

## Divisions of Archaeology and Historic Preservation

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### Fieldwork Guidelines for Cultural Resource Investigations

#### I. Introduction

##### A. Application

- 1 The fieldwork standards are developed primarily to address Section 106 projects and reports that are submitted to the State Historic Preservation Office (SHPO) for review and comment. Other reports (non-106) that are submitted to either the Division of Historic Preservation (DHP) or the Division of Archaeology (DOA) for review and comment are expected to meet these standards. Other types of projects, such as thesis or dissertation work, or grant-funded studies, are encouraged to consider these standards in developing their project but it is recognized that these standards may not be applicable in some respects for those studies.
2. The primary goal of the standards is to ensure adequate information is obtained on the presence, absence, and eligibility of cultural resources within a project area such that federal agencies, SHPO, federally recognized American Indian Tribes (Tribes), and other interested parties can be confident that they are appropriately considered under the aegis of the National Historic Preservation Act (NHPA) and the National Environmental Policy Act (NEPA).
3. The standards provide guidance to clients, agencies, and contractors on what the Divisions consider acceptable fieldwork strategies and procedures.
4. The standards provide the framework through which the submitted reports will be reviewed, and ensure that staff will provide consistent reviews of those reports.
5. The standards also ensure that Division staff provide consistent advice to clients, agencies, and contractors concerning fieldwork strategies and methods.
6. **Clients, agencies, contractors, and researchers are strongly encouraged to consult with DOA/DHP to discuss strategies, methods, and goals prior to, and during fieldwork, to determine the most effective means of identifying and assessing cultural resources. DOA/DHP will consider deviations to the field standards described below on a case-by-case basis. Agreed-upon deviations must be documented in the report.**

##### B. Defining the Project Area (PA) or Area of Potential Effect (APE)

Defining the APE is the responsibility of the appropriate federal agency in consultation with SHPO and Tribes. In some instances however, projects are undertaken prior to the involvement of the federal agency and the delineation of an APE. In these instances, the PA becomes the operational area, and the DOA/DHP consider the following guidelines applicable for defining the PA:

1. For archaeological resources, the PA is the area of potential ground-disturbing activities.
2. For standing structures, the APE may be larger than the project area boundary, depending on the nature and scale of the undertaking. The APE must include areas where indirect effects

are possible, taking into consideration topography, view sheds, noise and vibration, traffic patterns, and other factors which have the potential to effect historic properties. |

3. For Traditional Cultural Properties (TCP's), consultation must be undertaken with the appropriate Tribes to determine properties of concern to them. In addition, prior to or during fieldwork, reasonable and good faith efforts should be undertaken to identify any group that may have a TCP on or near the project area that could be directly or indirectly impacted by the proposed project. The scope of that search is project-dependent and should be determined in consultation with the federal agency and SHPO. Further information on identifying and evaluating TCPs can be found in Bulletin 38, Guidelines for Evaluating and Documenting Traditional Cultural Properties, National Park Service, and on the Advisory Council for Historic Preservation's website.

#### C. Archaeological Site Forms

The DOA will assign state site numbers when a new or updated site form is accepted as final. The DOA requires that all new and updated sites forms for a given project are accepted as final before the draft report is submitted. Further information on site forms and the review process can be obtained by contacting the DOA Site Files Manager.

## **II. Cultural Resource Assessments**

Assessments can be a useful planning document to assist clients in developing projects through the Section 106 process. Preparing a thorough review of the environment, physical setting, cultural history, previous archaeological investigations, and known standing structure and archaeological sites within a project area provides a framework that identifies areas of higher and lower site likelihood for clients. This review can also include a recommended APE and a research design to guide future investigations. Undertaking an on-the-ground inspection of the project area to aid in the description of the physical environment, land use patterns, and potential for cultural resources is appropriate. If any field work to identify new archaeological sites, standing structures, or TCPs, or to relocate previously recorded sites or structures is undertaken, the project should be approached as a Phase I project and reported accordingly.

A Cultural Resource Assessment should be prepared by a professional archaeologist familiar with the region and its pre-contact and post-contact history. As effect determinations are not being made, the archaeologist does not have to meet the Secretary of the Interior's standards (SOI).

### **III. Phase I Survey – Standing Structures**

#### **A. Survey Goal**

The goal of the Louisiana Historic Resource Inventory (LHRI) Survey is to capture information about above-ground resources that may be eligible for the National Register within and adjacent to a project area. These resources may include buildings, structures, objects, and districts. For the LHRI survey, the PA and the APE may be different depending on the nature of the project.

1. All above-ground resources at least 50 years old within the APE (direct and indirect) must be evaluated. These resources must be photographed and recorded using the LHRI form. The DHP is responsible for issuing all survey numbers for the LHRI Survey program. Each resource must also be evaluated for National Register eligibility. Evaluation must be completed by an SOI-qualified Architectural Historian, Historian, Architect, or Historic Architect, and must follow the Guidelines for Assessing the Eligibility of Resources for the National Register. The Determination of Eligibility (DOE) must be submitted to SHPO for concurrence. SHPO will review the DOE to ensure that the guidelines were followed and all eligibility criteria were adequately addressed. The final affect determination must be based upon the eligibility of the property for listing on the National Register.
2. For any above ground resource within the PA/APE which is determined to be eligible for or listed on the National Register, an effect determination must be made. This determination must be submitted to SHPO for concurrence. Adverse effects, once concurred upon, must be resolved through the Section 106 consultation process.
3. Each recorded structure will be assigned a unique LHRI survey number. In order to receive the unique numbers, a table must be submitted to the SHPO which includes the property information and geographic information (latitude and longitude). SHPO staff will return the spreadsheet back with the assigned numbers. Shapefiles may be submitted in lieu of or addition to a spreadsheet, and will be required with the submission of the final digital pdfs of the LHRI forms. LHRI survey forms must be transmitted electronically, unless specified circumstances prohibit this requirement. The DHP must be consulted regarding any issues prior to finalizing documents.

## IV. Terrestrial Phase I Survey – Archaeological Resources

### A. Introduction

The goal of a Phase I investigation is to locate and define the boundaries of each archaeological site within a PA or APE. For archaeological investigations, the PA and APE often represent the same tract of land. Cultural Resources Investigation Permits (CRIP), issued by the DOA for excavations on state lands, are not required for Phase I surveys.

