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Archeological Resource Survey in Advance of Proposed Improvements of a Three-Mile Segment of Blake Manor Road, Travis County, Texas

By: Joel Butler

Joel Butler, Principal Investigator

Prepared for:

Travis County
and
The Texas Historical Commission

Texas Antiquities Permit No. 7260

May 2015

ARCHEOLOGICAL RESOURCE SURVEY IN ADVANCE OF PROPOSED IMPROVEMENTS OF A THREE-MILE SEGMENT OF BLAKE MANOR ROAD TRAVIS COUNTY, TEXAS

WRITTEN BY
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SUBMITTED TO

Travis County
and
The Texas Historical Commission

TEXAS ANTIQUITIES PERMIT 7260

Prepared by

AmaTerra ENVIRONMENTAL, INC.

Austin, Texas 78704

Technical Report 59

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Cover: Indian blanket flowers north of the East Metro Park entrance, facing northeast.

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AmaTerra Project No. 178-011

ABSTRACT

This report documents the results of an archeological resource survey along a three-mile segment of Blake Manor Road in advance of improvements involving road widening to enhance the overall safety and capacity of the roadway. The survey was conducted in compliance with the Antiquities Code of Texas under Permit No. 7260. Archeologists from AmaTerra Environmental, Inc. (AmaTerra) visually inspected the entire Area of Potential Effects and excavated 108 shovel tests in support of the survey. No new archeological sites were discovered as a result of the survey, although two isolated artifacts were documented and one previously recorded site (41TV2009) was revisited and is recommended as ineligible for listing as a State Antiquities Landmark or in the National Register of Historic Places. No artifacts were collected during this survey, but a field inventory and artifact photographs were made during the course of investigations. That inventory, along with photos and records, are to be permanently curated at the Texas Archeological Research Laboratory in Austin. AmaTerra recommends that no further archeological resources work is warranted prior to construction.

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CHAPTER 1
INTRODUCTION

AmaTerra Environmental, Inc. (AmaTerra) conducted an archeological survey of three miles of proposed improvements to Blake Manor Road between 1,500 feet south of Hamilton Point Drive and 1,500 feet north of Burleson Manor Road south of the City of Manor in northeastern Travis County, Texas (Figures 1 and 2). The project area is shown on the 2012 USGS 1:24000 Manor, Texas topographic sheet in Figure 1 and on a current aerial photograph in Figure 2.

The purpose of the survey was to identify whether any archeological sites would be affected by the proposed road widening. The Area of Potential Effect (APE) is approximately three miles long by an average of 140 feet in width, encompassing about 58.5 acres total (current detailed schematics and profiles are attached). The vertical APE for this project is currently unknown, but similar projects typically have a vertical APE of three to four feet in depth; therefore, the vertical APE is assumed to be four feet. The APE contains 34.2 acres of existing and 24.3 acres of proposed right-of-way (ROW).

Travis County proposes to replace the existing 26-foot wide two-lane blacktop shoulderless roadway with a 140-foot wide 14-foot center median-divided four 12-foot lane roadway with a 10-foot multi-use bicycle/pedestrian path (see Appendix A for current project schematics).

Because the undertaking is proposed by a municipal agency on public and privately owned land, the cultural resource investigations is regulated pursuant to the Texas Antiquities Code and was carried out under Texas Antiquities Permit No. 7260.

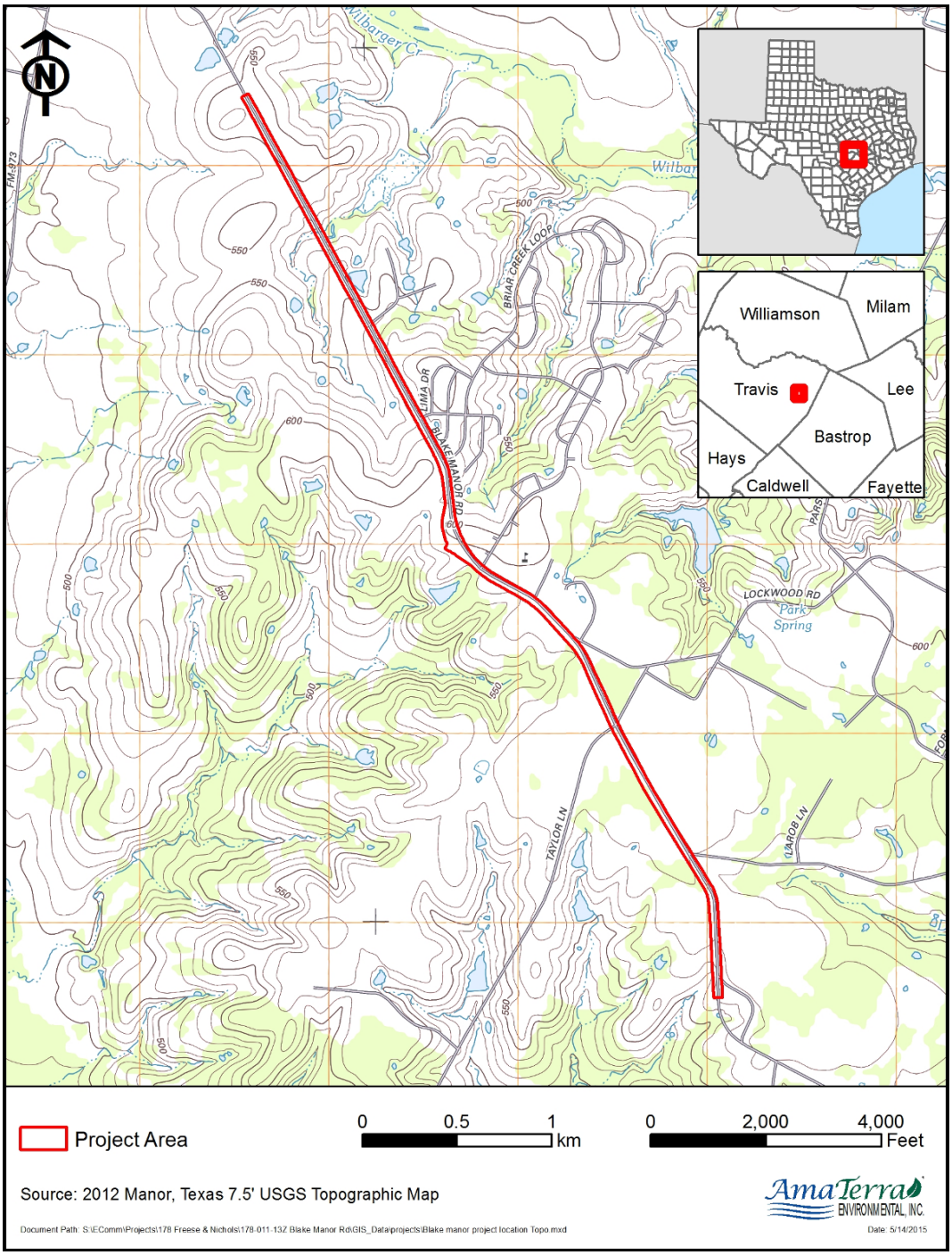

Figure 1. Project area on 2012 Manor, Texas USGS 7.5' Topographic map.

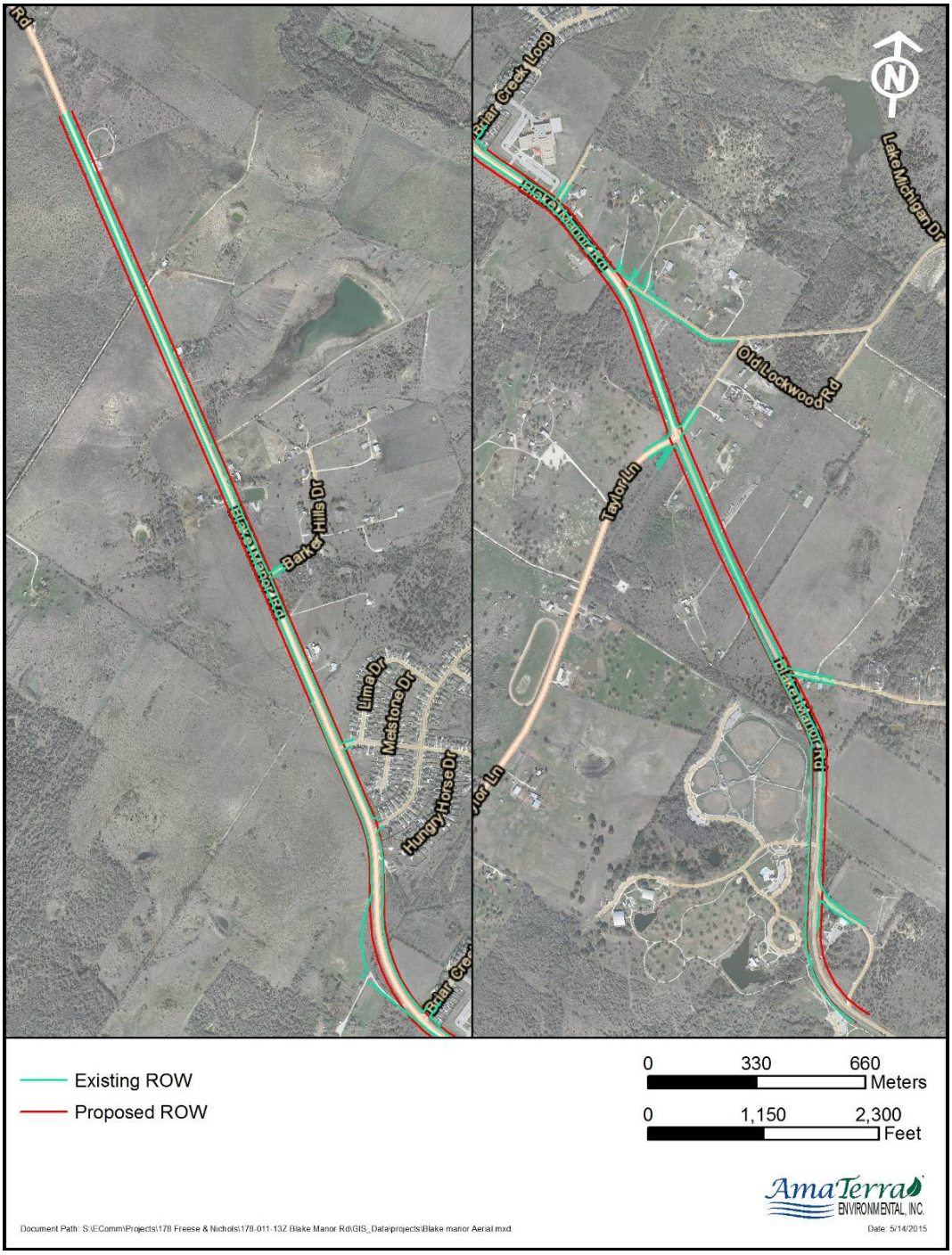

Figure 2. Project area on a recent aerial photograph.

CHAPTER 2

ENVIRONMENTAL SETTING AND CULTURAL BACKGROUND

Geographic and Biologic Setting

The project area is located on the northern portion of the Blackland Prairie physiographic province as defined by Black (1989b). Since the late Tertiary, the majority of soils once deposited on the Edwards Plateau have eroded to lower elevations east of the Balcones Escarpment, in an area known as the Blackland Prairie physiographic province (Black 1989b). Within the Blackland Prairie, rich deposits of late Tertiary and Quaternary calcareous clay soils have accumulated (without interruption) to great depths. Due to the rich, deep accumulation of soils within the Blackland Prairie, this region has been extensively used for agriculture since European colonization. Geographically, the Blackland Prairie is an area of relative low topographic relief and poor drainage that is prone to frequent flooding (Collins 1995).

The deep soil deposits of the Blackland Prairie support numerous tall-mid grasses such as little bluestem (*Schizachyrium scoparium*), big bluestem (*Andropogon gerardii*), Indian grass (*Sorghastrum nutans*), tall dropseed (*Sporobolus asper*), eastern grama grass (*Tripsacum dactyloides*), and switch grass (*Panicum virgatum*), which are the natural vegetative species for this environment (Ellis et al. 1995). In addition, mesquite (*Prosopis glandulosa*), pecan (*Carya illinoinensis*), hackberry (*Celtis laevigata*), juniper (*Juniperus ashei*), and live oak (*Quercus virginiana*) are often observed within the low flat woodlands along streams located within the Blackland Prairie. Since the nineteenth century, human land modifications along with ranching/grazing activities have resulted in a dramatic increase in invader flora species (e.g., mesquite, buffalo grass [Ellis et al. 1995]). In Texas, crop production (i.e., cotton, and grain sorghum) has thoroughly impacted over 99% of the original Blackland Prairie. Currently only one tenth of 1% of original Blackland Prairie survives in isolated patches within the Oak Wood and Prairie regions to the east (Texas Blackland Prairies 2003).

The project area is located within the Texan Biotic Province as defined by Blair (1950). Typical fauna associated with this region include: white tailed deer (*Odocoileus virginianus*), badger (*Taxidea taxus*), eastern cottontail (*Sylvilagus floridanus*), raccoon (*Procyon lotor*), and opossum (*Didelphus virginiana*). In prehistoric times, large numbers of bison (*Bison bison*) periodically inhabited the Blackland Prairie environment (McDonald 1981).

