SCENE OF WORK
NON-INVASIVE ARCHAEOLOGICAL SURVEY
VOLUNTEER TRAINING SITE-MILAN TENNESSEE ARMY NATIONAL GUARD

A. INTRODUCTION

The Tennessee Army National Guard (TNARNG), as an agent of the National Guard Bureau (NGB), is responsible for the prudent management of cultural resources on all of its properties. All TNARNG properties are managed in accordance with the various federal and state laws as delineated by the Army National Guard Cultural Resources Handbook 2013 and the Integrated Cultural Resources Management Plan (ICRMP) 2017 respectively, which guides all activities that may impact cultural resources on a site. Survey data and associated maps are used for mission planning and cultural resources management, in addition to a variety of other planning purposes. Up to date baseline information on archaeological and architectural characteristics are essential to informed cultural resources management.

The Volunteer Training Site (VTS) Milan lies in the state of Tennessee, approximately 10 miles southeast of the city of Milan, Tennessee in the small community of Lavinia along the property boundaries of the Milan Army Ammunition Plant (MLAAP). VTS Milan encompasses four tracts of land totaling 2,480 acres of federally-owned land in Carroll & Gibson Counties, Tennessee; that were once a part of the MLAAP.

To date, there are 12 archaeological sites recorded on VTS Milan, none of which are eligible for the National Register of Historic Places (NRHP). These 12 archaeological sites represent the later settlement activities associated with the mid to late 1800s homesteads mainly including domestic residences and their analogous family cemeteries (5 total on site). There are also 6 NRHP-eligible structures that all correspond to the military build-up for World War II. The proposed study focuses on the archaeological non-invasive survey of Site #40CL71 and its surrounding buffer zone in VTS Milan’s cantonment area.

This area of the training site was initially recorded in 1999 by Stayard et. al where the family plot lay un-enclosed on a flat, grassy lawn incorporating a 13 x 8 meter area. In 2006 Deter-Wolf & Karpynec did a documentary and field investigations of this site (fenced off during the early 2000’s) to specifically determine its NRHP-eligibility nomination (ineligible). The goal of this study is to use non-invasive technologies to delineate a conclusive boundary of where this archaeological resource is confined, determine an accurate delineation for the respected grounds, and to establish a true buffer zone from all possible infringements to provide the maximum maneuverability within the cantonment area in support of the mission.

In order to be eligible for the NRHP, archaeological sites, districts, buildings, structures, or objects must meet one of four criteria established by the National Park Service (NPS):

(a) Associated with events that have made a significant contribution to the broad patterns of history;
(b) Associated with the lives of persons significant in the past;
(c) Embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master; possess high artistic value; or represent a significant and distinguishable entity whose components may lack individual distinction; and
(d) Have yielded, or may be likely to yield, information important in prehistory or history.

Additionally, the archaeological resource must have integrity of "location, design, setting, materials, workmanship, feeling and association" to convey its significance (36 Code of Federal Regulations, Part 60, Section 60.6).

The TNARNG requests archaeological services (Contractor) for a non-invasive survey for Site #40CL71 and its surrounding buffer zone on Volunteer Training Site Milan (VTS Milan), Carroll & Gibson Counties, Tennessee.

**B. OBJECTIVE**

The objective of this Scope of Work (SOW) is to survey up to 3,654 square meters depending on environmental constraints, this includes site #40CL71 and its surrounding areas to create a more conclusive buffer zone (2.5m around cemetery perimeter) around sensitive areas within the cantonment area at VTS Milan. The information to be collected will be applied to the management of the training site (specifically within the cantonment area) in order to protect historic properties and/or cultural resources. The project includes performance of a non-invasive geophysical or remote sensing survey within the cantonment area applying Ground Penetrating Radar (GPR) techniques to examine previously identified cultural resources including aiding researchers in discerning the physical boundaries or areas suspected to contain structural remains or known settler cemeteries, as identified through archival research, aerial photographs, and previous survey reports; in combination with Geographic Information System (GIS) technology to examine the land use history, or landscape of training lands.