The DOA's GIS database illustrates all the Reconnaissance and Phase I level surveys that have been performed across the state. Many of these surveys do not meet the Division's current survey standards, particularly those undertaken in the 1980s and 1990s. Surveys conducted prior to 2007 are illustrated in a different shade on the DOA's GIS survey coverage. **Contractors and agencies using this database should take into account the quality of prior surveys in determining which areas need to be surveyed for a given project.** In general, the DOA will recommend resurvey of any property that:

1. was surveyed primarily by walkover inspection with no or limited, non-systematic shovel testing;
2. was surveyed at a reconnaissance level;
3. was surveyed using a strategy that does not meet the DOA's current standards; this would include many surveys pre-dating 2007.
4. The DOA recommends consulting with our office concerning possible resurvey during the project planning process.

The DOA expects that a Phase I survey will be supervised by an archaeologist who is SOI-qualified or has a minimum of five (5) years field experience in Louisiana and/or the lower Mississippi Valley region pre-contact or post-contact archaeology. This individual should be in the field for a majority of the field investigation.

The following sections outline the standards for undertaking a Phase I survey. The DOA encourages discussion about field strategies and methods prior to initiating the fieldwork. In particular, any anticipated deviations from the standards should be coordinated with the DOA prior to fieldwork. All deviations must be discussed in the report.

At the end of each Phase I investigation, each site identified in the PA/APE must be recommended as not eligible, eligible or undetermined with respect to the National Register criteria. Guidelines for assessing eligibility are available on the DOA's website.

### B. Terrestrial Survey Standards for Rural and Non-Urban Areas

1. For Phase I surveys, all portions of a PA/APE must be examined by systematic shovel testing whenever possible, in combination with systematic pedestrian survey, and/or additional techniques such as augering, coring, soil probes, or mechanically excavated trenching, depending upon the surface conditions and potential for deeply buried archaeological sites. Consultation with the DOA concerning any strategies other than shovel-testing is required prior to employing that method.
2. Surveys in swamp or marsh environments conducted by boat or airboat are limited to examination of exposed ground (such as remnant natural levees). Systematic shovel testing

should be undertaken on available surfaces, along with visual examination of other environments for exposed archaeological deposits (such as in treefalls, animal burrows, shorelines, or dredged deposits).

3. A reconnaissance level examination (walkover surface inspection) may be undertaken in those areas that have been disturbed by construction immediately prior to the survey (i.e., a damage assessment of those areas). The purpose of the reconnaissance inspection is to determine, to the extent possible, whether a site(s) was present in the disturbed area. Reconnaissance inspections are not accepted for urban environments.
4. Professional judgment in the selection of strategy, the array of transects, and the placement of subsurface tests must be justified in the report that results from the Phase I project. Field conditions that limit or prevent investigation of an area, such as inundation, disturbance, standing crops, etc., must be delimited on a map of the project area and explained in the report. Investigators are encouraged to discuss survey strategies with the DOA prior to field work if difficult conditions are anticipated.
5. Survey strategies must consider factors such as proximity to streams, topographic elevations, slopes, and roads, among other considerations, when determining high and low probabilities for cultural resources. Pre-contact and post-contact sites may have very different probability distributions and the survey strategy should take these differences into account. The criteria for determining high and low probability survey areas should be clearly explained in the report. Criteria that the DOA considers for defining high probability areas include, but are not limited to:
  - a. Within 100 or 200 m of a small to moderate streams and bayous, depending upon the size of the watercourse, and including the entire natural levee. The major rivers (Mississippi, Red, Ouachita, Calcasieu, etc.) are not included within this criteria;
  - b. Along the major rivers, the entire natural levee as defined by topographic lines is high probability;
  - c. Along the Mississippi River, areas of crevasse splay deposits that extend well beyond the natural levee are considered high probability;
  - d. The 200 m of a topographically high surface adjacent to and overlooking a topographically lower area (e.g., Macon Ridge, Pleistocene terraces along Red, Sabine, and Calcasieu Rivers, etc.)
  - e. Pimple mounds often occur in areas of generally low probability but the mounds themselves are high probability and at least two shovel tests should be placed in each mound within the survey area;
  - f. The presence of previously recorded sites in an area is often sufficient to indicate survey at a high probability level;
  - g. Within 100 m of historic roads and railroads;
  - h. Within urban areas, the pre-contact site probability criteria follow the guidelines listed above;

- i. Within urban areas, the post-contact site high probability area is considered to be the platted city limits as defined on 1930/1940s maps. If maps are not available, the project archaeologist should use their professional judgement as to which areas should be considered high and low probability. New Orleans has a separate probability map that is available on the DOA's GIS.
6. All of the archaeological PA/APE should be surveyed unless there is a prior agreement with the DOA.
7. Survey transects should be no more than 30 m apart with individual shovel tests placed at no more than 30 m intervals for high probability areas, and no more than 50 m apart with individual shovel tests placed at no more than 50 m intervals for low probability areas. Areas of low probability for cultural resources must be shovel tested. Low probability does not mean "no probability" and areas so designated must be surveyed. Survey shovel tests are not necessary on topographic slopes greater than 30 degrees (except inclines with intermittent level terraces that should be tested). In swamp/marsh terrain, shovel tests should be placed on any exposed landform. In other settings, professional judgement in the placement of shovel tests is expected, with the rationale explained in the report.
8. If a field is inundated due to recent rains, the survey should be postponed a few days until field conditions permit survey. If a field is in standing crops and the owner will not permit survey, the survey should be postponed until the field is accessible. The client can often work out an arrangement with the owner to permit timely survey. Systematic shovel-testing in areas of permanent or semi-permanent water is not required, but tests should be placed wherever conditions permit.
9. Each shovel test should attempt to extend to the subsoil, the water table, or to a depth of 50 cm, whichever comes first. Shovel tests should extend at least 20 cm below the last artifact-bearing stratum. Each shovel test should be at least 30 x 30 cm in size (30 cm diameter circle or 30x30 cm square is acceptable). The soil matrix for shovel tests must be screened through ¼ inch (or finer) mesh hardware cloth. If screening is not possible or practical, alternative methods (e.g. trowel sorting) for investigating the shovel test matrix are acceptable. The DOA encourages investigators to employ additional techniques such as soil probes or augers to determine soil stratigraphy at depths greater than 50 cm where possible.
10. The results of all shovel tests, auger tests, and other investigations should be recorded on shovel test forms. Representative profiles should be drawn to illustrate the sediment stratigraphy across the project area.
11. A GPS coordinate, using a device with a minimum accuracy of 3-5 m accuracy, should be recorded for each positive shovel test and each negative site delineation shovel test. IN addition, the coordinates for each beginning and ending shovel test on each survey transect should be recorded. All shovel test, auger test, and other investigation locations should be included on the survey area maps presented in the report.
12. The general soil stratigraphy revealed by shovel tests within a project area must be presented in reports with discussions of representative soil texture and color using Munsell Soil Color designations.

