

CORINTH EXCAVATIONS

ARCHAEOLOGICAL SITE MANUAL



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Corinth Excavations Archaeological Site Manual

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This manual describes the present state of archaeological practice at Ancient Corinth. The system employed here has evolved over five decades of excavation and in response to both the nature of the anthropogenic activities and the ultimate goals of the excavation: a diachronic archaeological and cultural history of Corinth. The practicalities of removing archaeological material from the ground, recording it, analyzing it and storing it for future use have been developed over the past 100+ years of archaeological exploration and are well-suited to the field here, to the post-excavation methods used and to the facilities available at Corinth. Previous field and recording strategies owe a debt to the Gezer system (Dever and Lance 1978). However, the current fields methods employed are influenced by the strategies and processes advocated by Philip Barker (Barker 1997) and Edward Harris (Harris 1989), among others. Our current recording system has been developed to best facilitate single-context recording and to enable excavation data to be searchable in database format. Aspects of the field recording system have been adapted for use at Corinth from the archaeological site manual of the Museum of London Archaeology Service (MOLAS) (Spence 1994). Modifications to the open area strategy and the MOLAS recording system are the product of accumulated experience of excavations in Greece, the Unites States, Britain, the Near East and Cyprus and in response to the specific conditions that exist at Corinth Excavations and impact archaeological research here. Corinth Excavations would like to acknowledge the work of A. Rohn and E. Barnes for their contributions towards our current recording system for burials and human remains.

1. METHODOLOGY

1.1 STRATIGRAPHIC EXCAVATION

Archaeological sites are made up of discrete layers of cultural debris and other natural features such as deposits formed by erosion. Stratigraphic excavation is the isolation and identification of different deposits and features and the careful removal of each of these separately in the reverse order of their deposition, the logical assumption being that the upper strata were formed more recently than the lower strata. This concept was developed for application in archaeology from the Law of Superposition, a geological concept relating to the formation of horizontal layers of rock in the earth's crust. In plain language the 'Last In, First Out' principle means that a pit must be isolated and dug before the earth into which it was cut is excavated. This is the basic tenet of modern archaeological excavation.

1.2 THE OPEN AREA METHOD

Traditionally, archaeologists in Greece have used trenches and baulks to excavate ancient remains. These typically take the form of 5 x 5m squares with baulks that separate them (Fig. 1A), and are also commonly referred to as 'Wheeler boxes' in reference to Sir Mortimer Wheeler, the British archaeologist who first pioneered their use in the 1920s and 1930s (Wheeler 1954). Proponents of this method argue that the baulks allow the archaeologist to have permanent access to the stratigraphy of the site by preserving vertical views of the strata throughout excavation. Ironically, with this method, the archaeological remains that have not been excavated (the baulks) can be more important to the archaeologist than those which have been excavated (the trenches). However, it has been demonstrated time and again that the vertical section preserved by the baulk can be more misleading in terms of understanding site formation than simply excavating context by context without creating arbitrary trenches. The reasons for this include situations where the baulk 'just missed' a context that was excavated inside the trench and so the section preserves a false or incomplete record of the stratigraphic relationships of the contexts in that area. The trench and baulk method also may impede the interpretation of certain contexts when only part of the context is revealed inside the trench.

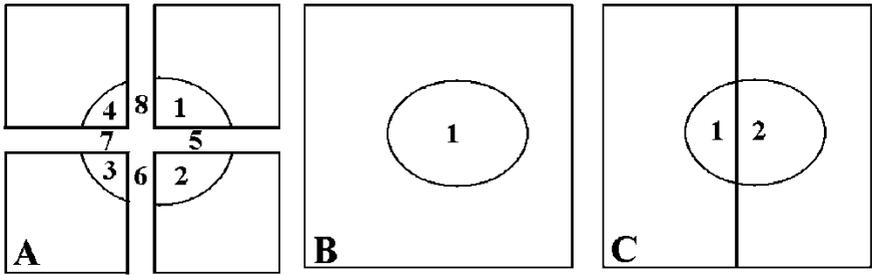


Figure 1. Excavation of a pit using A) the baulk-debris method (8 contexts), B) the open area method (1 context) and C) the modified baulk-debris method (2 contexts).

At Corinth, we have recently reassessed our own methodology and abandoned the trench and baulk method in favor of the open area method (Fig 1B), now standard practice all over Britain, much of the US and in other parts of Europe. Instead of arbitrarily sectioning all the stratigraphic contexts on the site and removing them based on what trench they happen to be located in, open-area excavation, in a sense, treats the entire excavation area as one large trench, and each individual context is identified, recorded and removed (if possible) in chronological and stratigraphic sequence. This method allows us to see more if not all of any given context at the same time and thus have more information at the moment of excavation with which to interpret context formation, finds and stratigraphic relationships. It also allows for more chronological control of the site, that is, it is possible to concentrate all attention on the stratigraphic relationships and the material record of the chronological period being excavated instead of having one trench at early modern levels, another at Roman and another at Mycenaean and trying to piece these disparate records back together after the excavation season has ended.

However, it is important to be flexible in your approach to the variety of situations you will encounter in the field. There may be specific situations where it is helpful to section a context or series of contexts in order to be able to have a vertical view of the strata before the entirety of the material is removed (Fig. 1C). This might be useful in an area of the site with particularly complicated stratigraphy, for example, or in an area where a section might be useful for soil coring. If this strategy is employed, it is important to note what you are doing and WHY on your recording sheets and to describe and draw the soil section you have created. Later on it will also be important to reunite the material taken from the contexts you have sectioned into two or four parts (by half-sectioning or quarter-sectioning).

At Corinth we have come to recognize open area excavation as a superior excavation strategy, allowing for more successful on-site and post-excavation interpretation and analysis and reducing the time needed to publish findings. However, the open area strategy might not produce the results desired on other

archaeological research projects where restraints on time and resources and a need for experienced excavators impede the implementation of this practice. However, the procedures outlined in this manual are not exclusive to open area excavation as the rigorous recording methodology advocated makes comparison of strata between any excavated areas more straightforward.

1.3 SINGLE CONTEXT RECORDING

Each action that leaves a trace in the stratification of an archaeological site, be it anthropogenic or a natural event, is called a **context**. Some actions will have left a positive trace: these are either **deposits** of soil and other materials, like a dump of rubbish in a pit or the fill inside a grave, or built **structures**, like walls. Others actions will have left a negative trace: these are **cuts** (they cut into other contexts, like when a grave or a well or a foundation trench for the building of a wall is dug). By identifying, excavating and recording each context individually, it is possible to reconstruct the history of activity at a site. Each context is recorded on a standardized form which encourages the recorder to make certain observations and attempt certain interpretations. In theory, by keeping consistent, careful and detailed records, it should be possible at any time in the future to reconstruct the site layer by layer, context by context, integrating finds and features. In an open area excavation, deposits are recorded and removed in their entirety. However, in practice, certain walls and features may be left for future restoration and presentation to the public making total removal of these contexts impossible.

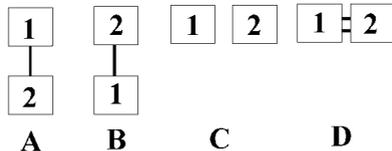
Experienced archaeological technicians trained by the excavations and overseen by the foreman do the excavating at Corinth. However, supervisors should also do a certain amount of excavation. Although their main responsibility is for recording individual contexts as they are removed, excavation will help them to understand differences in color, composition and texture which differentiate deposits and define cuts. The Director of Excavations and the field director are responsible for assessing the stratigraphic relationships of the excavation area as a whole and to coordinate the supervisors in the recording of contexts as they are removed in stratigraphic sequence.

1.4 THE HARRIS MATRIX

In 1975 Edward Harris published and copyrighted the Harris Winchester Matrix (Harris 1975). At Corinth, the Harris matrix is one of the principle organizing features of the excavation and of the post-excavation analytical process and is something that must be added to and updated in and out of the field on a daily basis. The Harris matrix is not a matrix at all but rather a two dimensional diagram which represents the spatial and temporal relationships between archaeological contexts. Since 1975 numerous books and articles have been written on the subject and several computer programs have been designed to help assemble the diagrams. The Corinth excavation database tracks stratigraphic relationships (see § 6.2.10.2 RELATIONSHIPS). Because the database does not yet generate a Harris Matrix

for graphic feedback a master matrix must be created on paper or on the computer. At Corinth we regularly use a program called ArchEd (first developed in 1996 at the Max Plank Institute) to render Harris matrices graphically. All contexts are included in the matrix: deposits as well as cuts, walls, floors and other structures. Each and every one of these should have its own individual context number.

There are four basic time relationships which exist between contexts:



- A. 1 is later than 2.** This is the immediate chronological relationship.
- B. 1 is earlier than 2.** This is the immediate chronological relationship.
- C. 1 is contemporary with 2.** This relationship can only be determined by material culture or a full understanding of the site, e.g. wall 1 bonds with wall 2.
- D. 1 equals 2.** In other words, the same context excavated in two operations, like when you section a context or when the same context has been cut into two parts by later human activity.

In constructing a Harris matrix it is the stratigraphic sequence which is of importance. A context may overlie several other strata but it is the latest of these strata which is most relevant. For example, if the foundation trench for a wall cuts through several different layers of soil, it is most important to establish the *latest* layer it cuts, as this was the surface in use at the time the wall was built and so is most useful in dating the construction of the wall. In this way, the matrix is a very important tool of organization as it moves beyond simple physical relationships and forces the archaeologist to refine their understanding of chronological relationships. The Harris matrix must be updated *daily* to maintain an understanding of the stratigraphy of the site. Working Harris Matrix forms are available for use in the field.

Example: In the section illustrated below, the topsoil (context 1) is the latest context present. 1 overlies several discrete deposits, 2, 3, 4 and 10, physically touching all of them. But through further excavation it is revealed that 2 cuts 10 and thus has to be later in time. Further, 2 and 3 are both cutting into context 4, 4 overlies 5, 5 cuts 6 and 7...and so on. However, if you look at the Harris matrix for this hypothetical situation, you will see that the relationships have been streamlined so that redundant relationships are not expressed. For example, even though we've already established that 1 is later than 2, 3, 4 and 10, it is unnecessary to draw additional lines from 1 to 4 and from 1 to 10 since the matrix is already expressing the fact that 1 is later in time than both 4 and 10 as it is situated above them in the diagram. (Note, in this example, cuts are not included.)

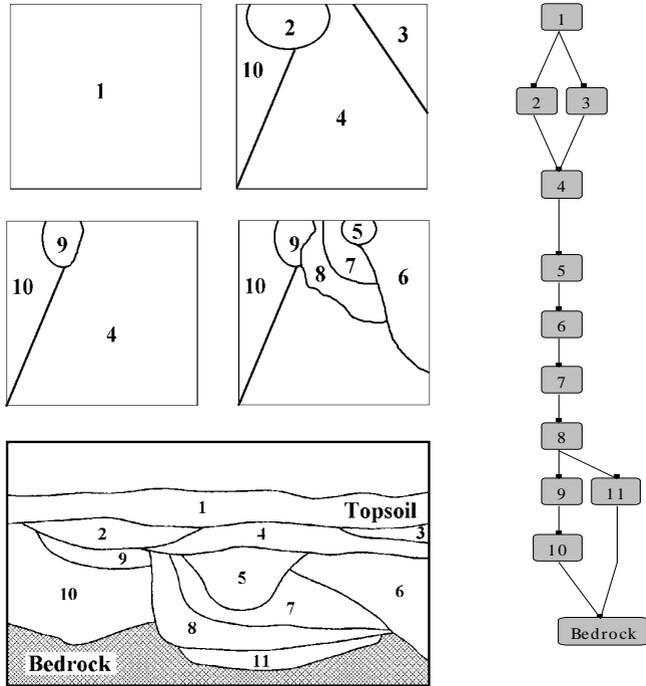


Figure 2. Hypothetical plans and vertical section showing several strata overlying bedrock. The Harris matrix expresses these relationships in a diagram.

2. GENERAL EXCAVATION PROCEDURES

2.1 GENERAL GUIDELINES

Cleanliness is next to godliness on an archaeological site. A few millimeters of dust or loose soil on the surface of the excavation area will completely obscure soil changes and make stratigraphic excavation impossible. *Sweep often* (see §2.3 below for instruction on recording archaeological cleaning). It is also very dangerous to allow loose soil to accumulate around the edge of the excavation. This will happen naturally as foot traffic disturbs dry soil, but it is very important for the edges of excavation to be swept back regularly to prevent material from the topsoil falling into the excavation area and contaminating the contexts revealed below.

The hot and dry climate of Greece makes it difficult to see the stratigraphy of the site as dry soil loses much of the color it has when moist. *The soil should be sprayed with water when this becomes a problem.*

Ideally, it will be possible to recognize each archaeological context on site by appearance or texture and to remove it neatly. However, in practice, some stratigraphic relationships will be difficult to discern without careful exploration of the boundaries with other contexts. In situations where it is difficult to find the edges between similar contexts, the junctions should be explored carefully until the boundaries can be established with certainty and the soil should be sprayed with water to help restore soil color.

There may be times, however, when an error will have been made in deciding which context is stratigraphically the latest. When an error is recognized, the context should be immediately closed and no more material collected. The error must be described in the notes section of the context recording sheet: when and how the error was identified and the course of action needed to rectify the mistake. A new context number with new measurements will need to be opened in order to continue excavation, as appropriate to your new understanding of the stratigraphic sequence. Be sure to record your new understanding of the stratigraphic sequence in the Harris matrix and not base the matrix simply on the order of excavation.

Since contexts are dated by the latest material in them, it is essential to avoid *contamination*, that is, later and stratigraphically different material (particularly pottery) mistakenly collected with any given context. Make sure, therefore, that *all* of the soil of any context is removed before the context is closed and excavation continues with a new context.

As you record the removal of different contexts on site, realize that what you write will be examined, analyzed and weighed by future scholars wishing to publish the archaeological material of Corinth and understand aspects of the development of the site. The future researcher will be interested in specific contexts and the materials contained within it, the context's relation to other deposits and features. For example, future scholars will want to know if a certain context is a floor and if (A) the floor is cut by a foundation trench for a wall, or (B) the floor goes directly up to the wall, over the cut of the foundation trench, or (C) the floor goes over the top of the wall. In case A, the floor pre-dates the wall – any context that is cut by the foundation trench will have existed before the wall was built, and finds from these contexts could give a "pre-occupation" date (the *terminus post quem* for the structure); in case B, the floor was laid after the foundation trench was dug and the wall built and they are all part of the same structure – any finds from this floor are from the use phase of the building. In case C the floor is covering the top of a wall from an earlier building that was abandoned previously; finds from the floor will help date the abandonment of the structure (its *terminus ante quem*). Describing these relationships requires you to interpret not only the function and formation of

the context you are recording, but to interpret how it is part of a greater web of human activity in this area over time.

Your opinion should be stated and the evidence given in support of it, but sometimes it is only possible to fully interpret a context after it is excavated, its pottery and finds analyzed, and related contexts similarly studied. You should frequently return to your context records in the database and add amendments to your interpretations as you come to new conclusions. But please make it clear that these are “Later Notes” so that is clear to anyone consulting your records later what was an interpretation made in the field and what was added later. Initial and date all “Later Notes.”

During the recording process, in the field and out, it is important to communicate with fellow supervisors as, ultimately, all contexts are related in some manner and these relationships are crucial to understanding the site as a whole.

