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FM 48 Roadway Improvement Project, Wheeler County, Texas

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FM 48 Roadway Improvement Project, Wheeler County, Texas

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Report for Archeological Survey

FM 48 Roadway Improvement Project,
Wheeler County, Texas

Christopher Ringstaff Principal Investigator,
Antiquities Permit No.7230

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated 12-16-14, and executed by FHWA and TxDOT.

Abstract

The Texas Department of Transportation (TxDOT) proposes to widen FM 48 from the town of Mobeetie Texas northward to the Wheeler/Hemphill County line. The Area of Potential Effects (APE) for the proposed FM 48 improvement project has a length of approximately 9.5 miles consists within the existing 100-foot ROW. The total area of APE is approximately 115.2 acres with no proposed new ROW or easements. The maximum vertical depth of impact will be approximately 5 feet for culvert replacements.

An intensive archeological survey conducted by TxDOT within the FM 48 project area traversing the recorded site 41WE20. The site consists of the Sweetwater Creek Battlefield which is a NRHP listed site and is part of the Red River War Battlefields National Register District. Prior to the survey consultation with THC was conducted for the appropriate survey methodology. A metal detector survey was conducted on April 2, 2015. During the course of the survey the west side of the APE was avoided due to extensive grading the presence of buried utilities. Although the east side of the APE within the delineated area of 41WE20 had a lesser degree of grading impacts, the shallow grading that had occurred was sufficient to disturb any potential surficial or shallowly buried items associated with the battlefield. In addition, the plethora of buried aluminium cans, barbed wire fence hardware and other recent metal items within the APE.

A TxDOT archeologist evaluated the potential for the proposed undertaking to affect archeological historic properties (36 CFR 800.16(l)) or State Archeological Landmarks (13 TAC 26.12) in the area of potential effects (APE). TxDOT concludes Based on field observations and the results of metal detector survey, the proposed undertaking will have **no adverse effect** on 41WE20. The site one of several sites that are part of a National Register District identified as Battle Sites of the Red River War. **In addition, the existing ROW of FM 48 that traverses 41WE20 has been sufficiently impacted from prior to road construction that it should NOT be considered a contributing element the NRHP listed property thus compelling TxDOT to determine an exception under Section 4(f) regulations (23 CFR 774 and 23 USC 327).** Considering the results of the survey, documented existing impacts, and lack of integrity of 41WE20 within the APE, TxDOT recommends NO additional work is warranted.

Project Identification

- **Date:** 4/9/2015
- **Date(s) of Survey:** 4/2/2015
- **Archeological Survey Type:** Reconnaissance Intensive
- **Report Version:** Draft Final
- **Jurisdiction:** Federal State
- **Texas Antiquities Permit Number:** TAC 7230
- **District:** Childress
- **County or Counties:** Wheeler
- **USGS Quadrangle(s):** Mobeetie
- **Highway:** FM 48
- **CSJ:** 0489-01-020
- **Report Author(s):** Christopher Ringstaff
- **Principal Investigator:** Christopher Ringstaff

Texas Historical Commission Approval

Signature

Date

Project Description

Project Type: Bridge replacements

Total Project Impact Acreage: 115.2 acres

New Right of Way (ROW) Acreage: 0.0 acres

Easement Acreage: 0.0 acres

Area of Pedestrian Survey: 18.2 acres

Project Description and Impacts: As shown in the attached project location map (Figure 1), The Texas Department of Transportation (TxDOT) proposes to widen a 9.5 mile segment of FM 48 in Wheeler County, Texas. The proposed project is a widening of a non-freeway facility consisting of widening, ACP overlay, and multiple culverts extended on FM 48 in Wheeler County. The existing roadway typically consists of two-10' travel lanes, one each direction with no paved shoulders. The proposed project will have two-11' travel lanes with a 3' paved shoulder on each side and backfill the pavement edges up to 10'. The proposed project will extend multiple culverts along the roadway to accommodate the widening. All work will be done within the existing mowed/maintained ROW that has been previously disturbed for transportation use. No new ROW/Easements required for this project.