13. The cultural material (excluding brick, mortar, plaster, concrete, gravel, and other post-contact period bulk materials) recovered from all shovel tests should be collected (see the DOA's collection standards). Material not retained should be noted in the notes and discussed in the report. When conditions permit, surface collections are appropriate; depending on site size and artifact density, the surface collection can be gridded and/or a sampling strategy implemented for some or all material classes at the supervisor's discretion. The collection criteria should be clearly defined in the report.
14. Systematic shovel testing should be conducted at all previously recorded sites in the PA/APE. Depending on site size, testing at 10, 20, or 30 m intervals is acceptable; however, at least three shovel tests should be excavated within the known site boundaries. The goal is to determine if the site is still present at this location, and its current condition. A site update form is required to be submitted for each revisited site, even if evidence of the site is not encountered.
15. Deep testing is appropriate whenever there is a potential for sites to be buried below the depth of shovel tests (such as natural levees and urban lots). Testing should occur to the depth of the project's expected ground disturbance, whenever practical. Representative profiles of augers, cores, soil probes, or mechanically excavated trenches must be presented in a report on the project and plotted on a map of the project area. Samples of potential cultural deposits collected from augers, cores and trenches should be screened through ¼ inch or finer mesh.
16. Stripping of areas to assess feature abundance and distribution, particularly when artifacts are primarily limited to the plow zone, is strongly encouraged when possible. For artifact scatters limited to the plow zone, features may be the only intact deposits at a site and are unlikely to be encountered by shovel testing.
17. At least one overview photograph must be taken of each site to illustrate the setting, ground cover, etc. It is preferable to include a person, building, or other common object in the photograph for scale. This photograph should be included in the report.
18. Terrestrial remote sensing methods (e.g., ground penetrating radar, magnetometry, electrical resistivity) provide another means of searching for and identifying sites not visible on the surface, or for delineating site boundaries. Remote sensing surveys should use transects and spacing appropriate for the particular method employed and the resource(s) being examined (e.g., cemetery, pre-contact site, urban lot); these decisions should be explained in the report.
19. Remote sensing is not an acceptable substitute for other Phase I survey techniques. Sites identified initially via remote sensing data should be confirmed in the field through shovel testing, soil probes, or some other subsurface testing technique.
20. For battlefield sites, systematic metal detecting of the portion of the PA/APE within the battlefield limits is required. The survey must be under the direct field supervision of a qualified professional archaeologist. The spacing and survey strategy for metal detecting should be discussed with the DOA prior to initiating the survey.

#### C. Terrestrial Survey Standards for Urban Areas

1. An urban property is defined as any lot within the boundaries of a platted city block within an incorporated city, village or town. The high site probability zone is defined as the urban area



as outlined on 1930/1940s maps. If maps are not available, the project archaeologist should use their professional judgement as to which areas should be considered high and low probability

2. Investigators are strongly encouraged to discuss urban survey strategies with the DOA as the research proposal is developed. Deviations from these standards can be agreed upon prior to beginning fieldwork and described in the report. Any deviations developed in the field, and their rationale, must be described in the report.
3. The survey area is defined as the PA/APE. In circumstances where the PA/APE is partially covered by buildings or pavement that will not be removed, the survey area will represent those portions of the PA/APE that are accessible to shovel testing and/or trenching, and the frequency of shovel tests/trenches should be calculated based on the available surveyable area. At least one shovel test or trench should be placed in each accessible area if they are discontinuous.
4. If the property lies within a high site probability zone, at least one shovel test should be excavated for each 25 sq m of area.. If possible, at least two shovel tests should be placed where available historic maps (e.g., Sanborns) indicate subsurface features such as privies, wells, etc. are likely to be located. At least one shovel test should be placed elsewhere on the lot to provide greater coverage. This latter shovel test is particularly important in settings where there is a greater probability for pre-contact sites to be present. If the lot is greater than 75 sq m in size, the additional shovel tests should be systematically placed (to the extent possible) across the property.
5. If the property lies within a low site probability zone, a minimum of one (1) shovel test should be excavated for each 50 sq m of area. It should be placed in the area where historic maps (if available) indicate the greatest likelihood of intact deposits would be located.
6. Shovel tests should extend at least 20 cm below the last artifact-bearing stratum, with a minimum depth of 50 cm below surface or the water table if it lies less than 50 cm below surface. A soil core or auger should be used to extend at last one shovel test per lot to a depth of 100 cm below surface to ensure any deep deposits are encountered.
7. In addition to shovel tests, the use of soil probes and/or augers is strongly encouraged to prospect for subsurface features. Remote sensing can be a very cost-effective means of assessing the potential for sub-surface features, especially when examining lots covered by paving, slabs or fill.
8. Mechanically excavated trenches can be an effective survey strategy in some circumstances. When the surface is obscured by paving, slabs, or fill, mechanical methods may be employed to remove the overburden and expose areas for shovel testing. Alternatively, a backhoe/tracker/other machine may trench across the lot with thorough examination of both trench walls. In high site probability areas, at least 15 m of trench (can be discontinuous; i.e., three 5 m segments or five 3 m segments to accommodate lot size, buildings, utilities, etc.) should be excavated for each 100 sq m of area. In low site probability areas, at least 20 m of trench should be excavated for each 400 sq m of area.

