Volume 2018 Article 73

2018

Intensive Archeological Survey Of FM 47 At Sabine River, Rains And Van Zandt Counties, Texas

Debra L. Beene

Timothy B. Griffith

Joesph Sanchez

Intensive Archeological Survey Of FM 47 At Sabine River, Rains And Van Zandt Counties, Texas

Blanton & Associates, Inc.
Environmental Consulting • Planning • Project Management

INTENSIVE ARCHEOLOGICAL SURVEY OF FM 47 AT SABINE RIVER, RAINS AND VAN ZANDT COUNTIES, TEXAS

by
Debra L. Beene, Timothy B. Griffith, Ph.D., & Joseph Sanchez

Texas Antiquities Code Permit No. 6441
Principal Investigator:
Debra L. Beene

CSJ: 0770-01-015

January 2018

Blanton & Associates, Inc.
ENVIRONMENTAL CONSULTING • PLANNING • PROJECT MANAGEMENT
5 LAKEWAY CENTRE COURT, SUITE 200
AUSTIN, TEXAS 78734
512.264.1095
BLANTONASSOCIATES.COM

INTENSIVE ARCHEOLOGICAL SURVEY OF FM 47 AT SABINE RIVER, RAINS AND VAN ZANDT COUNTIES, TEXAS

By

Debra L. Beene,
Timothy B. Griffith Ph.D.,
& Joseph Sanchez

Prepared for

TEXAS DEPARTMENT OF TRANSPORTATION PARIS DISTRICT

and

HUITT-ZOLLARS, INC.

CSJ: 0770-01-015

Texas Antiquities Code Permit No. 6441
Debra L. Beene, Principal Investigator

January 2018

ABSTRACT

Between February 05 and 08, 2013, archeologists from Blanton & Associates, Inc., at the request of Huitt-Zollars, Inc. and on behalf of the Texas Department of Transportation, Paris District, conducted an intensive non-collection archeological survey of the proposed Farm-to-Market 47 bridge replacement at the Sabine River located in Rains and Van Zandt Counties, Texas (CSJ No. 0770-01-015). The proposed bridge replacement and roadway improvements encompass 6.27 acres.

The 100 percent visual inspection, augmented by strategically placed backhoe trenches, resulted in the discovery of one archeological site (41VN132) within the proposed project right of way and determined that previously recorded site 41RA12 does not extend into the proposed right of way. Site 41VN132 was discovered within the southeast quadrant of the proposed project boundary and extends beyond the proposed right of way; therefore, its significance cannot be determined. Although the full site boundary is unknown for 41VN132, the portion of the site located within the proposed project boundary is not recommended as significant and would not contribute to the site's eligibility if it were later fully assessed and determined eligible for inclusion in the National Register of Historic Places or listing as a State Archeological Landmark. Additional investigations may be warranted if the proposed project boundary expands beyond the Area of Potential Effect.

Table of Contents

Figures

Appendices

MANAGEMENT SUMMARY

PROJECT TITLE: Intensive Archeological Survey of Proposed Improvements to Farm-to-Market 47 at Sabine River in Rains and Van Zandt Counties, Texas.

PROJECT DESCRIPTION: At the request of Huitt-Zollars, Inc. and on behalf of the Texas Department of Transportation Paris District, Blanton & Associates, Inc. conducted an intensive non-collection archeological survey of proposed improvements to Farm-to-Market 47 at the Sabine River in Rains and Van Zandt Counties, Texas (CSJ No. 0770-01-015). The Area of Potential Effect (APE) measures approximately 1,853 feet long with a maximum width of 173.5 feet and encompasses approximately 6.27 acres. Vertical impacts would extend a maximum depth of 5 feet below ground surface for the roadway approach and a maximum depth of 20 to 30 feet below ground surface for the bridge replacement.

PROJECT LOCATION: The APE is located in a rural area adjacent to, and parallel to, Lake Tawakoni's Iron Bridge Dam and approximately 9 miles (14.53 kilometers) northeast of Wills Point, Texas on the USGS *Iron Bridge Dam, Texas 7.5-minute quadrangle.*

TOTAL ACREAGE: Approximately 6.27 acres.

DATE OF WORK: Between February 05 and 08, 2013.

PURPOSE OF WORK: Blanton & Associates, Inc. assisted the project sponsor in their compliance with the Antiquities Code of Texas and Section 106 of the National Historic Preservation Act.

PRINCIPAL INVESTIGATOR: Debra L. Beene

NEWLY RECORDED SITES: 41VN132

PREVIOUSLY RECORDED SITES: 41RA12 is located beyond, but near to the proposed project area.

COMMENTS: Newly discovered site 41VN132 extends beyond the proposed right of way; therefore, its significance cannot be determined. Although the full site boundary is unknown, the portion of 41VN132 located within the APE is not recommended significant. It would be a non-contributing component if the site were later fully assessed and determined eligible for inclusion in the National Register of Historic Places or listing as a State Archeological Landmark. Additional investigations may be warranted if the proposed project boundaries expand beyond the current APE. Blanton & Associates, Inc. recommends that the proposed construction be allowed to proceed as planned without additional investigations, as the proposed construction will not affect significant archeological resources.

INTRODUCTION

Between February 05 and 08, 2013, archeologists from Blanton & Associates, Inc. (B&A), at the request of Huitt-Zollars, Inc. and on behalf of the Texas Department of Transportation (TxDOT) Paris District, conducted an intensive non-collection archeological survey of proposed improvements to Farm-to-Market (FM) 47 at the Sabine River in Rains and Van Zandt Counties, Texas (**Figures 1** and **2**). TxDOT proposes to replace the existing FM 47 bridge and approaches at the Sabine River.

The proposed construction would occur within existing (100 ft. wide) and proposed (73.5 ft. wide) APE. The total proposed FM 47 roadway approach would measure 40 ft. wide (including two 8 ft. shoulders) by 1,733 ft. beyond the bridge limits (**Figures 5** and **6.1 – 6.5**). The proposed bridge and much of the proposed roadway would be relocated approximately 50 ft. south of the existing bridge which would be removed. The proposed bridge would measure 120 ft. long by 40 ft. wide; additional impacts would include two proposed driveways and cut and fill to level the roadway as well as shape the channel bank (see **Figures 3** and **4**). The existing APE measures 1,853 ft. long by 100 ft. wide (4.24 acres) and the proposed APE would measure approximately 1,853 ft. long by a maximum width of 73.5 ft. and encompass 2.03 acres.

The overall APE for this project measures approximately 1,853 ft. long with a maximum width of 173.5 ft. and encompasses approximately 6.27 acres. Vertical impacts would extend a maximum depth of 5 ft. below ground surface for the roadway approach and a maximum depth of 20 to 30 ft. below ground surface for the bridge replacement. Available construction plans indicate that no temporary or permanent easements or detours would be necessary.

Because the proposed construction would occur on property owned or administered by a political subdivision of the State of Texas (e.g., TxDOT and the Sabine River Authority), the project is subject to the Antiquities Code of Texas (TAC), now subsumed in Title 13, Part II of the Texas Administrative Code. This legislation defines the necessary conditions for recognition and preservation of State Archeological Landmarks (SALs) and requires that any political subdivision of the State of Texas, defined as a "local governmental entity created and operating under the laws of this state, including a city, county, school district, or special district created under the Texas Constitution, Article III, §52(b)(1) or (2), or Article XVI, §59" in 13 TAC §26.5 of the code, must identify potential SALs through survey of public lands prior to actions that could potentially damage those sites. This archeological investigation was conducted under TAC Permit No. 6441 issued to Principal Investigator Debra L. Beene. All work was conducted in accordance with the terms and conditions of the First Amended Programmatic Agreement among the Federal Highway Administration (FHWA), TxDOT, the Texas State Historic Preservation Officer (TxSHPO), the Advisory Council on Historic Preservation (ACHP), and TxDOT regarding the Implementation of Transportation Undertakings (PA-TU), as well as the Memorandum of Understanding (MOU) between TxDOT and the Texas Historical Commission (THC).

Additionally, the project may utilize federal funding and a U.S. Army Corps of Engineers Section 404 permit could be necessary, the project is also subject to the provisions of Section 106 of the National Historic Preservation Act (NHPA). The intent of the NHPA is to consider cultural resources that might be threatened by federal undertakings. The act, which created the National Register of Historic Places (NRHP)

and the Advisory Council for Historic Preservation (ACHP), states that the ACHP must be afforded the chance to comment when any cultural resources eligible for inclusion in the NRHP are present in an area affected by federal agency actions or actions funded, licensed, permitted or provided permission by federal agencies. Protection of cultural resources under federal law depends upon site significance, as defined by National Park Service (NPS) rules 36 CFR 60, resulting in NRHP eligibility. Sites with unknown NRHP eligibility must be treated as eligible until the eligibility can be determined.

Field investigations were designed to comply with appropriate archeological field methods as defined in the Department of the Interior's Standards and Guidelines (NPS 1983), the Guidelines of the Council of Texas Archeologists (CTA 1987), and the survey standards developed by the THC (n.d) in conjunction with the CTA. The primary intent of the survey was to identify and describe all archeological resources discovered within the study area, evaluate their eligibility for inclusion in the NRHP or listing as SALs and, should eligible archeological sites be located, make recommendations for future management options, such as avoidance and preservation or further investigations.