2.2 COORDINATE GRID MEASUREMENTS AND ELEVATIONS

All plan measurements are related to a Cartesian coordinate grid system. Each point measurement is determined uniquely in a plane through two numbers; an X-axis value, or easting, and a Y-axis value, or northing. Thus, for example, a point at the excavation could be designated (E265.76, N1003.57). This grid is referenced to the grid on the the Hellenic Military Geographic Service’s 1:50,000 Korinthia map in the HATT projection and is easily converted to the newer ΕΓΣΑ87 projection system. Because the values in the system are large and unwieldy (e.g. E-7043.76, N16362.75) a benchmark closer to the ancient site has been established for ease of recording: to keep the numbers small with positive values. For the sake of uniformity with other work on the site since 1960, all elevation measurements are related to the benchmarks established from the Hellenic Military Geographic Service monuments then in use (*Hesperia* 1960 p.238). Measurements are taken using a Total Station and all descriptions and drawings reflect these benchmarks (meters east and north, and meters above sea level).

All supervisors are trained in using the Total Station at the beginning of the excavation season, in particular how to physically set up the machine and tripod and how to use the machine’s programs to take accurate readings using the reflective prism.

Measurements should be taken to the nearest 0.01m.

When a new context is excavated or described, *representative elevations must be taken* on the surface of the context; if the context runs into the edge of excavation, then also along that edge. Several *representative bottom elevations must also be taken* on the surface revealed by the removal of the context. In the case of a wall, elevation should be taken on the highest preserved stone, the last stone at both ends

of the wall and/or the last stone before the wall disappears into the edge of excavation. While the context recording sheets require only maximum elevations and coordinates north and east of the permanent benchmark, several elevations should be taken on the surface of each context and below it after it is removed so that the general contours of each context can be reconstructed after excavation.

2.3 ARCHAEOLOGICAL CLEANING

There may be times when it is necessary to scrape or sweep down an area that is composed of several different soil contexts (for example, cleaning a section for drawing, or a large area of the site for a photograph). Any material from this operation should be collected on its own with a new unique context number so that it will not be added to the material from another discrete context, thus contaminating it. If it is possible to ascertain *exactly* which contexts are contributing materials to this cleaning operation, these numbers should be entered in the Notes field of the cleaning context recording sheet. While any material collected during the cleaning of multiple contexts is not going to be useful in dating or interpreting any individual context on site, this material might be useful to the museum staff at the end of the season for the purposes of mending pottery or other finds and so is well worth keeping.

Cleaning ‘contexts’ are not included in the Harris matrix as they are not true contexts, but created by us as a means of tracking finds during cleaning. If cleaning baskets extend over multiple contexts, it is unnecessary to describe the soil in soil description fields on the recording sheets. However, measurements and elevations must still be taken for each cleaning operation and a description of the cleaning and why it is performed must be entered in the Notes field.

2.4 SKIN BAULKS

If the ‘Last In, First Out’ principle cannot be followed for some reason, a protective strip of soil or ‘skin baulk’ should be left around the later context, while the earlier context is being excavated. This will protect against contamination of the earlier context by creating a barrier between the earlier and the later contexts. The skin baulk can be excavated later with its own context number and the relationship of the skin baulk with the context it came from should be made clear in the Notes field and in the Harris matrix fields.

2.5 DRY SIEVING

Sieving guarantees nearly complete retrieval of all archaeological material larger than the size of the sieve mesh from any given context and is excellent for statistical purposes. Certain contexts will be more rewarding to sieve than others and it is essential to consider what kind of data is sought before determining the proportion, mesh size and method of sieving. Primary deposits (*the fills of pits, hearths, floors, roads, foundation trenches and the matrix of structures*) should be 100% sieved, with a portion sampled for flotation. Secondary and disturbed

deposits (*topsoil, agricultural plow zone, robbing trenches, dumped fill and leveling fill*) should be sieved only when it is very important to establish a date for their deposition and to aid the understanding of the development of the site. Secondary and disturbed deposits may contain an overwhelming majority of early material and it may be important to see if there are a few later pieces - a proportion can be sieved as an experiment, and if needed, 100% can be sieved. In some cases sieving is a poor use of time and excavation resources. For example, sieving for pottery in a context composed of degraded mudbrick will result in huge quantities of tiny sherds being reused as temper that predate the construction of the mudbrick wall and virtually no material useful in dating the context.

The reasons for sieving a particular context should be made explicit in the Notes field on the context recording sheet, and in the Dry Sieving field, the size of mesh used (typically 5mm) and what percentage of the total context was sieved. The later can be determined by counting the number of buckets of soil removed as they are of a standard size (40L) and dividing this number by the number of buckets sent to the sieve.

2.6 SAMPLING FOR WATER FLOTATION

A water flotation machine forces water up from below a sample of soil. Light things like small bones, seeds, and carbonized organics float and are propelled by the flow of water towards collection sieves. The rest of the sample is washed clean of any soil by the action of the water leaving behind heavier things that can be sorted once they are dry: any larger micro-fauna and –botanical material and any anthropogenic finds. Although limey soils, such as those at Corinth, are generally not good for pollen preservation, the microchemistry of certain contexts may be ideal.

1. Enter the Title Tag and Context# from the context being sampled (see §5.2.1) and later, the Chronological Range of the context and what material dated it.
2. Note how many samples are taken from this context (so the sample you are recording could be '1 of 4', for example). This will be useful in situations where you want to take several samples of the same context but keep them separate for comparative analysis (like a large floor or a burial).
3. Take measurements on the location and size of the sample using the Total Station and/or measuring tapes (see §3.4, §5.2.2 and §5.2.4). This is the location of the Sample, not the context itself. Use these measurements to figure the dimensions of the sample in meters.
4. Note whether the sample is taken from Plan (i.e. from above the context – this will be the norm) or from Section (from the vertical face of a section, see §3.3).
5. Note the % of the context sampled (this can be an estimate), the size of the sample taken in Liters and the number of containers used to take the sample (see §5.2.13 and §5.2.14)
6. Briefly describe the methods used to collect the sample and the soil conditions (§5.2.12).
7. List the inclusions in the context being sampled, giving particular note to the inclusions that suggested that sampling would be valuable (organics, carbon, shells, etc) (see §5.2.8).
8. Copy the Harris matrix of the context from the context recording sheet to the sample recording sheet.
9. Discuss the reasons you are sampling this context, for example, Is there a good amount of organic material or carbonized organics preserved here? Is the context particularly wet or water-logged? Did you sample other related contexts and need this sample for comparison? Etc...
10. Discuss specific questions you have about this sample, for example, Will frequent animal bone give information about diet? Will any seeds recovered give information about the environmental conditions or the farming practices in use when this context was deposited? Etc... These will not be the only questions that are taken into account during the post-excavation analysis, but will help those consulting your records in the future to understand why you sampled here.
11. Draw a sketch of the context (does NOT have to be to scale since you have already done this with the top plan of this context) showing the location of the sample. Note dimensions or coordinate points and draw a Right Arrow. If you are taking multiple samples from the same context, include them all so it is easy to see where they were all taken in relation to each other. If you sampled a fill from a pit or well, sketch a simple section showing the relationship of this context to other fills in the pit or well.
12. The notes section is reserved for the recording of the materials collected from

flotation.

2.7 EXCAVATING STRUCTURES

A 'structure' is any built feature. The Director decides whether or not it is possible to remove a wall or other structure during the course of excavations. Some walls and structures will be left in situ to preserve that period of use on site and for display to the public. Walls and other structures can still be recorded even if they are not fully excavated and there is a separate recording sheet for structures. However, if they are excavated (and thus destroyed), then all efforts should be made to collect the soil and other material from inside and treat this like all other contexts. This soil should be sampled for flotation and the rest 100% dry-sieved.

2.8 OBJECTS FOUND IN SITU

Primary and in situ objects require special procedures and are should be excavated with extra care to preserve their spatial relationships so that they can be conserved, drawn and photographed. The conservator should be consulted during excavation and he/she may decide to consolidate and excavate the finds personally. Before artifacts are photographed, drawn and removed they should be given a temporary field numbers to aid identification later. Point measurements as well as top and bottom elevations must be taken on each object. Later, many, if not all, of the objects will receive registered inventory numbers in the museum. These numbers should be communicated back to the conservator, photographer and architect so their records can be updated.

Primary and in situ objects resting on interfaces like floors and surfaces or the cut of a pit are the result of a discrete human action. Their deposition is a moment in time that is separate from the creation of the interface they rest upon and the fill that covers them. These assemblages must be assigned their own context number, different from the fill that covered them, and collected separately.

3 FORMATION PROCESSES OF SPECIFIC CONTEXTS

3.1.1 FLOORS, SURFACES AND ROADS

The term 'floor' is reserved for a purposefully constructed surface inside or associated with a structure. It is sometimes constructed using special materials fit for purpose (like plaster or mosaic or stone slabs). This kind of floor, since it is built, will be recorded as a 'structure' (see §5.4 regarding Structures) as the data fields on the Structure recording sheet will most accurately record this feature. A floor that is not built of these or other materials and is simply packed earth will be recorded as a 'deposit' as the Deposit sheet data fields will most accurately describe this feature. These floors are recognizable on the ground as a crust of hard-packed earth often with sherds or other materials lying flat on top of them. Describe the relationship of the floor to any visible architectural and/or other features (foundation trench cuts, walls, pits, hearths etc.). On coming down on a

floor, clean it well before excavating it as a new context, then remove the crust itself on its own. Change context numbers to excavate the underlying fill. Often you will find several superimposed or repaired floors - repeat the process of cleaning and removal as often as is necessary. In the case of repairs, record and remove the repaired part separately from the original floor – each action will have its own context number. If objects are found resting on the floor, undisturbed since their deposition, give this assemblage its own context number as these objects were deposited at a different moment in time from both the construction of the floor and the deposition of the fill that covered the floor. Always sieve floors 100% and consider a water-sieving strategy.

‘**Surfaces**’ are also hard-packed, but are not contained within the walls of a structure and are not constructed with specialized materials. A surface might be, for example, the surface of an open courtyard or a pathway. Surfaces are not as easy to recognize as floors as they are not typically contained by walls and are not built of special materials, but their hardness will be distinctive and they might have pottery or other finds lying horizontally on top of them. Record surfaces as ‘deposits.’ Always sieve surfaces 100% and consider a water-sieving strategy.

Exterior surfaces that are exposed to the elements as well as human and animal foot traffic will most certainly have a series of resurfacings and repairs. Once the surface is damaged, foot traffic and erosion will inevitably remove the hard surface in this area. Further erosion might create a pocket of silting in the damaged area that can be distinguished in the field. Later this silted in divot might be repaired with a dump of earth and other materials that are packed down into the hole. After years of use, an exterior surface will be a patch-work of divots and repairs into a series of partial or total resurfacings. These areas are challenging in the field as each repair and resurfacing must be identified, isolated and excavated individually.

Roads should be recorded with the same issues in mind. A road that is built should be recorded on a Structure sheet (this includes roads constructed with crushed stone, gravel or pebbles – in the context of road surfaces, these materials are also referred to as ‘road metal’). Roads are distinguishable in the field by their very compact surfaces, their linear nature, their relationship to other roads and structures, and by the fact that they are usually metalled unless they are built of stone slabs. They might also have pot-holes and wheel ruts preserved on the surface. Repairs and repavings/resurfacings are each recorded separately with their own context numbers. Always sieve roads 100% and consider a water-sieving strategy.

3.1.2 FOUNDATION TRENCHES AND ROBBING TRENCHES

When some walls are built, first a trench is dug where the wall will run and then the foundations of the wall are built inside this trench. When the foundations are laid, the gaps in the **foundation trench** are filled in on one or both sides of the wall

foundations and the wall itself is built upon these foundations. Examine all deposits that run up to a wall or a foundation to see whether an area of looser soil can be distinguished against the wall face. Chances are that the foundation will have a 10 to 40 cm. wide patch of looser soil along its side. A *very* narrow loose area immediately against the wall face may not be a foundation trench; rather, this softness may be the result of root or water action. Dig the loose fill of the foundation trench separately as its own context. This context, together with the material from the dismantling of the wall itself (if it is excavated), can provide a date of construction for the wall. If, however, the wall is light and its foundation light, or if the wall has no rougher lower segment, or if the wall is built directly upon the remains of an earlier wall, no foundation trench may exist.

If the foundation is Roman and constructed in rubble and mortar, the chances are that the foundation trench may not have a distinct fill. In a case such as this, the foundation for the wall was dumped into the foundation trench and completely filled it – there was no later backfilling of gaps in the foundation trench since no gaps were left during construction.

A **robbing trench** is created by later action. The stones of a wall and sometimes even the foundations are robbed (removed) to build something new. These are common features as it is easier to rob out an existing wall than to quarry new building material. Sometimes the robbing trench was backfilled right after the robbing took place. In other cases, the trench may have been left open for a period of time before it was backfilled – you should expect to find silting, slumping and erosional deposition at the bottom of the trench under the backfill in this case. Unless it is logistically impossible or unsafe, it is good practice to dig one or more section through the fills of a robbing trench before digging them in entirety (see §3.3 on Vertical Sections). This will help ensure that even very subtle changes between fill contexts are observed and the stratification of the robbing trench fills are fully understood; the section can also allow for more complex environmental sampling. The series of images below illustrates what foundation trenches and robbing trenches can look like in section. Image 1 shows the wall in use; 2 shows the wall after the structure has gone out of use and collapsed; 3 shows the robbing trench after the wall and foundations have been robbed out and the trench backfilled; 4 shows the same robbing trench after the earth above it has been plowed.

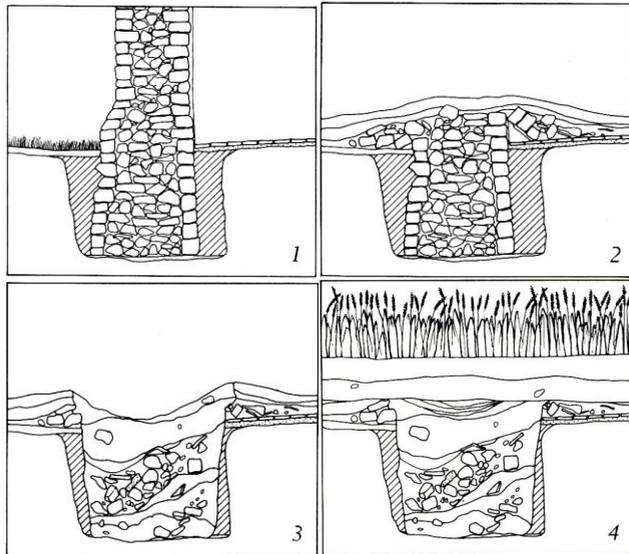


Figure 3. Sections at 4 stages of the creation of a robbing trench (Barker 1994).

3.1.3 PITS AND WELLS

Pits are of particular importance as they are discrete units that usually contain dumped material that will be very useful for dating purposes as well as supplying valuable environmental data collected by flotation. Unless it is logistically impossible or unsafe, it is good practice to dig section the fills of a pit (see §3.3 on Vertical Sections). This will help ensure that even very subtle changes between fill contexts are observed both in plan and in section and the stratification of the pit fills are fully understood; the section can also allow for more complex environmental sampling. Sieve pits 100% and consider a flotation strategy.