Area of Potential Effects (APE): The Area of Potential Effects (APE) for the proposed FM 48 improvement project has a length of approximately 9.5 miles consists within the existing 100-foot ROW. The total area of APE is approximately 115.2 acres with no proposed new ROW or easements. The maximum vertical depth of impact will be approximately 5 feet for culvert replacements.

Parcel Number(s): N/A

Project Area Ownership: State of Texas.

Project Setting

Topography: The project area is located on the rolling eastern margin of the Southern High Plains physiographic region of Texas.

Geology: An overlay analysis using the digitized Economic Geology Plainview Sheet reveals the project area consists of Pliocene Ogallala Formation (Figure 2).

Soils: Based on an overlay analysis using the USDA State Soil Survey Geographic Database (STATSGO) data reveals soils in the project area consist of Grandfield-Devol-Veal Complex (Figure 3).

Land Use: Transportation

Vegetation: Grasslands.

Estimated Ground Surface Visibility: Typically poor due to thick grasses approximately 10%.

Comments on Project Setting: The project area is located on a ridge line along which the Sweetwater Creek Battle was conducted.

Previous Investigations and Known Archeological Sites: A records review by TxDOT staff archeologists included a review of the Texas Historical Commission's Archeological Sites Atlas (Atlas). The Atlas review was conducted on 3/5/2015 and revealed one previously recorded archeological site within one kilometer of the APE. The site 41WE20 consists of the Sweetwater Creek Battlefield and is within the FM 48 project area. The roadway traverses the site 41WE20 which is a NRHP listed site and part of the Red River War Battlefields National Register District.

Surveyors: Christopher Ringstaff.

Survey Methods: The survey consisted of an Intensive Pedestrian Survey as defined by 13TAC26. Due to the scope of the overall project, it would typically be considered as one with no potential to effect Archeological Historic Properties of State Antiquities Landmarks. However, the presence of 41WE20 (Sweetwater Creek Battlefield) in the central portion of the APE necessitated archeological survey since 41WE20 is part of a multi-site National Register District identified as Battle Sites of the Red River War.

The methods used for the survey of 41WE20 within the FM 48 ROW were developed in consultation with staff from the Texas Historical Commission including Brett Cruise and Mark Denton in on March 26, 2015. It was determined that a metal detector survey would be appropriate in area of the ROW that appeared to have lesser construction impacts. Prior to consultation a GIS overlay analysis of the digitized artefact distribution was conducted to better understand the approximate spatial relationship to the 41WE20 battlefield and the proposed FM 48 project (Figure 4).

A Whites DFX metal detector and a small handheld detector were used for the survey. Only artifacts associated with 41WE20 and not modern trash would be recorded using DGPS. Although the survey of the APE as a whole deviates from the Minimum Survey Standards as set forth by the Texas Historical Commission and Council of Texas Archeologists, this deviation, as mentioned, was developed in consultation with staff from the Texas Historical Commission.

Subsurface Excavation:

Each metal detector signal was probed to identify the associated metal object.

Collection and Curation: NO YES If yes, specify facility.

Survey Results

Upon arrival upon the project area it was clear that the east side of the FM 48 ROW that traversed 41WE20 has a lesser degree of prior roadway construction blading/ grading impacts and opposed to the sharply bevelled western side of the ROW (Figures 6 through 8). Toward the southern extent of 41WE20, the grading on the east side became sufficiently extensive that no survey was conducted in this area (Figure 9). Nevertheless, a transect approximately 1.4 miles in length was conducted on the east side of the FM 48 ROW almost completely traversing 41WE20 (see Figures 4 and 5).