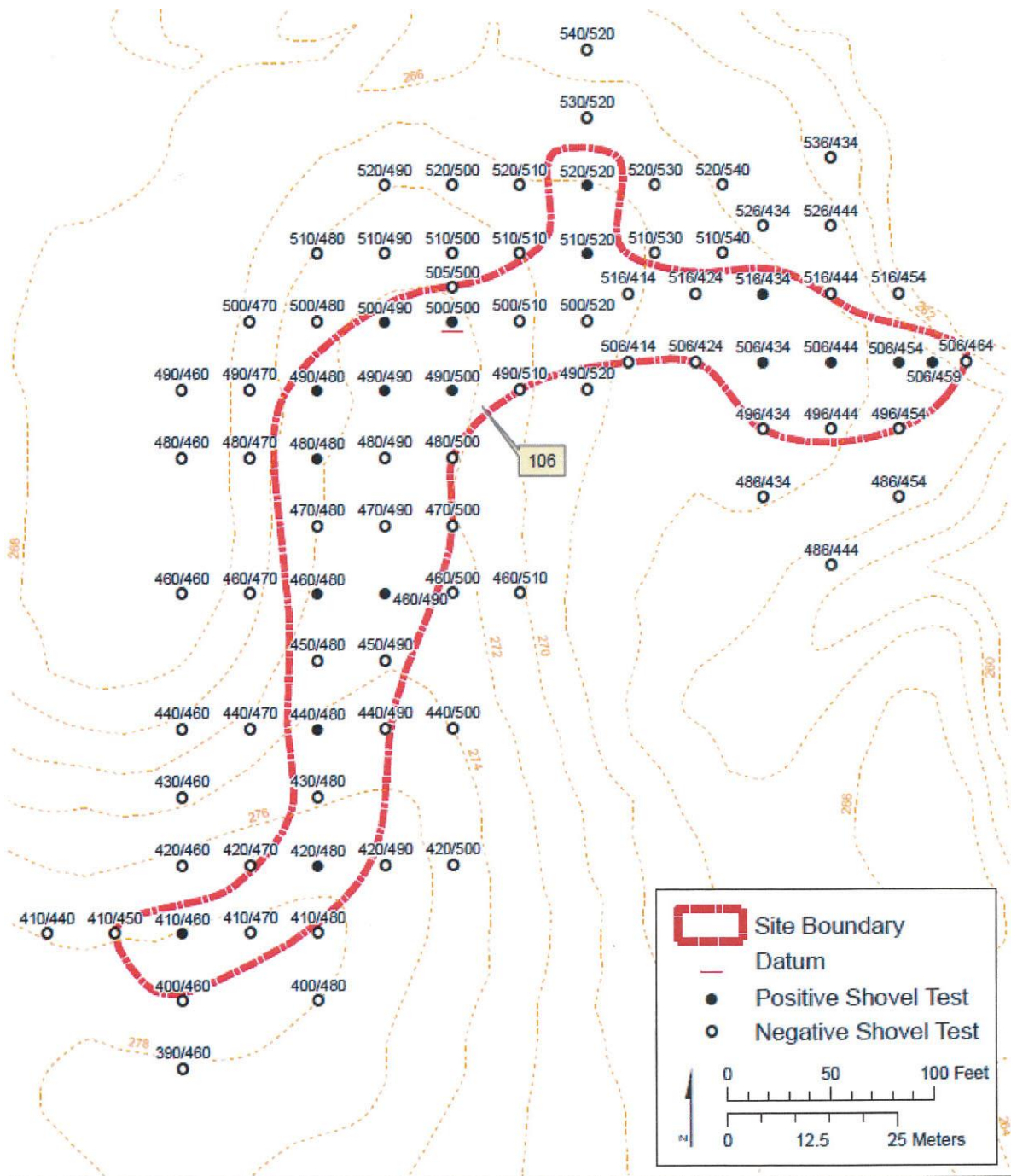
#### D. Human Remains

1. **In the event human remains are encountered during a Phase I project, work must stop immediately in the vicinity of the uncovered human remains.** Notice regarding the discovery must be made to the appropriate local law enforcement agency and the appropriate Parish Coroner's Office following the provisions of the Louisiana Unmarked Human Burial Sites Preservation Act (R.S. 8:671-871, et seq.). The State Archaeologist must be notified within 72 hours of the discovery. Within 24-hours of notification, the State Archaeologist shall notify any American Indian tribe that has indicated an interest in the area where the discovery of human remains was made. The local law enforcement officials shall assess the nature and age of the human skeletal remains. If the coroner determines that the human skeletal remains are not a crime scene and are older than 50 years of age, the Louisiana Division of Archaeology has jurisdiction over the remains and will work out appropriate plans among property owners, appropriate Tribes, living descendants, and other interested parties to insure compliance with existing state laws. **No remains will be removed from the site until jurisdiction is established and the appropriate permits obtained from the Division.**
2. Human remains discovered during a survey on federal or Tribal lands are the responsibility of the lead federal agency under the terms of the Native American Graves Protection and Repatriation Act (NAGPRA).

#### E. Defining Archaeological Site Boundaries

1. In Louisiana, an archaeological site is defined as a locus that contains at least five artifacts and/or an intact feature, with either surface or subsurface provenience, that are at least fifty years old. Surface scatter sites should include five or more artifacts within an area no greater than 30 x 30 m. Sites defined by shovel testing should have a minimum of five artifacts from one or more shovel tests where the positive shovel tests are no more than 30 m apart. The field archaeologist should exercise their professional judgement in determining whether artifact scatters represented by less than 5 artifacts or distributed over more than 30 m intervals, should be considered sites; the DOA will consider other factors in determining what should be considered a site on a case-by-case basis. The investigator is strongly encouraged to consult the DOA's site files manager to discuss small scatters and site boundaries before preparing a draft site form.
2. Investigators must submit an archaeological site form or site update form for each archaeological site encountered during a survey project. The DOA also encourages, but does not require, site forms or site form updates for archaeological sites adjacent to or near project areas being surveyed if investigators visit the site.
3. All sites, whether surface scatters or known only from subsurface deposits, should be delineated following the methodology discussed below.
4. If an archaeological site is identified primarily by artifacts visible on the ground surface, its boundaries are defined as the extent of the surface scatter. Shovel tests should be excavated across the site utilizing the methodology discussed below to determine the presence/absence of subsurface deposits. Site boundaries must reflect any positive shovel tests lying outside the surface scatter.
5. If an archaeological site is identified primarily by artifacts recovered during shovel testing, the boundaries should be delineated by placing additional tests at 10 m intervals in a grid

pattern centered on the original positive test. The delineation shovel tests should continue until at least two negative tests along each grid line are excavated. If positive shovel tests extend for three consecutive tests at 10-meter intervals, the interval between shovel tests may be extended to 20-meter intervals. When there are two consecutive negative shovel tests at 20m shovel test intervals, a test at the 10m interval between the two negative tests should be placed to confirm the boundary. An example of this expanded cruciform pattern of site definition shovel testing is presented below.