Geology and Soils

Local geology within the project area is evenly divided between Upper Cretaceous-aged Navarro and Taylor group undivided (Knt) marl, shale, and limestone in the north and Pleistocene-aged high gravels (Qhg) - silty deposits containing chert and limestone gravels eroded from the Edwards Plateau in the south (USGS 2005). No Holocene-aged alluvium is present within the project area.

An examination of Natural Resources Conservation Service (NRCS) soil data for Travis County reveals that soils within the APE are mostly Heiden (22.4%), Houston (36.6%), and Wilson (32.4%) clays with less than 5% each of Altoga, Burleson, and Tinn series clays (Figure 3) (NRCS 2015). These soils are all typical of the Texas Blackland Prairies and constitute the "gumbo" so intensively cultivated for a variety of crops since Anglo settlement began in the region over 150 years ago. These clays are mostly residuum from eroded Upper Cretaceous-aged shales and marls, which underlie the western Blacklands. These clays are subject to deep and wide drought cracking and rain swelling, resulting in widespread bioturbation along with mechanically-mixed soil from agricultural plowing. Although these clays are sometimes deep, they are not typically associated with stratified archeological sites. Most of the local sites determined to be eligible for listing on the NRHP due to intact deposits are associated with Chaney and other sandy soil series, which are not present within the project area.

Previous Archeological Work

According to the Texas Historical Commission (THC) Atlas, the proposed location has not been previously surveyed. However, one previous survey occurred within one kilometer of the APE (Figure 2). A 10-acre archeological survey was carried out in 2004 by SWCA for Travis County under TAC Permit 3369 directly west of the project area near the southern terminus. No sites were recorded during SWCA's survey.

Although not listed on the Atlas, many sites within one kilometer of the project were recorded during a 2002 Lower Colorado River Authority (LCRA) survey of 260 acres for the then proposed East Metro Park Hike and Bike Trail under TAC Permit 2888. Thirteen archeological sites were documented during the LCRA survey, 12 of which lie within one kilometer of the current project area.

Known Archeological Sites

One previously documented archeological site (41TV2009) lies within the project area. This historic house site was recorded 1/2-mile north of the project's southern terminus in the 2002 LCRA survey and was found to be ineligible for listing on the National Register of Historic Places (NRHP). This site was destroyed by park construction. Site 41TV2010 lies 60 meters west of the project area and was recorded by the 2002 LCRA

survey as the original farm house relocated from 41TV2009. Site 41TV2010 was found to be ineligible for listing on the National Register of Historic Places (NRHP). This site was also destroyed by park construction.

In addition to site 41TV2009, an additional 15 sites are within one kilometer of the project limits (Figure 3). Seven of these sites are prehistoric lithic scatters or procurement sites, which are probably more indicative of landform than particular cultural use-areas. Two sites are historic-period trash scatters, three others (including 41TV2009 and 41TV2010) are historic-period house sites, and two others are prehistoric campsites. All sites but 41TV2004, a prehistoric campsite with probable intact burned-rock midden features, are listed as ineligible for listing on the NRHP. Site 41TV2004, which is located 520 meters west of the current project area, is listed as having "undetermined" eligibility.

Prehistoric Site Potential

Although soils within the APE are clays not typically associated with intact archeological sites, the presence of minor stream crossings could indicate pockets of deeper colluvial soils where stratified archeological deposits might occur. Additionally, given that the project area is located within the western reaches of the Blackland Prairie, lithic procurement scatters and open campsites associated with procurement were considered possible. These sites would have been shallowly buried to surface scatters with little or no intact deposits.

Historic-Aged Site Potential

Although recent aerial imagery and Google Street-view photographs show no standing structures within the project footprint, historic-aged sites are also a possibility, as indicated by the 1896 (Figure 4) and 1955 (Figure 5) Austin Topographic maps, which plot several structures adjacent to the project area throughout its length. This could indicate the presence of undocumented historic archeological sites within the project area. These would most likely have consisted of debris scatters on the surface or shallowly buried.

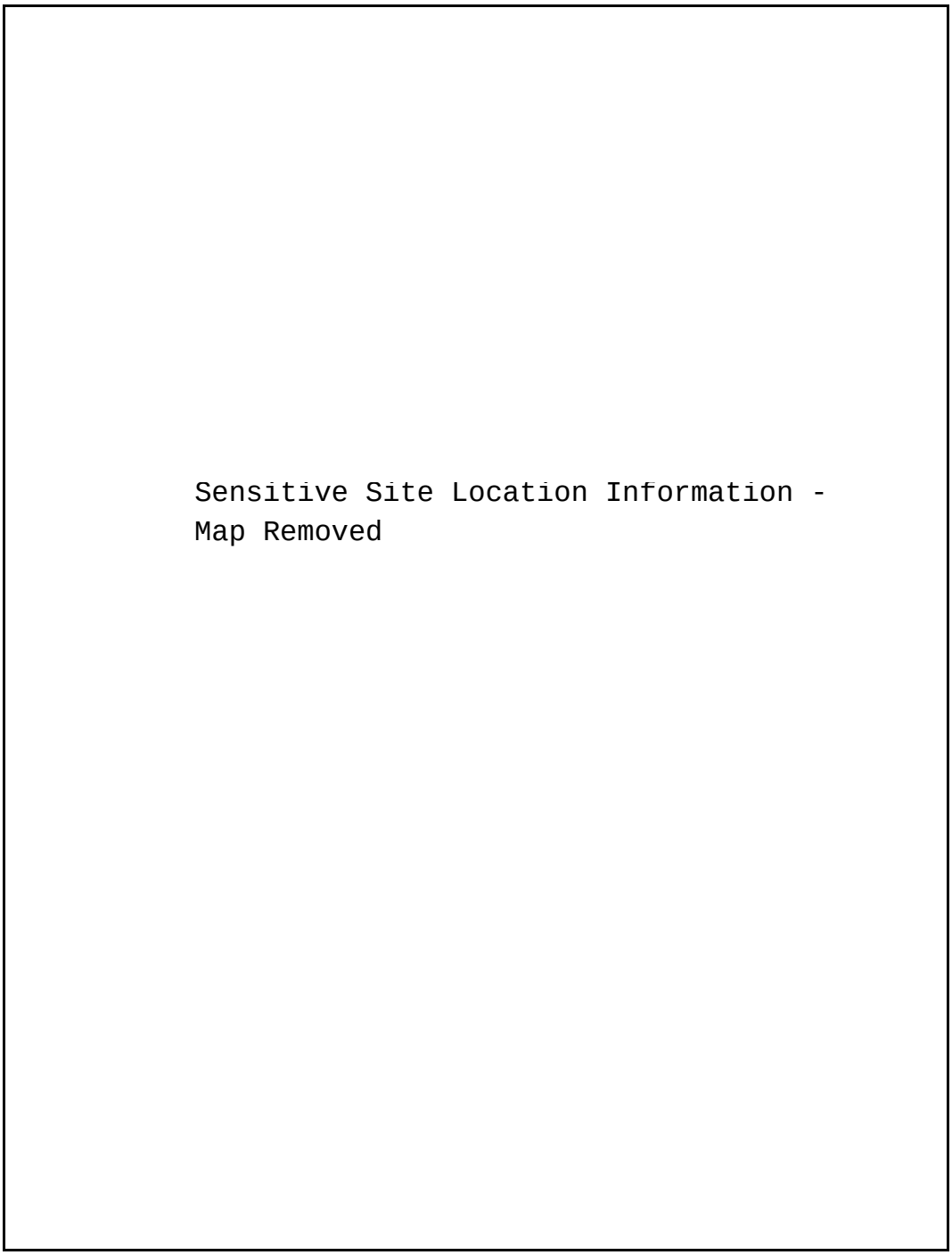

Figure 3. Project area on topographic map depicting previous archeological surveys and site locations within one kilometer.

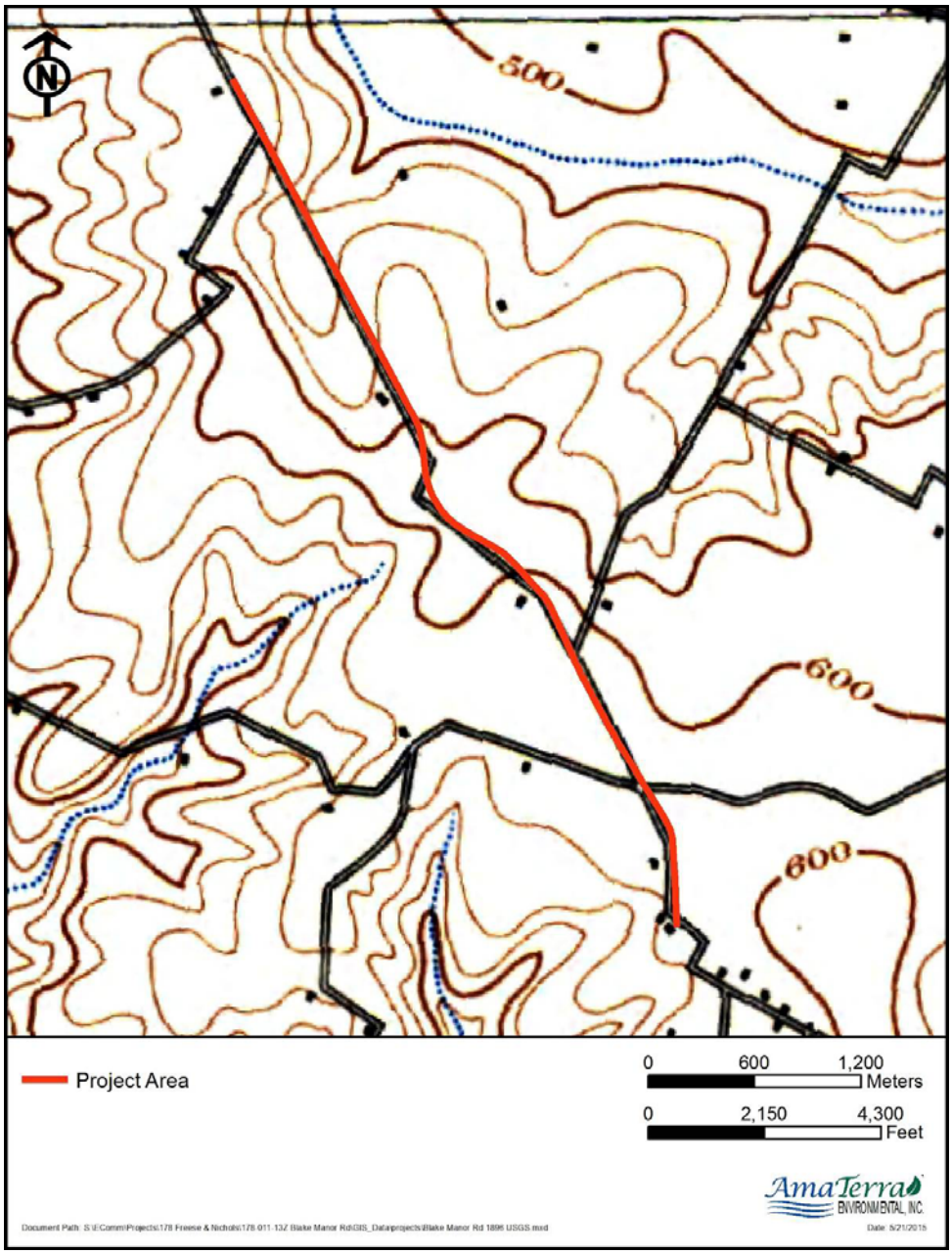

Figure 4. Project area on 1896 USGS topographic map.