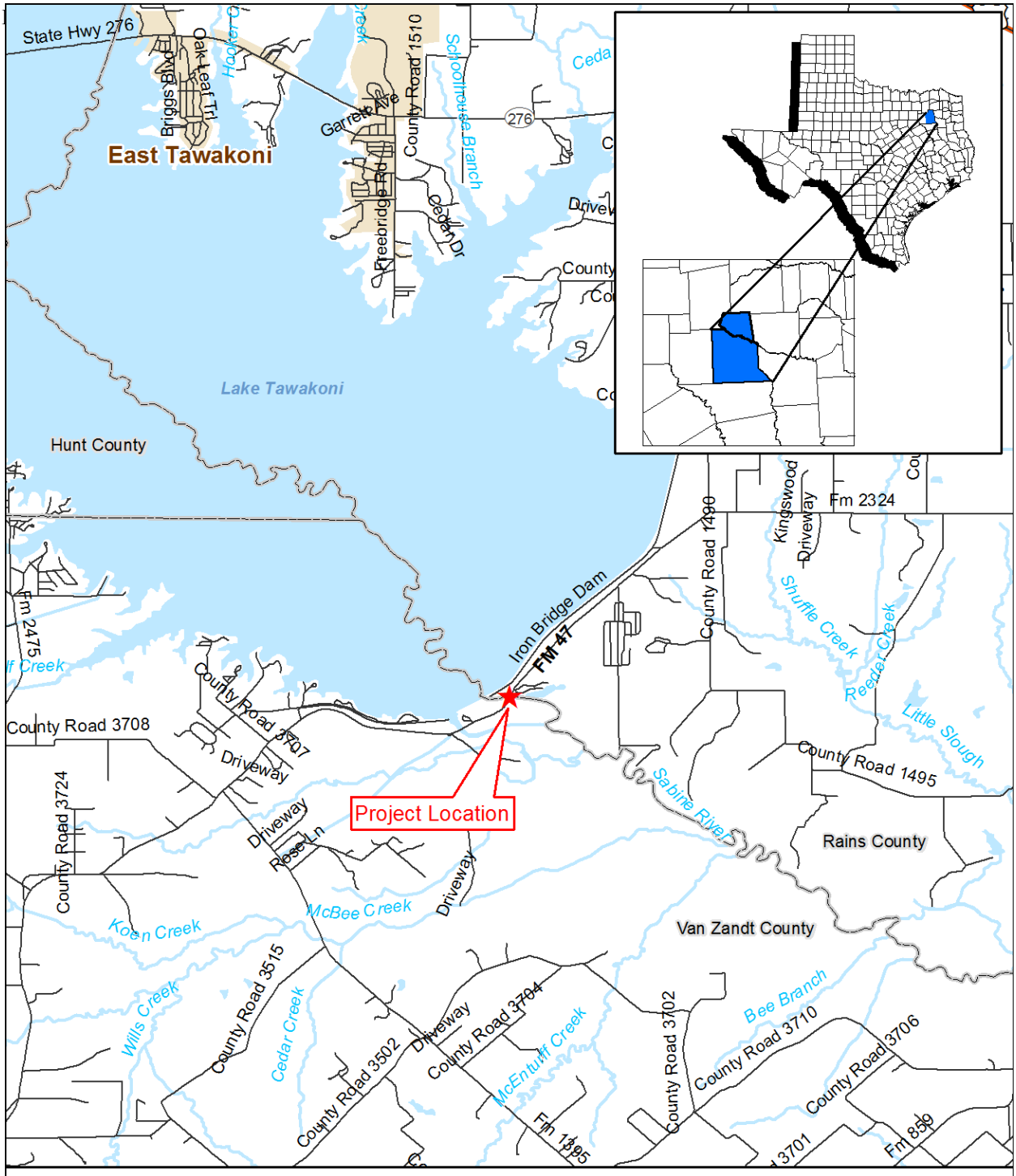


Figure 1
Project Location on County Map
FM 47 over Sabine River
Rains and Van Zandt
Counties, Texas
CSJ: 0770-01-015

This page has been removed intentionally to protect sensitive

cultural materials

Figure 2

5

Base Map: Bing Aerial Imagery 2010 Van Zandt County, Texas

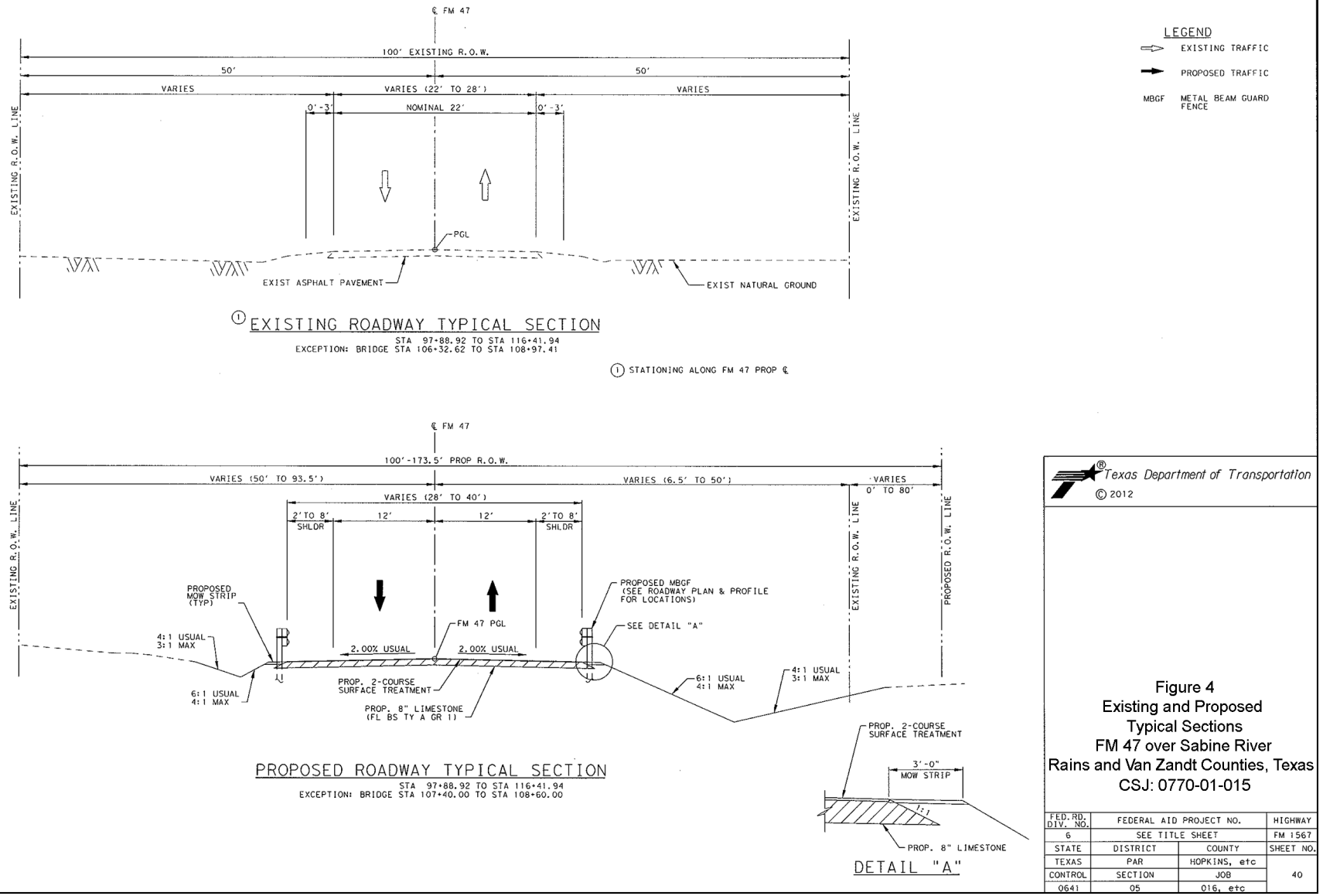
Proposed Improvement

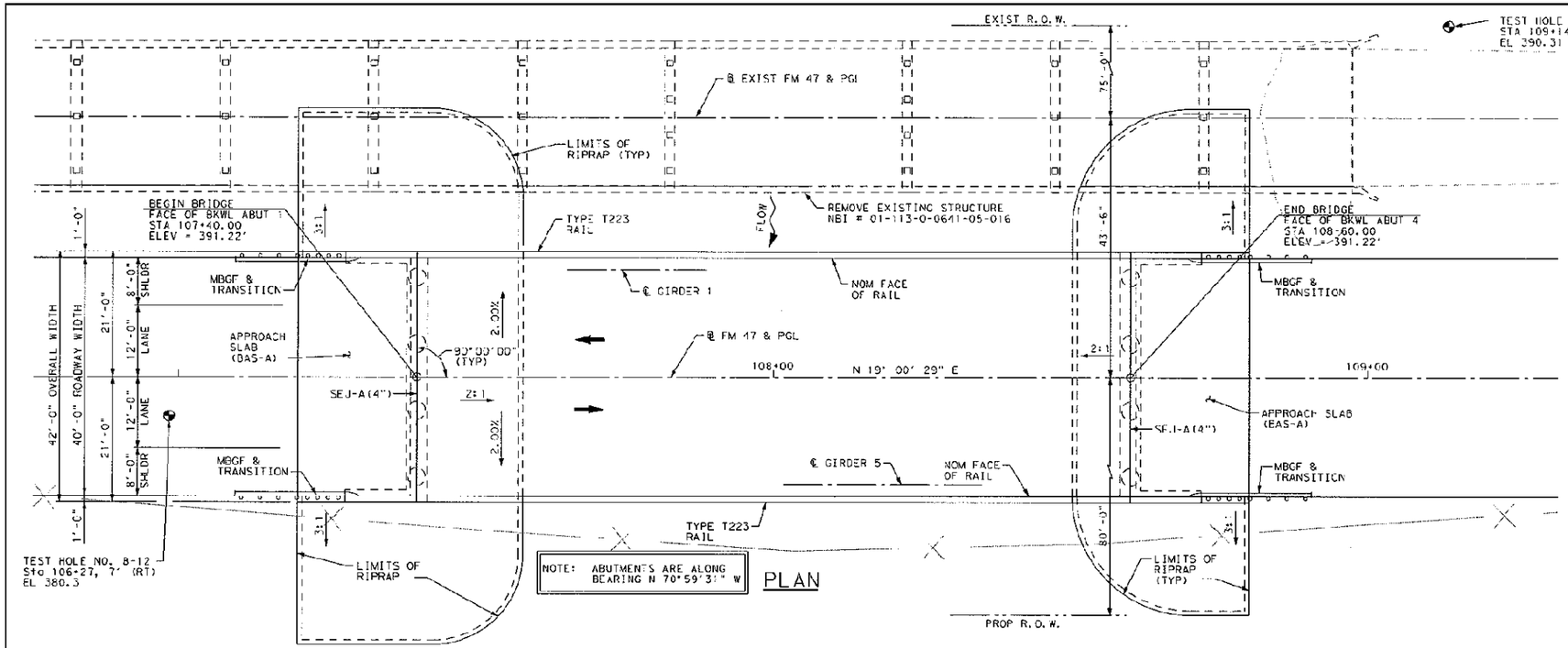
N
W E
S

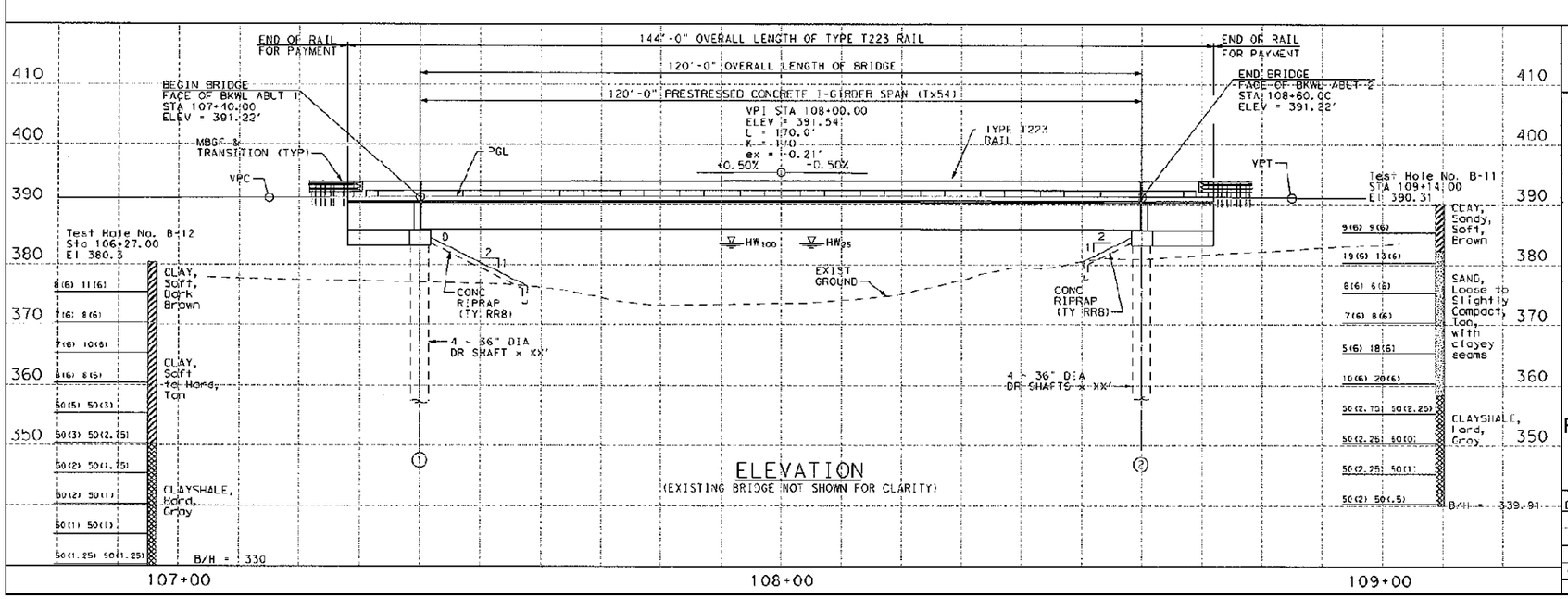
1:3,000

0 50 100 200
Feet

Figure 3
Project Location on
Aerial Imagery
FM 47 over Sabine River
Rains and Van Zandt
Counties, Texas
CSJ: 0770-01-015