During the course of the survey, the extend of buried modern debris became more and more apparent. In particular, aluminium beer cans were the most common item recovered although bailing wire, barbed wire, nails, pull tabs, and auto and tractor hardware account for many of the other items found (Figures 10 and 11). Despite the many modern items cluttering the roadside magnetic landscape, the survey continued along the 10-20-foot swath of ROW adjacent to the fence line that had any potential for surface integrity.

Once the survey was completed it was clear that depth of the many buried modern metal items indicated that prior roadway construction, particularly grading (see Figures 6-9) has impacted the existing ROW to a degree that any items that may have even been present have been scoured and removed from their context. In addition, based on the GIS overlay analysis conducted prior to the survey, the ROW was in a low density portion of the battlefield (see Figure 4) and even without the prior roadway construction there would have likely been few if any artifacts associated with 41WE20 found.

Recommendations

A TxDOT archeologist evaluated the potential for the proposed undertaking to affect archeological historic properties (36 CFR 800.16(l)) or State Archeological Landmarks (13 TAC 26.12) in the area of potential effects (APE). TxDOT concludes Based on field observations and the results of metal detector survey, the proposed undertaking will have **no adverse effect** on 41WE20. The site one of several sites that are part of a National Register District identified as Battle Sites of the Red River War. **In addition, the existing ROW of FM 48 that traverses 41WE20 has been sufficiently impacted from prior to road construction that it should NOT be considered a contributing element the NRHP listed property thus compelling TxDOT to determine an exception under Section 4(f) regulations (23 CFR 774 and 23 USC 327).**

Considering the results of the survey, documented existing impacts, and lack of integrity of 41WE20 within the APE, TxDOT recommends NO additional work is warranted. Project planning can also proceed, in compliance with 13 TAC 26.20(2) and 43 TAC 2.24(f)(1)(C) of the MOU. If unanticipated archeological deposits are encountered during construction, work in the immediate area will cease, and TxDOT archeological staff will be contacted to initiate post-review discovery procedures under the provisions of the PA and MOU.