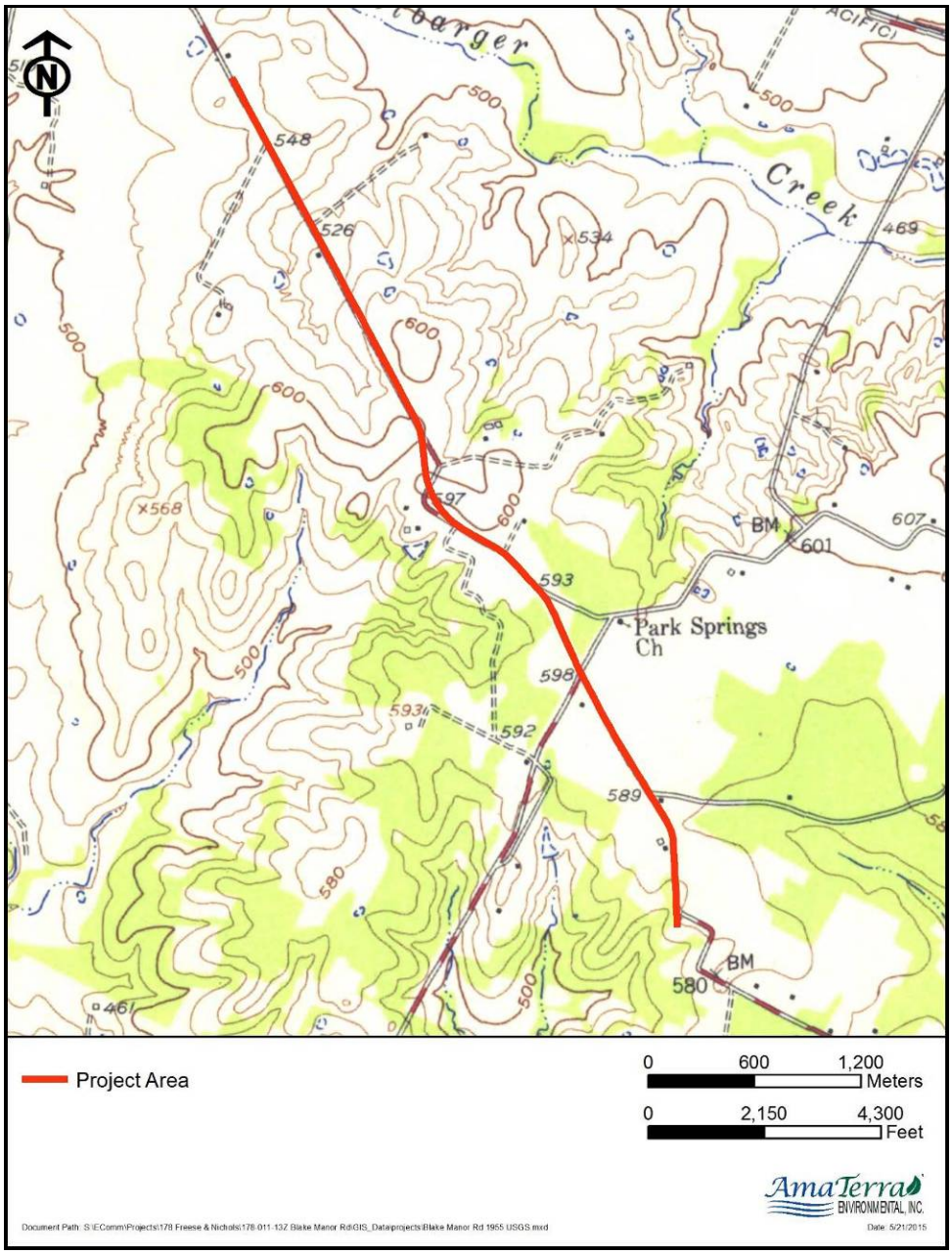

Figure 5. Project area on 1955 USGS topographic map.

Cultural Historical Framework

The project area is located within the Central Texas archeological region. Over the past century, numerous models have been proposed by prominent archeologists regarding Central Texas' prehistoric cultural chronology (Kelly 1947; Jelks 1962; Weir 1976; Prewitt 1981, 1985; Johnson and Goode 1994; Collins 1995; Black 1989a, 1995; Perttula 2004). The cultural background presented in this report is predominantly based on the chronological interpretations made by Johnson and Goode (1994) and Collins (1995). All dates are approximate and given as radiocarbon years before present or BP (i.e. before the development of radiocarbon dating in 1950). Human presence in Central Texas is divided into Prehistoric and Historic stages. Three major intervals or periods are identified in the Prehistoric Stage: the Paleoindian, the Archaic, and the Late Prehistoric.

Paleoindian Period (ca. 11,500–8800 BP)

According to Collins (1995:381–383) the Paleoindian period (which is divided into Early and Late sub periods) occurred between 11,500-8800 BP in Central Texas. The native inhabitants during the Early Paleoindian period are thought to have been nomadic hunter and gatherers that subsisted mainly on big game/megafauna hunting (Willey 1966:37). The Late Paleoindian period was a time period when the native inhabitants shifted the focus of their subsistence strategy away from big game/megafauna hunting to other large herbivores such as deer (Collins 1995:382). Sites dating to this earliest period are rare in Central Texas and are inherently significant.

Archaic Period (ca. 8800–1500 BP)

The Archaic period in Central Texas occurred between 8800–1200 or 1300 BP. The Archaic period is divided into three sub periods: Early, Middle, and Late Archaic (Collins 1995). Sites dating to the Archaic period, while more frequent than Paleoindian sites, are nonetheless uncommon and often contain significant research potential, especially if clearly stratified and/or well preserved.

The Early Archaic period in Central Texas occurred between 8800–6000 BP (Collins 1995). The hunting patterns that formed during the Late Paleoindian period continued into the Early Archaic. The hunter-gatherers during this time modified their existing subsistence strategy becoming more holistic by exploiting a wider array of food resources such as prickly pear, rodents, and rabbits (Story 1985:38–39, Weir 1976). Early Triangular, Martindale, and Andice are some of the projectile points commonly associated with this period (Black 1995).

Collins (1995) dates the Middle Archaic Period in Central Texas between 6000–4000 BP. During the Middle Archaic period, severe and prolonged altithermal (warm and dry) climatic conditions were predominant. The severe altithermal noted within Texas led to numerous important social and subsistence adaptations for the native inhabitants. The altithermal conditions caused bison populations, commonly observed in this region

during the early stages of the Early Archaic Period, to migrate out of Texas into the more mesic climate in the northern Great Plains. With the total loss of bison and severe xeric conditions throughout Texas, native populations migrated into Central Texas where resource-rich environments were fed by natural springs which rise from the Balconies Escarpment fault zone.

Burned rock middens (large localized concentrations of discolored or fire-fractured rock), spread throughout Central Texas during the Middle Archaic, possibly as a result of increased vegetable food processing (Hester et al. 1989). While it has been suggested that other cultural uses (ritual stone heating and sweat lodge preparation, for example), may have played a role in their formation, there can be little doubt, judging by the quantities of mussel and snail shell, bone, and debitage, that food processing was at the heart of their use (Black, et al. 1997, Butler 2006). Although the Middle Archaic was their heyday, some burned rock middens include artifacts datable from the transitional Paleoindian to the Late Prehistoric, thus raising the possibility that burned rock middens were part of cultural tradition for most of Texas' human history (Butler 2006).

Collins (1995) dates the Late Archaic period in Central Texas between 4000–1200 or 1300 BP. During the Late Archaic, the severe dry conditions observed during the Middle Archaic waned and more mesic conditions prevailed (Collins 1995). The return of mesic conditions in Central Texas also brought about the return of the large bison populations that left Texas during the Early Archaic. The return of large bison herds brought about a substantial change in the population density and subsistence strategies employed by the native inhabitants in Central Texas. The mobile hunting and gathering subsistence strategy associated with plains bison-focused hunting replaced the sedentary and holistic food processing lifeways adopted during the Middle Archaic Period.

Late Prehistoric Period (ca. 700 AD–1528 AD)

The Late Prehistoric period in Central Texas occurred between 1250–260 BP (Collins 1995). The development of the bow and arrow along with the introduction of pottery in Central Texas are technological innovations that mark the shift from the Archaic to the Late Prehistoric (Black 1989b:32, Story 1985:45–47). The Late Prehistoric period is divided into two phases: the Austin Phase (ca. 1250 BP–800 BP) and the Toyah Phase (ca. 800 BP–260 BP). Sites dating to the Late Prehistoric are common in Central Texas and their significance and research potential must be closely assessed with regard to their precise data content and important research questions about the time period.

The Austin Phase was a time of population decrease due to a drying climate and resulting decrease in food availability (Black 1989a:32). Early expanding stem projectile points (e.g., Scallorn) are common during this time period. Evidence of widespread hostility is substantiated by the fact that a high proportion of arrow-wound fatalities are noticed in burials of this period (Prewitt 1974).

The Toyah Phase is characterized by the introduction of bladelet technology, the appearance of the first ceramics in Central Texas (bone-tempered plainware), and the use of lithic technology consisting of Perdiz arrow points, alternately beveled knives, and tear-shaped end scrapers (Black 1989b:32; Huebner 1991:346). Prewitt (1985) and Black (1989c) suggest that this technology encroached from North-Central Texas. Hester (1995:444) recognizes this phase as the "best documented Late Prehistoric pattern" throughout South Texas with dates ranging between ca. 650/700 to 300/350 BP.

Historic Period (1528 AD–present)

The Historic period in Texas is divided into two sub periods: Protohistoric and Historic. The following is a very brief and generalized description of the Historic period in Texas.

The arrival of Spanish explorer Cabeza de Vaca into south and southeast Texas in 1528 marks the beginning of the Protohistoric period in Texas, which continues until 1700. Due to the fact that few written records are available for analysis, most of what we know regarding the Protohistoric has been gathered through archeological means (Hester 1995:449–450). Generally, archeological sites that date to this sub period contain both traditional Native American artifacts (e.g., lithic tools) and imported European manufactured goods (e.g., glass beads, metal).

The establishment of the first Spanish missions and the expansion of the Spanish Colonial Empire mark the Historic sub-stage (ca. 1700–present). Most of our knowledge of this sub-stage is through the written records of early Spanish missionaries.

The Manor area is rooted in agriculture and has been farmed for over 150 years (Smyrl 2010). Following the Civil War, cotton and various grain crops were heavily cultivated in the region, in which Manor served as a principal trade center. The area depopulated following the Great Depression, but resurged in the 1990s as a suburb of Austin, a role it continues to serve today (Smyrl 2010). The current project addresses the ongoing growth of suburbs in the region as more housing developments replace farmland and two-lane farm roads carry steadily increasing growing traffic loads.

CHAPTER 3
FIELD METHODS

The majority of the project area was not previously surveyed. Based on geographic setting and a review of historical maps, there was potential for historic and prehistoric-aged archeological sites to be present within the project area. Given the upland non-alluvial setting of the project area, these would most likely be on the surface or shallowly buried.

The survey took place within public and private properties. AmaTerra personnel performed an intensive survey, as outlined in 13 TAC 26.20 (2) and defined in 13 TAC 26.5. The field survey was carried out in compliance with the Antiquities Code of Texas under Texas Antiquities Permit No. 7260 following the Council of Texas Archeologists' guidelines for intensive surveys.

Pedestrian survey involved inspecting the ground surface for evidence of archeological sites. Documentation included narrative notes, maps, and photographs. Particular attention was devoted to areas where drainages cross the APE. In these locations, shovel tests were excavated as near the stream as possible to evaluate the depth of sediments and the potential for buried archeological deposits in the area.

Shovel tests were to be excavated to 80 centimeters below the surface (cmbs) or to pre-cultural deposits, whichever was higher, at a rate of 16 tests per linear mile on each side of Blake Manor Road, totaling up to 96 shovel tests. Each shovel test was 30 centimeters in diameter and all excavated soil was screened using ¼-inch hardware cloth. Artifacts were field inventoried and returned to the location in which they were found. The locations of all shovel tests were recorded using hand-held GPS receivers. Tests containing prehistoric or historic artifacts (exclusive of obviously recent debris) were further investigated with additional tests placed at 5-10 meter intervals; any location with more than two positive tests or with more than two different types of major artifact classes in the same test (ceramics, lithics, etc.) were to be designated as an archeological site. No artifacts were collected during this project.

Archeologists documented the work through notes and photographs, which will be housed permanently at the Texas Archeological Research Laboratory (TARL) in Austin.

The survey consisted of a pedestrian archeological survey involving careful examination of the ground surface and existing subsurface exposures. Because the project area encompasses a three-mile segment of roadway, up to 96 shovel tests were to be excavated within areas determined to have potential for archeological deposits. This translates to an effective coverage rate of 16 tests per linear mile for every 100 feet of width as recommended by the THC. Because the project has no Holocene-aged alluvium indicated on geologic maps and because potential deposits were unlikely to be deeper than 80 cm, no mechanical trenching was carried out as part of this survey.

CHAPTER 4
SURVEY RESULTS

Field work was carried out on April 31, May 1, and May 4, 2015. Joel Butler served as field director and Emory Worrell served as field technician. One hundred and eight shovel tests were excavated throughout the APE and 100-percent surface inspection of the existing and proposed ROW was conducted as well (Figure 6). No new sites were discovered during the survey, though two isolated artifacts were encountered and further explored and one site (41TV2009) was revisited.

Surface Inspection of APE

The surface inspection of the APE was conducted concurrent with shovel testing. Portions of the existing ROW were found to have been previously disturbed, mostly by ditch works and utilities trenching (Figures 7 and 8), though much of the proposed new ROW was visibly undisturbed.

Surface visibility within the proposed ROW was approximately 10 percent throughout the project area with only small spotty patches of raw earth visible due rapid grass and weed growth during an exceptionally wet spring growing season (Figures 9 and 10). No artifacts were noted on the surface of the project area; although native chert and quartzite gravels were visible in some areas, none showed signs of cultural alterations.

Shovel Testing

One hundred and eight shovel tests were excavated during field work, a total of approximately 16 tests per linear mile plus an additional six tests at the location of both isolated artifact finds (Figure 6). Shovel tests were placed in areas of no visible disturbance. Soils within the tests were mostly dense clays typical of the Blackland Prairies region, with the exception of disturbed areas and limited areas in the southern portion of the survey area with a sandy clay upper component, which was typically less than 20-30 cm in thickness. Chert, quartzite, and limestone pebbles and cobbles were present in varying sizes and quantities throughout the project area. Tests were mostly shallow, encountering tightly compacted clay and terminating at 20-30 cmbs. Because prehistoric sites in the region are typically associated with sandy deposits, where sandy clay was encountered, shovel tests were excavated beyond the bottom of those deposits. Shovel tests adjacent to drainages typically contained compact clay soil with numerous chert cobbles throughout, sometimes dense enough to be impenetrable to shovel testing. Within poorly drained areas, several shovel tests encountered saturated soils at shallow depths.

