

# Cultural Resources

# Archaeology Survey

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## OVERVIEW

Section 106 of the National Historic Preservation Act (NHPA) of 1966 requires federal agencies to take into account the effects of their undertakings on historic and archaeological properties and afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such undertakings (see Consultation Initiation Guidebook). The goal of the survey is to identify archaeological resources that have the potential to be affected by an undertaking, to provide an evaluation of National Register of Historic Places (NRHP) eligibility for all identified archaeological resources, and to provide management considerations on ways to avoid or minimize effects to archaeological resources. The Assessment of Effects Guidebook provides guidance on requirements needed to assess the effects of the undertaking on identified resources and identify ways to avoid, minimize harm, or mitigate any adverse effects on the resources.

Identification of archaeological resources must be conducted by a qualified archaeologist acting as, or under the supervision of, a Principal Investigator who meets the *Secretary of the Interior's (SOI) Historic Preservation Professional Qualification Standards*. The Principal Investigator, hereinafter referred to as the archaeologist, is responsible for ensuring that all archaeological data collection is completed in accordance with the following guidance.

The archaeologist will conduct the survey/testing for archaeological resources in accordance with methods based in general on those presented in the most current version of the Archaeology Survey Guidebook, the *Georgia Standards and Guidelines for Archaeological Investigations* from the Georgia Council of Professional Archaeologists (2019), as well as the *Archaeological Assessment Report Guidelines and Components* from the Historic Preservation Division, State Historic Preservation Office (1994) and the *SOI's Standards and Guidelines for Archaeology and Historic Preservation* [Federal Register 48(190):44734-44737].

The following survey goals will be adopted for each project:

- > Identify all archaeological resources, including the vertical and horizontal extent of deposits.
- > Obtain enough data to provide an evaluation of NRHP eligibility for all identified archaeological resources.
- > Provide information for management considerations on avoidance and minimization for all archaeological resources (if applicable).
- > Provide recommendations to inform development of a Phase II testing strategy if additional information is required to arrive at an NRHP recommendation, or to inform avoidance and minimization of an eligible site.

Prior to fieldwork, the archaeologist will contact the Prime consultant and/or the Project Manager (PM) (Office of Program Delivery) to inquire whether landowner notification letters have been sent out for environmental surveys (see Consultation Initiation Guidebook). If letters have not yet been mailed to landowners, the archaeologist will be responsible for coordinating with the Prime consultant and PM to ensure these are mailed out at least seven (7) days prior to survey. A copy of the landowner notification letter should be carried in the field during survey. If survey requires access to restricted areas (e.g., hunting camps, fenced areas, active livestock areas, gated property, manicured lawns) an effort should be made to make landowner contact in-person or by phone in order to access these areas. In instances when attempts to contact the landowner to gain access to restricted areas by the archaeologist prove unsuccessful, coordination with the Georgia Department of Transportation (GDOT) Archaeologist, or Team Leader, should be initiated prior to the completion of the survey. All interactions with landowners and members of the public should be professional, courteous, and documented in the project file. Any incidents or concerns from members of the public that arise during fieldwork should be immediately reported to the GDOT Archaeologist for further coordination. An example of the landowner letter and a list of recipients should be included as separate submittals along with the resulting archaeology report. The GDOT Archaeologist, in consultation with the project's lead federal agency, will conduct all early coordination with federally-recognized tribes.

The archaeologist will be responsible for securing all required fieldwork permits prior to survey, including Archaeological Resource Protection Act (ARPA) permits for survey on federal land and Georgia Department of Natural Resource (DNR) permits for DNR owned or managed lands (see Consultation Initiation Guidebook). All permits shall be submitted to GDOT for review and approval prior to submittal to the appropriate agency. Submittal of the permit applications should be coordinated with the GDOT Archaeologist to determine who will submit to the agency.

The archaeologist should coordinate with the project historian regarding any potential shared resources, such as cemeteries, mills, battlefields, Trail of Tears, Old Federal Road, etc., located within the project area. This may also include archaeological sites within historic districts or larger historic properties, such as farmsteads.

## DEFINING SURVEY AREAS

A project survey area will be defined as either an Environmental Survey Boundary (ESB) or a more refined Area of Potential Effect (APE) depending on the stage of project development in which the survey occurs. Additionally, specific project types may have special considerations in development of the survey area, including bridges requiring underwater survey, traffic signal upgrades, and intelligent transportation systems (ITS) or pedestrian upgrade projects. All questions related to the project survey area, and appropriate survey coverage should be coordinated with the assigned GDOT Archaeologist prior to survey. If there is not an assigned GDOT Archaeologist for the project, any questions can be addressed to the Archaeology Team Leaders with a carbon copy (cc) addressed to ArchSubmittals@dot.ga.gov.

Depending on weather conditions and data gathered during the survey, the archaeologist (in consultation with the GDOT Archaeologist) reserves the right to make changes in the data collection strategy as long as it does not affect the final desired results (see Archaeology Documentation Guidebook and Assessment of Effects Guidebook). Graphics depicting examples of the survey areas and site delineations discussed below can be found in the Cultural Resources Example Graphics Guidebook.

### Terrestrial Surveys

During the concept development stage for any given project, the project designer will develop an ESB for use by environmental Subject Matter Experts (SMEs) in their surveys in the absence of more developed project plans (see Environmental Survey Boundary Guidance). The ESB is designed to encompass all areas that may be required for the project design, as well as any future design changes. The design team develops an ESB based on proposed limits of required right-of-way (ROW) and easements, with an additional 100-foot (ft) offset. The ESB should always include, at a minimum, the existing ROW for the entire length of the project corridor, from the designated project beginning to the project end.