Current efforts focused on features attributed to historical land use - erosion control or agricultural/farming purposes; residential or commercial properties; mining; and military related activities. Prior to the 1940s, lands included multiple communities & cemeteries. In addition to the remains of residences, and other complementary farming structures, there are five plots considered as burial grounds (cemeteries) recorded as archaeological sites on VTS Milan ("considered plots" due to the nature three out of five do not have any grave markers nor signs of inundations/grave footprints). The proposed remote sensing study will serve as a tool to aid in the identification of resources that may provide further insight into the settlement and development of the area prior to the War Department acquisition in the 1940s. The study will be a tool to identify resources associated with this historic land use, especially those tied directly to archival information and oral histories. This study would aid in the preservation and management of known sites on VTS Milan, specifically within the cantonment area, while aiding in the understanding of certain locations allowing for better management of the landscape/resources.

The following are the objectives of this statement of work

1. Archival research necessary to develop a historic context for the report of findings and aid in the evaluation process.
2. Survey of a portion of the VTS Milan cantonment area, which has been surveyed to modern archaeological standards yet is the perfect candidate for the use of modern non-invasive technologies to further delineate previously known archaeological resources.
3. Preparation of a comprehensive report summarizing the findings from the archival research, field investigations, a historic context, evaluation recommendations, updated site forms, and management recommendations in accordance with standards maintained by the Tennessee State Historic Preservation Office (TN-SHPO).
All Stages of this study will follow the guidelines established by the Tennessee SHPO, as presented in the Tennessee SHPO Standards and Guidelines for Archaeological Resource Management Studies (Revised March 2009). Principal Investigator(s) and Field Director(s) will meet the minimal professional qualifications for archaeology as set forth in "Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines" (Federal Register, Volume 48, No. 190, September 29, 1983, Part IV, page 44739; see also 36 CFR 61). Following the TN-SHPO's Standards, direct field supervision by a professionally qualified archaeologist is recommended for all archaeological projects.

C. MAJOR REQUIREMENTS

The following tasks must be completed for the Contractor to successfully accomplish the work under this delivery order:

C.1 Task 1: Project Kick-Off Meeting

A kick-off meeting will be performed in person with the TNARNG Project Lead prior to commencement of work. At this time, the Contractor will be provided with detailed background information relating to the study (i.e., previously completed Phase I survey reports, photographs, maps, etc.). The TNARNG Point of Contact (POC) will be responsible for copying documents in cases where the original cannot be distributed to the Contractor for use during the execution of this SOW. This information will include the following:

- Maps showing the area of potential effect (APE) to be surveyed;
- Available topographic maps;
- Current aerial photography of the VTS Milan;
- Previously conducted archaeological surveys;
- Any available requested information that will assist in the archaeological survey

Whenever possible, this information will be provided to the Contractor in electronic format. The Contractor will be responsible for reviewing all provided data. In addition, the Contractor may accompany TNARNG representatives on a field review of areas of cultural interest on VTS Milan. This field review will serve to introduce the Contractor to the training site environment.

Also to be discussed at this meeting are the logistical needs of the project and deliverables. Following completion of the Kick-Off Meeting, the Contractor will prepare a summary letter, indicating an understanding of the current project and providing schedule for the archival research and field effort; The Contractor will need to coordinate their field schedule with the training site POC so that areas can be scheduled using the Range Facility Management Support System (RFMSS). Due to safety and mission training requirements, scheduling may vary, so plenty of advanced notice is advised.

C.2 Task 2: Archival Research

Archival research is conducted to document the historical context and archaeological deposits of a site. Initial archival research provides a basis for site identification in advance of discoveries of archaeological remains at a project area. Such research is often undertaken at the beginning of a project to better understand the local land use at the project location (farming or agricultural land use, domestic land use, industrial land use, military land use, railroad-related land use, or other usage). Examples of research materials examined during the course of the study include the study of historical maps (Sanborn Fire Insurance Company Maps, old topographic and road maps, tax assessor's maps, etc.), deeds and property records, sexton records, aerial photographs, and other documentation. The Contractor should perform the archival research prior to the field effort.
Research materials may be available from the TNARNG, but also will require additional research efforts by the Contractor at locations such as (but not limited to) the Tennessee State Library and Archives; Universities of Tennessee Libraries; Carroll and Gibson Counties Tax Assessor’s Office; Carroll and Gibson Counties Historical Societies, and various online references as deemed credible. Results of this research should be used to compile a historic context for inclusion in the report of findings.