When starting the excavation of the fills of a **well**, establish an elevation point at the mouth of the well. Use this point to measure the depths of the fills within the shaft using a tape measure if and when it becomes impossible to use the total station as the depth inside increases. All attempts should be made to identify the stratigraphy of different fills within the well shaft and to excavate them in stratigraphic sequence. However, if the well is very deep, has been subjected to a lot of sorting by the action of the water inside, or has one massive backfill dumped inside, this might not be possible. In this case, remove the fill inside the shaft in units of 10 cm depths each, using a single context number with a running alphabetic marker (Deposit 20A, 20B, 20C, 20AA, 20AB and so on). Generally, the earth from within a well is too waterlogged to sieve as it is excavated. Set out plastic sheeting on which to pile the excavated earth to dry. Keep contexts separate and marked with wooden tags. The earth should be 100% dry-sieved when dry and samples need to be taken for flotation.

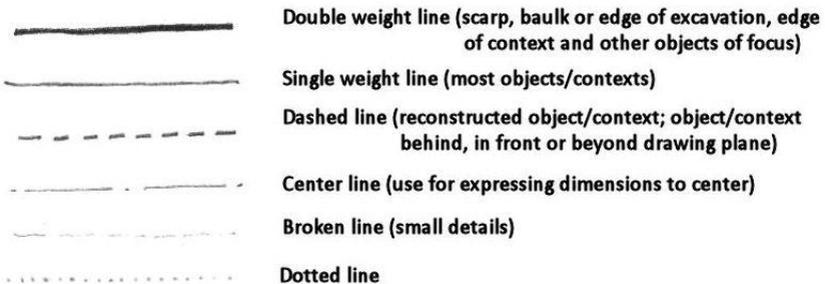
3.1.4 LEVELING AND DUMPED FILLS

3 FIELD DRAWINGS

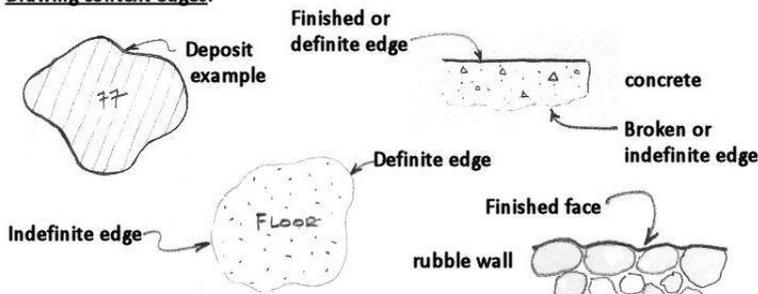
The site architect is responsible for producing professional plans of the excavation and the archaeological site as a whole. Professional drawings of specific features will be produced through the course of the season. However, supervisors will be doing the majority of the drawing in the field on a daily basis, drawing each context before it is excavated and drawing vertical sections as appropriate.

3.1 DRAWING CONVENTIONS

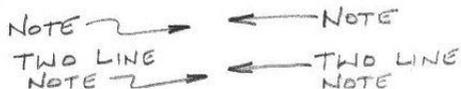
Consistency is very important in an open area excavation as many different hands will be drawing contexts that are related. For this reason, conventions have been developed that must be followed in all field drawings. The symbols below have been chosen because they are simple, naturalistic and immediately comprehensible, so a key is not a necessity for every drawing. The conventions rely heavily on various line weights and types. Using line weight properly is a helpful communication tool that can change the emphasis and meaning of a drawing as well as give it a richness that makes it more understandable. In general, harder materials, taller features, man-made edges, well defined edges and entities the artist wants to emphasize (such as the edge of deposit which is being currently excavated) receive heavier line weights. Poorly preserved faces, indefinite edges and shallow gradual changes should be drawn more delicately. Dashed and center lines (line-dash-line) have specific meanings. Dotted and other styled lines could be cautiously employed for various uses but they must be clearly labeled in each drawing.



Drawing context edges:



Arrows: Tight and originate from front of first word or end of last word of note.



 Elevation mark

 Coin

1002 N — Grid line

Drawing sloping surfaces:

Steep break: shallow



Steep break: deep



Gradual slope



Gradual slope break at top



Slope with break at top and bottom

3.2 TOP PLANS

A Top Plan is a ‘bird’s eye view’ of the context you are recording **before it is excavated** and must be drawn in the field at the time of excavation of every context you record (deposits, cuts and structures all need top plans). Top plans must clearly show the position and limits of the context and how the context is related to other features such as walls, pits, etc. The context being planned and any other related features all need to be clearly labeled. Elevations and find spots of objects such as coins and concentrations of pottery should also be marked.

DO use the total station to establish the basic location of your context, and to put in temporary points from which to measure your context, but DO NOT “DRAW” using the total station. Top plans that are based on a series of total station points are simply polygons and are not a true reflection of the shape or boundaries of the context. Top plans should be carefully measured and accurate. (See §3.4 below for instruction on laying out a right angle as an aid for producing measured drawings.)

Unless the area being recorded is particularly large or small, a scale of 1:50 should be uniformly used on all top plans. Grid labels (easting and northing axes) need to be labeled at the edges of the grid paper. This allows anyone to take two or more plans and easily compare them. Include all features visible on the surface around

the context you are recording: walls, pits, other cuts, changes in slope or elevation, distinct deposits. Once you have produced a drawing that accurately shows these basic elements, it can be used as a template for future top plans of contexts in this area.

Write your **name**, the **date**, the area of excavation (**Nezi** or **N of Nezi**), the **context number**, and the **scale** in the fields provided. Using a compass, draw in a **north arrow** here as well. If you needed more than one sheet of grid paper for your context, write '1 of x', '2 of x', etc, on the plan here. Include **TOP elevations** (do not include bottom elevations) on your drawing using the convention shown above in § 3.1.

If you find **coins** in a deposit, use the measurements taken with the total station to **label their exact find spot** on the top plan of that context.

3.3 VERTICAL SECTIONS

Make a note on all applicable context sheets that a section has been drawn.

A vertical section, or cross section, is a vertical slice into a site, revealing strata that can then be viewed from the side (see §2.5.2 for example illustrations of sections). Vertical sections are a useful visual tool to show stratigraphic relationships, as excavated, if they are systematically used with top plans. In most cases on an open area excavation, it is only possible to draw a section after the contexts are excavated, and this is done using the top and bottom elevations and the top plans that you drew of each individual context. This is a reconstructed section since you are reconstructing site stratification using measurements after excavation. As a rule, you should draw reconstructed sections any time you feel that the stratigraphy of a part of the site will be better understood by later scholars with the aid of a visual illustration. Because each context is recorded and drawn individually, we can reconstruct sections wherever we want on site. If you reconstruct a section, make a note on all applicable context record sheets that you have done this by checking the Section box in the Drawings field. Make careful note on the drawing itself as well as in your notes where you drew the section (N and E coordinates) and which direction you are facing.

If you sectioned a series of contexts during excavation, for example, if you half-sectioned multiple fills inside a pit and have dug the first half, then you should draw a section of the vertical scarp that you created. The vertical edges of the excavation might also require section drawings. However, in a careful excavation, many stratigraphic changes are easier to perceive horizontally than vertically, so do not let the section dictate how you excavate the surrounding areas – do not assume the section will tell you everything about the surrounding area, it will not. These kinds of sections should be drawn on site using measurements you can take then and there with the total station and a measuring tape. Always scrape and sweep down the vertical section before you draw it (see §2.3).

3.4 MEASURING OFF THE GRID & LAYING OUT A RIGHT ANGLE

The total station is often used to establish reference points and mark them on the ground with nails and labels. Lay a measuring tape along this line and a perpendicular grid line and you can take very accurate measurements of any point to you want to locate in space on the grid.

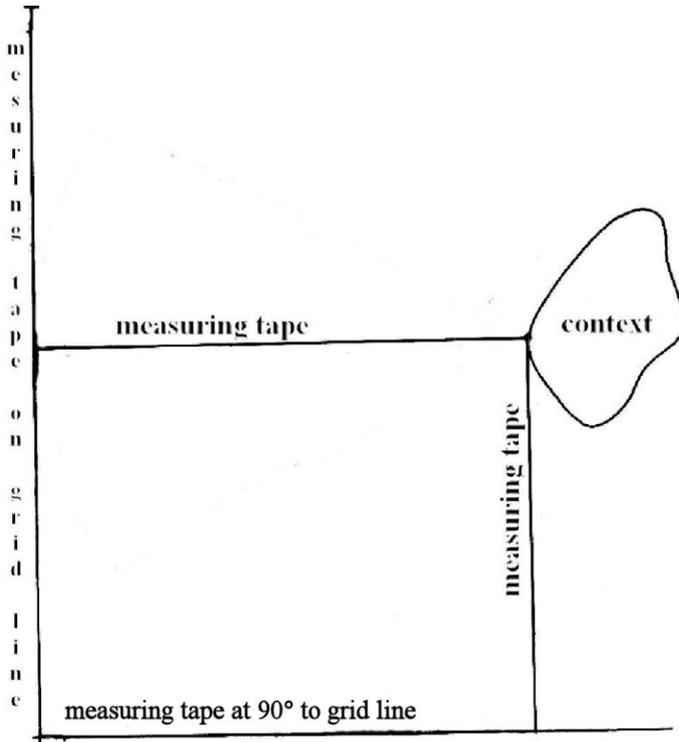
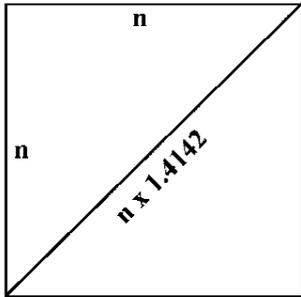


Figure 5. A quick way to take accurate measurements off the grid (adapted from Barker 1993).

If there is no logical or even grid line located in a convenient place for you to use to draw, you can put in a temporary one using the total station, or by laying out a right angle from an existing grid line.

The hypotenuse of a right triangle where the adjacent sides equal the integer one is $\sqrt{2} = 1.4142$. If you want to lay out a 1 x 1 meter square the diagonals will measure 1.414 meters.

$\sqrt{2}$ can be multiplied by the length of the sides desired to create whatever sized square you need:



2 m	x	1.4142	=	a diagonal of	2.828 m
3 m			=		4.243
4 m			=		5.657
5 m			=		7.071

4 SITE PHOTOGRAPHS

Both digital and film photography is used to document the excavation.

Photographs MUST be taken of:

Floors and surfaces, postholes, pits, well heads, robbing and foundation trenches, pipes and pipe trenches, drainage channels, graves (the top and bottom of the cut and then the skeleton before removal), structures when the tops are first revealed and then later when fully revealed, any structure that is going to be removed.

Photos are taken before the excavation of these features. It is the responsibility of everyone on site to make sure this happens. Additional photographs must be taken of complete vessels and any other finds that will be inventoried in the museum as they are revealed *in situ* and any unusual soil features. If you are unsure if a photo should be taken, consult with the field director. The field director is responsible for taking the photographs, uploading digital images to the database, and noting photo numbers on recording sheets.

5 FIELD RECORDING PROCEDURES

In an open area excavation, no trenches are split away from the excavation area as a whole. We excavate and record as a team, working our way through the stratigraphy context by context. Rather than being assigned to a specific trench or a specific area of the site, supervisors must move around the area and record whatever context is revealed next. Teamwork and communication is key to understanding not only the contexts you personally record, but the site as a whole.

Our records are all kept together as one notebook, rather than each student having their own set of records. The paper records we make in the field are transferred into a computer database at the end of each day, the goal being that at the end of the excavations all of our records will be fully digitized and searchable.

All the recording sheets are made up of two types of fields: more ‘objective’ pull down menus and more ‘subjective’, less structured, free text descriptions. For the pull down menus you will be asked to submit a structured response. If a characteristic from a pull down menu truly does not fit then you can give a subjective textual response in the Excavation Notes section. Keep in mind that there needs to be a balance between structure (which aids in searching, indexing and creating relationships and associations) and precision (accurately defining the characteristics of a context to the Nth degree). All observation in the field is ultimately interpretive but using a standardized system of recording helps to make the data we produce as useful as possible.

Lot Number and Chronological Range fields are filled in at a later date.

5.1 THE CONTEXT REGISTER

To prevent the same context number being assigned to more than one context or a number in the sequence being skipped, **you must register your context number BEFORE you begin recording a context.** The context register is shared between all supervisors and the field director. For the purpose of the register, the description of the context is not terribly important, but it should be intelligible to anyone consulting the register during the excavation season. It does not have to match the Title Tag for the context.

5.2 DEPOSITS

All contexts are classified as deposits, cuts or structures. Deposits are positive contexts (opposed to cuts) and are not built features (like structures). Most contexts are deposits. Pit fills, surfaces, agricultural plow zone, natural events like flood wash and grave fills are all examples of deposits.

5.2.1 TITLE TAG

This is the essential summary of the context. The best way to write a title tag is to keep it short and to the point. Use keywords and phrases that not only describe the deposit, but define it. Say what you mean, and call the context what it is. You should never use more than 10 words and strive to use as few as possible, recording only the essence of the context. These title tags can be modified if new information allows for more precise interpretation later. Title tags are most useful as a quick reference tool.

Describe the defining characteristics of the context but do not simply reference other contexts. If referencing a related context, use its title tag in a shortened form and **do not reference context numbers unless they are wall numbers.** There is no need to mention the chronological date of the context as this information will appear in the Chronological Range field. However, it may be important to note earlier or later relative phases. Likewise, avoid referencing any database field (color, compaction, sorting, composition, etc.) that has a pull down menu unless

you find it absolutely definitive of the context (i.e. there is literally nothing else that you could say about it to define it). Avoid abbreviations. **Put the most important and definitive words first.** Here are some examples of good and bad title tags:

Good Title Tags

Pit fill, third deposit from top
Dumped fill
Agricultural zone cut by modern plow furrows
Ashy fill of small pit
N-S partition wall
E-W property boundary wall
Destruction debris: tile scatter
Floor of packed earth
Leveling fill below clay floor
Exterior surface repair
Robbing trench fill of wall 5604
Well fill, tenth deposit from top
Floor over wall 5604
Floor cut by foundation trench of wall 5604
Natural deposit

Bad Title Tags

Fill of orange tree pit (pit cut = context 9)
Third deposit of fill in pit
Reddish soil E of context 43
Middle Roman destruction debris
Fill of well
Silty soil 10m east of wall 5302
Northern floor patch

5.2.2 CHRONOLOGICAL RANGE

This field can only be filled in after all pottery has been read and recorded, all coins read by the numismatist and recorded, and all other finds that could potentially date the context examined in the museum. This date field takes the LATEST date supplied by all the evidence collected for each context. You must also take stratigraphic relationships into account by keeping an up-to-date Harris matrix. For example, if the pottery from a context dates to the 4th century AD, a 6th century coin was also found in it and it was lying above a floor with a pottery date of ca. AD 700, the Chronological Range of the context is ca. AD 700 since the stratigraphic relationship dictates that the context must be dated to ca. AD 700 or later. It might be wise to wait until several contexts that are stratigraphically BELOW your context are excavated with pottery and coins read to make sure that you have a good idea of the dates of strata below your context. Note which body of

evidence dated the context: pottery, coin, stratigraphic relationship or other (and then elaborate). Pottery dates are recorded separately in the pottery fields in the database.

5.2.3 ELEVATIONS

You must take elevations on top of every context you record – take the highest of the top elevations and enter that number in the **Top** Elevation field. **When you are finished excavating a context**, take the lowest of the bottom elevations and enter that number in the **Bottom** Elevation field. Elevations can be taken with the total station or with the dumpy level if it is in the field. Although the recording sheets only ask for “highest of the high” and “lowest of the low” it will take several elevations to adequately describe a basket and these should be recorded on your top plan.

5.2.4 SLOPE DOWN TO AND DEGREE

By comparing the different elevations you take at the top of your context, you will be able to see if the surface slopes down towards any particular cardinal direction (**N, NE, E, SE, S**, etc). The Slope Degree is an estimate of the degree to which the top surface slopes: chose one of the following options:

level, slight, moderate, steep, vertical, or uneven.

