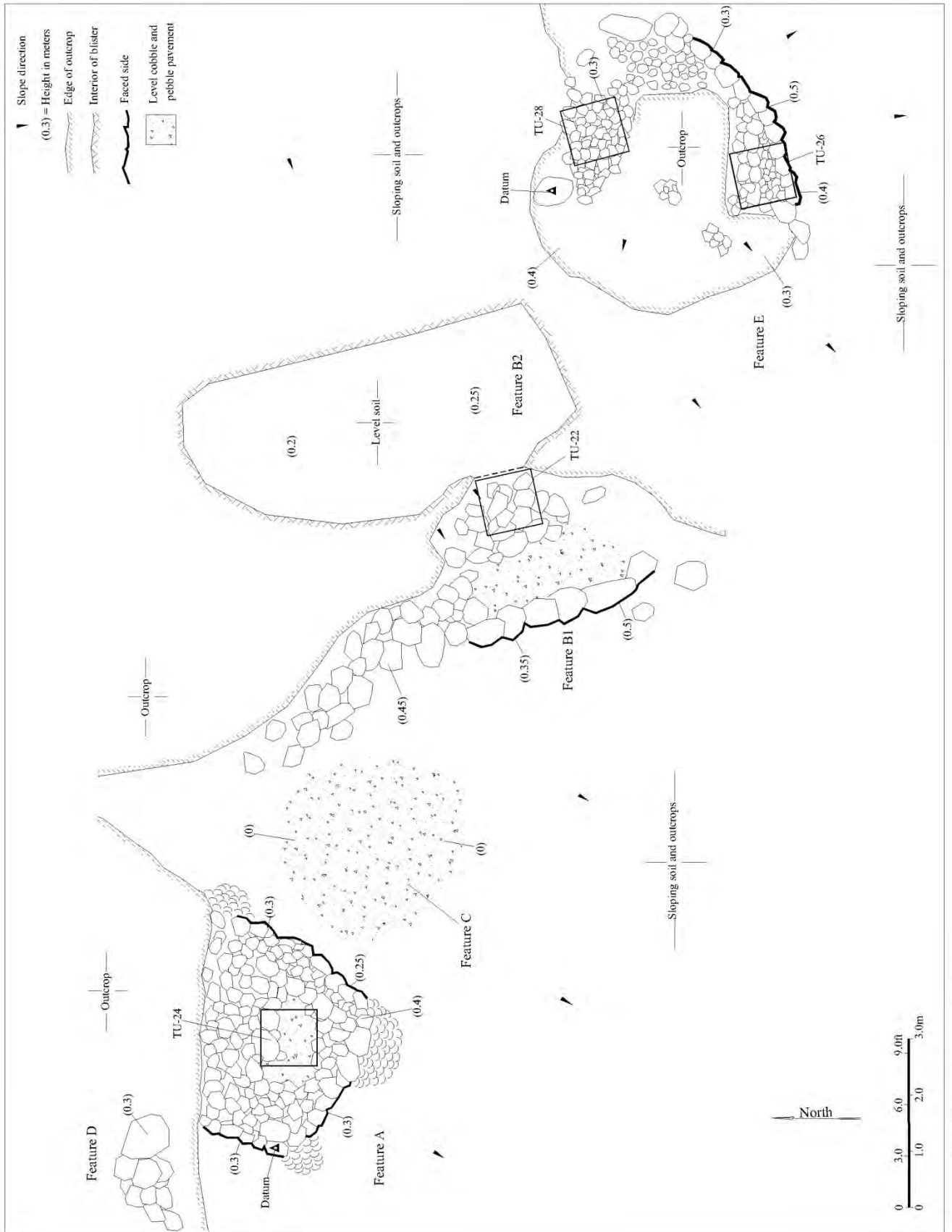


Figure 156. Site 28461 Plan Map

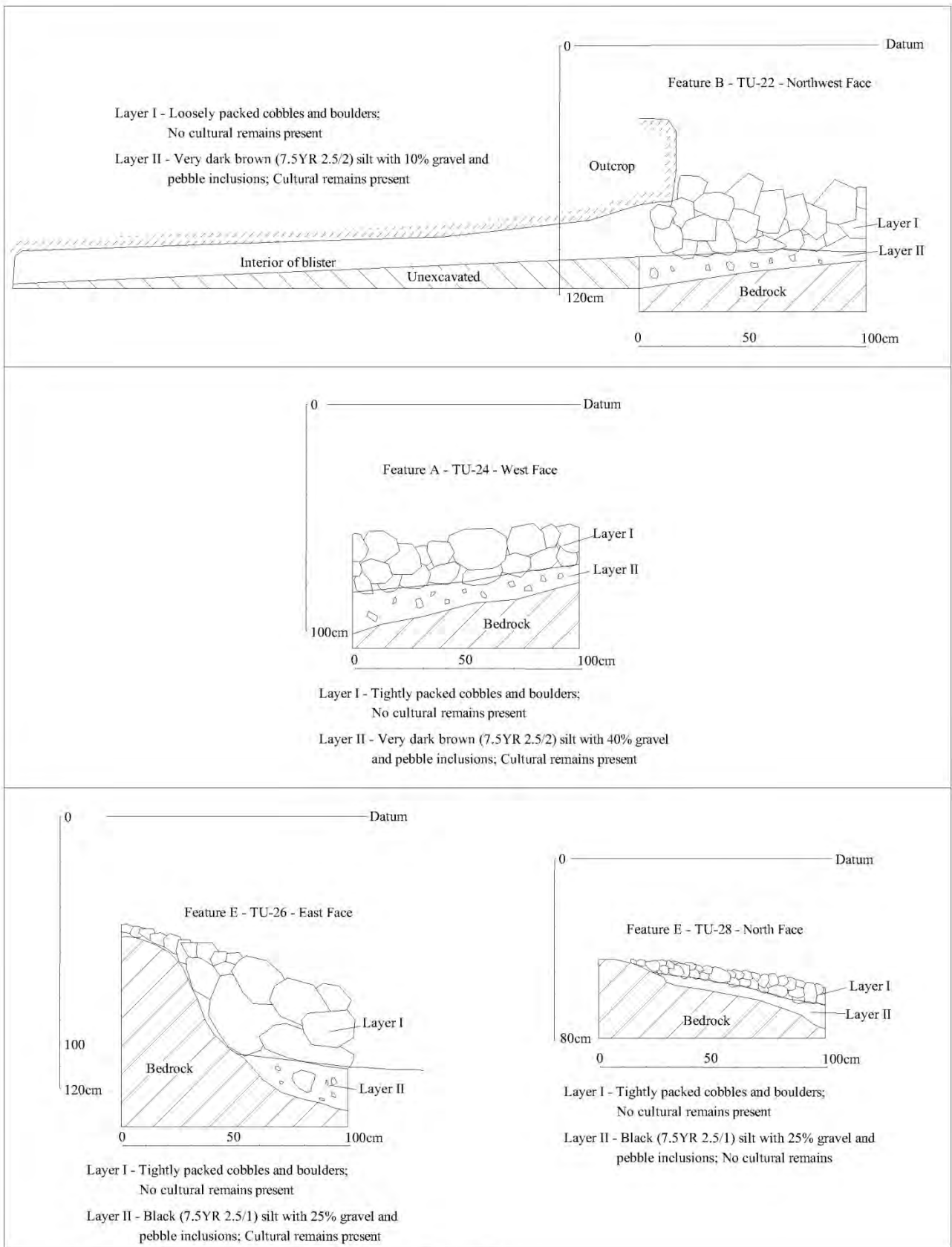


Figure 157. Site 28461, Profiles of TUs 22, 24, 26 and 28

Feature C is a circular-shaped paved area situated adjacent to Feature A to the east. It is 3.3 m in diameter and the sides are level with surrounding ground surface. The surface is a level cobble and pebble pavement. No cultural remains were present on the surface.

Feature D is a roughly oval-shaped pile of cobbles and small boulders located on a bare lava outcrop above Feature A to the northwest. It is 2.0 m long (east-west), 1.15 m wide and 0.3 m in height. No cultural remains were present on or around the feature.

Feature E is a roughly U-shaped terrace built against the eastern side of a raised bedrock outcrop, 5.5 m southeast of Feature B. The terrace is 4.2 m long (north-south) and 0.6 to 3.3 m wide. There is a stacked and faced cobble and small boulder retaining wall extending along the south side of the feature that is 0.3 to 0.5 m in height. The remaining sides are level with the surface of the outcrop. The surface of the terrace is level cobbles and small boulders with no cultural remains present.

Two 1.0 by 1.0 m test units were excavated into the surface of the terrace to determine its function. TU-26 was excavated in the southwestern corner of the feature adjacent to the faced terrace wall. This excavation revealed two layers (see *Figure 157*). Layer I consists of 0.05 to 0.34 m of tightly packed cobbles and small boulders with no cultural remains present, Bedrock was encountered below Layer I in the northern portion of the unit, with the Layer II soil present in the southern portion. Layer II is a 0.1 to 0.18 m thick deposit of black (7.5YR 2.5/1) silt with 25% gravel and pebble inclusions. Cultural remains from Layer II consist of one marine gastropod shell (*Cypraea* sp. 0.6g), 4 unburned *kukui* nutshells (2.5g), 5 burned *kukui* nutshells (0.5g) and 4 fragments of charcoal (0.4g).

TU-28 was excavated in the surface of Feature E in the northern portion, in an area that exhibits the most level surface. This excavation revealed two layers (see *Figure 157*). Layer I consists of 0.04 to 0.1 m of tightly packed cobbles and small boulders with no cultural remains present, Bedrock was encountered below Layer I in the western portion of the unit, with the Layer II soil present in the eastern portion. Layer II is a 0.1 to 0.18 m thick deposit of black (7.5YR 2.5/1) silt with 25% gravel and pebble inclusions. No cultural remains were recovered from Layer II.

Site 28461 is interpreted as a complex of permanent habitation features. Features A, B1 and E are interpreted as the foundations for roofed structures based on formal type and substantial construction (faced sides at all features and paved surfaces at Features A and B1). The Feature B1 terrace exhibits a surface area that is consistent with permanent habitation foundations (21.2 sq m), although Features A and E are slightly smaller (Feature A = 14.4 sq m, Feature E = 14.0 sq m). The Feature C pavement is interpreted as an associated activity area and Feature D as associated site furniture. The Feature B2 lava blister may have served as an associated storage area. The site is unaltered and in fair condition. It is assessed as significant for its information content.

State No.: 28462 (T-729)

Site Type: Complex (4)

Functional Interpretation: Permanent Habitation, Marker

Topography: Elevated pahoehoe rise on gentle west slope with soil and exposed outcrops

Elevation: 430 ft

Coordinates: - E=186931, N=2176155

Vegetation: Christmas berry, *haole koa*, , *alahe'e*, *noni*, *kiawe* and grasses

Probable Age: Prehistoric

Overall Dimensions: 12.0 m long (E-W) by 9.50 m wide (N-S)

Condition: Fair

Integrity: Unaltered

Description: Site 28462 is a complex composed of five features, consisting of an enclosure (Feature A), two lava blisters (Features B and C), a filled crack (Feature D) and a cairn (Feature E – *Figure 158*). The site is situated in the southeastern portion of the project area. The cairn and filled crack are located c. 5.0 to 7.0 m southwest of the enclosure. The filled crack was tested to determine whether or not it concealed a burial. No cultural material was observed in association with any of the features.

Feature A is a small enclosure constructed of pahoehoe boulders. The walls are now mostly collapsed but the overall wall alignment is still discernible. A blister entrance (Feature B) on the northeast side of the enclosure is within the area originally encompassed by the surrounding wall, as is a second blister entrance (Feature C) on the

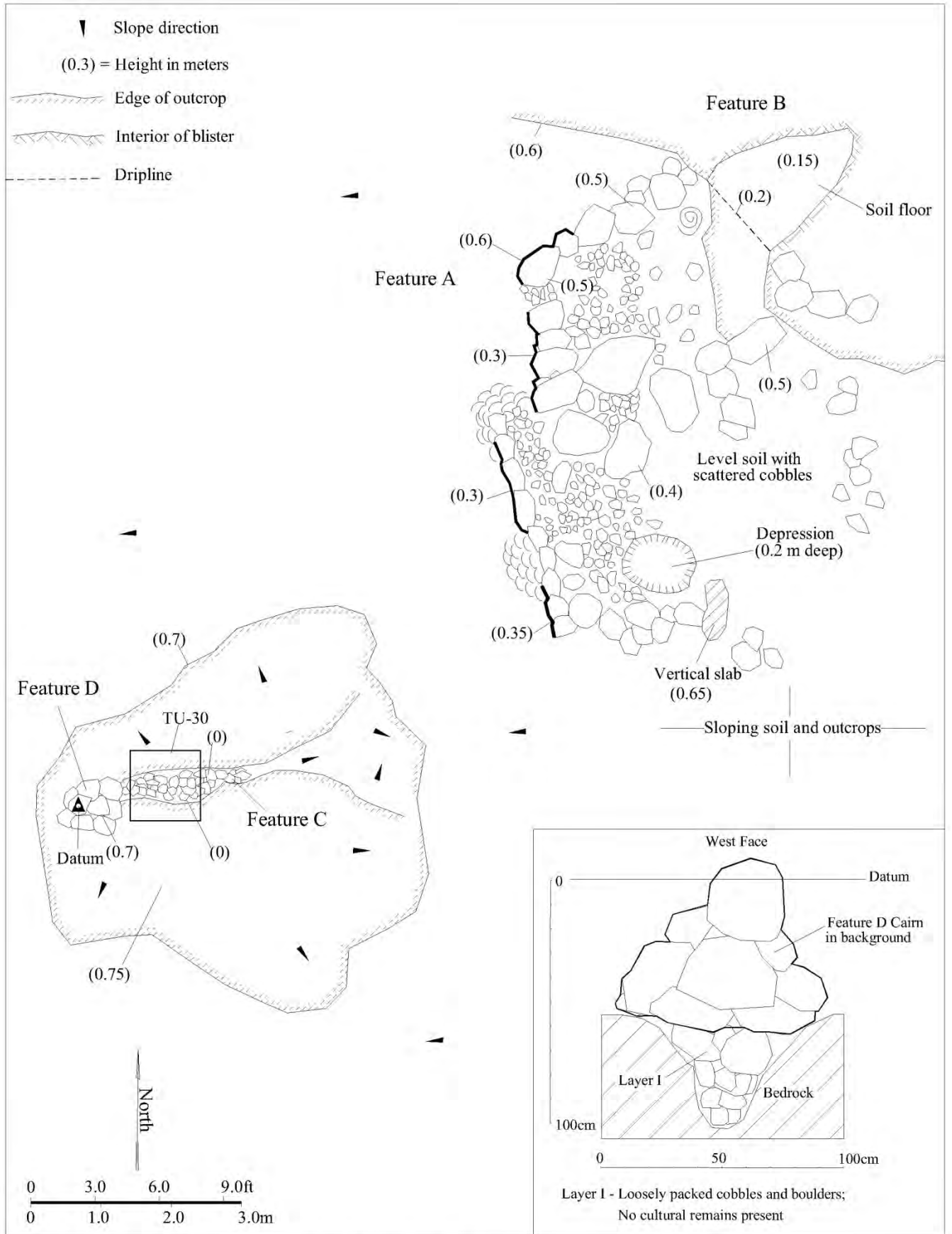


Figure 158. Site 28462 Plan Map and TU-30 West Face Profile

southwest. The perimeter wall is currently characterized as a one-course alignment of boulders on the north, south and east sides, and by a wall constructed of stacked and piled boulders and cobbles on the west side that varies in height from 0.2 to 0.65 m. The west wall's exterior is faced and partially collapsed. The northeast side of the enclosure is constructed on a pahoehoe outcrop. The interior floor surface consists of level soil, capped by scattered cobbles, and underlain by pahoehoe. The enclosure is open to the southeast and covers an area 7.0 m (N-S) by 5.7 m (W-E), encompassing an area of 39.9 sq m.

Feature B is a small lava blister that intersects the northeast side of the Feature A enclosure wall, in an area where the wall is no longer extant. The entrance to the blister is only a 0.2 m high gap, 1.1 m wide. The interior length is 2.0 m and the chamber is oriented northeast-southwest. A shallow soil deposit covers the blister floor but no cultural remains are present.

Feature C is a filled crack in a pahoehoe outcrop that is 2.0 m long (W-E) by a maximum of 0.25 m wide. It is located in the approximate center of a large pahoehoe outcrop exposed 2.5 m southwest of the southwest end of the Feature A blister. Fill consists of pahoehoe cobbles and appears to be roughly paved, possibly to provide a level surface surrounding the Feature E cairn. The filled crack was tested to determine whether it was constructed to obscure a blister burial.

TU-30, a 1.0 by 1.0 m test unit excavated in the filled crack (see *Figure 158*). The Layer I fill consists of 20% boulders and 80% cobbles to a maximum depth of 1.08 m and a maximum width of 0.25 m. No cultural material was recovered in association with the fill and no blister opening was encountered.

Feature D is a cairn constructed over the west end of the Feature D filled crack. The cairn is 1.0 m long by 0.85 m wide and is constructed of stacked pahoehoe boulders, three to four courses high to a maximum height of 0.7 m.

Site 28462 is interpreted as a permanent habitation complex based on its formal type (clustered multiple features), substantial construction (faced walls) and the large area covered by the Feature A enclosure (39.9 sq m). Feature A is interpreted as the foundation of a permanent residential structure while Feature B is assigned a storage function. The Feature C filled crack potentially served as interpreted as site furniture and the Feature D cairn is interpreted as a marker. The site is unaltered and in fair condition. It is assessed significant for its information content.

State No.: 28463 (T-740)

Site Type: Terrace

Functional Interpretation: Permanent Habitation

Topography: Soil and outcrops sloping to southwest

Elevation: 414ft

Coordinates: E=186872, N=2176151

Vegetation: Christmas berry, *kiawe*, *haole koa*, grasses

Probable Age: Prehistoric

Overall Dimensions: 6.25 m by 5.1 m

Condition: Fair

Integrity: Unaltered

Description: Site 28463 is a roughly rectangular-shaped terrace built on and adjacent to a raised bedrock outcrop in the southeastern portion of the project area. The terrace is 6.25 m long (northwest by southeast) and 3.65 to 5.1 m wide (*Figure 159*). There are stacked and faced cobble and small boulder retaining walls extending along the northwest, southwest, south and east sides. A portion of the northwestern side has collapsed outward. The north side abuts the edge of the outcrop. This outcrop bisects the surface of the terrace in its northern portion. The surface of the terrace is level, very roughly paved cobbles and small boulders. No cultural remains were present on the surface.

A 1.0 by 1.0 m test unit (TU-34) was excavated into the center of the terrace revealing two layers over bedrock (see *Figure 159*). Layer I consists of 0.13 to 0.41 m of tightly packed cobbles and small boulders with no cultural remains present. Layer II is a 0.05 to 0.1 m thick deposit of black (10YR 2/1) silt with 40% gravel and pebble inclusions. No cultural remains were present.

Site 28463 is interpreted as the foundation for a permanent habitation roofed structure. This is based on its formal type, substantial construction (faced sides, roughly paved surface) and area (31.8 sq m). The site is unaltered, in fair condition and is assessed as significant for its information content.

State No.: 28464 (T-656)

Site Type: Complex (3)

Functional Interpretation: Temporary Habitation and Marker

Topography Soil and pahoehoe outcrops in gently undulating to level terrain that slopes to the west

Elevation: 420 ft

Coordinates: E=187113, N=2176291

Vegetation: Christmas berry, *haole koa*, *alahe'e*, air plant and vines

Probable Age: Prehistoric

Overall Dimensions: 15.3 m long (N-S) by 13.3 m wide (W-E)

Condition: Good to Fair

Integrity: Unaltered

Description: Site 28464 consists of a relatively small lava tube (Feature A) and two cairns (Features B and C) located on the ground surface to the north and northwest of the tube entrance. The site is located in the southeastern portion of the project area. The three features are within c. 7.0 m of each other and appear to be related (*Figure 160*).

Feature A is a lava tube with an area of 69.8 sq m. Access is from a low overhang of a collapsed sinkhole on the east side of the lava tube. The tube is 14.1 m long (E-W) by 11.0 m wide (N-S) and consists of a single chamber intersected by five inaccessible small or low passages. The central chamber is dominated by a floor-to-ceiling column 2.5 m west of the entrance and the maximum height of the chamber is 1.9 m just inside the entrance where most of the habitable space is. The floor between the entrance and the column, and between the south face of the column and the south wall of the chamber, is covered by boulder and cobble roof fall rubble. An area of level cobble and pebble fill is present on the floor 2.0 m south of the entrance, visible over the top of the roof fall rubble. Rubble was moved to access the western portion of the chamber and in doing so, exposed cultural material consisting of charred wood fragments, *kukui* nutshells, urchin exoskeleton fragments, a marine shell and a waterworn basalt pebble beneath the roof fall on a pavement of flat slabs and pebbles. The western half of the central chamber is completely within the dark zone and only permits crawling or sitting. Three aligned boulders covering a distance of 0.9 m represent the only modification within the west half of the lava tube. The floor in the west half of the chamber is bare lava overlain by collapsed roof fall debris that partially blocks the north side of the floor-to-ceiling column. A crab claw and *kukui* nutshells are exposed on the floor at the western end of the chamber.

Feature B is a cairn located on the ground surface 4.5 m northwest of the lava tube entrance. It is constructed of stacked boulders retaining a core filled with small boulders and large cobbles on fairly level pahoehoe. It is 1.9 m long and 1.4 m wide. Two boulders appear to have tumbled from the northern edge. Two to three courses of angular pahoehoe boulders retain the fill to a maximum height of 0.65 m. The north and west sides are more vertically stacked than the south and east sides.

Feature C is a cairn located on the ground surface 7.3 m north of the lava tube entrance. It is constructed of stacked boulders retaining a core filled with small boulders and large cobbles and is 2.0 m long by 1.9 m wide. Up to six courses of angular pahoehoe boulders retain the fill to a maximum height of 0.85 m. The north and west sides are more vertically stacked than the south and east sides, which are partially collapsed.

Site 28464 is interpreted as a temporary habitation shelter with associated markers, based on formal type and associated cultural material and modifications. The site is unaltered and in good condition. It is assessed significant for its information content.

State No.: 28465 (T-647)

Site Type: Terrace

Functional Interpretation: Permanent Habitation

Topography Soil and outcrops sloping to west-southwest

Elevation: 420ft

Coordinates: E=186923, N=2176104

Vegetation: Christmas berry, *alahe'e*, grasses

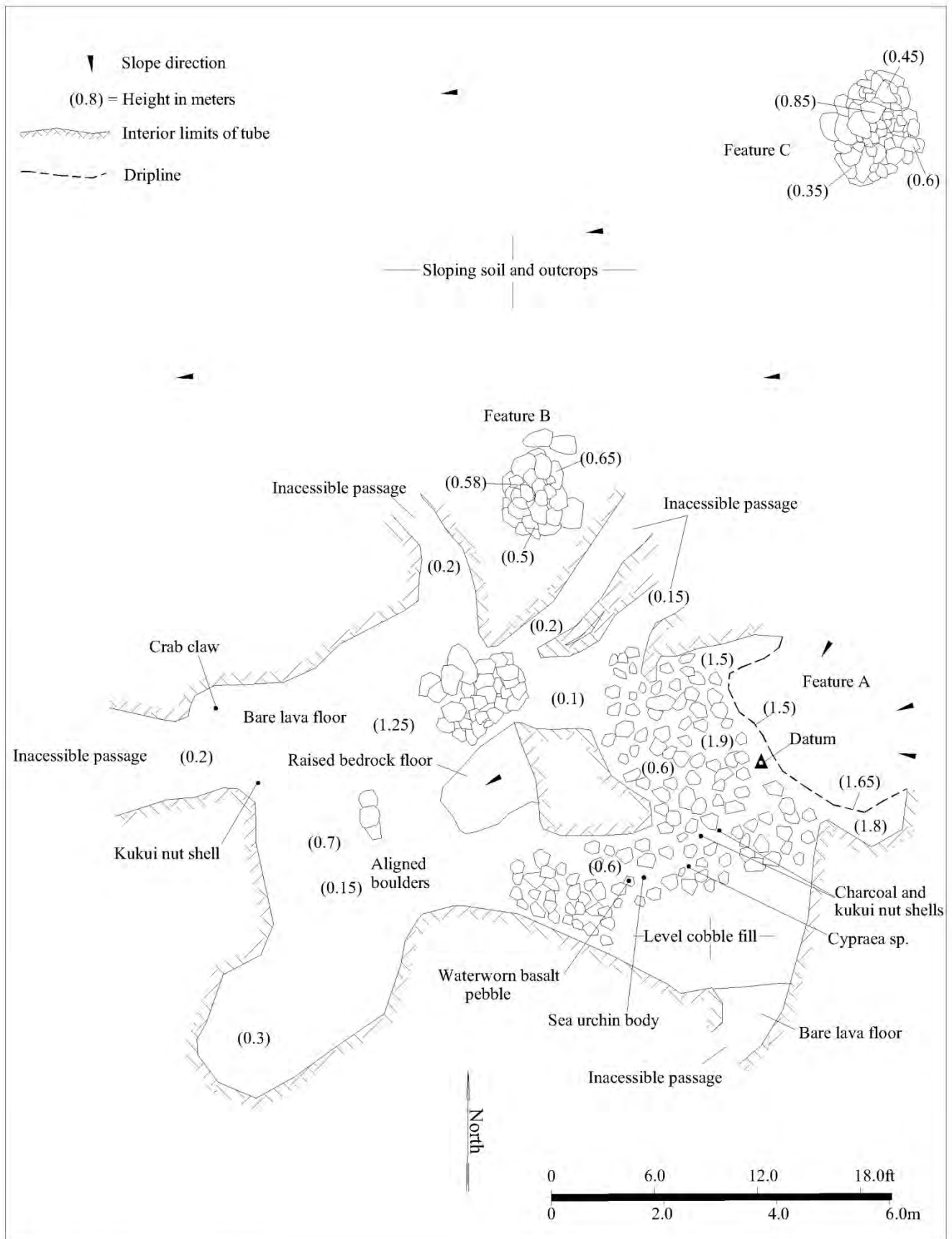


Figure 160. Site 28464 Plan Map

Probable Age: Prehistoric

Overall Dimensions: 4.75 m by 4.7 m

Condition: Fair

Integrity: Unaltered

Description: Site 28465 is a roughly rectangular terrace built against the western side of a raised bedrock outcrop in the southeastern portion of the project area. The terrace is 4.75 m long (east-west) and from 2.85 to 4.7 m wide with stacked cobble and small boulder retaining walls present along the north, west and south sides (*Figure 161*). The north end of the west side is faced and the south end has collapsed outward. Displaced boulders are located adjacent to the structure to the north and south. The surface of the terrace is a level cobble and pebble pavement with no cultural remains present.