APPENDIX A. FIGURES

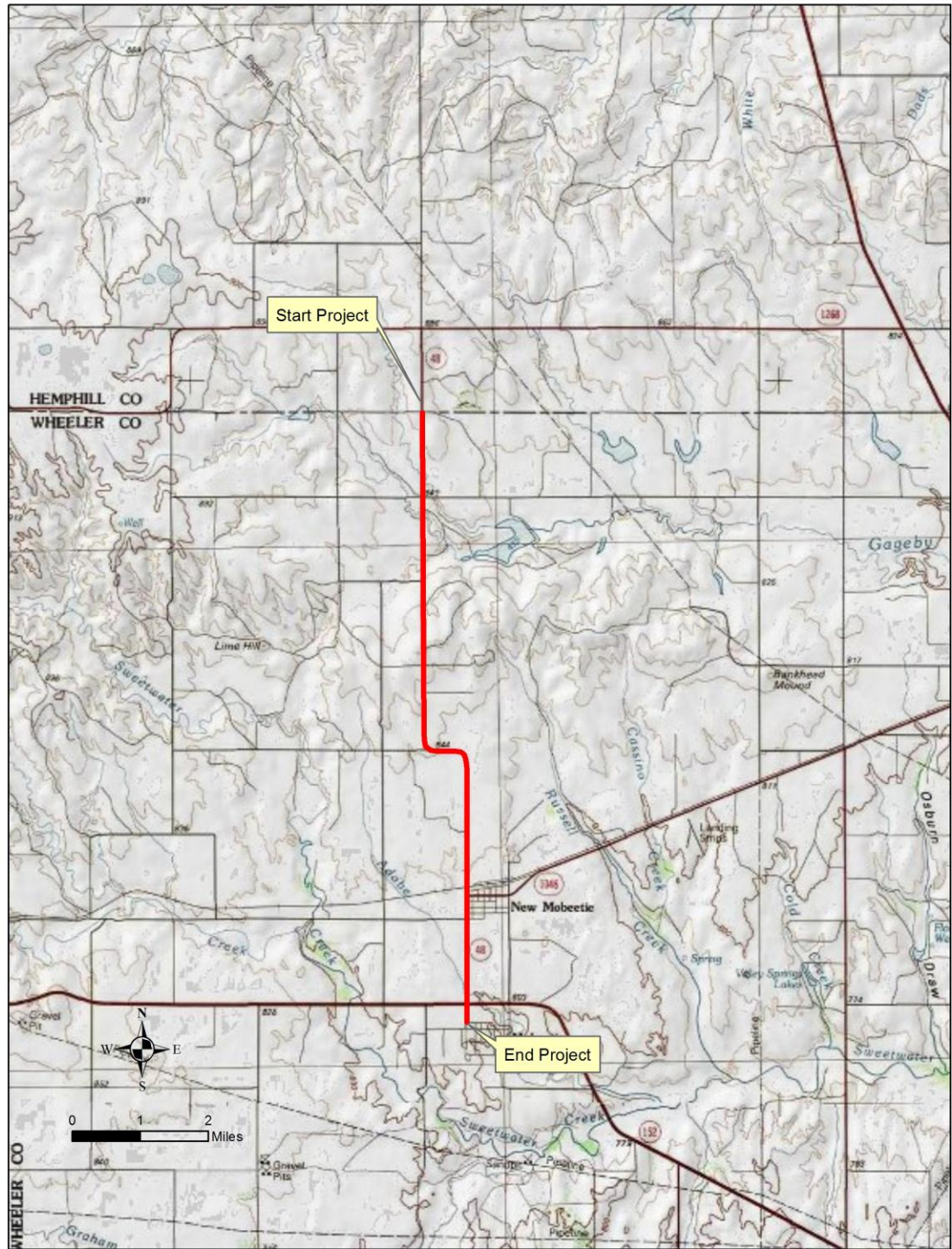


Figure 1. FM 48 Project location map Wheeler County, Texas.