℄ FM 47
100' EXISTING R.O.W.
50'
50'
VARIES
VARIES (22' TO 28')
VARIES
0'-3'
NOMINAL 22'
0'-3'
EXISTING R.O.W. LINE
EXISTING R.O.W. LINE
PGL
EXIST ASPHALT PAVEMENT
EXIST NATURAL GROUND
① EXISTING ROADWAY TYPICAL SECTION
STA 97+88.92 TO STA 116+41.94
EXCEPTION: BRIDGE STA 106+32.62 TO STA 108+97.41
① STATIONING ALONG FM 47 PROP ℄
LEGEND
EXISTING TRAFFIC
PROPOSED TRAFFIC
MBGF METAL BEAM GUARD FENCE
℄ FM 47
100'-173.5' PROP R.O.W.
VARIES (50' TO 93.5')
VARIES (6.5' TO 50')
VARIES 0' TO 80'
VARIES (28' TO 40')
2' TO 8' SHLDR
12'
12'
2' TO 8' SHLDR
EXISTING R.O.W. LINE
EXISTING R.O.W. LINE
PROPOSED R.O.W. LINE
PROPOSED MOW STRIP (TYP)
PROPOSED MBGF (SEE ROADWAY PLAN & PROFILE FOR LOCATIONS)
FM 47 PGL
SEE DETAIL "A"
4:1 USUAL 3:1 MAX
2.00% USUAL
2.00% USUAL
6:1 USUAL 4:1 MAX
4:1 USUAL 3:1 MAX
6:1 USUAL 4:1 MAX
PROP. 2-COURSE SURFACE TREATMENT
PROP. 8" LIMESTONE (FL BS TY A GR 1)
PROPOSED ROADWAY TYPICAL SECTION
STA 97+88.92 TO STA 116+41.94
EXCEPTION: BRIDGE STA 107+40.00 TO STA 108+60.00
PROP. 2-COURSE SURFACE TREATMENT
3'-0" MOW STRIP
1:1
PROP. 8" LIMESTONE
DETAIL "A"
Texas Department of Transportation
© 2012
Figure 4
Existing and Proposed
Typical Sections
FM 47 over Sabine River
Rains and Van Zandt Counties, Texas
CSJ: 0770-01-015
FED. RD. DIV. NO. | FEDERAL AID PROJECT NO. | HIGHWAY
6 | SEE TITLE SHEET | FM 1567
STATE | DISTRICT | COUNTY | SHEET NO.
TEXAS | PAR | HOPKINS, etc | 40
CONTROL | SECTION | JOB
0641 | 05 | 016, etc





HL93 LOADING

0 10 20
SCALE: 1" = 20'

GENERAL NOTES:

DESIGNED ACCORDING TO AASHTO LRFD BRIDGE SPECIFICATIONS, 5TH EDITION, 2010, WITH CURRENT INTERIMS FOR HL 93 LOADING.

DESIGN INCLUDES FUTURE WEARING SURFACE LOAD OF 25 LBS/SF.

FOR BRIDGE CONSTRUCTION AND TYPICAL SECTION, SEE "CONSTRUCTION SEQUENCING" SHEET.

DRILLED SHAFTS HAVE BEEN DESIGNED WITH BOTH END BEARING AND SKIN FRICTION. DRILLED SHAFTS SHALL BE FOUNDED AT THE ELEVATIONS SHOWN OR DEEPER.

DESIGN SPEED: 55 MPH
FUNCTIONAL CLASS: RURAL MAJOR COLLECTOR
2010 ADT: 1,100
2030 ADT: 1,540
NBI #

HYDRAULIC DATA:

25 YEAR DESIGN FREQUENCY
DRAINAGE AREA = XX.X SQ MI

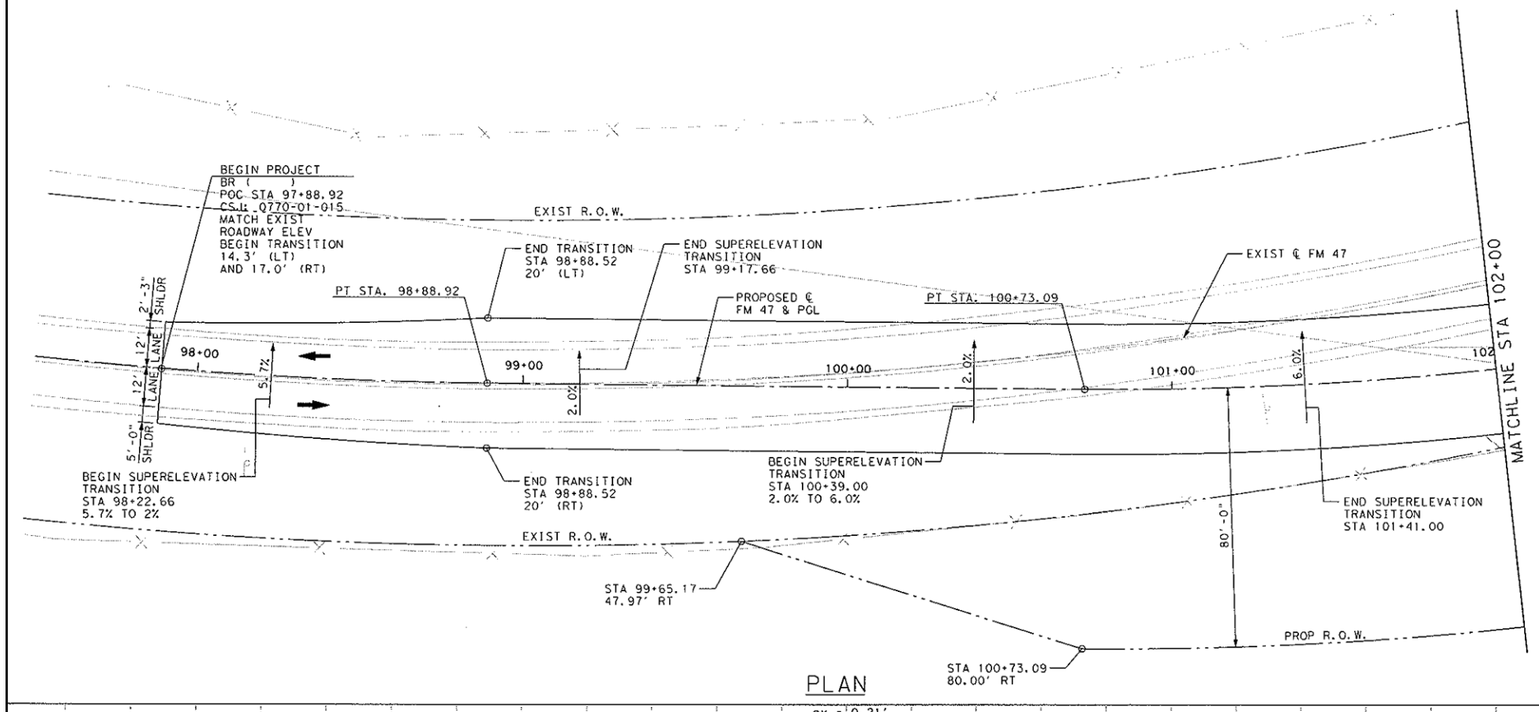
Q_{25} = XXXX CFS
V_{25} = XXXX FT/SEC
HW_{25} = XXXX FT

Q_{100} = XXXX CFS
V_{100} = XXXX FT/SEC
HW_{100} = XXXX FT

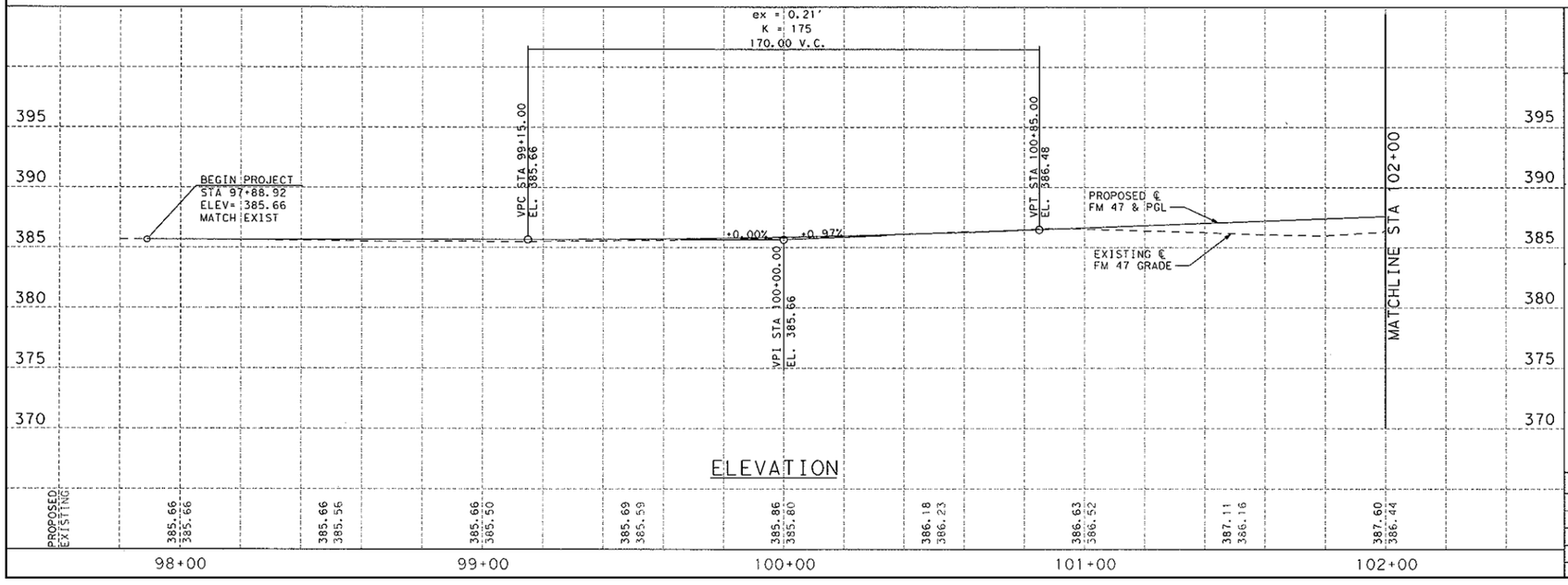
Texas Department of Transportation

Figure 5
Bridge Layout
FM 47 over Sabine River
Rains and Van Zandt Counties, Texas
CSJ: 0770-01-015

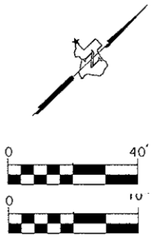
FED.RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY
6	SEE TITLE SHEET		FM 1567
STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	PAR	HOPKINS, etc	50
CONTROL	SECTION	JOB	
0641	05	016, etc	



PLAN



ELEVATION



NOTES:

1. SEE PROJECT LAYOUT FOR HORIZONTAL ALIGNMENT DATA AND BORE LOCATIONS.
2. SEE SURVEY CONTROL INDEX SHEET FOR BENCHMARK INFORMATION.

