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October 11, 2020

Texas Department of Transportation
Environmental Affairs Division
125 E. 11th Street
Austin, TX 78701

Re: Additional APE to the I-35 Capital Express South Project, Travis and Hays counties, Texas (CSJs 0015-13-077 and 0016-01-113)

To whom it may concern,

In April 2020, Atkins submitted an archaeological background study for the Capital Express South project (I-35 from US 290W/SH 71 to SH 45SE) in Austin, Travis County, Texas to the Texas Department of Transportation (TxDOT) Environmental Affairs Division (ENV) (Turner-Pearson and Russell 2020). TxDOT ENV approved the background study on May 7, 2020 and determined no further work was necessary. Subsequent to the approval, the project limits have been extended to include a transition area from SH 45SE to approximately 2,051 feet (ft) (625 meters [m]) north of Main Street in Buda, Hays County, Texas. It is anticipated that portions of the transition area will be restriped while an approximate 800 ft (244 m) portion of the transition area will be widened to include shoulders and an auxiliary lane on the southbound side within the existing right-of-way (ROW). Please see the Project Description in ECOS for a full detailing of the proposed project and objectives. Because the transition area will not include any additional ROW or easement and because the disturbances are anticipated to be commiserate with or less than those that have already occurred within the ROW, the transition area's area of potential effects (APE) for archaeology is limited to the existing road and ROW, approximately 16.36 hectares (40.43 acres) (Figures 1 and 2).

Atkins conducted a cultural resources background review of the area within 1 kilometer (km) of the transition area APE. Research of available records was conducted using the Texas Historical Commission's (THC) on-line Restricted Archeological Sites Atlas files (Atlas). As a secondary source of National Register of Historic Properties (NRHP) and National Historic Landmarks (NHL), the National Park Service's (NPS) NRHP database and GIS Spatial Data as well as the NHL Program were consulted. The NPS Geographic Resources Program National Historic Trails Map Viewer was used to identify National Historic Trails (NHT). Additionally, Texas Department of Transportation's (TxDOT) NRHP Listed and Eligible Bridges of Texas map and Historic Districts & Properties of Texas map were reviewed. Reports of previous archaeological investigations and previously recorded cultural resources in the project area or vicinity were also reviewed along with sources like the Bureau of Economic Geology's Geologic Atlas of Texas, the United States Department of Agriculture's Natural Resources Conservation Service's soil surveys and TxDOT's Austin District Hybrid Potential Archeological Liability Map (HPALM) to assess the additional project area's potential for containing previously unrecorded archaeological sites (Figure 3).

[redacted]

Analysis of Project Setting

- No archaeological sites have been identified within the transition area APE or within 150 ft of the additional APE (Figures 1 and 7; Table 1; Atlas 2020).
- No known cemetery sites occur within the APE or within 150 ft of the transition area APE (Figure 7; Atlas 2020).
- No Holocene-age deposits occur within or adjacent to the transition area APE (Figure 4; Table 2; BEG 1981).
- No historically-reliable water sources occur within 500 ft of the transition area APE.
- The transition area APE and adjacent areas do not contain wetlands or frequently-flooded areas. Confidently (Figures 5 and 6).
- The Atlas map or other information shows that the transition area APE does contain landforms on which human settlement or occupation typically occurred (Figure 7).
- Settings within and adjacent to the transition area APE that are favorable for human occupation have been subject to the following previous disturbances: previous road construction and maintenance; installations of utilities; modern land use practices like plowing, grade modifications, brush clearing, and tree removal; industrial, commercial, urban and/or suburban development; and erosion and scouring by natural causes.
- The majority of the settings with high potential for archaeological sites within or adjacent to the transition area APE have not been previously surveyed. However, construction would have destroyed the integrity archaeological sites within the I-35 ROW.

Conclusions

- Previous surveys have not covered a sufficient proportion of the transition area APE or adjacent areas to conclude that the transition area APE and adjacent areas are unlikely to contain archaeological sites or cemeteries (Table 3). However, roadway and utility construction would have destroyed the integrity of archaeological sites within the I-35 ROW.
- The transition area APE contains no deposits with sufficient integrity that prehistoric archaeological sites would have the potential to address important questions. Any such sites would lack integrity of design, materials, and construction of I-35 and/or adjacent utilities have resulted in disturbance of the transition area APE within the existing ROW.
- The transition area APE contains no deposits with sufficient integrity that historic-age archaeological sites would have the potential to address important questions. Any such sites would lack integrity of design, materials, association and based upon historic map research (NETR 2020), no historic-age structures or buildings have been identified to create historic-age archaeological site deposits. Additionally, these deposits would have been destroyed within the ROW by the construction of I-35.
- Historic map research shows that historic-era archaeological deposits could occur within or adjacent to the transition area APE based upon the mapped location of the Old San Antonio Road/El Camino Real de lost Tejas. However, these deposits would have been destroyed within the ROW by the construction of I-35.

- Map research shows that cemeteries are not likely to occur within or adjacent to the transition area APE.
- The transition area APE and adjacent areas occur in a setting that was conducive to human occupation and activity. However, construction of I-35, utilities, and adjacent dense urban development have heavily disturbed this setting.
- No further work is recommended to evaluate the potential for shallow deposits (Holocene-age deposits less than three-feet in depth) within the transition area APE to contain archaeological historic properties and cemeteries.
- No further work is recommended to evaluate deep deposits (Holocene-age deposits of three feet or greater depth) may or may not be necessary, depending on the nature of the sediments within the transition area APE and the depth of proposed impacts.

Because the additional transition area APE is limited to the existing I-35 and ROW, and disturbances are anticipated to be commiserate with or less than those that have already occurred, Atkins recommends that no further study is needed for the area within the additional transition area APE based upon the effect of prior development to impact the integrity of the areas within and adjacent to the project setting.

Sincerely,
Atkins

Katherine Turner-Pearson, MA, RPA

References Cited

Bureau of Economic Geology. 1981. Geologic Atlas of Texas, Austin Sheet. The University of Texas at Austin.

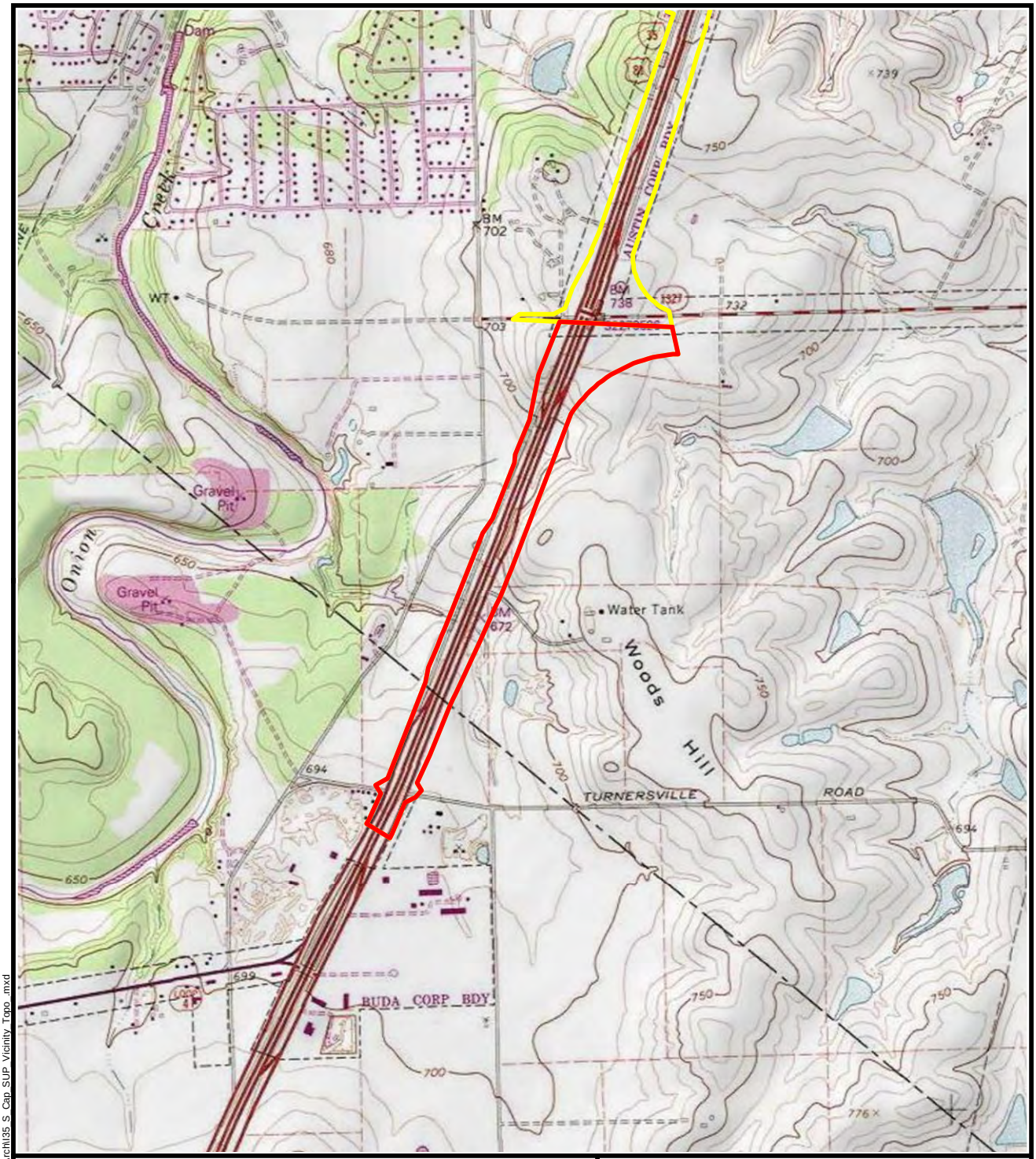
Nationwide Environmental Title Research Online (NETRO). 2020. https://www.historicaerials.com/viewer (accessed September 2020).

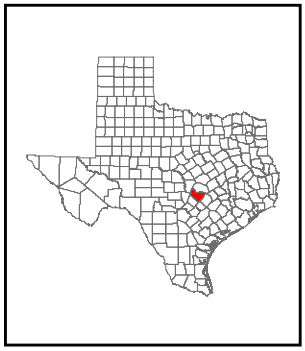
Texas Archeological Sites Atlas (Atlas). 2020. https://atlas.thc.state.tx.us/Account/Login. (accessed September 2020)

Turner-Pearson, Katherine and Kelley Russell. 2020. *Archaeological Background Study: Capital Express South (I-35 from SH 71/Ben White Boulevard to SH 45 Southeast) Travis County, Texas CSJ: 0015-13-007 and 0016-01-113*. Atkins, Austin.

This page has been redacted because it identifies the location of sensitive archaeological sites.