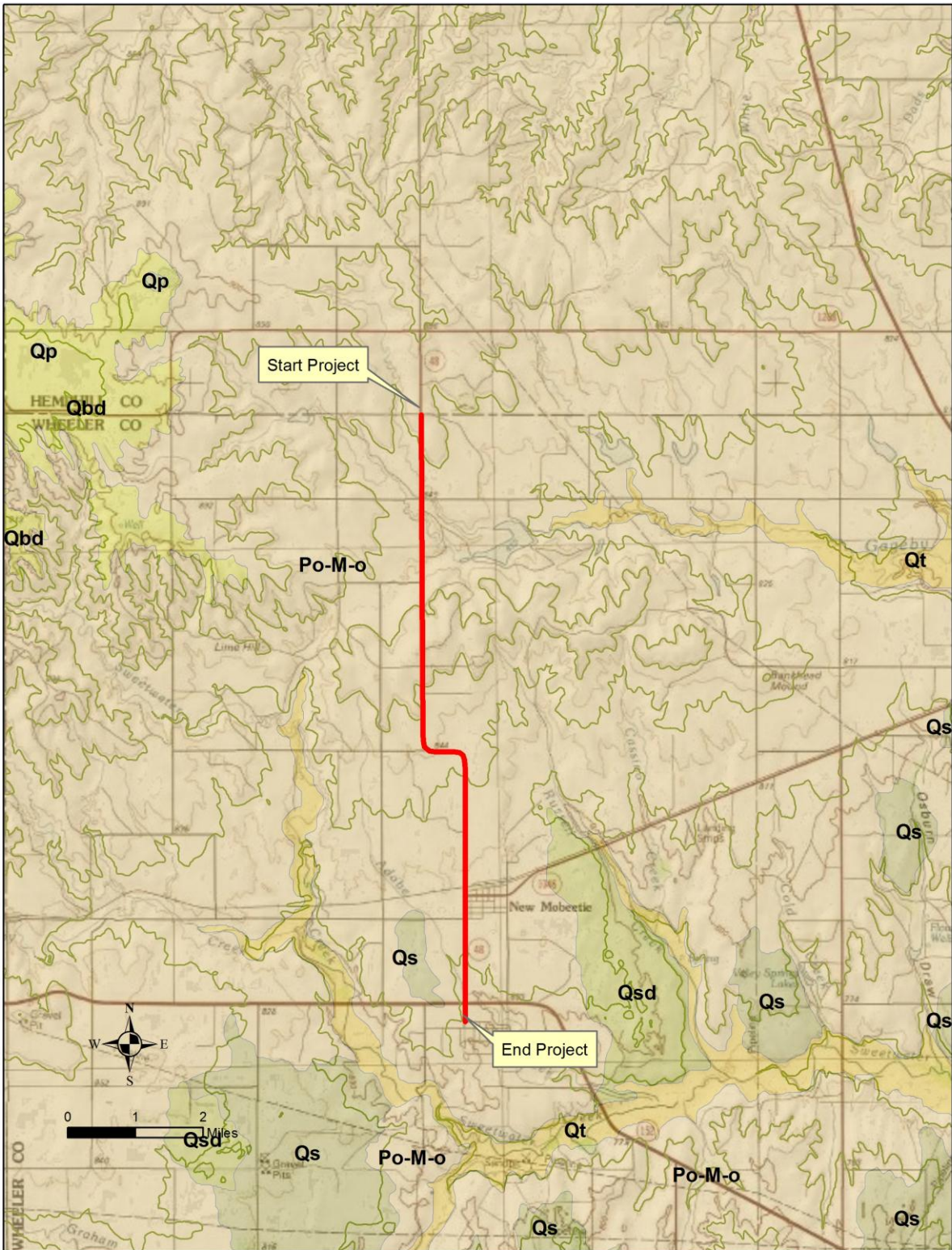


Figure 2. FM 48 Project Area Geology (BEG-GAT Overlay), Wheeler County, Texas.

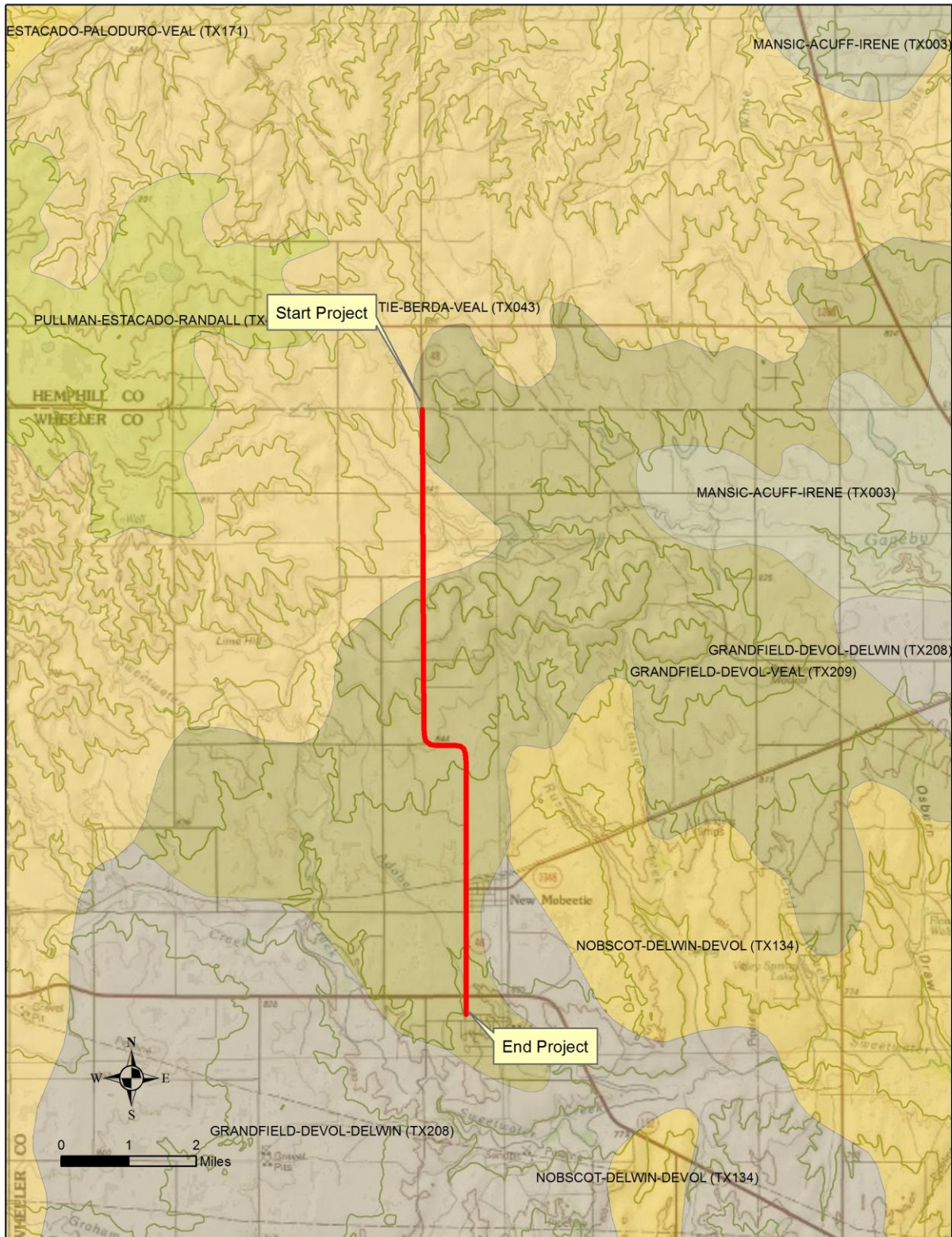


Figure 3. FM 48 Project Area Soils (STATSCO Overlay) Wheeler County, Texas.