5.2.5 COORDINATES

Based on your measurements of the size and shape of your context, determine the North, South, East, and West extents of your context. This field is used to determine a bounding box for the context and its location. Your top plan will be useful here.

5.2.6 SOIL COLOR

A Munsell chart is not required - who has ever seen Munsell Colors of soils used to draw meaningful conclusions about a deposit? Ideally the sample should be moist but that is difficult in mid-summer in Greece, so spray the soil if needed. Color should always be assessed when the deposit is moist but not waterlogged. This should be kept as simple as possible and standardized. Use the terms below (from C. Spence ed. (1990) section 3.1.1.2 and the Munsell Soil Color Charts, 1994). There are 3 components to describing soil color: a modifier, a hue and a color. Chose from the following options, **choose one term from each component**:

MODIFIER: Light, Dark, Very Dark

HUE: Brownish, Greenish, Greyish, Pinkish, Reddish, Yellowish

COLOR: Black, Brown, Green, Grey, Pink, Red, White, Yellow

If your basket is not uniform in color, select **MIXED**. You should then describe the different colors that you see in the Excavation Notes field below. ‘Mixed,’ as a rule, should be reserved for soils that truly are mixed and have more than one

distinct color component. It is much more important to describe the color of a deposit in order to define it as different from surrounding contexts than it is to try and analyze its color down to the individual particle level.

5.2.7 SOIL COMPOSITION

All soils will be made up from a combination of sand, silt or clay. Sand feels gritty and you can see the individual grains with the naked eye. Silt is smooth and slippery to the touch when wet and like powder when dry; the individual particles are much smaller than those of sand and can only be seen with the aid of a microscope. Clay is sticky and plastic-like to handle when wet and like extremely hard and compact when dry. The individual particles are extremely small and can only be seen with the aid of an electron microscope. You have to physically touch and feel the soil to be able to describe the texture and composition of a deposit.

This field asks for or the majority elements of a deposit. Inspect the soil with care, but there is no need to go overboard describing percentages of sand or silt here.

You may chose from the following options:

Fine sand, coarse sand, clay, or silt

Silty sand (very common) or **clayey sand**

Sandy silt (very common) or **clayey silt**

Sandy clay or **silty clay**

Or **MIXED** (if mixed, please elaborate in the Excavation Notes section).

RUB MOIST SEDIMENT BETWEEN FINGERS	
1. Is the sediment sandy or gritty?	YES > 2 NO > 6
2. Can the sediment be formed into a ball?	YES > 3 NO > 4
3. Will it form a U-shape without breaking?	YES > CLAYEY SAND
	NO > SILTY SAND
4. Are the sand grains like granular sugar?	YES > COARSE SAND
	NO > 5
5. Are they the size of castor sugar?	YES > FINE SAND
	NO > FINE SAND
6. Does the sediment stain the fingers?	YES > 7 NO > 9
7. Sediment texture is smooth and silky?	YES > 8
	NO > SANDY SILT
8. Is it also sticky?	YES > CLAYEY SILT
	NO > SILT
9. Is it sticky and hard to break?	YES > CLAY NO > 10
10. Does it break easily and cleanly?	YES > SANDY CLAY
	NO > SILTY CLAY

Figure 6. Diagnostic questions for soil (after C. Spence 1994).

5.2.8 SOIL COMPACTION

This describes how compact the soil in a deposit is. You should excavate some of the deposit and discuss compaction with the excavator in order to make this observation. **First you must determine the composition of the soil.**

If the MAIN component is **fine-grained (silt or clay)**, choose from:

Hard, firm, soft, or very soft.

If the MAIN component is **coarse-grained (sand)**, choose from:

Strongly cemented, weakly cemented, compact, or loose.

SEDIMENT	TERM	DEFINITION TYPE
COARSE-GRAINED	STRONGLY CEMENTED	Cannot be broken with hands.
	WEAKLY CEMENTED	Pick removes sediment in lumps which can be broken with hands.
	COMPACT	Requires pick for excavation.
	LOOSE	Can be excavated with trowel.
FINE-GRAINED	HARD	Brittle or very tough.
	FIRM	Molded by strong finger pressure.
	SOFT	Easily molded with fingers.
	VERY SOFT	Non-plastic, crumbles in fingers

Figure 7. Chart for describing soil compaction (after C. Spence 1994).

5.2.9 INCLUSIONS

Inclusions are anything in the soil that is not soil (ceramic sherds, glass fragments, stones, shell, bone and other organics like carbon or land shells, plaster fragments, mudbrick fragments, tile [small or large fragments] and other building materials). List all inclusions that are present and to estimate the % of inclusions in the soil.

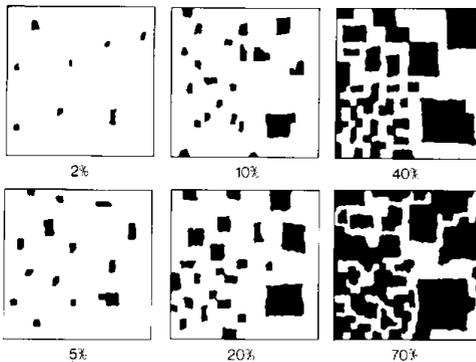


Figure 8. Chart for estimating percentage composition of inclusions. Each square equals the percentage. (Redrawn after Hodgson 1974).

5.2.9.1 SORTING

This term refers to the distribution of inclusions in your soil; usually random in the case of dumped fill, water-sorted in the case of water-laid sediments, gravity sorted

in tipped fill, etc. A complex depositional history often produces a complex particle distribution in a single stratum. The degree of sorting is a measure of the frequency with which particles of the same size occur. For example, if the deposit consists mainly of fine pebbles, it is 'well sorted'. An appreciation of sorting gives some idea of the processes responsible for deposition. When describing the level of sorting of the inclusions in your context, chose from the following options:

well, moderately, poorly, very poorly

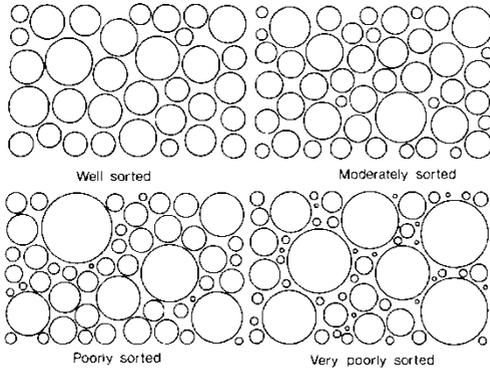


Figure 9. Chart for estimating degree of sorting (redrawn after Folk 1988).

5.2.9.2 SIZE

This is not a field on your recording sheet (or in the database) but should be described in the Inclusions field. Describe the size of the **primary** inclusions in a deposit. For stones, use the chart below to standardize your vocabulary in your descriptions. For other inclusion it is more useful to give average dimensions (in meters).

FINE PEBBLES	0.002m - 0.006m
MEDIUM PEBBLES	0.006m - 0.02m
COARSE PEBBLES	0.02m - 0.06m
COBBLES	0.06m - 0.2m.
BOULDERS	0.2m.

Figure 10. Modified Wentworth Scale for describing the size of stones.

5.2.9.3 SHAPE AND ROUNDNESS

This is not a field on your recording sheet (or in the database) but should be described in the Inclusions field. Describe the shape and roundness of stone inclusions. This information helps to determine the nature and origin of the deposit.

ROUNDED



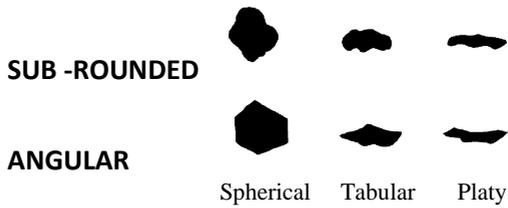


Figure 11. Guide to describing the shapes of stones.

5.2.10 THE HARRIS MATRIX AND STRATIGRAPHIC RELATIONSHIPS

See §1.4 for an explanation of the principles behind the Harris matrix. Use this field to begin assembling the overall Harris matrix for the site, by focusing on the context you are recording (the center rectangle) and any and all other contexts **physically related** (that means actually touching). You will use this information as well as the physical relationships of other contexts to refine this preliminary field matrix into a proper Harris matrix that maps chronological relationships rather than purely physical ones.

In the matrix, Context numbers ABOVE the context you are recording are LATER in time than your context. Context numbers BELOW the context you are recording are EARLIER in time than your context.

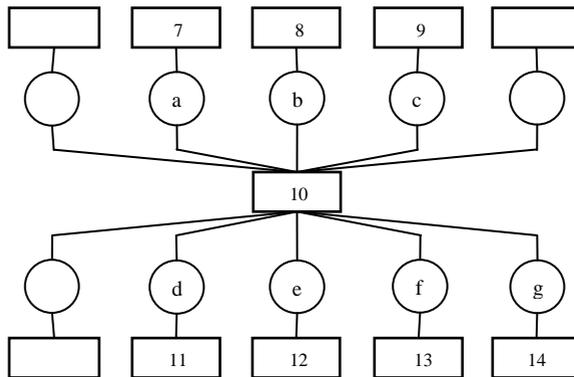


Figure 12. A modified Harris matrix with hypothetical contexts.

When the overall site Harris matrix is composed, positive features (deposits, structures, skeletons) will be represented as a context number inside a rectangle (as shown above), and negative features (cuts) with an oval. However, for the field version – a work in progress – all contexts besides the context being recorded will be represented with rectangles.

Use the empty **circles** incorporated into the lines that connect contexts to describe physical characteristics and relationships between contexts, **WHY** and **HOW** you interpret one context as being distinct from another and how they related to each other.

5.2.10.1 CHARACTERISTICS

This field asks you to justify the reasons why the context you are recording is a distinct unit and different from the soils around it. This should take the form of simple comparisons based on your description of the soil of the context. So, for the example matrix shown above, in the Characteristics field, it might read:

- a) 7 is harder than 10
- b) 8 is blacker than 10
- c) 9 is blacker and has fewer inclusions than 10
- d) 10 is softer and redder than 11
- e) 10 is very slightly redder than 12
- f) 10 is softer and redder and has more inclusions than 13
- g) 14 is a cut

5.2.10.2 RELATIONSHIPS

Use this field to record how the contexts in your Harris matrix physically relate to each other. As is explained in the manual in §1.4, there are only a few relationships that can exist between contexts. These relationships should be recorded in this field as well as in the appropriate database fields:

If the context you are recording is **EARLIER** than another context:

- Your context is **filled by** it, or
- Your context is **overlaid by** it, or
- Your context is **cut by** it.

The context you are recording is **EQUAL TO** another context when you can prove that a single context has been truncated by later action and now exists in two or more parts, i.e. separated by the later activity, or when you have sectioned a single context and excavated it in two or more parts each with separate context numbers. When you have an equivalent relationship, write in the equivalent context number with an equal sign next to the central rectangle in the matrix.

If the context you are recording is **LATER THAN** another context:

- Your context is **laid on** it, or
- Your context is **laid against** it, or
- Your context **cuts** it.

So, for the example matrix shown above, in the Relationships field, it might read:

- a) 7 is laid on 10
- b) 8 is laid on 10
- c) 9 cuts 10
- d) 10 cuts 11
- e) 10 is laid on 12
- f) 10 is laid against 13
- g) 10 is laid on 14

The Harris matrix relationship fields in the database will be used to generate a master matrix for the entire site and are extremely important. The information entered into the database fields should be considered the final product of the Harris matrix process that started in the field and should be updated any time a new interpretation of stratigraphic relationships is made.

5.2.11 BOUNDARIES WITH OTHER CONTEXTS

This field can only be filled-in when your basket has been completely dug. This describes how dramatic the change was between the context you are recording and the context(s) revealed below it. Please choose from:

Sharp: the change is dramatic and very easy to see (a major change in color, texture, inclusions or all of the above).

Clear: the change is clear, but not dramatic (a clear change in color or texture or inclusions).

Diffuse: the change is not clear or easy to see, but it is perceived by a slight change in color or texture or inclusions.

If more than one context is revealed below the one you are recording and they differ in how distinctly different they are from your context, leave this field blank and elaborate in the Excavation Notes section.

5.2.12 FORMATION/INTERPRETATION

This is your interpretation of the nature of the context, what it is and how it got there. Sometimes this is easy, like when you are digging the fill of a pit. Sometimes it is difficult to determine in the field during excavation before all finds are analyzed and stratigraphic relationships are determined and you will only be able to describe your context in general terms, like “Deposit accumulated over N-S wall”, “Dumped debris”, or “Possibly a leveling operation?”. See §2.5 Excavating Special Deposits for more in depth descriptions of different deposits and features that you will encounter in the field. This information will be helpful when coming up with a title tag for your context when you enter it into the database. If the nature of the formation of the deposit is not clear at the time of excavation, state this clearly – it is better to be honest than to force an interpretation with no evidence to back it up. You can always add to or modify this field later, just make sure you note that this is a ‘Later Note’ and date and initial it so that is clear to anyone

consulting your records in the future what was a field interpretation and what added later.

5.2.13 METHOD AND CONDITIONS

Please give the following information:

Tools used: small pick, big pick, trowel, wooden chopstick, broom, etc.

Soil Conditions: Excavated Dry or Excavated Moist. If your basket has been exposed to the elements for a length of time, comment on how long (a week? 2 weeks? Longer?). Mention if there was a recent significant rain or if you sprayed the soil down with water prior to excavation.

5.2.14 SIEVING

Indicate whether or not you have sieved soil from this context, what size of mesh sieve you used (usually this is 5mm) and what percent of the total context you have sieved. You can estimate this by counting the number of zembils or wheelbarrows of soil that are removed and then calculating the ratio between those taken to the dump and those taken to be sieved – explain how you arrived at this number in your Excavation Notes.

5.2.15 SAMPLES TAKEN

Indicate if you have taken sample(s) for water flotation, how much (in L) and what percent of the context this sample is. If samples were taken, a sample sheet needs to be completed – see §2.7.1.

5.2.16 COINS

You cannot enter information about inventoried objects in the field, but you will enter some coin information. When a coin is found while excavating a context, immediately take a reading on it using the total station. Then mark the find-spot on your top plan using these measurements, with the elevation written next to the word ‘coin’. In the data field on the recording sheet, list each coin with its elevation, “Coin (87.23 El.): _____” and leave space as each coin will be given a unique number (something like 2008-178) at the museum that you will need to write in this space.

All coins are taken to the museum at the end of the day in individual paper envelopes. On the outside of the envelope, record the area of excavation (**Nezi** or **N of Nezi**), the **date**, the **context number** and the **north, east** and **elevation** measurements from the total station. **Draw and outline around the coin** on the outside of the envelope in pencil. Coins found while sieving also go to the museum packaged like this, but instead of noting the measurements of their find spot, write ‘from sieve.’

5.2.17 FINDS COLLECTED

List the finds you collect from each deposit in this field along with quantities of each category (e.g. Glass (1 box), metal (1 bag), bone/shell (1 box), etc.). This should be a list of all finds, regardless if they are being sent to Pietri or to the museum.

5.2.18 EXCAVATION NOTES

This is your opportunity to put into words in the field anything you observe about the context you are recording and any other interpretations of the excavation. It is fine to be repetitive here if it is necessary to get the point across (to repeat information you entered into the data fields above) but do try to step beyond simple description and attempt more complicated interpretation. This is the best place to explain WHY you think the things you do about your context. It is not helpful or appropriate to treat this area as your personal diary – keep your notes professional.