LEGEND

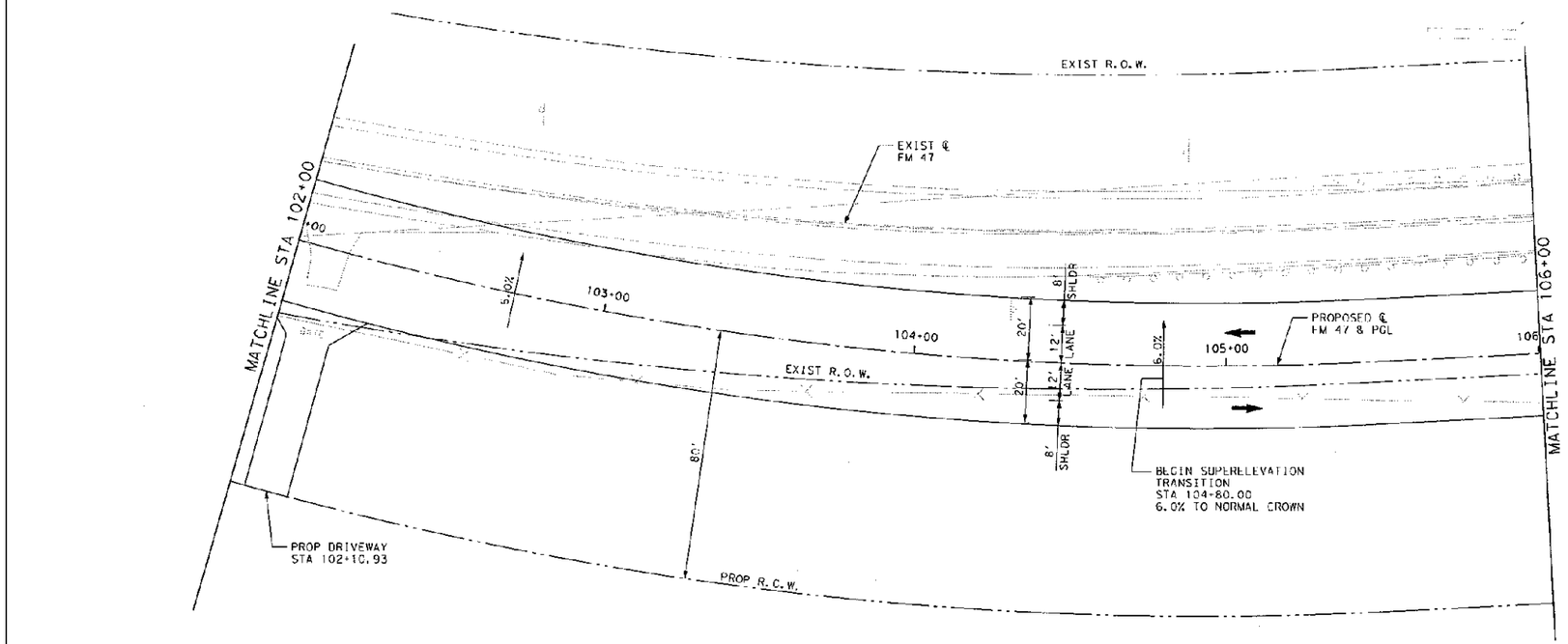
→ TRAFFIC FLOW ARROW

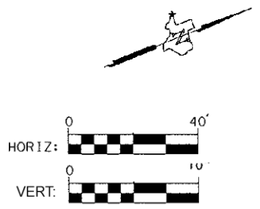
Texas Department of Transportation

Figure 6.1
Plan and Profile
FM 47 over Sabine River
Rains and Van Zandt
Counties, Texas
CSJ: 0770-01-015

STA BEGIN OF PROJECT TO STA 102+00.00

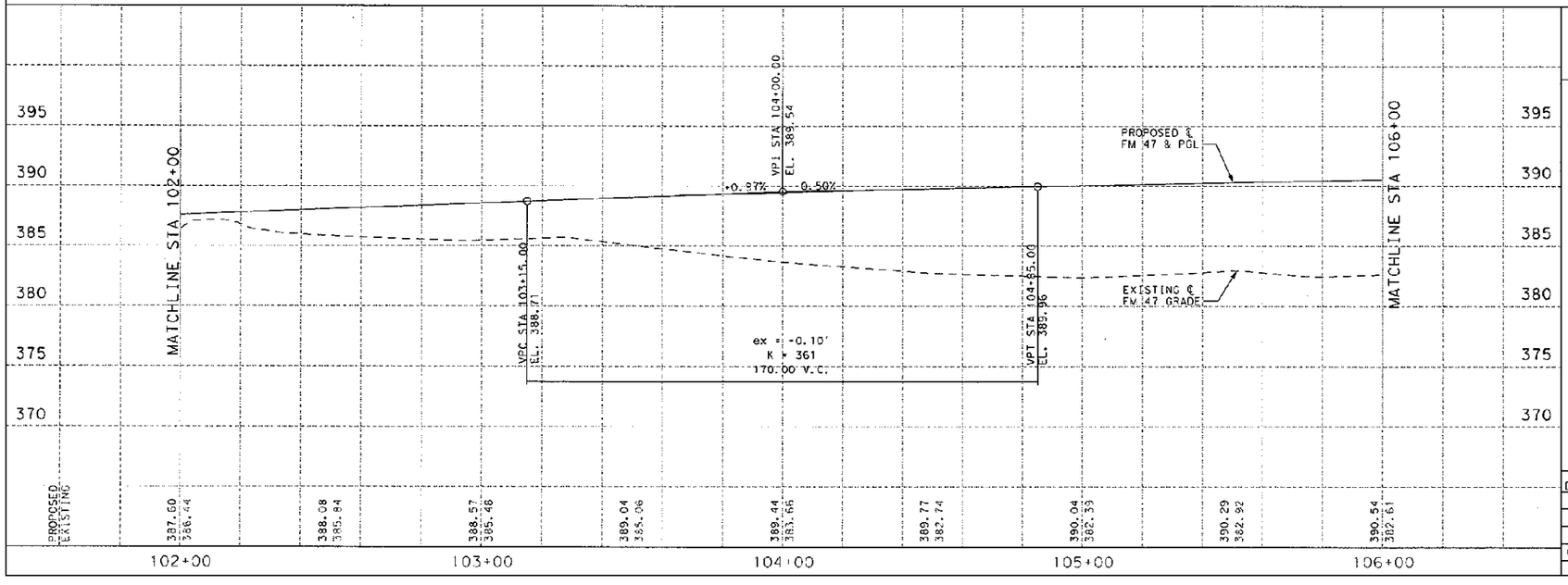
FED.RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY
6	SEE TITLE SHEET		FM 1567
STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	PAR	HOPKINS, etc	
CONTROL	SECTION	JOB	44
0641	05	016, etc	