Figure 2: Topographical Project Vicinity Map





Transition Area APE

Previously Reviewed Project APE

0 1,000 2,000

Feet

USGS. 1:24,000; generated by Atkins; using ArcMap. (06 October 2020).

mobility 35 CAPITAL AREA

Topographical Project Vicinity

I-35 South Capitol Expressway
US 71 to SH 45

AUSTIN, TRAVIS COUNTY, TEXAS
CSJs 0015-13-077, 0016-01-113

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Figure 3: Predictive Archeological Liability Map

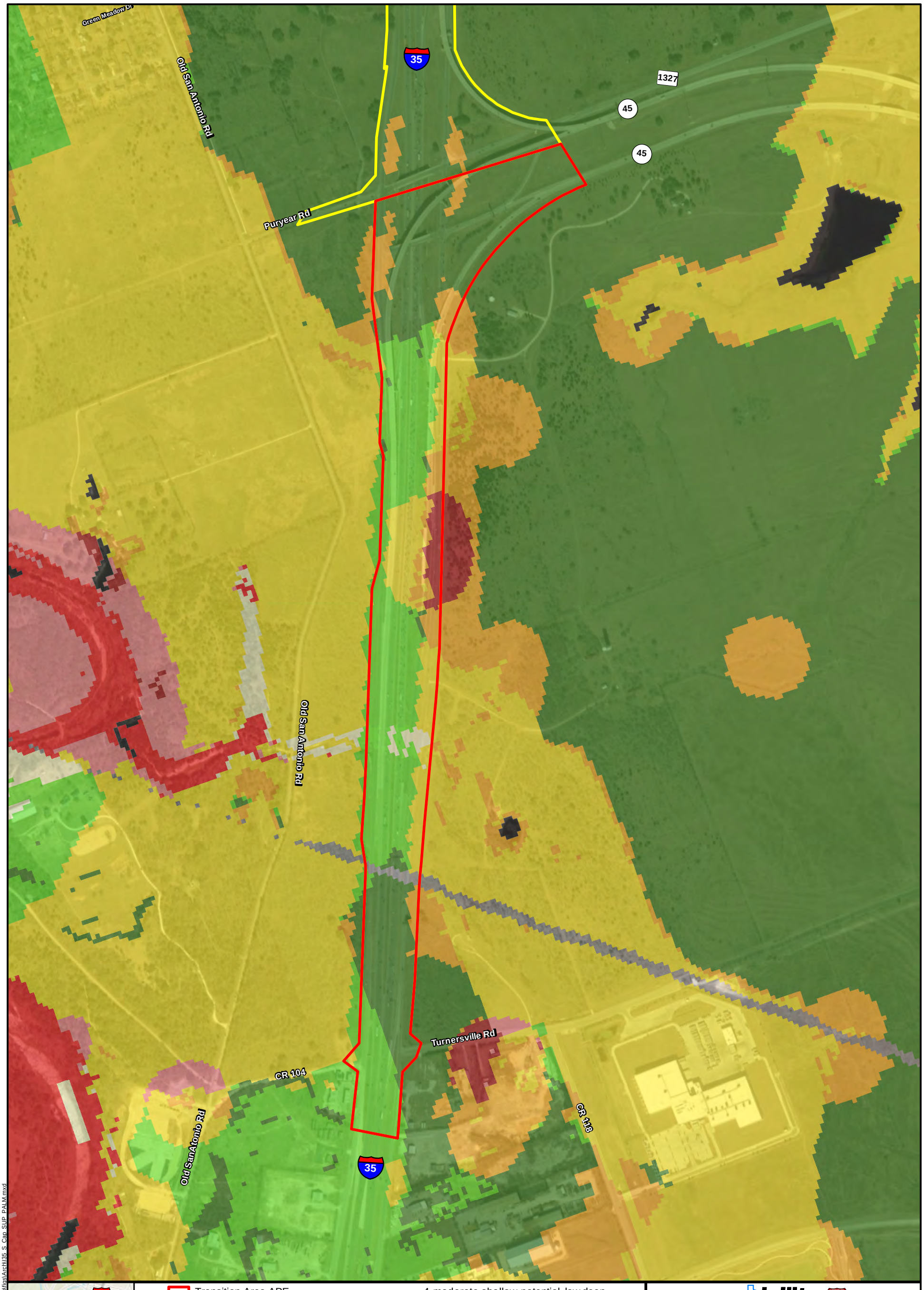
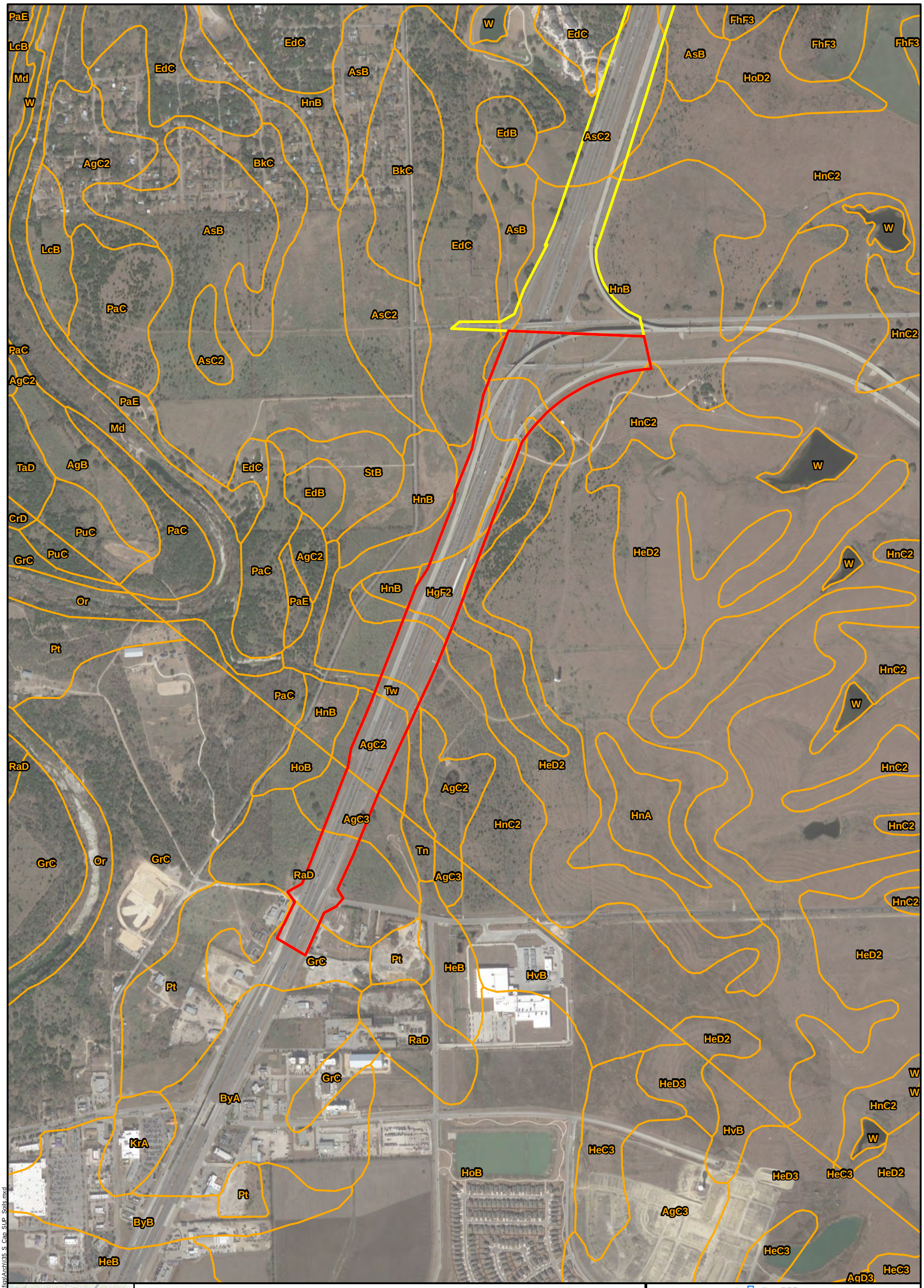


Figure 4: Soils Map



Google, TNRIS. Texas Google Imagery Service. 2018. 1:12,000; generated by Atkins; using ArcMap. < https://tnris.org/texas-google-imagery/> (07 October 2020); NRCS (2014)

Soils

I-35 South Capitol Expressway
US 71 to SH 45

AUSTIN, TRAVIS COUNTY, TEXAS
CSJs 0015-13-077. 0016-01-113

N:\Clients\S_TVTxDOT\IH35_Mobility35\STEL_S10miCompAreaDocs\ArcMxd\I35_S_Cap_SUP_Soils.mxd

Figure 5: FEMA Flood Hazard Map

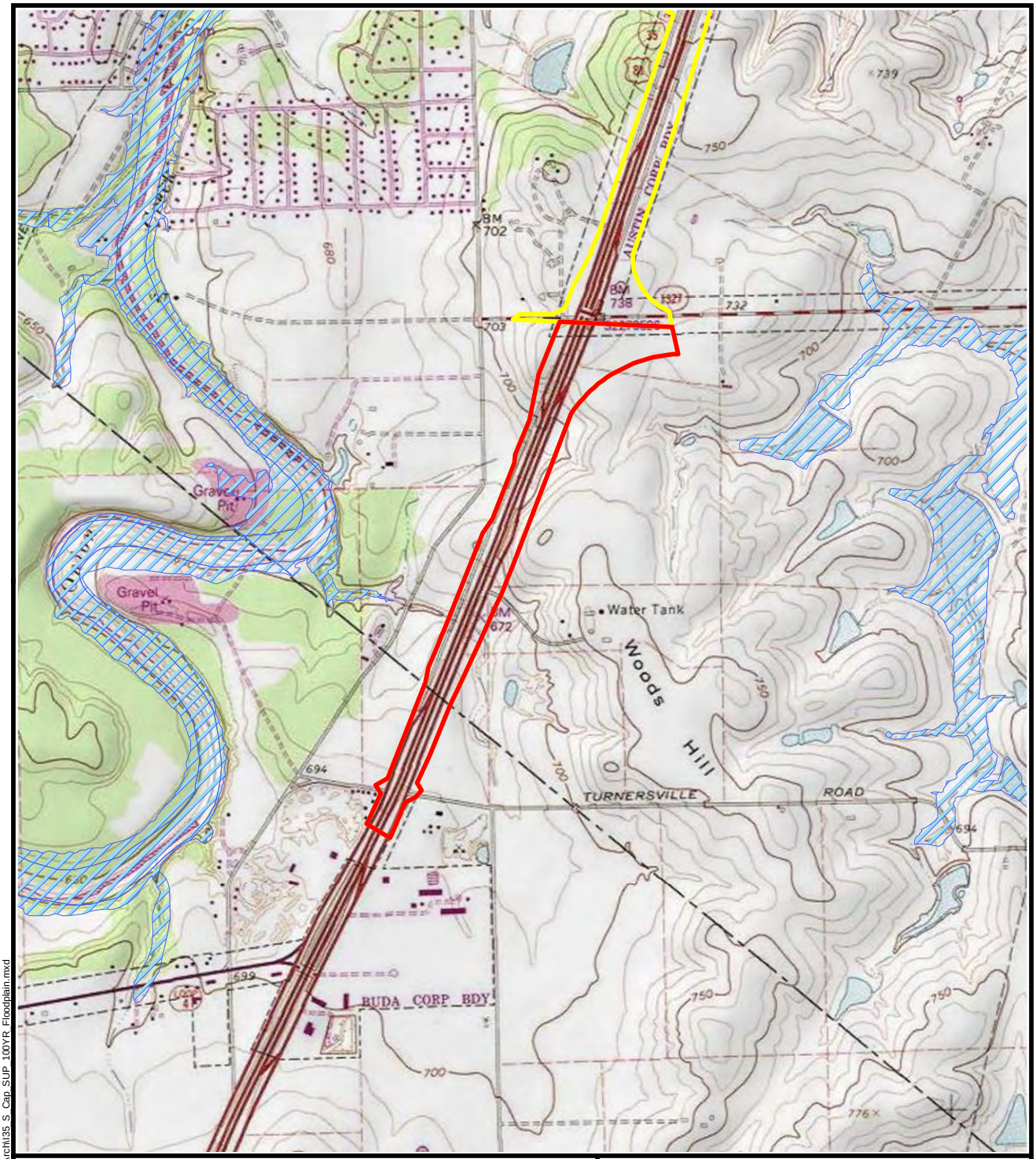
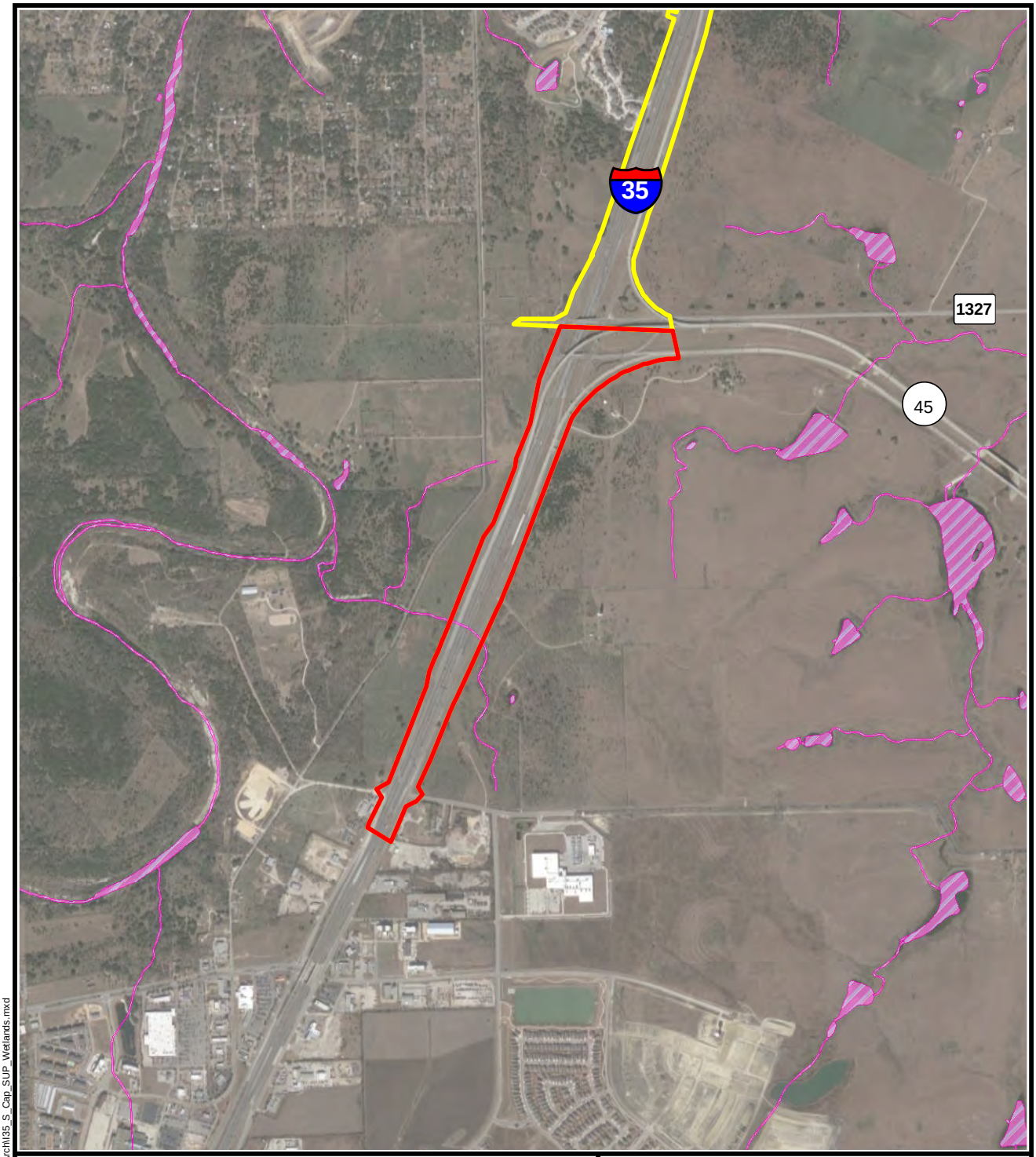
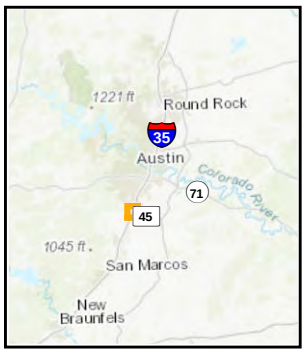