For each deposit please attempt to record the following information:

1. Begin by stating what you are digging and why you are digging it.
2. Any descriptive information relating to the fields above that needs elaboration or clarification.
3. What contexts this deposit reveals – this will help with the Harris matrix later on – you won't have context numbers for these new contexts yet, but you can describe them.
4. If you were expecting to reveal something with the excavation of this deposit, did you? Or did this deposit reveal something unexpected?
5. Any information about the excavation or revelation of this context that was not recorded in the data fields above.
6. Anything else you think is important, or any ideas you have about how this deposit relates to the rest of the excavation.

If you want to add to these notes at any point after the initial composition in the field, you MUST write 'Later notes,' date and initial them.

5.3 CUTS

All contexts are classified as deposits, cuts or structures. Deposits and structures are positive features; a cut is the remainder of a negative human action – the removal of something. You cannot excavate a cut, you can only observe it. All cuts must be recorded and assigned a context number so they can be integrated into the Harris matrix as they are the remainder of human action and are thus part of the history of the site as a whole.

5.3.1 TITLE TAG

See §5.2.1.

5.3.2 COORDINATES

See §5.2.5.

5.3.3 ELEVATIONS

Take several elevations along the top and bottom of your cut – the highest of the high is entered in the Top field and the lowest of the low in the Bottom field.

5.3.4 SHAPE IN PLAN

Describe the shape at the top of the cut. Choose from the following terms:

Square, Rectangular, Circle, Semi-circular, Oval, Sub-rectangular, Linear, or Irregular.

If you choose Irregular, you must elaborate on the shape of the top of the cut in the Notes section.

5.3.5 DIMENSIONS

If the shape is asymmetrical (so not a circle or a square), measure the longest distance first, this is your **Length**, the shortest distance is the **Width**, and the **Depth** is the difference between the highest top elevation and the lowest bottom elevation. Record in meters. If the cut is square, the length and the width will be the same measurement. If the cut is a circle, give the **Diameter** rather than the length and width.

5.3.6 BREAK OF SLOPE-TOP

Describe the degree with which the top surface of the edge of the cut breaks into the sides. Choose from the following terms:

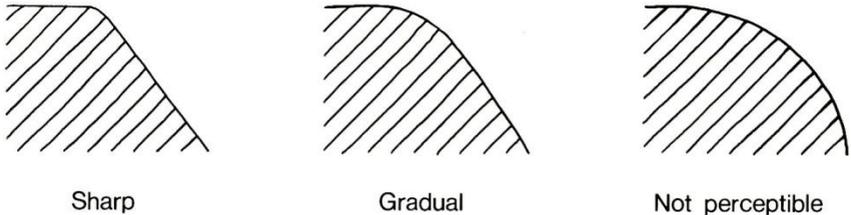


Figure 13. Guide to describing the break of slope – top (C. Spence 1994).

5.3.7 SIDES

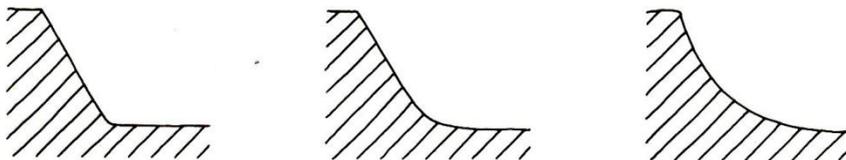
Describe the sides of the cut using the following terms:

Vertical, Convex, Concave, Stepped, or Mixed.

If you choose Mixed, you must elaborate on the sides of the cut in the Notes section.

5.3.8 BREAK OF SLOPE – BASE

Describe the degree with which the sides break into the base of the cut using the following terms:



Sharp

Gradual

Not perceptible

Figure 14. Guide to describing the break of slope – base (C. Spence 1994).

5.3.9 BASE

Describe the base of the cut with the following terms:

Flat, Concave, Sloping, Pointed, Tapered – blunt, Tapered – sharp, Uneven.

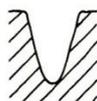
If you choose Uneven, you must elaborate on the base of the cut in the Notes section.



A tapered point



A tapered blunt point



A tapered rounded point



Vertical sides and a flat base

Figure 15. Guide to describing the base of a cut (C. Spence 1994).

5.3.10 ORIENTATION

This only applies to linear cuts. If linear, note the orientation of the cut in cardinal directions (N-S, E-W, NE-SW, NW-SE).

5.3.11 TRUNCATION

Does the cut have its original shape or has it been truncated (cut by) by another action/context? If so, describe what part is truncated and, if possible, state what has truncated it.

5.3.12 HARRIS MATRIX

See §1.4 for an introduction to the principles of the Harris Matrix and §5.2.10 for instruction on using the Harris matrix for deposits. Using the Harris matrix for cuts is very similar. The principle difference for cuts is that you are not asked to describe the differences between soil contexts as the cut is itself an interface between soil contexts. Note that cuts are expressed with ovals in the final Harris matrix produced for the site as a whole.

5.3.13 FILLED BY

This field asks for the context numbers of **ALL** the deposits filling this cut.

5.3.14 NOTES

This is your opportunity to put into words in the field anything you observe about the context you are recording and any other interpretations of the excavation. It is okay to be repetitive here if it is necessary to get the point across (to repeat information you entered into the data fields above) but do try to step beyond simple description and attempt more complicated interpretation. This is the best place to explain WHY you think the things you do about your context. It is not helpful or appropriate to treat this area as your personal diary – keep your notes professional.

For each cut please attempt to record the following information:

1. Any descriptive information relating to the fields above that needs elaboration or clarification.
2. How you came to recognize this cut based on the observations you recorded above.
3. What this cut cuts into (you will not have a context number for this deposit yet, but you should describe it well as you will need to add the context number(s) to your Harris matrix in the future when this deposit is excavated.)
4. Cuts of pits and trenches are important as the material from the fill inside and the deposits they cut are very good dating tools. Describe how this cut and its related deposits might aid the dating of this part of the site.
5. Any information about the excavation or revelation of this context that was not recorded in the data fields above.
6. Anything else you think is important, or any ideas you have about how this cut relates to the rest of the excavation.

If you want to add to these notes at any point after the initial composition in the field, you MUST state that they are ‘Later notes,’ date and initial them.

5.4 STRUCTURES

All contexts are classified as deposits, cuts or structures. Structures are purposely built features like walls, built floors, built roadways, hearths, and well heads.

On your recording sheet check the appropriate box to note whether your structure is **excavated** or **unexcavated**.

5.4.1 TITLE TAG

See §4.2.1.

5.4.2 CHRONOLOGICAL RANGE

If the structure you are recording is actually excavated, treat this field as you would for a deposit – see §5.2.2. However, many walls and other structures at Corinth are not excavated so that they may be preserved for display to the public. When this is the case, you can only date your structure based on the chronological ranges of stratigraphically related contexts. Ideally, this will take the form of foundation

trenches (see §2.5.2) and the fills they cut. However, if no foundation trenches exist for a structure, you must rely on other stratigraphic relationships and your Harris matrix, for example: does your structure cut any floors, pits or other contexts and thus post-date them? Are there any floors that run up to your structure and thus post-date it? Are there any deposits or other structures that overlie your structure and thus post-date it?

5.4.3 COORDINATES

Based on your measurements of the size and shape of the structure, determine the furthest North, South, East, and West that the structure extends. Your top plan will be useful here.

5.4.4 ELEVATIONS

Take elevations at several points on the structure, but only record the highest of the high and the lowest of the low in this field. The other measurements should be added to the top plan.

5.4.5 DIMENTIONS

Overall length, width and height of the structure, in meters.

5.4.6 MATERIALS

List all forms of building material used in the structure. If there are different materials and they are being used in different and purposeful ways (like if marble was only used on the corners or large stones only at the base of a wall) then please elaborate here.

Frequently used building materials at Corinth: *Not an exhaustive list*

limestone, sandstone, marble, andecite, conglomerate
roof tiles, diamond tiles, brick (fired), mudbrick, clay
plaster, hydroplaster
tesserae – stone, tesserae – glass,

5.4.7 SIZE OF MATERIALS

Measure several examples of each form of building material in the structure and list the average size for each type, in meters.

5.4.8 FINISH OF STONES

See illustration below. This describes the exterior surface of any STONES used in the structure and is not to be applied to other forms of building material. If there are no stones used, leave this field blank. Choose from the following terms:

Unworked, Roughly Hewn, Squared, Tooled Surface, or Mixed.

If the surface of the stones is tooled, describe the appearance of the tool marks in the Notes section. If you select Mixed, you *must* elaborate in the Notes section below. Often, a change observed in the masonry style or the building materials

used in a structure is evidence of a later repair or addition to the structure and so a new phase of the use of the structure. Make sure that this is not the case here – all repairs and additions must be recorded separately and given their own context number.

If it is a wall being recorded and the two faces are significantly different from each other, please select the Mixed option, and then describe each face in the Notes section, explaining the differences you observe.

5.4.9 MASONRY STYLE

See illustration below. This field is only applicable to structures built up from the ground (so not built roads or built floors or hearths or mosaics). There are two fields: one is a more general description of the way the structure was built. **Only if possible**, fill in the second field which is more specific to the Classical world and to Corinth. Select from the following general terms:

Dumped rubble (present in some foundations)

Uncoursed (no regular courses or regular horizontal alignment)

Random courses (courses of varied and random height)

Regular courses (courses of regular and consistent height)

Coursed

Mixed

Also state whether any of the following techniques are used in conjunction with the masonry style:

String course (a projecting course of tile, brick or stone to emphasize a junction or boundary)

Leveling course (a course of building material used to create a level surface upon which to continue building up the wall)

Quoins (corners) stressed

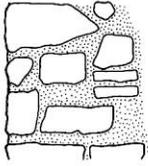
Revetment (wall surface faced with usually marble or other fine stone slabs)

If you select Mixed, you *must* elaborate in the Notes section below. Often, a change observed in the masonry style or the building materials used in a structure is evidence of a later repair or addition to the structure and so a new phase of the use of the structure. Make sure that this is not the case here – all repairs and additions must be recorded separately and given their own context number.

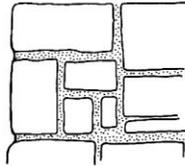
If possible, select from the following specific masonry terms:

cyclopean, lesbian, polygonal, ashlar

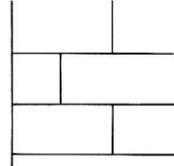
opus cemicium, opus incertum, opus mixtum, opus reticulatum, opus signinum,,



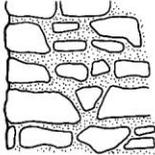
1 Random uncoursed



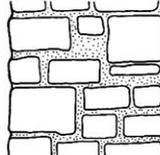
2 Squared random



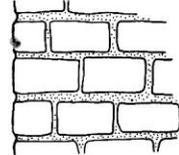
3 Ashlar



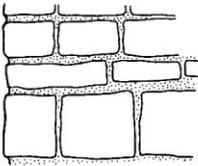
4 Random coursed



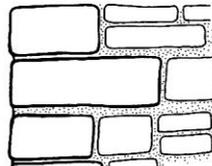
5 Squared, built to courses



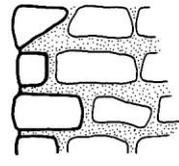
6 Regular courses



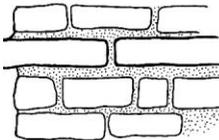
7 Uneven courses



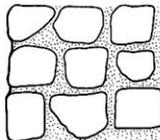
8 Quoins (corners) stressed



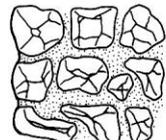
9 Quoins unstressed



10 A String



11 Fair face



12 Rough face

Figure 16. Diagram of stone finishes and masonry styles (C. Spence 1994).

5.4.10 BONDING MATERIAL

Describe the bonding material of the structure. Select one of the following terms: **None, Mud, Mud-Plaster, Plaster, Cement, Modern Cement (from modern restoration work).**

5.4.11 SPECIAL FEATURES

List any significant special features of this structure, like mason's marks, spolia, graffiti, or evidence for tools or quarrying methods used on stones (e.g. Lewis holes and surface treatments), arches or vaults, thresholds or windows, etc. **This is only a list**; describe these features fully in the Notes section.

5.4.12 HARRIS MATRIX

See §1.4 for an introduction to the principles of the Harris Matrix and §5.2.10 for instruction on using the Harris matrix for deposits. Using the Harris matrix for structures is very similar. The principle difference for structures is that you are not asked to describe the differences between soil contexts as the structure will obviously be very easy to distinguish from the surrounding soil. Note that structures are expressed with rectangles in the final Harris matrix produced for the site as a whole.

5.4.13 FORMATION/INTERPRETATION

This is a brief definition of your interpretation of the nature and function of the structure. You should explain in the Notes section how you arrived at this decision. This field will be useful in creating the Title Tag for this context. Choose from the following terms:

Wall – superstructure or Wall – foundation

Wall repair/addition

Built Floor

Built Road or Metalled Road (constructed with gravel or crushed stone)

Built Hearth

Well Head

Drain or Manhole

Stairs

Platform (or Stylobate)

Ramp

5.4.14 INTERNAL OR EXTERNAL STRUCTURE

This field will only be used if the structure being recorded is a wall. If it is a wall, state whether or not you are able to interpret the wall as external or internal (or if one face was internal and the other external). If you are unable to do this, explain why. If you are able to do this, site the evidence for this interpretation, (if necessary include comparisons to other walls or other contexts related to the one being recorded to make your case).

5.4.15 RELATED CONTEXTS

Briefly mention any and all related *structures* with their context numbers. Define the relationship – do they bond or not, are they physically connected or related by stratigraphy or building style? Briefly discuss the structure being recorded in the context of the greater building activities of this moment – is it part of a room, a

building, a city block? Is it part of a campaign of later refurbishment, remodeling or repair? Mention directly related *deposits and cuts* – floors, foundation or robbing trenches and their cuts – anything directly associated with the structure you are recording. This is a **list** of related contexts, use the Notes field to elaborate on these relationships and cite your evidence for them.

5.4.16 SIEVING

This field will only be used if the structure being recorded is subsequently excavated/dismantled. If so, treat all soil inside the structure as if it was a deposit. It will not receive a new context number as it is part of this structure. Describe the soil briefly in the fields provided. Soil from inside structures is ALWAYS 100% dry-sieved with 3mm mesh unless it is deemed necessary to take a sample for flotation, and then the rest is dry-sieved.

5.4.17 COINS

See §4.2.15.

5.4.18 FINDS COLLECTED

See §5.2.16.

5.4.19 NOTES

This is your opportunity to put into words in the field anything you observe about the context you are recording and any other interpretations of the excavation. It is okay to be repetitive here if it is necessary to get the point across (to repeat information you entered into the data fields above) but do try to step beyond simple description and attempt more complicated interpretation. This is the best place to explain WHY you think the things you do about your context. It is not helpful or appropriate to treat this area as your personal diary – keep your notes professional.

For each structure please attempt to record the following information:

1. Any descriptive information relating to the fields above that needs elaboration or clarification.
2. If this structure is to be excavated or if it will be left for presentation on site.
3. Any information about the excavation of this context that was not recorded in the data fields above.
4. Anything else you think is important, or any ideas you have about how this structure relates to the rest of the excavation.

If you want to add to these notes at any point after the initial composition in the field, you MUST state that these are ‘Later notes,’ date and initial them.