**C.3 Task 3: Submission of Project Work Plan**

The Contractor will submit for review by the TNARNG POC a Project Work Plan detailing the scheduled stages of the project and the proposed methodology to be used in each phase. The work plan will be completed and approved by the TNARNG POC within one month following the start-up meeting.

The methodology should be in accordance with scientific standards and those outlined by the *Tennessee SHPO Standards and Guidelines for Archaeological Resource Management Studies* (Revised March 2009).

The Contractor is responsible for obtaining any permits and authorizations that may be required to complete this contract. Copies of all permits will be provided to the TNARNG POC within 30 days of issuance.

**C.4 Task 4: Field Work**

This portion of the project will be performed by personnel that meet the minimal professional qualifications for archaeology as set forth in "Archaeology and Historic Preservation: Secretary of the Interior’s Standards and Guidelines" (Federal Register, Volume 48, No. 190, September 29, 1983, Part IV, page 44739; see also 36 Code of Federal Regulations [CFR] 61) with methodology in accordance with the *Tennessee SHPO Standards and Guidelines for Archaeological Resource Management Studies* (Revised March 2009).

The Contractor will perform non-invasive geophysical or remote sensing investigations to identify site locations and their respective boundaries. Generally, this effort will include a systematic pedestrian walk-over, with the geophysical or remote sensing equipment, as well as a visual inspection of the survey tract/APE, and minimal, yet systematic, collection of significant artifacts from the ground surface. No subsurface testing (i.e., shovel tests, auger tests, etc.) is anticipated at this point, although some vegetation or leaf-litter may need to be removed for visual inspection of features.

The survey intervals using the non-invasive geophysical or remote sensing equipment may vary, but follow established protocols for these types of surveys. If shovel testing is deemed necessary, the tests should be excavated to subsoil. All soils from shovel test/excavations must be screened through ¼-inch or smaller mesh screen. All shovel tests/excavations will be backfilled. Artifacts should be collected following a defined sampling strategy that is applied consistently throughout the project; artifacts must be cleaned, bagged, and labeled by provenance.

Daily field notes and photographs must be recorded to document all survey activities, shovel tests, and observations. All shovel tests, excavation units and features should be recorded with sub-meter accuracy using a Global Positioning System (GPS -see C.6. Task 6 for specifications for collection perimeters). Data from the non-invasive geophysical or remote sensing equipment will also be recorded. Soil types, textures, and colors should be recorded using sand grain sizing gauges and Munsell color designations. Photographs should be made with clear quality, high resolution (6-10 megapixels/300 dpi) photographs; a photographic catalog (photo log) should be made with the photographs to document proveniences.

If new sites are encountered during the field effort, these sites will be recorded using the Tennessee Site Survey Record form (which can be obtained from the Site File Curator Paige Silcox), the originals of which are submitted to the TN-SHPO. Guidance and definitions of what constitutes an archaeological site versus an
isolated find can be found at the Georgia Council of Professional Archaeologists' (GPCA) Georgia Standards and Guidelines for Archaeological Surveys (revised 2014). Standing structures or structural remains found in association with subsurface archaeological deposits should be recorded accordingly. Photographs of structures – at a minimum – should be taken at an oblique angle, so as to record all four cardinal directions of the structure (e.g., S/E, N/W).

If human remains are discovered in the course of fieldwork, cease all work in the area of the discovery and contact the TNARNG POC immediately. The TNARNG POC will follow the Inadvertent Discoveries Standard Operating Procedure (SOP) and contact the State Archaeologist and local police authorities.