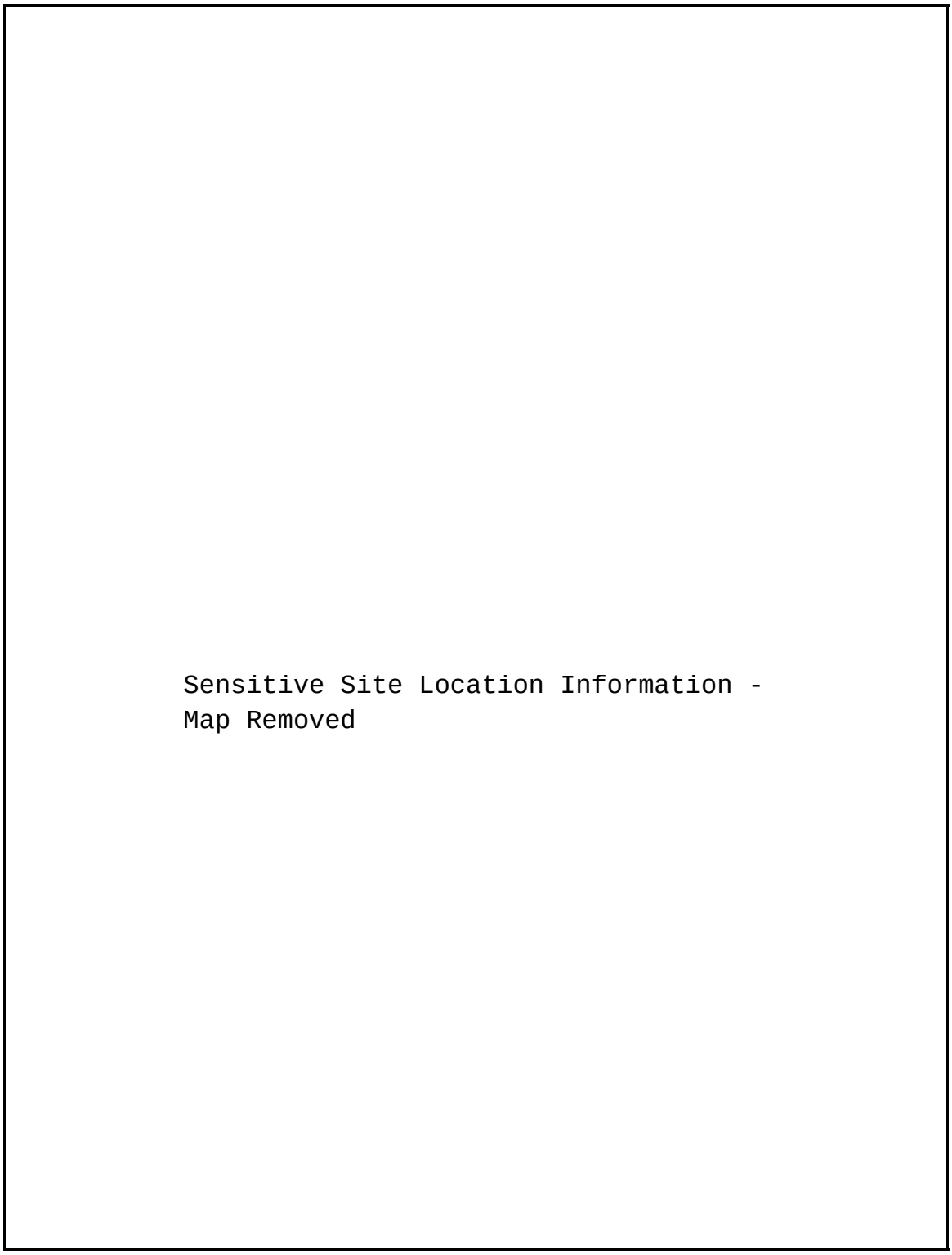

Figure 6. Shovel test locations and areas of disturbance within the project area on an aerial photograph.

Figure 7. Disturbed APE at Blake Manor Elementary School (facing north).

Figure 8. Intensively cut and landscaped APE at East Metro Park (facing south).

Figure 9. Proposed ROW near northern project terminus with lush spring vegetation (facing south).

Figure 10. Pasture land with lush spring vegetation in project area at Hog Eye Road (facing north).

Artifacts

One small eroded red brick fragment (IO-1, Figure 11) was excavated from shovel test J-15 directly across from the entrance to East Metro Park. The brick fragment was located near the surface in dense clay. Five additional shovel tests were excavated within the proposed ROW around the shovel test (Figure 6). This location was treated as a site in the field and designated FS-1 due to the presence of a mid-Twentieth Century barn (45 meters east of the proposed ROW), several old galvanized water tanks, miscellaneous metal debris, and a discarded rotary hoe tractor implement. However, following field work, it was determined, via historic aerial photography and maps, that in 1954, the location was an open plowed field and that the barn was constructed as a solitary structure between 1963 and 1967 (Figure 12). Farm-related debris noted in the field, such as the rotary hoe and water tanks, was not visible in the historic aerial photograph and was therefore most likely brought from another location after 1967. Because evidence suggests that FS-1 has no historic-aged component, it was determined to an isolated find and not an historic site. No further research was carried out and no site number was requested for the location.

Figure 11. Isolated find IO-1, red brick fragment from FS-1 location.

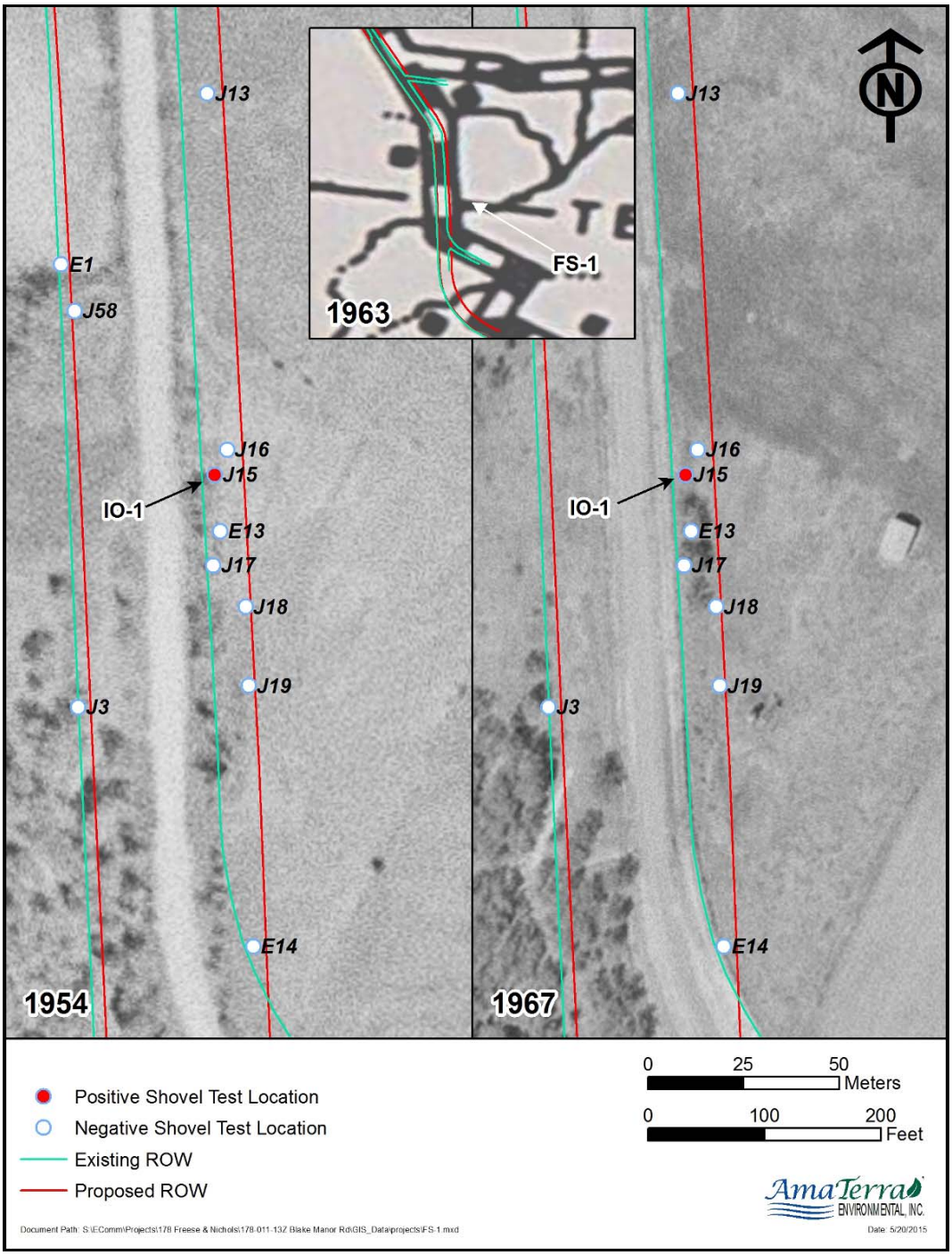

Figure 12. FS-1 location and shovel tests on historic aerials and map, demonstrating post-historic age of the location.

One 7.8-cm long by 4.2-cm wide by 0.6-cm thick bifacial chert artifact and one 5 by 2.5-cm piece of burned angular chert debris (IO-2) were excavated from shovel test J-21 within a sandy clay layer in the upper 20 cm of the test (Figure 13). An additional six shovel tests were placed in the immediate vicinity and one additional directly across

Blake Manor Road from J-21 (see Figure 6); however, none of the additional tests encountered the sandy clay lens, nor did any contain additional artifacts. While test J-21 displayed no outward variation in surface relief, it was evidently placed on a remnant lobe of sandy clay, which may have been an isolated remnant of an eroded site. Because no further artifacts were located, this location was designated as an isolated find.

Figure 13. Isolated artifacts: biface (left) and burned angular debris (right) from shovel test J-21.

Site 41TV2009

Site 41TV2009 was recorded as a farmstead dating to the late 19th Century by A. Ziggy Gamble of LCRA during their 2002 survey of East Metro Park. The THC online Atlas plots the site beneath Blake Manor Road, but inspection of a 1954 aerial photograph indicates that most of the site was located west of the road, with all structures outside the current project's proposed ROW (Figure 14). According to the site form, the main house was moved in 1954 300 meters to the south, where it was recorded in the 2002 survey as 41TV2010, which left the original location as a scatter of historic-aged debris and a water well. One artifact, a plow retaining clip measuring 1.5 by 1.75 inches (Figure 15), was found in shovel test J-59 within the proposed ROW adjacent to the site. No other artifacts were observed in the area, which has been heavily landscaped since 2002 for drainage and the adjacent baseball fields. At the time of Gamble's recording, it was recommended that the site was not eligible for listing as an SAL or in the NRHP; Because of this recommendation, as well as the marginal nature of the site within the current project area, AmaTerra recommends that, within the APE, further work on site 41TV2009 is unnecessary.

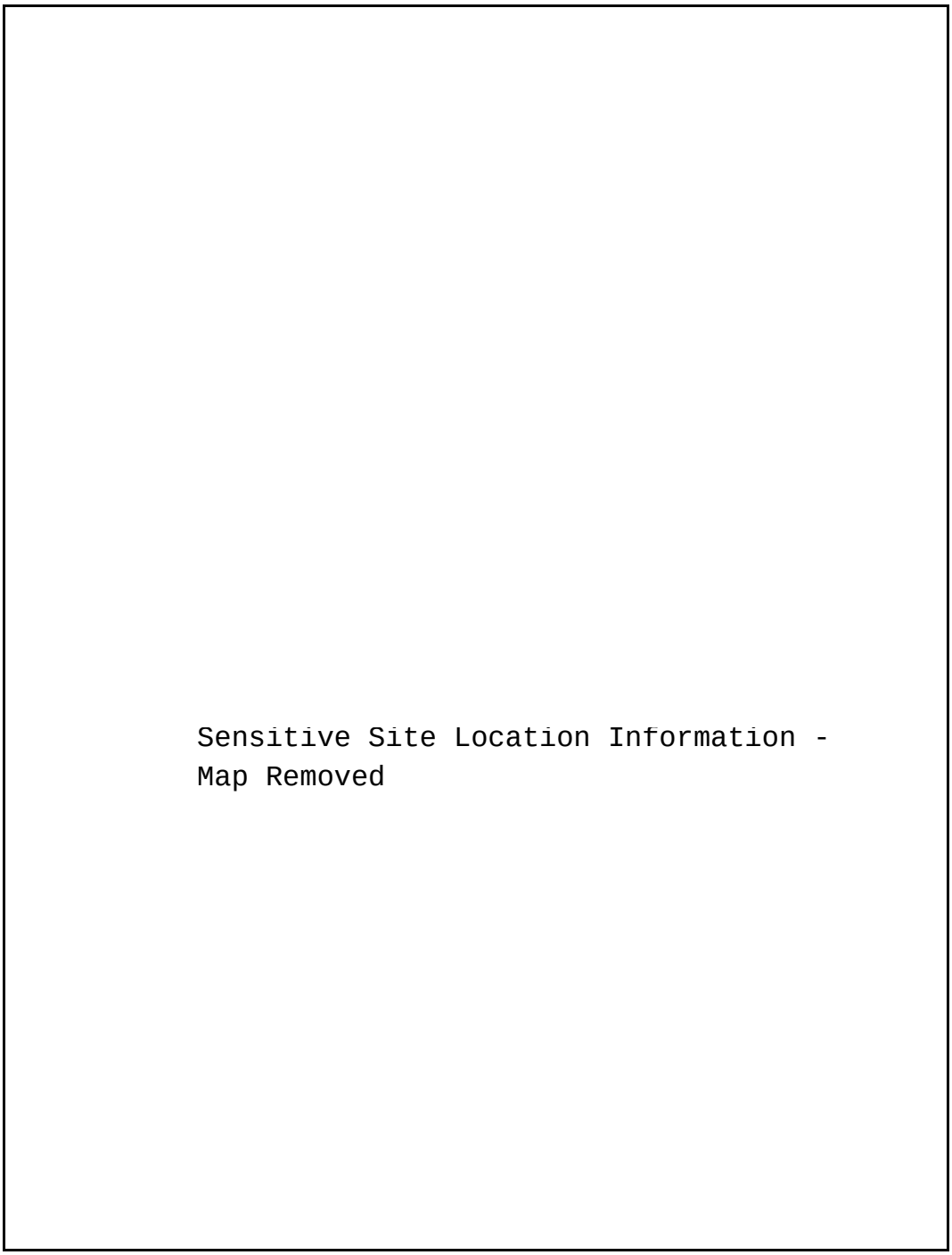

Figure 14. Site 41TV2009 with shovel test locations overlaid on 1954 aerial photograph.