6 BURIALS & SKELETONS

Recording burials requires you to document each action that went into burying the individual(s) present in the grave. For example, the digging of the grave left the grave cut; a sarcophagus could have been placed in the grave next (or if the body was cremated it might have been placed in an ossuary before burial); the body followed (maybe already in a coffin); and possibly later the grave was dug out again and the bones of the skeleton were shifted around as part of a secondary burial ritual. Each of these actions is an individual context that requires individual recording so they can be incorporated into the Harris matrix of the site. Grave cuts, grave fills and sarcophagi should be recorded with Cut, Deposit and Structure sheets, respectively. Skeletons, be they articulated or disarticulated, have their own recording sheets.

Take soil samples for flotation from the fill of the grave – see also §6.12.

In certain complicated situations like a female skeleton with a fetus in position or a mass-grave, there might be multiple discernable individual skeletons in the same context. If this is the case, talk to the Director or the field director about how to record each skeleton best.

Bone Lot Numbers will be assigned at the end of the season if necessary.

6.1 COORDINATES, ELEVATIONS AND ORIENTATION

The coordinates should reflect the N, S, E and W extent of the skeleton. Use these to determine the **Maximum Dimensions** (L, W, Depth) of the skeleton and enter that information in the field below. Elevations should be taken at various points on the skeleton before and after removal (these should be recorded on your top plan), but only the **elevations taken on top of the skull and on the earth after the skull is removed** should be recorded in the Elevations data field. Using a compass, take a bearing from pelvis to skull; record the bearing and draw a North Arrow in the box provided in the Skeleton Diagram field.

6.2 TYPE OF BURIAL

This field asks for a very brief and simple description of the type of burial you are recording. Like Title Tags, keep this brief: “Cist/Pit”, “Pit lined with tiles”, “Cremation in urn”, “Bone Stack”, or “Inhumation in sarcophagus” is sufficient. Speak with the Director or the field director if you are unsure what type of burial you have.

6.3 GRAVE CUT & FILL(S)

These fields ask for the **context numbers** of the grave cut and any fills inside the cut. Please record context numbers only, not descriptions of these contexts (they will already have been described on their own context sheets).

6.4 SARCOPHAGUS/OSSUARY

Only enter information in this field if the skeleton was buried in a sarcophagus or some other kind of ossuary (like a ceramic vessel or a coffin). If the burial was in a sarcophagus or other built tomb, this should be recorded with a Structure sheet – enter that context number here. If there was some other kind of non-built ossuary, this item should be made a small find and may be inventoried in the museum. If it gets an inventory number, enter this information in this field. If you have either a sarcophagus or an ossuary, circle this term on the recording sheet in this field.

Wooden coffins were used at different periods at Corinth, but the wood rarely survives. However, often the presence of a coffin can be reconstructed by making careful note of where the coffin nails are arranged around the skeleton. Coffins (even if they survive only as nails) should be given a context number, incorporated into the Harris matrix, and recorded with a Deposit sheet.

6.5 TRUNCATION and DISTURBANCE

The principle of “Last In, First Out” means that when you record an individual skeleton, any later truncations or disturbances should have already been recorded and/or removed as individual contexts. The term ‘disturbance’ could be interpreted as something burial-related, like if your skeleton was disturbed by the deposition of a secondary burial in the same grave. But ‘truncation’ is later action that is not related to the burial activities of this particular grave and cuts or even removes part of the burial contexts, like a later wall being founded over part of your grave, or a later burial cutting your skeleton. If the skeleton has been truncated by later action, list the context number(s) of these actions in the ‘Truncation’ field. There is a larger field below on the recording sheet to briefly describe truncations and disturbances. If this space is not sufficient, continue your description in the Excavation Notes. Any disturbing natural action from roots or animals should be described in this longer field and elaborated on in Excavation Notes.

6.6 SKELETON DIAGRAM

Shade in the bones that are present at the time of excavation. Use a hashed line to show any truncation. Record the north arrow and compass bearing (taken pelvis to skull) in the box provided. Use the check-boxes to note whether the skeleton is **Articulated** or **Disarticulated** and a **Primary** or **Secondary** burial.

6.7 STICK-FIGURE SKETCH

This is just what it sounds like: a very crude stick-figure sketch of the body as it lies in the grave, expressing the position of the limbs especially. Save detail for the top plan, this is simply a thumbnail. If you are recording a secondary burial of a bone pile, do not bother to sketch this – your top plan will be sufficient.

6.8 HARRIS MATRIX

Like other contexts, a skeleton will be a distinct unit in the Harris matrix.

6.9 POSITION OF BODY PARTS

These fields are for articulated skeletons only. Detail the position of the body and its different parts in the appropriate fields. For the **Body**, note whether the skeleton is prone (face down), supine (face up), extended or flexed, or laying on left or right side. Note which way the **Head** faces and if it is propped by stones or other materials. If the body is twisted or half supine/half on its side, note this in the **Trunk** field. Note whether the **Arms** are straight or flexed, at the side, over the chest, on the pelvis, or under the body; and the position of the **Hands** (open or clenched, palms up or down, or if fingers are entwined or grasping an object, for example). Note whether **Legs** are extended or flexed, side-by-side or crossed (left over right or right over left), and the position of the **Feet** (pointing down, splayed to either side, etc.).

6.10 LIST IN SITU BROKEN BONES

List any broken bones that were broken *before* you attempted to remove them during excavation, that is, they were already broken before you revealed them through excavation. Use the check-boxes to note if the state of preservation of the bones is **Good**, **Fair**, or **Poor**. Use the following diagrams to identify the bones of an adult, a juvenile, or a Neonate.

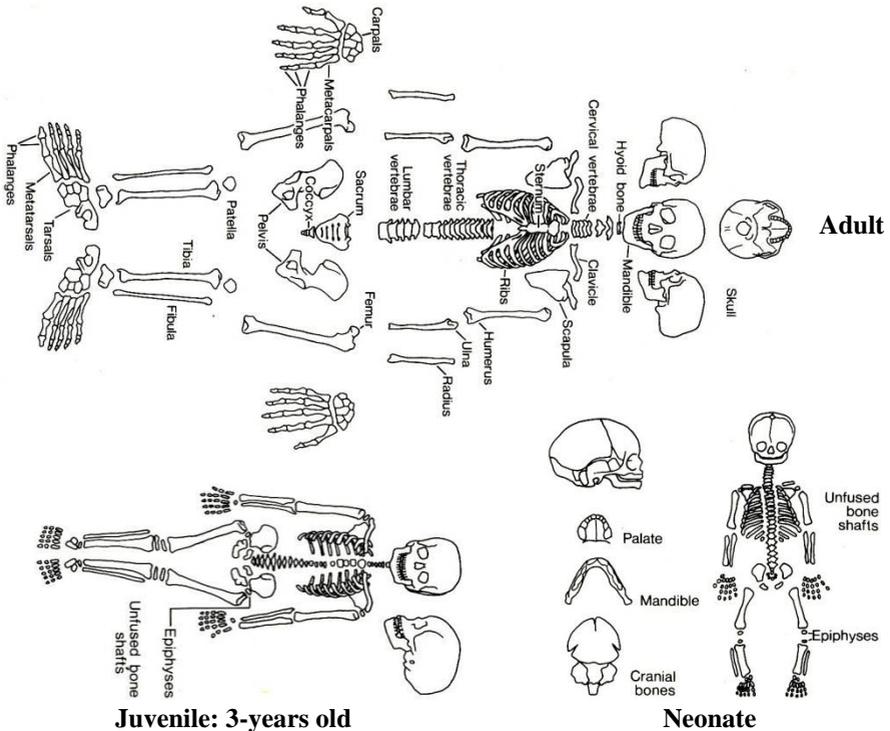


Figure 17. Diagram of skeletal components (C. Spence 1994).

6.11 ASSOCIATED OBJECTS

Note here the items directly associated with the skeleton, these will be the remains of any clothing and accessories on the skeleton or any grave goods deliberately placed in the grave at the time of burial. Do not list material that happens to be in the fill of the grave cut. If any of these items are inventoried in the museum, add these numbers to the record when you have them.

6.12 SIEVING AND SOIL SAMPLING

Consult with the Director and the field director before removing the skeleton. It might be fruitful to take several soil samples for flotation at different points on top of, beside and under the body to see if the remains of perishable grave goods can be detected in the soil and where they were placed on or around the body. Whatever is not sampled, should be dry-sieved 100% with a fine mesh. Be involved with the sieving and be careful that the sieving action is not too harsh that it damages any bone still in the soil.

6.13 SPECIALIST OSTEOLOGICAL DATA

These fields are filled in by an osteologist.

6.14 EXCAVATION NOTES

Use this space to more fully describe the state of the skeleton and the way it was buried; any disturbances or truncation; the way the skeleton or the sarcophagus/ossuary is situated within the grave cut; any remains of burial ritual or practice; describe complicated burial situations, like a female with fetus in position or multiple burials in the same cut or multiple cuts. Any of the data fields above that needed elaboration can be discussed here.

6.15 DRAWING SKELETONS

See also §3. The site architect will produce a professional plan of each burial, but each skeleton also needs a measured top plan. As skeletons are less easy to draw, consider using a drawing frame – talk to the architect or the field director for advice if needed. Include the grave cut in your drawing of the skeleton (this can be traced from the top plan of the fill of the grave that will have already been partially recorded). Also include clothing, accessories and grave goods in the drawing of the skeleton.

7 FINDS

7.1 FINDS LABELS IN THE FIELD

You will be given wooden tags with which to label the baskets and boxes used to collect material excavated in each context. Each supervisor or supervisor pair has a different color. On the tag write in pencil: the area of excavation (**Nezi** or **N of Nezi**), the **context number**, the **date** and the **type of material** being collected (pottery or bone/shell). Other finds (like coins, glass, metal objects, etc.) are

collected separately by type in envelopes (or boxes, if needed) and are taken to the museum for specialized cleaning, analysis and recording.

7.2 POTTERY

This is the most prolific find on site and almost every deposit and excavated structure will yield pottery. Collect large amounts of pottery in a basket and small amounts in a box. All pottery is taken to Pietri to be washed and laid out to dry. The foreman is responsible for this task. Pottery can stay out on site overnight if the basket used to collect it is not yet full and the context is still being excavated. Make a note on your recording sheets in the field provided how many baskets and boxes of pottery were sent to Pietri from any single context as this will help you at pottery reading to collect all the pottery from one context on the same table to be read at the same time.

7.3 UNWORKED ANIMAL BONE AND SHELL

Collect unworked animal bone and shell from any given context together in the same box. The bone/shell from this context will be taken to Pietri when the pottery is – the foreman is responsible for this task. Contexts with higher quantities of bone should be sieved 100%. With contexts like pits, wells, kitchen floors, garbage dumps, and house destructions, take special care to collect bone and shell by sieving. Be sure that the bone will withstand the mechanical process of sieving - waterlogged horn cores are very fragile. We are looking for bones of different size, ranging from rodent and sprat up to buffalo, therefore different sieve sizes should be considered.

Choose the appropriate sieve(s) and note its size and the percentage sieved on the recording sheet. It is a good idea to consult with the Director or the Field Director.

7.4 ROOF TILES

Small fragments of roof tile are a frequent inclusion in deposits at Corinth and are of little value in dating the context. Whole tiles are more informative, or tiles that have an edge or preserve the shape of the tile. If you have a fall of roof tiles from a destruction or have a deposit of dumped destruction debris in a pit, well or cistern, collect the tiles in the field. Weigh them, note whether they are Sicilian (round in profile) or Corinthian (flat in profile – see §11.4.1), describe them (if they are pan or cover tiles, painted or not) and give percentage of each by weight in the Notes section of your recording sheet. Lay out broken tile fragments from destruction debris to look for joins. If a complete profile can be reconstructed, sketch the tile and give its dimensions (L x W x Th x H). All whole tiles should be taken to Pietri with the pottery from the context they come from.

7.5 COINS

See §5.2.15.

Coins are taken to the museum and registered with the Assistant Director after work ends each day. Each coin is given a sequential and unique number to aid in future study. Coins are cleaned by the conservator and analyzed by the numismatist; their findings are given to you later for recording on the appropriate context sheet and in the database.

7.6. “SMALL FINDS”

Small finds are anything man-made recovered from the excavation that is NOT pottery, unworked animal bone/shell, roof tiles, or coins. Mostly small finds will be glass and small objects made of metal or worked bone. Collect each type of find together in a separate box or envelope (metals collected together, glass all together, etc.) and label the boxes and envelopes with the area of excavation (Nezi or N of Nezi), the date, the context number from which the material came and the type of material it is. **All small finds must go to the museum at the end of every single day** – they cannot be left out on site even if they come from a context that is still being excavated at the end of the day. Wall plaster should be collected separately and sent to Pietri for counting and weighing there.

8 EXCAVATION SUMMARY REPORTS

At the end of each three-week session, all supervisors need to collaborate to create a summary of the findings of the excavation in their appropriate areas. Most supervisors will be working as a team to summarize the open area excavation as a whole (Nezi), while some supervisors might be recording the excavation of the contexts associated with a single room or other feature and this part of the excavation will be written up separately (N of Nezi). New summaries build upon the summaries of the previous excavation season and can simply be updated as needed. Summaries are organized chronologically and are meant to give an overall impression of the excavation – the high points – and not to be a regurgitation of every context recorded (soil descriptions NEVER appear in a Summary Report, for example). There are example summaries from past seasons on hand in Hill House for consultation. It is the responsibility of the field director to see that summaries are composed and to request corrections if needed. These documents will be uploaded to the database and become part of the permanent archive of the excavations.

All Summary Reports must be accompanied by an up-to-date Harris matrix produced on the computer and annotated with chronological markers and any other useful information as needed (see §1.4 and §5.2.9). This document will also be checked by the field director.

9 POTTERY READING

9.1 SORTING

Every afternoon and on Saturdays each supervisor is responsible for sorting the pottery from the contexts they recorded in the field. Even if your material is already sorted, others will appreciate it if you help them with theirs. Instruction is given on pottery types and sorting procedures at the beginning of each excavation session and your knowledge and grasp of the material will increase with practice each day.

Separate the decorated/fine wares from the course wares from the cooking wares. Separate out any diagnostic sherds (rims, bases, handles). Do a finer sorting when you are more confident with the different pottery types. Pull aside anything that looks unusual and ask the Director about it during the reading.

9.2 READING

The Director is responsible for reading your pottery and will tell you what information to record in the database for each context as well as give you the Chronological Range of your pottery. As far as possible, standardized vessel forms are used to identify pottery but inventory numbers and published references may also be used.

9.3 THE POTTERY DATABASE FIELDS

Deposit and Structure recording sheets have pottery fields associated in the database for the recording of the pottery at pottery reading. Since the pottery from many contexts is eventually discarded or partially discarded these records are an essential part of the excavation archive. The Director will dictate what information is entered into these fields and it is the responsibility of the student who recorded the context in the field to record the pottery at the reading. Enter both the pottery date and whether the pottery is saved, partially saved or thrown on the context sheets as well as in the database. At the end of the reading of each context the Director must tell you whether to Save or Throw the pottery. This decision is based on the material itself and on the stratigraphic relationships of the context to the rest of the site.

9.4 SAVED AND THROWN POTTERY

Saved pottery is counted and weighed and put aside for later consultation. This pottery needs to be put in a tin with a wooden label marked 'Saved.' **You must note why the pottery is being saved (ask the Director)**; is it for mending, or for lotting or to see how things shape up stratigraphically as more of the site is excavated? Saved status is noted in the database and on the wooden tag. Pottery can also be Partially Saved (the rest of the context is then Thrown).