Figure 6: National Wetlands Inventory Map





Transition Area APE

Previously Reviewed Project APE

Wetlands (NWI)

0 1,000 2,000

Feet

Google, TNRIS. Texas Google Imagery Service. 2018. 1:80,000; generated by Atkins; using ArcMap. < https://tnris.org/texas-google-imagery/> (06 October 2020).

mobility 35 CAPITAL AREA

NWI Wetlands

I-35 South Capitol Expressway
US 71 to SH 45

AUSTIN, TRAVIS COUNTY, TEXAS
CSJs 0015-13-077, 0016-01-113

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This page has been redacted because it identifies the location of sensitive archaeological sites.

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Table 1. Archaeological Sites Within 1,000 Meters of Transition Area APE (*Texas Archeological Sites Atlas,* Texas Historical Commission 2020).

Site Trinomial	Site Type	Time Period	Distance From APE	Direction From APE	Notes
41HY19	Open campsite/ burned rock midden	Prehistoric	693 m	West	Henderson Site
41TV2368	Farmstead	Historic	493.7 m	East	house and barn remain

Table 2. Soils Within the Transition Area APE

Code	Soil Name	Landform	Depth
GrC	Gruene clay, 1 to 5% slopes	Ridges	0-80 in
RaD	Real gravelly loam, 1 to 8 % slopes	Ridges	0-14 in
AgC3	Altoga silty clay, 2 to 5% slopes, eroded	Stream terraces	0-60 in
AgC2	Altoga Silty Clay, 3-6% slopes	Stream terraces	0-60 in
Tw	Tinn clay, 0 to 1% slopes, frequently flooded	Flood plains	0-80 in
HnC2	Houston Black Clay, 3-5% slopes, moderately eroded	Ridges	0-80 in
HnB	Houston Black clay, 1 to 3% slopes	Ridges	0-80 in
HeD2	Heiden Clay, 5 to 8% slopes, eroded	Ridges	0-65 in
HgF2	Heiden Gravely Clay, 8 to 20% slopes, moderately eroded	Ridges	0-80 in

Table 3. Archaeological Surveys within 1,000 Meters of Transition Area APE (*Texas Archeological Sites Atlas*, Texas Historical Commission 2020)

Abstract Number	Date	Type	Agency	Distance from APE	Direction	Notes
8100012889	9/1/2005	Areal	TxDOT	138 m	North	SH 45 HPA
8100012889	9/1/2005	Areal	TxDOT	679 m	East	SH 45 HPA
8100015060	12/31/2009	Linear	City of Austin	85 m	North	I-35 water/wastewater
8100012804	8/24/2003	Areal	TxDOT	Within APE	North	I-45
	04/1989	Linear	TDHPT	Within APE	North	
	02/1986	Linear	FHWA	Within APE	---	I-35
	06/1989	Linear	FHWA	Within APE	---	I-35
8100013553	5/3/2007	Areal	City of Buda	527 m	South	Main Street/I-35 interchange

Archeological Background Study

Project Name: Capital Express South

Highway: I-35 from SH 71/Ben White Boulevard to SH 45 Southeast

District(s): Austin

County(s): Travis

CSJ Number(s): 0015-13-077, 0016-01-113

Author and Affiliation: Katherine Turner-Pearson and Krista McClanahan, Atkins

Report Completion Date: March 2021

Table of Contents

Introduction

This project may require compliance both with Section 106 of the National Historic Preservation Act and with the Texas Antiquities Code. The purpose of this document is to identify risks for archeological historic properties within the project's area of potential effects (APE). The document also considers whether any cemeteries may extend into the APE, requiring compliance with the state Health and Safety Code.

The following sections list the results of review of readily-available information for the APE's setting and adjacent areas. The report also evaluates adjacent areas (a buffer zone; see Recommendations Section for definition of the buffer zone). The buffer zone is evaluated in case a subsequent design change expands the APE. This report concludes with separate recommendations regarding project effects and the need for additional work within shallow deposits less than three feet in depth and within Holocene-age deposits of three feet or greater depth, if such deep deposits are present.

This background study is (check one):

☐ the initial study for this project

☒ a continuation of previous investigations due to design changes or other reasons

Identify previous investigation(s):

Turner-Pearson, Katherine and M. Kelley Russell. 2020. Archeological Background Study: Capital Express South (I-35 from SH 71/Ben White Boulevard to SH 45 Southeast) Travis County, Texas CSJ: 0015-13-007 and 0016-01-113. Atkins, Austin.

Area of Potential Effects

The APE is defined to encompass the limits of the existing right of way; proposed, new project right of way; permanent and temporary easements; and any project-specific locations and utility relocations designated by TxDOT. Note: the APE encompasses the entirety of the project area, regardless of the extent of prior archeological investigations, the particular locations subject to proposed field investigations, or the portion of a project added through a design change. If impacts are not known, worst-case impacts are assumed in defining the APE.

See **Attachment 1** for a map of the APE. The project limits have been extended to include a transition area from SH 45SE to approximately 2,051 feet (ft) (625 meters [m]) north of Main Street in Buda, Hays County, Texas. It is anticipated that portions of the transition area will be restriped while an approximate 800 ft (244 m) portion of the transition area will be widened to include shoulders and an auxiliary lane on the southbound side within the existing right-of-way (ROW). Utility relocation within the original project area and expanded transition area will be limited to a depth of impacts of 15 ft (4.6 m). Please see the Project Description in ECOS for a full detailing of the proposed project and

objectives. Because the transition area will not include any additional ROW or easement and because the disturbances are anticipated to be commiserate with or less than those that have already occurred within the ROW, the transition area's area of potential effects (APE) for archaeology is limited to the existing road and ROW, approximately 16.36 hectares (40.43 acres).

Information Source Checklist

(check each source of information that was consulted by the professional archeologist in preparing this background study—the number and type of sources are at the professional archeologist's discretion)

☒ Labelled USGS 7.5' topographic quadrangle project location map (or equivalent if a 7.5' quadrangle is unavailable) is attached and includes an inset map that depicts the county within Texas where the project occurs. Attachment 2

☒ Predictive Archeological Liability Map (PALM) is attached if available *(consult TxDOT's Environmental Compliance Toolkit).* Attachment 3

☐ Geologic Atlas of Texas map is attached *(PALM may be substituted for the GAT map, if it's available).*

☒ Soils map is attached *(PALM may be substituted for the soils map, if it's available).* Attachment 4

☒ FEMA flood hazard map is attached. Attachment 5

☒ National Wetlands Inventory map is attached Attachment 6

☒ Texas Archeological Sites Atlas map is attached, depicting any sites within one kilometer of the APE or additional APE. Attachment 7

☐ Historic topographic map is attached.

☐ Historic soils map is attached.

☐ Historic road map is attached.

☐ As-built plans for roadway are attached.

☐ Other map of historic information is attached.

☐ Aerial images are attached.

☐ Project area photographs are attached.

Analysis of Project Setting

- **Previously-Identified Archeological Sites**

☒ No archeological sites have been identified within the APE or within 150 feet of the APE

Attachments 1 and 7; Table 1; Atlas 2020

☐ Archeological sites have been identified within the APE or within 150 feet of the APE

- **Previously–Identified Cemeteries**

☒ No known cemetery sites occur within the APE or within 150 feet of the APE.

Attachment 7; Atlas 2020

☐ Cemeteries occur within the APE or within 150 feet of the APE.

- **Holocene-Age Deposits**

☒ No Holocene-age deposits occur within or adjacent to the APE.

Attachment 4; Table 2; BEG 1981

☐ Holocene-age deposits occur within or adjacent to the APE.

- **Historically-Reliable Water Sources**

☒ No historically-reliable water sources occur within 500 feet of the APE.

☐ Historically-reliable water sources occur within 500 feet of the APE, or this question can't be answered confidently.

- **Wetlands and Frequently-Flooded Areas**

☐ The APE and adjacent areas contain wetlands or frequently-flooded areas.

☒ The APE and adjacent areas do not contain wetlands or frequently-flooded areas, or this question cannot be answered confidently.

Attachments 5 and 6

- **Preferred Landforms for Occupation**

☐ The Atlas map or other information shows that the APE does not contain landforms on which human settlement or occupation typically occurred.

☒ The Atlas map or other information shows that the APE does contain landforms on which human settlement or occupation typically occurred, or this issue was not resolved with the available information.

Attachment 7

- **Prior Disturbances**

Settings that are favorable for human occupation have been subject to the following previous disturbances *(check all that apply).*

☒ Previous road construction and maintenance.

☒ Installations of utilities.

☒ Modern land use practices like plowing, grade modifications, brush clearing, and tree removal,

☒ Industrial, commercial, urban and/or suburban development

☒ Erosion and scouring by natural causes.

☐ Other (identify)

☐ NO PRIOR DISTURBANCES OR UNKNOWN (do not check any foregoing disturbances)

- **Previous Archeological Surveys**

☐ The majority of the settings with high potential for archeological sites within or adjacent to the APE have been previously surveyed.

☒ The majority of the settings with high potential for archeological sites within or adjacent to the APE have not been previously surveyed.

However, construction would have destroyed the integrity archaeological sites within the I-35 ROW.

Conclusions

- **Results of Previous Investigations**

☐ Previous surveys have covered a sufficient proportion of the APE or adjacent areas to conclude that the APE and adjacent areas are unlikely to contain archeological sites or cemeteries.

☒ Previous surveys have not covered a sufficient proportion of the APE or adjacent areas to draw inferences regarding the presence of archeological sites and cemeteries, or previous surveys show that archeological sites and/or cemeteries are present within the APE.

However, adjacent areas are unlikely to contain archaeological sites or cemeteries (**Table 3**) because roadway and utility construction would have destroyed the integrity of archaeological sites within the I-35 ROW.

- **APE Integrity (Prehistoric Sites)**

The APE contains no deposits with sufficient integrity that prehistoric archeological sites would have the potential to address important questions. Any such sites would lack integrity of *(check all that apply):*

☐ Location

☒ Design

☒ Materials

☐ Association

☒ Other (*identify*)

Construction of I-35 and/or adjacent utilities have resulted in disturbance of the transition area APE within the existing ROW.