TNARNG Project Personnel will complete a site visit of all cultural resources being investigated by the Contractor concurrent to the review of the draft report. This field check of these sites is required for management purposes and as part of the QA/QC for the TNARNG.

C.5 Task 5: Reporting

The project will include the preparation of a draft report and a final report detailing the results of the archival research and the field work. The draft report must be completed after completion of the archival research and field work, and must include a copy of the populated TNARNG GIS geo-database. The final report must be completed incorporating any comments from the TNARNG POC and the TDOA/TN-SHPO.

The report will follow the general standards set forth in the Tennessee SHPO Standards and Guidelines for Archaeological Resource Management Studies (Revised March 2009), including a title page; management summary; table of contents; introduction; literature/document search; environmental setting description; research/field/laboratory methodology; GIS methodology; the results of the investigation; a historic context within which to reasonably address, and provide a preliminary interpretation or evaluation recommendation for each site; and copies of completed (typed) State Archaeological Site Forms.

Recommendations for sites should include whether the sites are eligible for the NRHP or not, and include guidance for avoidance, protection/stabilization, or data recovery for future mitigation of adverse effects. Recommendations for “undetermined” will not be accepted.

Upon acceptance of the draft report and its recommendations for sites by the TNARNG, a final will be prepared. Contractor will not submit any draft or final reports to the TDOA/TN-SHPO. The Contractor will submit reports to the TNARNG POC for review and submittal to the TDOA/TN-SHPO.

Amended site forms should be made for any previously recorded archaeological sites visited through the course of the survey, and new site forms shall be prepared for newly encountered sites.

The Contractor will submit artifacts to the TNARNG POC as “curation ready,” in accordance with 36 Code of Federal Regulations (CFR), Part 79.

C.6 Task 6: Geographic Information System (GIS) Database

Geospatial data collection should entail the use of mapping grade or better global positioning systems. Sub-meter accuracy must be maintained for all cultural data collected, and the final deliverable will include a GIS Methodology describing collection methodologies, real time differential corrections, and/or post processing methodologies. The TNARNG Environmental GIS Program Manager will provide Contractor with the required geo-database template(s) and accumulated background GIS data necessary to support the current contract, along with an informative whitepaper describing acceptable data codes and required data population fields if necessary.
GIS data submittals shall adhere to the following data standards: FGDC metadata compliant (http://www.fgdc.gov/metadata), populated completely, SDSFIE 3.0 or above, compliant (http://www.sdsfie.org/) and AR 115-13. All GPS points must be collected at sub-meter accuracy or better with real time correction as well as post processed for accuracy verification. Additionally, GPS data shall be collected with a PDOP of 4 or better. Recommend that the data be collected with a Trimble Pro-6H or equivalent device. Coordinate system and datum shall be WGS1984, UTM zones 16N or 17N depending on location.

Acceptable file formats for GIS data submittals are ESRI ArcGIS 10.3 or above, File Geodatabase. All new data collected during the project must be post-processed to achieve sub-meter accuracy. Project data should be mapped in Universal Transverse Mercator (UTM Zone 16N) and referenced to the WGS 84 datum.

A DRAFT GIS deliverable is required (Task 4a), and should accompany any documentation (i.e., survey reports) submitted for review. GIS data acquired during the course of the study will be submitted for review by the TNARNG GIS Program Manager along with the draft document. DRAFT GIS deliverables will be checked for accuracy and completeness, including feature geometry, attributes, and metadata requirements. Following review, at least two copies of the updated (final) GIS data must be included with the final deliverables for the project on CD-ROM without licensing or usage restrictions.

Contractor will coordinate with TNARNG GIS Section prior to initiating any field survey that requires GIS/GPS data collection allowing sufficient lead time for the GIS Section to observe data collection during field work if desired for collaboration and compatibility measures.