Pottery is Thrown when the Director has retrieved all useful information from any given context and it is of no further use. Thrown status must also be noted on the database and on the wooden tag. After weighing and counting Thrown pottery, put it in a tin and place it on the shelves at Pietri, it will be reburied later.

9.5 POTTERY WEIGHTS AND COUNTS

Enter the counts and weights of sherds by category (course, semi-course, fine and cooking) for the entire context in the Original column. If pottery is wholly or partially Saved, you need to separate out the Saved pieces and weigh and count these separately – enter these counts and weights in the Final column.

9.6 “GOOD THINGS FROM BAD PLACES” (GTs)

This is a special category reserved for particularly nice or otherwise interesting finds that were not found in their primary context, that is, they have been disturbed since their original deposition in the ground and are chance finds in another context. GTs do not actually tell us anything about the context they were found in, but we don't want to Throw them because of some special quality they have. GTs get weighed and counted with the rest of the context and that information is entered in the Original column. GTs need to go to the museum after pottery reading. Make sure to check the GT box next to this object(s) in the database.

10 LOTTING

In conceptual terms, a 'Lot' is a group of individual contexts that can be meaningfully grouped together as an archaeologically understandable feature, like a 'pit' or a 'floor' or a 'destruction'. In practical terms, a 'Lot' is how finds from these features are organized and stored. 'Lotting' is the process by which you, the field director and the Director decide which material is to be saved and permanently stored from the excavation. This process takes place at the end of the excavation season.

You should keep a careful record of what contexts have been saved and what contexts have been thrown during each pottery session with the Director, both in the database and on the context sheets. The next step is to organize the contexts that have saved pottery into meaningful stratigraphic and historical events. For example the contexts that made up the fill of a pit or a floor level or a foundation trench. You should use the Harris Matrix which you have been working on all season to help create lots from your contexts.

Lotting example 1:

76 is the floor associated with the N-S wall

78 is the fill of the foundation trench for the N-S wall covered by a floor (76).

In terms of lotting, these two contexts, although related by their association with the same building, should be kept separate as two different phases of the history of

the building (i.e. the construction and the use), and therefore also as two different lots.

Lotting example 2:

48 is destruction debris consisting mostly of tile

50 is destruction debris consisting primarily of mudbrick, 50 is beneath 48

52 is the clay floor beneath 50.

Contexts 48 and 50 can probably be understood as two contexts created by the same destruction and part of the same phase of the history of this building— these will be stored as a single lot. These are lotted separately from the floor (52), as it is not part of the phase of destruction, but part of the use phase of the building.

Once you have organized your saved contexts into potential lots, discuss them with the field director and the Director. At this point the Director will make final decisions about what pottery will be lotted and the field director will assign lot numbers. All pottery within a single lot is then labeled with the lot number and placed on the storage shelves at Pietri. Note that although contexts may be assigned to the same lot the pottery from different contexts is NEVER physically combined but is always stored separately. Any small finds that belong with lotted contexts are stored with the pottery.

When you have been given your lot numbers, add them to the necessary database entries and the context sheets. Previously saved pottery that was not put into a lot should be marked as thrown. For pottery that was lotted, the “all held” button should be clicked in the database so that the held boxes are checked beside each read piece. In the comments field below weights and counts, the Lot number should be recorded.

11 INVENTORYING IN THE MUSEUM

11.1 POTTERY

11.1.1 DIMENSIONS

Height = H; Diameter = D; Thickness = T; Maximum = max A. If full profile preserved: Height = Actual

If much of profile preserved: Height (in so far as preserved) = preserved
Diameter foot,

Diameter max. (= body, if greater than rim/lip)

Diameter max lip/rimB. If a fragment, and orientation clear, then take:

Height

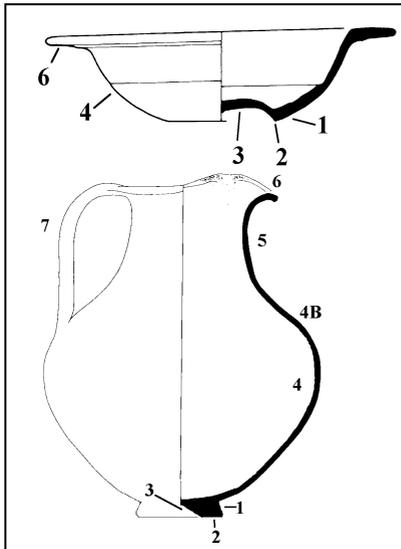
Width

Thickness, if unusual

If a fragment, and orientation unclear, then:

MPDim = maximum preserved dimension
In general, all dimensions are considered maximum and do not need to be specified as such, unless you are trying to distinguish between two dimensions. E.g., if a handle projects above a rim, you might want: H00.000 (rim) H00.000 (max)

11.1.2 DESCRIPTION: Use the illustration along with the text that follows:

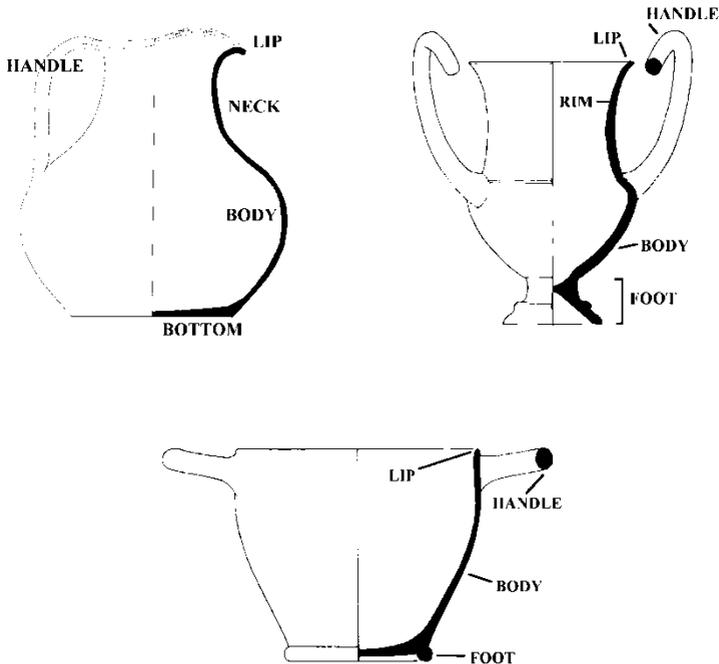


Description goes from the bottom up, outside first, then in, if significant. **Start with what the object is** “Cup with / plate with...”

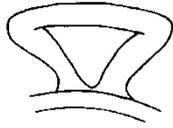
Shape only (not decoration or state of preservation), in following order:

1. Foot
 2. Resting surface or bottom, if no foot
 3. Undersurface describe whether flat, convex, nipped, etc.
- For descriptions of Foot, resting surface and bottom use terms illustrated in section 6.1.3
4. Body – use terms shown in section 6.1.3
 - 4B. Shoulder, if distinct from body
 5. Neck, if a closed shape
 6. Rim/Lip: every vessel has a lip: is the upper edge; not every vessel has a rim: it is an articulation or thickening of the mouth of the vessel – use terms shown in section 6.1.3
 7. Handle– use terms shown in section 6.1.3
 8. References to parallels for shape.

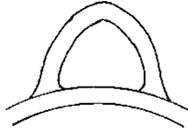
11.1.3 STANDARD TERMS FOR DESCRIPTIONS



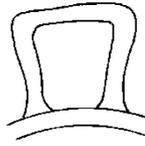
HANDLES



Triangular



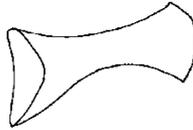
Loop



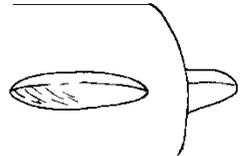
Horseshoe



Reflex
(with returns)



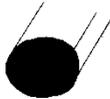
Spool



Lug

HORIZONTAL

VERTICAL



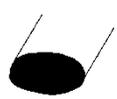
Round



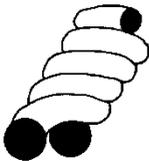
Strap



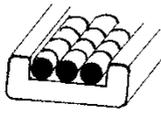
Spined



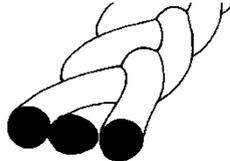
Oval



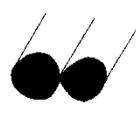
Twisted



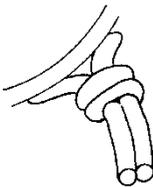
Corded



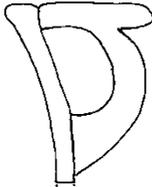
Braided



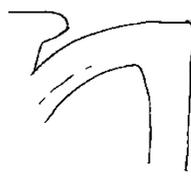
Double round



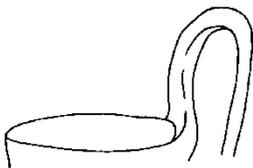
Knotted



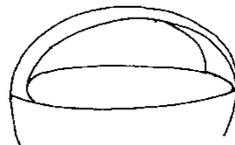
Spur



Horned



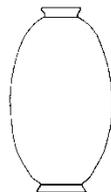
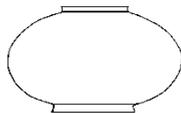
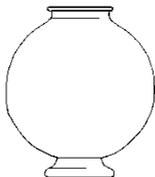
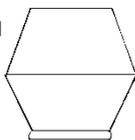
High swung



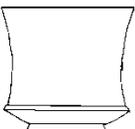
Basket

FORMS

Biconical



In two degrees

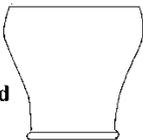


Spherical

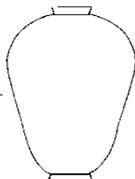
Globular (not ovoid)

Globular (not ovoid)

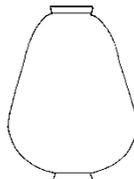
With compound curve



-m-



-m-



-m-



Ovoid (max. d. above or below median of body)

Cylindrical

Plastic

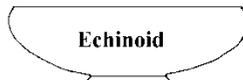


Hemispherical

Flaring walls

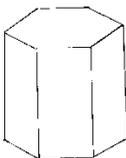


Straight

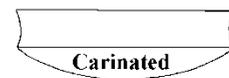


Echinoid

Faceted



Concave



Carinated

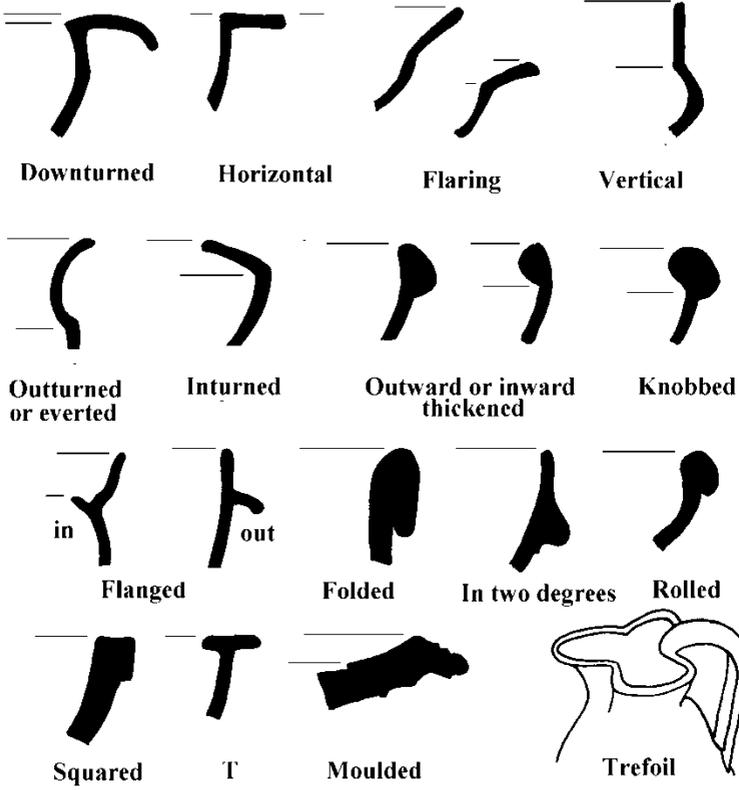


Convex

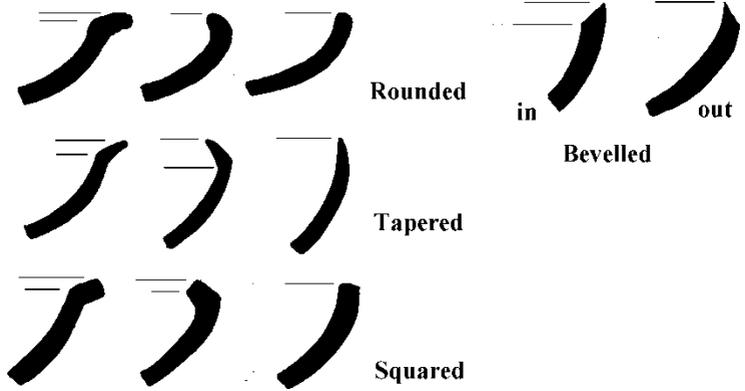


Horizontal

RIMS



LIPS



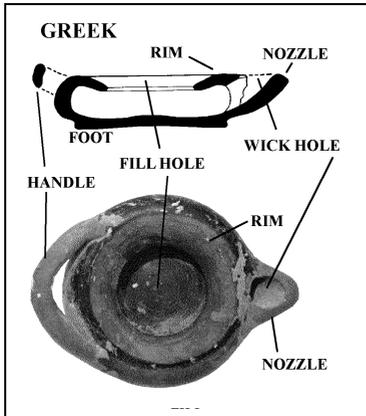
Flaring Inturned Vertical
 (see also downturned, outturned and horizontal)

11.1.4 DECORATION

From bottom up, outside first, then in if significant. Or, for medieval pottery, where important decoration of open shapes on interior, interior first, then exterior.

1. First, grooves or relief decoration: e.g., grooves, wheel-ridging, combing, fluted
2. Glaze/slip: glaze generally used for black color on pre-Roman pottery, or for vitreous Byzantine decoration; slip used rather than glaze for Roman pottery.
3. Painted decoration (note can also have burnishing)

11.2 LAMPS



11.2.1 DIMENSIONS

1. Height to rim
2. Max. Height = Height to handle, if handle extends above rim.
3. Length: from tip of handle to tip of nozzle
4. Diameter of foot, rim

11.2.2 DESCRIPTION

First, Mold or hand made then general type, then:

1. Foot or bottom
2. Body
3. Rim
4. Disc (if Roman)
5. Fill hole
6. Nozzle (and air hole, if Late Roman), wick hole
7. Handle

11.2.3 EXAMPLE DESCRIPTIONS

Greek: lamp with vertical ring foot, deep convex body, flat rim, large fill hole, long nozzle, flat on top with small wick hole at tip. Horizontal strap handle.

Roman: flat bottom, echinoid body, narrow rim, deep concave disc with three fill holes, small air hole at base of short U-shaped nozzle, small wick hole, vertical lug handle, pierced and grooved.

11.2.4 DECORATION

1. Relief or impressed, if it exists
2. Slip/glaze.

11.3 FIGURINES, STATUARY

11.3.1 DIMENSIONS

Height = H; Length = L; Width = W; T = Thickness

Only what would be anatomically important:

Height, Height head, Width shoulders, etc.

If a base, length, width, height.

11.3.2 CONDITION

In somewhat general terms, e.g., Six joining frags., complete from neck to feet, missing right hand; deep gash over right knee; surface stained purple.

11.3.3 MATERIAL, if marble: not type of marble, unless you are an expert, but color, size of crystals, colored or micaceous veins, if exist, laminating fracture if exists.