☐ THE APE HAS THE POTENTIAL TO PRESERVE SITES WITH SUFFICIENT INTEGRITY TO QUALIFY THOSE SITES FOR INCLUSION IN THE NATIONAL REGISTER OF HISTORIC PLACES *(if true, do not check any of the forgoing aspects of integrity)*

- **APE Integrity (Historic-Age Sites)**

The APE contains no deposits with sufficient integrity that historic-age archeological sites would have the potential to address important questions. Any such sites would lack integrity of *(check all that apply)*:

☐ Location

☒ Design

☒ Materials

☒ Association

☒ Other (*identify*)

Based upon historic map research (NETR 2020), no historic-age structures or buildings have been identified to create historic-age archaeological site deposits. Additionally, these deposits would have been destroyed within the ROW by the construction of I-35.

☐ THE APE HAS THE POTENTIAL TO PRESERVE SITES WITH SUFFICIENT INTEGRITY TO QUALIFY THOSE SITES FOR INCLUSION IN THE NATIONAL REGISTER OF HISTORIC PLACES *(if true, do not check any of the forgoing aspects of integrity)*

- **Results of Historic Map Research (Historic Age Sites)**

☐ Historic map research shows that historic-era archeological deposits are not likely to occur within or adjacent to the APE

☒ Historic map research shows that historic-era archeological deposits could occur within or adjacent to the APE; this research was inconclusive; or this research was not completed because it was not necessary to reach justifiable conclusions.

Based upon the mapped location of the Old San Antonio Road/El Camino Real de lost Tejas historic-era archeological deposits could occur. However, these deposits would have been destroyed within the ROW by the construction of I-35.

- **Results of Map Research (Cemeteries)**

☒ Map research shows that cemeteries are not likely to occur within or adjacent to the APE.

☐ Map research shows that cemeteries could occur within or adjacent to the APE, or this research was inconclusive.

- **Results of Landform Study**

☐ The APE and adjacent areas occur in a setting that was not conducive to human occupation and activity

☒ The APE and adjacent areas occur in a setting that was conducive to human occupation and activity; research on this issue was inconclusive; or this research was not completed because it was not necessary to reach justifiable conclusions.

Recommendations

- **Shallow Deposits**

Evaluate the potential for shallow deposits (Holocene-age deposits less than three-feet in depth) within the APE to contain archeological historic properties and cemeteries. Make appropriate recommendations regarding the need for further work, including the need for shovel test pits, auger probes, or other methods for evaluating shallow deposits.

See **Attachments 4** and **5** and **Table 4**. Because the APE is limited to the existing ROW, those areas of the APE that contain shallow soils that would have originally had medium to high potential to contain archaeological historic properties and cemeteries appear to have been previously disturbed by roadway, utilities construction, and adjacent urban development, and/or have been previously surveyed and have little to no potential to contain archaeological historic properties and cemeteries. No further work is recommended.

- **Deep Deposits**

Evaluation of deep deposits (Holocene-age deposits of three feet or greater depth) may or may not be necessary, depending on the nature of the sediments within the APE and the depth of proposed impacts. If Holocene-age deposits extend to three feet or more within the APE and would be impacted by the project, make appropriate recommendations regarding the need for further work. If no deep, Holocene-age deposits occur within the APE note that they are absent and indicate that no additional work in needed. If the deep Holocene deposits are present but the project either would not affect them or they have been too extensively disturbed to hold intact archeological deposits, provide an appropriate justification that no additional work is needed.

See **Attachments 4** and **5** and **Table 4**. The majority of the proposed impacts will be shallow: restriping and an approximate 800 ft (244 m) portion of the transition area will be widened to include shoulders and an auxiliary lane on the southbound side within existing ROW. Utility relocation within the original project area and expanded transition area will be limited to a depth of impact of 15 ft (4.6 m) but will be limited to the existing ROW. Those areas of the APE that contain deep soils appear to have been previously disturbed by roadway, utilities construction, and adjacent urban development, and/or have been previously surveyed. No further work is recommended.

- **Recommendations Summary (select only one check box)**

☒ No further study needed ☐ Survey of entire APE ☐ Variable, see attached figure

- **Results Valid Within**

The purpose of considering adjacent areas is to define, when possible, a buffer zone around the APE to which findings of no effect and recommendations for no further work can be extended. No

additional investigation should be necessary if a subsequent design change expands the APE into the buffer zone. In some cases, however, no buffer zone may be reasonably defined for the project or portions of the project as expansion of the APE may warrant survey. In such cases, check the middle box and indicate that the results are valid within zero feet of the APE.

☒ 50 feet of APE ☐ 0 feet of APE ☐ Variable, see attached figure

- **The Definition and Evaluation of this Horizontal Buffer Zone is Based on One or More of the Following Considerations**

☒ The integrity of the areas within and adjacent to the setting is affected by prior development.

☐ Previous investigations show that archeological materials are unlikely to exist in this area.

☐ Adjacent areas have potential to preserve archeological sites with good integrity.

☐ Other (specify)

Findings of no effect to archeological historic properties and/or State Antiquities Landmarks and recommendations for no further work apply to all areas within the horizontal buffer zone, as specified in the previous section. Any design change within this study area would not require further action or review beyond those actions recommended in this study. Design changes that either extend beyond the buffer zone or result in potential impacts deeper than the impacts considered in this report would require additional review. Note that no buffer zone may be defined for some projects, based on local conditions.

References Cited

Bureau of Economic Geology. 1981. Geologic Atlas of Texas, Austin Sheet. The University of Texas at Austin.

Nationwide Environmental Title Research Online (NETRO). 2020. https://www.historicaerials.com/viewer (accessed September 2020).

Texas Archeological Sites Atlas (Atlas). 2020. https://atlas.thc.state.tx.us/Account/Login. (accessed September 2020)

Turner-Pearson, Katherine and Kelley Russell. 2020. Archeological Background Study: Capital Express South (I-35 from SH 71/Ben White Boulevard to SH 45 Southeast) Travis County, Texas CSJ: 0015-13-007 and 0016-01-113. Atkins, Austin.

Attachments

Attachment 1 – Archaeological APE Map

Attachment 2– Project information

In April 2020, Atkins submitted an archaeological background study for the Capital Express South project (I-35 from US 290W/SH 71 to SH 45SE) in Austin, Travis County, Texas to the Texas Department of Transportation (TxDOT) Environmental Affairs Division (ENV) (Turner-Pearson and Russell 2020). TxDOT ENV approved the background study on May 7, 2020 and determined no further work was necessary. Subsequent to the approval, the project limits were extended to include a transition area from SH 45SE to approximately 2,051 feet (ft) (625 meters [m]) north of Main Street in Buda, Hays County, Texas. It is anticipated that portions of the transition area will be restriped while an approximate 800 ft (244 m) portion of the transition area will be widened to include shoulders and an auxiliary lane on the southbound side within the existing right-of-way (ROW). Utility relocation within the original project area and expanded transition area will be limited to a depth of impacts of 15 ft (4.6 m). Please see the Project Description in ECOS for a full detailing of the proposed project and objectives.

Attachment 2: Topographical Project Vicinity Map
Attachment 3: Predictive Archeological Liability Map
Attachment 4: Soils Map
Attachment 5: FEMA Flood Hazard Map
Attachment 6: National Wetlands Inventory Map
Attachment 7: Texas Archeological Atlas Map within 1 km of the Transition Area APE
Attachment 8: Photographs of Project Area

Table 1: Archaeological Sites Within 1,000 Meters of Transition Area APE
Table 2: Soils Within the Transition Area APE
Table 3: Archaeological Survey within 1,000 Meters of Transition Area APE

This report was written on behalf of the Texas Department of Transportation by:

Atkins North America, Inc.

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Austin, Texas 78758

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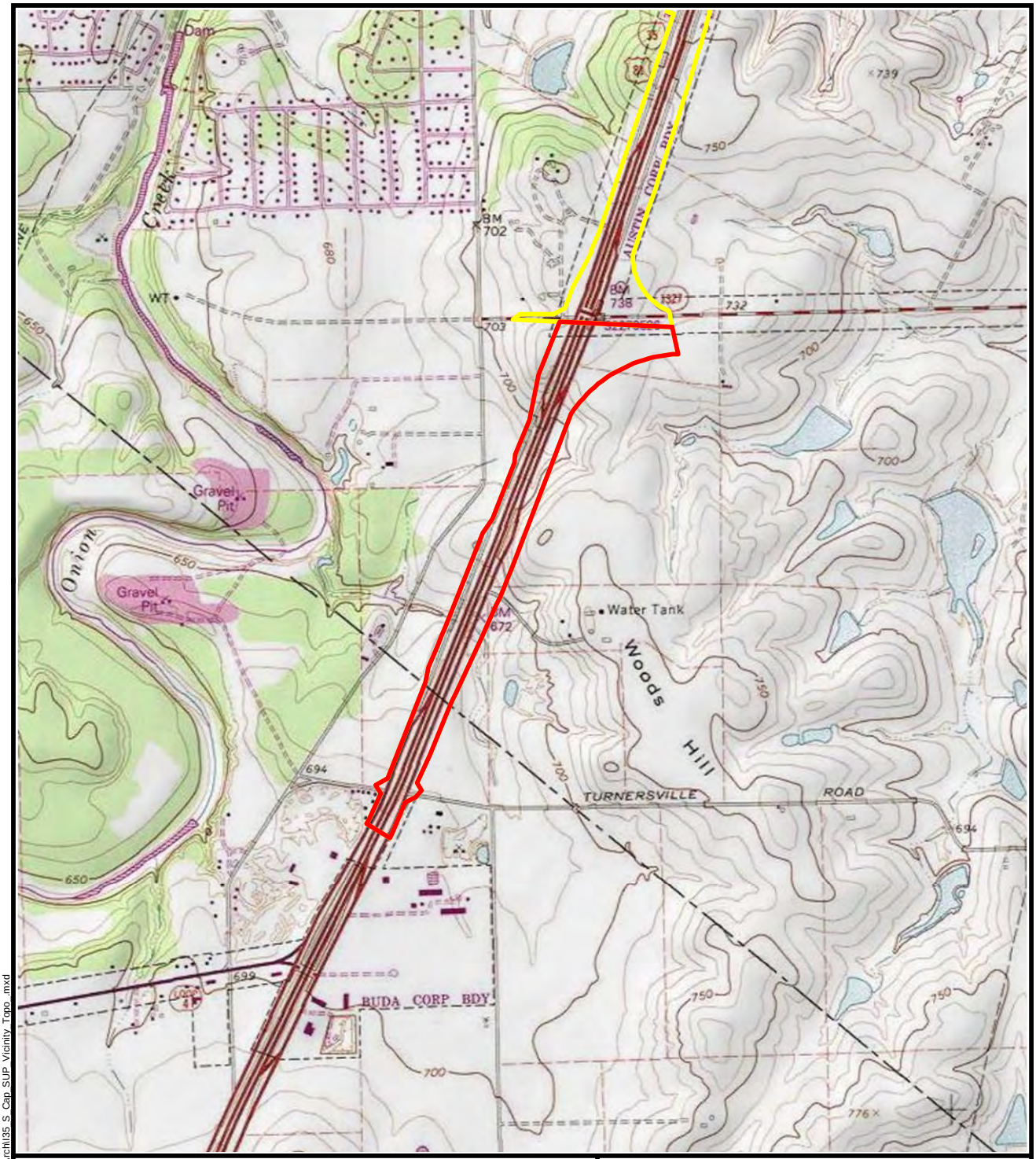
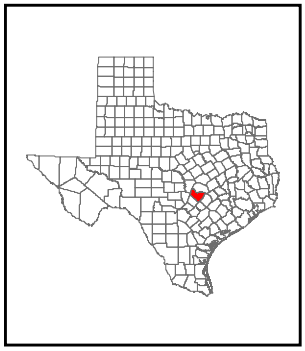
Fax (512) 327-2453

This page has been redacted because it identifies the location of sensitive archaeological sites.