If a survey occurs after the project designer has developed plans and established the project footprint, including locations of cut/fill limits, existing ROW, required ROW, and all temporary and permanent easements, the archaeologist will use this footprint to develop a more traditional APE. A project APE, as defined in 36 CFR 800.16(d), “is the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties if any such properties exist” and should therefore encompass the entirety of the project footprint. In an effort to avoid the need for subsequent surveys and provide coverage for potential unanticipated design changes, an additional 100 ft Expanded Survey Corridor (ESC) may be added to the length and width of the APE on a case-by-case basis. For ease of reference, the project APE and ESC are collectively referred to as the project survey area. On occasion an addendum ESB may be provided by design, however this should only be utilized for addendum surveys when the scope of a project has changed significantly and/or a revised concept report is required.

The requirement to survey an additional ESC may be waived on a project by project basis in coordination with the GDOT Archaeologist or Team Leader. Examples of surveys where an ESC may be waived include projects with limited design options restricted to the existing ROW such as sidewalk improvements, or addendum surveys that occur late in the project design development. This request can be sent via e-mail to the GDOT Archaeologist. All ESC waivers should be referenced in the resulting archaeological documentation.

For addendum surveys, the current project APE should be developed from the revised project design plans and compared to the extent of the previous survey coverage. Any areas of the current APE that fall outside of the previous survey coverage for the project will be considered the addendum survey area. The requirement for the additional of an ESC will be determined by the stage of project plan development and the potential for additional project changes, and the final decision should be made in coordination with the GDOT Archaeologist. Coordination with the GDOT Archaeologist on an addendum survey area is strongly encouraged prior to fieldwork.

### Underwater Surveys

When required, the underwater survey area and methodology should be determined in conjunction with the GDOT Archaeologist. The underwater survey area should include the terrestrial survey area, plus 300 ft from the outer limits of the ESB or 500 ft from the bridge, whichever is greater. The underwater survey area is comprised of both the waterway and the associated shoreline and/or streambank.

### Traffic Signal Upgrades

The APE for Signal Upgrades should be defined following the guidelines established in the 2018 Memorandum of Understanding (MOU) between the Federal Highway Administration (FHWA), the Georgia State Historic Preservation Office (SHPO), and GDOT, regarding Definition of Area of Potential Effects for GDOT Traffic Operations Projects, Improvements to Existing Signalized Intersections.

The archaeological APE shall be confined to areas proposed for newly required ROW or easements, cabinet installation, trenching for the installation of conduit, and any previously undefined activities resulting in subsurface disturbance outside of the roadway footprint. For projects located within areas containing potential Historic Streetcar Resources, proposed locations of set-back loop detectors and pedestrian islands will be considered within the archaeological APE and subject to survey per the 2015 *Programmatic Agreement (PA) for Historic Streetcar Archaeological Sites in Georgia*.

The archaeological APE includes adding a 100 ft by 100 ft survey area to each quadrant of the intersection, with the APE extending 500 ft from the intersection, constituting the width of the existing ROW. If an ESB is provided to the consultant by the project designer, the archaeologist should establish the APE per the MOU based on the plans, and then compare it to the ESB that was provided. If the ESB is larger in any area, the archaeologist should extend the APE to match this area.

If a previously recorded archaeological site is located within the proposed project limits, the GDOT Archaeologist will coordinate with SHPO on whether proposed project activities within the site boundary shall be considered as having No Potential to Cause Effect or should be included within the archaeological APE.

### CONDUCTING PHASE I ARCHAEOLOGICAL SURVEY

An archaeological survey can consist of terrestrial and/or underwater surveys, as well as specialized remote sensing surveys. Each one consists of methods that have been developed to identify and evaluate archaeological resources in their respective environments; these include surface and subsurface survey, metal detection, geophysical surveys, etc. for terrestrial surveys and side-scan sonar, magnetometer, diver investigations, shoreline survey, etc. for underwater surveys.

Consultants are encouraged to call 811 prior to conducting fieldwork in areas that may contain buried utilities.

#### Planning for Survey and Use of Previous Survey Coverage

If the survey area is considered an addendum survey for a proposed project, or if there is an adequate previous archaeological survey conducted along the main corridor for the proposed project, the Principal Investigator may request that previous archaeological surveys be used as previous survey coverage, and thus not re-surveyed.

In consultation with the GDOT Archaeologist, the archaeologist may request to utilize existing coverage from a previous archaeological survey in lieu of new survey. However, for a previous archaeological survey to be considered adequate survey coverage, it must be demonstrated to have used methods that compare to the current requirements of the Archaeology Survey Guidebook and current statewide archaeological standards. The appropriateness of prior surveys, regardless of age, should be vetted using all available information including, at a minimum, the original report(s), site form(s), etc. Additional documentation and maps are required to support the use of previous coverage. The coordination effort with the GDOT Archaeologist must take place prior to survey.

If an adequate previous survey can be demonstrated to have used appropriate methodology, additional field survey may not be required in the areas that overlap the current project survey area. However, the current condition of the project area will need to be documented for the current survey.

In instances where archaeological resources are in the overlap areas between the current project and the previous survey coverage, additional fieldwork at the site may not be required if the original delineation is found to be adequate and consistent with current archaeological survey standards and the current site conditions have not changed. A field visit and revisit site form is required for all sites within areas of proposed prior coverage to assess and document the current site conditions and any changes to the conditions of a site since the time of the previous survey (i.e. disturbed by development, graded, etc.) All

eligible or unknown sites where further Phase II testing is recommended, or sites that contribute to the eligibility of a larger historic property or district, will require a full report and use of the ASR is not considered appropriate in those instances. All waivers for site revisits should be obtained prior to fieldwork and documented in the associated archaeological report. NRHP-eligible sites, or unknown sites where further testing has been recommended will need to be revisited to assess the current field conditions of the site and document any changes since the time of the previous survey. The boundaries of all previously recorded sites should be derived from review of the original archaeological report and site forms, rather than the polygon included in GNAHRGIS.