Figure 15. Plow retaining clip from site 41TV2009, recovered in shovel test J-59.

CHAPTER 5
SUMMARY AND RECOMMENDATIONS

On April 31, May 1, and May 4, 2015, AmaTerra carried out an intensive archeological resource survey of a three-mile segment of Blake Manor Road between 1,500 feet south of Hamilton Point Drive and 1,500 feet north of Burleson Manor Road south of the City of Manor in northeastern Travis County, Texas. The survey was carried out in compliance with the Antiquities Code of Texas under Permit No. 7260 and conformed to 13 TAC 26. The survey consisted of a pedestrian survey of the project area by two archeologists who photographed and made notes of the existing resources and conditions. No surface artifacts were observed. One hundred and eight shovel tests were excavated during the project. Three tests were positive: two were isolated artifact finds and one was associated with previously recorded site 41TV2009. No new sites were documented during this survey.

Because the proposed action will not directly impact any SALs or NRHP-eligible archeological sites, AmaTerra recommends that the proposed Blake Manor Road improvements proceed to completion. No further archeological work is warranted.

No artifacts were collected as part of this archeological investigation. All field records created while conducting investigations will be permanently curated and archived at the Texas Archeological Research Laboratory in Austin, Texas.

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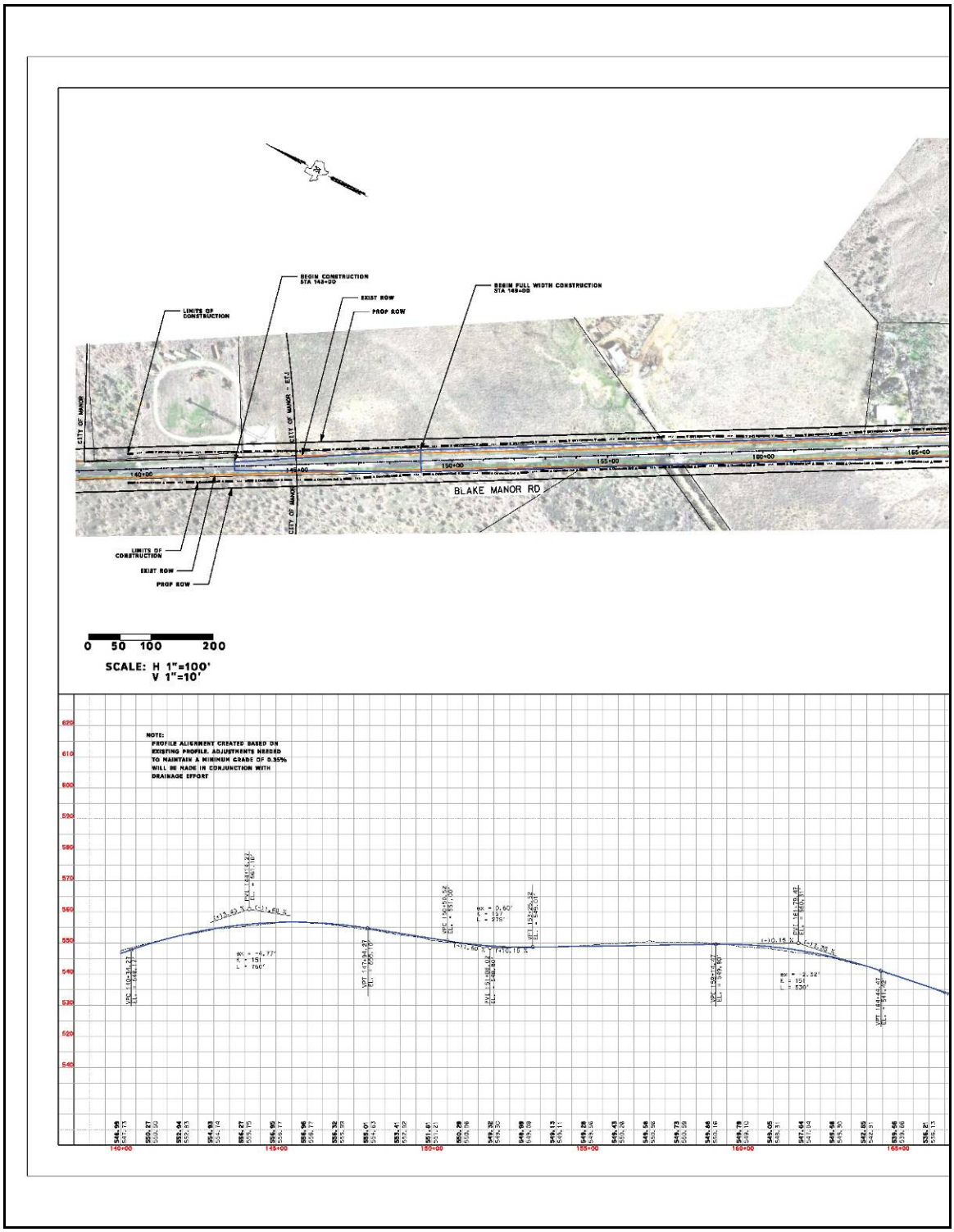
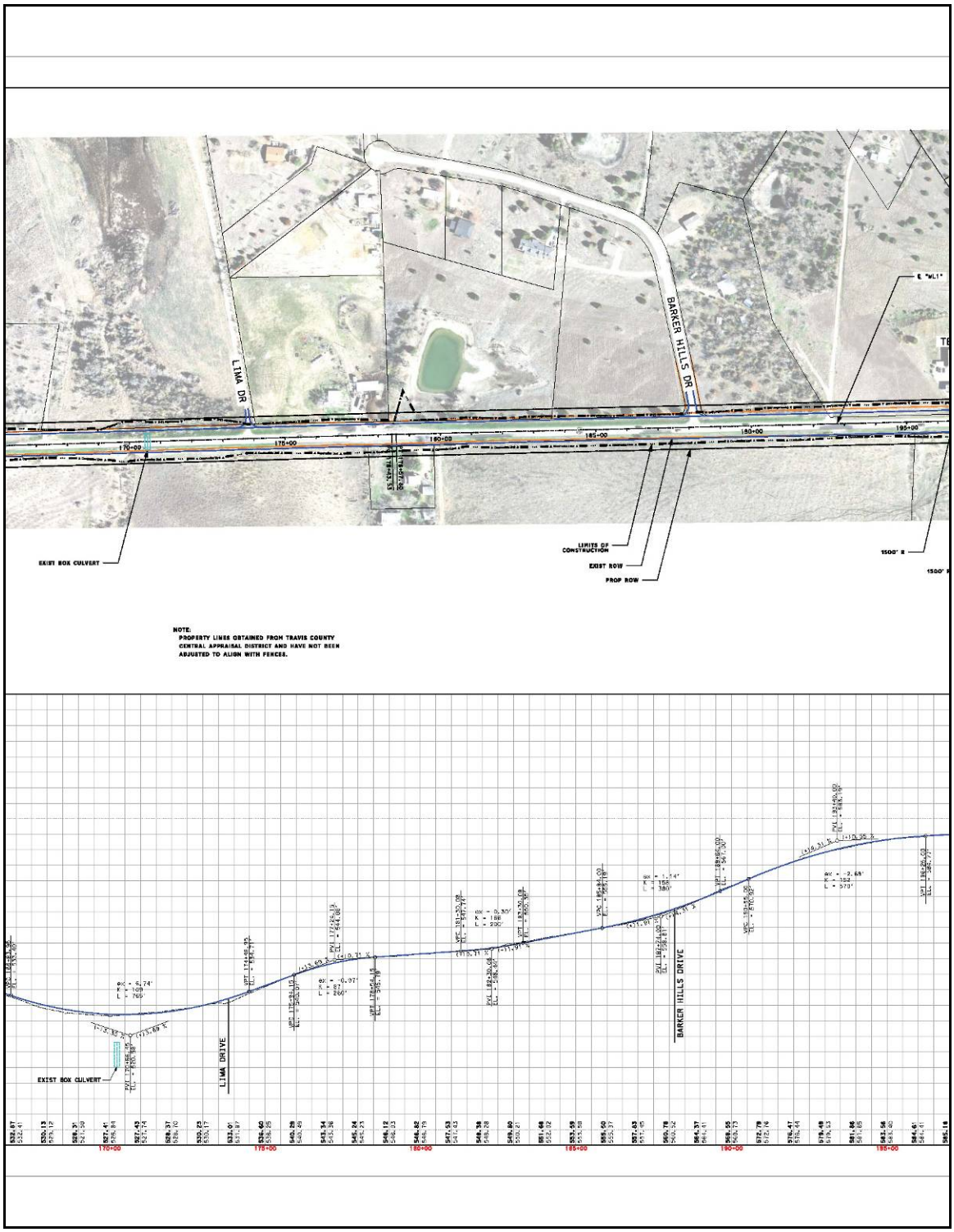
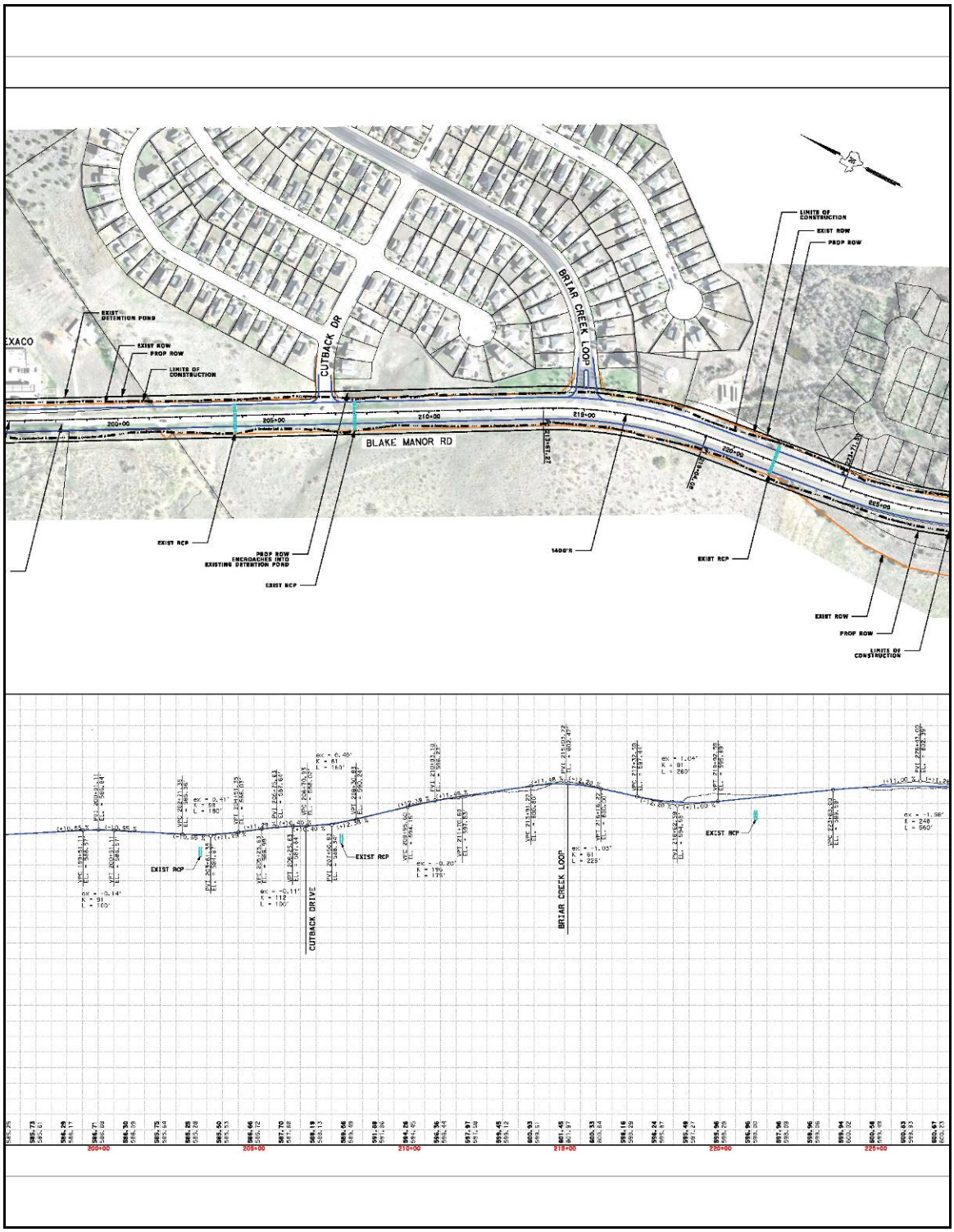
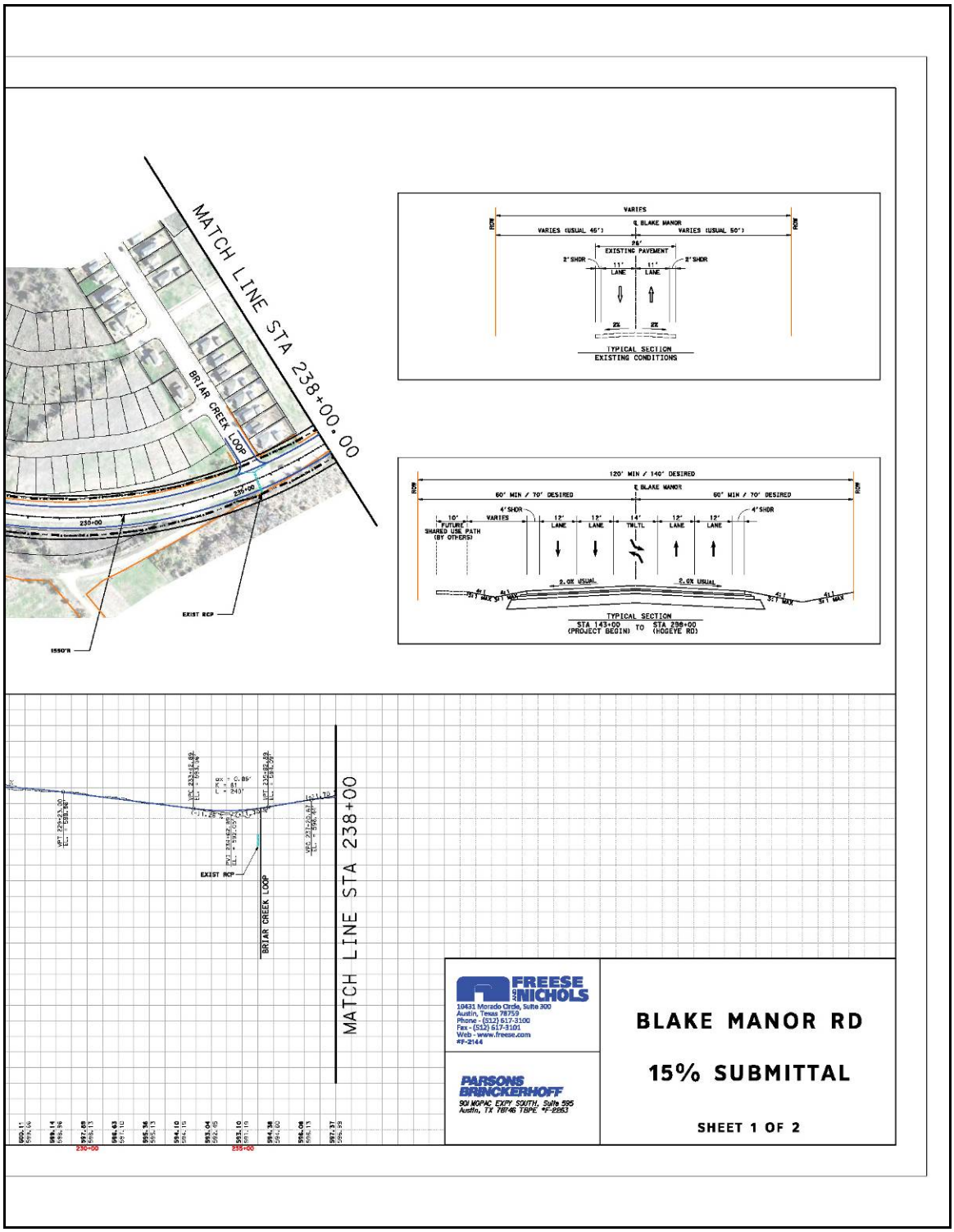
APPENDIX A