C.7 Task 7: Curation and Delivery of Documentation

All information collected during the implementation of this project becomes property of TNARNG and the Department of Defense (DoD). This includes field records, laboratory records, artifacts, audio/visual media, recordings, footage, still pictures, maps, GIS data, databases, photographic catalogs, artifact catalogs, and other materials collected, produced or acquired with project funding. Deliverables will not be subject to any kind of license, copyright, or other encumbrance. Materials produced using TNARNG/DoD funding will not be sold for a profit. Artifacts must be cleaned, bagged, and labeled by provenance prior to curation; curation requirements will follow standards established under 36 CFR 79 (Curation of Federally-Owned and Administered Archaeological Collections). These artifacts will be turned over to the TNARNG POC as curation ready for deposit with the University of Alabama (UA) Office of Archaeological Research (OAR) at Moundville.

One hard copy and two electronic copies (one electronic copy presented on CD with the hard copy, the second electronic copy can be submitted through an email Portable Document Format (.pdf) or a safe and secure file transfer site; Army uses AMRDEC- https://safe.amrdec.army.mil/SAFE/) of the draft report, along with the GIS draft data will be submitted to the TNARNG POC for review to ensure all needed information is included. The draft is due one month after completion of fieldwork.

Comments on the draft report will be returned to the Contractor within six weeks of receipt. Following receipt of these comments, the Contractor has one month or until the end of the contract (six months from initiation) to complete any changes and submit the final report.

Five hard copies and five electronic copies of the final report will be submitted. The preferred format for the actual report is the optical character recognition enabled (.pdf), with other supporting documentation in editable file formats. All CD-ROMs must be labeled with the project name and number, and submitted with the hard copies of the deliverables. The electronic copies should be presented on CD. All data will be in editable files that can be effectively incorporated into the TNARNG GIS system. Read-only files are not acceptable.
D. GOVERNMENT FURNISHED INFORMATION OR MATERIAL

The TNARNG shall furnish access to all requested data relevant to this project that is under its control. This will include topographic maps and environmental data about the site, if available. The TNARNG will provide access to the installation for the necessary field work; however, the Contractor must notify the TNARNG POC about the dates and times scheduled for field work on the property.

E. CONTRACTOR REQUIREMENTS AND RESPONSIBILITIES

The contract work shall be performed by or under the direct supervision of personnel who are professionally qualified in archaeology as set forth in “Archaeology and Historic Preservation: Secretary of the Interior’s Standards and Guidelines.”

The Contractor shall furnish, except as noted, all labor, materials, equipment, tools, transportation, communications, and supplies required to complete the work in accordance with project specifications, terms of the contract, and this Scope of Work.

The contractor shall obtain all permits and authorizations that may be required to complete this contract. Copies of permits will be furnished to the TNARNG POC within 30 days of issuance.

All information and data provided by TNARNG to the Contractor is for the purpose of fulfilling this contract. This information is to be protected by the Contractor; it is not to be distributed or utilized for any other purpose under penalty of law.

Upon completion of the Project, the Contractor shall protect all maps, photographs, specimen materials, studies, surveys, inventories, evaluations, plans, and project reports obtained or collected during the course of the Contract work in accordance with all regulations, laws and statutes. Copies of reports and applicable related materials will be furnished to the TNARNG upon completion of the Contract.

Publication of results from this project is possible only with written permission and cooperation from the TNARNG Environmental Office. Any manuscript must be approved by the TNARNG POC and the TNARNG Public Affairs Office (PAO) prior to submission for publication.

F. DELIVERABLES

All maps, historic documents and other items borrowed from the TNARNG or other contractors under contract to the TNARNG are the property of the TNARNG and shall be returned to the TNARNG upon completion of this Contract. The deliverables due in fulfillment of this Contract are summarized below:

F.1 Deliverables Description

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
<th>Deliverables</th>
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<tbody>
<tr>
<td>1</td>
<td>Kick-Off Meeting</td>
<td>a) Attend meeting &lt;br&gt;b) Summary Letter (1 electronic copy)</td>
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<tr>
<td>2</td>
<td>Archival Research</td>
<td>a) Incorporate into report of findings &lt;br&gt;b) Any materials photocopied, books purchased, newspaper articles, photographs, maps or other materials produced, acquired or obtained during the archival research.</td>
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<tr>
<td>3</td>
<td>Work Plan Submission</td>
<td>a) Project Work Plan detailing survey methodologies &lt;br&gt;b) Copies of all permits and authorizations that are obtained during the course of the contract work</td>
</tr>
<tr>
<td>4</td>
<td>Field Effort</td>
<td>a) 1 copy of original field notes</td>
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<tr>
<td>Task</td>
<td>Description</td>
<td>Deliverables</td>
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| 5      | Report of Findings                | a) Draft report of findings (incorporating results of archival research, field effort and oral histories; and providing eligibility determinations for sites investigated) - 1 hard copy and 2 electronic copies  
          |                                  | b) Final report of findings (incorporating results of archival research, field effort and oral histories; providing eligibility determinations for sites investigated; and incorporating any comments from draft documents) - 5 hard copies and 5 electronic copies |
| 6      | GIS data                         | a) Fully completed geodatabase that is FGDC compliant metadata conforming to SDSFIE requirements, and fully compatible with ESRI products. All data must be post-processed using sub-meter accuracy; UTM Zone 16N; referenced to WGS 84 datum. The data must be checked for accuracy and completeness, including feature geometry, attributes, and metadata requirements  
          |                                  | b) Updated from field check QA/QC data from TNARNG  
          |                                  | c) Populated SDSFIE compliant geo-database.  
          |                                  | d) 2 copies of final geodatabase on CD-ROM/DVD (with 6a requests)  
          |                                  | e) NOTE: Templates will be provided to Contractor from Tennessee Army National Guard GIS if necessary |
| 7      | Curation and Delivery of documentation | a) All artifacts from collection  
          |                                  | b) All curation materials / artifacts, photographs / photologs, GIS data and other items collected during study  
          |                                  | c) All copies of field notes or other material not provided during subsequent tasks. |

F.2 Deliverables Compensation

The Contractor shall be compensated based upon the following payment methodology:

<table>
<thead>
<tr>
<th>Goods or Services Description</th>
<th>Contract Percentage</th>
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<tbody>
<tr>
<td>Tasks 1-3: (Kick-Off Meeting, Archival Research, and Work Plan Submission) within thirty days from kick-off meeting</td>
<td>15%</td>
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<tr>
<td>Task 4: Field Effort</td>
<td>30%</td>
</tr>
<tr>
<td>Tasks 5-6 a,a : Draft Report and Draft GIS Data within one month of the completion of fieldwork</td>
<td>20%</td>
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<tr>
<td>Tasks 5-6 b,d: Final Report and Final GIS within one month of (or up to) the contract completion</td>
<td>25%</td>
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<tr>
<td>Task 7: Curation Materials</td>
<td>10%</td>
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G. MEETINGS AND REVIEWS

Consultations and meetings will be conducted as necessary. At a minimum, this will include:

1. Kick-Off meeting – On-site (VTS Milan), or Joint Force Headquarters (JFHQ), Nashville, TN in-person if appropriate
2. Review of Project Work Plan – may be conducted in person or via phone/email.
3. Monthly progress report reviews – may be conducted in person or via phone/email.
4. Draft plan review – may be conducted in person or via phone/email.

H. TECHNICAL REPRESENTATIVE

The TNARNG technical representative under this Contract is Gregory Turner at (615)313-0765. All material submissions are to be sent to Mr. Turner at the following address:

Tennessee Army National Guard
Construction and Facilities Maintenance Office – Environmental Division
ATTN: Jonathan Guilford
3041 Sidco Drive
Nashville, TN 37204-1502

The VTS Milan on-site POC for this project is LTC Cory Scates at (731) 222-5304. All visits to VTS Milan by the Contractor should be coordinated through LTC Cory Scates.

No TNARNG personnel, other than the Contracting Officer, shall have the authority to change or alter these requirements. The Technical Representative shall clarify technical points or supply relevant technical information, but no requirements in this statement of work or the scope of work may be altered as a sole result of such verbal clarification.

I. PERIOD OF SERVICE

The Period of service for this contract shall be 180 days from notice to proceed.

- END OF SCOPE OF WORK -