If a new project falls within an area of adequate previous survey coverage, the project can be documented in an Archaeological Short Report (ASR). The consultant should coordinate with the GDOT Archaeologist to ensure proposed use of previous survey coverage is adequate. If documentation of concurrence from the SHPO is available for areas of previous coverage, it should be included with the archaeological documentation.

In consultation with the GDOT Archaeologist, the use of previous survey coverage may need to be supplemented with additional methodologies for certain areas and site types, such as the addition of probing or ground penetrating radar (GPR) for cemeteries, or metal detection for military sites, if the previous survey did not include these methodologies. In these instances, a full Phase I archaeological report will be required and the ASR is not considered an appropriate level of documentation.

In all overlapping areas between the current survey area and the previous survey coverage, an inspection for historic and/or modern cemeteries is to be undertaken. The previous survey coverage may not have recorded a cemetery as an archaeological site as the cemetery may not have been 50 years of age at the time of the initial survey. Additionally, the previous survey may not have surveyed a modern cemetery, which is required as part of Georgia's Abandoned Cemeteries and Burial Grounds Act (OCGA 36-72).

The archaeologist should coordinate with the project historian on all known shared resources within the survey area (i.e., battlefields, cemeteries, mills, mines, Trail of Tears, Old Federal Road, early farmsteads, etc.) in order to thoroughly document and evaluate the resource.

### Terrestrial Survey

A terrestrial survey can consist of several investigatory methods, including surface visual inspection, subsurface survey, metal detector survey, geophysical survey, and specific methods for the survey of cemeteries. Depending on the proposed undertaking, some or all of these terrestrial survey methods may be required.

#### Visual Inspection

The survey area is to be visually inspected for surface features (i.e., wells, cisterns, foundation remains, fieldstone walls, mines, grave markers, potential grave depressions, piled stone features, driveways, roadbeds, etc.) and artifact scatters in addition to

subsurface testing. In the absence of any subsurface deposits encountered through shovel testing, all surface features or scatters are to be recorded via a Global Positioning System (GPS) unit and treated like a positive shovel test with 15-meter (m) close interval shovel testing conducted in four orthogonal directions.

### Subsurface Survey

#### *Transects*

Throughout the length of the survey corridor parallel survey transects will be spaced at 30 m intervals as dictated by the nature of the survey area. The spacing of transects should be oriented to maximize coverage of the survey area, including both existing and required ROW, using standard 30 m intervals. If a previously recorded archaeological site lies within the survey area, transect and shovel test intervals should be reduced to 15 m throughout the portion of the site within the survey area.

For surveys along an existing roadway, initial transect placement should be oriented along each side of the road, placing the initial transect within or along the existing ROW. In as much as possible, and keeping within existing ROW, placement of the initial transect should avoid disturbances from road construction, ditches, buried utilities, etc. Subsequent placement of transects should parallel the initial transect at 30 m intervals until the edge of the survey area is reached.

For surveys consisting of new location roadway that is 60 m or wider, initial transect placement should begin along the centerline of the survey area. Subsequent placement of transects should parallel both sides of the initial centerline transect, placed at 30 m intervals until the outer edge of the survey area is reached. If the new location roadway is less than 60 m wide, transects should be placed 30 m apart centered within the width of the new location. If the survey follows a curve, the transects should follow the same curve as the road or new location.

#### *Shovel Tests*

Throughout the length of the survey corridor shovel tests will be spaced at 30 m intervals as dictated by the nature of the survey area. When considering tie-in roads to the main corridor, oblique/acute road angles may necessitate the use of judgmentally placed shovel tests in order to ensure adequate survey coverage.

All previously recorded archaeological sites within the survey area will require a revisit survey in order to assess the original NRHP determination and site boundary, including short interval, delineation shovel testing. Please refer to guidance (above) on the use of previous survey coverage and previously recorded sites. Any previously recorded site within the survey area is to be subjected to a grid short interval, delineation shovel test survey.

Shovel tests will be generally 30 centimeter (cm) in diameter and excavated to a depth of 80 cm below surface (cmbs) or 10 cm into sterile subsoil unless an impenetrable substrate or the water table are encountered. If artifact deposits continue, or a portion of the survey area

has potential for deeply buried deposits (i.e., areas adjacent to rivers and creeks), augering or other deep testing methods may be required. All excavated soil, from either a shovel test or a 1 m x 1 m unit, will be screened through 0.25-inch mesh hardware cloth and then backfilled upon completion.

Additional survey transects and close interval shovel testing (i.e., 10 to 15 m intervals) will be excavated at all discovered sites, structural remains, and surface features within the survey area in an effort to delineate sites (see Cultural Resource Example Graphics guidebook). Close interval shovel test transects should also be excavated to delineate the extent of all surface artifact distributions. All sites should be delineated using a full grid of close interval shovel tests within the survey area boundary. Close interval shovel testing will be terminated on individual parallel transects and in orthogonal directions when two consecutive negative shovel tests are recorded in association with each positive shovel test within the limits of the site or isolated find. No testing should be performed outside of the project's defined survey area.

In rare occasions, shovel tests may be enlarged to 1 m x 1 m excavation units at the discretion of the Principal Investigator or as conditions warrant in consultation with the GDOT Archaeologist. In general, this will be restricted to one test unit per site at the Phase I survey level. Additional shovel tests will be excavated where micro-landforms suggest the potential for buried archaeological resources. Deep testing in areas adjacent to rivers and creeks may be facilitated by use of mechanical means. If mechanical means are used for deep testing, the deep testing plan should be developed in consultation with the GDOT Archaeologist. All deep testing should comply with OSHA *Standards for Excavation Safety*, 29 CFR 1926 Subpart P.