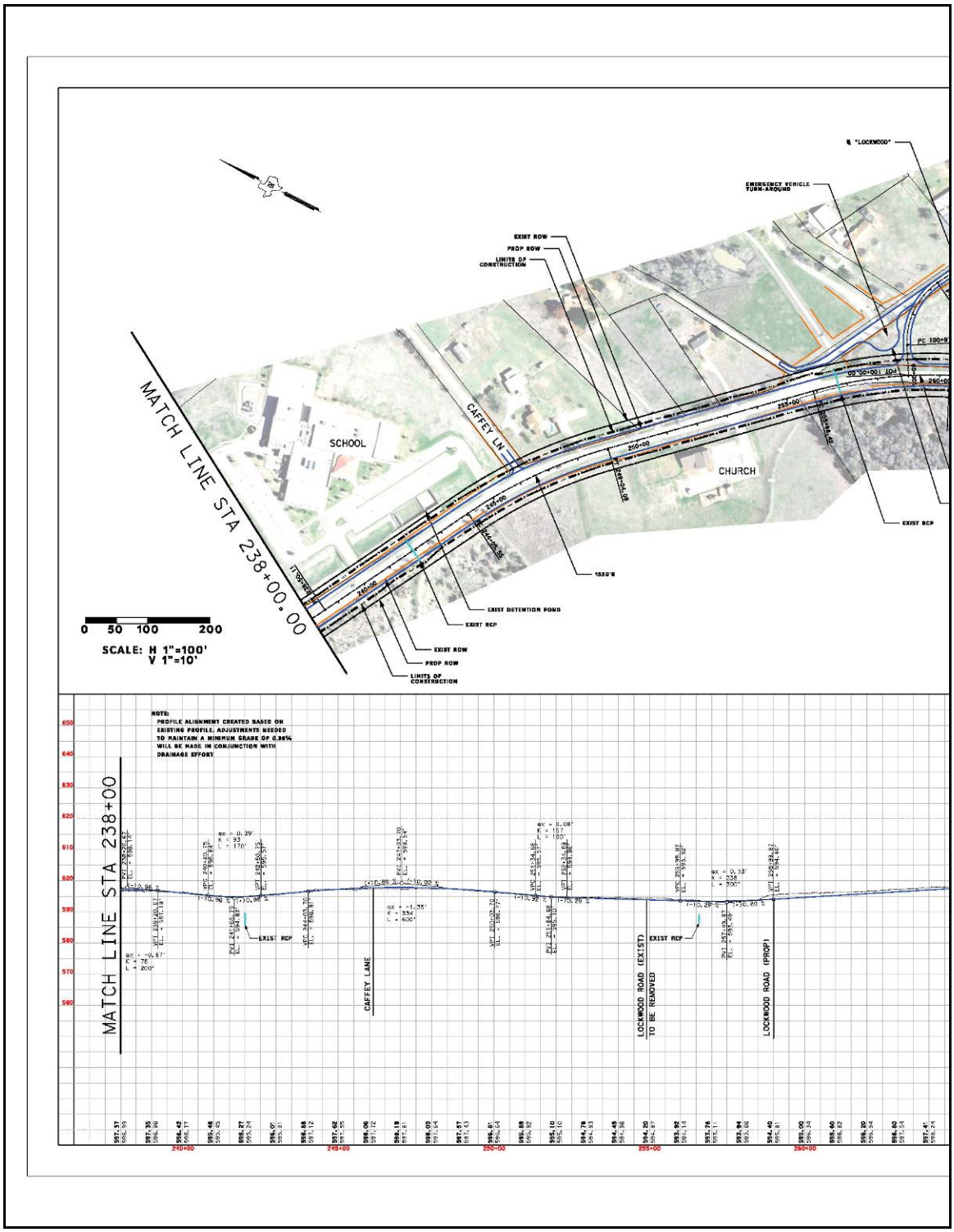
CURRENT DESIGN SCHEMATICS

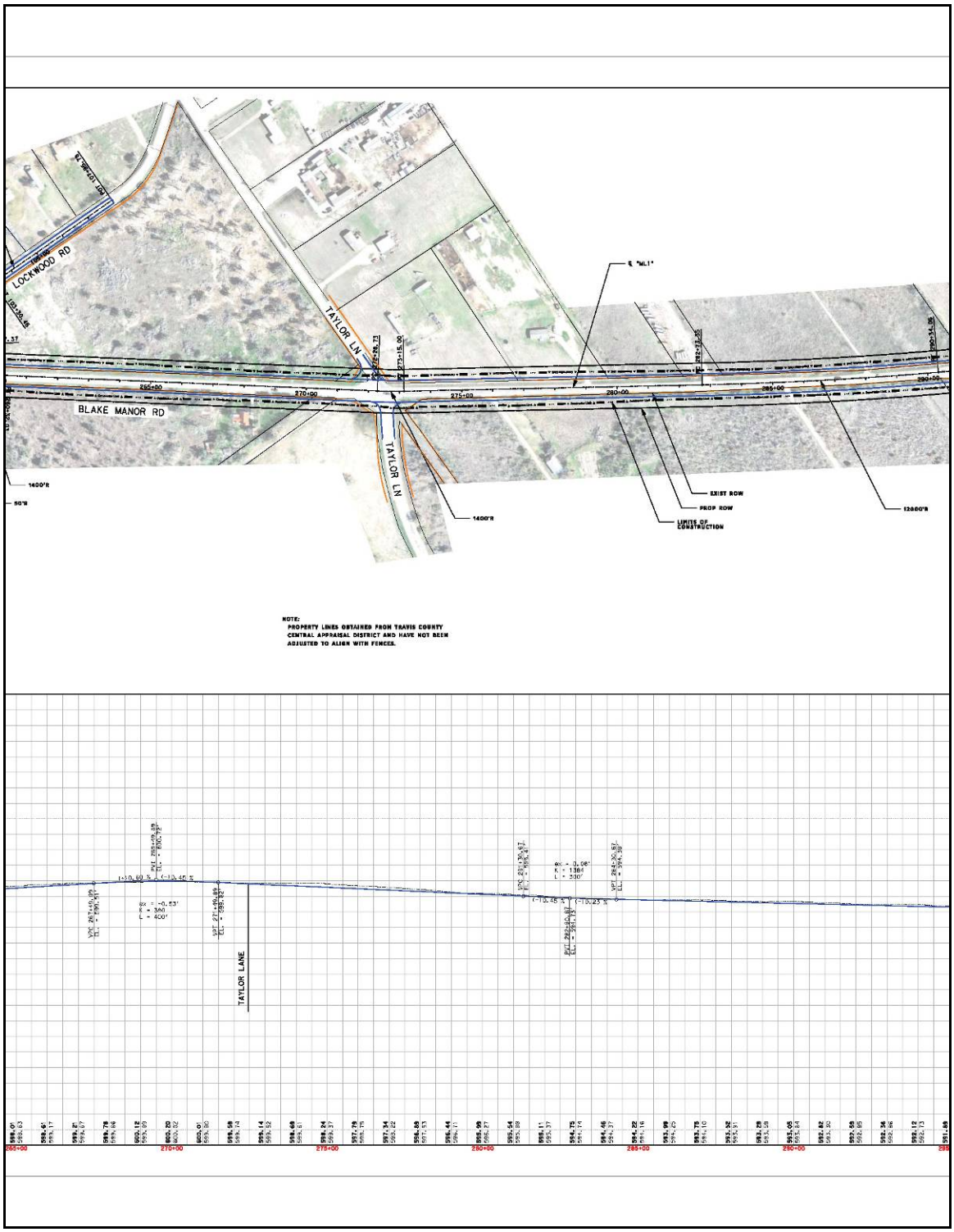

BEGIN CONSTRUCTION
STA 140+00
EXIST ROW
PROP ROW
BEGIN FULL WIDTH CONSTRUCTION
STA 140+00
LIMITS OF CONSTRUCTION
CITY OF MANOR
CITY OF MANOR - ETJ
BLAKE MANOR RD
140+00
145+00
150+00
155+00
160+00
165+00
LIMITS OF CONSTRUCTION
EXIST ROW
PROP ROW
0 50 100 200
SCALE: H 1"=100'
V 1"=10'
NOTE:
PROFILE ALIGNMENT CREATED BASED ON EXISTING PROFILE. ADJUSTMENTS NEEDED TO MAINTAIN A MINIMUM GRADE OF 0.35% WILL BE MADE IN CONJUNCTION WITH DRAINAGE EFFORT