LEGEND

➡ TRAFFIC FLOW ARROW

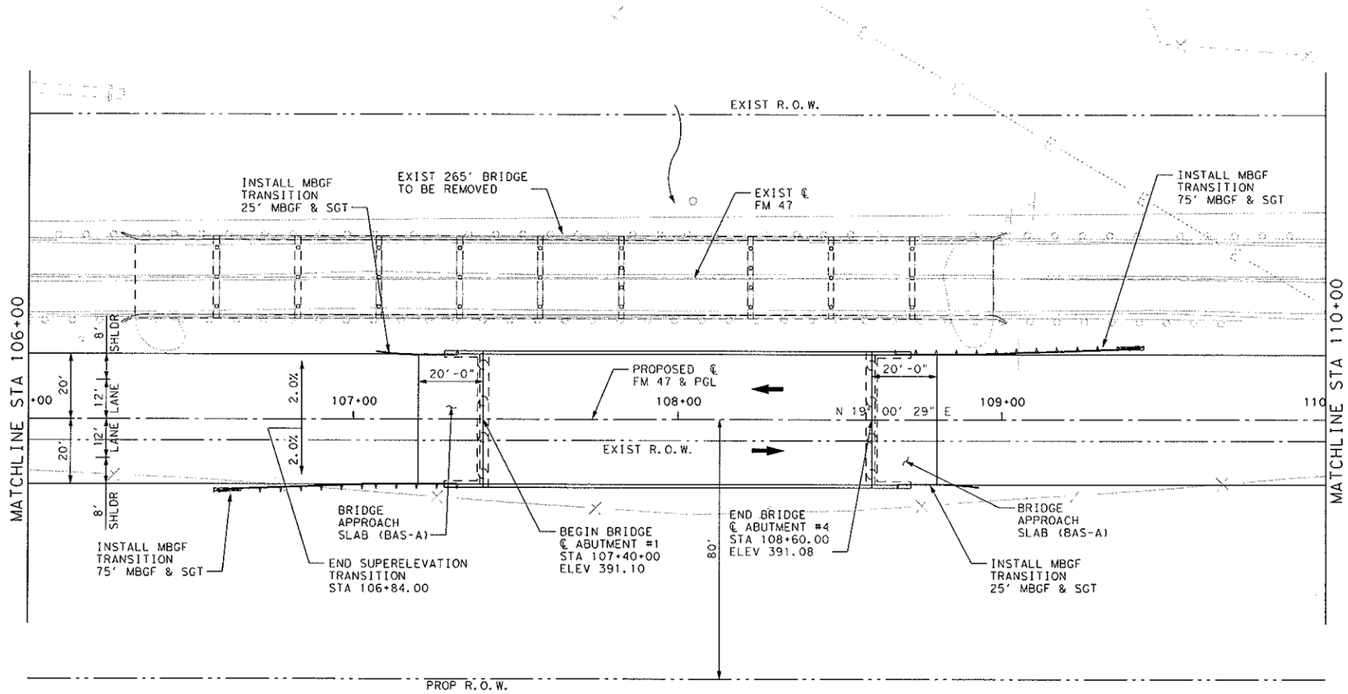


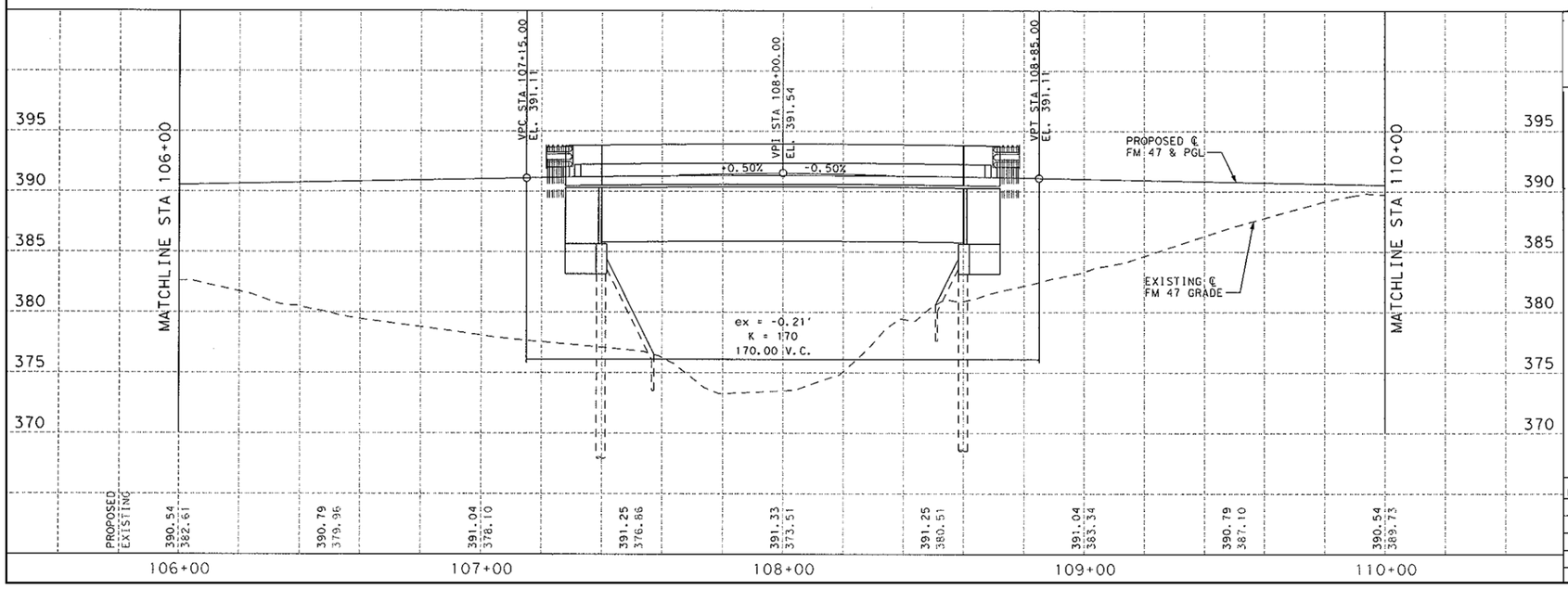
Texas Department of Transportation
© 2012

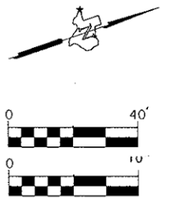
Figure 6.2
Plan and Profile
FM 47 over Sabine River
Rains and Van Zandt
Counties, Texas
CSJ: 0770-01-015

STA 102+00.00 TO STA 106+00.00

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY
6	SEE TITLE SHEET		FM 1567
STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	PAR	HOPKINS, etc	
CONTROL	SECTION	JOB	45
0641	05	016, etc	







LEGEND

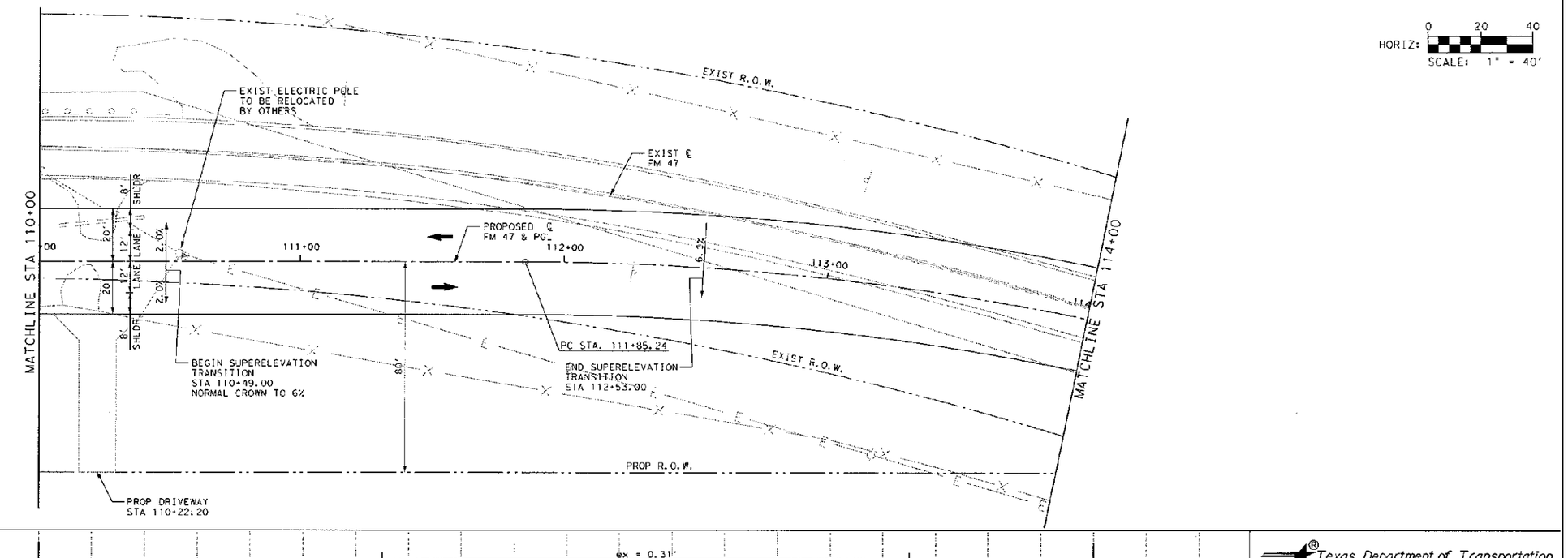
➡ TRAFFIC FLOW ARROW

Texas Department of Transportation

Figure 6.3
Plan and Profile
FM 47 over Sabine River
Rains and Van Zandt
Counties, Texas
CSJ: 0770-01-015

STA 106+00.00 TO STA 110+00.00

FED.RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY
6	SEE TITLE SHEET		FM 1567
STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	PAR	HOPKINS, etc	
CONTROL	SECTION	JOB	46
0641	05	016, etc	

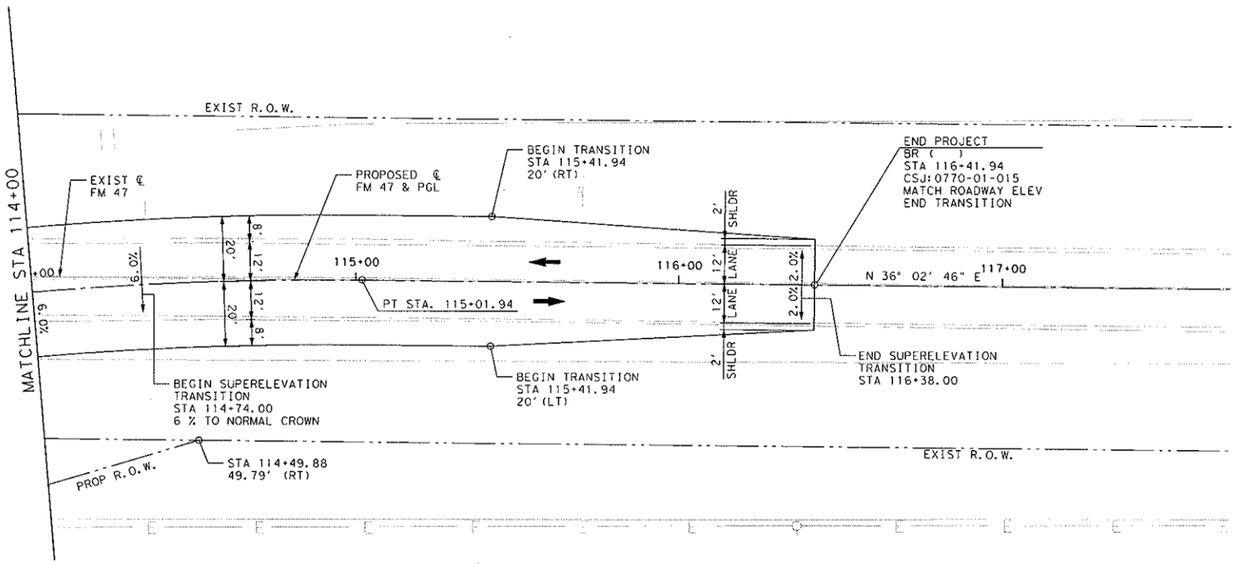


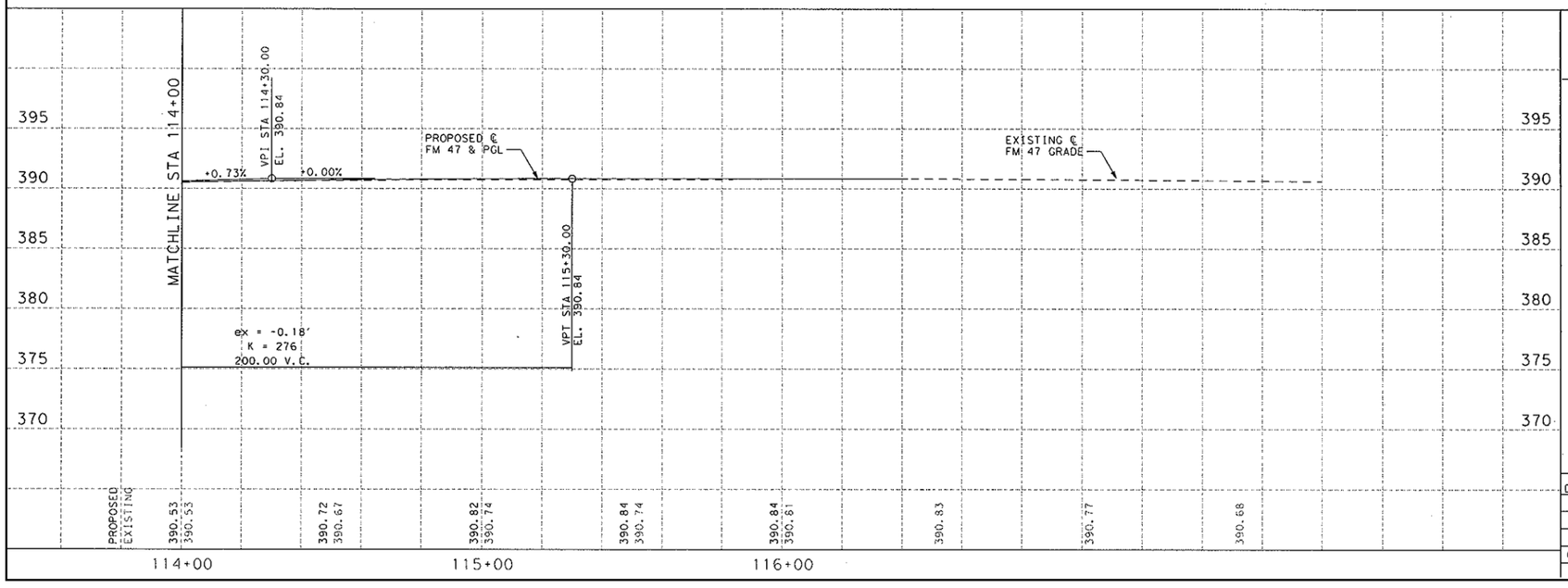
Texas Department of Transportation

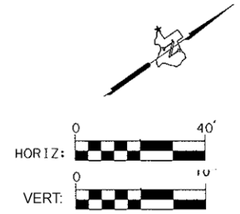
Figure 6.4
Plan and Profile
FM 47 over Sabine River
Rains and Van Zandt
Counties, Texas
CSJ: 0770-01-015