6. Delineation shovel testing is not necessary for portions of a site that extend outside the project boundary. The site form and the site description in the report must indicate that the site remains undefined beyond the project boundary. The site maps must show the site boundary at the project boundary in these instances.
7. Unless circumscribed by the boundaries of the project area, natural features such as streambeds or hill slopes, or man-made features such as ditches, driveways, or structures, nine (9) is the minimum number of shovel tests excavated for site delineation. This number is the result of the original positive shovel test; with two shovel tests in each of the four cardinal directions excavated in 10-meter intervals.
8. If augering, coring, or soil probing identify an archaeological site during Phase I investigations, additional tests at 10 m intervals in the cardinal (or grid cardinal) directions from the original positive test must be excavated to define the limits. Due to the relatively small sample size provided by these techniques, it is recognized that limits may be difficult to define and other factors such as topography, geological history, etc. can be used to infer probable site boundaries. This information should be presented in the resulting site form and report for the Phase I investigation.
9. If a site is identified within a mechanically excavated trench, cores or augers should be used to define the limits to avoid substantial impact to the site through numerous trenches. If trenching is necessary, it should be limited to the minimum number of trenches necessary to provide approximate site limits.
10. Each positive shovel test at a site, and each negative delineation shovel test should have their location recorded with a GPS with a minimum accuracy of 3-5 meters.
11. In rural areas, determining whether a discontinuous artifact scatter should be consider a single site or broken into several sites can be challenging. In general, the DOA maintains that a minimum 30 m gap as determined by surface inspection and/or shovel testing is necessary to segregate a scatter into two sites. The scatter's position in relation to distinct landforms can also be used to combine or segregate sites. The DOA strongly encourages investigators to discuss site definition concerns with the Site Files Manager prior to submitting draft site forms.
12. In urban settings, the site boundary is generally defined as the city block, with individual lots identified as loci (identified by the lot street address). It is recognized that lot sizes have changed over time; the current lot boundaries at the time of the survey are used to define the loci boundary. Site boundaries will extend to the center of the street on each side. The DOA and investigator may agree to different site boundaries in specific contexts. For some sites, such as pre-contact or post-contact site that predate the street grid, the site may be defined as the extent of the artifact scatter for that component. In this situation, there will be overlapping sites; a pre-street grid site polygon underlying the later city block site.
13. Isolated Finds, including scatters with up to four artifacts, are not assigned site numbers, except in special circumstances. Unique or special artifacts (dugout canoe, reconstructable vessel, Paleo-Indian projectile point) will be assigned site numbers. Determining whether an artifact or small scatter should be considered a site is at the discretion of the investigator, in consultation with the DOA Site Files Manager.

14. The DOA requests that all cemeteries encountered during a project (both inside and outside the PA/APE) be treated as a site and a site form completed. Efforts to delineate the cemetery are not required during the Phase I survey, but can be undertaken in consultation with the client and DOA. The site boundary should be set as the visible surface limits. Delineation of the cemetery will be required if the project ground disturbance will occur within 100 feet of the visible cemetery boundaries.

#### F. Collection Standards

1. The DOA expects that all materials recovered during Phase I investigations will be retained for analysis, except as discussed in Section IV.B.13 above and in the DOA's curation standards.
2. Isolated Finds should not be retained if the collection will be curated with the DOA, unless it is a unique or significant item (see Section IV.E.13). Please contact the DOA's Collections Manager if there is a question on whether to retain a specific item.
3. Following analysis, if the collection is to be returned to the landowner, organize the collection following the landowner's direction. If the collection is to be curated with the DOA or another facility, follow that facility's guidelines.
4. Please see the DOA's Curation Standards for more specific information about curation standards for all collections to be curated with the Division.

## V. Marine Phase I Survey

### A. Application

1. A marine survey should be conducted whenever the PA/ APE crosses:
  - a. A navigable stream that is, or was historically, large enough to support rafts, sailing ships, steamships, or other motorized craft.
  - b. Inland lakes, including but not limited to Lake Maurepas, Lake Salvador, Lake des Allemands, Lake Verret, Lake Palourde, Lake Fausse Pointe, White Lake, Grand Lake, Calcasieu Lake, and Sabine Lake.
  - c. The coastal waters of the state of Louisiana, including but not limited to Lake Pontchartrain, Lake Borgne, Barataria Bay, Terrebonne Bay, Tmbalier Bay, Atchafalaya Bay, East and West Cote Blanch Bay, and Vermilion Bay.
2. The survey should address the potential for historic shipwrecks as well as the potential for submerged terrestrial archaeological sites.
3. The survey data must be interpreted and analyzed by an SOI-qualified marine archaeologist.

### B. Methods

1. Sub-bottom profiler, magnetometer, and side-scan sonar should be used for all surveys. Other technologies can be employed as appropriate. The DOA encourages consultation prior to fieldwork to determine the appropriate methods.
2. Marine surveys should be conducted at 30 m spacing unless conditions dictate otherwise. In waters less than 10 m deep, a 20 m line spacing is recommended. The goal of the survey is to provide complete coverage of the seafloor, lake bottom, or river bottom within the PA/APE. The DOA encourages consultation prior to fieldwork to determine the appropriate line spacing.
3. The DOA has not developed detailed marine survey standards and accepts those promulgated by the Bureau of Ocean Energy Management. Marine surveys should meet those standards except as noted above.

## VI. Terrestrial Phase II Investigation Field Standards - Archaeology

### A. Introduction

1. All Phase II projects conducted on State lands must obtain a Cultural Resource Investigation Permit from the Louisiana Archaeological Survey and Antiquities Commission before initiating fieldwork. The Commission meets in March, June, September, and December to consider permit requests. Investigators must provide a Scope of Work to the Commission at least one week prior to its regularly scheduled meeting, and be prepared to present the Scope to the Commission at their public meeting. Investigators must keep this schedule in mind when scheduling their investigation. Information on the Commission and the permit request process can be obtained by contacting the Director of the DOA.
2. The goal of Phase II archaeological investigation is to determine if a site is eligible for nomination to the National Register of Historic Places (NRHP) under Criteria A, B, C, or D. A separate section on assessing Eligibility is provided on the DOA website. In most cases, testing is not intended to exhaust the research potential of a site. The testing program should also provide sufficient information about the character and distribution of cultural deposits at a site to allow the development of a realistic Phase III mitigation/data recovery plan should that become necessary.
3. An SOI-qualified archaeologist or an archaeologist with a minimum of five (5) years experience in Louisiana and/or lower Mississippi Valley investigations must be on-site for a majority of the fieldwork. The supervising archaeologist must have appropriate training and experience in pre-contact archaeology if the site is of that time period, or in post-contact archaeology if the site is of that time period.
4. At the completion of a Phase II project, each site tested must be recommended as eligible or not eligible with the supporting documentation provided in the report. The recommendation must address each of the National Register criteria and clearly indicate which site characteristics, research questions and criteria were used to assess the site's eligibility. Additional information on assessing eligibility is available on the DOA's website.
5. A site update form must be submitted to the DOA that describes the results of the Phase II investigations at each site tested.