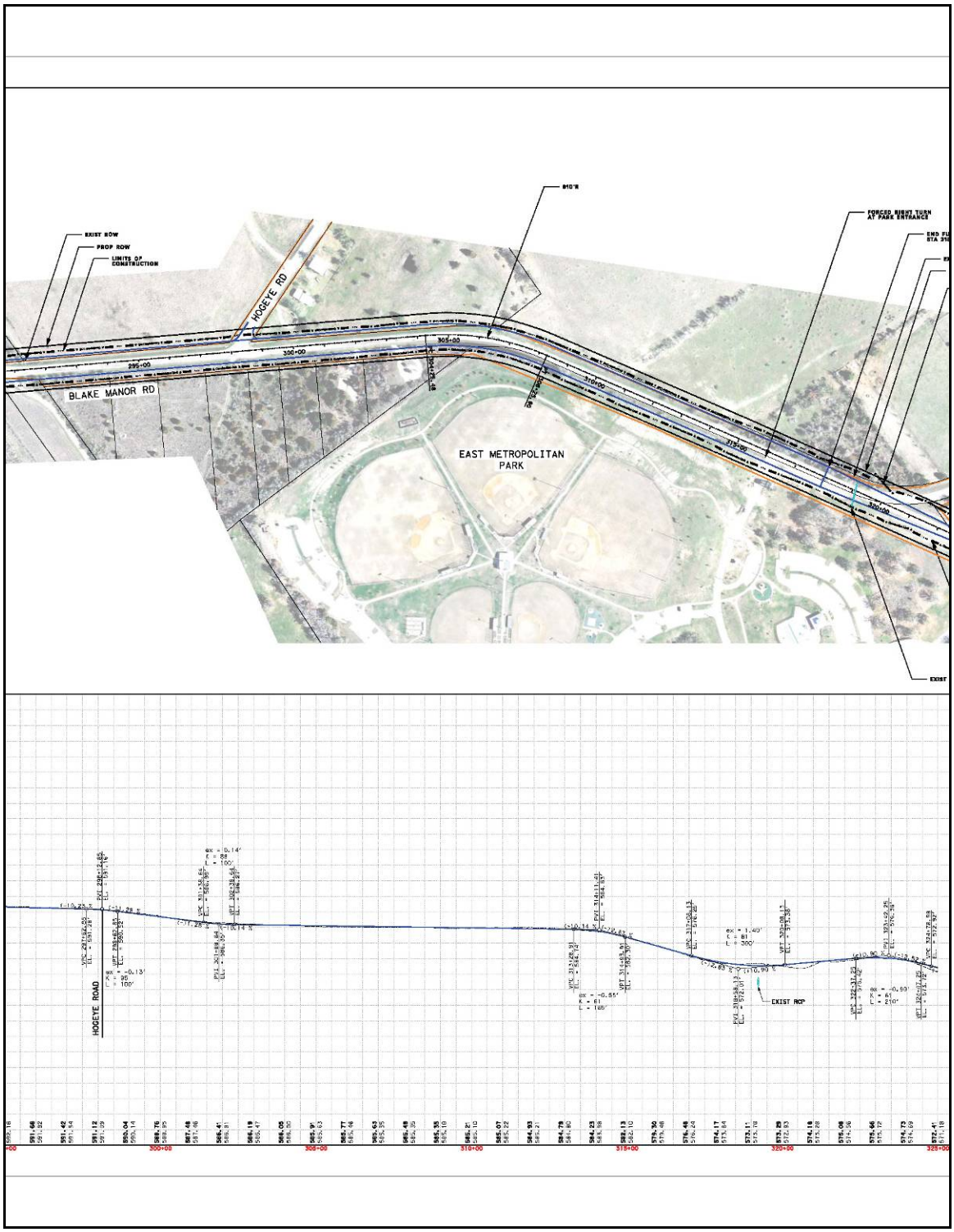

LIMA DR
BARKER HILLS DR
EXIST BOX CULVERT
LIMITS OF CONSTRUCTION
EXIST ROW
PROP ROW
NOTE:
PROPERTY LINES OBTAINED FROM TRAVIS COUNTY CENTRAL APPRAISAL DISTRICT AND HAVE NOT BEEN ADJUSTED TO ALIGN WITH FENCES.
EXIST BOX CULVERT
LIMA DRIVE
BARKER HILLS DRIVE
170+00
175+00
180+00
185+00
190+00
195+00

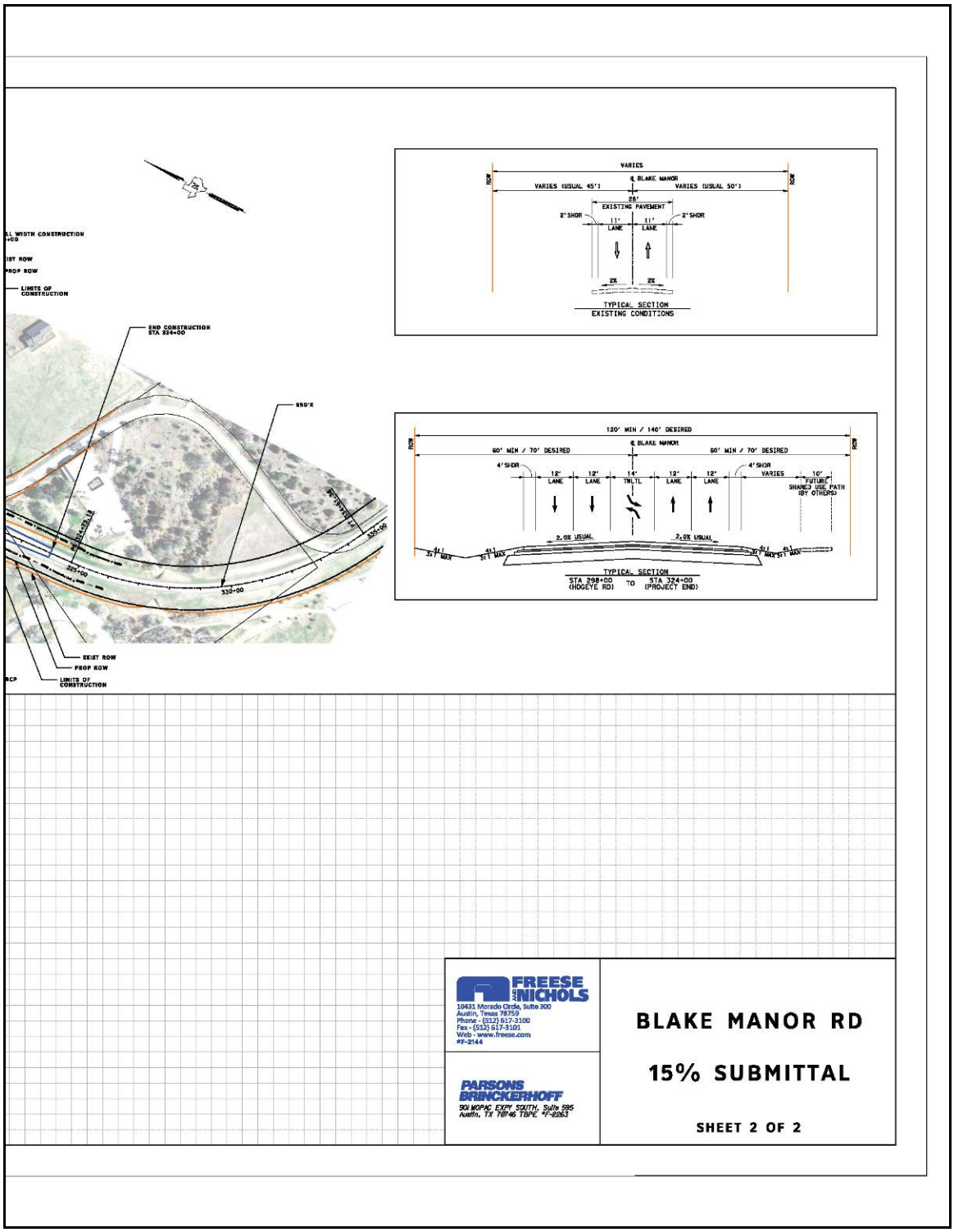

CUTBACK DR
BRIAR CREEK LOOP
BLAKE MANOR RD
EXIST DETENTION POND
EXIST ROW
PROP ROW
LIMITS OF CONSTRUCTION
EXIST RCP
PROP ROW ENCROACHES INTO EXISTING DETENTION POND
1400'R
200+00
205+00
210+00
215+00
220+00
225+00


MATCH LINE STA 238+00.00
BRIAR CREEK LOOP
EXIST RCP
1550'R
VARIES
℄ BLAKE MANOR
VARIES (USUAL 46')
VARIES (USUAL 50')
ROW
26'
EXISTING PAVEMENT
2'SHDR
11'
LANE
TYPICAL SECTION
EXISTING CONDITIONS
120' MIN / 140' DESIRED
60' MIN / 70' DESIRED
4'SHDR
10'
FUTURE
SHARED USE PATH
(BY OTHERS)
12'
LANE
14'
TWLTL
2.0% USUAL
4:1
MAX
TYPICAL SECTION
STA 143+00
(PROJECT BEGIN)
TO
STA 298+00
(HOGEYE RD)
MATCH LINE STA 238+00
BRIAR CREEK LOOP
EXIST RCP
FREESE AND NICHOLS
10431 Morado Circle, Suite 300
Austin, Texas 78759
Phone - (512) 617-3100
Fax - (512) 617-3101
Web - www.freese.com
#F-2144
PARSONS BRINCKERHOFF
901 MOPAC EXPY SOUTH, Suite 595
Austin, TX 78746 TBPE #F-2263
BLAKE MANOR RD
15% SUBMITTAL
SHEET 1 OF 2


MATCH LINE STA 238+00.00
SCHOOL
CAFFEY LN
CHURCH
EMERGENCY VEHICLE TURN-AROUND
EXIST ROW
PROP ROW
LIMITS OF CONSTRUCTION
EXIST DETENTION POND
EXIST RCP
0 50 100 200
SCALE: H 1"=100'
V 1"=10'
NOTE:
PROFILE ALIGNMENT CREATED BASED ON EXISTING PROFILE. ADJUSTMENTS NEEDED TO MAINTAIN A MINIMUM GRADE OF 0.35% WILL BE MADE IN CONJUNCTION WITH DRAINAGE EFFORT
MATCH LINE STA 238+00
CAFFEY LANE
LOCKWOOD ROAD (EXIST) TO BE REMOVED
LOCKWOOD ROAD (PROP)
240+00
245+00
250+00
255+00
260+00


LOCKWOOD RD
TAYLOR LN
BLAKE MANOR RD
TAYLOR LN
EXIST ROW
PROP ROW
LIMITS OF CONSTRUCTION
NOTE:
PROPERTY LINES OBTAINED FROM TRAVIS COUNTY CENTRAL APPRAISAL DISTRICT AND HAVE NOT BEEN ADJUSTED TO ALIGN WITH FENCES.
TAYLOR LANE


EXIST ROW
PROP ROW
LIMITS OF CONSTRUCTION
HOGEYE RD
BLAKE MANOR RD
EAST METROPOLITAN PARK
FORCED RIGHT TURN AT PARK ENTRANCE
EXIST
EXIST RCP
295+00
300+00
305+00
310+00
315+00
320+00
325+00


LIMITS OF CONSTRUCTION
END CONSTRUCTION STA 324+00
EXIST ROW
PROP ROW
LIMITS OF CONSTRUCTION
VARIES
℄ BLAKE MANOR
VARIES (USUAL 45')
VARIES (USUAL 50')
ROW
ROW
25'
EXISTING PAVEMENT
2' SHDR
11' LANE
11' LANE
2' SHDR
2%
2%
TYPICAL SECTION
EXISTING CONDITIONS
120' MIN / 140' DESIRED
60' MIN / 70' DESIRED
℄ BLAKE MANOR
60' MIN / 70' DESIRED
4' SHDR
12' LANE
12' LANE
14' TWLTL
12' LANE
12' LANE
4' SHDR VARIES
10' FUTURE SHARED USE PATH (BY OTHERS)
2.0% USUAL
2.0% USUAL
4:1 MAX
5FT MIN
4:1 MAX
5FT MIN
TYPICAL SECTION
STA 298+00 (HOGEYE RD)
TO
STA 324+00 (PROJECT END)
FREESE NICHOLS
10431 Morado Circle, Suite 300
Austin, Texas 78759
Phone - (512) 617-3100
Fax - (512) 617-3101
Web - www.freese.com
#F-2144
PARSONS BRINCKERHOFF
901 MOPAC EXPY SOUTH, Suite 595
Austin, TX 78746 TBPE #F-8263
BLAKE MANOR RD
15% SUBMITTAL
SHEET 2 OF 2