Cultural Resources Example Graphics,  
GDOT Office of Environmental Services

### Specialized Methodologies

The methods described below are to be used when an identified cultural resource necessitates additional investigative methods to evaluate and examine a resource for NRHP eligibility as well as an aid to identify the potential presence of subsurface features (e.g., unmarked graves in a modern cemetery). In some instances, a combined Phase I/II methodology may be determined appropriate and a research design may be necessary prior to survey.

#### Metal Detection

Metal detection methodology should be coordinated with the GDOT Archaeologist prior to fieldwork, including any proposed artifact sampling strategies (i.e. 10% sampling of dense clusters, etc.). Based on background research, metal detection should be used during Phase I survey when working in areas with potential for military deposits or features (e.g., battlefields, camps, forts, etc.) and areas of historically documented mining activity. Within



these areas, metal detection should be conducted, at a minimum, along 30 m interval transects in addition to the standard shovel test survey. If a metal detector hit results in a positive military or mining artifact, metal detector survey transects should be reduced to 15 m intervals to delineate the military or mining-related find. If a metal detector hit results in a non-military or mining artifact, the area should be subjected to standard close interval shovel testing to delineate the find.

Metal detection may also be incorporated into Phase II testing strategy for all historic period sites, as determined in consultation with the GDOT Archaeologist during development of the Phase II Testing Plan.

### Geophysical Survey

Geophysical survey will be utilized on archaeological sites at the discretion of the archaeologist (in consultation with the GDOT Archaeologist) as conditions warrant. The survey may include a variety of methods including GPR, magnetometry, resistivity, and other methods as warranted by the site type and field conditions. Geophysical surveys should be conducted by qualified personnel for the particular method used.

### *Historic Streetcar Resources*

In accordance with the 2015 *PA Regarding Historic Streetcar Archaeological Sites in Georgia*, between FHWA, GDOT, and SHPO, GPR is to be conducted in areas where background research has identified the potential for historic streetcar archaeological sites. Within the metro Atlanta region, GPR survey is required for any project area with the potential for streetcar lines that predate the Georgia Power Era, while all potential historic streetcar locations outside of the metro Atlanta area will require GPR survey. The GPR antenna size should be applicable to the survey area as appropriate to identify the location of non-GPSS streetcar tracks within the survey area (i.e., a 400mHz or 900mHz antenna may be required). A GPR survey for potential streetcar lines should be collected via paired individual transects, collected in opposite directions, at multiple locations along a given roadway to determine whether track remnants are likely continuous through the survey area or whether portions have been removed. For areas outside of metro Atlanta, geophysical survey for historic streetcars may be required if background research indicates the potential presence of a streetcar system. In instances where potential historic streetcar resources are identified, additional coordination and documentation will be required pursuant to the PA and in coordination with the GDOT Archaeologist.

### Cemeteries

#### Cemetery Survey Goal

For all GDOT projects, any cemetery identified within the survey area should be archaeologically delineated, regardless of age, to ensure compliance with Georgia's Abandoned Cemeteries and Burial Grounds Act (OCGA 36-72). Under the current law as amended (OCGA 36-72-14[c]), a cemetery permit is not required for GDOT projects which acquire ROW from a cemetery as long as no burials are identified within the affected property. The consultant is to review the GDOT Cultural Resources Cemetery Procedures

and the Archaeology Documentation Guidebook for additional guidance on the identification and evaluation of historic cemeteries.

All historic cemeteries located within the survey area should be recorded as archaeological sites and evaluated for NRHP eligibility. The National Park Service (NPS) provides a discussion of these issues in the publications entitled *Guidelines for Evaluating and Registering Archaeological Properties* (Bulletin 36; 2000) and *Guidelines for Evaluating and Registering Cemeteries and Burial Places* (Bulletin 41; 1992).

The goal of a cemetery survey is to identify any burials or potential burials within the survey area. Visible marked burials, visible unmarked depressions, and any potentially unmarked, non-visible burials or anomaly within the survey area should be recorded via a GPS unit. In cases of cemeteries containing large numbers of marked burials and visible unmarked depressions within the survey area, at a minimum all burials within the existing ROW and adjacent/nearest to the existing ROW must be recorded to facilitate avoidance and minimization efforts and compliance with OCGA 36-72. In these instances, a modification of the required recordation may be requested through consultation with the GDOT Archaeologist.

### Requirements Prior to Survey

The archaeologist will be responsible for conducting deed research (from the applicable county seat) to assist with establishing the boundary of the cemetery. If a legal deed does not exist to establish the cemetery boundary then the archaeologist will be responsible for delineating the location and the boundary of the cemetery within the survey area, using probing and/or geophysical methods (e.g., GPR), and other historic documentation in consultation with the project historian. Coordination between the project archaeologist and the project historian is to be conducted to determine who is responsible for contacting the property owner of the cemetery in order to obtain information on the cemetery and the burials located on their property. In the case of a modern cemetery, contacting the property owner is the responsibility of the project archaeologist.

### Cemetery Survey Methods

The cemetery survey should include, at a minimum, probing to locate any potentially unmarked graves within the survey area. Probing is to be conducted on 1 m interval transects using a steel-tipped probe inserted into the ground spaced 1 m apart and extending outward from the concentration of visible, marked and unmarked graves. This effectively tests for perceivable changes in soil compaction which may be used as an indicator for an unmarked, non-visible interment. Similarly, a penetrometer may be used to measure compactness of soil in lieu of a steel-tipped probe. The location of any potentially unmarked grave is to be recorded with a GPS unit. In consultation with the GDOT Archaeologist, when there is a high potential for unmarked graves, and if field conditions are conducive, GPR may be required to identify the location of any unmarked graves within the survey area. The GPR antenna size should be applicable to the survey area as appropriate to identify the location of any potentially unmarked graves. If standard

cemetery delineation methods are inconclusive or not possible due to field conditions, and the area cannot be definitively avoided, additional methods such as the use of canine scent detection or mechanical stripping be necessary to verify the presence of burials. Coordination with the GDOT Archaeologist is required prior to use of any additional specialize methodology.

After delineation of a cemetery boundary using the appropriate methods, shovel testing may be needed within a larger associated parcel boundary to identify potential unrelated archaeological deposits. Extreme caution should be given in these scenarios to ensure that this only occurs in areas without potential for unidentified burials and coordination with the GDOT Archaeologist may be needed prior to shovel testing.

In consultation with the project historian, if a cemetery and its associated parcel are both deemed eligible for the NRHP by the project historian, then the site boundary for the historic cemetery is established as the entire parcel. If the associated parcel is considered ineligible for the NRHP by the project historian, then the boundary of the site is established by the archaeologist through a combination of fieldwork and historic imagery (e.g., maps, aerials). If the archaeological survey enlarges the site boundary beyond the parcel boundary through the identification of graves, then the project historian will adopt the larger archaeological defined boundary (see Historic Survey Guidebook). Additionally, if the parcel is deeded as a cemetery, then the entire parcel boundary is used as the site boundary for the historic cemetery. In instances where potential burials are identified outside of a parcel boundary and cannot be ground-truthed, the cemetery site boundary in those locations should be set approximately five (5) meters offset from the outermost potential burials. In addition to identified or potential burial locations, the cemetery site boundary should also consider the landform and associated vegetative features.

### Special Consideration for Addendum Surveys

Addendum project surveys should pay particular attention to cemeteries within the entire project area that may not have been recorded, delineated, or evaluated for the NRHP during previous surveys. If a cemetery is not recorded as a historic property, or was recorded as modern during an original survey but has turned 50 years of age by the time an addendum survey is required, it will need to be documented as a site and evaluated for the NRHP in the addendum survey. This will be true regardless of whether there are any design changes in the area of the cemetery. Older corridor projects often have cemeteries noted in the reports that do not appear in the Georgia Archaeological Site File (GASF) or Georgia's Natural, Archaeological, and Historic Resources Geographical Information System (GNAHRGIS) database; therefore, a thorough review of previous documentation of older corridor projects is necessary. It is important to verify that previous delineations of cemeteries were adequate when revisiting a project.

### Special Consideration for Cemeteries within the Viewshed and Modern Cemeteries

Historic cemeteries within the viewshed of a project will be documented by both the project historian and the project archaeologist. However, modern cemeteries located within the

viewshed of a project will only be documented by the project archaeologist. Delineation of a cemetery situated adjacent to a project survey area should be conducted using appropriate methods to ensure that unmarked portions of a cemetery do not extend into the survey area.

All modern cemeteries within the project survey area will need to be delineated in accordance with OCGA 36-72. This is to document all burials within the survey area, including marked and unmarked burials. However, a modern cemetery is not recorded as an archaeological site or historic resource and it is not evaluated for NRHP eligibility.

### Underwater Survey

During fieldwork scoping, all projects will take into consideration the potential of maritime archaeological sites and landscapes and the need for an underwater survey. Consideration will be given to navigable and inland waterways and the potential for both historic and precontact resources. This may include remote sensing in the waterway, visual inspection of the shoreline, and diver inspections during Phase I survey and hand excavation/dredging, coring, and other specialized techniques during Phase II testing, as described in further detail below.

When conducting underwater surveys, established best safety practices should be followed (i.e. United States Army Corp of Engineers [USACE] Dive Safety Program, American Academy of Underwater Science [AAUS] Dive Safety Standards or National Oceanic and Atmospheric Administration [NOAA] Dive Safety Manual). The Principal Investigator and field crew will have a minimum of an Open Water Diver Self-Contained Underwater Breathing Apparatus (SCUBA) Certification by a certified agency, completion of a scientific diving course, up-to-date basic first-aid and cardiopulmonary resuscitation (CPR) certification, be an archaeologist meeting the *SOI's Standards and Qualifications*, and at least one member of the crew should hold an up-to-date Emergency Oxygen Provider certification.

### Geophysical Survey

Geophysical instrumentation should at minimum include side-scan sonar and magnetometer. Based on background research and known precontact sites in close proximity to the waterway, additional sub-bottom profiler data may be requested. Consultants should ensure data is readable, accurate, at a proper resolution, and ensure line spacing provides 100% coverage of the survey area. At the discretion of the Principal Investigator, higher resolution lines at tighter spacing can be used to further investigate promising sonar contacts. Deviations from this standard methodology should be coordinated with the GDOT Archaeologist prior to completion of the survey.

### Diver Investigations

All sonar contacts and magnetometer anomalies should be ground-truthed through diver investigation or visual inspection. In the event that numerous anomalies are identified, prioritization of targets in consultation with the GDOT Archaeologist may be necessary.

Prioritization should take into consideration the proximity of the anomaly of the terrestrial survey area and the likelihood that it represents a cultural deposit, including association with a known site boundary. When prioritization is needed, all anomalies regardless of visual inspection, should be discussed in the report.

### Shoreline Inspection

A visual inspection of the shoreline should be conducted in areas consisting of shallow water and dry ground within the survey area either from the boat or by pedestrian survey. Visual inspection/pedestrian survey should be conducted along the shoreline of the terrestrial survey area at such a time when the shoreline is exposed (i.e., low tide) to identify potentially submerged or semi-submerged archaeological sites. If artifacts or features are identified along the shoreline that may extend upland, coordination should occur with the terrestrial survey to ensure proper delineation within the terrestrial ESB. Delineation for resources identified beyond the limits of the terrestrial ESB will be restricted to the shoreline.

If submerged artifacts are located, they should be photodocumented and their provenience recorded using GPS. In the rare event that unique, exceptionally significant submerged artifacts are identified, collection should be discussed in consultation with the GDOT Archaeologist and may be undertaken on a case-by-case basis.

## FIELD SURVEY DOCUMENTATION

The following field survey documentation is required to for all applicable surveys.

### Terrestrial Survey Field Records

#### General Survey Notes

The consultant shall record field notes with the GDOT project information, date of survey, descriptive field observations of the survey area, including general weather conditions, soil conditions, hindrances to conducting the survey, etc. Representative digital photographs should be taken of all aspects of the survey (i.e., observed soils, field conditions encountered in the survey area, especially of any locations that prevented the excavation of shovel tests, etc.).

Descriptive data for each test shall include type of test (i.e., shovel test, 1 m x 1 m unit); topographic location; Munsell soil color, texture, and observed anomalies; depths of soil horizons; and the presence or absence of cultural material. A stratigraphic profile will be drawn and photographed for each 1 m x 1 m excavation unit. All necessary logs (i.e., photo logs, field specimen logs [bag list], etc.) are to be recorded and maintained while in the field during the survey. Structures, sites, stratigraphy, and cultural material will be recorded using standard archaeological techniques.

#### Sites, Structural Remains, and Cultural Features

All discovered sites, structural remains, and cultural features will be recorded as to width, length, depth, and nature of fill within the survey area. Locations of shovel test, surface

features, and disturbances at each site will be sufficiently recorded in the field so that a site sketch map may be produced for subsequent documentation. The location of each positive shovel test and any surface feature is to be recorded with a GPS unit. Representative digital photographs will be taken for each site, structural remains, and cultural features, illustrating the site's physical setting.

At each site identified during the survey, data collection will be sufficient to support a recommendation of NRHP eligibility, or a recommendation for Phase II testing to determine NRHP eligibility. The NPS provides guidance on the evaluation of archaeological sites in the publications entitled *How to Apply the National Register Criteria for Evaluation* (Bulletin 15; 1997) and *Guidelines for Evaluating and Registering Archeological Properties* (Bulletin 36; 2000), in addition to other resource specific bulletins. There are two standard NRHP eligibility recommendations: eligible and ineligible. While primarily evaluated under Criterion D, consideration should also be given to whether it is appropriate to also evaluate an archaeological site under the other remaining Criteria based on the cultural context.

In some instances, a site will be recommended as having an unknown NRHP recommendation. Sites that are found to lack significant data potential under Criterion D within the survey area, but whose boundaries have not been fully delineated beyond the limits of the survey area, may remain unknown overall in NRHP eligibility. Sites that require further investigations to evaluate data potential or integrity, such as Phase II testing, can also be considered unknown for NRHP eligibility until such investigations are completed.

If any portion of a site is found to contain significant data potential, the NRHP recommendation should be eligible, regardless of whether the site has not been fully delineated beyond the survey area and therefore has an unknown site boundary.

### Underwater Survey Field Records

#### General Survey Notes

The consultant shall record and include in any field notes the GDOT project information, date of survey, descriptive field observations of the survey area, including general weather conditions, water levels, hindrances to conducting the survey, etc. Representative digital photographs should be taken of all aspects of the survey (i.e., field conditions encountered in the survey area).

Dive logs including air amounts at the start (in pounds per square inch [PSI]) and air amounts (PSI) at the end will be required and recorded for each diver. This information will be included with the field notes and presented in an appendix of the subsequent documentation.

#### Sites, Structural Remains, and Cultural Features

Anomalies identified during underwater survey may be characterized based on type and the potential to be cultural. If anomalies are determined to be cultural and 50 years of age or older, they should be recorded as an archaeological site in accordance with GCPA standards.

All discovered sites, within the survey area and along the shoreline (i.e. docks, piers, pilings, river crossings, boats, ships, fish weirs, ship graveyards, mills, shipyards, ballast, etc.) should be documented including its coordinates using a GPS unit, width, length, height, and depth. Representative digital photographs will be taken for each site illustrating its physical setting.

Potential submerged sites should be noted and shown in the data, including the location and nature of artifact deposits, and a recommendation of further testing of these sites should be offered in the report.

In the event of an Isolated Find (IF), the nature of the cultural find should be documented including its coordinates using a GPS unit, width, length, height, and depth. Representative digital photographs will be taken for each IF illustrating its physical setting.

### CONDUCTING PHASE II ARCHAEOLOGICAL TESTING

In the event that Phase II testing is recommended, consultants will develop a Phase II testing plan for each site in consultation with the GDOT Archaeologist (see Archaeology Documentation Guidebook). The testing plan will be coordinated with the Lead Federal Agency, SHPO, federally-recognized tribes, and consulting parties prior to fieldwork. In addition to a Phase II landowner notification letter distributed by the GDOT Archaeologist, the consultant shall coordinate all Phase II fieldwork with the landowner(s) in advance of the start of fieldwork and a formal Right-of-Entry agreement may be required in certain circumstances. The consultant should contact the landowner(s) a minimum of a week prior to the start of fieldwork, provide them with a schedule for fieldwork, and address any reasonable concerns raised by the landowner(s), in consultation with the GDOT Archaeologist.

#### Terrestrial Testing

The Phase II testing strategy may include close interval shovel testing, mechanical stripping, hand excavation of formal test units (1 m x 1 m, 1 m x 2 m, 2 m x 2 m etc.), geophysical survey, and metal detection as determined by the nature of the site. The testing plan will propose locations for excavation based on the Phase I survey results. All test units will be excavated to a maximum depth of 150 cmbs and/or a minimum of 20 cm into culturally sterile subsoil and backfilled upon completion. All deep testing (units deeper than 150 cm) should comply with OSHA *Standards for Excavation Safety*, 29 CFR 1926 Subpart P. Geophysical survey will be incorporated into the testing strategy where conditions warrant and in consultation with the GDOT Archaeologist. Additional specialized methods may include a geomorphological investigation, specialized analysis of floral and faunal material, collection of material for radiocarbon analysis, collection of soil samples for optically stimulated luminescence (OSL) dating, etc.

All discovered archaeological features will be recorded as to width, length, depth, and nature of fill. Descriptive data recorded for each test unit shall include the type of test unit (i.e., 1 m x 2 m unit); topographic location; Munsell soil color, texture, and observed

anomalies within each level; depths of soil horizons; and the presence or absence of cultural material and features. A stratigraphic profile and plan views will be drawn for each excavation unit including documentation with digital photography. Structures, test unit stratigraphy, features, and recovered cultural material will be recorded using standard archaeological techniques.

All excavated soil will be screened through 0.25-inch mesh hardware cloth, with the exception of feature fill. Whenever sub plow zone middens or features are encountered, a sufficient soil sample will be recovered from each level (if applicable) of the midden or feature for flotation and micro-artifact analysis. Any soil collected from a midden or feature that is not subject to flotation will be screened through 0.125-inch mesh hardware cloth. The plan view and a profile view of all recorded features will be documented. Digital photographs will be taken of all aspects of the investigations. The artifact data collection strategy (sampling, specialized analysis, etc.) will be of sufficient scope in relation to the site type to support an assessment of NRHP eligibility.

### Underwater Testing

Phase II investigations may be needed if an anomaly identified during underwater survey is interpreted as being likely cultural, but the origin is unknown, or the extent/nature of the deposit needs further investigations. Additionally, Phase II underwater investigations may be required if the integrity of the cultural deposit cannot be ascertained beyond what is available from the remote sensing and diving. Examples of such include determining the age of a submerged vessel or coring to determine the presence or nature of submerged precontact or historic deposits identified in in the Phase I effort.

The testing strategy may include additional high-resolution data collection, close interval shovel testing along the shoreline, hand-excavation/dredging of formal units (1 m x1 m, 1 m x 2 m, 2 m x 2 m, etc.), or additional geophysical techniques. Methods for Phase II investigations are to be tailored to the environment and site type. The Phase II testing should include additional documentation of the site that was not recorded as a result of the Phase I survey (i.e., additional mapping/photographs associated with dredge units, coring, etc.).

All cultural material, including possible structures, associated debris fields, and other cultural deposits should be recorded using underwater archaeological techniques. Information to be recorded shall include topographic location, stratigraphy, Munsell soil color and texture if available, and GPS location. In addition, the contact/anomaly number and method of discovery shall also be recorded (i.e. geophysical, on-site recording, probing, hand-fanning, visual inspection, circle searches, dredging, etc.). The artifact data collection strategy (i.e. sampling, specialized analysis, etc.) will be of sufficient scope in relation to the site type to support an assessment of NRHP eligibility.



## MITIGATION / DATA RECOVERY EXCAVATIONS

After the consideration of avoidance alternatives and measures to minimize harm (pursuant to the Avoidance and Minimization Measure Meeting [A3M], (see Archaeology Documentation Guidebook) and the NRHP Criteria of Adverse Effect have been applied and documented in an Assessment of Effect document, archaeological data recovery may be required to mitigate an adverse effect as agreed upon in a Memorandum of Agreement for a proposed undertaking. Due to the diverse nature of archaeological deposits and variety of archaeological site types, no standard data recovery methodology exists to adequately mitigate adverse effects to all archaeological sites. When an adverse effect is unavoidable to an archaeological site, the GDOT Archaeologist, in coordination with the Lead Federal Agency, will be required to consult with federally-recognized tribes, SHPO, and other consulting parties to develop and implement a Data Recovery plan. The Data Recovery plan will be specific to the impacted archaeological site and focused on mitigation of the adverse effect associated with the proposed undertaking and the subsequent fieldwork will adhere to the agreed upon methodology of the plan.

## DISCOVERY AND TREATMENT OF HUMAN REMAINS

In the event that human remains are encountered Stipulation X of the 2019 PA *Regarding the Section 106 Process for the Transportation Program in Georgia* between FHWA, SHPO, the USACE Savannah District, the ACHP, and participating federally-recognized tribes, as well as Section 5.4 of the GDOT *Section 106 Cultural Resources Manual* (CR Manual) provides guidance in the event human remains are found within the survey area.

Guidance for the consultant is provided below if human remains are identified.

- > Stop all work or activity in the area immediately adjacent to the location of potential human remains or burial objects.
- > Report the find immediately to the on-site archaeologist in charge so that the observation may be confirmed.
- > Notify GDOT Office of Environmental Services personnel immediately, specifically the GDOT Archaeologist, GDOT Tribal Liaison, or the State Environmental Administrator.
- > The archaeologist should avoid displacement of potential human remains or burial objects. Any human remains or burial objects inadvertently removed from the ground should then be returned to the location in which it was found along with any other artifacts. If located in a shovel test, the test should be backfilled and if found in a test unit, the unit will be tarped over and secured.
- > The archaeologist will minimize photography, ensuring that no unnecessary photographs are taken. Sufficient descriptive information such as soil information, depth, etc. will be recorded to aid in consultation regarding the find (i.e., age, integrity of deposits, etc.).