### B. Field Methods

1. Given the diversity of sites examined in Phase II investigations, considerable professional judgment in the strategy developed to address the above goals is expected. This strategy must be clearly explained and justified in the report. Generally, however, Phase II investigations include excavation units, stripping, and feature excavation. The use of remote sensing techniques to assess the frequency and distribution of cultural deposits is strongly encouraged.
2. The field strategy and research design should be developed in consultation with the DOA, federal agency, and Tribes (as appropriate).
3. The results of Phase I shovel tests, remote sensing, cores, augers and trenches are important guides for the placement of test units and must be considered during Phase II investigations.

The DOA encourages discussion of field strategies prior to initiation of the fieldwork. Any agreed upon revised strategies must be documented via email or letter and thoroughly discussed and justified in the Phase II investigation report.

4. The methods employed should provide sufficient data for each of the eligibility criteria to be addressed as appropriate.

#### C. Site Mapping

1. Investigators conducting Phase II investigations should generate an appropriately detailed project map, using the metric system, of the site showing the locations of all excavation units and their spatial relationship to other surface and subsurface elements of a site, including topography when applicable.
2. All maps must have a north arrow, a scale and grid scale. If a site grid deviates from magnetic or geographic north, the angle of deviation must be shown on the map's legend.
3. Investigators must use a GPS device with a minimum accuracy of 3-5 m accuracy to locate four UTM grid locations and the site's datum point during Phase II investigations. These UTM coordinates will facilitate the use of a site map in the DOA's GIS database.

#### D. Phase II Excavations

1. The location of these units must be appropriate to the site, with consideration of the results of previous investigations, cultural features, artifact concentrations, vegetation, topography, structures, and other landscape items. The rationale for the placement of all excavations should be provided in the report.
2. Phase II investigations must include test units (at least 1x1 m in size but 1x2 m or 2x2 m units, or other sizes as appropriate are acceptable) to assess the integrity of deposits and provide sufficient artifact samples to address the site's eligibility. Testing should also include additional shovel tests, remote sensing, mechanical stripping, trenching, or other techniques to determine the extent and spatial variability of the site's strata and artifact distributions. The testing strategies should be appropriate to the type and age of the site, its depth and stratigraphy, and degree of preservation. One excavation unit does not provide sufficient data on the character of the entire site – a minimum of two units, and preferably more, should be excavated. .
3. Remote sensing, trenching, stripping or other broader exposure methods are encourage to determine the extent and spatial variability of the site's strata and artifact/feature distributions.
4. All excavation units, trenches, stripped areas, etc., must be located on a grid system referenced to a site datum. Vertical control of all excavations units must be maintained as they are dug. Metric measurements should be used for all excavations.
5. Whenever possible, unit and feature excavation levels should follow natural stratigraphy with arbitrary levels within thick natural strata. Natural and arbitrary levels should not exceed 10 cm in thickness in most circumstances.



## E. Recordation

1. At least one overview photograph of each site being tested should be taken to record the setting and field conditions.
2. Photographs of appropriate excavation unit walls and floors, as well as cultural features, must be recorded in the field. The photographs must include a menu board, when appropriate, that contains, at a minimum, the date, site number, excavation unit, and object being recorded. Photographs must also include a scale and north arrow. If the excavation being photographed is too large or small to accommodate a menu board notation, this information should be recorded and presented in the caption of the photograph in the report and on the photo log. Field illustrations should reliably record such items as stratigraphy, artifacts, features, etc. in a precise manner that provides location information about the excavation units. These illustrations must also provide compass orientation and scale. Munsell Soil Color designations should be used for all soil colors in illustrations.
3. All soils excavated in test units must be screened through ¼ inch, or finer, mesh. Investigators must justify in the report why certain portions of a test unit (e.g., gravel deposits, areas of disturbance, bioturbation, etc.) were not screened, or if a different screen mesh size is used.
4. The location of all special samples such as radiocarbon material, etc., should be recorded in the field.
5. Investigators should record the provenience of all cultural materials obtained during testing and maintain the separation of artifacts by provenience.

## F. Human Remains

1. If prior work in a project area identified human remains, or indicated there is a high probability that human remains will be encountered during subsequent work, an Unmarked Burial Sites Permit must be obtained from the DOA prior to beginning fieldwork. The permit request must include a proposal detailing the process to be followed in the field and in the lab when human remains are encountered. If the prior work has determined the remains will likely be American Indian, consultation with the appropriate Tribes must be initiated as part of the permit process and their concerns incorporated into the permit request. The DOA is responsible for consulting with Tribes on an Unmarked Burial permit. If the remains are anticipated to be non-Native American, the efforts to identify descendants must be initiated and the descendants concerns incorporated into the permit request.
2. **In the event human remains are encountered during a Phase II project, work must stop immediately in the vicinity of the uncovered human remains.** Notice regarding the discovery must be made to the appropriate local law enforcement agency and the appropriate Parish Coroner's Office following the provisions of the Louisiana Unmarked Human Burials Site Preservation Act (R.S. 8:671-681 et seq.). The State Archaeologist must be notified within 72 hours of the discovery. Within 24-hours of notification, the State Archaeologist shall notify any Indian tribe that have indicated interest in the area where the discovery of human remains was made. The local law enforcement officials shall assess the nature and age of the human skeletal remains. If the coroner determines that the human skeletal remains are not a crime scene and are older than 50 years of age, the DOA has jurisdiction over the

remains and will work out appropriate plans among property owners, appropriate Tribes, living descendants, and other interested parties to insure compliance with existing state laws. No remains will be removed until jurisdiction is established and the appropriate permits obtained from the DOA.

3. Human remains discovered during an excavation on federal or Tribal lands are the responsibility of the lead federal agency under the terms of the Native American Graves Protection and Repatriation Act (NAGPRA).

#### G. Field Artifact Collection

1. The DOA expects that all materials recovered during Phase II investigations will be retained for analysis, except as discussed in the DOA's curation standards or if prior arrangements have been made with the DOA.
2. Following analysis, if the collection is to be returned to the landowner, organize the collection following the landowner's direction. If the collection is to be curated with the DOA or another facility, follow that facility's guidelines.
3. Please see the Curation Standards for more specific information about curation standards for all collections to be curated with the DOA.