Attachment 3: Topographical Project Vicinity Map





Transition Area APE

Previously Reviewed Project APE

0 1,000 2,000

Feet

USGS. 1:24,000; generated by Atkins; using ArcMap. (06 October 2020).

mobility 35 CAPITAL AREA

Topographical Project Vicinity

I-35 South Capitol Expressway
US 71 to SH 45

AUSTIN, TRAVIS COUNTY, TEXAS
CSJs 0015-13-077, 0016-01-113

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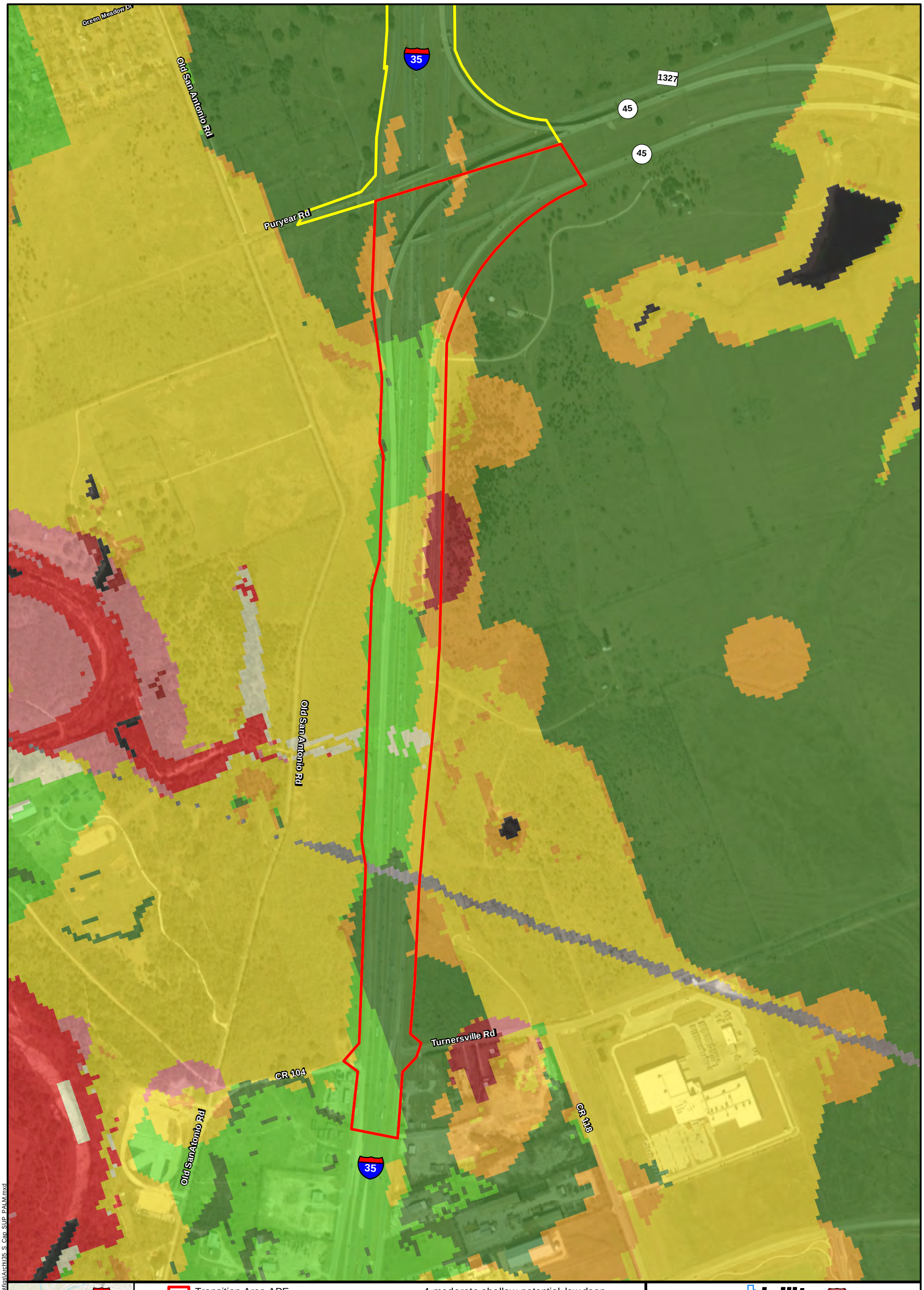
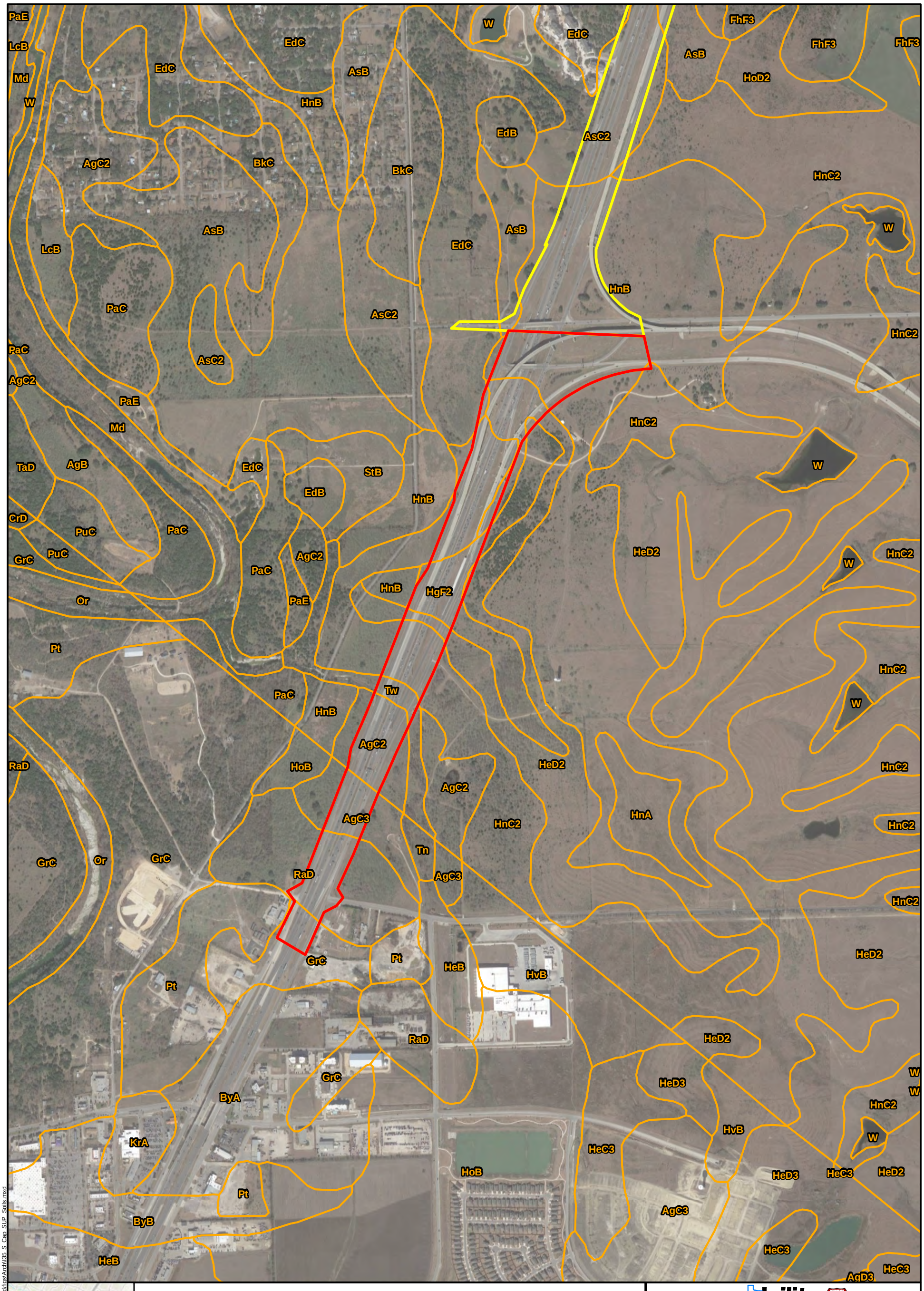
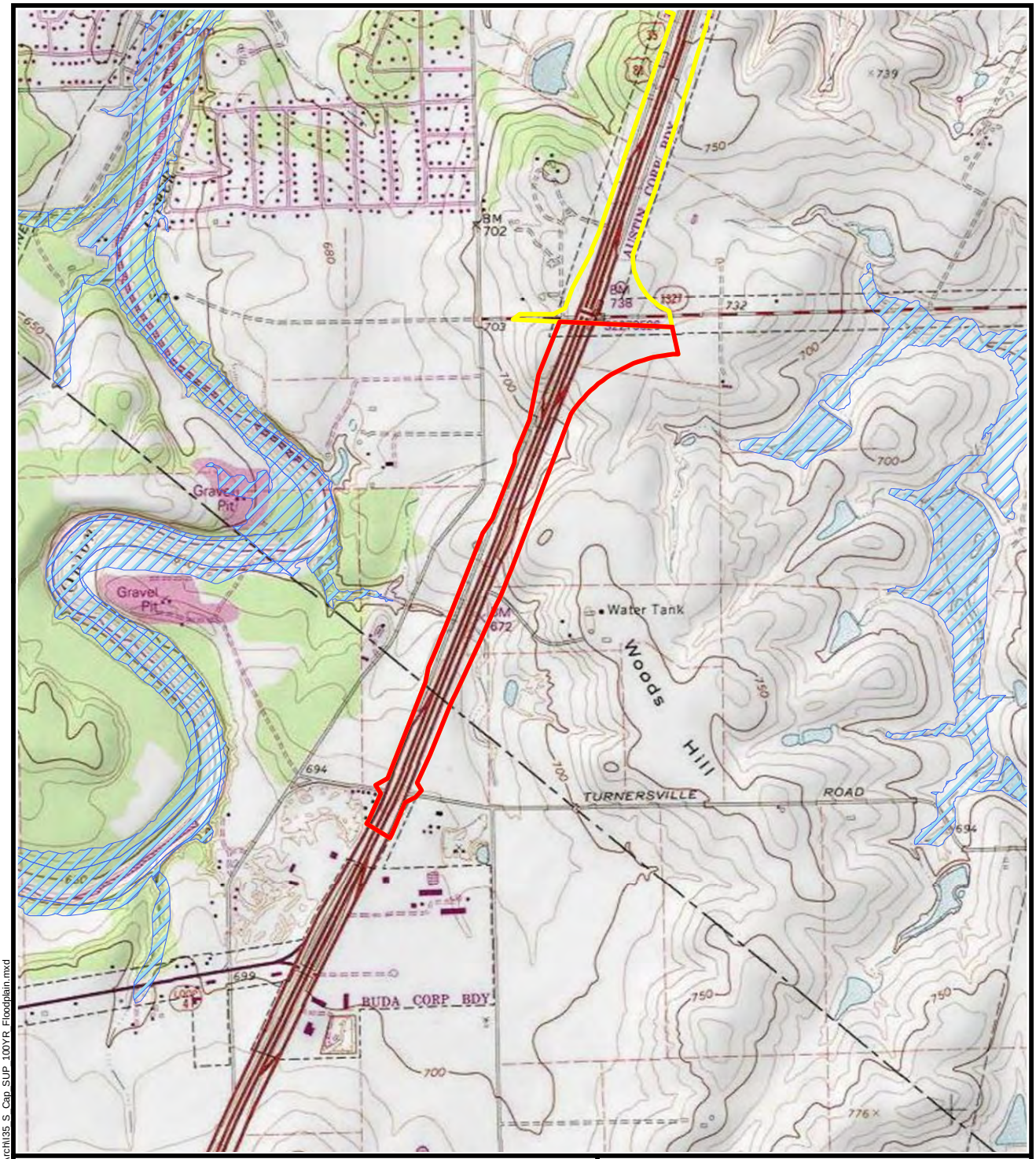
Attachment 4: Predictive Archeological Liability Map

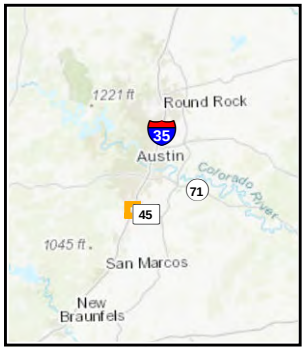


Attachment 5: Soils Map



Attachment 6: FEMA Flood Hazard Map





Transition Area APE

Previously Reviewed Project APE

100-year Floodplain

0 1,000 2,000

Feet

USGS. 1:24,000; generated by Atkins; using ArcMap. (06 October 2020).