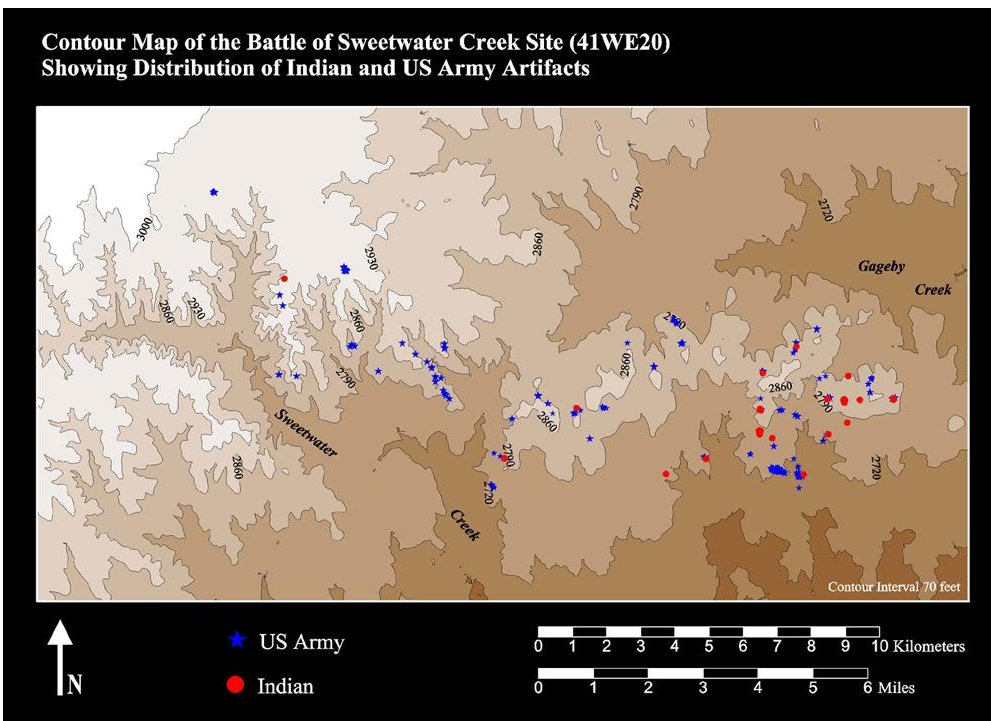
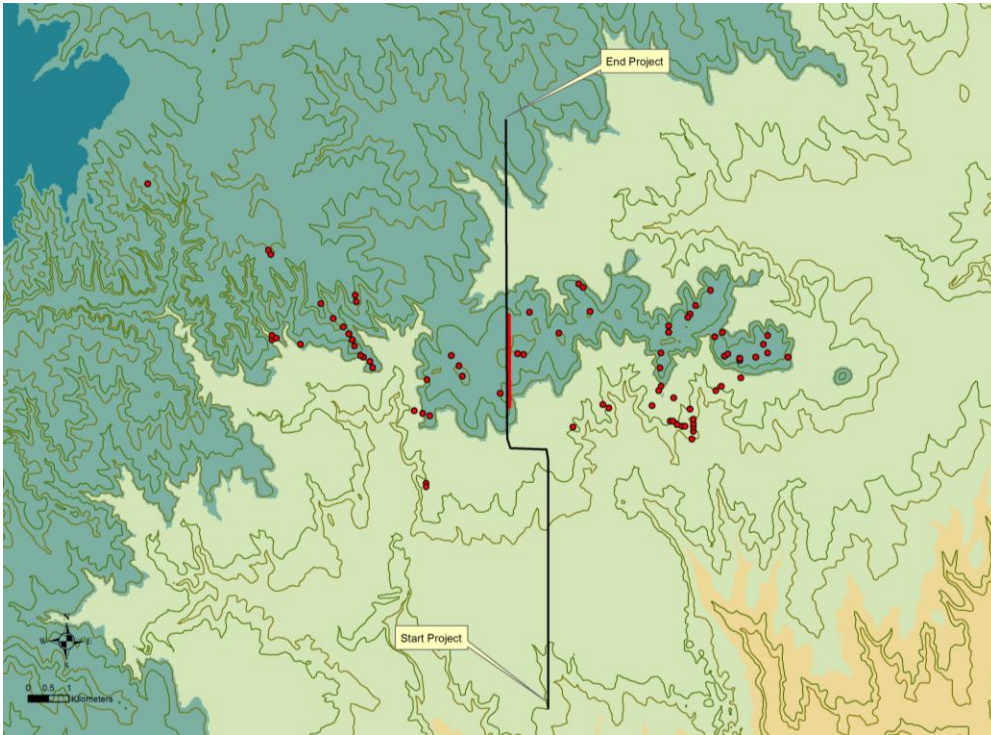


Figure 4. Overlay of digitized 41WE20 artifact distribution on DEM and ROW (above) with Sweetwater Battlefield artifact distribution map from TBH (below)