- > Protect the location of the discovery by reasonable means, securing the area from unauthorized personnel or activity.
- > The archaeologist will await further instruction from GDOT pending consultation with the Office of the State Archaeologist, Lead Federal Agency, and federally-recognized tribes, as applicable.
- > If potential human remains are identified in an archaeological context, law enforcement will not be notified as provided for in OCGA § 31-21-6(a) and the Georgia Office of the State Archaeologist *Policy on Encountering American Indian Human Remains*. If the human remains are determined to be modern in context (i.e. definitively less than 50 years of age), the archaeologist shall notify law enforcement in accordance with the Georgia Dead Bodies Act [OCGA § 31-21-6(a)].
- > The archaeologist and project personnel will refrain from discussing the find with the public, either through traditional or social media platforms. Communication regarding the find will be restricted to essential project personnel.

## DATA ANALYSIS AND CURATION

### Data Analysis

Artifact data analysis generally should follow well-established classification schemes and typologies. The choice of a specific classification system will depend on the goals and nature of the site under investigation, as discussed with the GDOT Archaeologist, and should be fully defined and referenced in the appropriate archaeology report.

### Curation

The following points will be adhered to:

1. The archaeologist will permanently curate project documentation (records, field notes, etc.) associated with projects that result in negative findings. Consultants will submit one copy of this documentation to GDOT either in original form, electronic form, or as copies on acid-free paper, as determined in consultation with the GDOT Archaeologist.
2. The archaeologist will also submit to GDOT one copy of documentation (records, maps, analysis forms, field notes, etc.) as well as any original photographic data gathered during investigations of sites at which artifact collections were not made (e.g., documentary investigations). Documentation should be either in original form or copies on acid-free paper. Printed photographic media should be placed in acid-free envelopes, folders, or polypropylene sheets; photographic media may also be submitted in electronic format.
3. For projects yielding collections, the archaeologist will utilize the University of West Georgia's Antonio J. Waring, Jr. Archaeological Laboratory (Waring Laboratory) for permanent curation of project collections, including artifacts and associated documentation (records, maps, analysis forms, field notes, etc.), with the exception

of any project requiring alternate curation facilities pursuant to an ARPA Permit or other special situation that may arise. The archaeologist will comply with the most current version of the “Standards for Archaeological Collections” utilized by the Waring Laboratory concerning curation of the project collection, and the archaeologist is encouraged to consult with the GDOT archaeologist, the GDOT Laboratory Director, the Waring Laboratory Coordinator, and the Waring Laboratory Director early regarding processing issues and to resolve any questions regarding curation of the collection. In particular, the following points will be adhered to:

- a. All artifacts and samples will be washed/cleaned or otherwise stabilized, prepared, packaged, and cataloged according to the guidelines established by the Waring Laboratory. The archaeologist should specifically adhere to Waring Laboratory’s “Standards for Archaeological Collections.” The original and two copies of the catalog must accompany the collection. Artifacts requiring special conservation (e.g., wood, metal, and shell) must be properly treated. Parts of the collection requiring special curation conditions (e.g., climate control) must be identified and packaged separately from the remainder of the collection.
- b. Artifacts must be packaged in interlocking, heavy-duty plastic (minimum 4 mil thick) bags or small archival containers. Each bag must be properly labeled according to Waring Laboratory’s “Collection Labeling and Packaging Guide,” and should include information such as the catalog number, field context identification, and other requisite information (Georgia Site File Number, GDOT Project Number [if assigned], and GDOT P.I. number). The same printed information must be inserted into the bag on a separate acid free paper tag.
- c. All archaeological collections including artifacts and documentation must be packed in Hollinger archival boxes, 15-inch x 12.5-inch x 10-inch, with each box properly labeled on one outside end. An artifact and documentation inventory must accompany each box. Records must be boxed separately from their associated artifacts. The contents of each box cannot exceed 30 pounds in total weight.
- d. Originals and copies of all documents (field and laboratory notes, final report, drawings, forms, and maps) will accompany the collection. These records must be packaged separately from the artifacts and must be on acid-free paper or placed within acid-free folders. All printed photographs, accompanying negatives (if appropriate), and other photographic materials must be placed in archival quality sleeves. A photographic log of these materials must be included in the document inventory. Digital photographs are accepted, and the preferred format is .tiff file. Any electronically stored data (e.g., computer discs, CDs) must accompany hard copies of the records and be identified as to the requisite software, operating system, disk density and computer type.

- e. The consultant will submit the collection for permanent curation to the Waring Laboratory within sixty (60) calendar days after the acceptance of the final report. Should more time be needed between completion of the final report and submittal of the collection for permanent curation, the consultant, in consultation with the GDOT archaeologist, may continue to temporarily curate the collection at the consultant's facility, for a set period of time agreed upon by GDOT. Once the collection is ready to be submitted, the consultant will notify the GDOT archaeologist and complete the "Certification of Collection" form for submittal with the collection. The GDOT archaeologist and GDOT Laboratory Director should be copied on all correspondence regarding project collections between the consultant and the Waring Laboratory.
- f. The consultant will follow submission procedures for the Waring Laboratory as detailed in the "Standards for Archaeological Collections" and will be responsible for the acceptance and permanent curation of the collection at the Waring Laboratory. Retrieval of collections not meeting curation requirements will be the responsibility of the consultant. The consultant should consider packaging and submitting GDOT project collections as consolidated "multiple small collections"; doing so may require coordination with the Waring Laboratory, the GDOT archaeologist, and the GDOT Laboratory Director.

For consultant projects, permanent curation of the collection will be funded by the consultant and must be accounted for in the preparation of all preliminary engineering budget and proposal submittals to GDOT for archaeology. Consultants should contact Waring Laboratory prior to budget submittals to determine the current fees. Consultants will curate collections under the set fee contract option. Any requests for expedited service or processing services at the Waring Laboratory will be the sole responsibility of the consultant, and these costs will not be transferred to GDOT.

*Guidebook Revision History*

Revision Description	Relevant Sections	Revision Date
Initial Publication	All	11/1/2022
Overview header, Restyle hyperlink	Front page, Conducting Phase I Archaeological Survey	10/17/2023