mobility 35 CAPITAL AREA

100-Year Floodplain

I-35 South Capitol Expressway
US 71 to SH 45

AUSTIN, TRAVIS COUNTY, TEXAS
CSJs 0015-13-077, 0016-01-113

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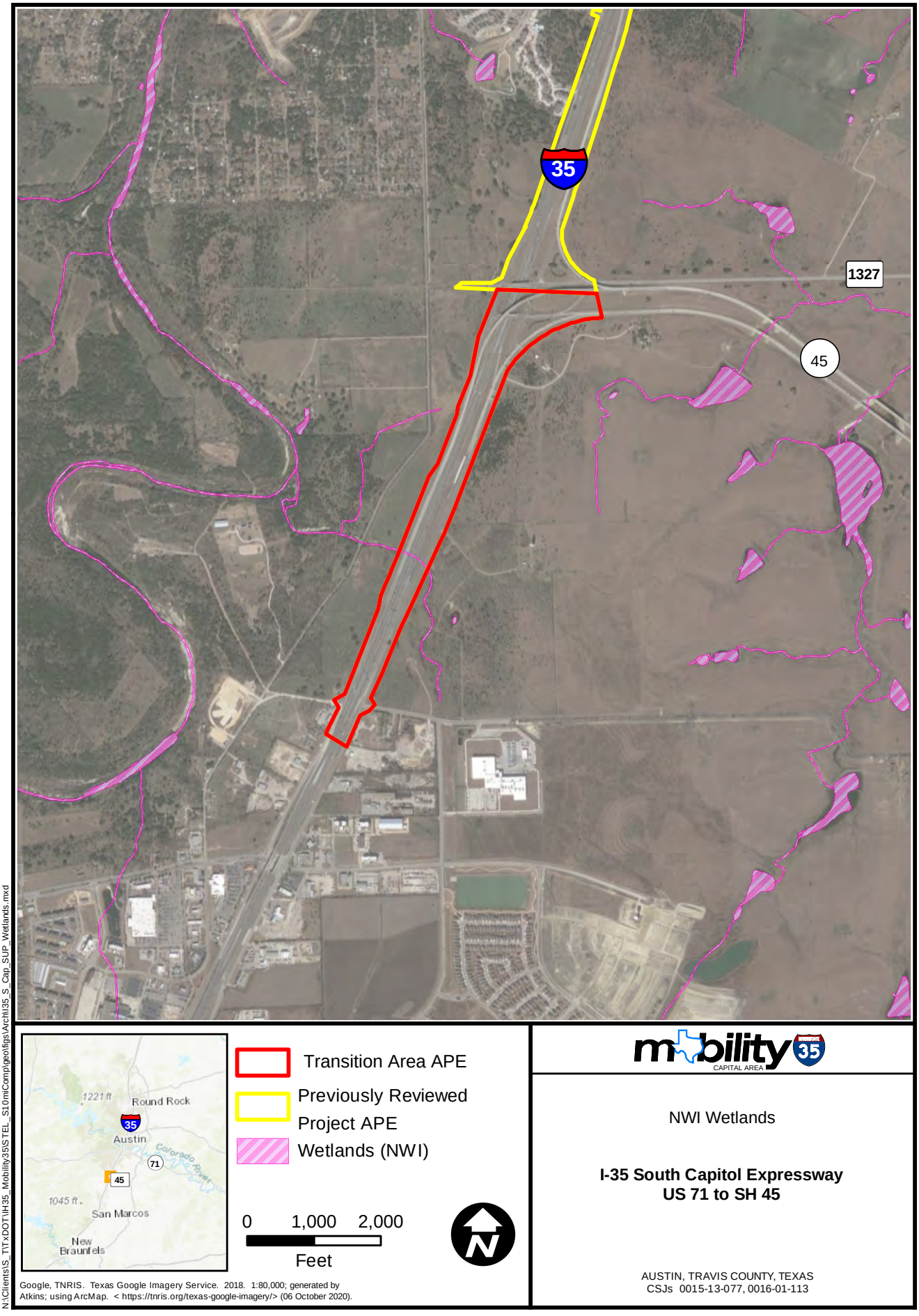
Attachment 7: National Wetlands Inventory Map



Google, TNRIS. Texas Google Imagery Service. 2018. 1:80,000; generated by Atkins; using ArcMap. < https://tnris.org/texas-google-imagery/> (06 October 2020).

mobility 35 CAPITAL AREA

NWI Wetlands

I-35 South Capitol Expressway
US 71 to SH 45

AUSTIN, TRAVIS COUNTY, TEXAS
CSJs 0015-13-077, 0016-01-113

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This page has been redacted because it identifies the location of sensitive archaeological sites.

Table 1. Archaeological Sites Within 1,000 Meters of Transition Area APE (*Texas Archeological Sites Atlas,* Texas Historical Commission 2020).

Site Trinomial	Site Type	Time Period	Distance From APE	Direction From APE	Notes
41HY19	Open campsite/ burned rock midden	Prehistoric	693 m	West	Henderson Site
41TV2368	Farmstead	Historic	493.7 m	East	house and barn remain

Table 2. Soils Within the Transition Area APE

Code	Soil Name	Landform	Depth
GrC	Gruene clay, 1 to 5% slopes	Ridges	0-80 in
RaD	Real gravelly loam, 1 to 8 % slopes	Ridges	0-14 in
AgC3	Altoga silty clay, 2 to 5% slopes, eroded	Stream terraces	0-60 in
AgC2	Altoga Silty Clay, 3-6% slopes	Stream terraces	0-60 in
Tw	Tinn clay, 0 to 1% slopes, frequently flooded	Flood plains	0-80 in
HnC2	Houston Black Clay, 3-5% slopes, moderately eroded	Ridges	0-80 in
HnB	Houston Black clay, 1 to 3% slopes	Ridges	0-80 in
HeD2	Heiden Clay, 5 to 8% slopes, eroded	Ridges	0-65 in
HgF2	Heiden Gravely Clay, 8 to 20% slopes, moderately eroded	Ridges	0-80 in

Table 3. Archaeological Surveys within 1,000 Meters of Transition Area APE (*Texas Archeological Sites Atlas*, Texas Historical Commission 2020)

Abstract Number	Date	Type	Agency	Distance from APE	Direction	Notes
8100012889	9/1/2005	Areal	TxDOT	138 m	North	SH 45 HPA
8100012889	9/1/2005	Areal	TxDOT	679 m	East	SH 45 HPA
8100015060	12/31/2009	Linear	City of Austin	85 m	North	I-35 water/wastewater
8100012804	8/24/2003	Areal	TxDOT	Within APE	North	I-45
	04/1989	Linear	TDHPT	Within APE	North	
	02/1986	Linear	FHWA	Within APE	---	I-35
	06/1989	Linear	FHWA	Within APE	---	I-35
8100013553	5/3/2007	Areal	City of Buda	527 m	South	Main Street/I-35 interchange

Updates since the April 2021 Public Hearing.

Archeological Background Study

Project Name: Capital Express South

Highway: I-35 from SH 71, Austin to Loop 4, Buda

District(s): Austin

County(s): Travis and Hays

CSJ Number(s): 0015-13-077 and 0016-01-113

Author and Affiliation: Eric Oksanen

Report Completion Date: NOV 15 2021

Table of Contents

Introduction

This project may require compliance both with Section 106 of the National Historic Preservation Act and with the Texas Antiquities Code. The purpose of this document is to identify risks for archeological historic properties within the project's area of potential effects (APE). The document also considers whether any cemeteries may extend into the APE, requiring compliance with the state Health and Safety Code.

The following sections list the results of review of readily-available information for the APE's setting and adjacent areas. The report also evaluates adjacent areas (a buffer zone; see Recommendations Section for definition of the buffer zone). The buffer zone is evaluated in case a subsequent design change expands the APE. This report concludes with separate recommendations regarding project effects and the need for additional work within shallow deposits less than three feet in depth and within Holocene-age deposits of three feet or greater depth, if such deep deposits are present.

This background study is (check one):	☐ the initial study for this project
	☒ a continuation of previous investigations due to design changes or other reasons Identify previous investigation(s): Additional APE to the I-35 Capital Express South Project, Travis and Hays counties, Texas (CSJs 0015-13-077 and 0016-01-113). Kathryn Turner-Pearson, Atkins, Austin. October 2011 If this box is checked, then answer the questions below only for the area that is affected by the design change.

Area of Potential Effects

The APE is defined to encompass the limits of the existing right of way; proposed, new project right of way; permanent and temporary easements; and any project-specific locations and utility relocations designated by TxDOT. Note: the APE encompasses the entirety of the project area, regardless of the extent of prior archeological investigations, the particular locations subject to proposed field investigations, or the portion of a project added through a design change. If impacts are not known, worst-case impacts are assumed in defining the APE.

See Attachment 1 for a map of the APE, which is based on the project information attached as Attachment 2.

Information Source Checklist

(check each source of information that was consulted by the professional archeologist in preparing this background study—the number and type of sources are at the professional archeologist's discretion)

☐	Labelled USGS 7.5' topographic quadrangle project location map (or equivalent if a 7.5' quadrangle is unavailable) is attached and includes an inset map that depicts the county within Texas where the project occurs.
☐	Predictive Archeological Liability Map (PALM) is attached if available *(consult TxDOT's Environmental Compliance Toolkit).*
☐	Geologic Atlas of Texas map is attached *(PALM may be substituted for the GAT map, if it's available).*
☐	Soils map is attached *(PALM may be substituted for the soils map, if it's available)*.
☐	FEMA flood hazard map is attached.
☐	National Wetlands Inventory map is attached
☒	Texas Archeological Sites Atlas map is attached, depicting any sites within one kilometer of the APE or additional APE.
☐	Historic topographic map is attached.
☐	Historic soils map is attached.
☐	Historic road map is attached.
☐	As-built plans for roadway are attached.
☐	Other map of historic information is attached.
	Specify Map:
☐	Aerial images are attached.
☐	Project area photographs are attached.

Analysis of Project Setting	
▪ **Previously-Identified Archeological Sites**	
☐	No archeological sites have been identified within the APE or within 150 feet of the APE
☐	Archeological sites have been identified within the APE or within 150 feet of the APE
▪ **Previously–Identified Cemeteries**	
☐	No known cemetery sites occur within the APE or within 150 feet of the APE.
☐	Cemeteries occur within the APE or within 150 feet of the APE.
▪ **Holocene-Age Deposits**	
☐	No Holocene-age deposits occur within or adjacent to the APE.
☐	Holocene-age deposits occur within or adjacent to the APE.
▪ **Historically-Reliable Water Sources**	
☐	No historically-reliable water sources occur within 500 feet of the APE.
☐	Historically-reliable water sources occur within 500 feet of the APE, or this question can't be answered confidently.
▪ **Wetlands and Frequently-Flooded Areas**	
☐	The APE and adjacent areas contain wetlands or frequently-flooded areas.
☒	The APE and adjacent areas do not contain wetlands or frequently-flooded areas, or this question cannot be answered confidently.

▪ **Preferred Landforms for Occupation**	
☐	The Atlas map or other information shows that the APE does not contain landforms on which human settlement or occupation typically occurred.
☐	The Atlas map or other information shows that the APE does contain landforms on which human settlement or occupation typically occurred, or this issue was not resolved with the available information.
▪ **Prior Disturbances**	
Settings that are favorable for human occupation have been subject to the following previous disturbances *(check all that apply).*	
☐	Previous road construction and maintenance.
☐	Installations of utilities.
☐	Modern land use practices like plowing, grade modifications, brush clearing, and tree removal,
☐	Industrial, commercial, urban and/or suburban development
☐	Erosion and scouring by natural causes.
☐	Other (identify)
☐	NO PRIOR DISTURBANCES OR UNKNOWN (do not check any foregoing disturbances)
▪ **Previous Archeological Surveys**	
☐	The majority of the settings with high potential for archeological sites within or adjacent to the APE have been previously surveyed.

☐	The majority of the settings with high potential for archeological sites within or adjacent to the APE have not been previously surveyed.

Conclusions

- **Results of Previous Investigations**

☐	Previous surveys have covered a sufficient proportion of the APE or adjacent areas to conclude that the APE and adjacent areas are unlikely to contain archeological sites or cemeteries.
☐	Previous surveys have not covered a sufficient proportion of the APE or adjacent areas to draw inferences regarding the presence of archeological sites and cemeteries, or previous surveys show that archeological sites and/or cemeteries are present within the APE.