STA 110+00.00 TO STA 114+00.00

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY
6	SEE TITLE SHEET		FM 1567
STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	PAR	HOPKINS, etc	
CONTROL	SECTION	JOB	47
0641	05	016, etc	







Texas Department of Transportation

Figure 6.5
Plan and Profile
FM 47 over Sabine River
Rains and Van Zandt
Counties, Texas
CSJ: 0770-01-015

STA 114+00.00 TO END OF PROJECT

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY
6	SEE TITLE SHEET		FM 1567
STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	PAR	HOPKINS, etc	
CONTROL	SECTION	JOB	48
0641	05	016, etc	

ENVIRONMENTAL SETTING

The proposed project is located in a rural area of southwestern Rains County and northwestern Van Zandt County. According to Lane (1973), the vegetation within the APE is classified as "Woodlands" with Water oak (*Quercus phellos* L.) and Willow oak (*Quercus phellos* L.) trees dominant and Loblolly (*Pinus taeda* L.) and Shortleaf (*Pinus echinata* Mill.) pine in scattered clumps and small plantations. Understory plants include the following grasses: Beaked panicums (*Panicum anceps*), additional panicums (*Panicums* L.), Virginai wildrye (*Elymus virginicus*), sea oats (*Uniola* L.*)*, various sedges (*Carex* L.), and *Paspalums* L.

Geology

The geology of the APE consists of Recent (Holocene) Alluvium described as floodplain deposits containing sand, silt, and clay (Barnes 1966). Regionally, Holocene alluvium has consistently shown to have a potential to contain buried archeological deposits.

Soils

The APE is mostly comprised of soils of the Kaufman-Gladewater Association; these are deep, nearly level clayey soils found in bottomlands (Lane 1973). Kaufman and Gladewater soils are formed in clayey alluvium with a typical surface layer of black clay measuring about 64 inches thick. The underlying material is very dark gray clay about 20 inches thick (Stringer 1991). These soils are found mostly in hardwood forests with water oak (*Quercus phellos* L.) and willow oak (*Quercus phellos* L.) dominant with lesser elm (*Ulmus* L.), sweetgum (*Liquidambar styraciflua*) and ash (*Fraxinus texensis*) trees with an understory of native grasses. A small area of the APE, located immediately east of the Sabine River, consist of gently sloping loamy soils of the Woodtell Series formed in stratified loamy and clayey sediment under mixed hardwoods and native grasses. Given these soil characteristics, the APE has a potential to contain buried archeological resources.

PREVIOUS ARCHEOLOGICAL INVESTIGATIONS

A review of records available on the THC's online Texas Archeological Sites Atlas (ATLAS) indicates that there is one previously recorded prehistoric site (41RA12) and two archeological surveys within a 1,000-meter search radius of the APE. A linear survey, conducted in 1984 under TAC Permit No. 408, is oriented east/west approximately 0.9 km (0.5 mile) south of the APE; no additional information is available (ATLAS 2013). An area survey, conducted in 1972 by the NPS, may encompass the APE. However, the survey area most likely has been misplotted on the ATLAS and represents the NPS survey of Lake Tawakoni to the immediate north of the APE. Numerous cultural resource sites were discovered during the survey; these include prehistoric mound sites (one with human burials), prehistoric open campsites (nonceramic and ceramic), and at least one multi-component site with a prehistoric and modern cultural assemblage.

Prehistoric site 41RA12 is located a (Site location redacted) of the proposed
project, but does not extend into the APE. It was originally recorded in 1957 by L. Johnson and W. Davis as part of the Texas Archeological Salvage Project. They describe the site as an open occupation site; the cultural assemblage included plain ceramic sherds; various blade fragments; *Gary*, *Yarbrough, Carrollton,* and *Merserve* dart points; and one *Bonham* arrow point. These diagnostic point types span the Late Paleo-Indian to the Late Prehistoric cultural periods (approximately 9000 BC to AD 1500). Some of the materials were found in the FM 47 roadway and scattered over a large hill or knoll located approximately
(Site location redacted) overlooking a wide floodplain to the south and west. The 25-acre prehistoric site was located on the large knoll which is slightly higher (approximately 10 ft.) than the surrounding floodplain. The site was recommended for extensive testing. It was revisited in 1971 by J. Malone; he noted that FM 47 cut through a knoll exposing a cultural assemblage (numerous ceramic sherds, fire cracked rock, and lithic debitage) buried up to 60 cm below the ground surface. The part of the site located within a knoll located further to the north had been leveled and buried below the Iron Bridge Dam. Most of the cultural material was observed in a plowed field located south of FM 47 where the entire knoll had been leveled and put into agricultural use and provides water drainage at the foot of the Iron Bridge Dam. There is no additional site information available (ATLAS 2013).

The background review also included an examination of the Texas State Highway Department's (SDHPT) 1936 and 1957 *General Highway Map, Rains and Van Zandt Counties, Texas* for locations of previous standing structures within or immediately adjacent to the APE. There are no structures plotted within the 1,000-meter search radius of the APE. A modern water tank was revealed on the 1980 USGS *Iron Bridge Dam, Texas* 7.5-minute quadrangle; it is located approximately 0.7 km (0.5 mile) west of the APE.

METHODS

Investigations consisted of an intensive archeological survey with surface and subsurface investigations of sufficient intensity to determine the nature, extent, and significance of the archeological resources discovered within the APE. The survey adhered to THC survey standards (n.d.), as well as the guidelines of the CTA (1987) and the Secretary of the Interior's Standards and Guidelines (NPS 1983). Field investigations were thoroughly documented with digital cameras.

Surface investigation of the APE consisted of a 100 percent pedestrian inspection of the ground surface by two archeologists utilizing five- to 10-meter transect intervals. Where possible, cutbank profiles of the river within the APE were inspected for the presence of buried archeological deposits. Subsurface investigations involved systematic backhoe trenching (BHTing) based on field conditions. BHTs measured approximately five meters (16.4 ft.) long by 1.5 meters (4.9 ft.) wide by 1.5 meters (4.9 ft.) deep. The archeologists cleaned and examined the trench walls to locate in-situ artifacts, features, soil anomalies, and stratigraphic units in the trench profiles. These were recorded and photographed. BHT locations were plotted with a hand-held global positioning system (GPS). When buried archeological material was identified in BHT 11, two additional BHTs (12 and 13) were excavated to determine the site's boundary. Additionally, a 30 by 30-centimeter shovel test column, excavated in 20-centimeter levels, was excavated in the positive trench wall to quantify artifact recovery.

The proposed archeological methodology utilized a no-collection strategy, so cultural materials were not collected during the investigation. One diagnostic dart point was documented in the field and left in place. The field documentation included a detailed description, locational data obtained with a GPS receiver, and photo-documentation.

The horizontal and vertical extent of the newly discovered site was documented for the portion located within the APE. The site was evaluated with respect to its eligibility for inclusion in the NRHP (as per eligibility criteria set forth in NPS regulations 36 CFR 60.4.) and for listing as a SAL (as per criteria established in Chapter 26.8 of the TAC). The newly discovered site was recorded on a Texas Archeological Site Data Form and submitted electronically to the Texas Archeological Research Laboratory (TARL)/University of Texas at Austin via the TEXSITE recording system. Site data includes a description of the site's environment and cultural materials observed within the APE.

Because the survey resulted in the discovery of a single site, the draft report is produced in accordance with the short report format guidelines as outlined by the THC's Rules of Practice and Procedures (as per Section 26.24), which refers to the Council of Texas Archeologists' Guidelines for Cultural Resource Management Reports. The report provides information from geologic maps and soil surveys, cultural resource background data, a detailed site description, significance assessment, and notes that the site extends beyond the APE.

A computer drafted site map utilizing hand-drawn field maps and topographic contours generated from a Digital Elevation Model (DEM) serves as the base map in the report. Differentially-corrected site polygon and all relevant natural and man-made landscape features are included.

The report evaluates, to the extent feasible, the eligibility of the archeological site discovered within the project area, as per the appropriate criteria, for inclusion in the NRHP and/or listing as a SAL. The evaluation of the potential for remaining intact archeological deposits is made and concludes with recommendations for additional archeological work, as per 13 TAC 26.5(35), 13 TAC 26.20(1), and 13 TAC 26.20(2).

RESULTS OF INVESTIGATIONS

The intensive archeological survey consisted of visual inspection of the entire APE and the excavation of 14 BHTs to investigate for buried cultural materials. BHTs were placed in each quadrant of the APE; BHTs 1 through 5 in the northeast quadrant, BHT 6 in the northwest quadrant, BHTs 7 and 8 in the southwest quadrant, and BHTs 9 through 14, centered on a raised knoll, within the southeast quadrant (**Figure 7**). East and north of the channel, the landform consists of a fairly flat floodplain currently in agricultural use. Prior to the construction of the Iron Bridge Dam at Lake Tawakoni, the floodplain sloped gently upward for approximately 900 ft. from the edge of the river (about 380 ft. above mean sea level [amsl]) north to a large knoll (390 ft. amsl). This large knoll was the location of site 41RA12, a 25-acre prehistoric open camp recorded in 1957 and revisited in 1971. Most if not all of the site was destroyed by land leveling and modification associated with the dam construction, drainage controls, and highway construction. Some western areas of 41RA12 may be intact; however, the site is located approximately 900 ft. north of the APE.

The APE is quite narrow in the northwestern quadrant as the toe of the earthen Iron Bridge Dam is located adjacent to the FM 47 drainage ditch (**Figure 8**). This large earthen dam extends into the northwest and southwest quadrants of the APE. It has an associated large depression where the original Sabine River flowed before it was rerouted to the Lake Tawakoni Spillway located approximately 3,000 ft. south of the APE. The remaining portion of the southwest quadrant consists of the FM 47 drainage ditch which abuts the lower edge of the earthen Iron Bridge Dam. The southeastern quadrant is a relatively flat floodplain terrace with a small knoll located approximately 500 ft. south of the channel. The knoll extends beyond the APE to the east and most likely extended further west prior to the construction of the dam and highway (**Figure 7**).

The field investigation revealed that most of the APE has been severely disturbed. The BHTs exposed four Stratigraphic Zones (I - IV) typified by disturbed and sometimes mechanically mixed sandy clay loam and sandy or silty clay becoming denser with depth. Soils located north of the Sabine River are typified by a 25 to 30 cm-thick surface layer of light yellowish brown sandy clay overlying an approximately 110 cm-thick light brownish gray sandy clay becoming lighter in color and denser with depth (**Appendix A**). Soils located south of the river are typified by brown to grayish brown sandy or silty clay loam over dark yellowish brown sandy clay over olive brown sandy clay becoming lighter in color and denser with depth. BHT investigations resulted in the discovery of prehistoric site 41VN132 in Stratigraphic Zone I.

Site 41VN132

Site 41VN132, a prehistoric temporary or open camp, was discovered within the upper 43 cm of a small knoll surrounded by a relatively flat floodplain terrace; it (Site location redacted)
The site is (Site location redacted) the thickest deposit of sandy loam; (Site location redacted)
, within the APE, measure approximately 15 m west/east and 20 meters (m) north/south (**Figure 9**). If it once extended to the west, it was leveled by the FM 47 and Iron Bridge Dam construction (**Figure 10*)*** and the eastern boundary of the site could not be determined as it extends beyond the APE along a narrow ridgeline.

The ground surface visibility was between 30 and 60 percent within the APE; the remainder of the knoll to the east is covered with thick woods. This site lacks any surface expression and was first recognized while documenting the profile of BHT 11, located in the center of the knoll (**Figure 11**). Six artifacts (two fire cracked rocks (FCRs), one burned clay ball, two lithic flakes and one lithic biface) were discovered between 5 and 38 centimeters below datum (cmbd) (**Figure 12**). The datum was established at ground level at the northeastern corner of the trench. To further assess the cultural deposits, a 30 by 30 by 100 cm column was excavated into the profile of BHT 11. The column was placed between four of the six artifacts observed in the BHT 11 profile and excavated in 20 cm levels. The majority of the artifacts (six flakes, nine FCRs, one carbon chunk, and one *Gary*-like dart point) were observed in Levels 2 and 3 of the column between 5 and 43 cmbd (**Figure 13**). The *Gary*-like dart point was documented and photographed (**Figure 14**). An additional seven artifacts (one lithic flake, five FCRs and one piece of limonite) were observed in the lower portion of Level 1, located between 5 cmbd and 5 to 10 cm above datum in a slight rise along the southern half of the trench. All of the artifacts were observed within Stratigraphic Zone I, a brown sandy clay loam with significant disturbances from root, worm, and insect bioturbation and from dam and highway construction (see **Figure 13**).

To further assess the site, additional BHTs (No.s 12 and 13) were placed slightly downslope to the north and south of BHT 11. Both trenches revealed mechanical mixing associated with a fence line and a thinning sandy loam deposit. BHTs 10 and 14 were placed below the knoll to the south and north; BHT 10 revealed mechanical displacement due to right-of-way clearing and both had common root bioturbation. BHTs 10 and 12 through 14 were negative for cultural resources (see **Appendix A**).

The presence of FCR and burned clay (**Figure 15**) within BHT 11 are suggestive of thermal features; however, the cultural deposits lack vertical integrity, living surfaces or intact features. While the research potential is limited within the APE; intact cultural deposits, with thermal features, may exist in the portion of the site further removed from impacts associated with the construction of Lake Tawakoni, Iron Bridge Dam, and FM 47. The overall site has an unknown NRHP eligibility as parts of it extend beyond the APE. However, the portion of the 41VN132, located within the APE, would not contribute to the eligibility of the site if it were later fully assessed and determined eligible for inclusion in the NRHP and listing as an SAL.

Survey investigations revealed that the majority of the APE has experienced extensive surface and subsurface impacts from the construction of Lake Tawakoni, Iron Bridge Dam, and the FM 47 roadway and bridge as well as the modification of the original channel of the Sabine River. From the existing reservoir and dam located immediately west of FM 47 to the agricultural fields and water drainage located north of the Sabine River and east of FM 47, the area has highly disturbed soil over basal clays. Most of the soils have been horizontally and vertically mixed , redistributed, and truncated by heavy machinery during various construction projects. The portion of the APE located south of the river and east of FM 47 has been modified as well. Given the survey results and prior disturbances, it is B&A's opinion that there is little potential for the APE to contain previously unidentified archeological resources. Dependent upon the degree of previous impacts and natural disturbances, the portion of site 41VN132 located outside of the APE along a small narrow ridge has the potential to contain buried and intact cultural deposits.

SUMMARY AND RECOMMENDATIONS

Intensive archeological survey efforts of proposed improvements to FM 47 at the Sabine River resulted in the discovery of one archeological site. Site 41VN132 was exposed in the upper level of BHT 11 located atop a small knoll remnant in the southeast quadrant of the APE. The remaining APE has been significantly leveled and modified during construction of Lake Tawakoni, Iron Bridge Dam, and FM 47, agricultural leveling, and modification of the original channel of the Sabine River.

Site 41VN132 was discovered within the upper 43 cm of a small knoll and extends an unknown distance to the east, outside of the APE, along a small narrow ridge associated with the knoll. Due to the lack of vertical integrity, living surfaces or intact features, it is B&A's opinion that the portion of the site located within the APE lacks research potential and would not contribute to the site's eligibility if it were later fully assessed and determined eligible for inclusion in the NRHP and listing as an SAL. The small narrow ridge associated with the knoll east of the APE appears to have suffered fewer impacts from highway and reservoir development and modification of the original channel of the Sabine River. Therefore, the site 41VN132 cultural deposits extending beyond the APE have the potential to contain buried and intact cultural deposits and should be avoided and protected.

The proposed FM 47 project should have *no effect* to historic properties pursuant to 36 CFR 800.4(d)(1) and should be allowed to proceed as planned without additional investigations. If it is determined that the planned construction requires impacts to occur outside the APE, then further cultural resource investigations would be necessary in those areas prior to any construction. If evidence of archeological and historic resources is identified during construction, work in the immediate area should cease until the THC is contacted and accidental discovery procedures can be implemented.

This page has been removed intentionally to protect sensitive

cultural materials

Figure 7

Figure 8 Northwest quadrant of APE

Figure 9 Archeological Site 41VN132

Not for public view—
contains sensitive site
information

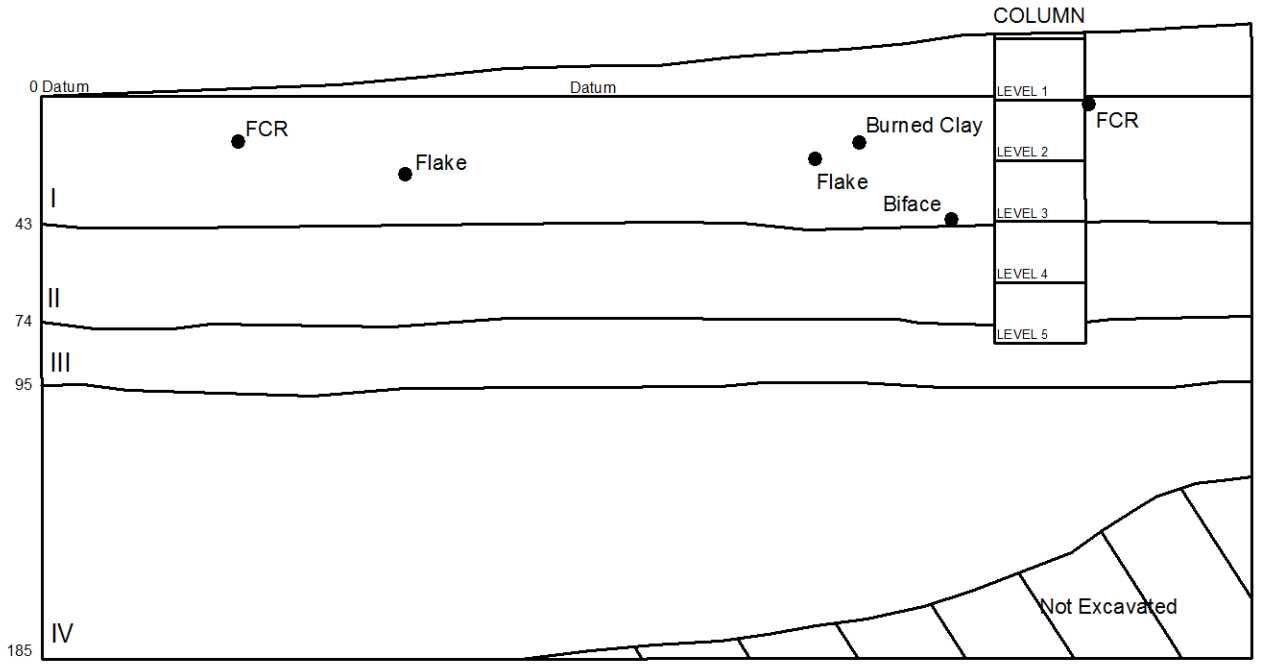
This page has been removed intentionally to protect sensitive

cultural materials

Figure 10

Figure 11 Location of BHT 11 at center of knoll (photograph center)

Figure 12 Backhoe Trench 11 and Column 1 (east wall profile photograph) with pin flags at artifact locations



Stratigraphic Zones

Zone I - Sandy clay loam with extensive bioturbation 10 YR 4/3
Zone II - Sandy clay loam with common bioturbation 10 YR 4/6
Zone III - Sandy clay loam with common bioturbation 2.5 YR 4/3
Zone IV - Sandy clay 2.5 YR 5/4

0-185 centimeters below datum (cmbd)

Column - 20 cm Levels

Level 1 - 1 Flake, 5 FCR, 1 Limonite
Level 2 - 4 Flakes, 5 FCR, 1 Charcoal
Level 3 - 1 Dart Point, 2 Flakes, 4 FCR
Levels 4 & 5 - Negative
FCR - Fire Cracked Rock

1:25
0 25 50
Centimeters

Figure 13
Backhoe Trench 11 and Column 1
(east wall profile drawing) at 41VN132
FM 47 over Sabine River
Van Zandt County, Texas
CSJ: 0921-22-003

Figure 14 *Gary*-like dart point, 41VN132

Figure 15 Burned clay ball, 41VN132

REFERENCES CITED

Barnes, V.E.

1966 *Geologic Atlas of Texas, Tyler Sheet*. Bureau of Economic Geology, The University of Texas at Austin.

Council of Texas Archeologists (CTA)

1987 Guidelines for Professional Performance Standards. Austin.

Lane, G.L.

1973 *Soil Survey of Hopkins and Rains Counties, Texas*. United States Department of Agriculture, Soil Conservation Service, in cooperation with the Texas Agricultural Experiment Station.

Stringer, B.R.

1991 *Soil Survey of Van Zandt County, Texas*. United States Department of Agriculture, Soil Conservation Service, in cooperation with the Texas Agricultural Experiment Station.

National Park Service (NPS)

1983 Archeology and Historic Preservation: Secretary of the Interior's Standard's and Guidelines. Federal Register 48 (190):44734-44742.

Perry-Castaneda Library Map Collection

2011 Texas Topographic Maps. University of Texas at Austin. http://www.lib.utexas.edu/maps/topo/texas/index.html.

Sellards, E.H., W.S. Adkins, and F.B. Plummer

1932 The Geology of Texas. Vol. 1: Stratigraphy. Bulletin No. 3232. Austin: Bureau of Economic Geology. University of Texas at Austin.

Texas Archeological Sites Atlas (ATLAS) website

2013 Texas Historical Commission, Austin. http://nueces.thc.state.tx.us/.

Texas Historical Commission (THC)

n.d. Survey Standards. Austin

Texas State Highway Department

1940 *General Highway Map, Rains and Van Zandt Counties, Texas*. Texas State Highway Department in cooperation with the U.S. Department of Agriculture, Bureau of Public Roads.

APPENDIX A

BACKHOE TRENCH DESCRIPTIONS

BACKHOE TRENCH DESCRIPTIONS

Zone	Depth (cm)	Description
		Backhoe Trench 1(East Wall Profile)
Zone I	0–29	Light yellowish brown (10YR 6/4) sandy clay with dark grayish brown (10YR 4/2) sandy clay loam mottling; abrupt and smooth lower boundary; no artifacts.
Zone II	29–121	Dry and very hard, light brownish gray (2.5Y 6/2) sandy clay with yellowish brown (10YR 5/6) mottling; blocky structure; few calcium carbonate flecks mixed throughout; diffuse and smooth lower boundary; no artifacts.
Zone III	121–180	Moist and friable, light brownish gray (2.5Y 6/2) sandy clay loam with pronounced strong brown (7.5 YR 4/6) iron staining; blocky structure; diffuse and smooth lower boundary; no artifacts.
Zone IV	180–260	Moist, light gray (2.5Y 6/2) sand with strong brown (7.5YR 4/6) mottling; loose structure; no artifacts.
		Backhoe Trench 2 (East Wall Profile)
Zone I	0–38	Light yellowish brown (10YR 6/4) sandy clay mixed with yellowish brown (10YR 5/6) sandy clay loam; heavy root bioturbations; abrupt and smooth lower boundary; no artifacts.
Zone II	38–133	Moist and firm, light brownish gray (2.5Y 6/2) sandy clay with yellowish brown (10YR 5/6) heavy mottling; blocky structure; moderate root and worm bioturbation; few calcium carbonate flecks; diffuse and smooth lower boundary; no artifacts.
Zone III	133–295	Moist and firm, light brownish gray (2.5Y 6/2) sandy clay with yellowish brown (10YR 5/6) heavy mottling; sandier with depth; no artifacts.
		Backhoe Trench 3 (West Wall Profile)
Zone I	0–42	Moist, grayish brown (2.5Y 5/2) sandy clay mixed with brown (7.5YR 5/4) sandy clay; granular; abrupt and smooth lower boundary no artifacts.
Zone II	42–158	Moist and extremely hard, light brownish gray (2.5Y 6/2) sandy clay with strong brown (7.5YR 4/6) mottling; blocky structure; moderate iron concretions and very dark gray (7.5YR 3/1) staining that increases with depth; few calcium carbonate flecks at depth; diffuse and smooth lower boundary; no artifacts.
Zone III	158–240	Moist and firm, light brownish gray (2.5Y 6/2) sandy clay with yellowish brown (10YR 5/6) mottling; heavy worm and root bioturbation; less iron staining than Zone II; diffuse and smooth lower boundary; no artifacts.
Zone IV	240–285	Most and friable, light gray (2.5Y 7/1) sandy clay loam; no iron staining; no artifacts.
		Backhoe Trench 4 (West Wall Profile)
Zone I	0–42	Light yellowish brown (10YR 6/4) sandy clay mixed with dark yellowish brown (10YR 4/6) sandy clay loam; abrupt and smooth lower boundary; no artifacts.
Zone II	42–220	Moist and extremely hard, light brownish gray (2.5Y 6/2) sandy clay with yellowish brown (10YR 5/8) mottling; blocky structure; few vertical

BACKHOE TRENCH DESCRIPTIONS

Zone	Depth (cm)	Description
		cracks; low percentage of calcium carbonate flecking cemented in solution; diffuse and smooth lower boundary; no artifacts.
Zone III	220–290	Moist and friable, gray (2.5Y 6/1) sandy clay; blocky structure; sand increases with depth; no artifacts.
		Backhoe Trench 5 (West Wall Profile)
Zone I	0–47	Brown (10YR 4/3) mixed with reddish yellow (7.5YR 6/8) sandy clays; abrupt and smooth lower boundary; no artifacts.
Zone II	47–84	Moist and firm, brown (10YR 4/3) fine sandy claywith yellowish brown (10YR 5/8) mottling; blocky structure; pronounced ant, worm and root bioturbations; clear and smooth lower boundary; no artifacts.
Zone III	84–180	Moist and very firm, grayish brown (2.5Y 5/2) fine sandy clay; heavy worm and root bioturbations; small (4 mm) iron masses starting at 170 cm; diffuse and smooth lower boundary not observed; no artifacts.
Zone IV	180–235	Moist, sticky and firm, light gray (2.5Y 7/1) sandy clay; no artifacts.
		Backhoe Trench 6 (East Wall Profile)
Zone I	0–42	Dark grayish brown (10YR 4/2) and strong brown (7.5YR 5/6) mixed sandy clays; asphalt chunks and small (approximately 3 cm) road base gravels; abrupt and smooth lower boundary; no artifacts.
Zone II	42–77	Moist and firm, light olive brown (2.5Y 5/3) sandy clay with strong brown (7.5YR 5/6) heavy mottling; blocky structure; moderate root and insect bioturbations; abrupt and smooth lower boundary; no artifacts.
Zone III	77–87	Moist and friable, dark grayish brown (10YR 4/2) sandy loam; rich organic loam not found in elsewhere and likely represents a flood deposited strata; abrupt and smooth lower boundary; no artifacts.
Zone IV	87–195	Moist and very firm, light yellowish brown (2.5Y 6/3) sandy clay with yellowish red (5YR 5/8) mottling; blocky structure; diffuse and smooth lower boundary; no artifacts.
Zone V	195–230	Moist and friable, light gray (2.5Y 7/1) sandy clay; sand increases with depth; no artifacts
		Backhoe Trench 7 (West Wall Profile)
Zone I	0–71	Moist, firm and very sticky, black (10YR 2/1) silt clay with brown (10YR 4/3) mottling; granular structure; heavy worm and root bioturbation; intact humic deposit; diffuse and smooth lower boundary; no artifacts.
Zone II	71–173	Moist and firm, very dark grayish brown (10YR 3/2) silty clay; blocky structure; low to moderate root bioturbation; diffuse and smooth lower boundary no artifacts.
Zone III	173–230	Moist and very firm, dark gray (10YR 4/1) silty clay; blocky structure; no artifacts.
		Backhoe Trench 8 (West Wall Profile)
Zone I	0–38	Brownish yellow (10YR 6/6) sandy clay mixed with very dark grayish brown (10YR 3/2) sandy loam; introduced fill layer; clear and wavy lower boundary; no artifacts.

BACKHOE TRENCH DESCRIPTIONS

Zone	Depth (cm)	Description
Zone II	38–179	Moist and friable, gray (2.5Y 6/1) fine sandy clay; blocky structure; heavy worm and root bioturbations; diffuse and smooth lower boundary; no artifacts.
Zone III	179–260	Light brownish gray (2.5Y 6/2) sandy clay with heavy olive yellow (2.5Y 6/8) mottling; sandier wet with depth; no artifacts.
		Backhoe Trench 9 (West Wall Profile)
Zone I	0–32	Disturbed, dark brown (10YR 3/3) silty clay heavily mixed with ash, charcoal, road bed gravels and modern wire fragments; clear and smooth lower boundary; no artifacts.
Zone II	32–124	Moist and firm, very dark gray (10YR 3/1) silty clay with light brownish gray (10YR 6/2) mottling; intact, granular structure; common slickenside; heavy root bioturbations; gradual and smooth lower boundary; no artifacts.
Zone III	124–230	Moist and extremely firm, dark gray (10Y 4/1) silty clay with yellowish brown 10YR 5/6) mottling; blocky structure; no artifacts.
		Backhoe Trench 10 (West Wall Profile)
Zone I	0–25	Mixed very dark gray (10YR 3/1) and dark grayish brown (10YR 4/2) silty clay; mechanically displaced and mixed during the ROW clearing; clear and smooth lower boundary; no artifacts.
Zone II	25–88	Moist and firm, very dark gray (10YR 3/1) silty clay; intact granular structure; common slickensides; clear and smooth lower boundary; no artifacts.
Zone III	88–230	Moist and extremely firm, very dark gray (10YR 3/2) silty clay; blocky structure; no artifacts.
		Backhoe Trench 11 (East Wall Profile) 41VN132
Zone I	0–43	Moist and friable, brown (10YR 4/3) sandy clay loam; significant root, insect, and worm bioturbations; clear and smooth lower boundary; sole cultural bearing BHT; quartzite and chert debitage, burned and fire-cracked quartzite rock, burned clay balls, and a single chert biface.
Zone II	43–74	Moist, sticky and firm, dark yellowish brown (10YR 4/6) sandy clay loam; blocky structure; common worm and root bioturbations; gradual and smooth lower boundary; lithic debitage, FCR, and one lithic biface in upper 15 cm.
Zone III	74–93	Moist and very firm, olive brown (2.5Y 4/3) sandy clay loam; blocky structure; common worm and root bioturbations; clear and smooth boundary; no artifacts.
Zone IV	93–185	Dry and very hard, light olive brown (2.5Y 5/4) sandy clay with yellowish brown (10YR 5/6) mottling; basal clay; no artifacts.
		Backhoe Trench 12 (East Wall Profile)
Zone I	0–27	Moist and friable, dark grayish brown (10YR 4/2) sandy loam mixed with pockets of light olive brown (2.5Y 5/3) sandy clay; abundant root bioturbations; mechanically mixed during fence line ROW clearing; clear and smooth lower boundary; no artifacts.

BACKHOE TRENCH DESCRIPTIONS

Zone	Depth (cm)	Description
Zone II	27–41	Moist and friable, brown (10YR 4/3) sandy clay loam; blocky structure; abundant root bioturbations; diffuse and smooth lower boundary; no artifacts.
Zone III	41–90	Moist and firm, light olive brown (2.5Y 5/3) sandy clay with light olive brown (2.5Y 5/6) mottling; blocky structure; moderate root bioturbations; basal clay; no artifacts.
		Backhoe Trench 13 (West Wall Profile)
Zone I	0–39	Disturbed, moist, slightly firm and sticky, very dark brown (10YR 2/2) fine sandy clay mixed with light olive brown (2.5Y 5/4) sandy clay; mechanically mixed during vegetation clearing along fence line corridor; diffuse and smooth lower boundary; no artifacts.
Zone II	39–130	Moist, sticky and firm, light olive brown (2.5Y 5/4) sandy clay; intact, blocky structure; common slickenside; heavy ant and root bioturbations; no artifacts.
		Backhoe Trench 14 (West Wall Profile)
Zone I	0–20	Yellowish brown (10YR5/8) sandy clay fill; abrupt and smooth lower boundary; no artifacts.
Zone II	20–48	Moist, sticky and very firm, very dark grayish brown (10YR 3/2) silty clay, granular structure; possibly truncated by Zone I; pronounced root and worm bioturbations; gradual and smooth lower boundary; no artifacts.
Zone III	48–124	Moist and very firm, olive brown (2.5Y 4/3 sandy clay; blocky structure; common root bioturbation; diffuse and smooth lower boundary; no artifacts.
Zone IV	124–160	Moist and extremely firm, light olive brown (2.5Y 5/6) sandy clay with olive brown (2.5Y 4/3) mottling; blocky structure; no artifacts.