## **VII. Terrestrial Phase III (Data Recovery) Investigation Field Standards - Archaeology**

### **A. Introduction**

1. If an archaeological site is determined eligible for the National Register of Historic Places, or already listed on the National Register, and will be adversely affected by a project reviewed by the Section 106 process, the lead federal agency is responsible for preparing and executing a Memorandum of Agreement (MOA) with all appropriate parties. This MOA will include a mitigation, data recovery or treatment plan (discussed below). All parties must review and approve this plan before the MOA is signed.
2. An SOI-qualified archaeologist or an archaeologist with a minimum of five (5) years experience in Louisiana and/or lower Mississippi Valley investigations must be on-site for the fieldwork. The supervising archaeologist must have appropriate training and experience in pre-contact archaeology if the site is of that time period, or in post-contact archaeology if the site is of that time period.
3. Investigators should inform the DOA about their schedule of fieldwork for Phase III projects in order to provide an opportunity for DOA personnel to visit the site(s).

### **B. Data Recovery Plan**

1. The data recovery plan must include a detailed research design. The Research Design will identify specific research questions developed from the Phase I and II investigation results, the Comprehensive Archaeological Plan, and other sources.
2. For pre-contact sites, the Research Design should incorporate extensive background research on the cultural periods represented at the site. This review should include discussion of comparable excavated sites and data in the state; if relevant comparable sites occur in adjoining states, they should be included in the review. The proposed data recovery plan should be sufficient to address the specific questions developed in the research design.
3. For post-contact Euroamerican sites, the Research Design should incorporate extensive background research on the property history and occupants as one means for developing research questions specific to that site and cultural components. This research should include property records, census data, city records such as utility records, city directories, newspapers and other relevant printed matter, in addition to historic maps. The Research Design should also incorporate the results of excavations at sites of the same time period and/or similar purpose/function; if relevant comparable sites occur in adjoining states, they should be included in the review. The proposed data recovery plan should be sufficient to address the specific questions developed in the research design.
4. The data recovery plan shall specify and justify the method and techniques to be used for recovery of the data contained in the property. Provisions for data analysis, interpretation, curation, and preparation of a final report shall also be included.
5. The use of remote sensing techniques to assess the abundance and distribution of cultural deposits and features is strongly encouraged.

6. Investigators must submit site update forms for all sites investigated during Phase III investigations to the DOA.
7. Data recovery plans must also contain curation statements that describe the disposition for all artifacts, archaeological samples and associated records obtained during a data recovery project.

#### C. Archaeological Site Mapping

1. Investigators should generate a site map that provides topographic contours, using the metric system, which shows the locations of all excavation units and their spatial relationship to other surface and subsurface elements of a site.
2. All maps must have a north arrow, a scale, and grid scale. If a site grid deviates from magnetic or geographic north, the angle of deviation must be shown on the map's legend.
3. Investigators must use a GPS device with a minimum accuracy of 3-5 m accuracy (submeter preferred) to locate at least four UTM grid locations and the site's datum point during Phase III investigations. These UTM coordinates will facilitate the use of a site map in the DOA's GIS database.
4. Maps of Phase III data recovery efforts should include, where appropriate, the placement of previous Phase I and II investigations including shovel tests, test units, areas remotely sensed, etc. at an archaeological site.

#### C. Field Methods

Given the wide diversity of sites examined in Phase III investigations, the Division expects considerable variation in the strategy to address data recovery goals. Once reviewed and accepted by the DOA, federal agency, and Tribes (as appropriate), investigators must clearly present this strategy in the report that is submitted to the DOA.

1. Archaeological excavation units must be excavated in a manner that records the vertical stratigraphy of a site, as well as the horizontal distribution of archaeological features and artifacts.
2. The size and placement of units and other excavations at an archaeological site are crucial to recovering the appropriate archaeological data from a site. The units must be appropriate to the site and based upon the Phase I and II results and the research design with consideration of vegetation, topography, structures, and other landscape features.
3. Whenever possible, unit and feature excavation levels should follow natural stratigraphy with arbitrary levels within thick natural strata. Natural and arbitrary levels should not exceed 10 cm in thickness in most circumstances.
4. The measurements of all Phase III archaeological investigations should be in the metric system.

5. Phase III excavation units and other procedures must be located on a grid system referenced to a site datum. Vertical control of all excavation units should be maintained as they are dug.

#### F. Phase III Recordation

1. Phase III projects should have at least one overview photograph of the site in order to record the setting and field conditions.
2. Photographs of appropriate excavation unit walls and floors, as well as cultural features, should be recorded in the field. The photographs must include a menu board that contains, at a minimum, the date, site number, excavation unit, and object being recorded. Photographs must also include a scale and north arrow. If the excavation being photographed is too large or small to accommodate a menu board notation, this information should be recorded and presented in the caption of a photograph in the report and on the photo log.
3. Field illustrations should record such items as stratigraphy, artifacts, features, etc. in a precise manner that provides location information about the excavation units. These illustrations should also provide compass orientation and scale. Munsell Soil Color designations should be used for all soil colors in illustrations.
4. All excavated soils must be screened through ¼ inch, or finer, mesh. Investigators must justify in the report if certain portions of an excavation performed as part of data recovery (e.g., gravel deposits, areas of disturbance, bioturbation, etc.) were not screened, or if other screen mesh sizes were employed.
5. The location of all special samples such as radiocarbon material, etc., should be recorded in the field.
6. Investigators should record the provenience of all cultural materials obtained during data recovery and maintain the separation of artifacts by provenience.

#### G. Human Remains

1. If prior work in a project area undergoing Phase III investigations has identified human remains, or indicated there is a high probability that human remains will be encountered during subsequent work, an Unmarked Burial Sites Permit must be obtained from the DOA prior to beginning fieldwork. The permit request must include a proposal detailing the process to be followed in the field and in the lab when human remains are encountered. If the prior work has determined the remains will likely be American Indian, consultation with the appropriate Tribes must be initiated as part of the permit process and their concerns incorporated into the permit request. The DOA is responsible for consulting with Tribes on an Unmarked Burial permit. If the remains are anticipated to be non-Native American, the efforts to identify descendants must be initiated and the descendants concerns incorporated into the permit request.
2. **In the event human remains are encountered during a Phase III project, work must stop immediately in the vicinity of the uncovered human remains.** Notice regarding the discovery must be made to the appropriate local law enforcement agency and the appropriate Parish Coroner's Office following the provisions of the Louisiana Unmarked Human Burial

Sites Preservation Act (R.S. 8:671-681 et. Seq.). The State Archaeologist must be notified within 72 hours of the discovery. Within 24-hours of notification, the State Archaeologist shall notify the Native American tribes that have indicated an interest in the area where the discovery of human remains was made. The local law enforcement officials shall assess the nature and age of the human skeletal remains. If the coroner determines that the human skeletal remains are not a crime scene and are older than 50 years, the Division has jurisdiction over the remains and will work out appropriate plans among property owners, appropriate Tribes, living descendants, and other interested parties to insure compliance with existing state laws. **No remains will be removed until jurisdiction is established and the appropriate permits obtained from the Division.**

3. Human remains discovered during an excavation on federal or Tribal lands are the responsibility of the lead federal agency under the terms of the Native American Graves Protection and Repatriation Act (NAGPRA).