APPENDIX B

SHOVEL TEST LOG

Shovel test	Northing	Easting	Depth	Color	Texture	Disturbances	Cultural Material	Date
J1	3351600	642036	0-20	10YR4/2	Cl			4/30/2015
			20-40	10YR4/2	Cl w/grvl	disturbed road gravels		4/30/2015
J-2	3351690	642032	0-20	10YR4/2 w 10YR7/2	Cl w/ blended grvl	dist		4/30/2015
J3	3351787	642026	0-20	10YR4/2	CL			4/30/2015
			20-30	10YR5/8 blend	CL w/ grvl/Sa blend	dist		4/30/2015
J-4	3352019	642015	0-20	10YR2/2	CL	gravels		4/30/2015
			20-30	10YR2/2	Cl	compact		4/30/2015
J5	3352197	641977	0-20	10YR4/2	Sa CL	chert/quartzite gravels		4/30/2015
			20-40	10YR4/2	CL			4/30/2015
J6	3352370	641868	0-20	10YR4/2	Sa CL	chert/quartzite gravels		4/30/2015
			20-40	10YR4/2	CL	CL @ 30cm		4/30/2015
J7	3352551	641762	0-20	10YR3/2	Cl	chert gravels		4/30/2015
			20-40	10YR3/2	CL	chert gravels		4/30/2015
J8	3352764	641635	0-20	10YR2/1	CL			4/30/2015
			20-40	10YR2/1	CL	saturated		4/30/2015
J9	3353000	641516	0-20	10YR2/2	CL			4/30/2015
			20-40	10YR2/2	CL	Compact at 35cm		4/30/2015
J10	3352858	641631	0-20	10YR3/2	Sa CL			4/30/2015
			20-40	10YR2/2	CL	saturated		4/30/2015
J11	3352304	641945	0-20	10YR3/2	CL	gravels		4/30/2015
			20-40	10YR3/2	CL	gravels		4/30/2015
J12	3352159	642039	0-20	10YR3/2	CL			4/30/2015
			20-40	10YR3/2	CL	gravels		4/30/2015
J13	3351947	642060	0-20	10YR4/2	Sa CL	gravels		4/30/2015
			20-40	10YR2/2	CL	gravels		4/30/2015
J14	3351578	642072	0-20	10YR4/2	Si CL			4/30/2015
			20-40	10YR4/2	Si CL			4/30/2015
			40-60	10YR5/4	Sa CL	dense gravels		4/30/2015
J15	3351847	642062	0-20	10YR3/2	CL		Brick Fragment	4/30/2015
			20-40	10YR3/2	CL	dense root mass		4/30/2015
J16	3351854	642065	0-20	10YR4/3	CL Lo			4/30/2015
			20-40	10YR5/4	Cl	CL at 35cm		4/30/2015
J17	3351824	642062	0-20	10YR4/2	CL Lo			4/30/2015

			20-40	10YR4/2	CL Lo	root mass at 35cm		4/30/2015
J18	3351813	642070	0-20	10YR3/2	CL			4/30/2015
			20-40	10YR3/2	Sa CL	sa cl at 30 to cl at 42cm		4/30/2015
J19	3351792	642071	0-20	10YR3/2	CL			4/30/2015
			20-40	10YR3/2	CL			4/30/2015
E1	3351902	642022	0-25	5YR5/8 10YR3/4	CL grvl	berm		4/30/2015
E2	3352120	642008	0-25	10YR3/2	CL grvl	berm and edge of field		4/30/2015
			25-30	w 5YR5/8	CL grvl			4/30/2015
E3	3352285	641922	0-20	10YR3/2	Sa CL grvl			4/30/2015
			20-25	10YR3/2	CL			4/30/2015
E4	3352466	641813	0-25	10YR3/2	CL			4/30/2015
E5	3352637	641709	0-25	10YR3/2	Sa CL			4/30/2015
E6	3352851	641592	0-20	10YR3/2	CL			4/30/2015
			20-30	10YR3/2	CL			4/30/2015
E7	3352987	641553	0-25	10YR3/2	CL			4/30/2015
E8	3352755	641679	0-20	10YR3/2	CL			4/30/2015
E9	3352518	641819	0-20	10YR3/2	CL			4/30/2015
			20-30	10YR5/2	CL			4/30/2015
E10	3352428	641877	0-25	10YR3/2	Sa CL grvl			4/30/2015
			25-30	10YR3/2	CL Grvl			4/30/2015
E11	3352220	642001	0-25	10YR3/2	CL			4/30/2015
E12	3352049	642048	0-15	10YR4/1	SA CL			4/30/2015
			15-25	10YR4/1	CL			4/30/2015
E13	3351833	642063	0-15	10YR4/2	CL Grvl			4/30/2015
			15-25	10YR4/2	CL Grvl			4/30/2015
E14	3351724	642072	0-5			disturbed road gravels		4/30/2015
J20	3353124	641460	0-20	10YR2/2	Sa CL			5/1/2015
			20-40	10YR2/2	CL			5/1/2015
J21	3353294	641375	0-20	10YR4/4	Sa CL		1 biface,1AD	5/1/2015
			20-40	10YR4/4-4/1	Sa CL	Sa CL to CL at 30CM		5/1/2015
			40-60	10YR5/2	CL	Compact at 50cm		5/1/2015
			60-80	10YR5/1	CL	Compact limestone pebbles @60cm		5/1/2015
J22	3353300	641383	0-20	10YR4/2	Si CL Lo			5/1/2015
			20-40	10YR4/2	CL			5/1/2015
			40-60	10YR3/2	CL	Compact at 50cm		5/1/2015

J23	3353272	641387	0-20	10YR4/2	Sa CL	CL at 10cm		5/1/2015
			20-40	10YR4/2	CL			5/1/2015
J24	3353467	641276	0-20	10YR2/2	BLK CL	compact at 15cm		5/1/2015
J25	3353631	641130	0-20	10YR2/2	CL	compact at 15cm		5/1/2015
J26	3353730	640994	0-20	10YR4/4	CL	compact at 15cm mottled light gray		5/1/2015
J27	3353758	640942						5/1/2015
J28	3353834	640821	0-20	10YR5/6	Sa CL			5/1/2015
			20-40	10YR5/6	CL	CL at 25cm		5/1/2015
J29	3353867	640777	0-20	10YR2/2	Cl w/grvl	large chert gravels		5/1/2015
			20-40	10YR2/2	Cl w/ grvl	large chert gravels		5/1/2015
J30	3353670	641136	0-20	mottled	Sa CL	Dist.		5/1/2015
E15	3353218	641415	0-30	10YR4/3	Sa CL			5/1/2015
			30-35	10YR4/3	CL			5/1/2015
E16	3353401	641328	0-25	10YR3/2	CL			5/1/2015
E17	3353280	641381	0-20	10YR3/3	Sa CL			5/1/2015
			20-50	10YR3/3	CL			5/1/2015
E18	3353289	641383	0-20	10YR3/3	Sa CL			5/1/2015
			20-80	10YR3/3	CL			5/1/2015
E19	3353302	641372	0-30	10YR3/3	Sa CL			5/1/2015
			30-50	10YR3/3	CL			5/1/2015
E20	3353314	641370	0-20	10YR3/3	Sa CL			5/1/2015
			20-40	10YR3/3	CL			5/1/2015
			40-50	10YR5/1	CL			5/1/2015
E21	3353548	641210	0-30	10YR3/2	CL			5/1/2015
E22	3353700	641052	0-20	10YR3/2	Sa CL			5/1/2015
			20-30	10YR3/2	CL			5/1/2015
E23	3353782	640905	0-10	10YR3/3	Sa CL			5/1/2015
			10-30	10YR3/3	CL			5/1/2015
E24	3353897	640741	0-20	Road Grvl		dist		5/1/2015
E25	3353587	641215	0-30	10YR3/2	CL			5/1/2015
E26	3353370	641378	0-30	10YR3/2	CL			5/1/2015
E27	3353161	641472	0-30	10YR3/2	CL			5/1/2015
E28	3354785	640432	0-30	10YR3/2	CL			5/1/2015
E29	3354583	640537	0-25	Disturbed		retention pond		5/1/2015
E30	3353981	640686	0-30	10YR3/2	CL			5/1/2015
E31	3354182	640615	0-20	Road Grvl				5/1/2015
E32	3354292	640609	0-30	10YR3/2	CL Grvl			5/1/2015

E33	3354480	640552	0-30	10YR3/2 w/ 10YR7/8	CL Grvl			5/1/2015
E34	3354618	640478	0-30	10YR3/2	CL Grvl			5/1/2015
E35	3354750	640409	0-30	10YR3/2	CL Grvl			5/1/2015
E36	3354908	640324	0-30	10YR3/2	CL Grvl			5/1/2015
E37	3355090	640234	0-30	10YR3/2	CL Grvl			5/1/2015
E38	3355265	640137	0-30	10YR3/2	CL Grvl			5/1/2015
E39	3355398	640104	0-30	10YR3/2	CL Grvl			5/1/2015
E40	3355208	640207	0-30	10YR3/2 w/ 10YR7/8	CL			5/1/2015
J31	3353523	641280	0-20	10YR2/2	CL			5/4/2015
J32	3353308	641405	0-20	10YR2/2	CL			5/4/2015
J33	3353263	641428	0-20	10YR2/2	CL			5/4/2015
J34	3353072	641521	0-20	10YR2/2	Si CL Lo			5/4/2015
J35	3354877	640383	0-20	10YR2/2	Si CL Lo			5/4/2015
			20-40	10YR2/2	Si CL Lo			5/4/2015
J36	3354699	640478	0-20	mottled	CL			5/4/2015
J37	3354071	640643	0-20	10YR2/2	mottled CL			5/4/2015
J38	3354230	640614	0-20	10YR4/4	mottled Sa CL	upper 5cm		5/4/2015
			20-40	10YR2/2	CL	CL at 20cm		5/4/2015
J39	3354394	640591	0-20	mottled	cl			5/4/2015
J40	3354571	640503	0-20	10YR4/4	mottled cl	upper 5cm		5/4/2015
			20-40	10YR5/3	cl	compact at 30cm		5/4/2015
J41	3354662	640457	0-20	10YR4/2	CL			5/4/2015
			20-30	10YR5/3	CL	compact at 30cm		5/4/2015
J42	3354824	640369	0-20	10YR2/2	gravel	at 5cm		5/4/2015
J43	3355002	640272	0-20	10YR2/2	CL			5/4/2015
			20-40	10YR2/2	CL	compact at 35cm		5/4/2015
J44	3355177	640183	0-20	10YR2/2	CL			5/4/2015
			20-40	10YR2/2	CL	compact at 30cm		5/4/2015
J45	3355352	640089	0-20	10YR4/4	mottled CL			5/4/2015
J46	3355302	640157	0-20	10YR2/2	CL			5/4/2015
			20-30	10YR2/2	CL			5/4/2015
J47	3355118	640256	0-20	10YR2/2	CL			5/4/2015
			20-30	10YR2/2	CL			5/4/2015
J48	3355561	640020	0-20	10YR2/2	CL			5/4/2015

			20-30	10YR2/2	mottled CL	compact at 30cm		5/4/2015
J49	3355761	639910	0-20	10YR2/2	CL			5/4/2015
			20-30	10YR2/2	CL	compact at 30cm		5/4/2015
J50	3355952	639803	0-20	10YR2/2	CL			5/4/2015
			20-40	10YR2/2	CL	compact at 30cm		5/4/2015
J51	3356127	639709	0-20	10YR2/2	CL	compact at 20cm some mottling		5/4/2015
J52	3356297	639619	0-20	10YR2/2	Sa CL		wire nail	5/4/2015
			20-40	10YR2/2	CL			5/4/2015
J53	3356224	639615	0-20	10YR2/2	CL			5/4/2015
			20-40	10YR4/2	CL	compact at 40cm		5/4/2015
J54	3356038	639715	0-20	10YR2/2	CL			5/4/2015
			20-40	10YR2/2	CL			5/4/2015
J55	3355851	639816	0-20	10YR2/2	CL			5/4/2015
			20-40	10YR2/2	CL			5/4/2015
J56	3355674	639910	0-20	10YR2/2	CL	lrg quartzite cobbles		5/4/2015
			20-40	10YR4/2	CL	mottling at 30cm		5/4/2015
J57	3355491	640020	0-20	10YR4/2	CL Lo			5/4/2015
			20-40	10YR2/2	CL	compact		5/4/2015
J58	3351890	642025	0-20	10YR4/2	CL			5/4/2015
			20-30	10YR2/2	CL			5/4/2015

Shovel test information removed

			20-30	10YR2/2	CL			5/4/2015
E41	3355668	639955	0-30	10YR5/2 w 5YR6/8	CL Grvl	Bladed		5/4/2015
E42	3355862	639845	0-30	10YR3/2	CL Grvl			5/4/2015
E43	3356018	639758	0-30	10YR5/2	CL			5/4/2015
E44	3356203	639665	0-30	10YR3/2	CL			5/4/2015
E45	3356321	639567	0-30	10YR3/2	CL			5/4/2015
E46	3356133	639664	0-30	10YR3/2	CL			5/4/2015
E47	3355953	639768	0-30	10YR3/2	CL			5/4/2015
E48	3355768	639866	0-30	10YR3/2	CL			5/4/2015
E49	3355581	639967	0-30	10YR3/2	CL			5/4/2015