11.3.4 DESCRIPTION:

1. General first: Sex, Nude or Draped, Pose, Position of legs, arms,
2. Then, specific from top down,
e.g. Female figure, nude, standing with weight on right leg, left turned out, arms at side. Hair worn long, with spirally curls framing forehead, square face, low forehead, thick straight eyebrows, deepset eyes, short nose, pursed lips, short fat neck, etc.
3. If draped, then drapery after head, again, going from general to specific:
e.g. Wears a frilly chiton that covers upper arms, over which a diagonal himation, hung from left shoulder, wrapped around waist to hang over extended left forearm. Deep vertical folds fall to feet.
4. Last, plinth or base
5. Tooling: i.e., use of claw chisel, flat chisel, drill
6. If a figurine, whether hollow or solid, handmade, vs. mould made.

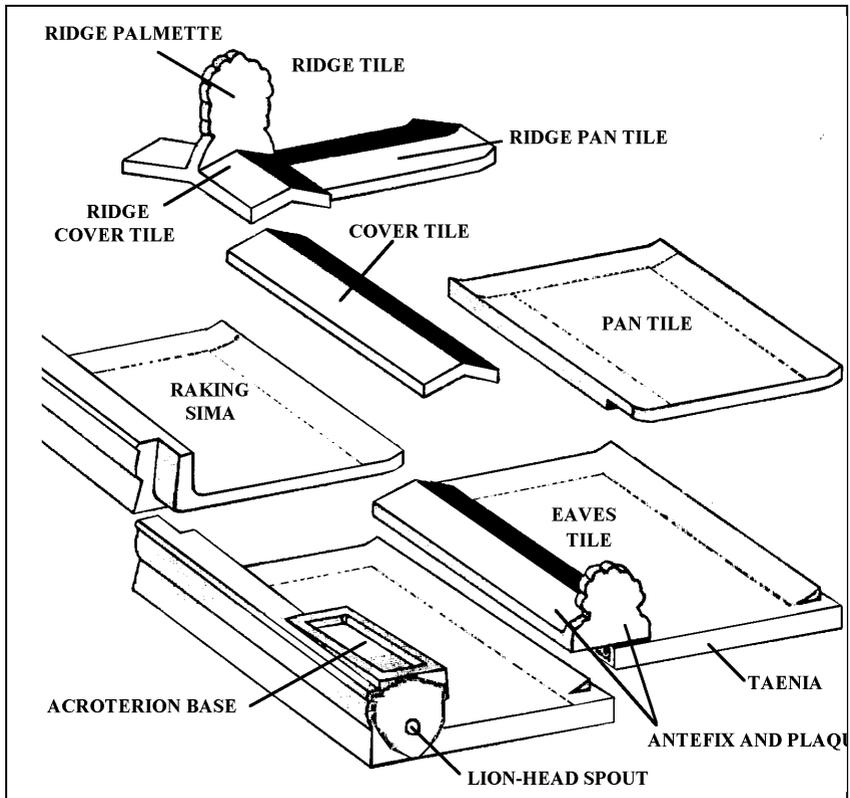
11.3.5 DECORATION: Painted decoration only, again systematically presented.

11.4 ARCHITECTURAL TERRACOTTAS

Look at the reconstruction of the south Stoa roof on the site:

11.4.1 PAN AND COVER TILES

- Classical Corinthian pan tile: flat floor, triangular sides; undercut at one end for overlap to next tile.
- Corinthian cover tile: pentagonal in shape.
- Laconian pan tile: shallow curve with flattened edges.
- Laconian cover tile: semi-circular in section
- Roman Corinthian pan tile: Flat with vertical edges along two long sides.



11.4.2 EAVES TILE: Is bottommost pan tile, at edge of roof; decorated on outer face and underside (= soffit)

11.4.3 ANTEFIX: Is the decorative plaque that covers the bottommost cover tile; usually takes the form of a palmette. The antefix that runs along the ridge or apex of the roof is called the ridge antefix.

11.4.4 SIMA: Is the gutter that initially runs down either facade along the edge of the roof and turns the corner, ending in a lion-head spout, before giving way to decorative eaves-tiles and antefixes. along the flanks.

In the 4th century B.C. the sima extends along the long sides too. Distinguish between the raking sima (facade) and lateral sima (flanks)

11.4.5 ACROTERION: The decorative element that falls at the apex of the roof and at the corners. Can be simply a floral motif, or a piece of sculpture.

11.5 INSCRIPTIONS

11.5.1 DESCRIPTION: describe the form of the block - thin, thick, plain, decorated with mouldings ? Also describe the treatment of all preserved stone faces.

11.5.2 TOOLING: Punch (= very coarse point); point-dressed; claw-chisel; smooth; polished; anathyrosis

11.5.3 TEXT: given under "Writing": language, letter Ht., distance between lines; if have finished edges of stone, then give distance between edge of block and start of text.

11.6 FABRICS

Color, hardness, feel and fracture all relate to the entire sherd rather than its components.

11.6.1 COLOR: The color of a fresh break should, where possible, be described using a Munsell Soil Color Chart or a CEC chart in natural light. Munsell color notations may seem to be inappropriate but they too follow a system that bridges the cultural idiom of subjective color description. "yellowish red" defines a specific hue, value and chroma range within the scale which "buff" does not.

Be careful in matching colors but remember that different people do not have the same capacity for matching a sample to the tabs illustrated but nearly everybody is capable of placing a color approximately within the three-dimensional scale.

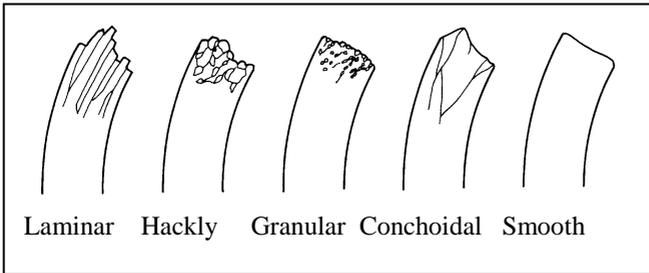
11.6.2 HARDNESS: Based on a modified Moh's scale and can be made with a fingernail and knife tip. This is actually not a hardness test but a test of cohesiveness. Firing and soil conditions both affect mineral cohesion; a sherd from the forum at Corinth may be extremely "hard" while a sherd of the same fabric from the Demeter Sanctuary can be a extremely soft.

Very soft	fingernail scratches easily
Soft	fingernail scratches
Medium hard	penknife scratches
Hard	penknife just scratches
Very hard	penknife will not scratch

MODIFIED MOH'S SCALE

11.6.3 APPEARANCE

The appearance of a fresh break **IS** an indicator of hardness and content of the ceramic body and may be suggestive of the technology used. Granular fractures tend to have numerous large inclusions while smooth breaks tend to have few or no inclusions. **Laminar** - platy, stepped appearance, **Hackly** - large angular irregularities, **Granular** - fine, more rounded irregularities, **Conchoidal** - large, smooth, angular facets like chert, **Smooth** - even, without apparent irregularities.



APPEARANCE OF BREAK

11.6.4 FEEL

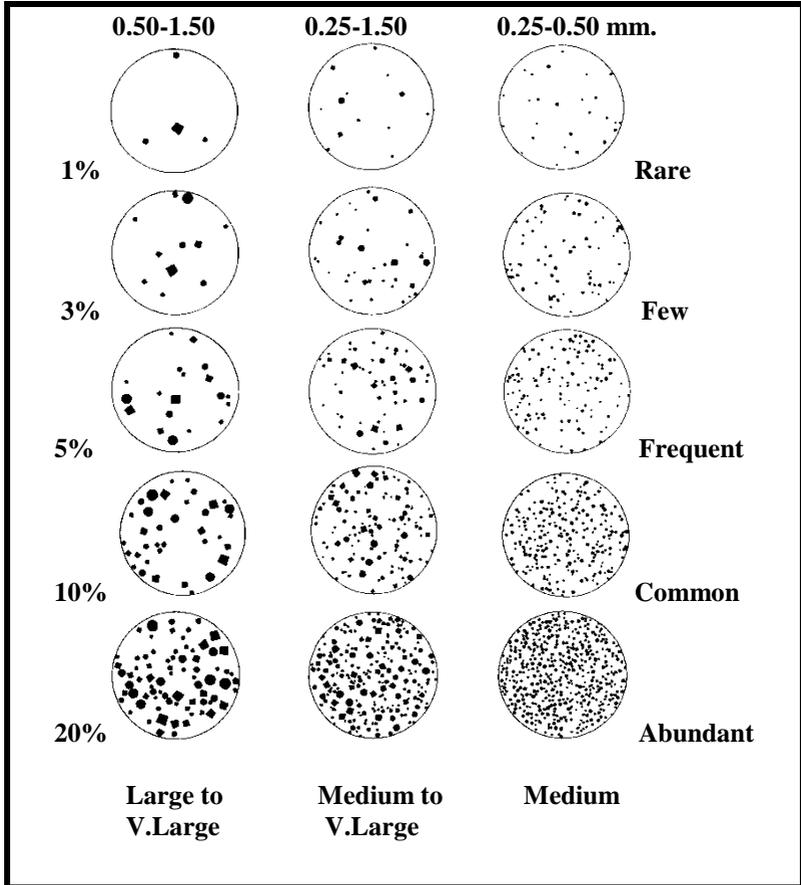
A description of how the surface, as opposed to the break, "feels" is useful and complements a description of the appearance. The terms suggested can be used in conjunction with each other; it is possible for a sherd to be both harsh and powdery (as Late Roman Palestinian amphoras), smooth and greasy (Middle Bronze Age "Minyan Ware") or rough and greasy (Early Bronze Age "Talc Ware"). It too is an indicator of cohesiveness and content.

Harsh	Abrasive surface
Rough	Angular irregularities present
Smooth	No irregularities discernible
Greasy	Slick, almost slippery surface
Powdery	Grainy feel often leaving powder on finger

11.6.5 INCLUSIONS

11.6.5.1 FREQUENCY: A verbal estimate of the frequency of inclusions can be made using a frequency chart). Obviously inclusion size affects the perception of frequency. A size estimate, with the assistance of a modified Udden-Wentworth Scale, and a frequency estimate should be indicated for all inclusions contained within the new break before going on describe the size and frequency of different individual types of inclusion.

FREQUENCY CHART:

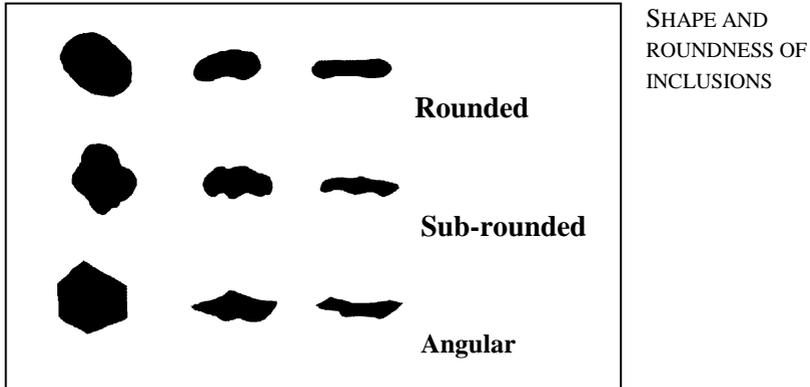


MODIFIED UDDEN-WENTWORTH SCALE:

V. Large >1mm. (very coarse sand); **Large** 0.5 <> 1.0mm (coarse sand); **Medium** 0.2 <> 0.5 (medium sand); **Small** 0.1 <> 0.2 (fine sand) **Fine** < 0.1 (very fine sand).

11.6.5.2 SHAPE

Description of inclusion shape is assisted by a chart illustrating gradations from rounded to angular grains on one axis and from spherical to platy on the other. Remember that the observed surface presents only two dimensions of a three dimensional object, thus a cylindrical object may appear tubular, spherical or oval in cross-section. Only a simple subjective color notation, for instance brown or white, qualified by adjectives such as milky, vitreous or glassy, is necessary.



11.6.5.3 IDENTIFICATION: Inclusions are usually too small to identify with any certainty in a hand specimen and it cannot be stressed enough that an accurate description is of far greater value than a wrong identification. The question of identity can be begged without dishonor but a **qualified guess** may be tentatively made **after description** if the identity is fairly sure. If the latter course is taken a pipette, a small bottle of 5% hydrochloric acid or vinegar, and a steel dress-maker's pin can be useful accessories.

Table for inclusion identification:

I. Inclusions that react with dilute hydrochloric acid

When dilute (5%) hydrochloric acid is put on these inclusions they will effervesce. Care should be taken so as to observe that the reaction is taking place on the inclusion rather than a reaction involving the surrounding clay matrix which may be of a calcareous nature.

1. Long curved structures, sometimes an observable lamination = shell
2. Spherical or slightly ovoid, sometimes concentric banding = ooliths
3. Inclusions irregular to rounded = limestone
4. White or clear vitreous inclusions,

sometimes rhomb-shaped = calcite

II. Inclusions that do not react with dilute hydrochloric acid

These inclusions can include mineral and rock fragments. The classification is divided into light and dark colored inclusions.

A. Light colored minerals:

1. Glistening flakes = mica
2. Clear/white vitreous grains, very hard = quartz/quartzite
3. Aggregate of white vitreous grains = sandstone
4. Dull white grains or rhombs, medium hard = dolomite
5. Dull milky white to orange/pink grains, hard = feldspar
6. Range of colors, light to dark, very hard, can show conchoidal fracture = chert

B. Dark colored minerals

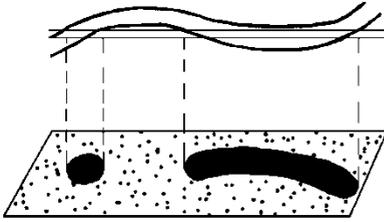
1. Glistening flakes = mica
2. Range of colors (Brown/grey/red), usually slightly elongate and subangular = mudstone or grog
3. Black grains = e.g. Fe-Ti oxide, ferromagnesian silicate, rock fragment
4. Range of colors, light to dark, very hard, can show conchoidal fracture = chert

III. Heterogeneous Inclusions that do not react with dilute hydrochloric acid

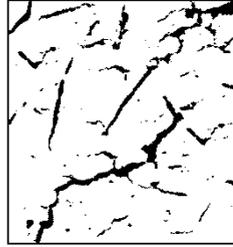
1. Composed of a number of grains, variable colors = rock fragments
(It may be possible to identify these further if the grains are large enough).

11.6.6 VOIDS. Voids can be confusing for the non-specialist, especially when it comes to differentiating between vughs, vesicles, channels and chambers. If they can be seen using a hand lens, they are probably vughs or vesicles. Some idea of the percentage of the visible surface area made up of voids, expressed verbally rather than numerically, is useful and uncomplicated. The orientation of voids relative to the surfaces of the pottery should be recorded, for example; parallel, inclined (approximate angle if possible), no preferred orientation.

1. Thin elongate voids = planar voids
2. Smooth, spherical voids = vesicles
3. Rounded voids = cross sections of channels
4. Irregularly shaped voids = vughs (divide into large [2-3 mm] and fine [less than 1 mm long] scale)



Channels



Planes

11.6.7 POROSITY. An estimation of porosity can be quantified with the help of a domestic oven. The sherds are heated at 105°C for an hour and weighed dry of unassociated water. They are then immersed in water for 24 hours and reweighed after having dried the surface. The difference in weight represents the water retained in the open pores and can be expressed as a percentage of the dry weight.

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