#### H. Field Collection Standards

1. The DOA expects that all materials recovered during Phase III investigations will be retained for analysis, except as discussed in the DOA's curation standards.
2. Following analysis, if the collection is to be returned to the landowner, organize the collection following the landowner's direction. If the collection is to be curated with the DOA or another facility, follow that facility's guidelines.
3. Please see the Curation Standards for more specific information about curation standards for all collections to be curated with the DOA.
4. For post-contact Euroamerican sites, the DOA may recommend development of an artifact culling plan to reduce the size of the curated collection. The DOA will consult with the investigators and other interested parties to develop the culling plan.

## **VIII. Terrestrial Archaeological Monitoring Field Standards**

### **A. Introduction**

1. The goal of archaeological monitoring is to assess the presence/absence of archaeological deposits in areas that were not examined by Phase I survey.
2. The decision to employ monitoring on a given project, rather than Phase I survey, must be considered on a case-by-case basis. The DOA does not support the use of monitoring as a general survey strategy but recognizes that it may be the most appropriate investigation strategy in limited situations. Investigators must consult with the DOA concerning the scope of work for archaeological monitoring as the project proposal is developed; communications with the DOA should be documented via email or letter and included as an appendix to the report.
3. Monitoring may also be employed to ensure that known sites within a project area are not impacted by ground-disturbing activities.

### **B. Monitoring Methodology**

1. An SOI qualified archaeologist or an archaeologist with a minimum of five (5) years experience in Louisiana and/or lower Mississippi Valley investigations must be on-site for the fieldwork. The supervising archaeologist must have appropriate training and experience in pre-contact archaeology if the site is of that time period, or in post-contact archaeology if the site is of that time period.
2. The supervising archaeologist should be present for all excavations within high site probability areas. Excavations in low site probability areas do not need to be continually monitored but must be regularly inspected as the excavation proceeds.
3. Circumstances that limit or prevent visual examination of project excavations must be described in the report and the unexamined or minimally examined areas delineated on a project area map.
4. At the discretion of the monitoring archaeologist, excavation or other ground-disturbing activities must be halted any time a suspected archaeological feature or deposit is encountered. Excavations in the area of the discovery must remain halted until the archaeologist can determine the nature, extent, and age of the archaeological deposit. If the initial examination determines the deposit may have sufficient integrity and content to be considered potentially eligible for nomination to the National Register, all further excavations in the vicinity of the deposit must be halted until a complete eligibility determination can be made. Excavations outside of the find location may proceed with continued monitoring.
5. The report must include a map showing the locations of all excavations, surface structures, topography, and identified archaeological deposits within the project area where archaeological monitoring is occurring.
6. Representative profiles of all excavations should be recorded in the field by both photographs and illustrations.

7. **In the event human remains are encountered during an archaeological monitoring project, work must stop immediately in the vicinity of the uncovered human remains.** Immediate notice regarding the discovery should be made to the appropriate local law enforcement agency, the lead federal agency, the Parish Coroner's Office, and the State Archaeologist following the provisions of the Louisiana Unmarked Human Burials Site Preservation Act (R.S. 671 et seq.). Within 24-hours of the notification, the State Archaeologist shall notify any Native American tribe that has indicated interest in the area of the discovery. The local law enforcement officials shall assess the nature and age of the human skeletal remains. If the coroner determines that the human skeletal remains are not a crime scene and are older than 50 years of age, the DOA has jurisdiction over the remains and will work out appropriate plans among property owners, appropriate Tribes, living descendants, and other interested parties to insure compliance with existing state laws. **No remains will be removed until jurisdiction is established and the appropriate permits obtained from the DOA.**

#### C. Defining Archaeological Site Boundaries

1. If archaeological deposits are encountered, the boundaries of the deposit (site) must be delineated horizontally and vertically at a scale equivalent to the Phase I site delineation standard.
2. If a site is identified during stripping, slab removal, or other surface exposure, delineation via shovel-tests to ascertain the limits is appropriate.
3. If a site is identified within a mechanically excavated trench and shovel testing is not practical, cores or augers should be used to define site limits to avoid substantial impact to the site through numerous trenches. If further mechanical excavation is necessary, it should be limited to the minimum number of trenches necessary to provide approximate site limits.
4. Investigators must provide the UTM's of the center point of an archaeological site by a Global Positioning System (GPS) device with a minimum accuracy of 3-5 m accuracy. At least four additional GPS points are required to define the boundaries of sites that are greater than 400 m<sup>2</sup> in area.
5. Locations of cultural material that are more than 50 years old, but do not meet other qualifications for being recorded as a site should be considered Isolated Finds and included in the report on monitoring investigations.
6. At the completion of the monitoring, investigators must assess if an identified site is eligible, not eligible, or undetermined for nomination to the National Register. Documentation for these assessments should be provided in the report submitted to the DOA.
7. A new site form or site update form must be filed for every site identified or revisited during a monitoring project.

#### D. Collection Standards

1. If backhoe trenches are employed, investigators must retain all diagnostic artifacts and a representative sample of non-diagnostic items recovered from disturbed contexts (backdirt piles, wall scrapings, etc.). All artifacts, including bulk materials, must be retained from



undisturbed contexts (i.e., midden lenses or features exposed in trench walls). After counting or weighing in the field or lab, bulk materials such as brick, mortar, plaster, shell and gravel may be discarded. If shovel tests are employed, collection standards are those as explained in the Phase I field standards.

2. Following analysis, if the collection is to be returned to the landowner, organize the collection following the landowner's direction. If the collection is to be curated with the DOA or another facility, follow that facility's guidelines.
3. Please see the Curation Standards for more specific information about curation standards for all collections to be curated with the DOA.