- **APE Integrity (Prehistoric Sites)**

The APE contains no deposits with sufficient integrity that prehistoric archeological sites would have the potential to address important questions. Any such sites would lack integrity of *(check all that apply):*

☐	Location
☐	Design
☐	Materials
☐	Association
☐	Other (*identify*)
☐	THE APE HAS THE POTENTIAL TO PRESERVE SITES WITH SUFFICIENT INTEGRITY TO QUALIFY THOSE SITES FOR INCLUSION IN THE NATIONAL REGISTER OF HISTORIC PLACES *(if true, do not check any of the forgoing aspects of integrity)*

- **APE Integrity (Historic-Age Sites)**

The APE contains no deposits with sufficient integrity that historic-age archeological sites would have the potential to address important questions. Any such sites would lack integrity of *(check all that apply)*:

☐	Location
☐	Design
☐	Materials
☐	Association
☐	Other (*identify*)
☐	THE APE HAS THE POTENTIAL TO PRESERVE SITES WITH SUFFICIENT INTEGRITY TO QUALIFY THOSE SITES FOR INCLUSION IN THE NATIONAL REGISTER OF HISTORIC PLACES *(if true, do not check any of the forgoing aspects of integrity)*
▪ **Results of Historic Map Research (Historic Age Sites)**	
☐	Historic map research shows that historic-era archeological deposits are not likely to occur within or adjacent to the APE
☒	Historic map research shows that historic-era archeological deposits could occur within or adjacent to the APE; this research was inconclusive; or this research was not completed because it was not necessary to reach justifiable conclusions.
▪ **Results of Map Research (Cemeteries)**	
☒	Map research shows that cemeteries are not likely to occur within or adjacent to the APE.
☐	Map research shows that cemeteries could occur within or adjacent to the APE, or this research was inconclusive.
▪ **Results of Landform Study**	
☐	The APE and adjacent areas occur in a setting that was not conducive to human occupation and activity
☒	The APE and adjacent areas occur in a setting that was conducive to human occupation and activity; research on this issue was inconclusive; or this research was not completed because it was not necessary to reach justifiable conclusions.

Recommendations

- **Shallow Deposits**

Evaluate the potential for shallow deposits (Holocene-age deposits less than three-feet in depth) within the APE to contain archeological historic properties and cemeteries. Make appropriate recommendations regarding the need for further work, including the need for shovel test pits or auger probes.

	No further work. Existing ROW.

- **Deep Deposits**

Evaluation of deep deposits (Holocene-age deposits of three feet or greater depth) may or may not be necessary, depending on the nature of the sediments within the APE and the depth of proposed impacts. If Holocene-age deposits extend to three feet or more within the APE and would be impacted by the project, make appropriate recommendations regarding the need for further work. If no deep, Holocene-age deposits occur within the APE note that they are absent and indicate that no additional work in needed. If the deep Holocene deposits are present but the project either would not affect them or they have been too extensively disturbed to hold intact archeological deposits, provide an appropriate justification that no additional work is needed.

	No further work. Extensively disturbed.

- **Recommendations Summary (select only one check box)**

☒ No further study needed	☐ Survey of entire APE	☐ Variable, see attached figure

- **Results Valid Within**

The purpose of considering adjacent areas is to define, when possible, a buffer zone around the APE to which findings of no effect and recommendations for no further work can be extended. No additional investigation should be necessary if a subsequent design change expands the APE into the buffer zone. In some cases, however, no buffer zone may be reasonably defined for the project or portions of the project as expansion of the APE may warrant survey. In such cases, check the middle box and indicate that the results are valid within zero feet of the APE.

☒ 50 feet of APE	☐ <00> feet of APE	☐ Variable, see attached figure

- **The Definition and Evaluation of this Horizontal Buffer Zone is Based on One or More of the Following Considerations**

☒	The integrity of the areas within and adjacent to the setting is affected by prior development.
☐	Previous investigations show that archeological materials are unlikely to exist in this area.
☐	Other (specify)

Findings of no effect to archeological historic properties and/or State Antiquities Landmarks and recommendations for no further work apply to all areas within the horizontal buffer zone, as specified in the previous section. Any design change within this study area would not require further action or review beyond those actions recommended in this study. Design changes that either extend beyond the buffer zone or result in potential impacts deeper than the impacts considered in this report would require additional review. Note that no buffer zone may be defined for some projects, based on local conditions.	

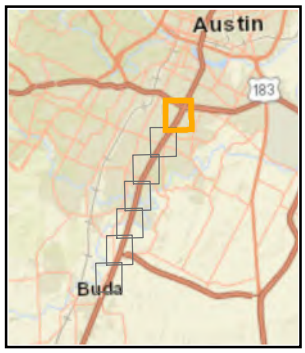
References Cited

Texas Historical Commission
Texas Archeological Sites Atlas. Electronic Website, https://atlas.thc.texas.gov/, accessed Nov 8, 2021.

Attachments

Attachment 1 – Map showing horizontal extent of APE, including existing ROW and proposed ROW/new easements.

Attachment 2 – Texas Archeological Sites Atlas of additional APE.



Survey Area

County Boundary

0 500 1,000

Feet

Google, TNRIS. Texas Google Imagery Service. 2018. 1:80,000; generated by Atkins; using ArcMap. < https://tnris.org/texas-google-imagery/> (06 July 2021).

mobility 35 CAPITAL AREA

Figure 1
Site Vicinity

Capital Express South
US 290W/SH 71 to SH 45SE

AUSTIN, TRAVIS COUNTY, TEXAS
CSJs 0015-13-077, 0016-01-113

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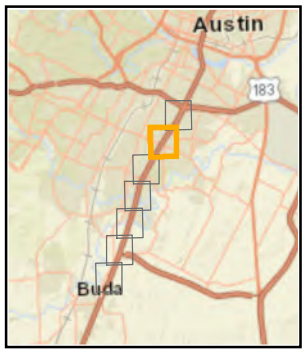

Survey Area

County Boundary

0 500 1,000

Feet

Google, TNRIS. Texas Google Imagery Service. 2018. 1:80,000; generated by Atkins; using ArcMap. < https://tnris.org/texas-google-imagery/> (06 July 2021).

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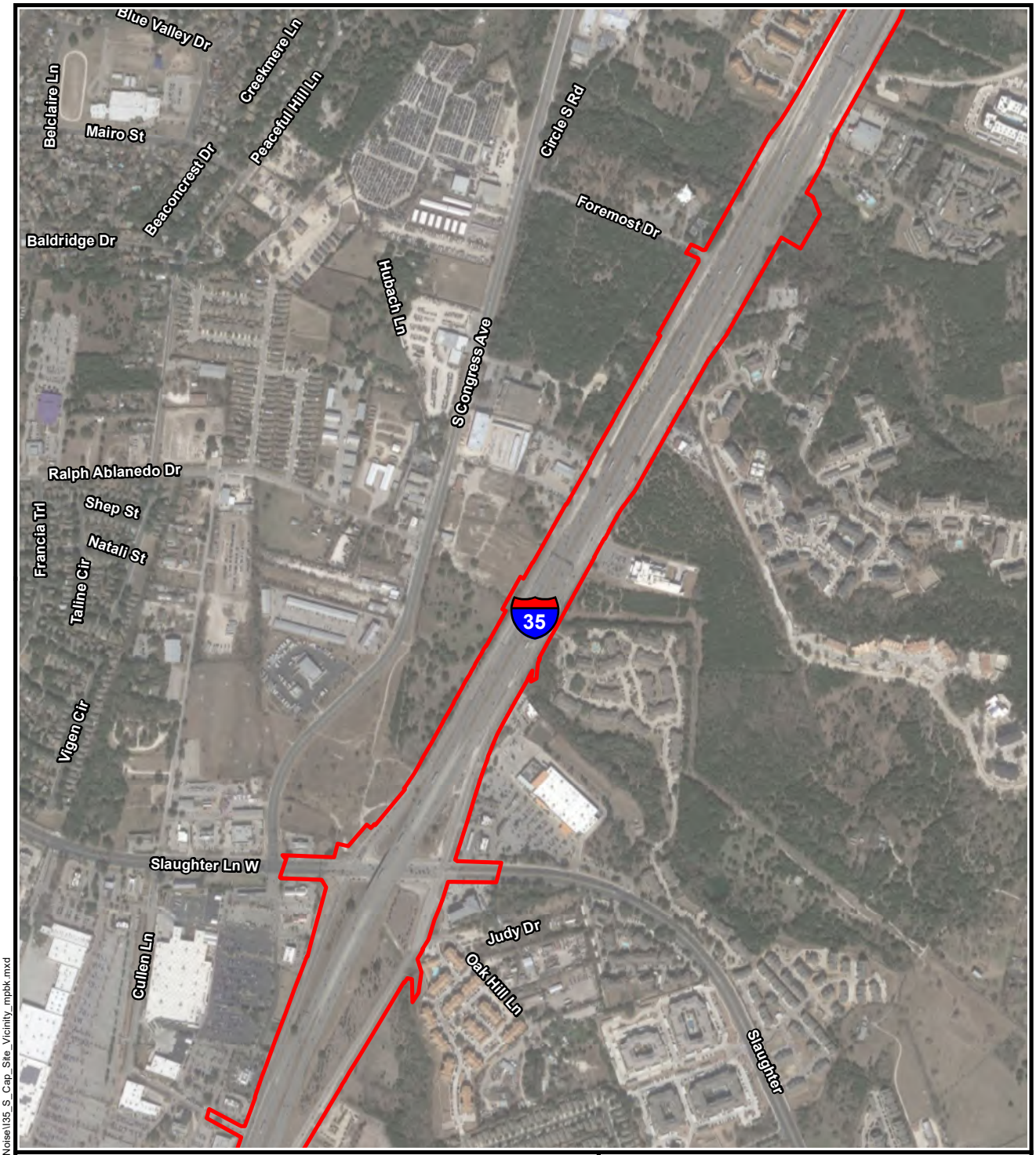

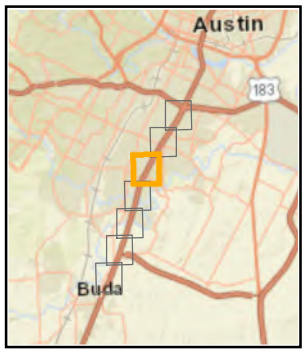

Survey Area

County Boundary

0 500 1,000

Feet

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mobility 35 CAPITAL AREA

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Capital Express South
US 290W/SH 71 to SH 45SE

AUSTIN, TRAVIS COUNTY, TEXAS
CSJs 0015-13-077, 0016-01-113

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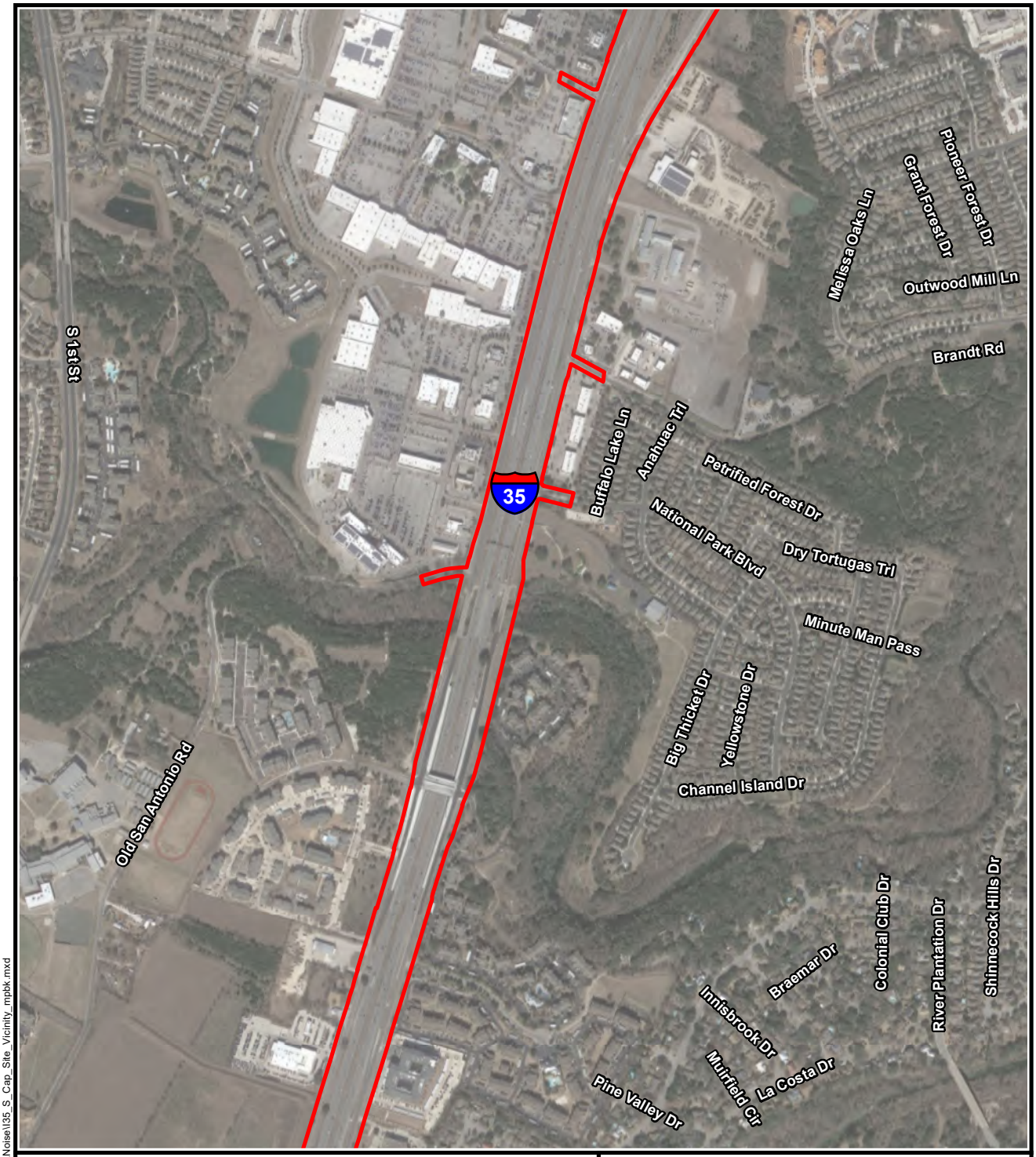