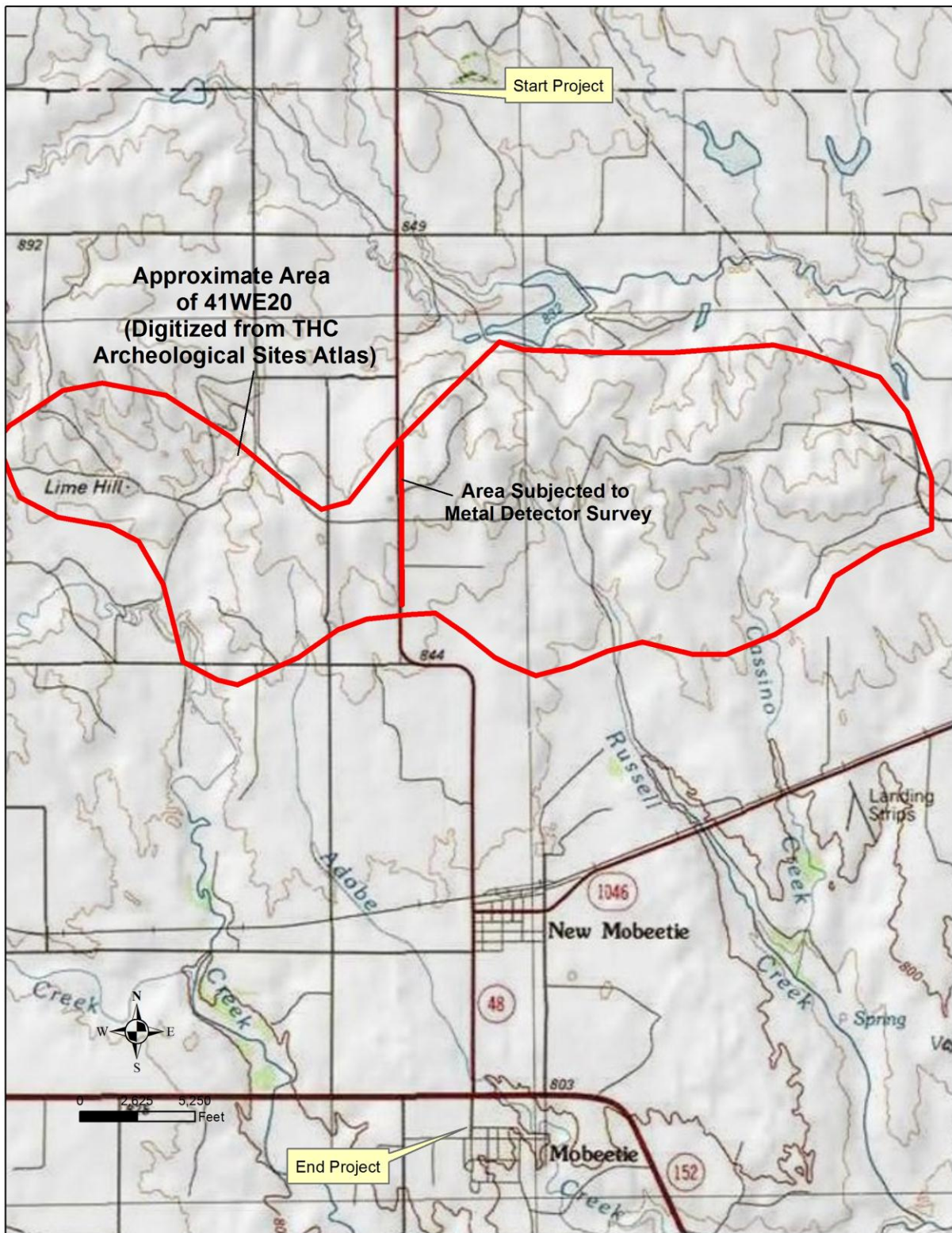


Figure 5. FM 48 Metal Detector Survey Area at 41WE20.



Figure 6. Close-up aerial view of FM 48 Metal Detector Survey Area at 41WE20.



Figure 7. East side of FM 48 at 41WE20. Note: graded yet relatively level surface. .



Figure 8. West side of FM 48 at 41WE20. Note: steep grading and utilities.



Figure 9. West side of FM 48 at 41WE20. Note: recent steep grading.



Figure 10. East side of FM 48 at southern portion of 41WE20. Note: steeper grading.



Figure 11. Metal detector survey gear with a sample of recovered modern items from a segment of the survey.



Figure 12. Close-up of sample of recovered modern items from survey segment.