A 1.0 by 1.0 test unit (TU-42) was excavated into the surface of the terrace in the western portion, revealing two layers over bedrock (see *Figure 161*). Layer I consists of 0.29 to 0.41 m of tightly packed cobbles, pebbles and boulders. Cultural remains from Layer I consist of a marine gastropod shell (*Cypraea* sp. 0.7g). Layer II is a 0.13 to 0.16 m thick deposit of black (7.5% YR 2.5/1) silt with 70% gravel and pebble inclusions. Cultural remains from this deposit consisted of a marine gastropod shell (*Cypraea* sp. 1.4g).

Site 28465 is interpreted as the foundation for a permanent habitation roofed structure. This is based on formal type, substantial construction (faced side, paved surface) and area (22.3 sq m). The site is assessed as significant for its information content. It is unaltered and in fair condition.

State No.: 28466 (T-658)

Site Type: Enclosure

Functional Interpretation: Temporary Habitation

Topography: Soil and outcrops sloping to southwest

Elevation: 429ft

Coordinates: E=186951, N=2176131

Vegetation: Christmas berry, *alahe'e*, autograph tree, grasses

Probable Age: Prehistoric

Overall Dimensions: 6.7 m by 3.6 m

Condition: Fair

Integrity: Unaltered

Description: Site 28466 is a crude enclosure built on and adjacent to a low bedrock outcrop in the southeastern portion of the project area. The main portion of the enclosure is oval in shape measuring 6.7 m long (north-northwest by south-southeast) and 3.6 m wide (*Figure 162*). The northern portion of the enclosure is formed by a roughly stacked, piled and aligned cobble and small boulder wall that is 0.5 to 1.8 m thick and 0.4 to 0.65 m in height. The southern side is bordered by a 0.5 m high bedrock outcrop. The interior floor of the enclosure is a level soil deposit. No cultural remains were present. A Christmas berry tree is growing in the enclosure along the eastern side.

A pile of small boulders extends to the west-southwest from the southwestern corner of the enclosure. This pile is 5.2 m long, 0.65 to 1.3 m wide and 0.25 to 0.6 m in height. The area to the north of the pile and the west of the enclosure is a level soil deposit with no cultural remains present.

There are two small non-cultural blisters associated with the enclosure; one along the south side and one to the east. The southern blister is 0.75 m long (north-northwest by south-southeast), 0.55 m wide and 0.15 m in height. The blister to the east is 2.3 m long (east-northeast by west-southwest), 0.6 m wide and 0.25 m high. The floors of the blisters are bare lava with no cultural remains present.

Although larger than typical temporary habitations (24.1 sq m), Site 28466 is assigned this interpretation based on its formal type and informal construction. The site is unaltered and in good condition. It is assessed as significant for its information content.

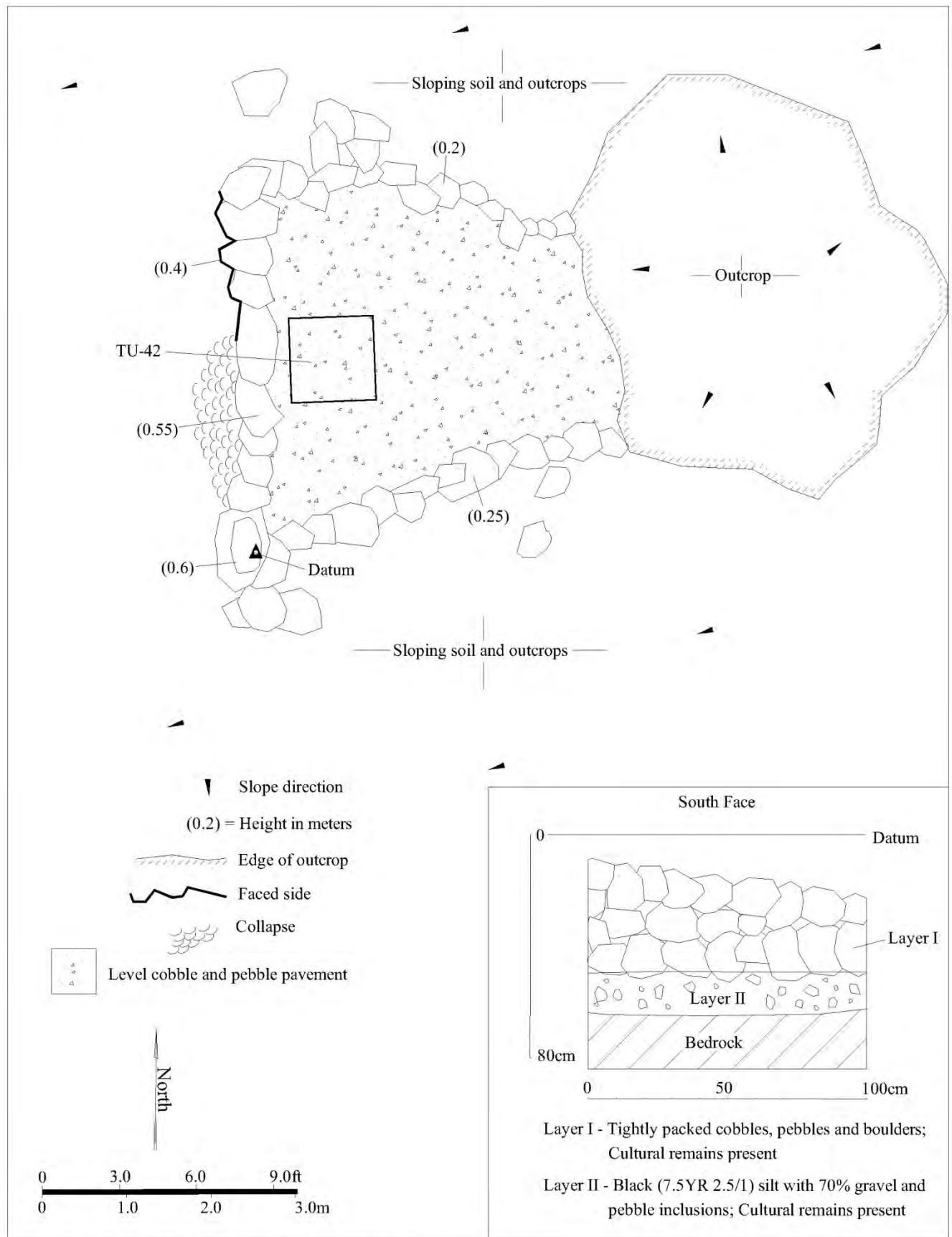


Figure 161. Site 28465 Plan Map and TU-42 South Face Profile

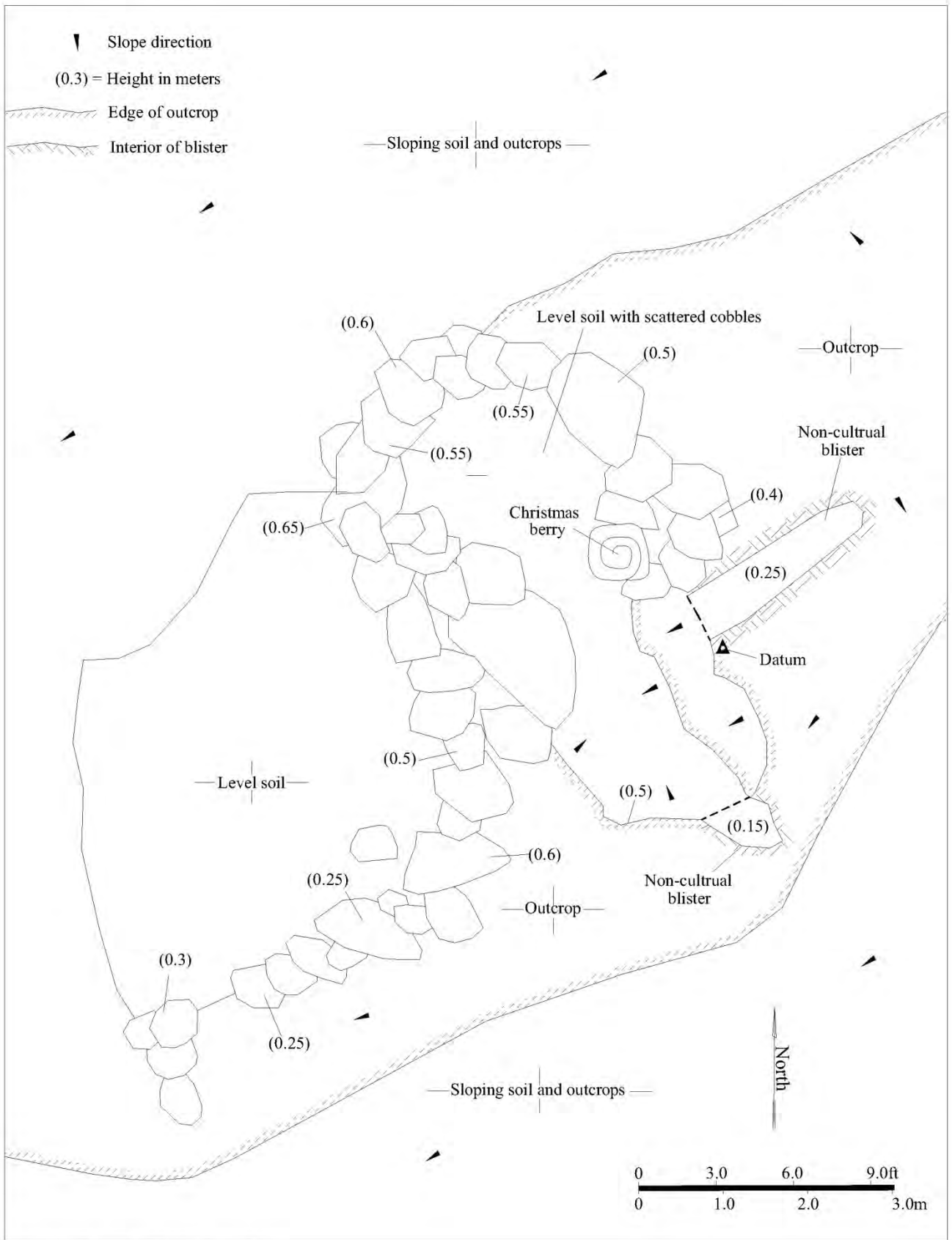


Figure 162. Site 28466 Plan Map

State No.: 28467 (T-663)

Site Type: Complex (3)

Functional Interpretation: Permanent Habitation

Topography Pahoehoe ridge crest

Elevation: 430 ft

Coordinates: E=186995, N=2176093

Vegetation: Christmas berry, *haole koa*, *alahe'e*, grasses

Probable Age: Prehistoric

Overall Dimensions: 13.0 m long (NW-SE) by 12.0 m wide (NE-SW)

Condition: Fair

Integrity: Unaltered

Description: Site 28467 is a complex composed of three contiguous features that comprise a single multi-tiered terrace and a small detached terrace located 4.0 m southwest of the main structure. The site is located in the southeastern portion of the project area. The central portion of the terrace (Feature A) commands the ridge top, while the terraces adjoining to the northwest (Feature B) and southeast (Feature C) are constructed on the flanks of the ridge crest (*Figure 163*). Feature D is constructed southwest of the south corner of Feature A. Waterworn *Porites* sp. coral boulders and a basalt abradar are associated with the site.

Feature A is the central tier of the multi-tiered terrace. Its south, east and west sides are defined by a retaining wall that has partially collapsed along the west side. The retaining wall is composed of stacked boulders and cobbles, two to six courses high and ranging in height from 0.25 to 0.75 m. The retaining wall varies in thickness from 0.25 to 0.5 m and is faced on the southwest and southeast exterior sides. The south half of the terrace surface is paved with cobbles and pebbles to level the pahoehoe outcrop surface. A slab- and cobble-rimmed possible posthole in the floor along the west side of the terrace is 0.25 m deep. A coral boulder is present c. 0.5 m east of the hole and a basalt abradar is exposed on the exposed bedrock at the north end of the terrace. The terrace covers a 23.0 sq m area.

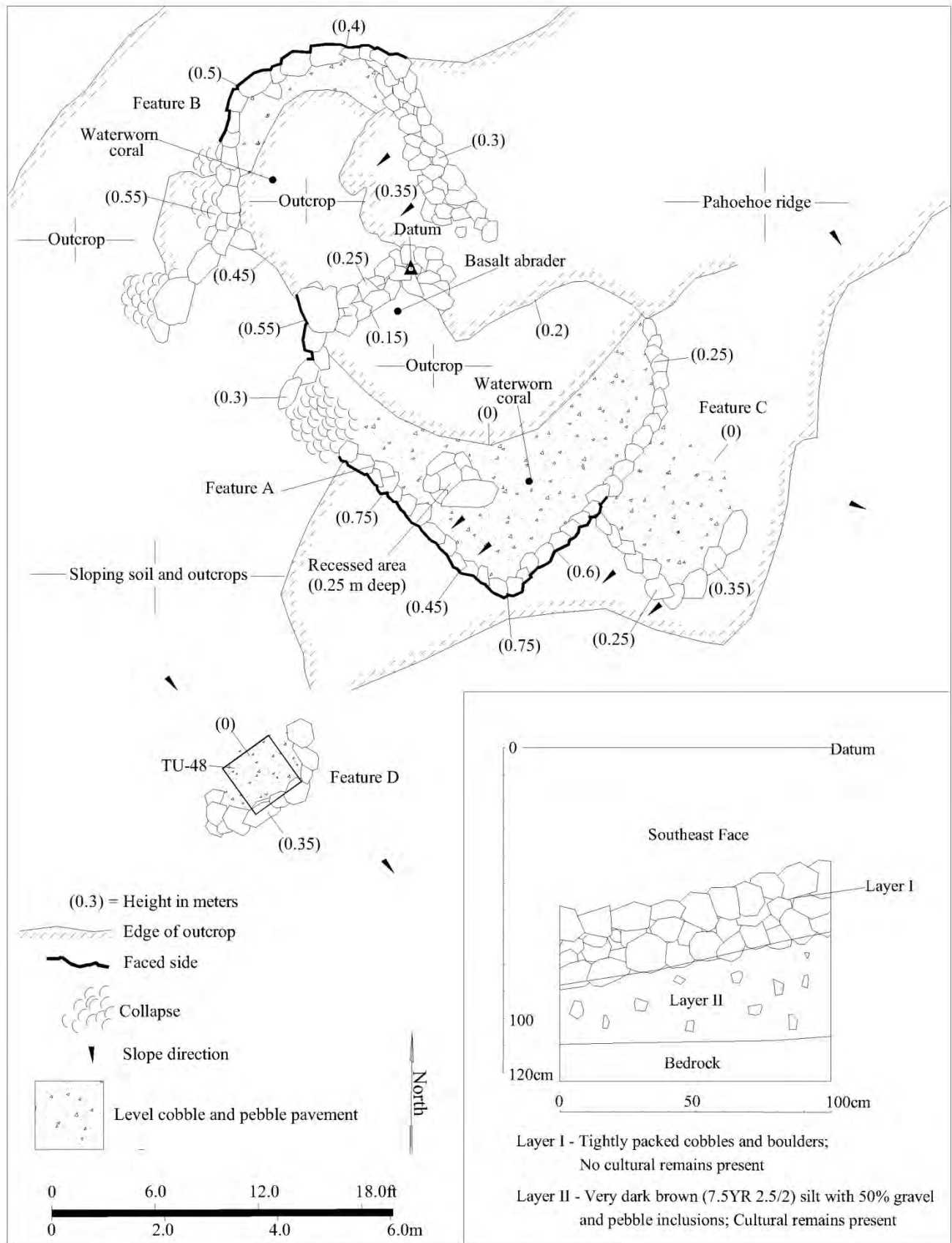
Feature B is adjoins the north side of the Feature A terrace. A retaining wall curves around the north side of the terrace and is faced on the exterior. The retaining wall is c. 0.25 m higher than the terrace surface. It is c. 0.4 m wide and is constructed of two courses of stacked boulders and cobbles to a maximum height of 0.5 m. The terrace surface immediately adjacent to the retaining wall is paved with cobbles and pebbles to level the pahoehoe outcrop surface, but most of the terrace surface is exposed level pahoehoe. A section of wall extends southwest from the northwest corner of the terrace, forming an enclosed alcove on the west side of the terrace and defined on the south by the northwest corner of the Feature A terrace. A waterworn *Porites* sp. coral boulder is present on the west side of the terrace surface at the intersection with the free-standing wall. The free-standing wall is a maximum of 0.5 m wide and varies in height from 0.25 to 0.55 m. Its southwest end is partially collapsed. The south and east sides of the terrace are delineated by a single course of boulders and cobbles. The terrace covers a 16.0 sq m area.

Feature C adjoins the south side of the Feature A terrace. Its retaining walls define the west and south sides of a square area, and are predominantly composed of aligned boulders preserved to a maximum height of 0.35 m. The terrace surface is roughly paved with boulders, cobbles and pebbles. The terrace covers a 6.25 sq m area.

Feature D is a small rectangular terrace located below the ridge crest, 4.0 m southwest of the south corner of the Feature A terrace. It is 2.4 m long (NE-SW) by 1.0 m wide (NW-SE). A stacked and piled retaining wall of pahoehoe boulders defines the southeast side of a relatively level paved surface on the ridge slope. Feature D was tested to determine whether or not it marked a burial.

TU-48, a 1.0 by 1.0 m test unit was excavated in the approximate center of the Feature D terrace (see *Figure 163*). Excavation documented a retaining wall (Layer I) constructed to a height of 0.2 to 0.3 m on a soil deposit (Layer II) composed of black (7.5YR 2/1) silt with 65% a'a cobble and pebble inclusions to a maximum depth of 30 cm overlying bedrock. No cultural material was recovered from the architectural fill of Layer I, but a *kukui* nutshell (1.4g) was recovered from Layer II.

Site 28467 is interpreted as a permanent habitation complex based on its formal type (clustered multiple features) and the large area covered by the associated features (156.0 sq m). Features A and B are interpreted as the foundation of at least one, and possibly two, permanent residential structures, while Features C and D likely



functioned as associated special purpose structures. The site is unaltered and in fair condition. It is assessed significant for its information content.

State No.: 28468 (T-629)

Site Type: Terrace

Functional Interpretation: Temporary Habitation

Topography: Soil and outcrops sloping to southwest

Elevation: 396ft

Coordinates: E=186882, N=2176038

Vegetation: *Haole koa*, *alahe'e*, grasses

Probable Age: Prehistoric

Overall Dimensions: 3.75 m by 2.7 m long

Condition: Fair

Integrity: Unaltered

Description: Site 28468 is a small, roughly rectangular terrace located in the southeastern portion of the project area. The terrace is built on and adjacent to the northwest side of a low bedrock outcrop (*Figure 164*). It is 3.75 m long (northeast by southwest) and 1.3 to 2.7 m wide. Stacked and piled cobble and small boulder retaining walls extend along the northwest and southwest sides. A raised outcrop comprises the western end of the terrace. The east and southeast sides adjoin the edges of the adjacent outcrop. The surface of the terrace consists of a level, rough pavement of cobbles and pebble pavement with no cultural remains present.

A 1.0 by 1.0 m test unit (TU-37) was excavated in the surface of the terrace in the southern portion. This excavation revealed two layers over bedrock (see *Figure 164*). Layer I consists of 0.08 to 0.13 m of tightly packed cobbles and small boulders with no cultural remains present. Bedrock was encountered below Layer I around the edges of the unit, with a pocket of Layer II soil located in the center. Layer II is a 0.02 to 0.28 m thick deposit of very dark brown (10YR 2/2) silt with 70% pebble and gravel inclusions. No cultural remains were present.

Site 28468 is interpreted as the possible foundation for a temporary habitation shelter. Despite the substantially constructed paved surface of the site, its small area (10.1 sq m) and informal construction suggests it functioned in this capacity. The site is unaltered, in fair condition and is assessed as significant for its information content.

State No.: 28469 (T-632, T-749)

Site Type: Enclosure

Functional Interpretation: Permanent Habitation

Topography: Weathered pahoehoe flow on gentle slope to west

Elevation: 400 ft

Coordinates: E=186843, N=2176087

Vegetation: *Haole koa*, *alahe'e*, various grasses

Probable Age: Prehistoric

Overall Dimensions: 12.2 m by 9.5 m

Condition: Fair

Integrity: Unaltered

Description: Site 28469 is a roughly rectilinear enclosure in the southeastern portion of the project area. The site is two adjoined compartments defined and separated by walls constructed of piled pahoehoe boulders and cobbles. The enclosure is 9.7 m long and varies in width from 6.0 to 9.5 m (*Figure 165*). The contiguous compartments share a common wall oriented roughly N-S. The west compartment is open to the west and the east compartment is open to the north and east. The compartments form a west half and east half of the structure and are wholly constructed on a relatively level pahoehoe outcrop c. 0.4 to 0.6 m above the surrounding terrain. The south wall of the structure has partially collapsed.

The west half is defined by a wall 4.5 m long (W-E) by 2.0 m thick and preserved to a maximum height of 0.95 m. The wall abuts a raised section of outcrop, which forms the northeast corner of the west compartment. The south end is defined by a tapering wall that is 1.0 m thick at its west end, but 2.6 m thick at the juncture with the common wall and the south wall of the east compartment. A triangular section on top of the southwest end of the south wall is framed by aligned cobbles and paved with boulders and cobbles, encompassing an area of c. 2.5 sq m. The east half is defined by a wall along its south side that adjoins the common wall on the west and the south wall of the west

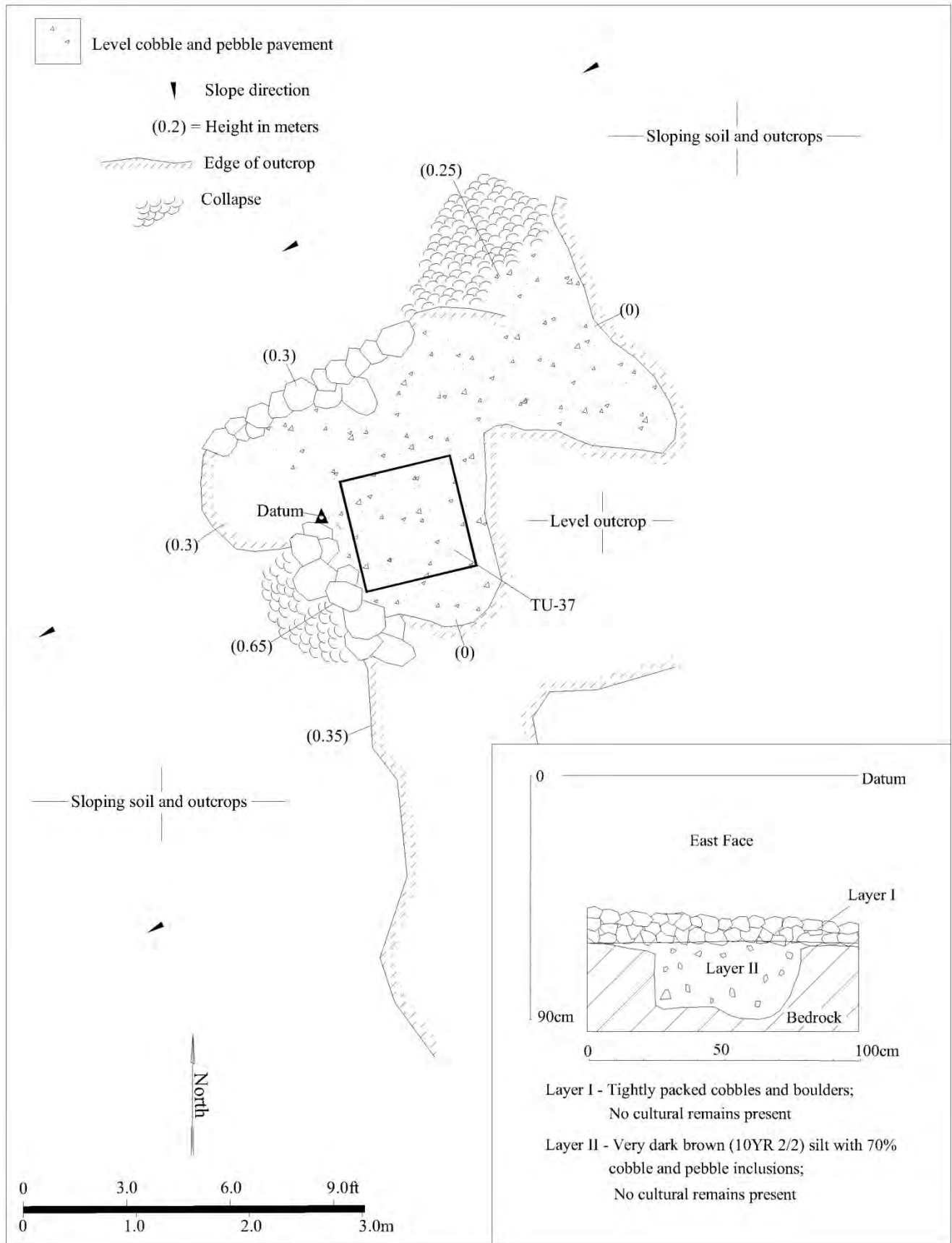


Figure 164. Site 28468 Plan Map and TU-37 East Face Profile

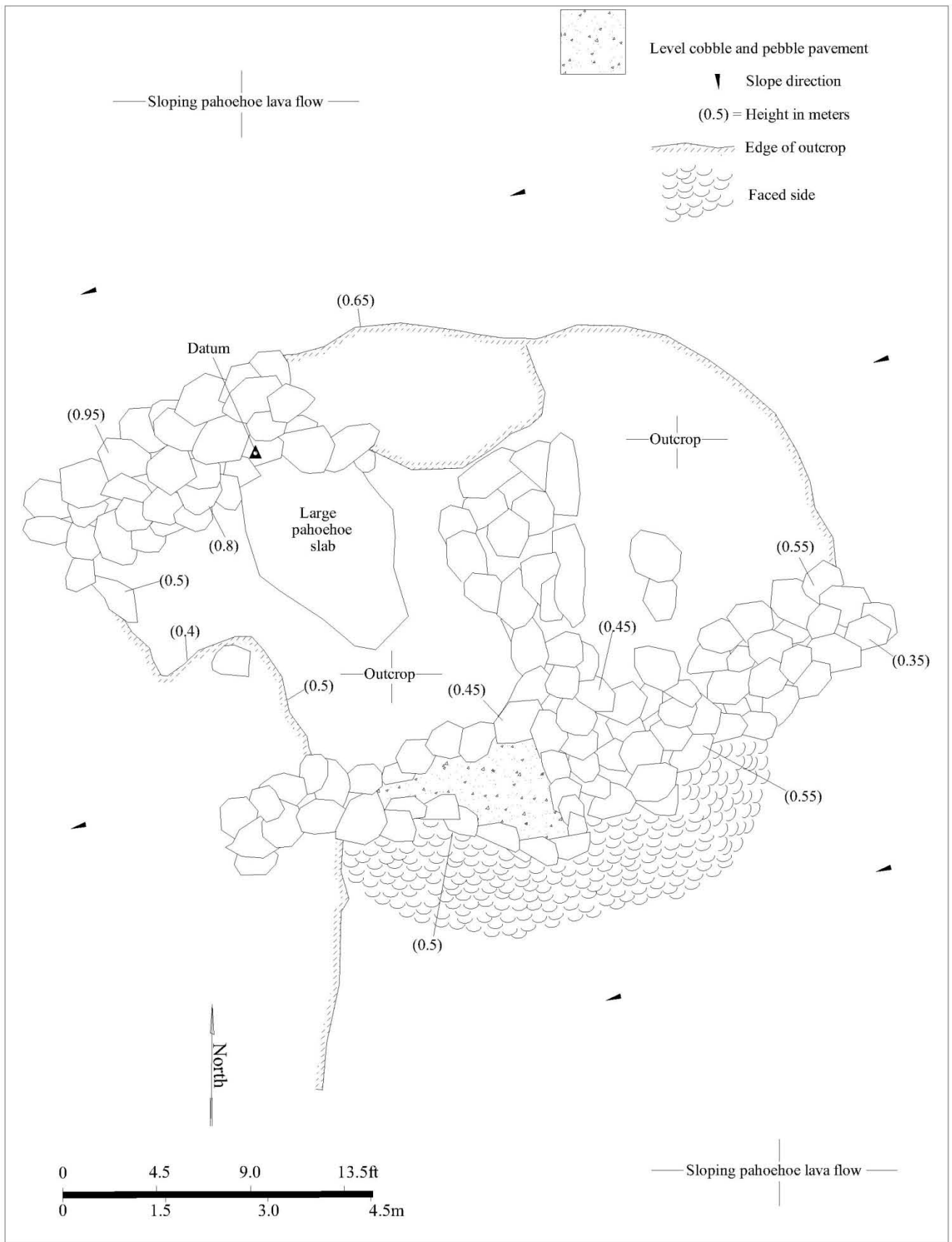


Figure 165. Site 28469 Plan Map

compartment. The south wall is 1.5 to 2.0 thick and 5.5 m long. The walls that frame the east compartment are 0.5 m high. The enclosure floor is the bare lava of the level outcrop, overlain unevenly in the north half of the west compartment by large broken pahoe-hoe slabs. No cultural material was found in association with the enclosure.

Site 28469 is interpreted as the possible foundation for a permanent habitation roofed structure. This is based on its formal type, substantial construction (paved surface) and area (61.5 sq m). The site is unaltered and is in fair condition. It is assessed significant for its information content.

State No.:28470

Site Type: Lava Tube

Functional Interpretation: Temporary Habitation

Topography: Soil and outcrops sloping to southwest and northwest

Elevation: 547ft

Coordinates: E=186150, N=2176979

Vegetation: *Haole koa*, *alahe'e*, various grasses

Probable Age: Prehistoric

Overall Dimensions: 46.2 m long

Condition: Fair

Integrity: Unaltered

Description: Site 28470 is a lava tube located in the northeastern portion of the project area. The site was discovered by construction personnel on October 28, 2009 during mechanical excavation within a well site (see *Figure 8a*). The discovery was immediately reported to SHPD. The site was documented in consultation with SHPD and subsequently destroyed.

The tube has an overall length of 46.2 m with an area of 214.4 sq m. The construction-breached entrance to the tube is located at c. 547 ft elevation and measures 3.5 m long (north-south), 3.2 m wide and 2.3 m in depth below the graded ground surface (*Figure 166*). The vertical entrance opens onto a linear chamber that is 46.2 m long (east-northeast by west-southwest) and from 3.0 to 5.9 m wide. The floor throughout this chamber is bare lava and the ceiling heights range from 0.3 m at the eastern end to 2.4 m at the western end. A restricted passage extends to the west from the west end of the main chamber; however, this passage was deemed too dangerous to enter because of its unstable roof.

There is a recessed area located in the floor of the tube adjacent to the vertical entrance that is 0.85 m in depth below the main surface of the tube. A small chamber is situated at the west end of this recessed area that is 1.75 m long (east-west), 1.45 m wide and 0.5 m in height. A concentration of dog bones and gnawed *kukui* nutshells (collected) was present along the south wall of this chamber. There is a second recessed area 5.3 m to the west of the first. Fragments of charcoal (Samples A and B) were collected from the floor of the recessed area.

The vertical entrance to a lower chamber is located on the main floor of the tube 1.6 m northeast of the breached entrance. This hole is 1.3 m long (northeast by southwest), 1.1 m wide and 2.15 m above the lower chamber floor. This opens onto a linear sub-chamber that is 17.3 m long (northeast by southwest) and 1.3 to 3.1 m wide. The floor throughout this sub-chamber is bare lava and the ceiling height ranges from 0.7 m at the southwest end to 1.6 m in the northeast portion. Roof fall is present below the entrance hole to the southwest. Gnawed *kukui* nutshells and a concentration of organic material with charcoal flecking (Sample C) are present adjacent to the roof fall to the southwest.

It is likely that the original entrance to the lava tube was in the vicinity of the breach based on the distribution of remains in the cave and the shallow depth of the ceiling below the former ground surface. The entrance was probably very small and probably obscured by vegetation and stones that precluded its identification during the SHPD-approved (LOG NO: 2009.3352; DOC NO: 0909TD12) archaeological inspection of the well site and subsequent monitoring.

Site 28470 is interpreted as a temporary habitation shelter based on its formal type and on the presence of the cultural remains. It has been altered by the construction activity and is destroyed. The site is assessed as significant solely for its information content.

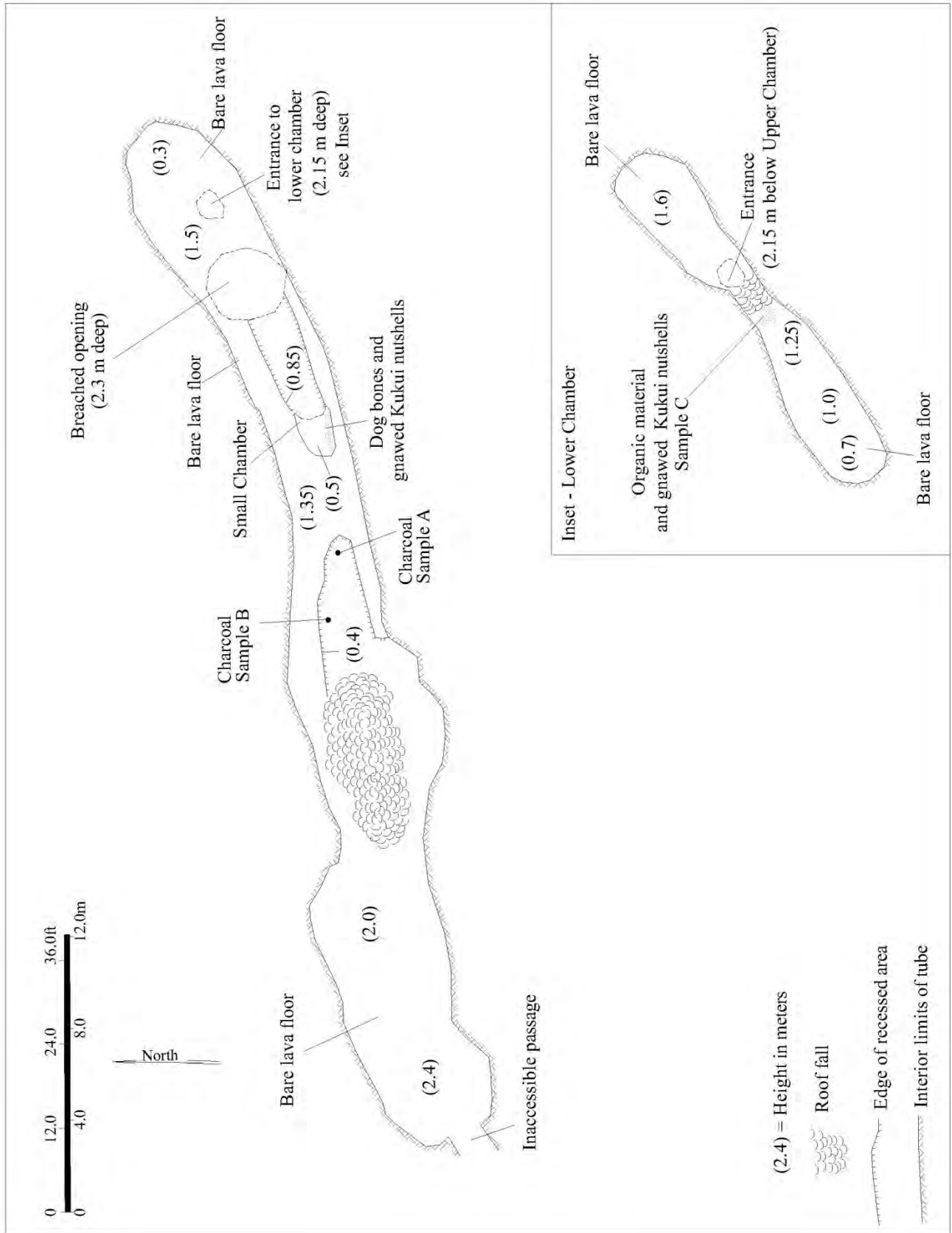


Figure 166. Site 28470 Plan Map

State No.: 28471 (T-237)

Site Type: Complex (3)

Functional Interpretation: Permanent Habitation

Topography: Soil and outcrops sloping to southwest and northwest

Elevation: 370-375ft

Coordinates: E=186915, N=2175980

Vegetation: Airplant, *alahe'e*, *haole koa*, grasses

Probable Age: Prehistoric

Overall Dimensions: 17.5 m by 16.6 m

Condition: Fair

Integrity: Unaltered

Description: Site 28471 is a complex of three features located in the southeastern portion of the project area. The features are comprised of two enclosures (Features A and B) and a platform (Feature C) located in an area 17.4 m long (northwest by southeast and 16.6 m wide (*Figure 167*)). The Feature A enclosure is rectangular in shape and is 17.5 m long (northwest by southeast) and 11.4 m wide, with an opening along the southwestern side. The Feature B enclosure forms the northwestern side. The wall of the enclosure is built of stacked and piled cobbles and small boulders. The walls are 1.0 to 1.5 m thick and 0.3 to 0.7 m in height. There are remnant faced sections present along the exterior of the north and east sides. A fragment of waterworn coral is located adjacent to the northern wall.

The majority of the enclosure's interior, except for an area of level soil present along the north side, is bare pahoehoe lava that slopes gently to the southwest. Several fragments of waterworn coral are present on the surface of this soil area. No other cultural remains were present.

Feature B is a rectangular enclosure that borders the western side of Feature A. It is 7.0 m long (north-northwest by south-southeast) and 5.1 to 5.8 m wide, with no apparent entrance, potentially due to collapse. The walls of the feature are built of stacked cobbles and small boulders and are 0.55 to 1.3 m thick and 0.2 to 0.35 m in height. Remnant facing is present along the interior of the east and south sides. The exterior of the western side has collapsed outward. The surface of the enclosure is level soil with no cultural remains present.

Feature C is an oval-shaped platform that is built into the eastern wall of the Feature A enclosure. The platform is 5.2 m long (east-northeast by west-southwest) and 4.6 m wide, with sides built of stacked and piled cobbles and small boulders. These sides range in height from 0.3 to 0.7 m above the surrounding ground surface. The surface is uneven cobbles and small boulders with a small area of level soil present on top. No cultural remains were present.

Site 28471 is interpreted as a complex of permanent habitation features. Features B and C potentially served as the foundation for roofed structures based on formal type, substantial construction of Feature B (faced sides) and area (Feature B = 40.6 sq m, Feature C = 23.9 sq m). The Feature A enclosure may have functioned as a yard based on formal type, substantial construction (faced sides) and area (199.5 sq m). The site is assessed as significant for its information content. It is unaltered and in fair condition.

State No.: 28472 (T-285)

Site Type: Cairn

Functional Interpretation: Marker

Topography: A'a flow sloping gently to west

Elevation: 401ft

Coordinates: E=186958, N=2175920

Vegetation: Christmas berry, *alahe'e*, *haole koa*, *haole koa*, lantana, autograph tree, grasses

Probable Age: Prehistoric

Overall Dimensions: 1.8 m by 1.4 m

Condition: Good

Integrity: Unaltered

Description: Site 28472 is a stone cairn located in an area of gently sloping a'a lava in the southeastern portion of the project area. It is constructed of stacked a'a cobbles and small boulders and is 1.8 m long (north-south) and 1.4 m wide at the base (*Figure 168*). The sides taper inward toward the top which varies in height from 0.45 to 0.6 m above the surrounding ground surface. No cultural remains were present.

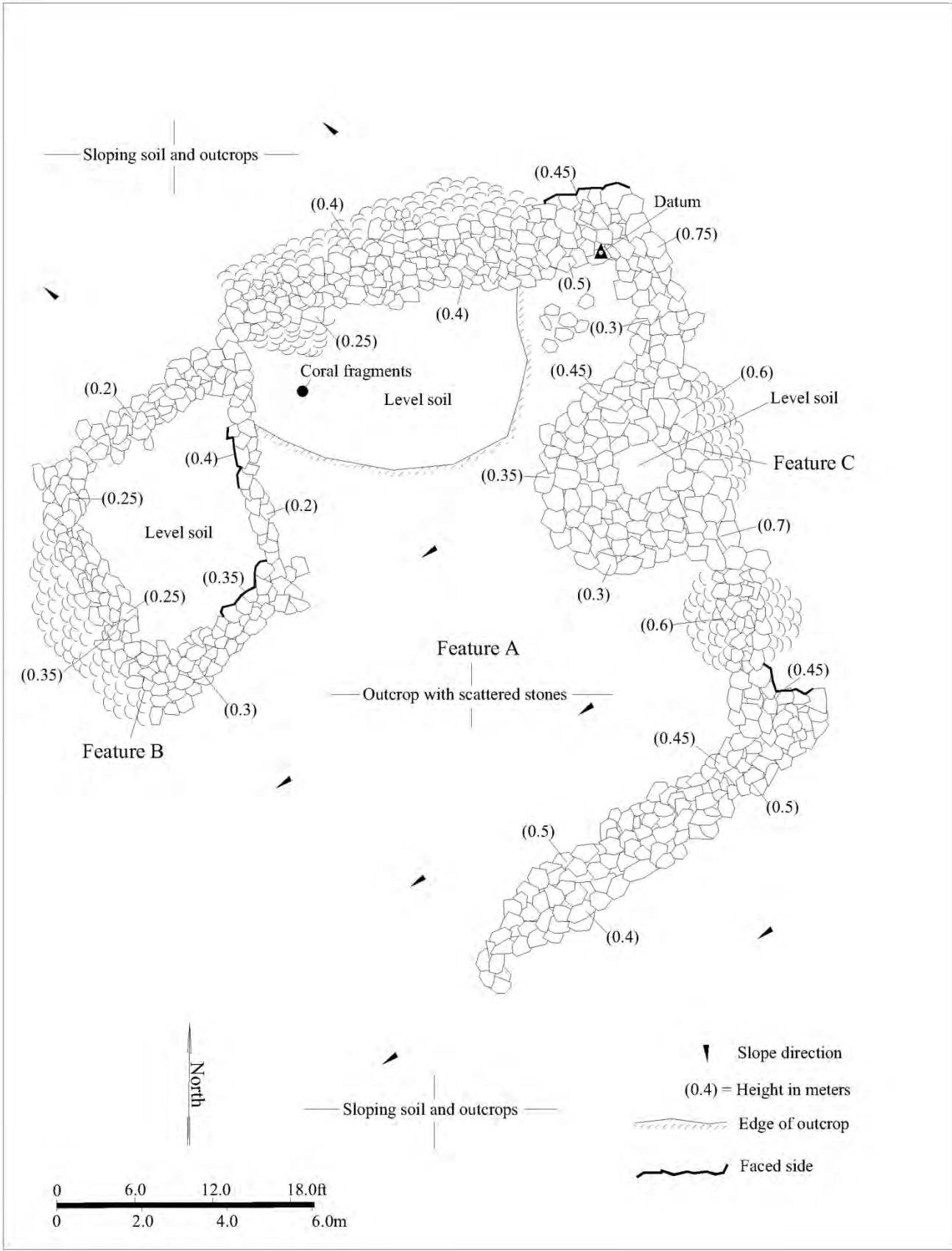


Figure 167 Site 28471 Plan Map



Figure 168. Site 28472 Cairn, view to south

Site 28472 is interpreted as a marker based on its formal type and appearance; however, unclear what the cairn is marking as no trails or land divisions are located in the immediate vicinity. The site is unaltered and in good condition. It is assessed as significant for its information content.

State No.: 28473 (T-281)

Site Type: Enclosure

Functional Interpretation: Permanent Habitation

Topography: A 'a flow sloping gently to northwest

Elevation: 415ft

Coordinates: E=187013, N=2175912

Vegetation: Christmas berry, airplant, *kiawe*, *alahe'e*

Probable Age: Prehistoric, Modern

Overall Dimensions: 6.6 m by 5.2 m

Condition: Fair

Integrity: Unaltered

Description: Site 28473 is an oval-shaped enclosure situated in an area of gently sloping, weathered 'a'a lava in the southeastern portion of the project area. It is constructed of stacked and piled 'a'a cobbles and small boulders with several vertical slabs set on edge incorporated into the southern side (*Figure 169*). The enclosure is 6.6 m long (east-west) and 3.2 to 5.2 m wide with a 0.5 m wide gap along the northeast side. The walls range from 0.45 to 0.9 m in thickness and from 0.1 to 0.75 m in height. Portions of the interior side of the north, northeast, west and south walls are faced, as are the exteriors of the west and southwest sides. The interior of the enclosure is level soil with scattered stones. A rusted metal wheelbarrow is present inside the enclosure.

Site 28473 is interpreted as the foundation for a permanent habitation roofed structure. This is based on its formal type, substantial construction (faced sides, vertical slabs) and area (34.3 sq m). The presence of the wheelbarrow indicates it a subsequent, recent episode of use. The site is unaltered, in fair condition and is assessed as significant for its information content.

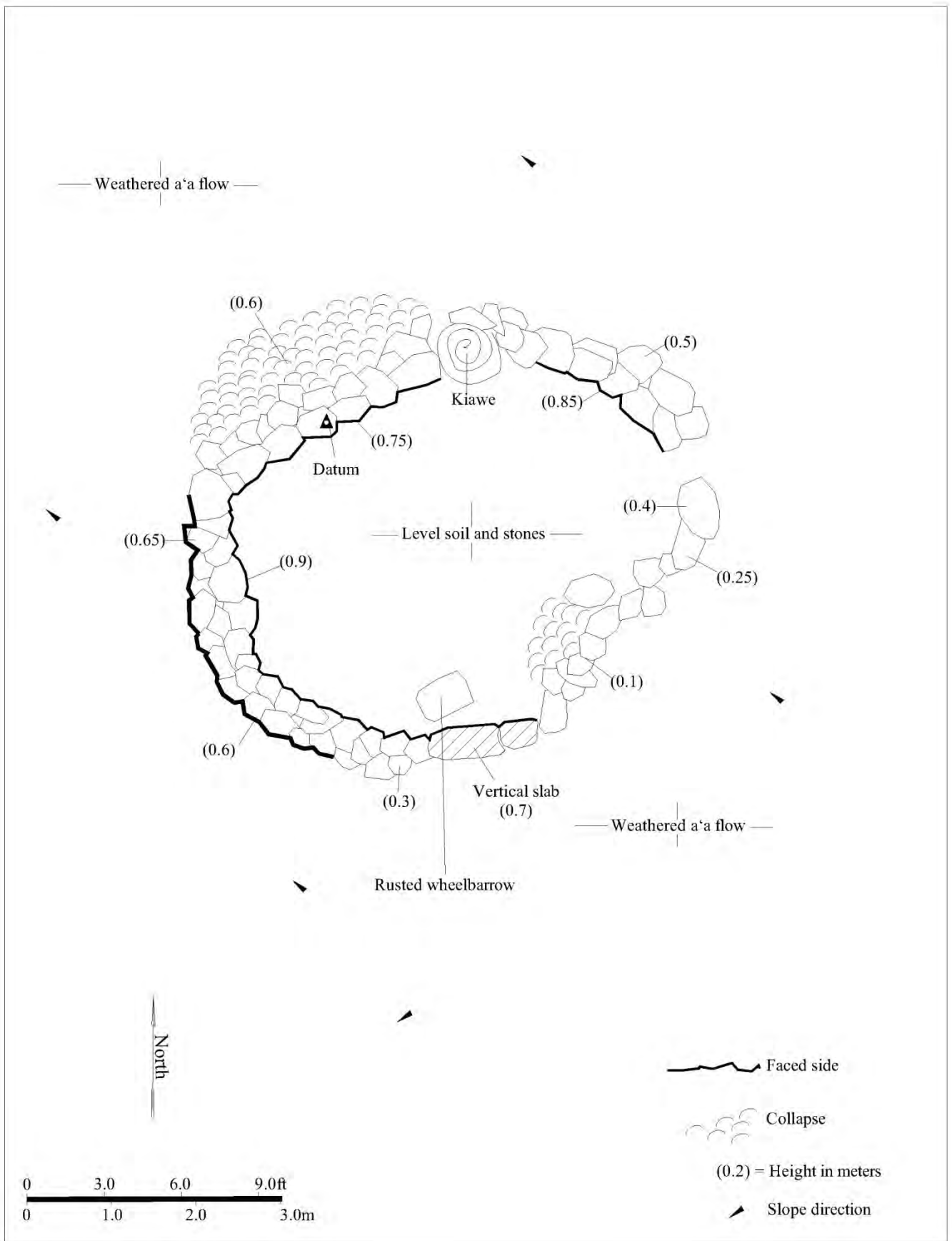


Figure 169. Site 28473 Plan Map

State No.: 28474 (T-555)

Site Type: Enclosure

Functional Interpretation: Temporary Habitation

Topography: Soil and outcrops sloping to west

Elevation: 409ft

Coordinates: E=187019, N=2175883

Vegetation: Christmas berry, *haole koa*, airplant, grasses

Probable Age: Prehistoric

Overall Dimensions: 2.85 m by 1.75 m long

Condition: Good

Integrity: Unaltered

Description: Site 28474 is a small oval-shaped enclosure built against the western side of a sloping bedrock outcrop in the southeastern portion of the project area. The enclosure is 2.55 to 2.85 m long (north-northwest by south-southeast) and 1.75 m wide with no entrance (*Figure 170*). The walls are constructed of roughly stacked and piled cobbles and small boulders and are 0.3 to 0.8 m wide and 0.5 to 1.1 m in height. The floor of the enclosure consists of level soil with no cultural remains present.

Site 28474 is interpreted as a temporary habitation shelter based on its formal type, insubstantial construction and small area (4.98 sq m). The site is unaltered and in fair condition. It is assessed as significant for its information content.

State No.: 28475 (T-287)

Site Type: Enclosure

Functional Interpretation: Temporary Habitation

Topography: A'a flow sloping gently to southwest

Elevation: 400ft

Coordinates: E=186965, N=2175920

Vegetation: Christmas berry, *alahe'e*, *haole koa*, autograph tree

Probable Age: Prehistoric

Overall Dimensions: 5.4 m by 3.2 m

Condition: Fair

Integrity: Unaltered

Description: Site 28475 is an oval-shaped enclosure built in an area of gently sloping a'a lava in the southeastern portion of the project area. It is constructed of roughly stacked and piled a'a cobbles and small boulders and is 5.4 m long (east-northeast by west-southwest) and 2.7 to 3.2 m wide (*Figure 171*). The walls are 0.5 to 1.0 m thick and 0.1 to 0.65 m in height. There is a 0.8 m wide gap in the enclosure wall along the eastern side. The interior is relatively level a'a lava with no cultural remains present.

Site 28475 is interpreted as a temporary habitation shelter. Although slightly larger than typical temporary habitations (17.3 sq m), its formal type and insubstantial construction suggest it likely functioned in this capacity. The site is unaltered, in fair condition and is assessed as significant for information content.

State No.: 28476 (T-552)

Site Type: Terrace

Functional Interpretation: Historic Habitation

Topography: Soil and outcrops sloping to west

Elevation: 404ft

Coordinates: E=187015, N=2175875

Vegetation: Christmas berry, *haole koa*, *opiuma*, airplant, grasses

Probable Age: Prehistoric

Overall Dimensions: 6.6 m by 3.9 m long

Condition: Fair

Integrity: Unaltered

Description: Site 28476 is an oval-shaped terrace located in an area of sloping soil and outcrops in the southeastern portion of the project area. The terrace is 6.6 m long (north-south) and 2.3 to 3.9 m wide, with a stacked cobble and small boulder retaining wall along the north, west and south sides (*Figure 172*). The retaining wall is 0.35 to 0.65 m

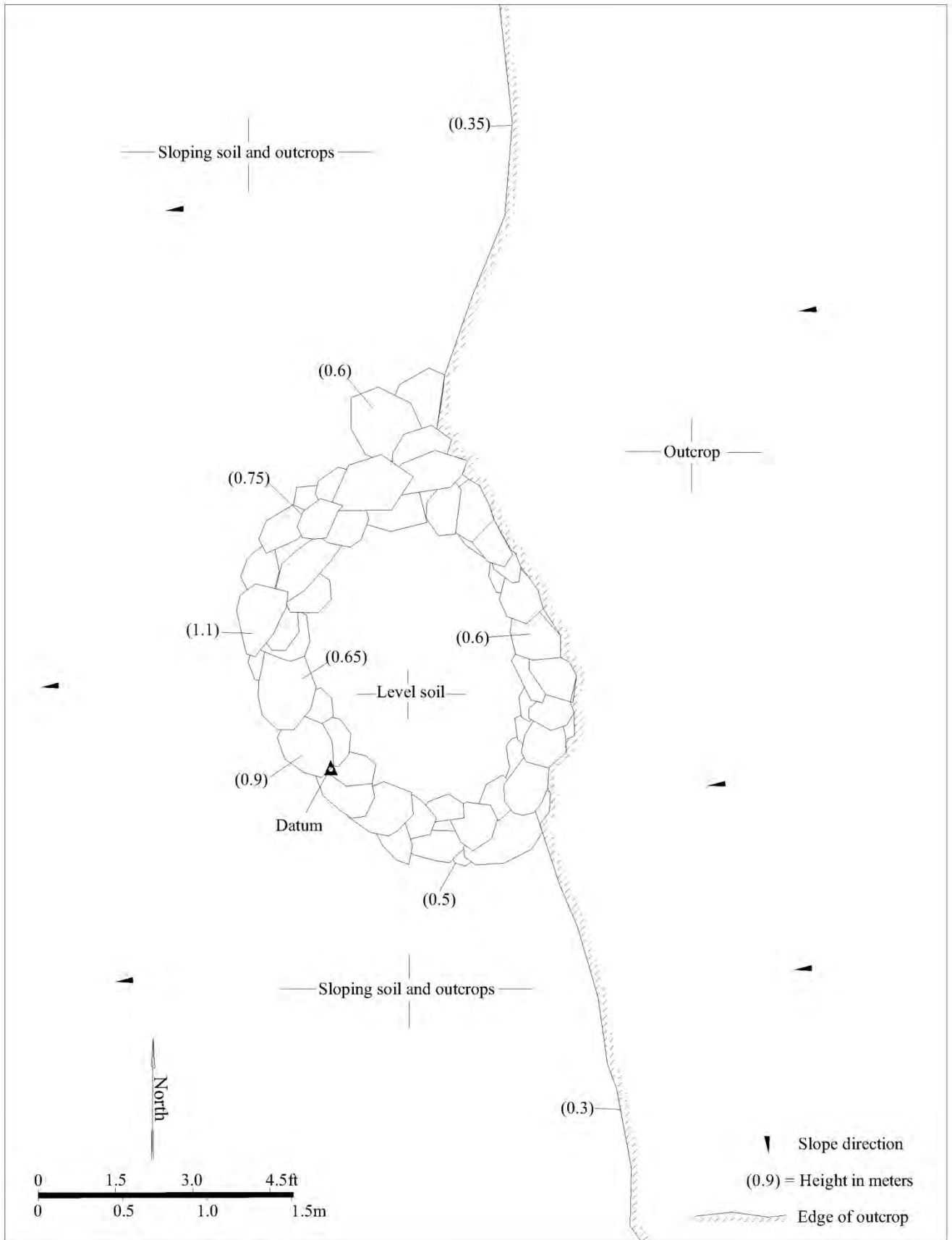


Figure 170. Site 28474 Plan Map

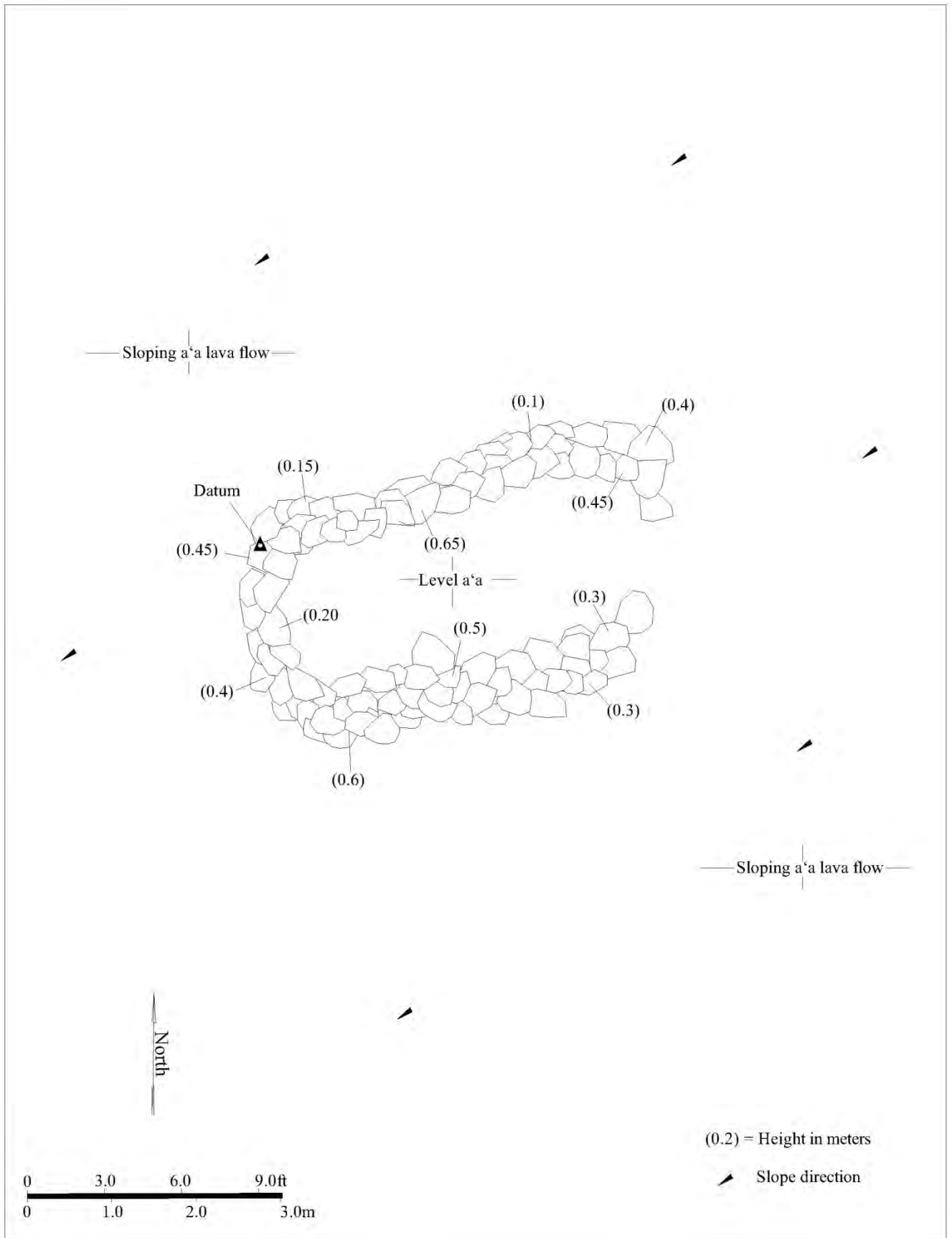


Figure 171. Site 28475 Plan Map

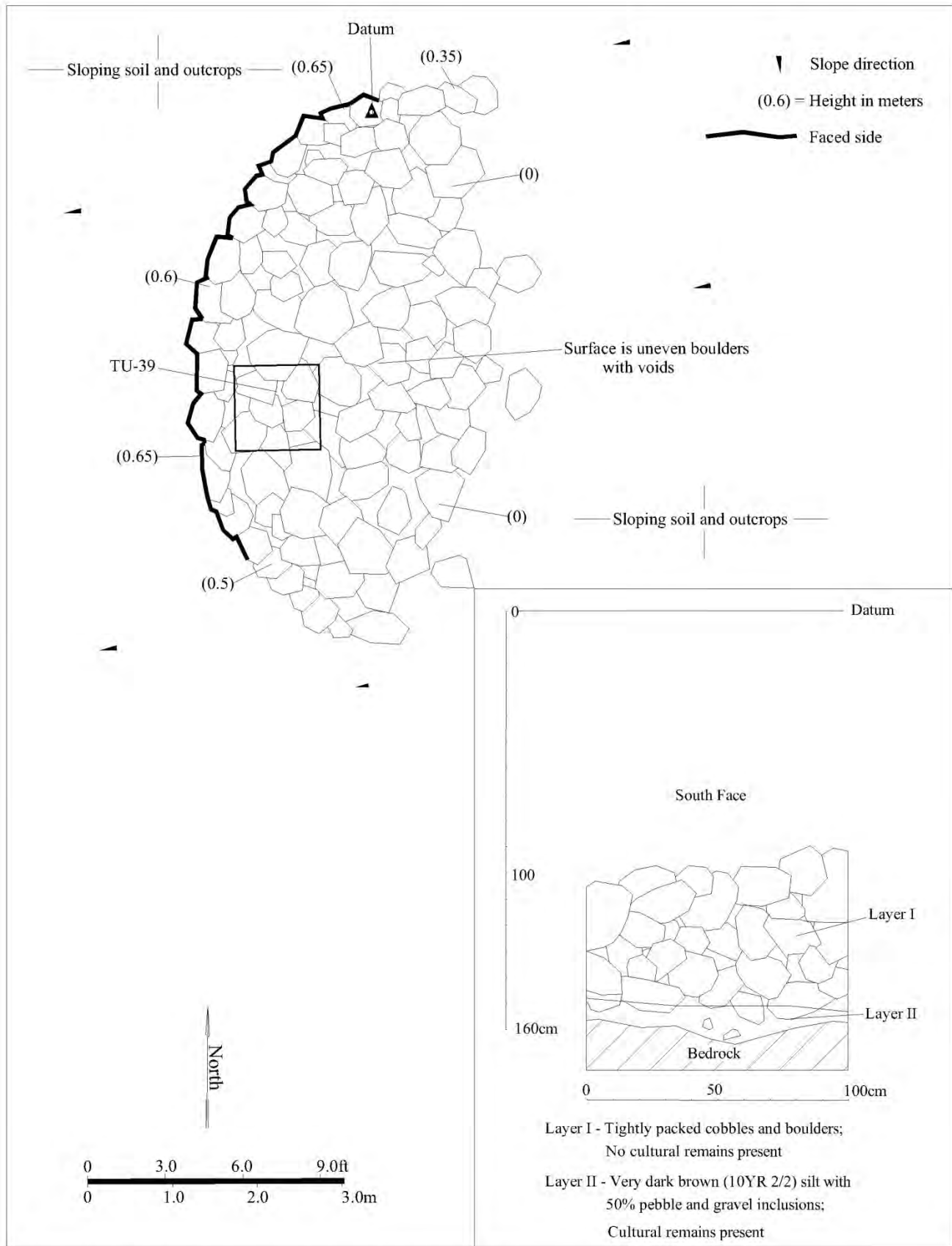


Figure 172. Site 28476 Plan Map and TU-39 South Face Profile

in height and the eastern side is level with the surface of the sloping terrain. There is facing present along the west and northwest sides. The surface of the terrace is level but unpaved cobbles and small boulders with no cultural remains present.

A 1.0 by 1.0 m test unit (TU-39) was excavated into the surface of the terrace revealing two layers over bedrock (see *Figure 172*). Layer I consists of 0.5 to 0.64 m of tightly packed cobbles and small boulders with no cultural remains present. Layer II is a 0.04 to 0.15 m thick deposit of very dark brown (10YR 2/2) silt with 50% pebble and gravel inclusions. Cultural remains from Layer II consist of two rusted iron wire nails (Acc. 33.001- 34.001; round head 6.1 mm in diameter and 65.5 mm long; 5.6g) that post-date c. AD 1890.

Site 28476 is interpreted as the possible foundation for an historic structure. This is based on its formal type and on the presence of the nails recovered from Layer II. The site is unaltered and in good condition. It is assessed as significant for its information content.

State No.: 28477 (T-553)

Site Type: Enclosure

Functional Interpretation: Permanent Habitation

Topography: Soil and outcrops sloping to west-southwest

Elevation: 400ft

Coordinates: E=187006, N=2175842

Vegetation: Christmas berry *haole koa*, grasses

Probable Age: Prehistoric

Overall Dimensions: 5.65 by 3.1 m

Condition: Fair

Integrity: Unaltered

Description: Site 28477 is an oval-shaped enclosure located in the southeastern portion of the project area. The enclosure is 5.65 m long (north-northeast by south-southwest) and 2.3 to 3.1 m wide (*Figure 173*). The walls are constructed of stacked cobbles and small boulders and are 0.45 to 0.65 m thick and 0.4 to 0.8 m in height. A portion of northeast wall is bi-faced. There is a 0.7 m wide gap adjacent to the gap to the southwest that may represent an entrance. The interior of the enclosure is level soil with no cultural remains. There is a Christmas berry tree growing inside the structure at the south end,.

Site 28477 is interpreted as the foundation for a permanent habitation roofed structure. This is based on its formal type, substantial construction (faced sides) and area (17.5 sq m). The site is unaltered and in fair condition. It is assessed as significant for its information content.

State No.: 28478 (T-547)

Site Type: L-shape

Functional Interpretation: Temporary Habitation

Topography: Soil and weathered a'a lava sloping to southwest

Elevation: 390ft

Coordinates: E=186965, N=2175824

Vegetation: Christmas berry, *alahe'e*, *haole koa*, airplant

Probable Age: Prehistoric

Overall Dimensions: 7.6 m by 3.5 m

Condition: Fair

Integrity: Unaltered

Description: Site 28478 is a roughly L-shaped enclosure southern portion of the project area in an area of sloping soil and weathered a'a. The structure is 7.6 m in length (northeast by southwest) and 3.5 m wide, open along the southeastern side (*Figure 174*). The walls are constructed of roughly stacked, piled and aligned cobbles and small boulders and range in thickness from 0.4 to 0.6 m and in height from 0.25 to 0.9 m. The interior is level soil with no cultural remains present. There is a raised bedrock outcrop (0.3 to 0.5 m high), adjacent to the enclosure to the southeast.

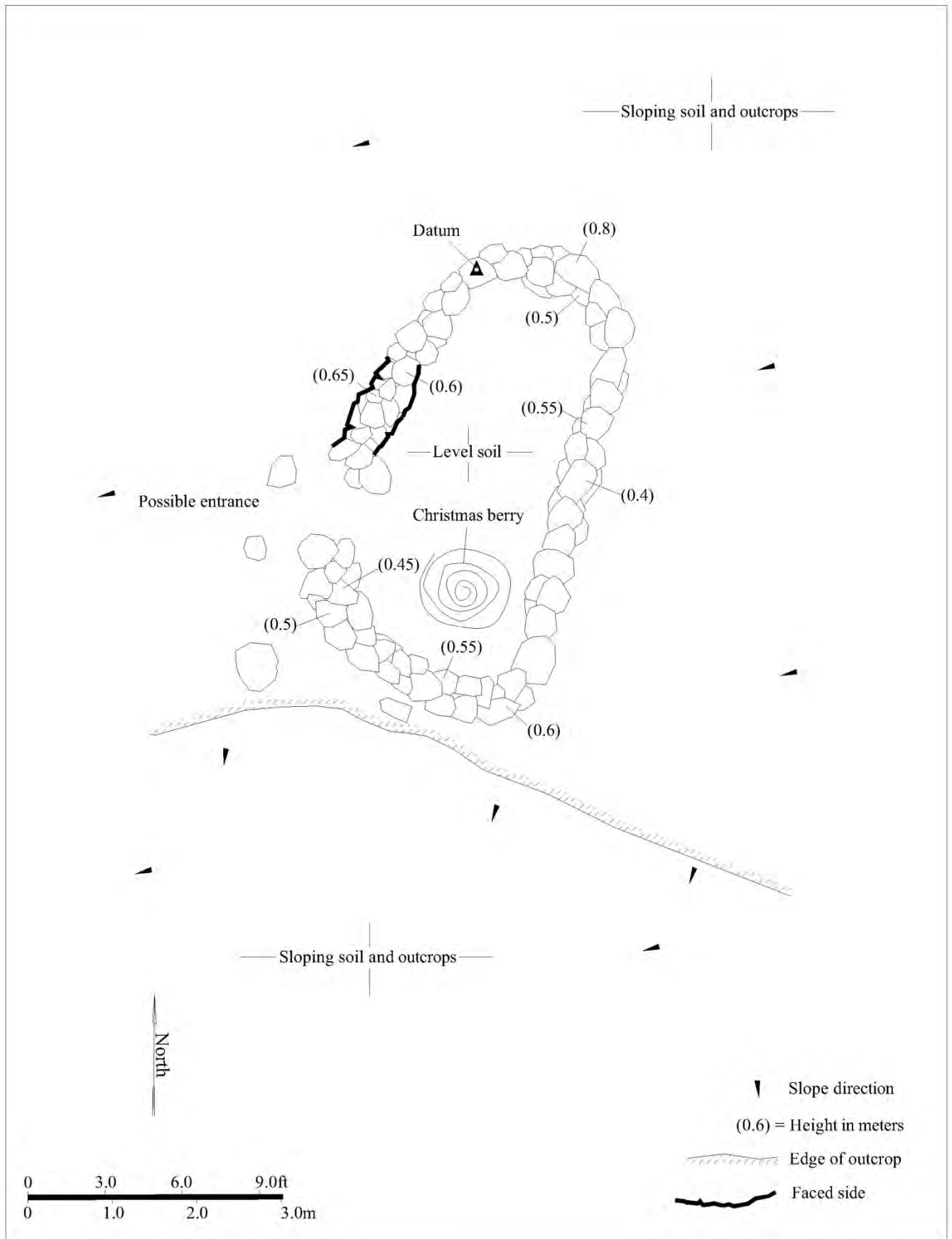


Figure 173. Site 28477 Plan Map

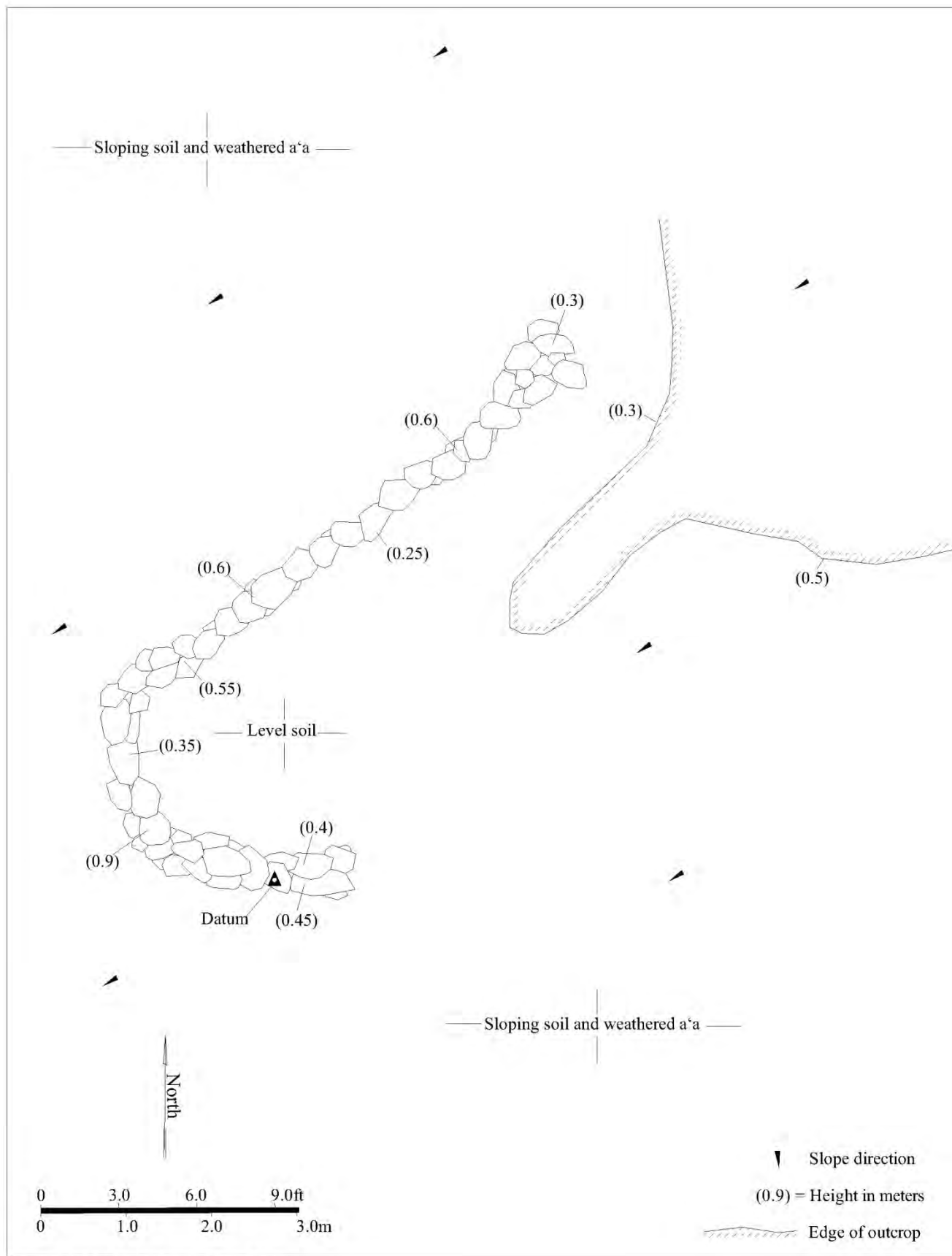


Figure 174. Site 28478 Plan Map

Site 28478 is interpreted as a temporary habitation shelter. Although larger than typical temporary habitations (26.6 sq m), its formal type and insubstantial construction suggest it likely functioned in this capacity. The site is unaltered, in fair condition and is assessed as significant for information content.

State No.: 28479 (T-964, 968, 969)

Site Type: Complex (11)

Functional Interpretation: Marker

Topography: Level soil and low outcrops

Elevation: 385ft

Coordinates: Feature A - E=186962, N=21754808

Vegetation: Christmas berry, *haole koa*, airplant, autograph tree, *alahe'e*, grasses

Probable Age: Indeterminate

Overall Dimensions: 31.7 m by 22.5 m

Condition: Fair

Integrity: Unaltered

Description: Site 28479 a cluster of 11 stacked stone cairns located in the southeastern portion of the project area. The cairns are arranged in an irregular configuration and are situated in an area of level soil and low outcrops. The site encompasses an area 31.7 m long (north-south) and 22.5 m wide (*Figure 175*). The cairns are built of stacked cobbles and small boulders. The features range in length from 0.7 to 1.5 m, in width from 0.6 to 1.3 m and in height from 0.5 to 0.95 m (see *Table 13* in Conclusions Section). Flat slabs cap six of the 11 cairns (Features A, C, E, G, I and J). No cultural remains were found in associated with any of the cairns.

The cairns at Site 28479 are assigned a marker function based on formal type and appearance; however, unclear what the features are marking. The features are arranged in an irregular pattern and do not appear to delineate a boundary. It is also unclear if these feature are historic or prehistoric in origin. The site is unaltered and in fair condition. They are assessed as significant for information content.

State No.: 28480 (T-292)

Site Type: Complex (2)

Functional Interpretation: Permanent Habitation

Topography: Soil and outcrops sloping to south and southwest

Elevation: 345ft

Coordinates: E=186780, N=2175822

Vegetation: Airplant, *alahe'e*, *haole koa*, grasses

Probable Age: Prehistoric

Overall Dimensions: 9.6 m by 3.2 m

Condition: Good

Integrity: Unaltered

Description: Site 28480 is a complex of two terraces located in the southwestern portion of the project area, built on the southern side of a sloping bedrock outcrop (*Figure 176*). The site encompasses an area 9.6 m long (northwest by southeast) and 3.2 m wide. The Feature A terrace is located in the eastern portion of the site. It is roughly rectangular in shape and is 6.7 m long (east-west) and 1.75 to 2.45 m wide. A stacked and faced cobble and small boulder retaining wall extends along the south and west sides of the feature, ranging in height from 0.55 to 0.75 m. The eastern side has collapsed and the remaining sides abut the surface of the adjacent outcrop. The surface is a level cobble and pebble pavement with an area of exposed bedrock in the eastern portion. No cultural remains were present.

The Feature B terrace is located 1.8 m to the northwest of Feature B. This terrace is rectangular in shape and is 1.7 m long (east-northeast by west-southwest) and 1.4 m wide. The south and east sides are bordered by aligned cobbles (0.2 to 0.3 m in height) and the remaining sides are level with the surrounding outcrop. The surface of the feature consists of a level cobble and pebble pavement with no cultural remains present.

A 1.0 by 1.0 m test unit (TU-53) was excavated in to the center of Feature B revealing two layers over bedrock (see *Figure 176*). Layer I consists of 0.16 to 0.22 m of tightly packed cobbles and pebbles with no cultural remains present. Bedrock was encountered below Layer I in the western portion of the unit, with the Layer II soil present in

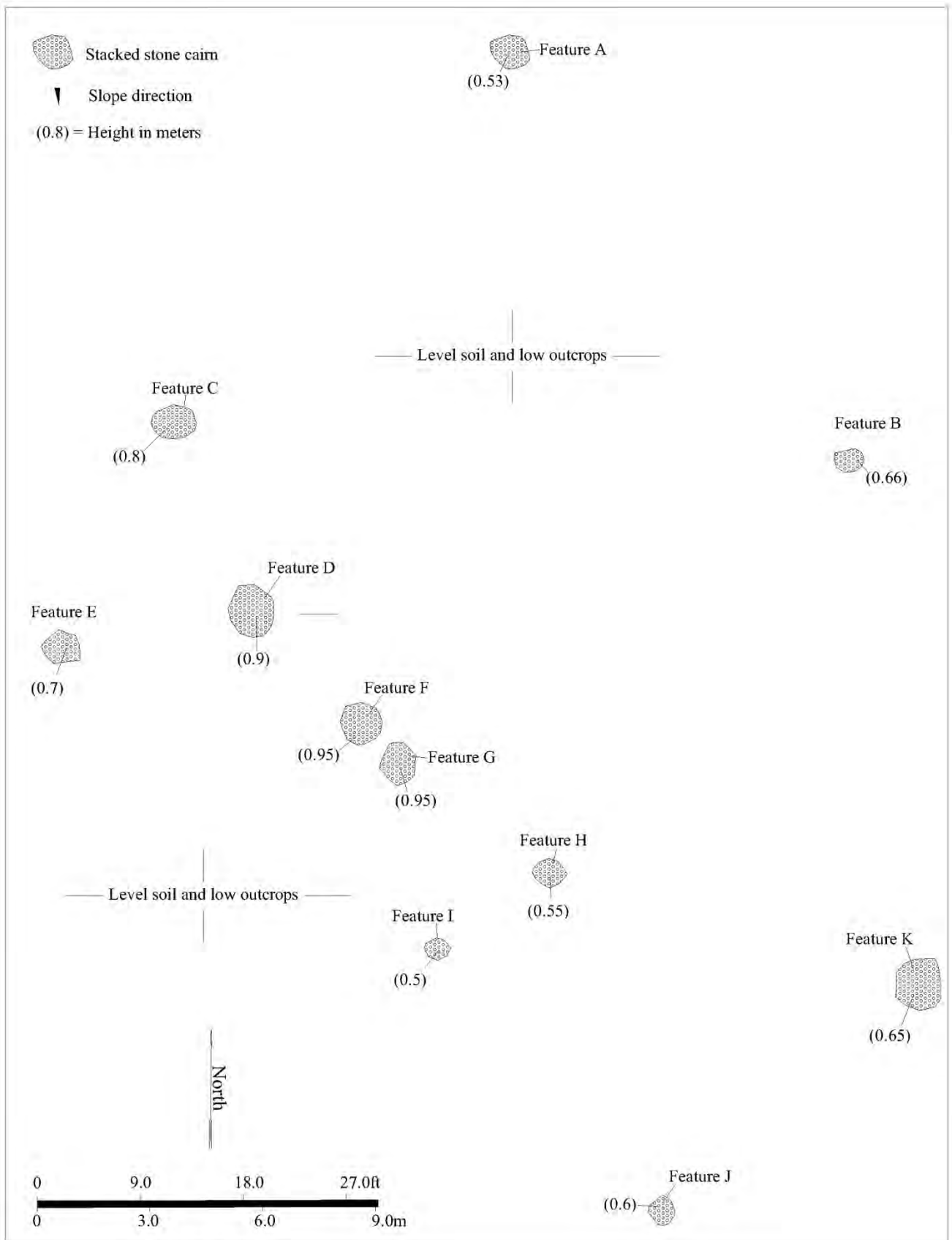


Figure 175. Site 28479 Plan Map

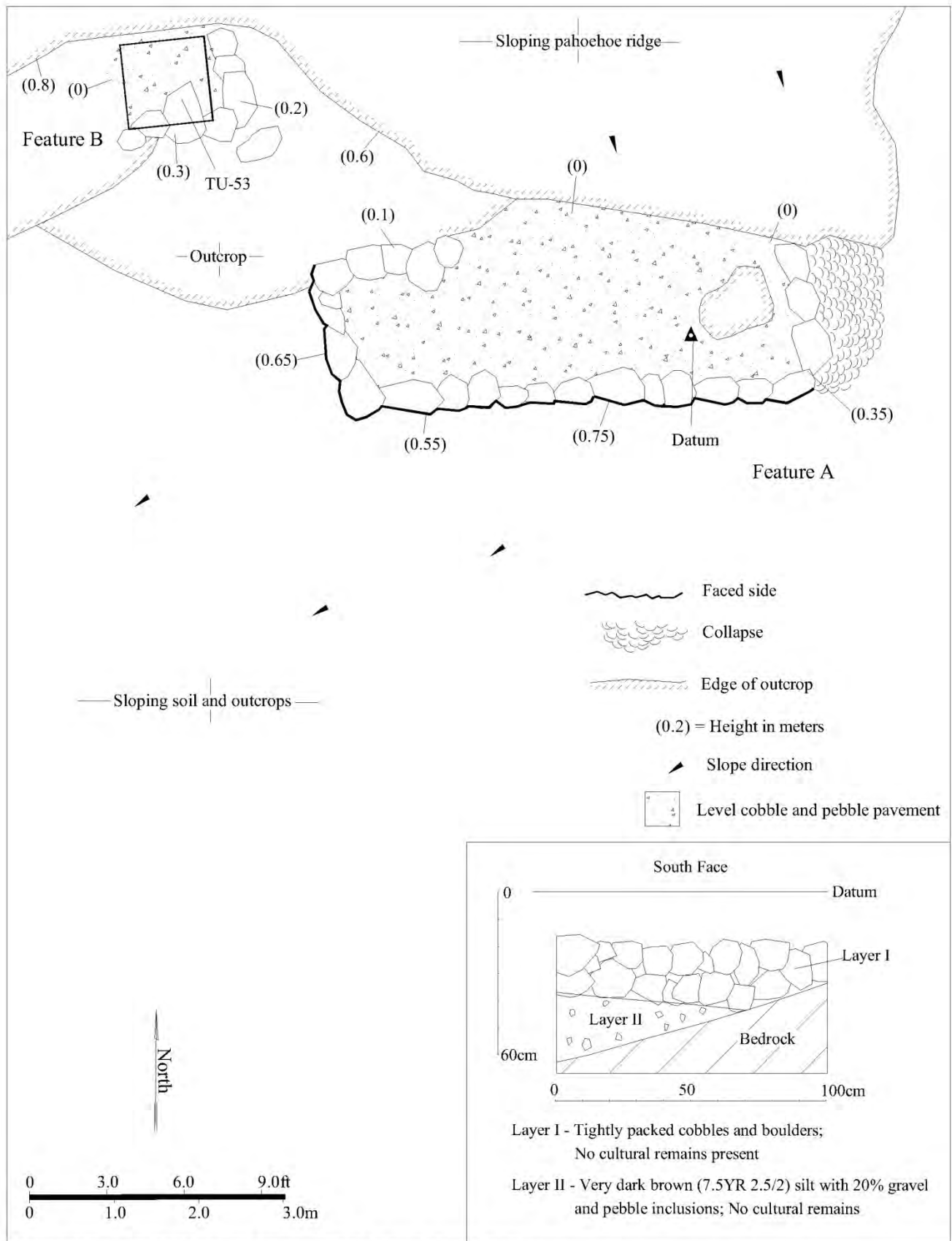


Figure 176. Site 28480 Plan Map and TU-53 South Face Profile

the eastern portion Layer II is a 0.05 to 0.25 m thick deposit of very dark brown (7.5YR 2/5/2) silt with 20% gravel and pebble inclusions. No cultural remains were present.

Site 28480 is interpreted as a complex of permanent habitation features. The Feature A terrace likely functioned as the foundation for a roofed structure based on formal type, substantial construction (faced sides, paved surface) and area 16.4 sq m). The Feature B terrace potentially served as a special purpose structure or site furniture based on its formal type, substantial construction (paved surface) and small area (2.38 sq m). The site is unaltered, in fair condition and is assessed as significant for its information content.

State No.: 28481 (T-521)

Site Type: Terrace

Functional Interpretation: Permanent Habitation

Topography Soil and outcrops sloping to southwest

Elevation: 359ft

Coordinates: E=186834, N=2175775

Vegetation: Christmas berry, lantana, autograph tree, *haole koa*, grasses

Probable Age: Prehistoric

Overall Dimensions: 5.0m by 3.8 m

Condition: Fair

Integrity: Unaltered

Description: Site 28481 is a terrace built against the western side of a raised bedrock outcrop in the southwestern portion of the project area. The terrace is roughly rectangular in shape and is 5.0 m long (north-south) and 3.8 m wide (*Figure 177*). There is a stacked cobble and small boulder retaining wall extending along the west and south sides that is 0.3 to 0.6 m in height. The western side of this wall is faced and the southwestern corner has collapsed outward. The northern side is bordered by level soil and the east side abuts the edge of the outcrop.

The western half of the terrace consists of a level cobble and pebble pavement and the eastern portion is a level soil. No cultural remains were present on the surface. Piles of cobbles and small boulders are located to the north and east of the terrace, against an outcrop. A 1.0 by 1.0 m test unit (TU-54) was excavated into the paved surface of the terrace revealing two layers over bedrock (see *Figure 177*). Layer I consists of 0.16 to 0.19 m of tightly packed cobbles and small boulders with no cultural remains present. Layer II is a 0.26 to 0.29 m thick deposit of very dark brown (10YR 2/2) silt with 40% gravel and pebble inclusions. No cultural remains were present.

Site 28481 is interpreted as the foundation for a roofed structure based on its formal type, substantial construction (faced sides, paved surface) and area (19.0 sq m). The site is unaltered and in fair condition. It is assessed as significant for its information content.

State No.: 28482 (T-513)

Site Type: Enclosure

Functional Interpretation: Temporary Habitation

Topography: Soil and outcrops sloping to west

Elevation: 354ft

Coordinates: E=186812, N=2175764

Vegetation: Christmas berry, *alahe'e*, airplant, autograph tree

Probable Age: Prehistoric

Overall Dimensions: 5.3 m by 3.4 m

Condition: Fair

Integrity: Unaltered

Description: Site 28482 is an oval-shaped enclosure built in an area of sloping soil and outcrops in the southern portion of the project area. It is constructed of roughly stacked and piled cobbles and small boulders and is 5.3 m long (northeast by southwest) and 3.4 m wide with no apparent entrance into the interior (*Figure 178*). The northwest and west sides are comprised of roughly stacked and piled cobbles and small boulders walls. The walls are 0.6 to 1.3 m thick and 0.45 to 0.75 m in height. The east and southeast sides are bordered by a low bedrock outcrop (0.2 m) with cobbles and small boulders placed along its edge. The interior is level soil with no cultural remains present.

Site 28482 is interpreted as a temporary habitation shelter. Although slightly larger than typical temporary habitations (18.0 sq m), its formal type and insubstantial construction suggest it likely functioned in this capacity. The site is unaltered, in fair condition and is assessed as significant for information content.

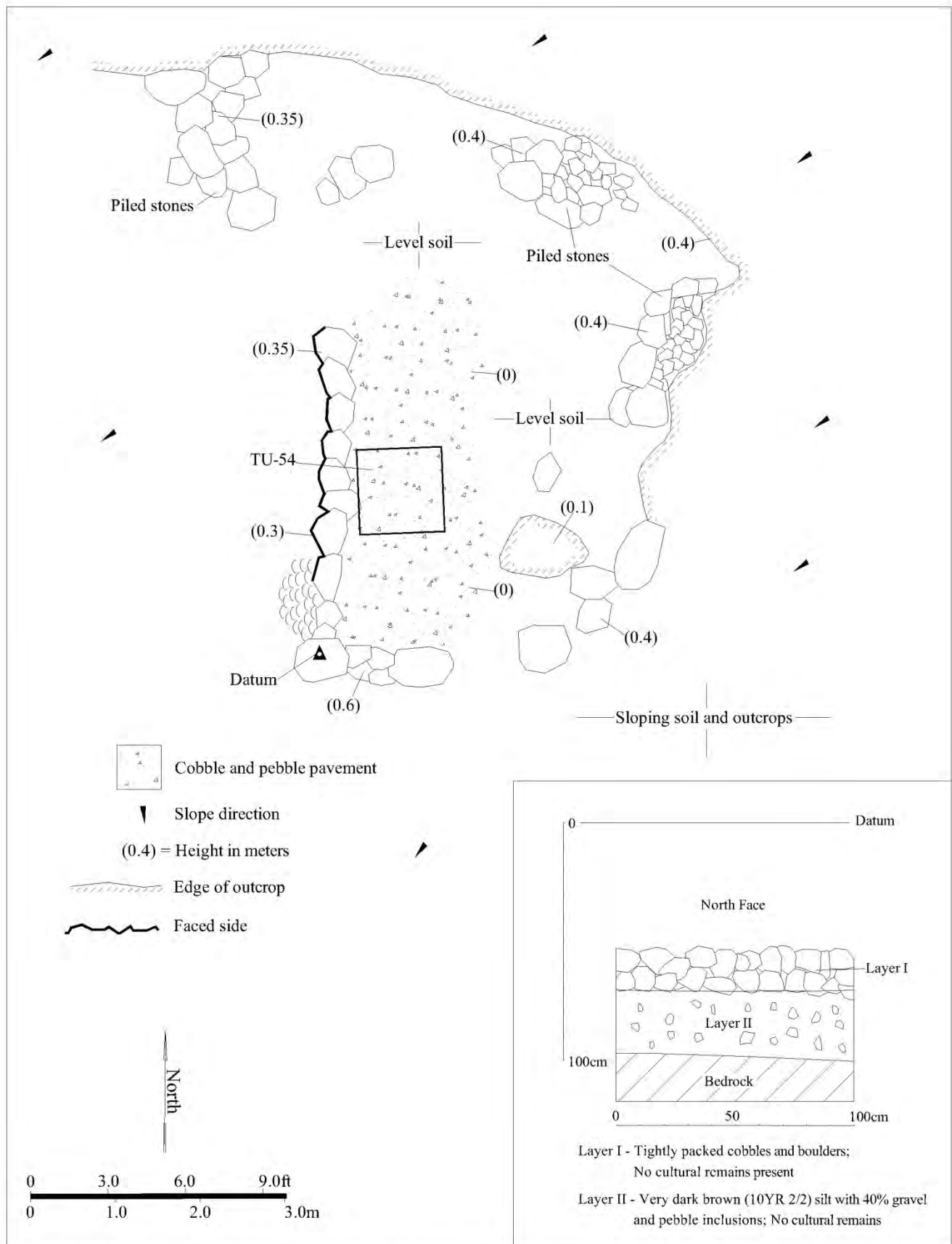


Figure 177. Site 28481 Plan Map and TU-54 North Face Profile

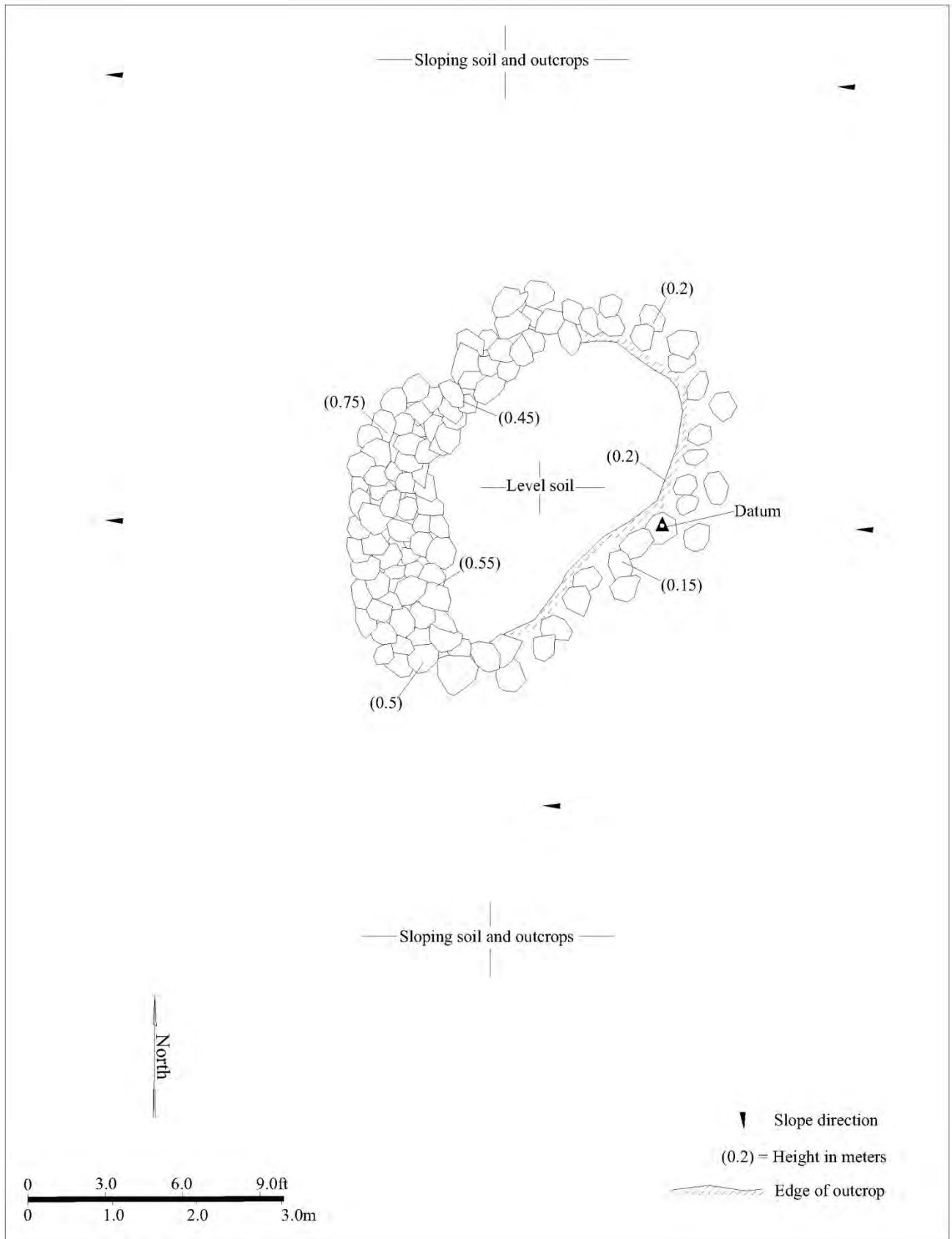


Figure 178. Site 28482 Plan Map

State No.: 28483 (T-297, 500)
Site Type: Complex (3)
Functional Interpretation: Permanent Habitation, Possible Burial
Topography: Soil and outcrops sloping to northwest
Elevation: 343ft
Vegetation: *Haole koa*, *alahe'e*, airplant, grasses
Probable Age: Prehistoric
Overall Dimensions: 37.0 by 10.2 m
Condition: Fair
Integrity: Unaltered

Description: Site 28483 is a complex of three features located in the southwestern portion of the project area. The site is comprised of two terraces (Features A and C) and a U-shape (Feature B) located in an area 37.0 m long (north-northeast by south-southwest) and 10.2 m wide (*Figure 179*). The Feature A terrace is roughly rectangular in shape and is 7.7 to 10.7 m long (northeast by southwest) and 4.7 to 9.8 m wide. A stacked and piled cobble and small boulder retaining wall extends along the northeast, northwest and southwest sides, with the southeast side abutting the edge of the sloping terrain. The retaining walls range in thickness from 0.4 to 1.5 m. The walls are 0.3 to 0.55 m high on the exterior sides and 0.1 to 0.3 m on the interior sides. Portions of the retaining walls are faced with collapse present at the northwestern corner. The surface of the terrace is level soil with no cultural remains present.

Feature B is a roughly U-shaped enclosure built off the southwest end of Feature B. It is 3.6 m long (northwest by southeast) and 3.4 m wide, open to the northwest. The walls are constructed of stacked and piled cobbles and small boulders. The walls are 0.5 to 1.4 m thick and 0.2 to 0.4 m in height. The exterior of the southeast side is faced. The interior surface is level soil with no cultural remains present.

The Feature C terrace is located 14.8 m north-northeast of Feature A, built on and adjacent to a raised bedrock outcrop. It is roughly rectangular in shape and is 4.9 m long (north-northwest by south-southeast) by 1.05 to 4.1 m wide. There are stacked cobble and small boulder retaining walls extending along the north, west and southwest sides, with the eastern side abutting the edge of an outcrop. There is remnant facing along the west side with rubble from wall collapse present at the northwest corner and along the north side. The surface is a level cobble and pebble pavement with no cultural remains. There is an alignment of three large cobbles on the surface at the southern end.

Site 28483 is interpreted as a complex of permanent habitation features. The Feature A and C terraces potentially served as house foundations based on their formal type, substantial construction (faced sides and paving at Feature C) and their areas (Feature A = 70.3 sq m, Feature C = 17.2). The Feature B enclosure may have served as an associated special purpose structure based on its formal type, substantial construction (faced side) and small area (12.2 sq m). The Feature C terrace may have also functioned as a burial structure, though it was not tested due to its location within a proposed preservation area. The site is unaltered, in fair condition and is assessed as significant for its information content. The site is located within the southwestern preservation area.

State No.: 28484 (T-498)
Site Type: Modified Outcrop
Functional Interpretation: Possible Burial
Topography: Soil and outcrops sloping moderately to south and southeast
Elevation: 343ft
Vegetation: Airplant, *alahe'e*, *haole koa*, monkeypod, grasses
Probable Age: Prehistoric
Overall Dimensions: 1.8 m by 1.6 m
Condition: Fair
Integrity: Unaltered

Description: Site 28484 is an oval shaped modified outcrop located in the southwestern portion of the project area. The site is a low pile of boulder, cobbles and flat pahoehoe slabs located in an area of surface bedrock that is 1.8 m long (north-south) and 1.6 m wide (*Figure 180*). The sides are 0.1 to 0.4 m in height and the surface is relatively level. No cultural remains were present on the surface. Site 28484 is interpreted as a possible burial structure based on its construction (flat slabs on surface and small area {2.8 sq m}). The site was not subjected to subsurface testing during the project as it is located within the boundaries of a planned preservation area. The site is unaltered and in fair condition. It is assessed as significant for information content and for its potential cultural value based on the possible presence of human remains.

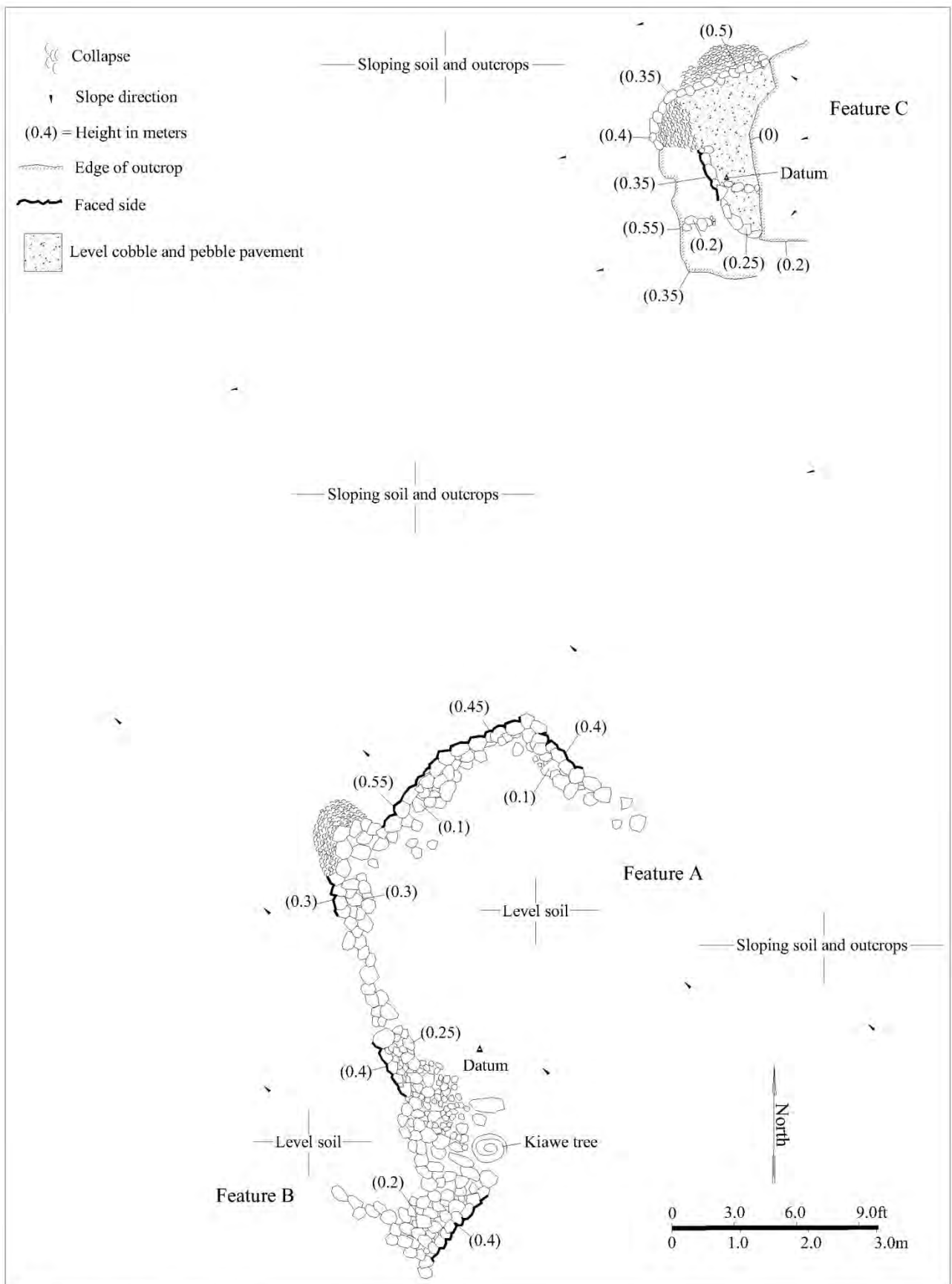


Figure 179. Site 28483 Plan Map

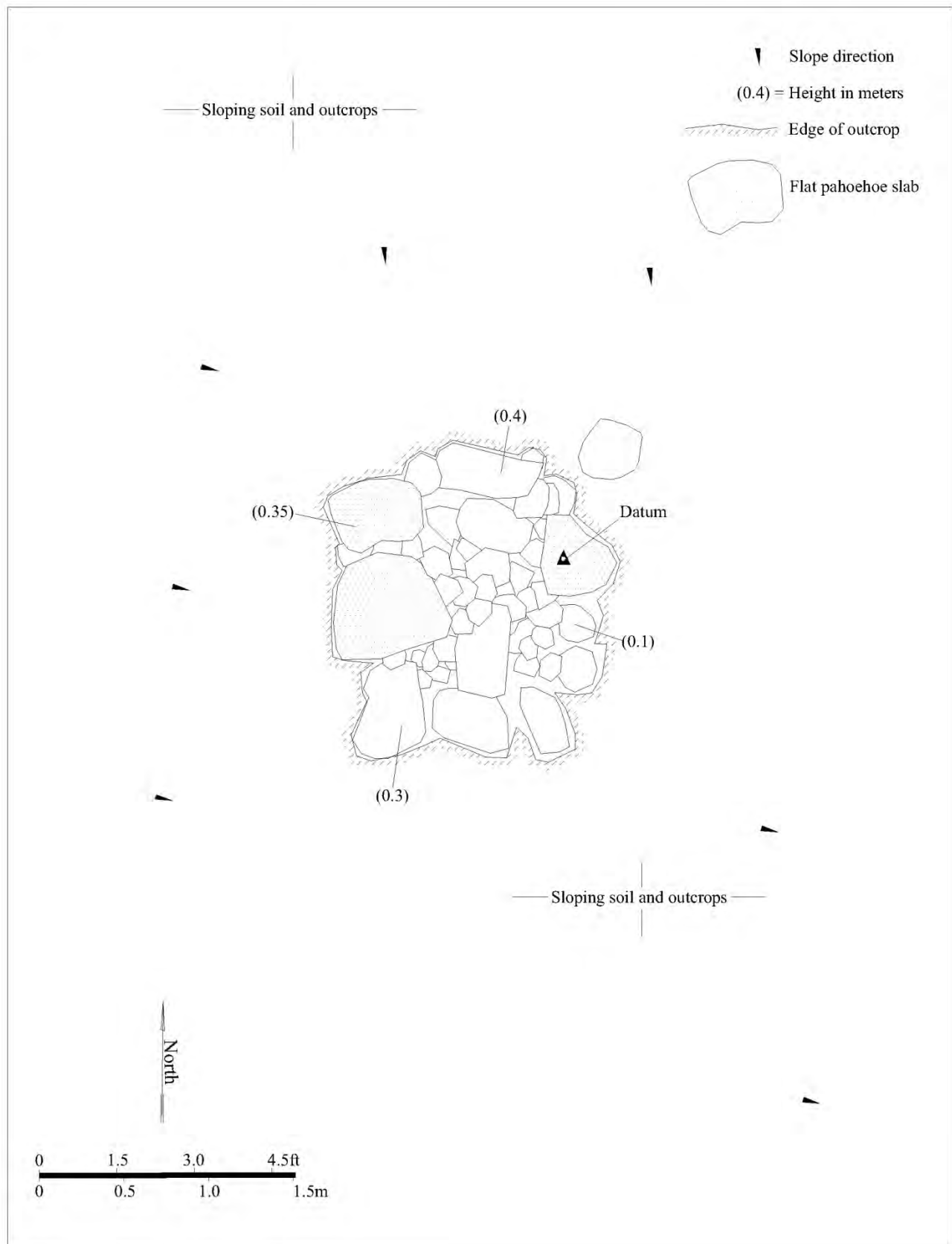


Figure 180. Site 28484 Plan Map

State No.: 28485 (T-915)
Site Type: Enclosure
Functional Interpretation: Permanent Habitation
Topography Soil and outcrops in relatively flat area with gentle slope northwest
Elevation: 350 ft
Coordinates: E=186776, N=2175673
Vegetation: *Haole koa*, grasses, air plant, monkeypod
Probable Age: Prehistoric
Overall Dimensions: 18.5 m long (NE-SW) by 14.0 m wide (NW-SE)
Condition: Fair
Integrity: Unaltered

Description: Site 28485 is an enclosure constructed on the north and east sides of a bedrock outcrop in the southwestern portion of the project area. The enclosure covers c. 259 sq m and is irregularly shaped (*Figure 181*). The walls are constructed of stacked and piled boulders and cobbles of two to five courses, which vary in height from 1.0 m to 0.25 m. The wall varies in thickness from c. 1.0 to 1.5 m. Portions of the enclosure wall along the west side are faced on the interior and exterior, as are portions along the south wall and the southeast corner. The enclosure wall has partially collapsed along the west and east sides. The walls enclose a fairly level area of exposed soil with scattered stones. A several soil areas in the interior appear to be framed with stones. No cultural material was observed in association with the enclosure.

Site 28485 is interpreted as an enclosed yard for a permanent habitation dwelling based on formal type, substantial construction (faced sides) and large area (259 sq m). The site is unaltered and in fair condition. It is assessed significant for its information content.

State No.: 28486 (T-9, 453, 888, 913, 983)
Site Type: Complex (4)
Functional Interpretation: Permanent Habitation
Topography Soil and outcrops sloping to west and southwest
Elevation: 328-345 ft
Coordinates: - NW Corner of Feature A - E=186642, N=2175675
Vegetation: *Haole koa*, *alahe'e*, grasses
Probable Age: Prehistoric
Overall Dimensions: 135.0 m by 113.0 m
Condition: Fair
Integrity: Altered

Description: Site 28486 is a complex of four features located in the southwestern portion of the project area. The site is a large enclosure (Feature A), two adjacent smaller enclosures (Features B and D) and a wall (Feature C) located in an area 135.0 m long (northeast by southwest) and 113.0 m wide. The extent of the Site 28486 features is depicted in *Figure 8b*.

The Feature A enclosure is square and is 111.0 to 115.0 m long (northeast by southwest) by 110.0 to 113.0 m wide. It is built of stacked and faced cobbles, boulders and slabs with a core-filled cobble interior. The walls range in thickness from 0.8 to 1.25 m and from 0.7 to 1.4 m in height. A portion of the Feature A enclosure wall is depicted in *Figure 182*. There is a 22.5 m wide gap in the southern wall of the enclosure. The interior of the large enclosure consists of soil and outcrops that slope gently to the west and southwest. There are five permanent habitation sites present within the interior of the enclosure (Sites 13398, 28487, 28488, 28489 and 28491). Modern debris is present within the enclosure.

The Feature B enclosure is constructed against the northeastern side of Feature A. It is rectangular in shape and is 40.5 m long (north-northwest by south-southeast) and from 9.1 to 21.8 m wide. The walls are generally collapsed, although intact stacked and faced sections are present. These walls are 0.9 to 1.1 m thick and 0.7 to 1.1 m in height. The northern side of the enclosure is in poor condition and is roughly aligned boulders and cobbles. There is 23.0 m wide gap in the eastern side of the enclosure. The interior of the feature is relatively level soil and outcrops with scattered stones. No cultural remains were present.

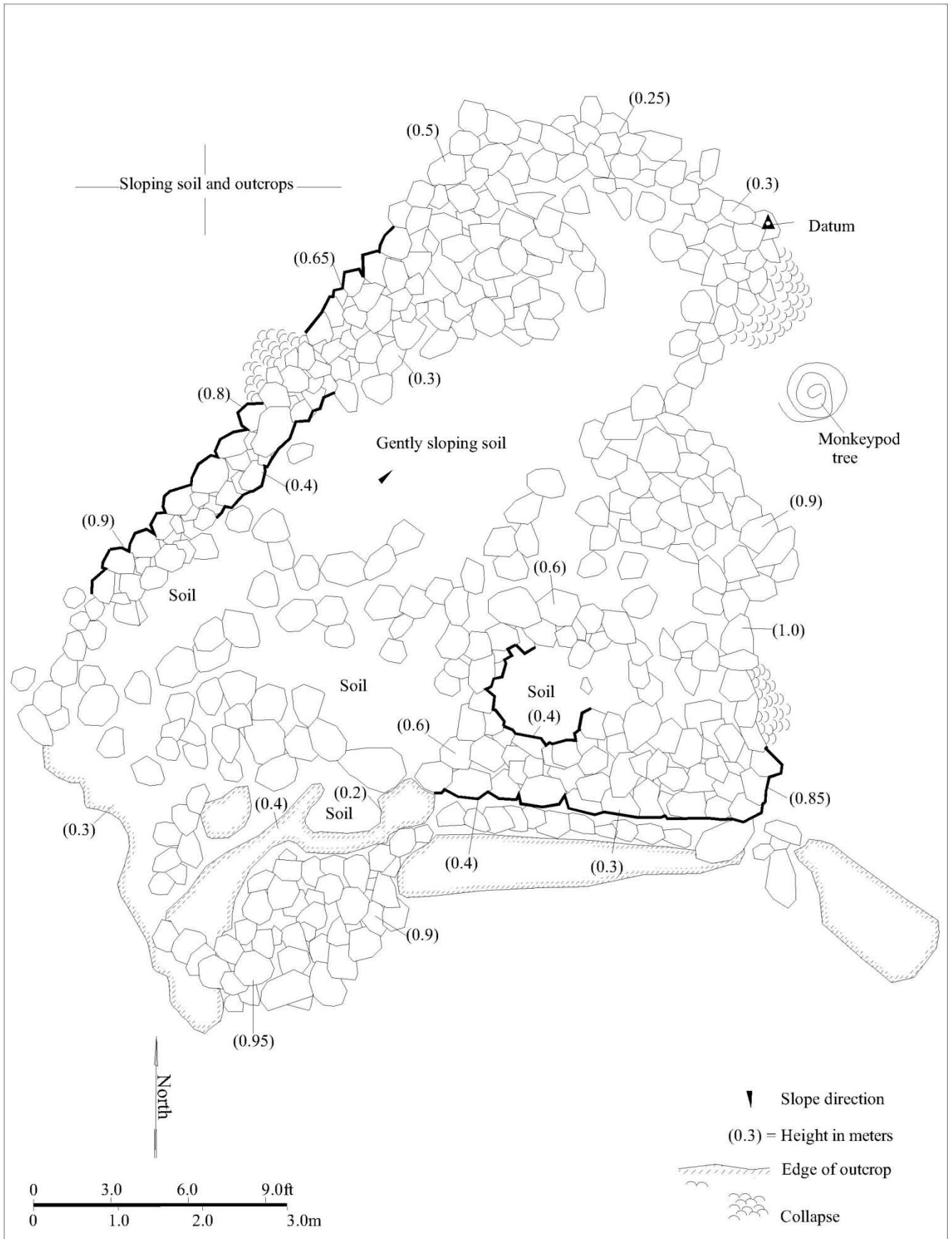


Figure 181. Site 28485 Plan Map



Figure 182. Site 28456, Feature A, Enclosure Wall, view to west



Figure 183. Site 28456, Feature A, Enclosure Wall, view to northeast

Feature C is a linear stone wall that originates against the interior side of the western Feature A enclosure. The wall is 39.7 m in length (northeast by southwest) and is built of stacked cobbles and small boulders with some remnant facing. The wall is 0.75 to 0.9 m wide and 0.7 to 1.0 m in height (*Figure 183*). No cultural remains were found in association with the wall.

Feature D is a roughly rectangular enclosure located within the Feature A enclosure in the southern portion. It is 40.8 m long (east-northeast by west-southwest) and 21.0 m wide. The enclosure is open along the south side. The walls of the enclosure are generally collapsed and are comprised of roughly stacked and piled cobbles and small boulders that are 0.8 to 1.85 m wide and 0.3 to 1.0 m in height. There are remnant intact faced sections present in the eastern portion (0.6 to 1.35 m in height – *Figure 184*). There is an internal enclosure in this eastern portion that 12.2 m long (east-northeast by west-southwest) and 5.6 m wide, open to the west. A small enclosure is built against the exterior east side of this portion of the feature that is 2.1 m long, 1.1 m wide and 0.7 m high. It is built on a raised, linear outcrop with a level surface that extends to the northeast. No cultural remains were present at Feature D.

Site 28486 is interpreted as a complex of permanent habitation features. The large Feature A enclosure served as a yard in which several permanent habitation sites were present. This is based on its height and method of construction. The Feature B and D enclosures also likely served as yards in which pole and thatched roofed structures once existed. The Feature C wall potentially served to subdivide the Feature A enclosure. The site is altered and in fair condition. The site is assessed as significant for its information content and is located with the Southwest Preservation Area.

State No.: 28487 (T-899)

Site Type: Enclosure

Functional Interpretation: Permanent Habitation

Topography Soil and outcrops sloping to west-southwest

Elevation: 342ft

Coordinates: E=186736, N=2175653

Vegetation: Christmas berry *haole koa*, autograph tree, grasses

Probable Age: Prehistoric

Overall Dimensions: 8.4 by 5.95 m

Condition: Fair

Integrity: Unaltered

Description: Site 28487 is an oval-shaped enclosure located in the southwestern portion of the project area, within the large 28486, Feature A enclosure. The enclosure is 8.4 m long (north-south) and 5.95 m wide with no visible entrance into the interior, potentially due to wall collapse (*Figure 185*). The walls are built of stacked and piled cobbles and small boulders and are 1.1 to 3.5 m thick by 0.15 to 0.9 m high. The interior is a level soil deposit with a low bedrock outcrop present along the north side. No cultural remains were present.

Site 28487 is interpreted as the possible foundation for a permanent habitation roofed structure. Although lacking elements of substantial construction, its formal type and area (49.9 sq m) suggest it may have functioned in this capacity. This interpretation is indirectly supported by the site's close proximity to other permanent habitation sites within and adjacent to the Site 28487, Feature A enclosure. The site is located within the Southwest Preservation Area. The site is unaltered and in fair condition. It is assessed as significant for its information content.

State No.: 28488 (T-878, 880, 883, 992)

Site Type: Complex (4)

Functional Interpretation: Permanent Habitation, Possible Burial

Topography Soil and outcrops sloping to west

Elevation: 328-345 ft

Vegetation: *Haole koa*, *alahe'e*, grasses

Probable Age: Prehistoric

Overall Dimensions: 13.5 m by 11.8 m

Condition: Fair

Integrity: Unaltered

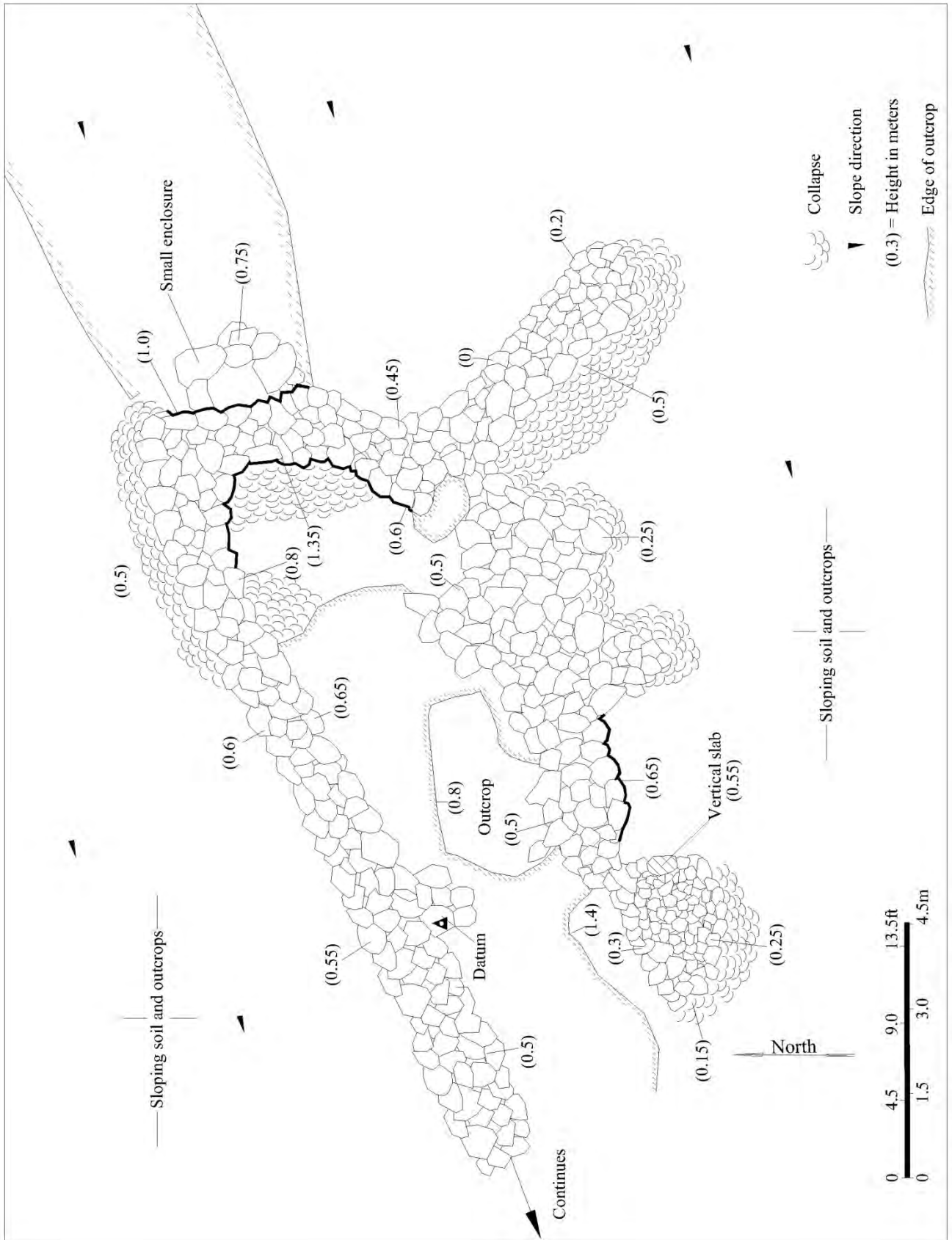


Figure 184. Site 28486, Feature D Plan Map

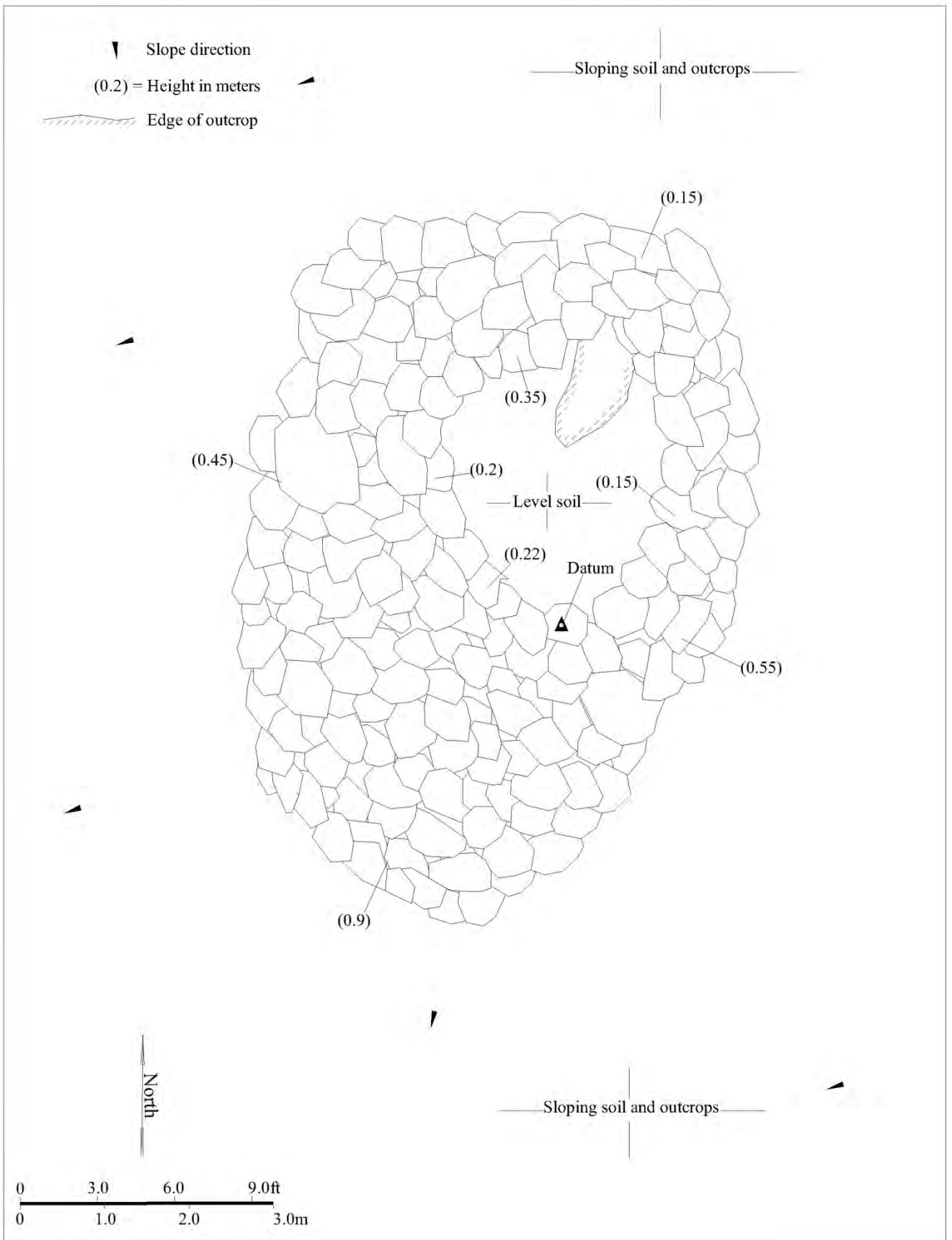


Figure 185. Site 28487 Plan Map

Description: Site 28488 is a complex of four features located in the southwestern portion of the project area within the large Site 28486, Feature A enclosure. The 28486, Feature C wall borders the site along the northern side. The features consist of a platform (Feature A) and three terraces located in an area 13.5 m long (northeast by southwest) and 11.8 m wide (*Figure 186*).

Feature A is a roughly rectangular platform built partially on the northern side of a low bedrock outcrop. It is 3.8 m long (north-south) and 2.1 to 2.8 m wide. The sides in the northern half of the platform have collapsed and are 0.3 to 0.6 m in height. The southern end is stacked cobbles and small boulders with a collapsed central portion 0.4 to 0.7 m in height. The southeast side of the structure is faced and the surface is a level cobble and pebble pavement. No cultural remains were present.

Feature B is a linear terrace located adjacent to Feature A to the west. The south side abuts the edge of an outcrop and the north end terminates at Feature C of Site 28486. It is 5.8 m long (north-northwest by south-southeast) and 0.75 to 3.0 m wide. There is a stacked and faced cobble and small boulder retaining wall on the west side of the feature that is 0.4 to 0.9 m in height. The center and northern end of this wall has collapsed. There is a cobble and pebble pavement adjacent to the wall to the east, with level soil located east of the pavement. No cultural remains were present. There is a pile of sloping cobbles and small boulders at the south end of Feature B, measuring 2.5 m long, (east-west), 2.5 m wide and 0.4 to 0.6 m high.

Feature C is an irregularly-shaped terrace built on the south and east sides of an outcrop to the south of Features A and B. It is 4.9 m long (east-west) and 1.3 to 2.85 m wide. The north and south sides are comprised of stacked and faced cobbles and small boulders (0.6 m high) with collapse present at the east end. The west end is level with the surface of the adjacent outcrop. The surface in the western portion of the feature is a level cobble and pebble pavement, with bare outcrop in the eastern portion. No cultural remains were present.

Feature D is a small irregularly-shaped terrace built against the east side of an outcrop to the west of Feature C. It is 3.0 m long (north-south) and 2.2 m wide. The west and north sides abut the edge of the outcrop with the remaining sides comprised of collapsed cobbles and small boulders (0.3 m high). The surface consists of a level cobble and pebble pavement with no cultural remains present.

Site 28488 is interpreted as a complex of permanent habitation structure with the Feature B terrace potentially functioning as the foundation for a roofed structure. This is based on its substantial construction (faced side, paved surface) and area (17.4 sq m). Features A and C may represent special purpose structures based on substantial construction (faced sides, paved surfaces) and small area (Feature A = 10.6 sq m, Feature C 13.9 sq m). Feature D may have functioned as site furniture. Alternatively, it is possible that the Feature A and C structures may be burial features; however, no subsurface testing was conducted because the features are situated within a preserve area. The site is unaltered and in fair condition. It is assessed as significant for information content and potentially for its cultural value.

State No.: 28489 (T-889, 991)

Site Type: Complex (2)

Functional Interpretation: Possible Burial

Topography: Soil and outcrops sloping gently to west-southwest

Elevation: 330ft

Vegetation: *Haole koa*, *alahe'e*, *kiawe*, grasses

Probable Age: Prehistoric

Overall Dimensions: 10.7 m by 4.3 m

Condition: Fair

Integrity: Unaltered

Description: Site 28489 is a complex of two features located within the large Site 28486, Feature A enclosure (see *Figure 8b*). The features are comprised of a terrace (Feature A) and a platform (Feature B) located in an area 10.7 m long (northeast by southwest) and 4.3 m wide (*Figure 187*). The western wall of the Site 28486, Feature D enclosure is situated adjacent to the site to the east.

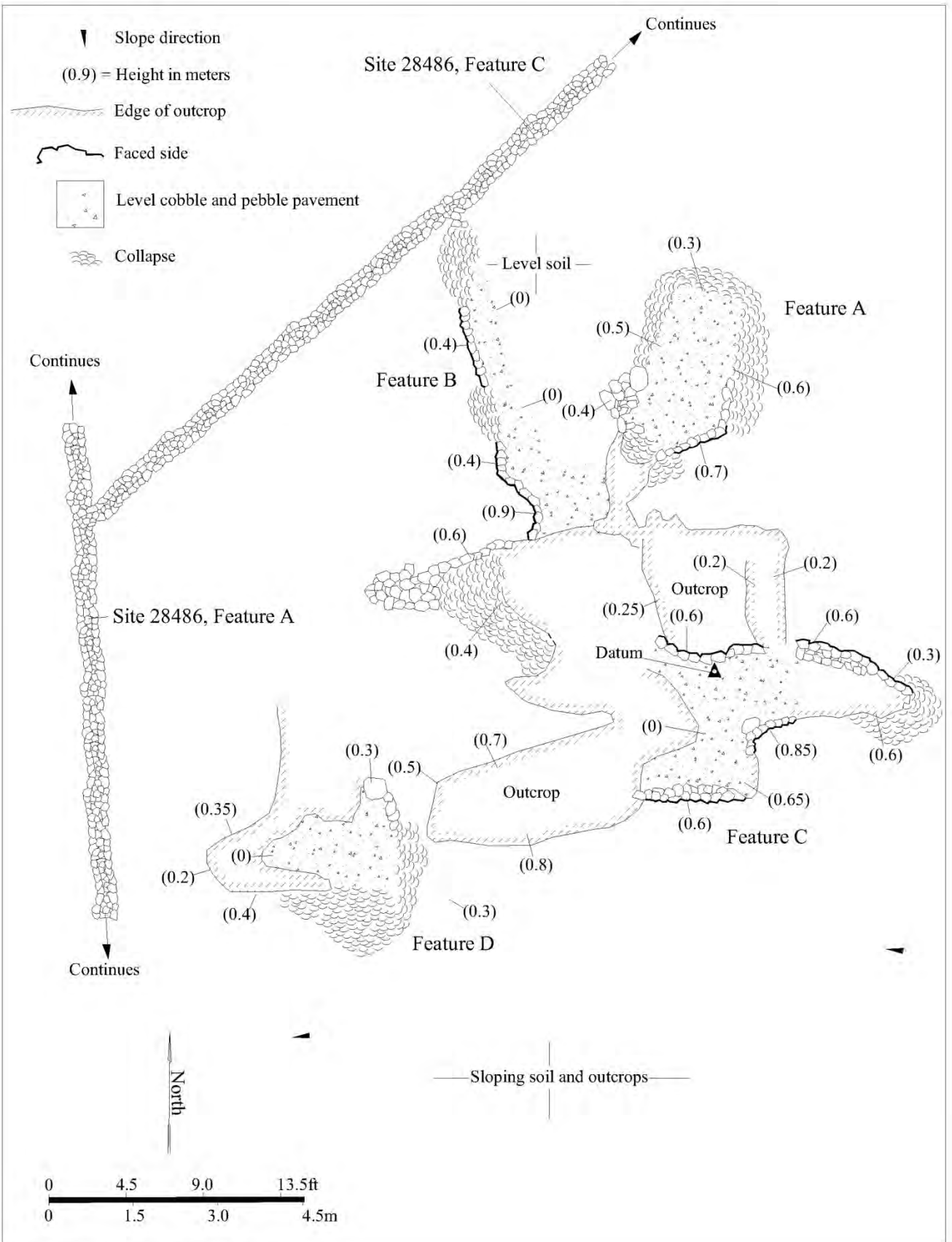


Figure 186. Site 28488 Plan Map

Feature A is rectangular in shape and is 3.95 m long (northwest by southeast) and 3.45 m wide, built against the west and south sides of a raised bedrock outcrop. The sides are constructed of stacked cobbles and small boulders and there are faced sections present along the northwest, southwest and southeast sides. Collapse is present at the north, west and south corners. The surface of the feature is a level cobble and pebble pavement with no cultural remains present.

Feature B is a small platform located 4.6 m to the northeast of Feature A. It is rectangular-shaped and is 2.1 m long (north-south) and 2.0 m wide with the sides comprised of stacked and aligned cobbles and small boulders. Collapsed areas are present at each of the four corners. The surface is a level cobble and pebble pavement with no cultural remains present.

Site 28489 is interpreted as a complex of probable burial structures based on formal type, substantial construction (faced sides, paved surface), and small area (Feature A=13.6 sq m, Feature B=4.2 sq m). No subsurface testing was undertaken to confirm this interpretation because the features are located within a planned preservation area. The site is unaltered and in fair condition. It is assessed as significant for information content and potentially for its cultural value.

State No.: 28490 (T-988)

Site Type: L-shape

Functional Interpretation: Permanent Habitation

Topography: Soil and outcrops sloping to southwest

Elevation: 330ft

Coordinates: E=186717, N=217576

Vegetation: *Kiawe*, *haole koa*, *alahe'e*, airplant, grasses

Probable Age: Prehistoric

Overall Dimensions: 6.5 m by 4.9 m

Condition: Fair

Integrity: Unaltered

Description: Site 28490 is an L-shaped enclosure located in the southwestern portion of the project area, 6.0 m south of the southern wall of the Site 28486, Feature A enclosure wall. The L-shape is 6.5 m long (east-northeast by west-southwest) and 4.9 m wide (north-northwest by south-southeast – *Figure 188*). The walls are comprised of aligned, stacked and piled cobbles and small boulder and are 0.4 to 0.9 m thick by 0.25 to 0.65 m in height. The southern wall is built on top of a low bedrock outcrop, with the western wall situated on level soil. The interior is level soil with no cultural remains present. Bedrock outcrops border the interior along the east and north side. Scattered cobbles are located on top of the outcrop at the northwest end of the site.

Site 28490 is interpreted as the possible foundation for a permanent habitation roofed structure. Although lacking elements of substantial construction, its formal type and area (31.8 sq m) suggest it likely functioned in this capacity. This interpretation is indirectly supported by the site's close proximity to other permanent habitation sites within and adjacent to the Site 28487, Feature A enclosure. The site is unaltered and fair condition. It is assessed as significant for its information content.

State No.: 28491 (T-466, 466.1, 891, 895)

Site Type: Complex (4)

Functional Interpretation: Permanent Habitation, Possible Burial, Possible Ceremonial

Topography: Soil and outcrops sloping to west-southwest

Elevation: 320-338 ft

Vegetation: *Kiawe*, *alahe'e*, *haole koa*, *klu*, airplant, grasses

Probable Age: Prehistoric-historic

Overall Dimensions: 63 by 35.1 m

Condition: Fair

Integrity: Altered

Description: Site 28491 is a complex of four features located in the southeastern portion of the project area. The features consist of Feature A, a very large, architecturally complex structure situated on the crest of a knoll, a platform (Feature B) and two terraces (Features C-D; *Figure 189*).

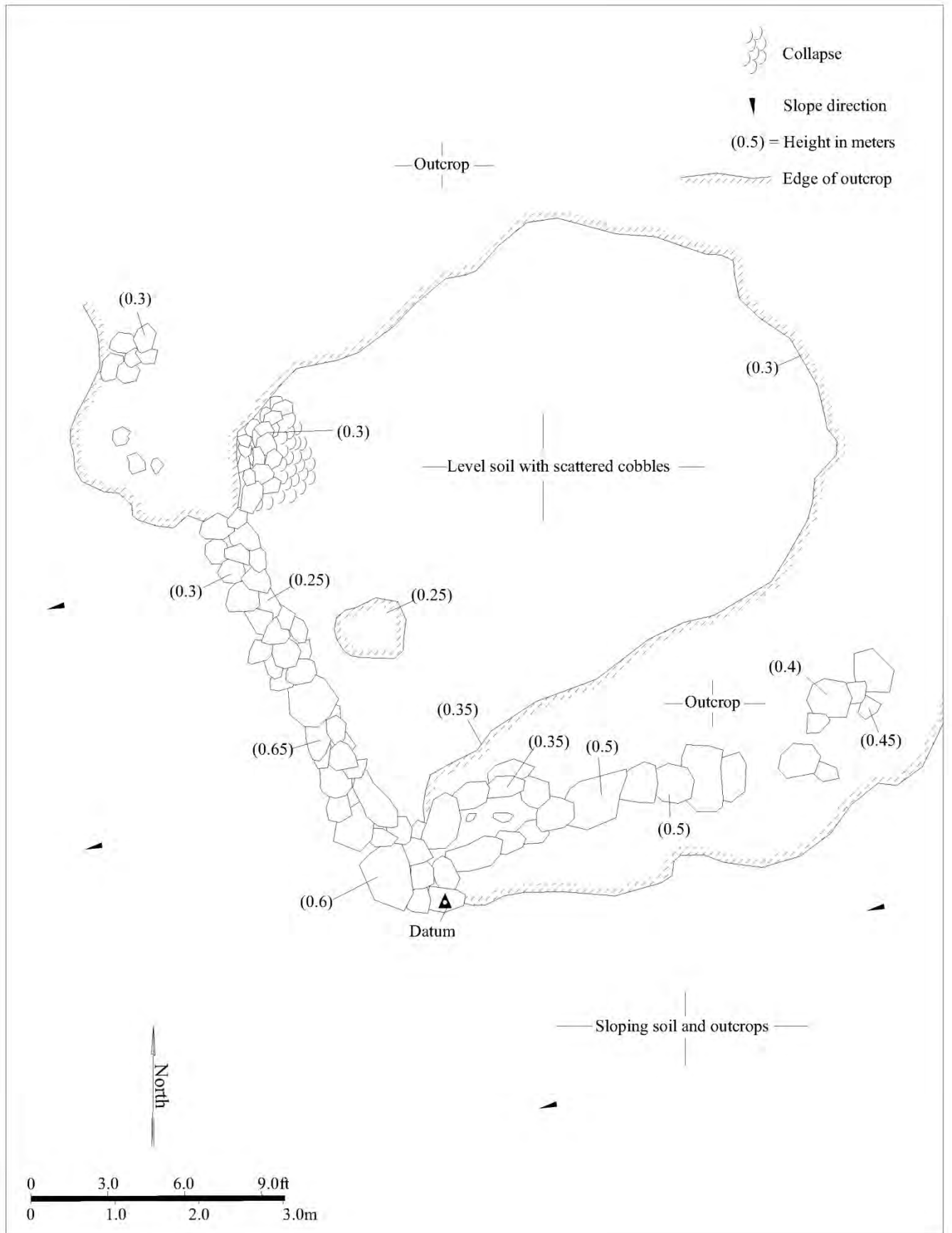


Figure 188. Site 28490 Plan Map



Figure 189. Site 28491 Plan Map

Feature A is a large, architecturally complex platform built against an outcrop. Several sub-features are designated (A-1 to A-5) to aid in describing the feature. The structure is constructed on the crest of a knoll that commands a broad view of the coast. The main portion of the structure (A-1) consists of a large platform with the long axis oriented NNW-SSE. The platform is 21.9 m long by 11.1 m wide. The southwest side of the structure is formed by a well-made, stacked and faced retaining wall that incorporates numerous basalt boulders 0.5 to 0.8 m in maximum dimension. Several large slabs set on edge up to 0.7 m in height form portions of the wall face. The central-portion of the platform surface adjacent to the southwest retaining wall may be a lower tier partially formed by a low, 0.5 m high retaining wall to the north and a change in elevation to the south. This tier is 10.8 m long by 4.0 m wide. A *Cellana* sp. shell is present on the surface at the southeastern corner of the lower tier. The central portion of the lower tier fronting the retaining wall is a pavement of cobbles and small boulders. The pavement is 6.75 m long by 3.0 m in width. Waterworn basalt pebbles and coral are present on the pavement.

The remainder of the platform surface primarily consists of level soil and outcrop. Paved areas are present near the northwestern and southwestern corners of the main, upper tier. Waterworn coral and basalt pebbles, and a waterworn basalt boulder fragment with a medial, pecked groove are present on the surface of the southwestern pavement, situated on the north side of the site datum. The northeastern side of the main tier was formerly bordered by a bi-faced wall. A portion of the exterior face of this wall is 0.55 m high and faced. The former interior face likely is marked by a series of slabs set on edge and embedded in the ground. Faced wall segments are present at the southwestern corner of the main platform surface adjacent to several artifacts consisting of a black glazed ceramic sherd, piece of waterworn coral, a rusted metal band and a fragment of black bottle glass. One wall segment is 0.85 m high (4 courses of stone in height) and the other is 0.65 m high (3-4 courses). It is unclear whether these faced segments are part of the original structure, or are part of a later addition, Feature A-3, discussed below. A piece of waterworn coral and a piece of waterworn basalt are present at the southern end of the upper tier surface.

The northwestern end of A-1 is formed by a large C-shaped enclosure (Feature A-2). The open, western side of the enclosure is formed by a natural bedrock shelf 0.3-0.4 m in height. The enclosure is 9.3 m long (east-west) by 9.0 m wide. The eastern side is built against an outcrop. Portions of the interior side of the enclosure wall are faced with stacked large cobbles and boulders up to 1.3 m in height and with basalt boulder slabs set on edge. The north side of the enclosure is a free-standing wall averaging 1.0 m in thickness and 0.55 to 1.05 m in height. The interior of the enclosure is level soil with no portable remains.

Feature A-3 forms the southeastern end of the A-1 platform and potentially represents later construction. The feature is a roughly square, well-paved terrace constructed of stacked and piles basalt cobbles and small boulders. The terrace is 6.3 m long (east-west) by 6.0 m wide. A retaining wall with remnant facing, 0.75 to 0.9 m in height, is present along the south and east sides of the feature. A series of stacked slabs form three steps leading up to the terrace surface in the center of the south wall. An alignment of small cobbles and large boulders forms the western border of the paved terrace surface.

There is a possible posthole in the south-central portion of the terrace surface. Two fragments of waterworn basalt cobbles also are present on the terrace surface. A possible remnant of an earlier wall foundation that partially enclosed Feature A-1 is a slab set on edge that is embedded in the center of the paved terrace surface. This embedded stone roughly aligns with a slab set on edge at the southwestern corner of Feature A-3 adjacent to the site datum. Other architectural features that suggest Feature A-3 is a later construction include the well-preserved, cobble paved surface and the apparent use of mostly cobbles, as opposed to larger stone in the south and east retaining walls of Feature A-3 compared to the stones in the retaining walls for Feature A-1

Feature A-4 is an irregularly-shaped, 1.5 m diameter ring formed by a single course of cobbles and boulders built beside a low outcrop. Two pieces of branch coral are present next to the feature. Feature A-5 is a small pavement of cobbles on an outcrop immediately east of Feature A-2. The pavement is 2.7 m long (north-south) by 2.1 m wide. The west side of the feature is formed by a 0.55 m high retaining wall built against an outcrop.

Feature A is in fair to good condition and was likely altered by a second, potentially historic episode of reuse and modification. This later episode is probably represented by the construction of Feature A-3 that likely was built from stone taken, in part, from an enclosing wall that formerly bounded the east side of the main Feature A-1 platform. As stated previously, the well-preserved condition of Feature A-3 relative to the other portions of the structure and the

presence of adjacent historic artifacts support an early historic age for Feature A-3. An historic age is indirectly supported by the large Site 28486, Feature A enclosure that surrounds the entire site and is undoubtedly historic based on its rectangular shape and construction.

Feature B is a rough platform that incorporates a large outcrop with an L-shaped wall on the surface. The feature is 11.4 m long (north-south) by 9.0 m wide. It is constructed of stacked and piled basal cobbles and small boulders. The surface of the platform is an uneven, rough pavement that is slightly concave with several voids beneath the surface. The exterior walls are mostly collapsed with remnant faced segments in the north and south faces. The exterior walls range in height from 0.3 to 0.5 m. The roughly paved surface with voids and generally collapsed walls may indicate that stones were removed from the structure, potentially to build the Site 24486, Feature A enclosure wall to the north.

An L-shaped wall is situated on the platform surface, built against an outcrop on the southeast side. The L-shape is 2.5 m square with a small area of paving and soil in the interior. The northeast wall consists of a single course wall with facing on the interior and exterior sides. The interior side is 0.25 m high and exterior is 0.35 to 0.5 m high. The southwest wall segment is mostly collapsed except for a short stacked and faced segment near the western, exterior corner of the feature. The feature is in fair condition and appears to be altered. No cultural remains were noted at Feature B.

Feature C is a terrace that incorporates a large outcrop. The feature is constructed of stacked and piled basal cobbles and small boulders. Feature C is 20 m long (northeast-southwest) by 7.8.0 m wide. The outcrop, which forms the southeast side of the platform, ranges from 1.4 to 2.5 m in height. There is an area of level soil on the surface of the platform. The level soil is 8.7 m long by 2.5 m wide. Portions of the terrace surface surrounding the soil area are paved. There is a cupboard in the northeastern end of the terrace with a flat basalt slab in front that probably served as a door or cover. The interior floor of the cupboard is soil covered with a *Cypraea* sp. shell fragment present on the soil.

The north east, northwest, and southwest sides of the terrace are slopes of rubble 0.35 to 0.95 m in height with no remnant facing. Feature C is in fair condition. The lack of wall facing and rubble walls may indicate that the feature was altered by the removal of stone for construction of nearby structures.

Feature D is a terrace built against the northeast side of a 1.5 m high outcrop. The collapsed walls of the terrace range from 0.65 to 2.3 m in height. The feature is constructed of stacked and piled basal cobbles and small boulders. Feature D is 7.8 m long (northwest-southeast) by 5.1 m wide. The upper surface is paved with basalt cobbles and slabs. This paved area is 4.5 m long by 2.4 m wide. The feature is in fair to good condition and appears to be unaltered.

Site 28491 is interpreted as a complex of permanent habitation, ceremonial, and possible burial features. Features A-3, B, and C potentially functioned as the foundations for roofed structures based on formal type, substantial construction (faced sides, paving) and area (Feature A-3 = 37.8 sq m, Feature B = 102.6 sq m, and Feature C =156.0 sq m. The areas of Features B and C are likely inflated by the collapsed nature of the structures. As mentioned previously, the Feature A-3 terrace likely is an historic structure. Feature D is interpreted as a possible burial based on its morphology and small paved area (10.8 sq m).

The remaining sub-features of the Feature A are interpreted as the potential remnants of a *heiau*. The A-1 platform is over 240 sq m (243.1 sq m) in area. This large area and its substantial construction utilizing large boulder-size stones and large slabs set on edge likely indicate that its erection was a communal effort. The tiered nature of the platform surface, prominent location overlooking the coast, and presence of branch coral (Feature A-4) also are potential indicators of a ritual function. Waterworn coral and basalt pebbles, both potential components of paving material imported from the coast, are present in the paved surfaces of the upper and lower Feature A-1 tiers. This material is a further indication of a substantial construction effort that is well beyond that typical of residential architecture in the vicinity.

Site 28491 is assessed as significant for its information content. Features A and D are additionally assessed as significant for their cultural significance to the Hawaiian people based on the features' potential association with traditional religious beliefs.

State No.: 28492 (T-472)
Site Type: Modified Outcrop
Functional Interpretation: Possible Burial
Topography Soil and outcrops sloping moderately to west
Elevation: 330ft
Vegetation: Airplant, *alahe'e*, *haole koa*, grasses
Probable Age: Prehistoric
Overall Dimensions: 5.9 m by 2.2 m
Condition: Fair
Integrity: Unaltered

Description: Site 28492 is a roughly rectangular-shaped modified outcrop located in the southwestern portion of the project area, adjacent to the Site 26909, Feature 343 wall to the north. The site is 5.9 m long (west-northwest by east-southeast) and 1.5 to 2.2 m wide (*Figure 190*). The sides are comprised of stacked cobbles and small boulders and are 0.35 to 0.75 m in height. Portions of the north and south sides are faced and collapse is present along the west, southwest and northeast sides. The surface is level cobbles and small boulders with seven flat pahoehoe slabs set into it. No cultural remains were present on the surface.

There is an irregularly-shaped area of scattered cobbles and small boulders that extends to the north-northwest from the site. This area is 7.8 m long, 1.2 to 5.4 m wide and 0.2 to 0.4 m in height above the surrounding ground surface. No cultural remains were present.

Site 28492 is interpreted as a possible burial structure based on its construction (faced sides, flat slabs on surface and small area (12.9 sq m). The site was not subjected to subsurface testing because it is located within a planned preservation area. The site is unaltered and in fair condition. It is assessed as significant for information content and potentially for its cultural value.

State No.: 28493 (T-319)
Site Type: Complex
Functional Interpretation: Permanent Habitation
Topography Soil and outcrops on gentle slope to west
Elevation: 325 ft
Coordinates: E=186684, N=2175766
Vegetation: Christmas berry, *haole koa*, *alahe'e*, grasses
Probable Age: Prehistoric
Overall Dimensions: 15.0 m long (E-W) by 10.0 m wide (N-S)
Condition: Fair
Integrity: Unaltered

Description: Site 28493 is a complex composed of three contiguous features located in the southwestern portion of the project area. Feature A is a paved habitation terrace, Feature B is a serpentine linear wall, and Feature C consists of a wall constructed around a bedrock outcrop to form a roughly C-shaped enclosure (*Figure 191*). No cultural material was observed in association with any of the features.

Feature A is an L-shaped terrace located on the western edge of the complex. Its two retaining walls are located on the west sides of the feature and have completely collapsed. The terrace surface is 0.55 m high at the southwest corner and 0.25 m at the northwest corner. The retaining wall was composed of piled boulders and cobbles. The terrace surface is paved with small boulders and cobbles, covering an area c. 5.0 m by 2.5 m (12.5 sq m) in the southern portion and 4.5 by 2.0 m (9.0 sq m) in the northern portion, equaling a contiguously paved area of c. 21.5 sq m.

Feature B is an L-shaped wall that defines the southern edge of the Feature A terrace and that connect to the west side of the Feature C enclosure. The wall is constructed on a linear pahoehoe outcrop and consists of piled boulders and cobbles that vary in height from 0.25 m to 0.45 m. Sections of the wall have collapsed along the south face. The wall covers a distance of 4.3 m (E-W) and varies in thickness from 1.5 to 2.9 m.

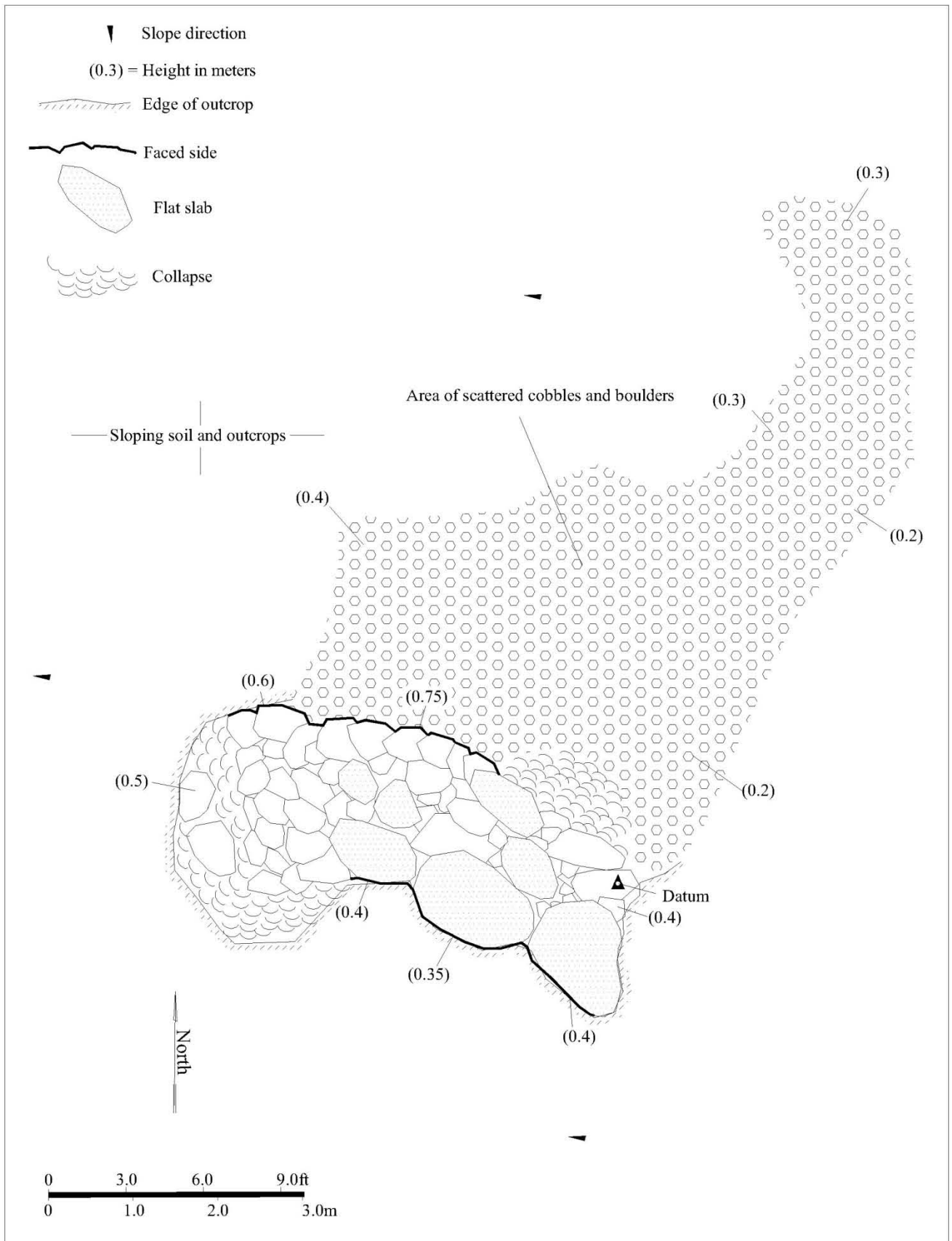


Figure 190. Site 28492 Plan Map

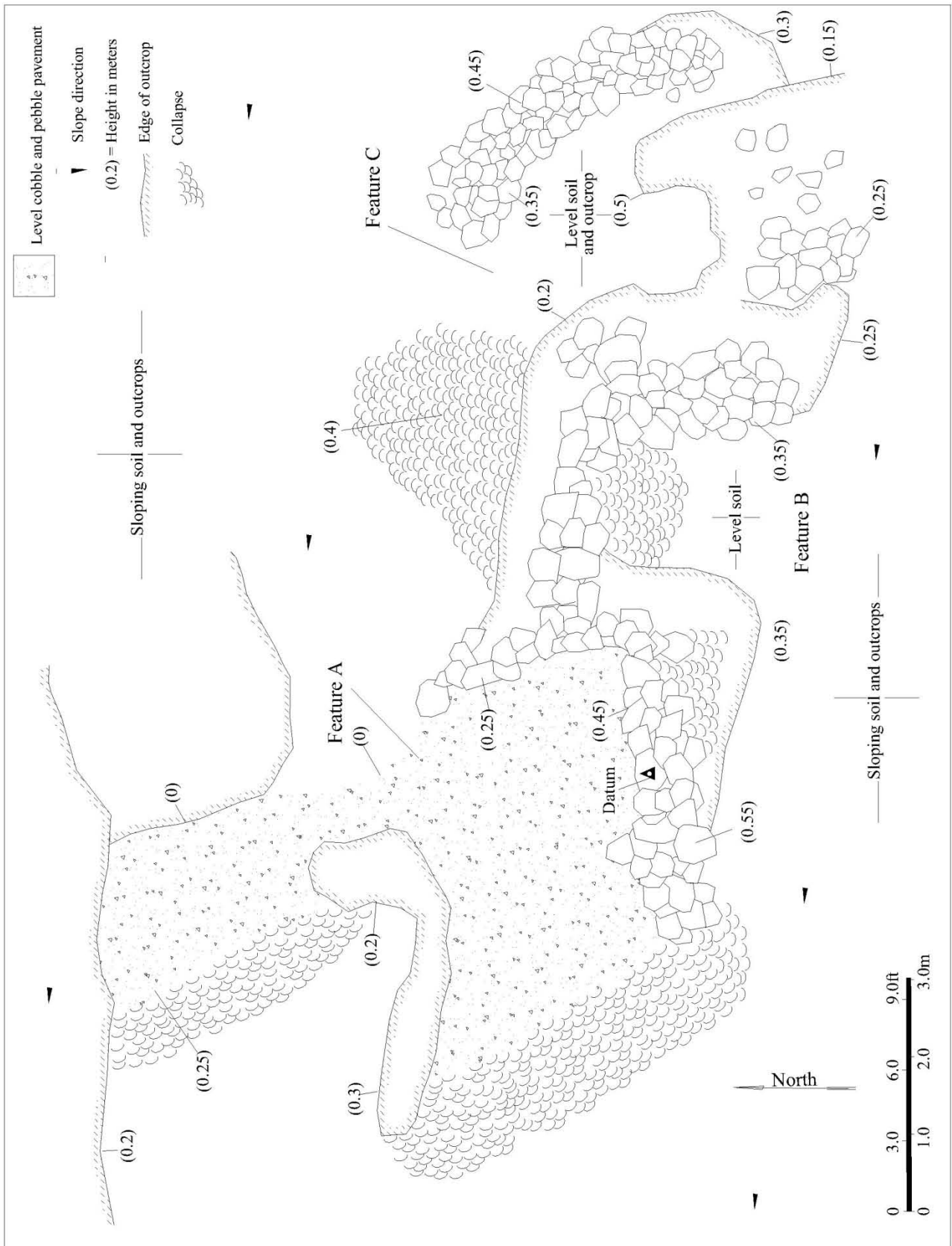


Figure 191. Site 28493 Plan Map

Feature C is a C-shaped enclosure constructed on and around the eastern end of the pahoehoe outcrop. Its western side is formed by the north face of the outcrop and the east side of Feature B. The eastern side is composed of a free-standing wall and the enclosure is open to the NNW. The eastern wall is constructed partially on bedrock, of piled boulders and cobbles c. 0.8 to 1.5 m wide, to a height of 0.45 m. The enclosure floor is level soil overlying bedrock. It is 3.5 m long (north-northwest by south-southeast) and 3.2 m wide.

Site 28493 is interpreted as a permanent habitation complex. Feature A is interpreted as the foundation of a permanent residential structure based on formal type, substantial construction (paved surface) and area (21.5 sq m). Features B and C define the space of associated specialized activity areas. The site is unaltered and in fair condition. It is assessed significant for its information content.

State No.: 28494 (T-337)

Site Type: Complex (2)

Functional Interpretation: Permanent Habitation, Possible Burial

Topography Soil and outcrops sloping to northwest

Elevation: 325 ft

Vegetation: *Haole koa*, *alahe'e*, grasses

Probable Age: Prehistoric

Overall Dimensions: 12.4 m by 8.7 m

Condition: Fair

Integrity: Unaltered

Description: Site 28494 is a complex of two features located in the southwestern portion of the project area. The features consist of an enclosure (Feature A) and a platform (Feature B) located in an area 12.4 m long (east-west) and 8.7 m wide (*Figure 192*). Feature A is irregular in shape and is 8.5 m in length (north-south) and 3.2 to 8.0 m wide. The feature incorporates a low (0.2 to 0.4 m) linear outcrop along the south side, with roughly stacked and piled walls extending around the remaining perimeter. These walls are 0.6 to 2.5 m wide and 0.2 to 0.5 m in height. The interior is level soil with no cultural remains present.

Feature B is an oval-shaped platform located adjacent to Feature A to the east. It is 4.6 m long (north-south) and 3.4 m wide. The sides are constructed of stacked cobbles and small boulders and are 0.45 to 0.65 m in height. There is a vertical slab (0.6 m) incorporated into the western side. A second slab is visible on top of the structure, measuring 0.1 m above the platform surface. The southwest side of the platform is faced. The surface of the feature consists of level but unpaved cobbles and small boulders with no cultural remains present.

Site 28494 is interpreted as a permanent habitation complex. The Feature A enclosure potentially functioned as yard in which a pole and thatched roofed structure once existed, based primarily on its formal type and area (68.0 sq m). The Feature B platform potentially served as the foundation for a roofed structure based on formal type, substantial construction (faced side, vertical slabs) and area (15.6 sq m). Alternatively, Feature B may also represent a burial feature because of its formal construction and relatively small area; however, no subsurface testing was conducted due to the site's location within a planned preservation Area. The site is unaltered and in fair condition. It is assessed as significant for information content and potentially for its cultural value.

State No.: 28495 (T-460)

Site Type: Lava Tube

Functional Interpretation: Temporary Habitation

Topography Soil and outcrops sloping to southwest and west

Elevation: 326ft

Coordinates: E=186659, N=2175691

Vegetation: *Haole koa*, *alahe'e*, grasses

Probable Age: Prehistoric

Overall Dimensions: 28.4 m long

Condition: Good

Integrity: Unaltered

Description: Site 28495 is lava tube located in the southwestern portion of the project area. It has an overall length of 28.4 m and an area of 126.2 sq m. The tube is situated to the north of the large Site 28486 Feature A enclosure

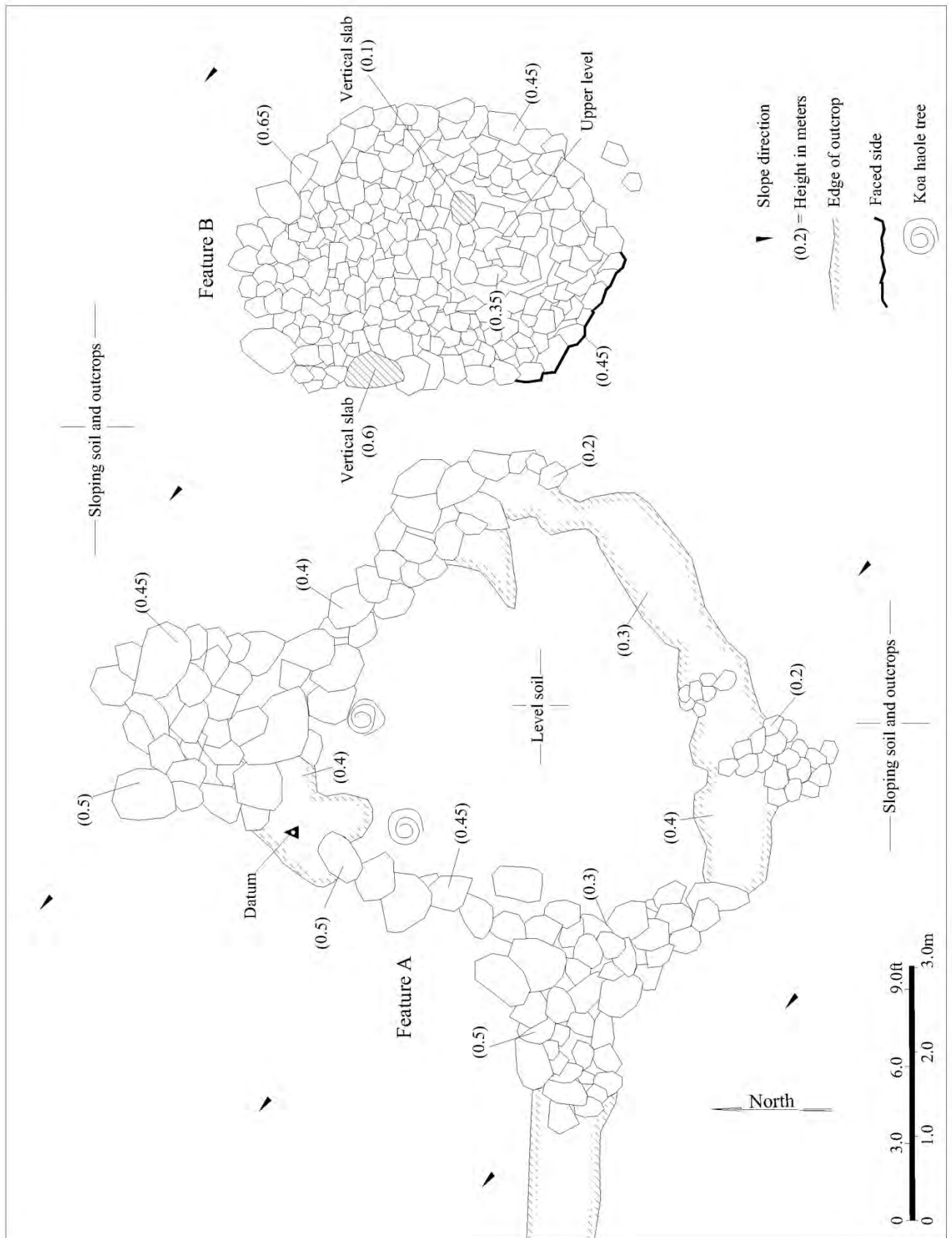


Figure 192. Site 28494 Plan Map

and the entrance is situated directly below the Site 26909, Feature 343 wall. The entrance is through a horizontal opening on the side of an outcrop that is 2.85 m wide (north-northwest by south-southeast) and 0.75 m high (*Figure 193*). This opens onto a large irregularly-shaped chamber that is 19.7 m long (north-northeast by south-southwest) and 2.4 to 5.25 m wide. The floor is a level soil and the ceiling heights vary from 0.25 to 0.75 m. Several floor to ceiling columns bisect this chamber and roof fall appears to have been cleared from the central portion and deposited along the side walls. Cultural remains in this chamber consists of *Cellana sp.*, *Cypraea sp.*, *Drupa sp.* and unidentified marine shell fragments, a coral abrader, burned and unburned *kukui* nut shells, sea urchin fragments, and waterworn basalt cobbles and pebbles. A concentration of ash is present 5.25 m east of the entrance.

Three passages extend off the main chamber; one to the south, one to the north and one to the west. The southern passage opens onto a linear chamber that is 6.4 m long (east-northeast by west-southwest), 1.0 to 1.7 m wide and 0.2 to 0.6 m in height. The west end of this tube is inaccessible due to its low ceiling (0.1m). The passage that extends to the north off the main chamber is also inaccessible due to its low (0.1 m) ceiling.

The passage to the west extends off the northern portion of the main chamber and continues in this direction for 7.5 m. This chamber is basically inaccessible due to the low height (0.2 m), although observations made from the eastern end indicate it is 2.2 to 3.2m wide with a soil floor and no cultural remains. Inaccessible passages extend to the southwest and northeast from this low chamber.

Site 28495 is interpreted as a temporary habitation shelter based on its formal type and on the presence of the cultural remains within it. The site is unaltered, in good condition and is assessed as significant for information content. It is located within a planned preservation area.

State No.: 28496 (T-339, 341, 349)

Site Type: Complex (4)

Functional Interpretation: Permanent Habitation

Topography: Soil and outcrops sloping to west and southwest

Elevation: 310-318ft

Coordinates: E=186640, N=2175725

Vegetation: *Haole koa*, *alahe'e*, *kiawe* various grasses

Probable Age: Prehistoric

Overall Dimensions: 52.6 m by 29.0 m

Condition: Fair

Integrity: Unaltered

Description: Site 28496 is a complex of four features located in the southwestern portion of the project area. The site consists of two terraces (Features A and B) and two enclosures (Features C and D). The site encompass an area 52.6 m long (northwest by southeast) and 29.0 m wide (*Figure 194*). The site is located 17.0 m north of the Site 28497 permanent habitation complex.

Feature A is a terrace situated at the western end of the site, built against the western side of a raised outcrop. The main portion of the structure is rectangular in shape and is 6.8 m long (northeast by southwest) and 5.8 m wide with stacked cobble and small boulder retaining walls along the northeast, northwest and southwest sides (0.3 to 0.4 m high). The surface of this portion is a level cobble and pebble paving and exposed outcrop. Two flat pahoehoe slabs covering a cupboard are present on the surface of the paved area in the eastern portion. There is a lower tier along the southwest side that is 7.6 m long (north-northwest by south-southeast) and 1.65 to 2.2 m wide. There is a level cobble and pebble paved section at the northern end of the lower tier. The sides of this tier vary in height from 0.3 to 0.4 m. No cultural remains were present on the surface of the terrace.

Feature B is a roughly oval terrace that is built against the northern side of Feature A. It is 4.7 m long (northwest by southeast) and 4.0 m wide, with a stacked and faced cobble and small boulder retaining wall along the west and northwest sides (0.6 to 0.65 m high). The surface of the feature is level soil and no cultural remains were present.

Feature C is a large, roughly rectangular-shaped enclosure located 4.5 m to the north of Feature B. It is 21.8 m in length (east-west) and 4.2 to 8.2 m wide with a 0.9 m wide possible entrance in the western wall and a 1.6 m wide possible entrance along the north side. The walls of the feature are built of stacked cobbles and small boulders and

are 0.65 to 1.1 m wide and 0.2 to 0.9 m in height. The interior is level soil with an outcrop along the northern side. A large *kiawe* tree has fallen over the southeastern portion of the structure. No cultural remains were noted.

Feature D is a large roughly oval-shaped enclosure situated 14.0 m to the southeast of Feature C. It is 20.3 m in length (north-south) and 7.8 to 17.2 m wide. The walls are constructed of stacked cobbles and small boulders and 0.5 to 2.0 m wide and 0.3 to 1.0 m in height. A vertical slab (0.65 m high) is present along the western side, with a second slab incorporated into the northern wall (0.5 m high). There is a small cupboard (0.8 m long, 0.87 m wide and 0.3 m high) incorporated into the interior eastern wall. The interior is areas of level soil divided by low outcrops. A fragment of waterworn coral was noted in the interior.

Site 28496 is interpreted as a complex of permanent habitation structures. Feature A is interpreted as a the foundation for a permanent habitation structure based on its substantial construction (paved surface) and area (40.8 sq m). The Feature B terrace may have served as an associated *lanai* or activity area. The two large enclosures are interpreted as yards in which pole and thatched roofed structures once existed based on area (Feature C = 178.7 sq m, Feature D = 349.1 sq m). The site is located within a planned preserve. It is unaltered, in fair condition and is assessed as significant for its information content.

State No.: 28497 (T-348, 445, 455)

Site Type: Complex (17)

Functional Interpretation: Permanent Habitation, Possible Burial

Topography: Soil and outcrops sloping to west and southwest

Elevation: 325-330ft

Vegetation: *Haole koa*, *alahe'e*, various grasses

Probable Age: Prehistoric

Overall Dimensions: 55.7m by 33.0 m

Condition: Fair

Integrity: Unaltered

Description: Site 28497 is a complex of 17 features located in the southwestern portion of the project area. The site consists of five enclosures (Features D, F, H, L and N), six terraces (Features A, C, G, I, K and M), two platforms (Features E and O) a walled terrace (Feature B), a pavement (Feature J) and two mounds (Features P and Q – *Figure 195*). The site encompasses an area 55.7 m long (north-south) and 33.0 m wide. It is located adjacent to the Site 28486, Feature A enclosure wall and is 24.0 m northwest of the Site 28491 ceremonial complex. The Site 26909, Feature 343 wall extends through the southern portion of the site.

Feature A is a large rectangular-shaped terrace built on and adjacent to raised bedrock outcrops. The feature is 7.5 m long (north-south) and 2.7 to 5.0 m wide, with stacked and faced cobble and small boulder retaining walls along the north, south, east and portions of the west side. The north end of the east side has collapsed and the southwest corner abuts a low outcrop. The surface is an area of level soil in the center with cobble and pebble pavements to the north and south. A low outcrop is located adjacent to the soil area to the south. There are five possible postholes on the paved surfaces of Feature A; two along the east side and three along the south side. A basalt adze (59mm long, 31.9 mm wide and 19mm thick) was collected from the surface of Feature A (Acc. No. 62.001 – *Figure 196*). The adze evidences ground surfaces on the ventral and dorsal surfaces.

Feature B is a walled terrace situated adjacent to Feature A to the west and southwest. It is roughly L-shaped in shape and is 10.0 m long (northeast by southwest) and 2.3 to 6.4 m wide. The walls are constructed of stacked and partially faced cobble and small boulders and are 0.8 to 1.4 m wide and 0.25 to 1.0 m in height. The interior in the center is level soil bordered by a low outcrop along the east side. A level cobble and pebble paved area is situated to the north, below Feature A to the west. No cultural remains were noted on the surface of Feature B.

Feature C is a terrace built against the northeast side of Feature A. It is rectangular in shape and is 4.3 m long (east-west) and 2.4 to 3.4 m wide, with stacked cobble and small boulder retaining walls along the north, east and south sides (0.3 to 0.5 m in height). The north side is faced and the surface is a level cobble and pebble pavement. No cultural remains were present.