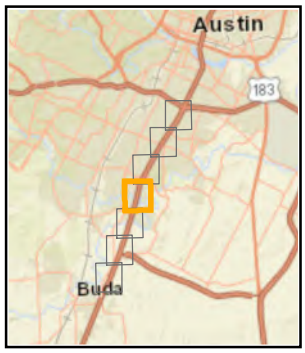

Survey Area

County Boundary

0 500 1,000

Feet

Google, TNRIS. Texas Google Imagery Service. 2018. 1:80,000; generated by Atkins; using ArcMap. < https://tnris.org/texas-google-imagery/> (06 July 2021).

mobility 35 CAPITAL AREA

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Capital Express South
US 290W/SH 71 to SH 45SE

AUSTIN, TRAVIS COUNTY, TEXAS
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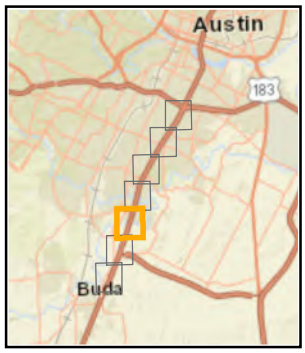

Survey Area

County Boundary

0 500 1,000

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mobility 35 CAPITAL AREA

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US 290W/SH 71 to SH 45SE

AUSTIN, TRAVIS COUNTY, TEXAS
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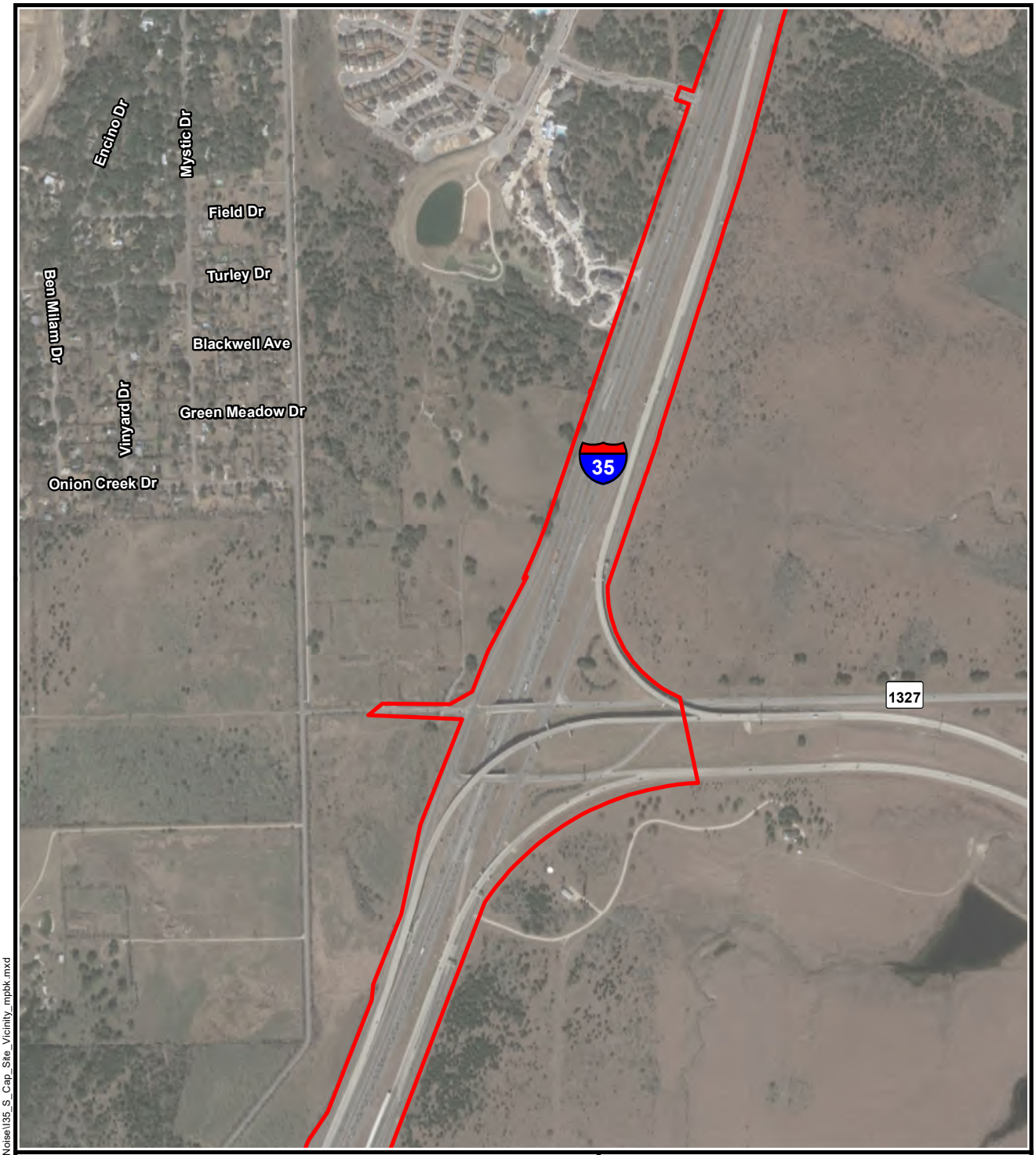

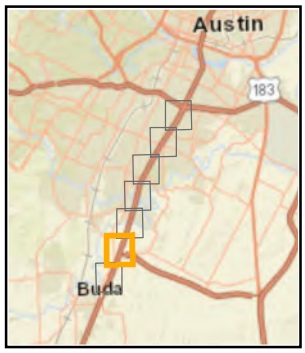

Survey Area

County Boundary

0 500 1,000

Feet

Google, TNRIS. Texas Google Imagery Service. 2018. 1:80,000; generated by Atkins; using ArcMap. < https://tnris.org/texas-google-imagery/> (06 July 2021).

mobility 35 CAPITAL AREA

Figure 1
Site Vicinity

Capital Express South
US 290W/SH 71 to SH 45SE

AUSTIN, TRAVIS COUNTY, TEXAS
CSJs 0015-13-077, 0016-01-113

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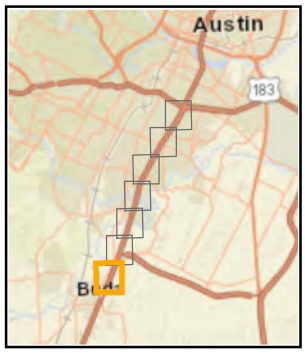

Survey Area

County Boundary

0 500 1,000

Feet

Google, TNRIS. Texas Google Imagery Service. 2018. 1:80,000; generated by Atkins; using ArcMap. < https://tnris.org/texas-google-imagery/> (06 July 2021).

mobility 35 CAPITAL AREA

Figure 1
Site Vicinity

Capital Express South
US 290W/SH 71 to SH 45SE

TRAVIS/HAYS COUNTY, TEXAS
CSJs 0015-13-077, 0016-01-113

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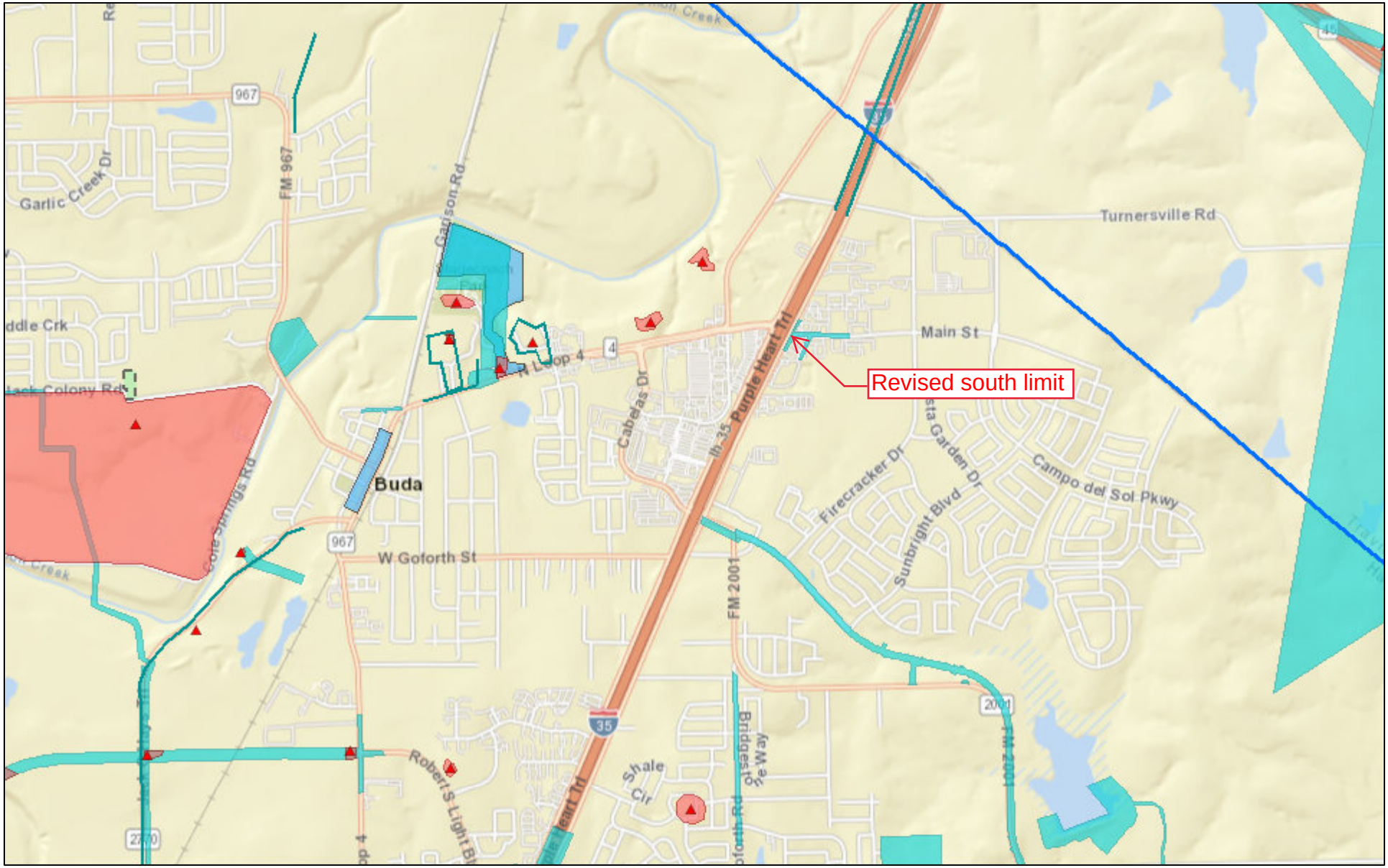
Attachment 2. Texas Archeological Sites Atlas



November 9, 2021

1:36,112

0 0.3 0.6 1.2 mi

0 0.5 1 2 km

Site Centroid
Site Centroid
Site Area
Archeology Project Line
Archeology Project Area
Cemeteries
National Register Districts
Regional Reviewer

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand),