



Re: Project Review under Section 106 of the National Historic Preservation Act and/or the Antiquities Code of Texas  
**201904329**  
West Cargo Demolition Project  
N/A  
Grapevine, TX

Dear Integrated Environmental Solutions, LLC:

Thank you for your submittal regarding the above-referenced project. This response represents the comments of the State Historic Preservation Officer, the Executive Director of the Texas Historical Commission (THC), pursuant to review under Section 106 of the National Historic Preservation Act.

The review staff led by Arlo McKee and Justin Kockritz has completed its review and has made the following determinations based on the information submitted for review:

**Above-Ground Resources**

- THC/SHPO concurs with information provided .
- No historic properties are present or affected by the project as proposed. However, if historic properties are discovered or unanticipated effects on historic properties are found, work should cease in the immediate area; work can continue where no historic properties are present. Please contact the THC's History Programs Division at 512-463-5853 to consult on further actions that may be necessary to protect historic properties.

**Archeology Comments**

- No historic properties present or affected. However, if buried cultural materials are encountered during construction or disturbance activities, work should cease in the immediate area; work can continue where no cultural materials are present. Please contact the THC's Archeology Division at 512-463-6096 to consult on further actions that may be necessary to protect the cultural remains.
- THC/SHPO concurs with information provided

We look forward to further consultation with your office and hope to maintain a partnership that will foster effective historic preservation. Thank you for your cooperation in this review process, and for your efforts to preserve the irreplaceable heritage of Texas. If you have any questions concerning our review or if we can be of further assistance, please email the following reviewers: [Arlo.McKee@thc.texas.gov](mailto:Arlo.McKee@thc.texas.gov), [justin.kockritz@thc.texas.gov](mailto:justin.kockritz@thc.texas.gov).

Sincerely,

For Mark Wolfe, State Historic Preservation Officer  
Executive Director, Texas Historical Commission

**Please do not respond to this email.**



25 January 2019

Mr. Mark Wolfe  
Texas Historical Commission  
1511 Colorado Street  
Austin, TX 78701

RE: Cultural Resources Analysis for the West Cargo Demolition Project, City of Grapevine, Dallas County, Texas

## **INTRODUCTION**

Integrated Environmental Solutions, LLC (IES) has been contracted by the Dallas/Fort Worth International Airport (DFW) to provide coordination with the Texas Historical Commission (THC) for the proposed West Cargo Demolition Project on DFW property. The proposed project area or Area of Potential Effects (APE) is located at the southeast corner of the intersection of W. Airfield Drive and W. 19<sup>th</sup> Street in Tarrant County, Texas (**Attachment A, Figure 1**). The APE is comprised of a direct and indirect APE. DFW is presently seeking approval from the Federal Aviation Administration (FAA) to modify the Airport Layout Plan (ALP) to reflect permanent improvements and is performing the necessary environmental review to support the ALP modification. Since the ALP modification is a federal action, the FAA will review the 17.7-acre area in accordance with the National Environmental Policy Act of 1969 (NEPA). Thus, coordination with the State Historic Preservation Officer (SHPO), represented by the THC, is necessary to comply with the National Historic Preservation Act (NHPA) of 1966 and the Antiquities Code of Texas (ACT). Therefore, we are requesting a review of the project to determine SHPO recommendations to proceed.

## **PERTINENT REGULATIONS**

### *Section 106 of the National Historical Preservation Act (NHPA)*

The NHPA (54 U.S. Code [USC] 300101), specifically Section 106 of the NHPA (54 USC 306108) requires the SHPO, represented by the THC, to administer and coordinate historic preservation activities, and to review and comment on all actions licensed by the federal government that will have an effect on properties listed in the NRHP, or eligible for such listing. Per 36 Code of Federal Regulations (CFR) Part 800, the federal agency responsible for overseeing the action must make a reasonable and good faith effort to identify cultural resources. Federal actions include, but are not limited to, construction, rehabilitation, repair projects, demolition, licenses, permits, loans, loan guarantees, grants, and federal property transfers.

### *Antiquities Code of Texas (ACT)*

As the DFW is a political subdivision of the State of Texas, it is required to comply with the ACT. The ACT was passed in 1969 and requires state agencies and political subdivisions of the state (i.e., cities, counties, river authorities, municipal utility districts, school districts, etc.) to notify the THC of ground-disturbing activities on public land that have the potential to impact archeological sites. Advance project review and coordination by the THC is required only for undertakings with more than 5 acres or 5,000 cubic yards of ground disturbance. However, if the activity occurs inside a designated historic district, affects a recorded archeological site, or requires onsite investigations the project will need to be reviewed by the THC regardless of project size.

## **AREA OF POTENTIAL EFFECTS**

The direct APE for the proposed project encompasses approximately 17.7 acres located at the southeast corner of W. Airfield Drive and W. 19<sup>th</sup> Street (**Attachment A, Figure 1**). Current plans call for the demolition of five buildings for the purpose of future redevelopment. As the project will require approval from the FAA, an assessment of indirect effects is required to comply with the NHPA. For this project, it was anticipated that the sole indirect effect of the undertaking would be related to the visual effects of above-ground elements associated with the demolition of existing buildings and future construction of new airport facilities. To account for these above-ground elements, the indirect effects assessment area will assess a 300-foot buffer surrounding the APE.

Integrated Environmental Solutions, LLC. | 610 Elm Street, Suite 300  
McKinney, Texas 75069 | [www.intenvsol.com](http://www.intenvsol.com)

**Telephone: 972.562.7672**

## METHODOLOGY

### *Background Research*

During the background review, a variety of literature and online sources were referenced to determine if potential cultural resources were located within the APE. These sources included the *Soil Survey of Tarrant County, Texas*, the Geologic Atlas of Texas (Dallas Sheet), the U.S. Geological Survey (USGS) topographic map, the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) digital soil database for Tarrant County, the National Archives and Records Administration's 1940 Census Enumeration District Maps, the Texas Historic Overlay, Potential Archeological Liability Map (PALM) of Tarrant County, records from Vought Heritage, and both past and current aerial photography of the proposed APE. Additionally, a file search of the Texas Archeological Site Atlas (TASA) and Texas Historical Sites Atlas (THSA) were performed to identify if archeological sites or any previously designated or identified historic properties were within the APE, including: NRHP properties, State Archeological Landmarks (SAL), and Official Texas Historical Markers (OTHM), which includes Recorded Texas Historic Landmarks (RTHL), historic cemetery markers, thematic markers, and 1936 Centennial Markers. This review was performed by Anne Gibson on 20 November 2018.

All photographs used within the analysis were taken by IES staff during a reconnaissance architectural survey. This survey was performed 06 November 2018. No archeological field assessments have been conducted as part of this project. IES archeologists used the photographs to assist in determining potential effects to archeological resources and if an archeological survey would be required.

### *National Register Evaluation Criteria*

The assessment of significance of a cultural resource property is based on federal guidelines and regulations. The criteria for evaluating properties for inclusion in the NRHP are codified under the authority of the NHPA, as amended (36 CFR Part 60.4 [a–d]), and the Advisory Council on Historic Preservation has set forth guidelines to use in determining site eligibility. Federal regulations indicate that “[t]he term ‘eligible for inclusion in the National Register’ includes both properties formally determined as such by the Secretary of the Interior and all other properties that meet National Register listing criteria” (36 CFR §800.2[e]). Based on Advisory Council guidelines, any cultural resource that is included in or eligible for inclusion in the NRHP is a historic property.

Subsequent to the identification of relevant historical themes and related research questions, four criteria for eligibility are applied. The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, material, workmanship, feeling, and association and:

- Criterion A: that are associated with events that have made a significant contribution to the broad patterns of our history; or
- Criterion B: that are association with the lives of persons significant in our past; or
- Criterion C: that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- Criterion D: that have yielded, or may be likely to yield, information important in prehistory or history [36 CFR Part 60.4(a–d)].

The principal objective is to determine whether a cultural resource possesses the potential to contribute to one or more of the above-defined criteria. Adequate information regarding site function, context, and chronological placement from both archeological and, if appropriate, historical perspectives is essential for cultural resources investigations. Because research questions vary as a result of geography, temporal period, and project design, determination of site context and chronological placement of cultural resources is a particularly important objective during the inventory and evaluation processes. Criterion D is generally associated with prehistoric, but also historic-era, archeological sites. Criteria A, B, and C typically reflect association with historic-era resources, rarely with prehistoric sites. Above ground non-archeological resources less than 50 years in age can be evaluated for NRHP eligibility under Criterion Consideration G. As the NRHP Criteria Evaluation exclude properties that are 50 years or less unless they are of exceptional importance, Criterion Consideration G allows for NRHP eligibility if the cultural resource has achieved exceptional importance on the local, state, or national level within the last 50 years.

**BACKGROUND REVIEW**

*Topographic Setting Geology, and Soils*

The USGS Grapevine 7.5' Quadrangle map illustrates the APE is located within a gently sloping upland setting (**Attachment A, Figure 2**). The APE is situated approximately 0.6-mile northeast of the watershed of Big Bear Creek. The project area occupies an elevation range of 610 to 620 feet (ft; 186 to 189 meters [m]) above modern sea level (amsl).

As shown by the *Soil Survey of Tarrant County, Texas*, there is only a single soil unit within the APE (Ressel 1981). The entire APE contains Houston Black-Urban land complex, 1 to 4 percent slopes, which consists of clay weathered from calcareous shale of the Taylor Marl and Eagleford Shale formations. These soils are typically located in upland settings within the Northern Blackland Prairie and are moderately well drained. Soil data was viewed from the USDA NRCS Web Soil Survey (Web Soil Survey 2018; **Attachment A, Figure 3**).

The APE is located within the Northern Blackland Prairie of the Texas Blackland Prairie ecoregion. This area is distinguished from surrounding regions by the gently rolling hills and fine-textured, black clayey soils with predominant prairie vegetation (Griffith et al. 2007). Vertisols dominate the Blackland Prairie ecoregion and consist of high content clay that has great shrinking and swelling potential. Soils in this area are underlain by the Eagle Ford Formation (Kef), which is comprised of shale, sandstone, and limestone dating to the Cretaceous (McGowen et al. 1987; USGS 2018).

*Texas Archeological Sites Atlas Review*

A file search within the TASA and THSA maintained by the THC identified no previously recorded archeological sites, National Register Properties, historical markers, or cemeteries located within the APE (TASA 2018; THSA 2018). The TASA records did identify six previously conducted archeological surveys and three previously recorded archeological sites located within 1 mile of the APE, which are summarized in **Table 1** and **Table 2**, respectively (**Attachment A, Figure 4**).

**Table 1: Recorded Archeological Surveys within 1 Mile of the APE**

Agency	ACT* Permit No.	Firm/Institution	Date	Survey Type	Location (Approximate)
No data	n/a	No data	1991	Area	0.26 mile southwest of APE
Texas Department of Transportation (TxDOT)	3561	Geo-Marine, Inc.	2004	Area	0.04 mile northwest of APE
DFW, FAA	4491	AR Consultants, Inc. (ARC)	2008	Linear	0.86 mile southwest of APE
DFW	7373	IES	2015	Area	0.40 mile northwest of APE
DFW	8215	IES	2018	Area	0.92 mile southwest of APE
DFW	8392	IES	2018	Area	0.24 mile west of APE

\*ACT=Antiquities Code of Texas

**Table 2: Previously Recorded Archeological Sites within 1 Mile of the APE**

Site	Time Period	Site Type	Cultural Materials	Topographic Setting	Reference
41TR126	Prehistoric; Historic	Lithic scatter; Farmstead	Lithic debitage, projectile point; nails, window glass, ceramics, bottle glass, brick fragments; well feature	Upland	Goodmaster 2017
41TR216	Historic	Surface scatter	Bottle glass, metal fragments, bed springs, pocket knife, whiteware	Upland	Trask 2007
41TR315	Historic	Historic artifact scatter	clear bottle glass, ceramics, 78-rpm record fragments, and brick fragments	Upland	Stone, Goodmaster, Chapman, Gibson 2018

*Direct APE Archeological Resource Potential*

Disturbance Analysis

Prior to the construction of DFW in the early 1970s, the APE was used for agricultural and ranching purposes. Since 1972, significant ground disturbances have transpired throughout the APE related to large-scale surface grading, contouring, and development of DFW facilities. As depicted within aerial photography, once the airport construction began, ground disturbances associated with large-scale grading occurred throughout the APE. In 1972, five buildings were constructed within the APE. The ground surrounding these buildings was paved over for parking, cargo loading, and maintenance areas. Only a few areas along the northern and western boundaries were kept as medians with maintained landscaping.

### Prehistoric Resources

Data presented within the PALM for Tarrant County indicates that the entire APE featured a negligible potential for both shallow and deeply-buried cultural deposits with reasonable contextual integrity. Similar conclusions were reported in 2007 and 2008 by AR Consultants, Inc. (ARC), who conducted intensive pedestrian surveys of 1,210 acres on the DFW property under Texas Antiquities Permit Number 4491. These results were published in the report *An Archaeological Survey for Chesapeake Energy Corporation at DFW International Airport Dallas and Tarrant Counties, Texas*. Through this study, three environmental zones were identified within the DFW that contain varying amounts of cultural resources probability. The current APE will have ground disturbances within Zone 1 (**Attachment A, Figure 5**).

Zone 1 is comprised of the Blackland Prairie Uplands ecoregion, which consists of mostly level clay or clay loam soils over a thin layer of limestone bedrock. Water permeates very slowly to the water table causing slow surface runoff and high shrink and swell potential. This setting has a low biotic diversity and is dominated by short grasses. Due to the limited resources available within the area, it has a low probability for containing prehistoric sites (Shelton et al. 2008). The THC reviewed and concurred with these conclusions.

Based on previous research, in combination with the current analysis, it has been determined the APE contains a negligible potential for containing prehistoric cultural deposits.

### Historic-Period Resources

Historic-period resources within North-Central Texas are primarily related to farmsteads, houses, and associated outbuildings and structures that date from the mid-19<sup>th</sup> to the mid-20<sup>th</sup> centuries. Typically, these types of resources are located along old roadways, but can be located along railroads, creeks, and open pastures. Although determining the presence of the earliest of these buildings and structures is problematic, maps depicting these features are widely available post-1920.

Historical aerial photography and maps identified several historic-age roads and a historic-aged structure were once located within the APE. The structure was associated with a farmstead, which is depicted as early as 1920 in a USDA soils map. A 1942 aerial photograph shows the farmstead was located along the northern boundary of the APE. By 1946, all structures associated with the farmstead had been demolished. Between 1970 and 1979, the construction of the current buildings and surrounding pavement destroyed any identifiable footprints of these historic-age features. As such, the APE is considered to have negligible potential for containing historic-period cultural resources.

## RESULTS

### *Archeological Resources*

Through the background review and review of photographs taken during the architectural survey, IES determined that the APE was significantly disturbed and contained no potential for archeological resources and would not require an archeological survey to be performed prior to construction.

### *Architectural Resources*

#### Direct APE



An architectural survey of the APE was performed 06 November 2018 to identify potentially significant architectural resources. During this survey, five buildings were identified within the direct APE (**Table 3; Attachment A, Figure 6**). Research of these buildings indicate each were constructed in 1972 during the original build phase of the airport. Although these buildings were not of historic age at the time of survey, each building was evaluated for significance under NRHP Criteria Consideration G per DFW's request to assess architectural resources of at least 45 years of age. During the architectural survey, photographs were taken of the exterior and interior of each building.

The largest of these recorded buildings was the Evergreen facility, which is located in the eastern part of the APE at 1530 W. 19<sup>th</sup> Street (**Attachment B, Photographs 1 through 22**). The Evergreen facility features offices, warehouse storage, and loading docks used by various air freight companies for cargo transportation. The building was constructed in the Modern style, which emphasized function over aesthetic embellishment. The facility is comprised of a flat roof, reinforced concrete slab exterior walls supported by steel beam framing, and a concrete foundation. The main entrance on the north wall of the building features three walls of glass paneling. The interior contains exposed metal beam roof supports and columns in the storage areas, second story cat walks, concrete block dividing walls, and insulated rooms (ceiling tiles, sheet rock walls, glass windows, wooden doors) for offices and common areas. Based on research, it was determined that the Evergreen facility is not of historic age, nor has it achieved exceptional importance since its construction and does not qualify for NHRP listing under Criteria Consideration G.

The west half of the APE features a row of four identical warehouses (Attachment B, Photographs 23 and 24), known as Building A (Attachment A, Photographs 25 through 31), Building B (Attachment B, Photographs 32 through 46), Building C (Attachment B, Photographs 47 through 61), and Building D (Attachment B, Photographs 62 through 69). The Modern style buildings feature flat roofs, reinforced concrete exterior walls, concrete block or sheet rock interior walls, steel beam framing, and concrete flooring. Each building contains warehouse and enclosed office space. A portion of Building C is currently being leased by an airport limousine service provider for maintenance and office space. In Building D, a portion of the space is used by a bussing contractor for DFW. Based the age of the buildings and general lack of significance in the history of DFW, Buildings A, B, C, and D are considered not eligible for NRHP listing under Criteria Consideration G.

Table 3: Architectural Resources within the Direct APE

Property Name	Property Location/ Address	Construction Date/ Architectural Elements	Photograph of Resource
Evergreen Facility	1530 W. 19 <sup>th</sup> Street	1972 Modern style, two-story building constructed of steel beam framing with concrete block and concrete slab walls. The front entrance features a series of large glass windows. The building contains numerous cargo-holds and loading docks.	
Building A	1900 W. Airfield Drive	1972 Modern style, two-story building constructed of steel beam framing with concrete block and concrete slab walls. The building features offices, storage, maintenance areas, and loading docks.	
Building B	1910 W. Airfield Drive	1972 Modern style, two-story building constructed of steel beam framing with concrete block and concrete slab walls. The building features offices, storage or maintenance areas, and loading docks.	

Property Name	Property Location/ Address	Construction Date/ Architectural Elements	Photograph of Resource
Building C	1920 W. Airfield Drive	1972 Modern style, two-story building constructed of steel beam framing with concrete block and concrete slab walls. The building features offices, storage or maintenance areas, and loading docks.	
Building D	1930 W. Airfield Drive	1972 Modern style, two-story building constructed of steel beam framing with concrete block and concrete slab walls. The building features offices, storage or maintenance areas, and loading docks.	

Indirect APE

As the project will require approval from the FAA, an assessment of indirect effects was required to comply with the NHPA. The sole potential indirect effect of the undertaking was determined to be related to visual effects associated with the demolition of multiple buildings and redevelopment of the area. To account for potential visual impacts associated with these above-ground elements, indirect impacts were considered within the direct APE footprint and within a 300-foot radius surrounding the direct APE. Thus, any standing structure or building 45 years or older within the direct and indirect APE was photographed and assessed for potential NRHP eligibility (see **Attachment A, Figure 1**).

Historical aerial photography indicates the indirect APE is located within a built and disturbed environment. Presently, most of the indirect APE occupies roadways, parking lots, and modern airport facilities. Through the reconnaissance survey of the indirect APE, it was determined that no historic-age resources were present. However, one resource was identified that was 45 years in age and was evaluated for NRHP eligibility under Criteria Consideration G (**Table 4**).

The American Airlines West Supply Warehouse was built in 1972 or 1973 as part of the original development of the airport. The Modern style two-story building features administrative offices, warehouse storage space, and numerous loading docks (**Attachment B, Photograph 70**). According to current and historic aerial photographs, the building appears to have been minimally altered since its initial construction. Based on our research, we have determined that the American Airlines West Supply Warehouse is not of historic age, nor has it achieved exceptional importance since its construction and does not qualify for NRHP listing under Criteria Consideration G.

Table 4: Architectural Resources within the Indirect APE

Property Name	Property Location/ Address	Construction Date/ Architectural Elements	Photograph of Resource
American Airlines West Supply Warehouse	1630 W. 19 <sup>th</sup> Street	1972 Modern style, two-story building constructed of steel beam framing with concrete slab walls. The building features offices, storage, and loading docks.	

### CONCLUSIONS

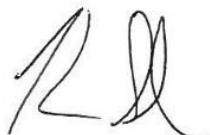
The entire APE has been exposed to significant previous ground disturbances and contains negligible potential for containing prehistoric or historic-age archeological sites. There are five modern architectural elements that are 45 years in age (Evergreen facility and Buildings A, B, C, and D) within the direct APE and one resource (American Airlines West Supply Warehouse) in the indirect APE. IES does not consider any of these buildings to be eligible for the NRHP under Criteria Consideration G.

Therefore, DFW is requesting concurrence with the findings of this desktop analysis and the recommendation that no historic properties will be affected under 36 CFR Part 800.4(d)(1) within the current APE. It is the recommendation of IES that the SHPO concur with these findings and the undertaking be permitted to continue without the need for further cultural resources investigations. However, in the unlikely event that any prehistoric or historic features or deposits are encountered during construction, work should cease in that area immediately and the THC should be contacted for further consultation.

If you have questions, please contact me by phone at (972) 562-7672 or via email at [kstone@intenvsol.com](mailto:kstone@intenvsol.com).

Sincerely,

Integrated Environmental Solutions, LLC



Kevin Stone, MA, RPA  
Cultural Resources Principal Investigator



## REFERENCES

- Griffith, Glenn, Sandy Bryce, James Omernik, and Anne Rogers  
2007 Ecoregions of Texas. Texas Commission on Environmental Quality.
- McGowen, J.H., C.V. Proctor, W.T. Haenggi, D.F. Reaser, and V.E. Barnes  
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- Shelton, Rebecca, Cody S. Davis, and S. Alan Skinner  
2008 *An Archaeological Survey for Chesapeake Energy Corporation at DFW International Airport Dallas and Tarrant Counties, Texas*. AR Consultants, Dallas.
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2018 *Texas Archeological Sites Atlas*. s.v. "Tarrant County"  
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- U.S. Geological Survey  
2018 U.S. Department of the Interior Mineral Resources On-Line Spatial Data Website.  
<http://mrddata.usgs.gov/sgmc/tx.html> (accessed November 2018).
- Web Soil Survey  
2018 U.S. Department of Agriculture–National Resources Conservation Service Website,  
<http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm> (accessed November 2018).

**ATTACHMENT A**

**Figures**

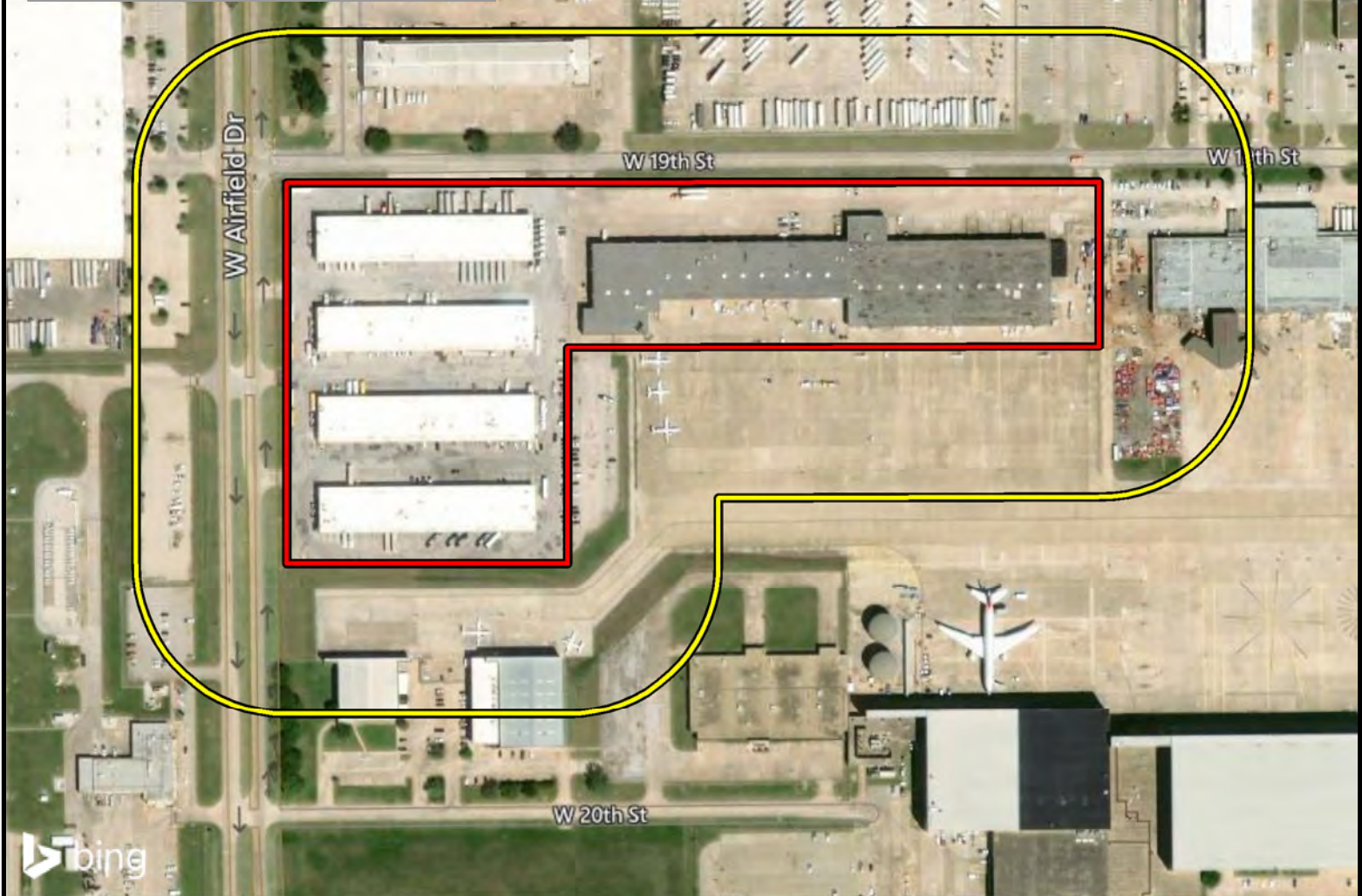
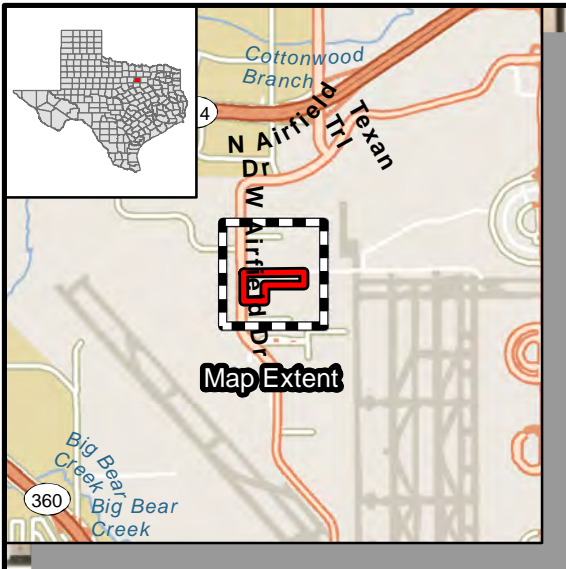
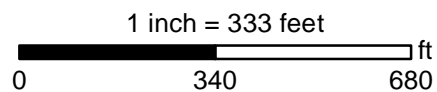


Figure 1  
General Location Map

- Area of Potential Effects - Direct
- Area of Potential Effects - Indirect



County: Tarrant  
 State: Texas  
 Date map created: 12/10/2018  
 Source: (c) 2009 Microsoft Corporation  
 and its data suppliers; ESRI 10.5  
 Streetmap  
 IES Project Ref: 03.006.066



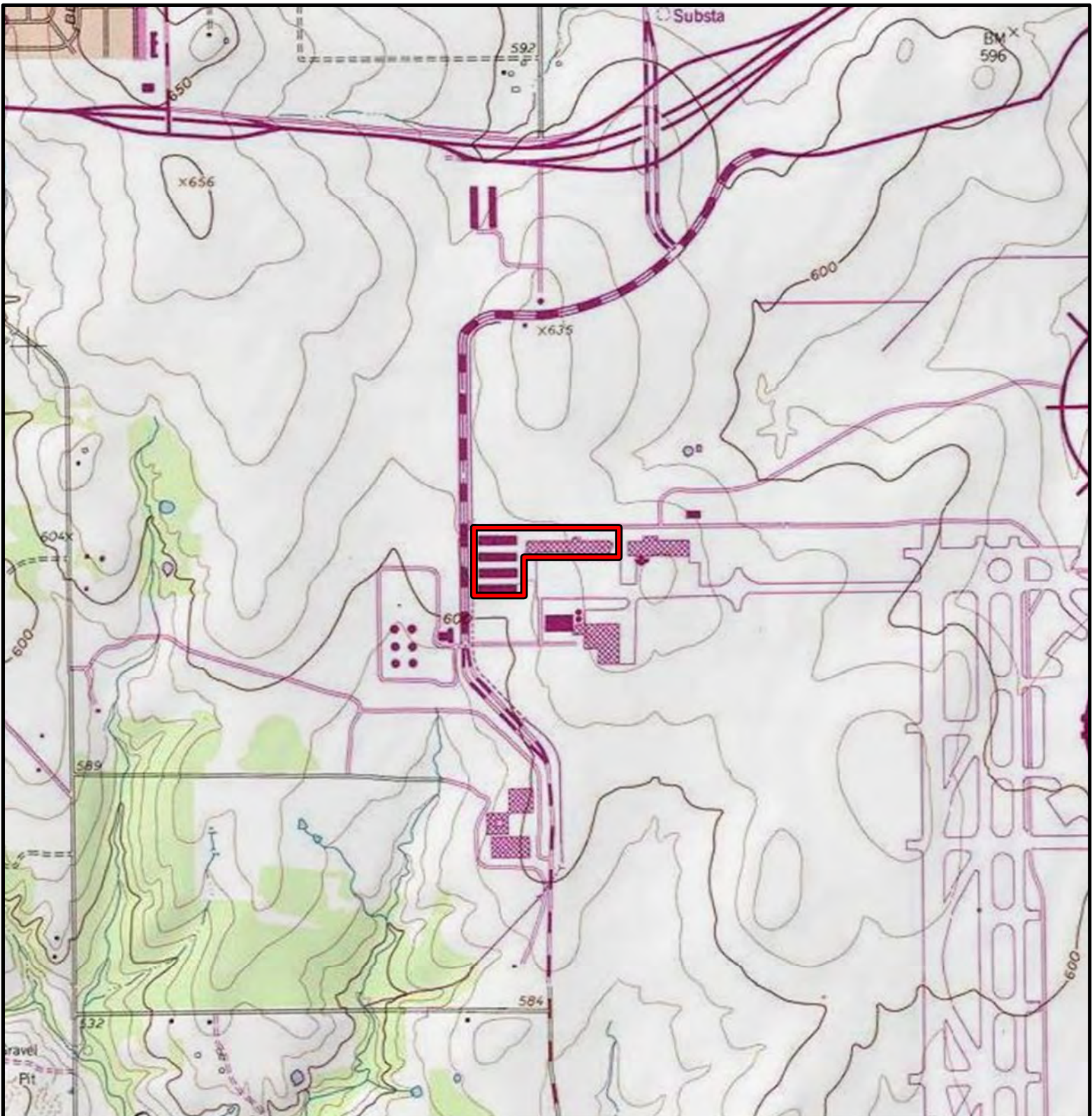
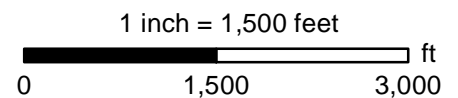


Figure 2  
Topographic Setting

 Area of Potential Effects



County: Tarrant  
 State: Texas  
 Date map created: 11/20/2018  
 Source: USGS topographic map  
 Grapevine (1982) 7.5-minute quadrangle  
 IES Project Ref: 03.006.066



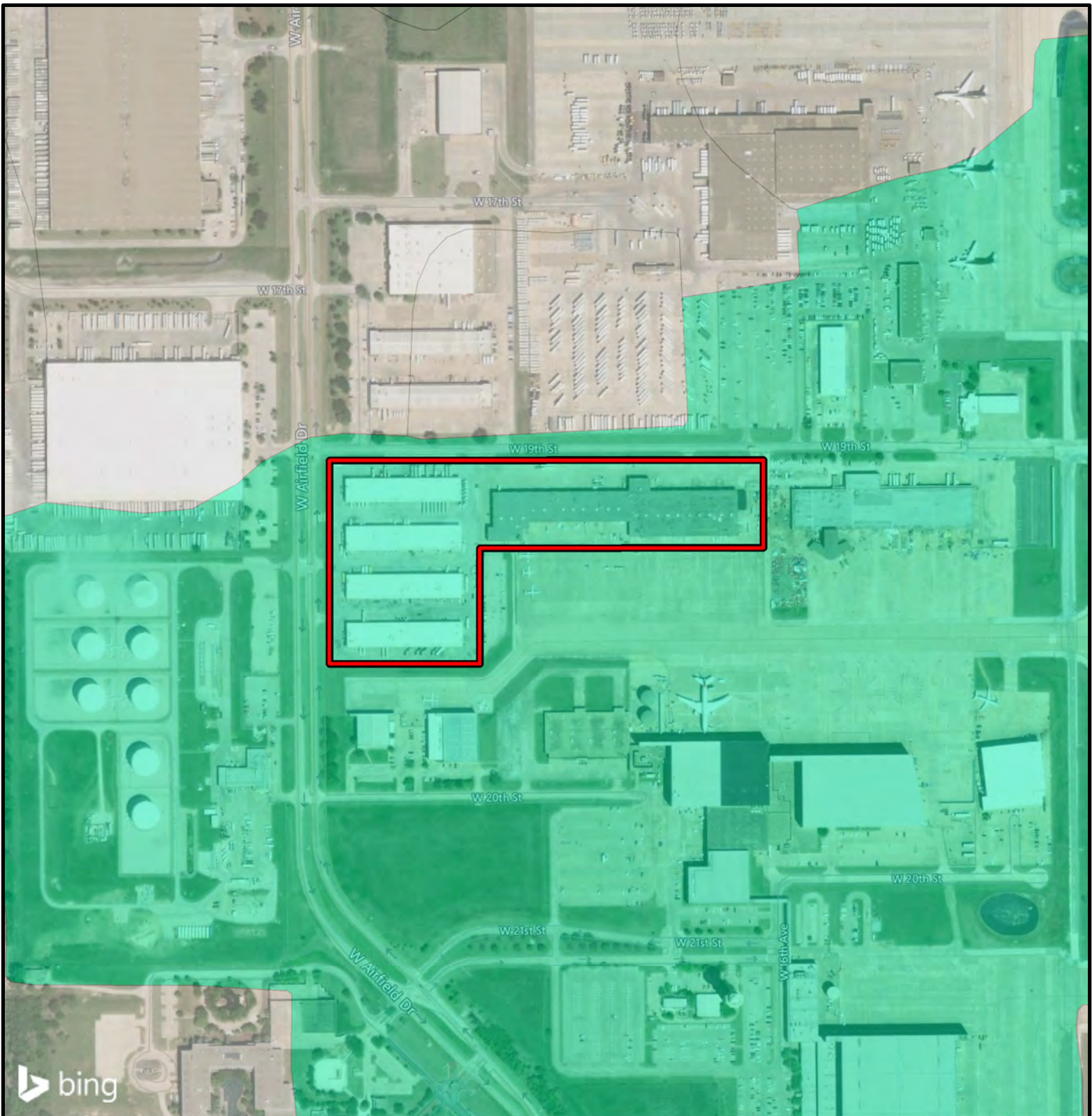


Figure 3  
Soil Map Units Located Within and  
Adjacent to the APE

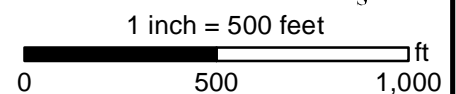
County: Tarrant  
State: Texas  
Date map created: 11/21/2018  
Source: 2007 USDA  
NRCS Digital Soils Database  
IES Project Ref: 03.006.066

 Area of Potential Effects

**Soil Description**

 35 - Houston Black-Urban land complex, 1 to 4 percent slopes

 Other Values



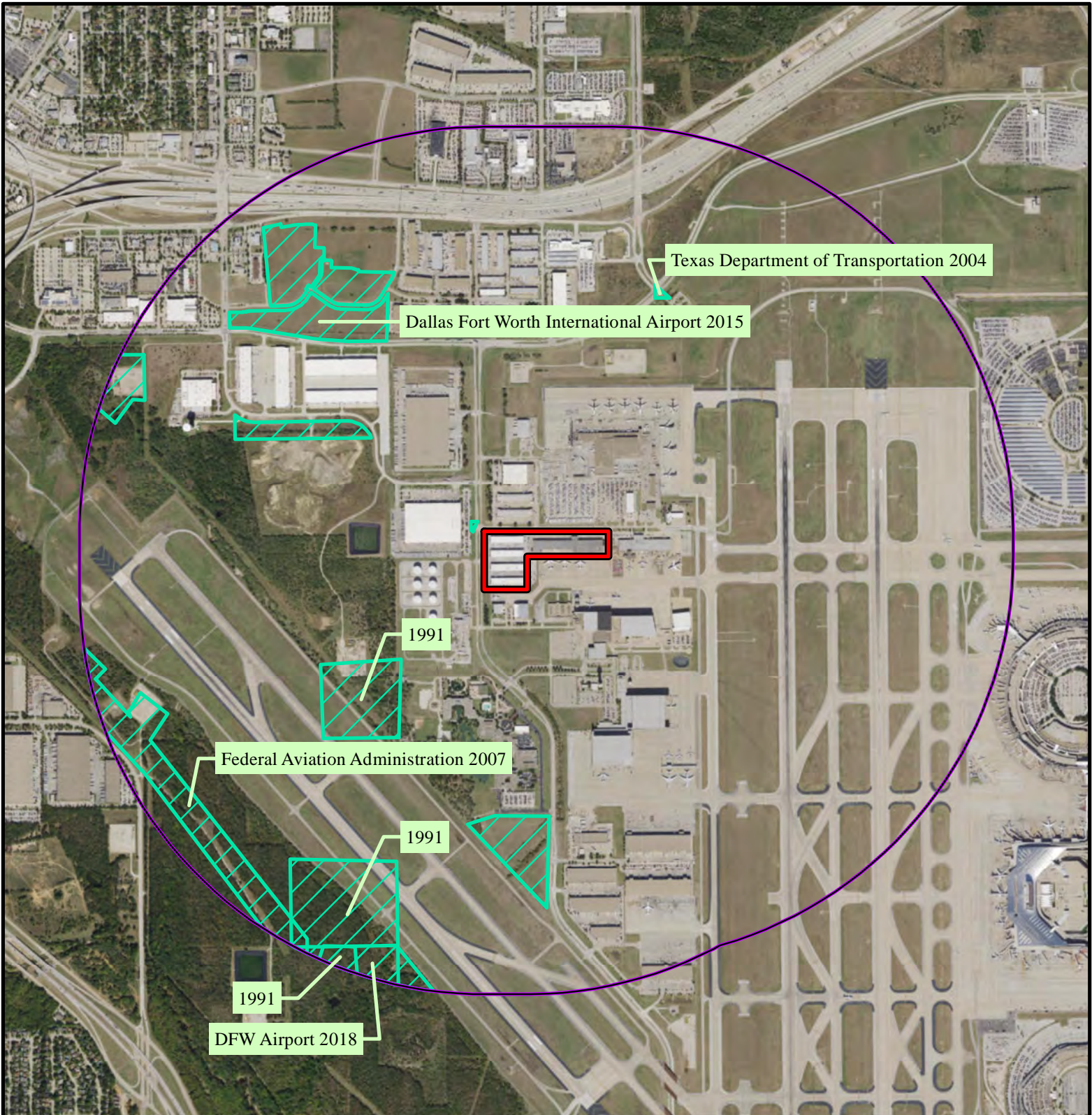
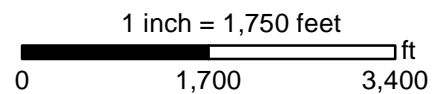


Figure 4  
 Previous Investigations within  
 1 Mile of the APE

- Area of Potential Effects
- Area of Potential Effects - 1 Mile Buffer
- Previous Archeological Survey



Counties: Tarrant  
 State: Texas  
 Date map created: 11/20/2018  
 Source: (c) 2009 Microsoft Corporation  
 and its data suppliers; ESRI 10.5  
 IES Project Ref: 03.006.066



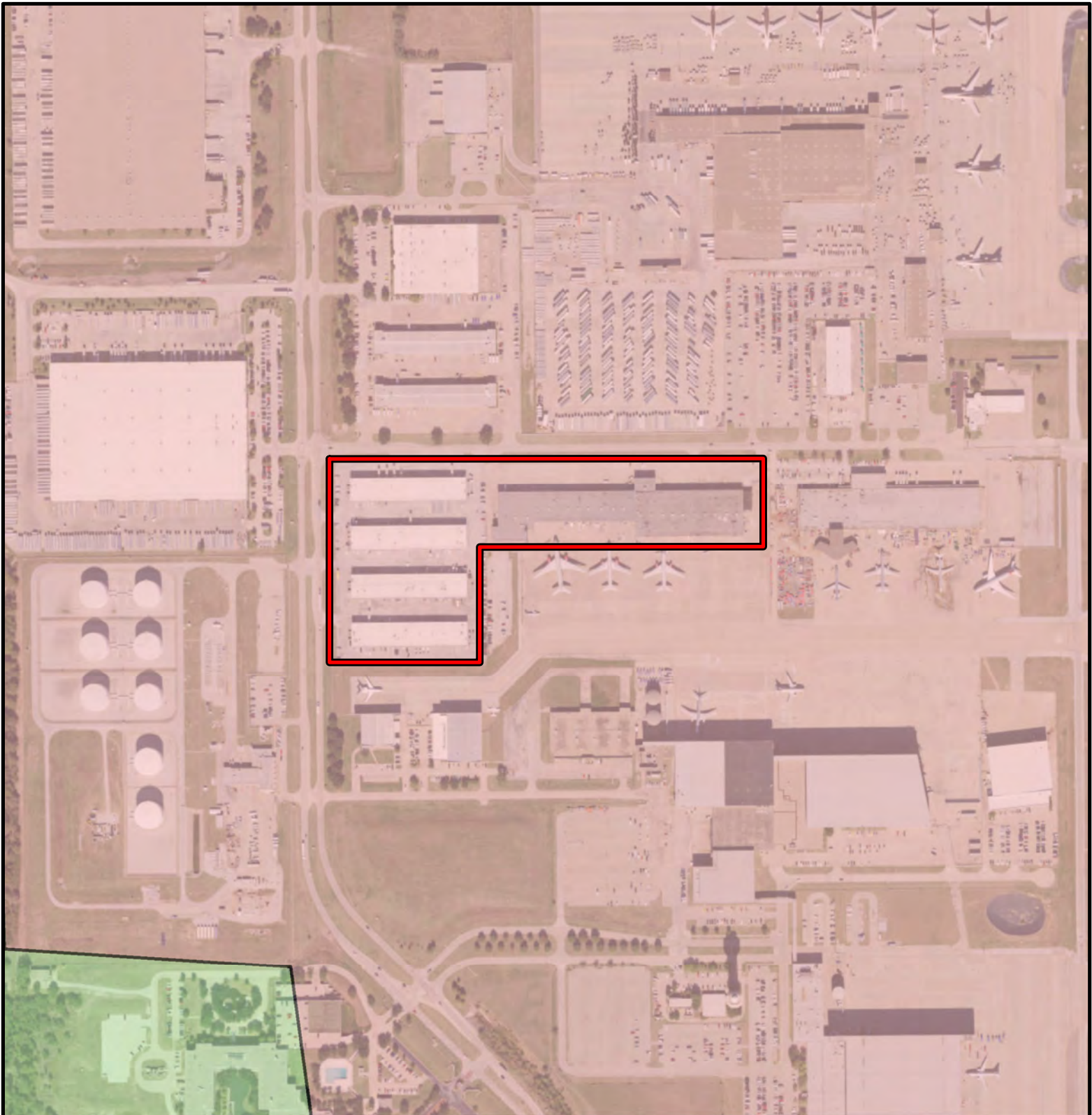


Figure 5  
Archeological Environmental  
Zone Map



Area of Potential Effects

**Archeological-Environmental Zone**



Zone 1 - Blackland Prairies Uplands



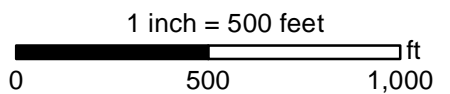
Zone 2 - Eastern Cross Timbers



Zone 3 - Bear Creek Floodplain



Counties: Tarrant  
State: Texas  
Date map created: 11/20/2018  
Source: (c) 2009 Microsoft Corporation  
and its data suppliers; ESRI 10.5  
IES Project Ref: 03.006.066



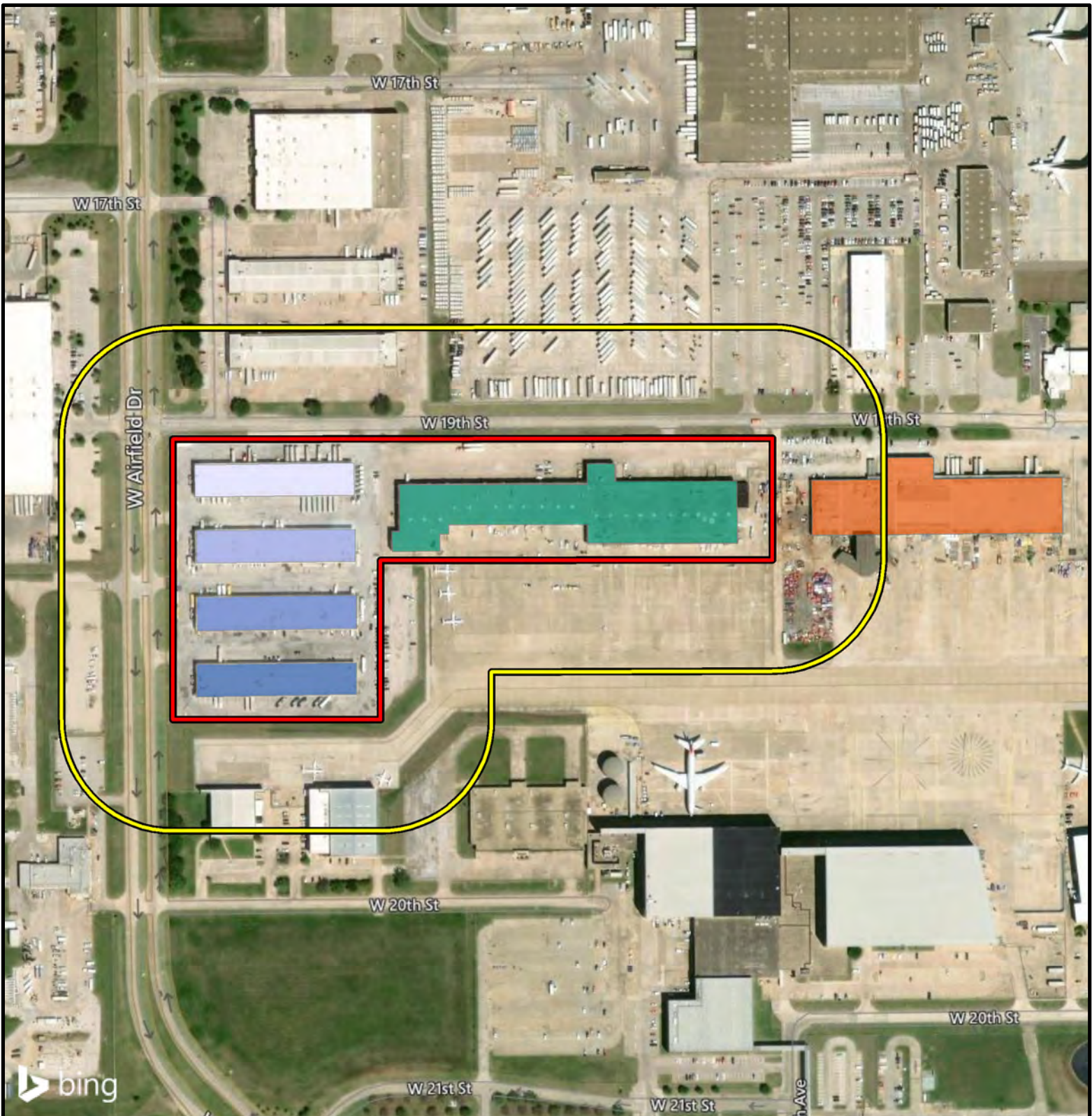


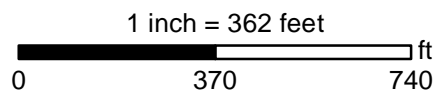
Figure 6  
Architectural Resource Map

County: Tarrant  
 State: Texas  
 Date map created: 12/10/2018  
 Source: (c) 2009 Microsoft Corporation  
 and its data suppliers; ESRI 10.5  
 Streetmap  
 IES Project Ref: 03.006.066

- Area of Potential Effects - Direct
- Area of Potential Effects - Indirect

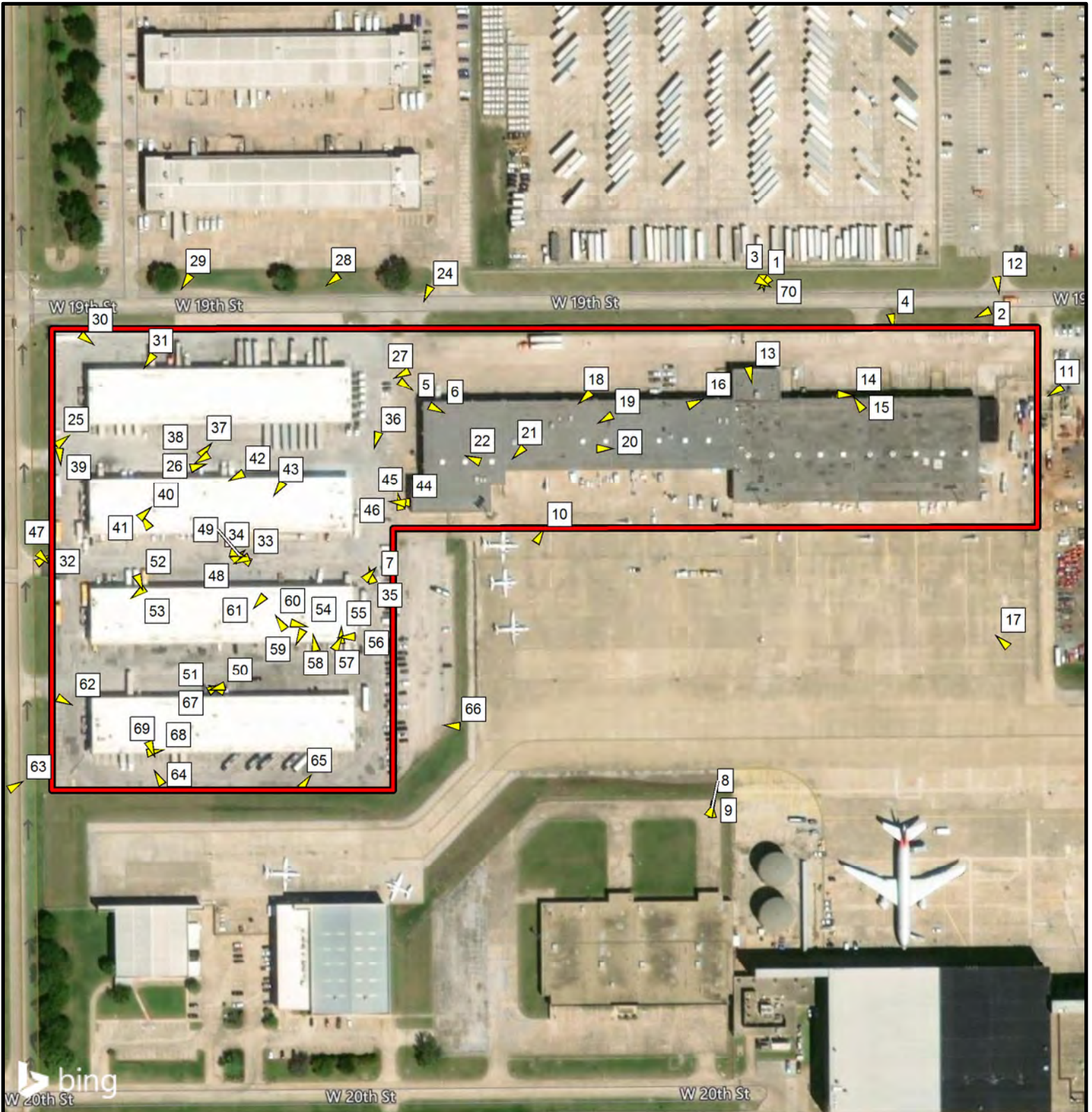
**Architectural Resource**

- Building A
- Building B
- Building C
- Building D
- Evergreen Facility
- American Airlines West Supply





**ATTACHMENT B**  
**Representative Photographs**

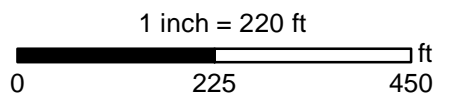


Attachment B  
Photograph Location Map

- Area of Potential Effects
- ▲ Photograph Location



County: Tarrant  
 State: Texas  
 Date map created: 12/11/2018  
 Source: (c) 2009 Microsoft Corporation  
 and its data suppliers; ESRI 10.5  
 IES Project Ref: 03.006.066





Photograph 1 – Evergreen Facility, View to the South



Photograph 2 - Evergreen Facility, View to the Southwest



Photograph 3 - Evergreen Facility, View to the Southwest



Photograph 4 - Evergreen Facility, View to the South



Photograph 5 - Evergreen Facility, View to the Southeast



Photograph 6 - Evergreen Facility, View to the East



Photograph 7 - Evergreen Facility, View to the Northwest



Photograph 8 - Evergreen Facility, View to the North



Photograph 9 - Evergreen Facility, View to the Northeast



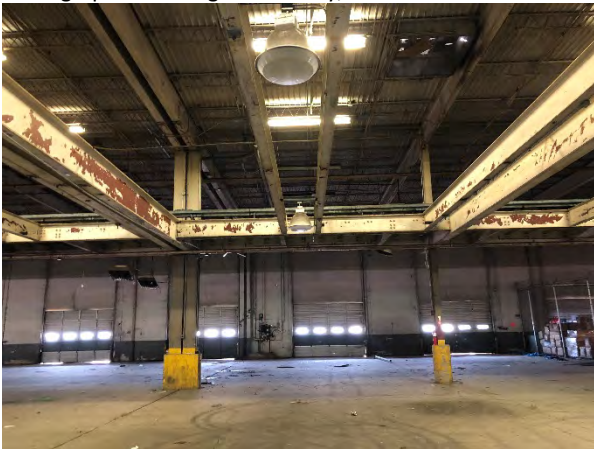
Photograph 10 - Evergreen Facility, View to the North



Photograph 11 - Evergreen Facility, View to the West



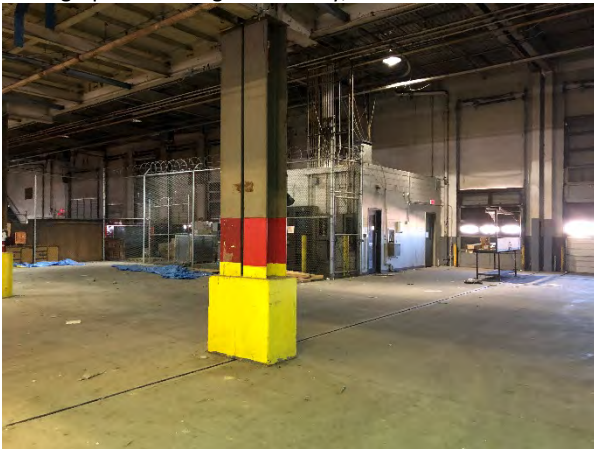
Photograph 12 - Evergreen Facility, View to the South



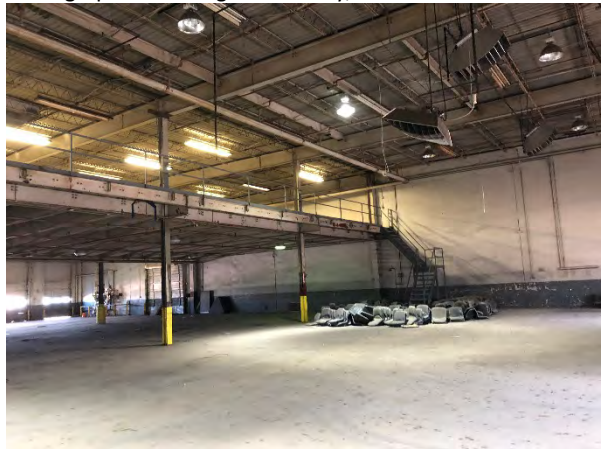
Photograph 13 - Evergreen Facility, Interior



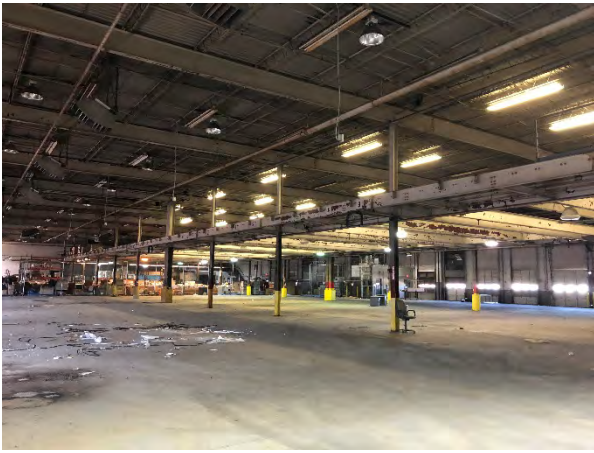
Photograph 14 - Evergreen Facility, Interior



Photograph 15 - Evergreen Facility, Interior



Photograph 16 - Evergreen Facility, Interior



Photograph 17 – Evergreen Facility, Interior



Photograph 18 – Evergreen Facility, Interior



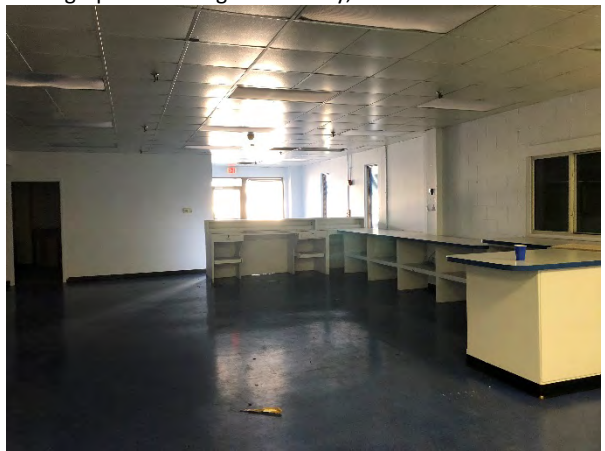
Photograph 19 – Evergreen Facility, Interior



Photograph 20 – Evergreen Facility, Interior



Photograph 21 – Evergreen Facility, Interior



Photograph 22 – Evergreen Facility, Interior



Photograph 23 – Building A, B, C, & D, View to Southeast



Photograph 24 – Building A, B, C, & D, View to the Southwest



Photograph 25 – Building A, View to the Northeast



Photograph 26 – Building A, View to the East



Photograph 27 – Building A, View to the West



Photograph 28 – Building A, View to the South



Photograph 29 – Building A, View to the South



Photograph 30 – Building A, Interior



Photograph 31 – Building A, Interior



Photograph 32 – Building B, View to the Northeast



Photograph 33 – Building B, View to the Northwest



Photograph 34 – Building B, View to the Northeast



Photograph 35 – Building B, View to the North



Photograph 36 – Building B, View to the South



Photograph 37 – Building B, View to the South



Photograph 38 – Building B, View to the Southwest



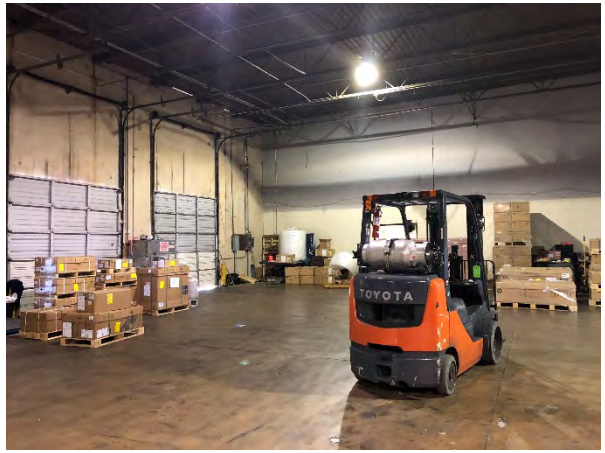
Photograph 39 – Building B, Interior



Photograph 40 – Building B, Interior



Photograph 41 – Building B, Interior



Photograph 42 – Building B, Interior



Photograph 43 – Building B, Interior



Photograph 44 – Building B, Interior



Photograph 45 – Building B, Interior



Photograph 46 – Building B, Interior



Photograph 47 – Building C, View to the Southeast



Photograph 48 – Building C, View to the Southwest





Photograph 49 – Building C, View to the Northeast



Photograph 50 – Building C, View to the Southeast



Photograph 51 – Building C, View to the Northwest



Photograph 52 – Building C, Interior



Photograph 53 – Building C, Interior



Photograph 54 – Building C, Interior



Photograph 55 – Building C, Interior



Photograph 56 – Building C, Interior



Photograph 57 – Building C, Interior



Photograph 58 – Building C, Interior



Photograph 59 – Building C, Interior



Photograph 60 – Building C, Interior



Photograph 61 – Building C, Interior



Photograph 62 – Building D, View to the East



Photograph 63 – Building D, View to the Northeast



Photograph 64 – Building D, View to the North



Photograph 65 – Building D, View to the Northeast



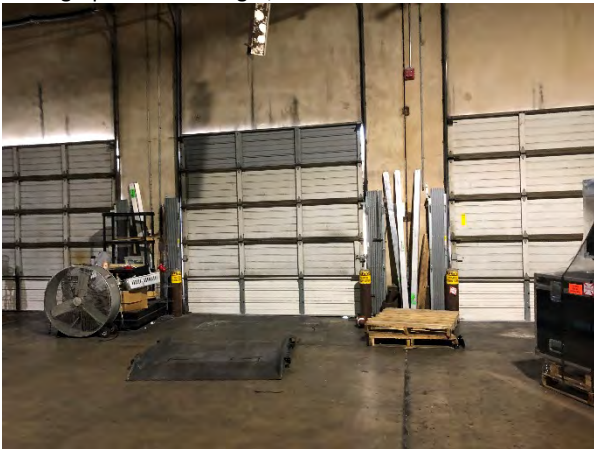
Photograph 66 – Building D, View to the West



Photograph 67 – Building D, View to the Southeast



Photograph 68 – Building D, Interior



Photograph 69 – Building D, Interior



Photograph 70 – American Airlines West Supply Warehouse, View to the East



Re: Project Review under Section 106 of the National Historic Preservation Act and/or the Antiquities Code of Texas  
**201904329**  
West Cargo Demolition Project  
N/A  
Grapevine, TX

Dear Integrated Environmental Solutions, LLC:

Thank you for your submittal regarding the above-referenced project. This response represents the comments of the State Historic Preservation Officer, the Executive Director of the Texas Historical Commission (THC), pursuant to review under Section 106 of the National Historic Preservation Act.

The review staff led by Arlo McKee and Justin Kockritz has completed its review and has made the following determinations based on the information submitted for review:

**Above-Ground Resources**

- THC/SHPO concurs with information provided .
- No historic properties are present or affected by the project as proposed. However, if historic properties are discovered or unanticipated effects on historic properties are found, work should cease in the immediate area; work can continue where no historic properties are present. Please contact the THC's History Programs Division at 512-463-5853 to consult on further actions that may be necessary to protect historic properties.

**Archeology Comments**

- No historic properties present or affected. However, if buried cultural materials are encountered during construction or disturbance activities, work should cease in the immediate area; work can continue where no cultural materials are present. Please contact the THC's Archeology Division at 512-463-6096 to consult on further actions that may be necessary to protect the cultural remains.
- THC/SHPO concurs with information provided

We look forward to further consultation with your office and hope to maintain a partnership that will foster effective historic preservation. Thank you for your cooperation in this review process, and for your efforts to preserve the irreplaceable heritage of Texas. If you have any questions concerning our review or if we can be of further assistance, please email the following reviewers: [Arlo.McKee@thc.texas.gov](mailto:Arlo.McKee@thc.texas.gov), [justin.kockritz@thc.texas.gov](mailto:justin.kockritz@thc.texas.gov).

Sincerely,

For Mark Wolfe, State Historic Preservation Officer  
Executive Director, Texas Historical Commission

**Please do not respond to this email.**



31 January 2019

Mr. Mark Wolfe  
Texas Historical Commission  
1511 Colorado Street  
Austin, TX 78701

RE: Cultural Resources Analysis for the Kitty Hawk Aircargo Building Demolition Project, City of Grapevine, Tarrant County, Texas

## **INTRODUCTION**

Integrated Environmental Solutions, LLC (IES) has been contracted by the Dallas/Fort Worth International Airport (DFW) to provide coordination with the Texas Historical Commission (THC) for the proposed Kitty Hawk Aircargo Demolition Project on DFW property. The proposed project area or Area of Potential Effects (APE) is located 0.15-mile east of the intersection of W. Airfield Drive and W. 20<sup>th</sup> Street in Tarrant County, Texas (**Attachment A, Figure 1**). The APE is comprised of a direct and indirect APE. DFW is presently seeking approval from the Federal Aviation Administration (FAA) to modify the Airport Layout Plan (ALP) to reflect permanent improvements and is performing the necessary environmental review to support the ALP modification. Since the ALP modification is a federal action, the FAA will review the 3.2-acre area in accordance with the National Environmental Policy Act of 1969 (NEPA). Thus, coordination with the State Historic Preservation Officer (SHPO), represented by the THC, is necessary to comply with the National Historic Preservation Act (NHPA) of 1966 and the Antiquities Code of Texas (ACT). Therefore, we are requesting a review of the project to determine SHPO recommendations to proceed.

## **PERTINENT REGULATIONS**

### *Section 106 of the National Historical Preservation Act (NHPA)*

The NHPA (54 U.S. Code [USC] 300101), specifically Section 106 of the NHPA (54 USC 306108) requires the SHPO, represented by the THC, to administer and coordinate historic preservation activities, and to review and comment on all actions licensed by the federal government that will have an effect on properties listed in the NRHP, or eligible for such listing. Per 36 Code of Federal Regulations (CFR) Part 800, the federal agency responsible for overseeing the action must make a reasonable and good faith effort to identify cultural resources. Federal actions include, but are not limited to, construction, rehabilitation, repair projects, demolition, licenses, permits, loans, loan guarantees, grants, and federal property transfers.

### *Antiquities Code of Texas (ACT)*

As the DFW is a political subdivision of the State of Texas, it is required to comply with the ACT. The ACT was passed in 1969 and requires state agencies and political subdivisions of the state (i.e., cities, counties, river authorities, municipal utility districts, school districts, etc.) to notify the THC of ground-disturbing activities on public land that have the potential to impact archeological sites. Advance project review and coordination by the THC is required only for undertakings with more than 5 acres or 5,000 cubic yards of ground disturbance. However, if the activity occurs inside a designated historic district, affects a recorded archeological site, or requires onsite investigations the project will need to be reviewed by the THC regardless of project size.

## **AREA OF POTENTIAL EFFECTS**

The direct APE for the proposed project encompasses approximately 3.2 acres located at the eastern terminus of W. 20<sup>th</sup> Street (**Attachment A, Figure 1**). Current plans call for the demolition of the Kitty Hawk Aircargo building and its associated infrastructure for future development of new airport facilities. As the project will require approval from the FAA, an assessment of indirect effects is required to comply with the NHPA. For this project, it was anticipated that the sole indirect effect of the undertaking would be related to the visual effects of above-ground elements associated with the demolition of the existing building and proposed construction of new airport facilities. To account for these above-ground elements, the indirect effects assessment area will assess a 300-foot buffer surrounding the APE.

Integrated Environmental Solutions, LLC. | 610 Elm Street, Suite 300  
McKinney, Texas 75069 | [www.intenvsol.com](http://www.intenvsol.com)

**Telephone: 972.562.7672**

## METHODOLOGY

During the background review, a variety of literature and online sources were referenced to determine if potential cultural resources were located within the APE. These sources included the *Soil Survey of Tarrant County, Texas*, the Geologic Atlas of Texas (Dallas Sheet), the U.S. Geological Survey (USGS) topographic map, the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) digital soil database for Tarrant County, the National Archives and Records Administration's 1940 Census Enumeration District Maps, the Texas Historic Overlay, Potential Archeological Liability Map (PALM) of Tarrant County, records from Vought Heritage, and both past and current aerial photography of the proposed APE. Additionally, a file search of the Texas Archeological Site Atlas (TASA) and Texas Historical Sites Atlas (THSA) were performed to identify if archeological sites or any previously designated or identified historic properties were within the APE, including: NRHP properties, State Archeological Landmarks (SAL), and Official Texas Historical Markers (OTHM), which includes Recorded Texas Historic Landmarks (RTHL), historic cemetery markers, thematic markers, and 1936 Centennial Markers. This review was performed by Anne Gibson on 21 November 2018.

All photographs used within the analysis were taken by IES staff during a reconnaissance architectural survey. This survey was performed 06 November 2018. No archeological field assessments have been conducted as part of this project. IES archeologists used the photographs to assist in determining potential effects to archeological resources and if an archeological survey would be required.

### *National Register Evaluation Criteria*

The assessment of significance of a cultural resources property is based on federal guidelines and regulations. The criteria for evaluating properties for inclusion in the NRHP are codified under the authority of the NHPA, as amended (36 CFR Part 60.4 [a–d]), and the Advisory Council on Historic Preservation has set forth guidelines to use in determining site eligibility. Federal regulations indicate that “[t]he term ‘eligible for inclusion in the National Register’ includes both properties formally determined as such by the Secretary of the Interior and all other properties that meet National Register listing criteria” (36 CFR §800.2[e]). Based on Advisory Council guidelines, any cultural resource that is included in or eligible for inclusion in the NRHP is a historic property.

Subsequent to the identification of relevant historical themes and related research questions, four criteria for eligibility are applied. The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, material, workmanship, feeling, and association and:

- Criterion A: that are associated with events that have made a significant contribution to the broad patterns of our history; or
- Criterion B: that are association with the lives of persons significant in our past; or
- Criterion C: that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- Criterion D: that have yielded, or may be likely to yield, information important in prehistory or history [36 CFR Part 60.4(a–d)].

The principal objective is to determine whether a cultural resource possesses the potential to contribute to one or more of the above-defined criteria. Adequate information regarding site function, context, and chronological placement from both archeological and, if appropriate, historical perspectives is essential for cultural resources investigations. Because research questions vary as a result of geography, temporal period, and project design, determination of site context and chronological placement of cultural resources is a particularly important objective during the inventory and evaluation processes. Criterion D is generally associated with prehistoric, but also historic-era, archeological sites. Criteria A, B, and C typically reflect association with historic-era resources, rarely with prehistoric sites. As mentioned previously in this report, above ground non-archeological resources less than 50 years in age can be evaluated for NRHP eligibility under Criteria Consideration G. As the NRHP Criteria Evaluation exclude properties that are 50 years or less unless they are of exceptional importance, Criteria Consideration G allows for NRHP eligibility if the cultural resource has achieved exceptional importance on the local, state, or national level within the last 50 years.

## BACKGROUND REVIEW

### *Topographic Setting Geology, and Soils*

The USGS Grapevine 7.5' Quadrangle map illustrates the APE is located within a gently sloping upland setting (**Attachment A, Figure 2**). The APE is situated approximately 0.5-mile northeast of the watershed of Big Bear Creek. The project area occupies an elevation of 613 feet (ft; 186 meters [m]) above modern sea level (amsl).

As shown by the *Soil Survey of Tarrant County, Texas*, there is only a single soil unit within the APE (Ressel 1981). The entire APE contains Houston Black-Urban land complex, 1 to 4 percent slopes, which consists of clay weathered from calcareous shale of the Taylor Marl and Eagleford Shale formations. These soils are typically located in upland settings within the Northern Blackland Prairie and are moderately well drained. Soil data was viewed from the USDA NRCS Web Soil Survey (Web Soil Survey 2018; **Attachment A, Figure 3**).

The APE is located within the Northern Blackland Prairie of the Texas Blackland Prairie ecoregion. This area is distinguished from surrounding regions by the gently rolling hills and fine-textured, black clayey soils with predominant prairie vegetation (Griffith et al. 2007). Vertisols dominate the Blackland Prairie ecoregion and consist of high content clay that has great shrinking and swelling potential. Soils in this area are underlain by the Eagle Ford Formation (Kef), which is comprised of shale, sandstone, and limestone dating to the Cretaceous (McGowen et al. 1987; USGS 2018).

#### *Archeological Sites Atlas Review*

A file search within the TASA and THSA maintained by the THC identified no previously recorded archeological sites, National Register Properties, historical markers, or cemeteries located within the APE (TASA 2018; THSA 2018). The TASA records did identify six previously conducted archeological surveys and three previously recorded archeological sites located within 1 mile of the APE, which are summarized in **Table 1** and **Table 2**, respectively (**Attachment A, Figure 4**).

**Table 1: Recorded Archeological Surveys within 1 Mile of the APE**

Agency	ACT* Permit No.	Firm/Institution	Date	Survey Type	Location (Approximate)
No data	n/a	No data	1991	Area	0.26 mile southwest of APE
Texas Department of Transportation (TxDOT)	3561	Geo-Marine, Inc.	2004	Area	0.04 mile northwest of APE
DFW, FAA	4491	AR Consultants, Inc. (ARC)	2008	Linear	0.86 mile southwest of APE
DFW	7373	IES	2015	Area	0.40 mile northwest of APE
DFW	8215	IES	2018	Area	0.92 mile southwest of APE
DFW	8392	IES	2018	Area	0.24 mile west of APE

\*ACT=Antiquities Code of Texas

**Table 2: Previously Recorded Archeological Sites within 1 Mile of the APE**

Site	Time Period	Site Type	Cultural Materials	Topographic Setting	Reference
41TR126	Prehistoric; Historic	Lithic scatter; Farmstead	Lithic debitage, projectile point; nails, window glass, ceramics, bottle glass, brick fragments; well feature	Upland	Goodmaster 2017
41TR216	Historic	Surface scatter	Bottle glass, metal fragments, bed springs, pocket knife, whiteware	Upland	Trask 2007
41TR315	Historic	Historic artifact scatter	clear bottle glass, ceramics, 78-rpm record fragments, and brick fragments	Upland	Stone, Goodmaster, Chapman, Gibson 2018

#### *Direct APE Archeological Resource Potential*

##### Disturbance Analysis

Prior to the construction of DFW in the early 1970s, the APE was used for agricultural and ranching purposes. Since 1972, significant ground disturbances have transpired throughout the APE related to large-scale surface grading, contouring, and development of DFW facilities. As depicted within aerial photography, once the airport construction began, ground disturbances associated with large-scale grading occurred throughout the APE. In 1972, a building was constructed within the APE. The ground surrounding this building was paved for surface parking, cargo loading, and maintenance areas. Only a few areas north and west of the building were kept as maintained landscaping.

##### Prehistoric Resources

Data presented within the PALM for Tarrant County indicates that the entire APE featured a negligible potential for both shallow and deeply-buried cultural deposits with reasonable contextual integrity. Similar conclusions were reported in 2007 and 2008 by AR Consultants, Inc. (ARC), who conducted intensive pedestrian surveys of 1,210 acres on the DFW property under Texas Antiquities Permit Number 4491. These results were published in the report *An Archaeological Survey for Chesapeake Energy Corporation at DFW International Airport Dallas and Tarrant Counties, Texas*. Through this study, three environmental zones were identified within the DFW that contain varying amounts of cultural resources probability. The current APE will have ground disturbances within Zone 1 (**Attachment A, Figure 5**).

Zone 1 is comprised of the Blackland Prairie Uplands ecoregion, which consists of mostly level clay or clay loam soils over a thin layer of limestone bedrock. Water permeates very slowly to the water table causing slow surface runoff and high shrink and swell potential. This setting has a low biotic diversity and is dominated by short grasses. Due to the limited resources available within the area, it has a low probability for containing prehistoric sites (Shelton et al. 2008). The THC reviewed and concurred with these conclusions.

Based on previous research, in combination with the current analysis, it has been determined the APE contains a negligible potential for containing prehistoric cultural deposits.

#### Historic-Period Archeological Resources

Historic-period resources within North-Central Texas are primarily related to farmsteads, houses, and associated outbuildings and structures that date from the mid-19<sup>th</sup> to the mid-20<sup>th</sup> centuries. Typically, these types of resources are located along old roadways, but can be located along railroads, creeks, and open pastures. Although determining the presence of the earliest of these buildings and structures is problematic, maps depicting these features are widely available post-1920.

Historical and modern aerial photographs show that much of the surrounding area was used for agricultural fields or pasture. The 1920 USDA Soil Map for Tarrant County illustrated the APE as being void of historic-period structures. This was verified on historical aerial photography dating to 1942. As such, the APE is considered to have a low potential for containing historic-period cultural resources.

### RESULTS

#### *Archeological Resources*

Through the background review and review of photographs taken during the architectural survey, IES determined that the APE was significantly disturbed and contained no potential for archeological resources and would not require an archeological survey to be performed prior to construction.

#### *Architectural Resources*

##### Direct APE

An architectural survey of the APE was performed 06 November 2018 to identify potentially significant architectural resources. During this survey, the Kitty Hawk Aircargo (KHA) building was identified within the direct APE (**Table 3; Attachment A, Figure 6**). Although this building was not of historic age at the time of survey, it was evaluated for significance under NRHP Criteria Consideration G per DFW's request to assess architectural resources of at least 45 years of age. During the architectural survey, photographs were taken of the exterior and interior of the KHA building (**Attachment B, Photographs 1 through 20**).

Historical aerial photographs indicate the building was constructed between 1970 and 1973. The building was constructed in the Modern style, which emphasized function over aesthetic embellishment. The facility is comprised of a flat roof, reinforced concrete exterior walls, and a portico supported by a colonnade. The interior contains modern insulated rooms consisting of ceiling tiles, sheet rock walls, glass windows, and carpeting. The facility primarily functioned as office space for KHA until the company ceased operations in early 2008. Currently, the vacant building is used by DFW Department of Public Safety for training purposes and by DFW Customer Experience for storage of old equipment. Based on background research, it was determined that the KHA facility is not of historic age, nor has it achieved exceptional importance since its construction and does not qualify for NHRP listing under Criteria Consideration G.

##### Indirect APE

As the project will require approval from the FAA, an assessment of indirect effects was required to comply with the NHPA. The sole potential indirect effect of the undertaking was determined to be related to visual effects associated with the demolition of the KHA building and future development of the location. To account for potential visual impacts associated with these above-ground elements, indirect impacts were considered within the direct APE footprint and within a 300-ft radius surrounding the direct APE. Thus, any standing structure or building 45 years or older within the direct and indirect APE was photographed and assessed for potential NRHP eligibility (see **Attachment A, Figure 1**).



Historical aerial photography indicates the indirect APE is located within a built and disturbed environment. Presently, most of the indirect APE occupies roadways, parking lots, and modern airport facilities. Through the reconnaissance survey of the indirect APE, it was determined that no historic-age resources were present. However, two resources were identified that were 45 years in age and evaluated for NRHP eligibility under Criteria Consideration G (**Table 4**).



**Table 3: Architectural Resources within the Direct APE**

Property Identification Number	Property Location/ Address	Construction Date/ Architectural Elements	Photograph of Resource
Kitty Hawk Aircargo Building	1535 W. 20 <sup>th</sup> Street	1972 or 1973 Modern style, one-story building constructed of reinforced concrete and steel beam framing. The façade features a portico supported by a colonnade.	

**Table 4: Architectural Resources within the Indirect APE**

Property Identification Number	Property Location/ Address	Construction Date/ Architectural Elements	Photograph of Resource
American Airlines Hangar	Eastern terminus of W. 20 <sup>th</sup> Street	1972 or 1973 Modern airplane hangar constructed of reinforced concrete and steel beam framing.	
Building D	1930 W. Airfield Drive	1972 Modern style, two-story building constructed of steel beam framing with reinforced concrete walls. The building features offices, storage or maintenance areas, and loading docks.	

The eastern portion of the indirect APE contains part of a multi-story aircraft hangar operated by American Airlines (AA) (**Attachment B, Photographs 21 and 22**). The building is constructed of reinforced concrete molded into a vertical rib pattern over a steel beam frame. According to historical aerial photographs, the hangar was built between 1970 and 1973 during the initial construction phase of DFW. Based on our research, we have determined that the AA hangar is not of historic age, nor has it achieved exceptional importance since its construction and does not qualify for NRHP listing under Criteria Consideration G.

The southeast corner of a building known as Building D (**Attachment B, Photographs 23 and 24**) is located within the western indirect APE. The Modern style building features a flat roof, reinforced concrete exterior walls, concrete block or sheet rock interior walls, steel beam framing, and concrete flooring. The building contains warehouse and enclosed office space. As of this report, a portion of Building D is used by a bussing contractor for DFW. Based on our research, we have determined that the DFW, Building D is not of historic age, nor has it achieved exceptional importance since its construction and does not qualify for NRHP listing under Criteria Consideration G.

### **CONCLUSIONS**

The entire APE has been exposed to significant previous ground disturbances and contains negligible potential for containing prehistoric or historic-age archeological sites. There is one architectural element (KHA Building) that is 45 years in age within the direct APE and two resources (AA Hangar and Building D) in the indirect APE. IES does not consider any of these buildings to be eligible for the NRHP under Criteria Consideration G.

Therefore, DFW is requesting concurrence with the findings of this analysis and the recommendation that no historic properties will be affected under 36 CFR Part 800.4(d)(1) within the current APE. It is the recommendation of IES that the SHPO concur with these findings and the undertaking be permitted to continue without the need for further cultural resources investigations. However, in the unlikely event that any prehistoric or historic features or deposits are encountered during construction, work should cease in that area immediately and the THC should be contacted for further consultation.

If you have questions, please contact me by phone at (972) 562-7672 or via email at [kstone@intenvsol.com](mailto:kstone@intenvsol.com).

Sincerely,

Integrated Environmental Solutions, LLC



Kevin Stone, MA, RPA  
Cultural Resources Principal Investigator

**REFERENCES**

- Griffith, Glenn, Sandy Bryce, James Omernik, and Anne Rogers  
2007 Ecoregions of Texas. Texas Commission on Environmental Quality.
- McGowen, J.H., C.V. Proctor, W.T. Haenggi, D.F. Reaser, and V.E. Barnes  
1987 Geologic Atlas of Texas: Dallas Sheet. Bureau of Economic Geology. University of Texas at Austin.
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2018 *Texas Archeological Sites Atlas*. s.v. "Tarrant County"  
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2018 *Texas Historic Sites Atlas*. s.v. "Tarrant County"  
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<http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm> (accessed November 2018).

**ATTACHMENT A**

**Figures**

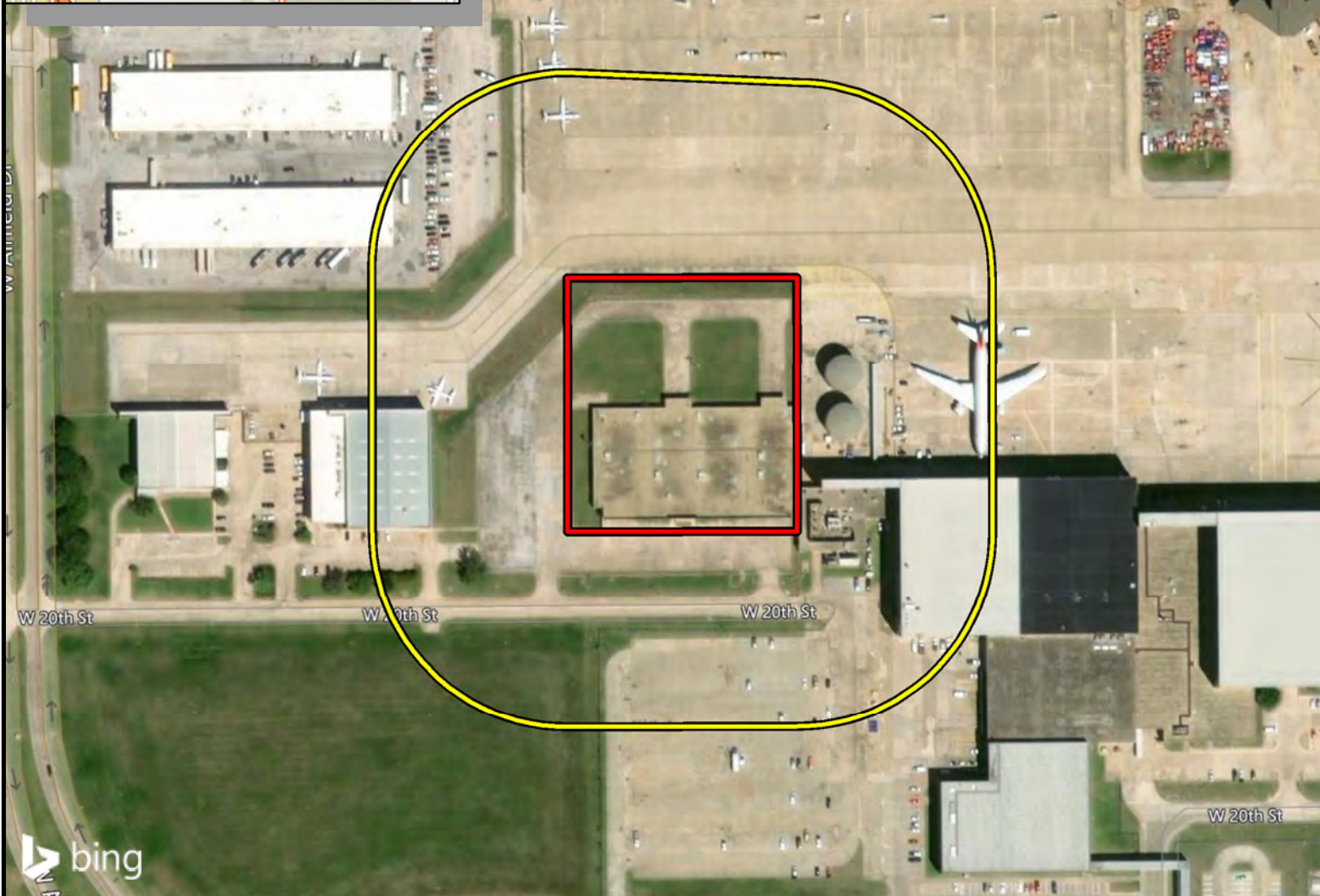
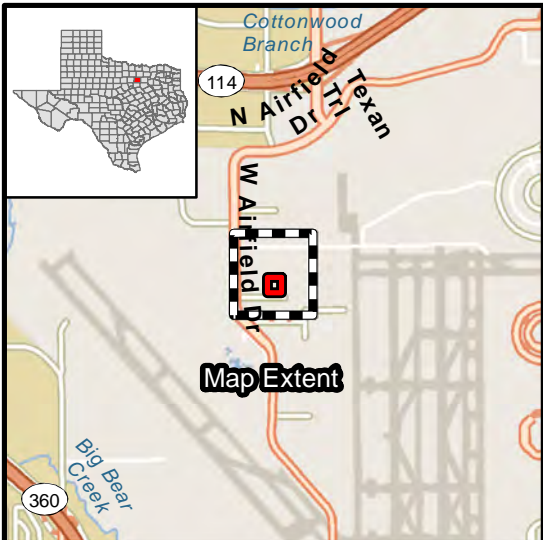


Figure 1  
General Location Map

- Area of Potential Effects - Direct
- Area of Potential Effects - Indirect



County: Tarrant  
 State: Texas  
 Date map created: 11/21/2018  
 Source: (c) 2009 Microsoft Corporation  
 and its data suppliers; ESRI 10.5  
 Streetmap  
 IES Project Ref: 03.006.066

1 inch = 250 feet  
 0 250 500 ft

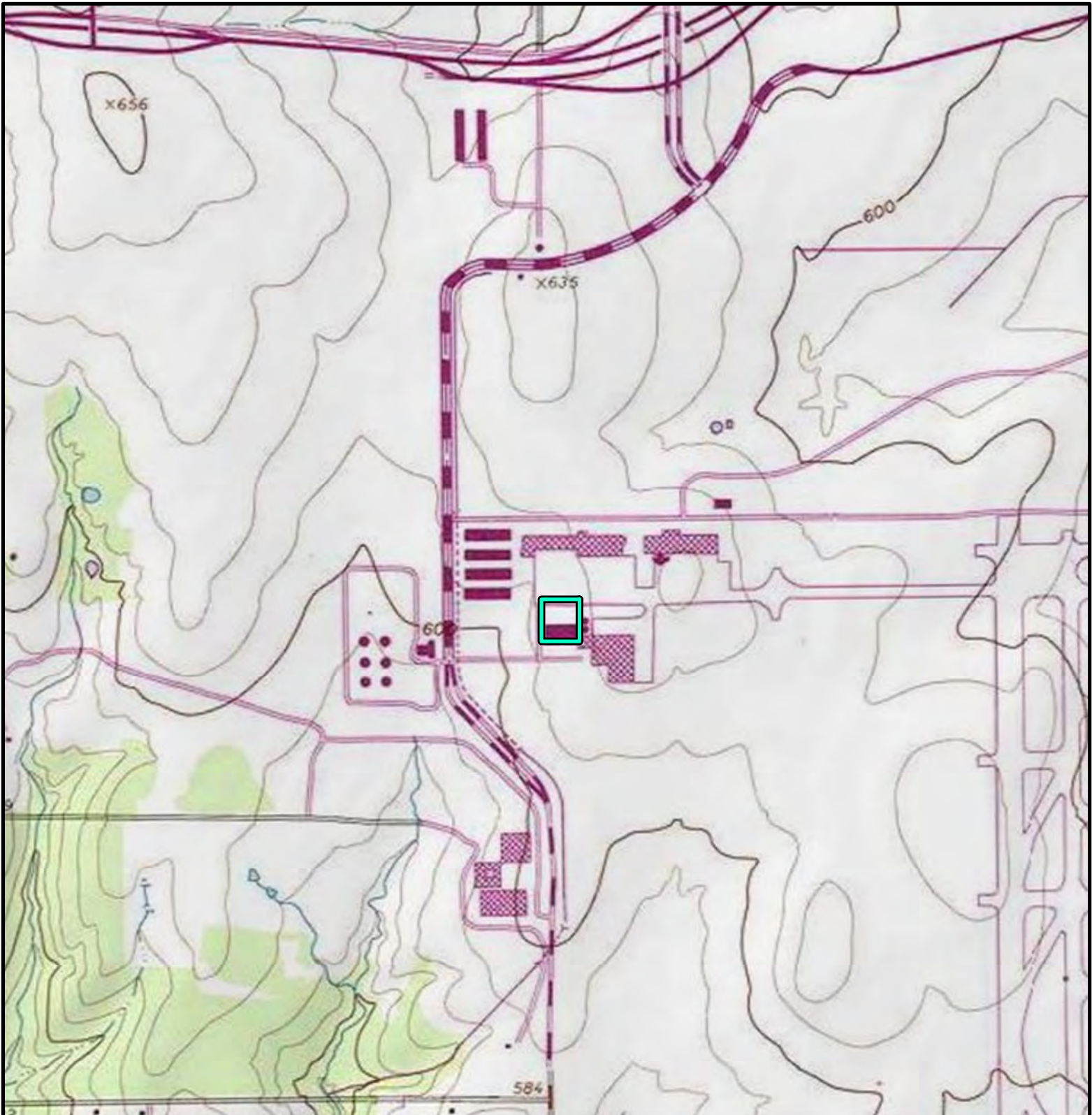
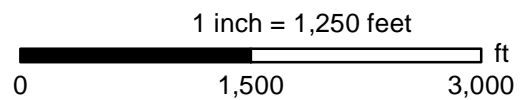


Figure 2  
Topographic Setting

 Area of Potential Effects



County: Tarrant  
State: Texas  
Date map created: 11/21/2018  
Source: USGS topographic map  
Grapevine (1982) 7.5-minute quadrangle  
IES Project Ref: 03.006.066



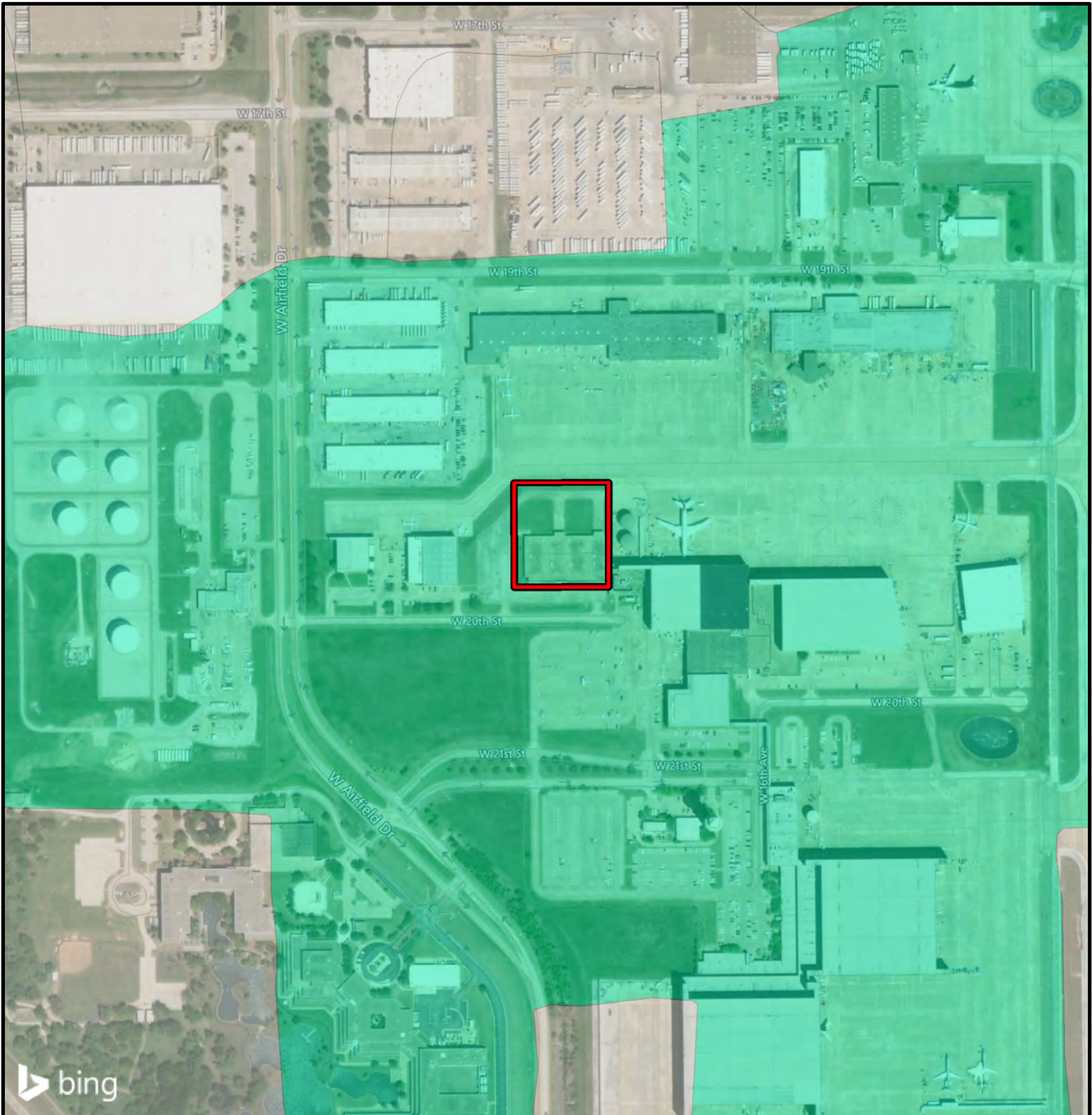


Figure 3  
Soil Map Units Located Within and  
Adjacent to the APE

 Area of Potential Effects

**Soil Description**

 35 - Houston Black-Urban land complex, 1 to 4 percent slopes

 Other Values

County: Tarrant  
State: Texas  
Date map created: 11/21/2018  
Source: 2007 USDA  
NRCS Digital Soils Database  
IES Project Ref: 03.006.066

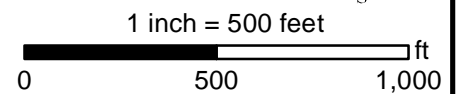




Figure 4  
 Previous Investigations within  
 1 Mile of the APE

- Area of Potential Effects
- Area of Potential Effects - 1 Mile Buffer
- Previous Archeological Survey



Counties: Tarrant  
 State: Texas  
 Date map created: 11/20/2018  
 Source: (c) 2009 Microsoft Corporation  
 and its data suppliers; ESRI 10.5  
 IES Project Ref: 03.006.066

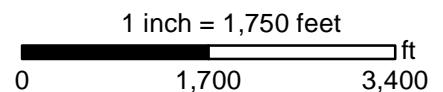






Figure 5  
Archeological Environmental  
Zone Map



Area of Potential Effects

**Archeological-Environmental Zone**



Zone 1 - Blackland Prairies Uplands



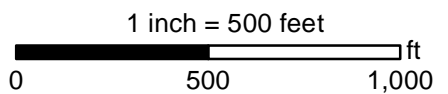
Zone 2 - Eastern Cross Timbers



Zone 3 - Bear Creek Floodplain



Counties: Tarrant  
State: Texas  
Date map created: 11/20/2018  
Source: (c) 2009 Microsoft Corporation  
and its data suppliers; ESRI 10.5  
IES Project Ref: 03.006.066



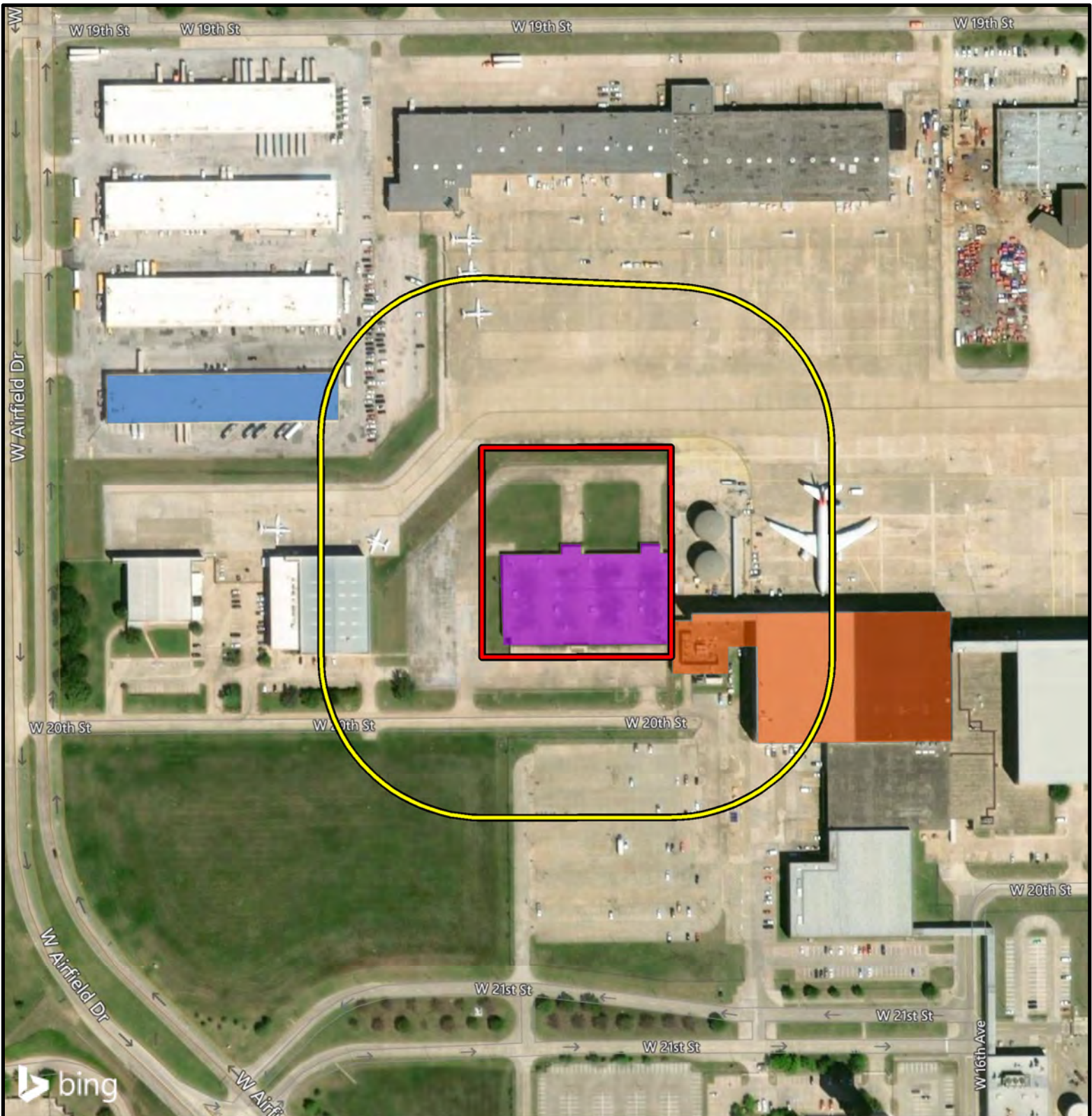


Figure 6  
Architectural Resource Map

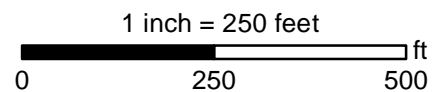
- Area of Potential Effects - Direct
- Area of Potential Effects - Indirect

**Architectural Resource**

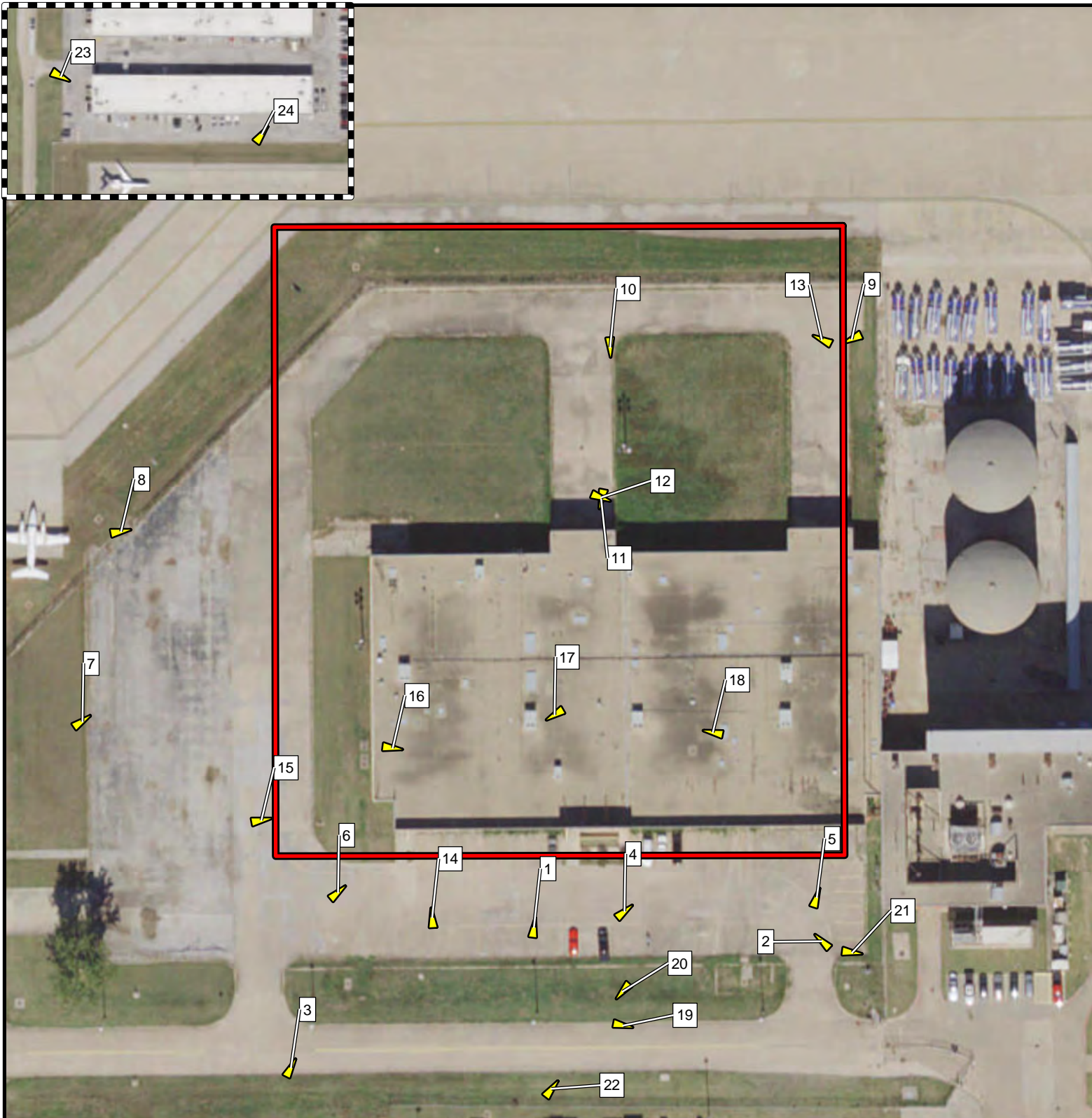
- Kitty Hawk Aircargo Building
- American Airlines Hangar
- Building D



County: Tarrant  
 State: Texas  
 Date map created: 12/11/2018  
 Source: (c) 2009 Microsoft Corporation  
 and its data suppliers; ESRI 10.5  
 Streetmap  
 IES Project Ref: 03.006.066



**ATTACHMENT B**  
**Representative Photographs**

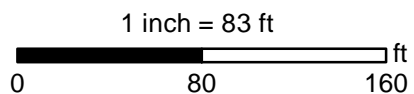


Attachment B  
Photograph Location Map

- Area of Potential Effects
- ▲ Photograph Location



County: Tarrant  
 State: Texas  
 Date map created: 12/11/2018  
 Source: (c) 2009 Microsoft Corporation  
 and its data suppliers; ESRI 10.5  
 IES Project Ref: 03.006.066





Photograph 1 – KHA Building, View to the North



Photograph 2 – KHA Building, View to the Northwest



Photograph 3 – KHA Building, View to the Northeast



Photograph 4 – KHA Building, View to the Northeast



Photograph 5 – KHA Building, View to the North



Photograph 6 – KHA Building, View to the Northeast



Photograph 7 – KHA Building, View to the East



Photograph 8 – KHA Building, View to the East



Photograph 9 – KHA Building, View to the Southwest



Photograph 10 – KHA Building, View to the South



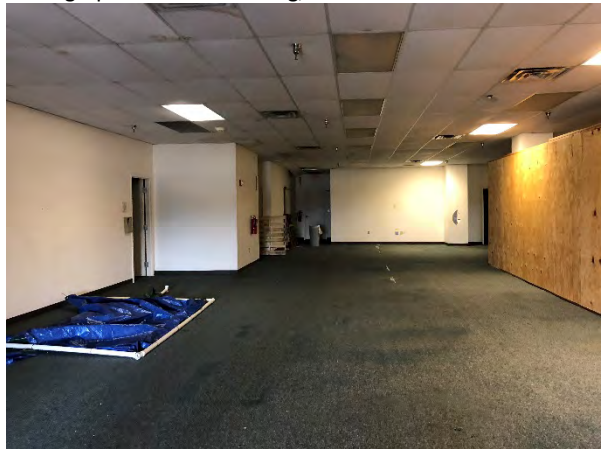
Photograph 11 – KHA Building, View to the South



Photograph 12 – KHA Building, View to the Southeast



Photograph 13 – KHA Building, View to the West



Photograph 14 – KHA Building, Interior



Photograph 15 – KHA Building, Interior



Photograph 16 – KHA Building, Interior



Photograph 17 – KHA Building, Interior



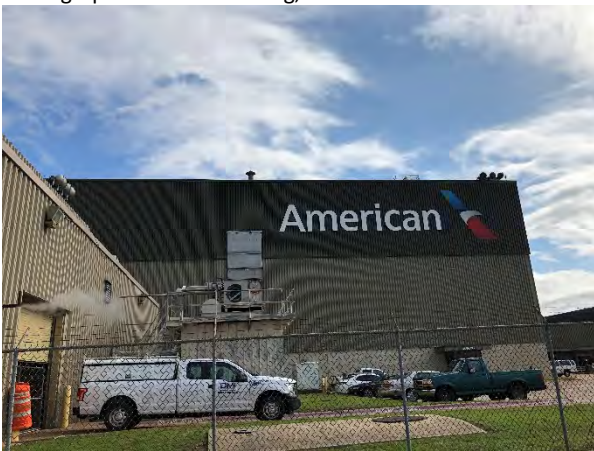
Photograph 18 – KHA Building, Interior



Photograph 19 – KHA Building, Interior



Photograph 20 – KHA Building, Interior



Photograph 21 – AA Hangar, View to the East



Photograph 22 – AA Hangar, View to the Northeast



Photograph 23 – Building D, View to the East



Photograph 24 – Southeast Corner of Building D, View to the Northeast

## This Correspondence sent to CRM@intenvsol.com on 01-02-2023



**Re:** Project Review under Section 106 of the National Historic Preservation Act and/or the Antiquities Code of Texas

**THC Tracking #202303006**

**Date:** 01/02/2023

American Airlines West Warehouse  
West 19th Street  
Grapevine, TX

**Description:** Demolition of a circa 1973 building on the DFW International Airport property.

Dear Integrated Environmental Solutions, LLC:

Thank you for your submittal regarding the above-referenced project. This response represents the comments of the State Historic Preservation Officer, the Executive Director of the Texas Historical Commission (THC), pursuant to review under Section 106 of the National Historic Preservation Act and the Antiquities Code of Texas.

The review staff, led by Justin Kockritz and Arlo McKee, has completed its review and has made the following determinations based on the information submitted for review:

### Above-Ground Resources

- THC/SHPO concurs with information provided.
- No historic properties are present or affected by the project as proposed. However, if historic properties are discovered or unanticipated effects on historic properties are found, work should cease in the immediate area; work can continue where no historic properties are present. Please contact the THC's History Programs Division at 512-463-5853 to consult on further actions that may be necessary to protect historic properties.
- Property/properties are not eligible for listing in the National Register of Historic Places.

### Archeology Comments

- No historic properties affected. However, if cultural materials are encountered during construction or disturbance activities, work should cease in the immediate area; work can continue where no cultural materials are present. Please contact the THC's Archeology Division at 512-463-6096 to consult on further actions that may be necessary to protect the cultural remains.

We look forward to further consultation with your office and hope to maintain a partnership that will foster effective historic preservation. Thank you for your cooperation in this review process, and for your efforts to preserve the irreplaceable heritage of Texas. If the project changes, or if new historic properties are found, please contact the review staff. If you have any questions concerning our review or if we can be of further assistance, please email the following reviewers: [justin.kockritz@thc.texas.gov](mailto:justin.kockritz@thc.texas.gov), [Arlo.McKee@thc.texas.gov](mailto:Arlo.McKee@thc.texas.gov).

This response has been sent through the electronic THC review and compliance system (eTRAC). Submitting your project via eTRAC eliminates mailing delays and allows you to check the status of the review, receive an



electronic response, and generate reports on your submissions. For more information, visit <http://thc.texas.gov/etrac-system>.

Sincerely,

A handwritten signature in black ink, appearing to be 'Mark Wolfe', written in a cursive style.

for Mark Wolfe, State Historic Preservation Officer  
Executive Director, Texas Historical Commission

**Please do not respond to this email.**

## CULTURAL RESOURCES REPORT



### CULTURAL RESOURCES REPORT FOR THE DEMOLITION OF THE AMERICAN AIRLINES WEST WAREHOUSE, DALLAS FORT WORTH INTERNATIONAL AIRPORT, TARRANT COUNTY, TEXAS

Prepared for:  
Texas Historical Commission

On Behalf of:  
Dallas Fort Worth International Airport



Prepared by:



December 2022

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**CULTURAL RESOURCES REPORT FOR THE DEMOLITION OF THE  
AMERICAN AIRLINES WEST WAREHOUSE, DALLAS FORT WORTH  
INTERNATIONAL AIRPORT, TARRANT COUNTY, TEXAS**

by

Daniel Norwid, MPS  
Architectural Historian

Anne Gibson, MA, RPA  
Project Archeologist

&

Kevin Stone, MA, RPA  
Principal Investigator

Submitted to:

**Texas Historical Commission**  
1511 Colorado Street  
Austin, Texas 78701

**Federal Aviation Administration**  
10101 Hillwood Parkway  
Fort Worth, Texas 76177

Prepared by:

**Integrated Environmental Solutions, LLC**  
301 West Eldorado Parkway, Suite #101  
McKinney, Texas 75069

Cultural Resources Report  
December 2022

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# CHAPTER 1: INTRODUCTION

## **1.1 Project Description**

Integrated Environmental Solutions, LLC (IES) has been contracted by Dallas Fort Worth International Airport (DFW) to provide coordination with the Texas Historical Commission (THC) on behalf of DFW and Federal Aviation Administration (FAA) for the proposed demolition of the American Airlines West Warehouse located at 1600 West 19<sup>th</sup> Street in the City of Grapevine, Tarrant County, Texas (**Figure 1.1**). Based on the highly developed setting of the Area of Potential Effects (APE), it was determined that coordination for archeological resources could be accomplished through a no-survey desktop analysis. An architectural resources reconnaissance survey was conducted to evaluate above ground resources 45 years or older for National Register of Historic Places (NRHP) eligibility.

DFW is presently seeking approval from the FAA to modify the Airport Layout Plan (ALP) to reflect permanent improvements and is performing the necessary environmental review to support the ALP modification. Since the ALP modification is a federal action, the FAA will review the proposed demolition activities in accordance with the National Environmental Policy Act of 1969 (NEPA) and the National Historic Preservation Act of 1966 (NHPA). In addition, DFW is a political subdivision of the state of Texas. Thus, coordination with the State Historic Preservation Officer (SHPO), represented by the THC, is necessary to comply with the Antiquities Code of Texas (ACT). Therefore, on behalf of DFW and the FAA, IES is requesting a review of the project to determine THC recommendations to proceed.

## **1.2 Reporting Conventions**

Standards for archeological methods require that measurements be recorded in metric units. For this reason, while general distances and engineering specifications are described in imperial units (e.g., inch [in], foot [ft], mile [mi], acre [ac]) within this report, archeological measurements and observations are listed in metric units (e.g., centimeter [cm], meter [m], kilometer [km], hectare [ha]), unless historic-period artifact or architectural elements are more appropriately recorded in imperial units.

## **1.3 Pertinent Regulations**

### *1.3.1 National Historical Preservation Act (NHPA) Section 106*

The NHPA (54 U.S. Code [USC] 300101), specifically Section 106 (54 USC 306108), requires the SHPO, represented by the THC, to administer and coordinate historic preservation activities, and to review and comment on all actions licensed by the federal government that will have an effect on properties listed in the NRHP, or eligible for such listing. Per 36 Code of Federal Regulations (CFR) Part 800, the federal agency responsible for overseeing the action must make a reasonable and good faith effort to identify cultural resources. Federal actions include, but are not limited to, construction, rehabilitation, repair projects, demolition, licenses, permits, loans, loan guarantees, grants, and federal property transfers.

### *1.3.2 Antiquities Code of Texas (ACT)*

As DFW is considered a political subdivision of the State of Texas under Section 52, Article III, or Section 59, Article XVI, of the Texas Constitution, DFW is required to comply with the ACT. The ACT, as outlined in the Texas Administrative Code (TAC) Title 13 Part II and the Texas Natural Resource Code (TNRC) Title 9 Chapter 191, requires that political subdivisions notify the THC at least 30 days in advance prior to any project that may affect potential or designated archeological sites. While advance project review by the THC is required for undertakings with more than five acres (ac) or 5,000 cubic yards of ground disturbance, the THC can still request project information and/or an archeological survey in advance of more minor ground disturbances since all publicly sponsored projects must comply with the ACT. If the activity occurs inside a designated historic district, affects a recorded archeological site, or requires on-site investigations, the project will need to be reviewed by the THC, regardless of project size.



### 1.3.3 *Direct APE*

The direct APE for the project encompasses approximately 2.82 ac surrounding the American Airlines West Warehouse (**Figure 1.1**). The APE boundaries were determined through consultation with DFW staff and the FAA. Although final project designs for the APE were not available at the time of the report, preliminary plans call for the demolition and replacement of the American Airlines West Warehouse. Depths of impacts associated with the proposed project will generally be within several feet of the current ground surface.

### 1.3.4 *Indirect APE*

Since the project will require compliance with NHPA Section 106, an assessment of indirect effects is required. Currently, no plans are available detailing elevations of future construction. As such, indirect effects were evaluated within 150 ft of the direct APE. Land clearing for DFW began in 1969, with the first aircraft landing on the property on 13 January 1974. With this information, it is likely that all components of DFW are not presently of historic age (50 years in age or older). Given this, as part of DFW's and the FAA's due diligence approach to cultural resources, and the Section 106 process, resources 45 years or older were evaluated for NRHP eligibility.

## **1.4 Administrative Information**

**Sponsor(s):** DFW, FAA

**Review Agencies:** FAA and THC

**Architectural Historian:** Daniel Norwid, MPS

**Project Archeologist:** Anne Gibson, MA, RPA

**Principal Investigator:** Kevin Stone, MA, RPA

**IES Project Number(s):** 03.006.099

**Date(s) of Field Work:** 07 July 2022

**Area Surveyed:** 2.82 ac

**Architectural Resources Recommended Eligible for NRHP Under Criteria in 36 CFR 60.4:** None

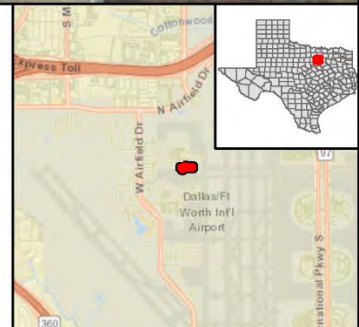
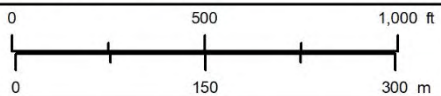
**Architectural Resources Recommended Not Eligible for NRHP Under Criteria in 36 CFR 60.4:** R-1  
(American Airlines West Warehouse )



Figure 1.1  
General Location Map

- Area of Potential Effects - Direct
- Area of Potential Effects - Indirect

County: Tarrant  
State: Texas  
Date map created: 7/21/2022  
Source: Streetmap; ESRI  
IES Project Ref: 03.006.099



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## CHAPTER 2: ENVIRONMENTAL BACKGROUND

### 2.1 Topography, Geology, and Soils

#### 2.1.1 *Climate*

Tarrant County is located in the North Central region of the State of Texas. This region has a humid subtropical climate and average annual precipitation ranging from approximately 35 to 40 in (89 to 102 cm). Approximately half of the precipitation falls as rain between April and May, with July and August being the two driest months of the year. The subtropical region tends to have a relatively mild year round temperature with occasional exceedingly hot and cold snaps (Estaville and Earl 2008).

#### 2.1.2 *Topography, Geology, and Soils*

DFW is located within a gently rolling upland setting that is irregularly dissected by the headwaters of unnamed tributaries of surrounding streams. The periphery of DFW property contains more dramatic topography with incised drainages and named waterways, particularly along the western, southern, and eastern limits. The transition of the gently sloping upland ridges to the low-lying Big Bear Creek valley floor correlates to a transition from the more stable, clay rich Blackland Prairie soils to the more erosive, sandy soils of the Cross Timbers ecological region. The APE is located at the apex of a broad, upland ridge in the western half of DFW property (**Figure 2.1**).

The APE is located within the Northern Blackland Prairie of the Texas Blackland Prairie ecoregion. The Northern Blackland Prairie distinguishes itself from surrounding regions through gently rolling hills and black, fine-textured soils that primarily support prairie vegetation (Griffith et al. 2007). Historical vegetation included little bluestem, big bluestem, yellow Indiangrass, and tall dropseed. Most of the native prairie has been converted to cropland, non-native pasture, and expanding urban uses around Dallas, Waco, Austin, and San Antonio. Vertisols dominate the Blackland Prairie ecoregion and consist of high clay content soils with significant shrink and swell potential (Ressel 1981). The APE is underlain by the Eagle Ford Formation (Kef) geological formation (McGowen et al. 1987, USGS 2022; **Figure 2.2**). This formation is comprised of shale, sandstone, and limestone beds dating to the Cretaceous period.

As shown by the *Soil Survey of Tarrant County, Texas*, the APE contains one soil map unit (Ressel 1981; **Table 2.1**; **Figure 2.3**). The entire APE contains soils typical of *in situ* development in upland settings within the Northern Blackland Prairie ecoregion. Soil data was viewed from the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2022).

**Table 2.1:** Soils Located within the Project Area

Soil Map Unit Description	Percentage of the APE
<b>HuB - Houston Black-Urban land complex, 1 to 4 percent slopes</b> - This component is described as clay located on ridges. Typical Bw subsoil horizon depth is 8 to 24 in (20 to 61 cm). Depth to a root restrictive layer or bedrock is more than 80 in (203 cm). The natural drainage class is moderately well drained.	100

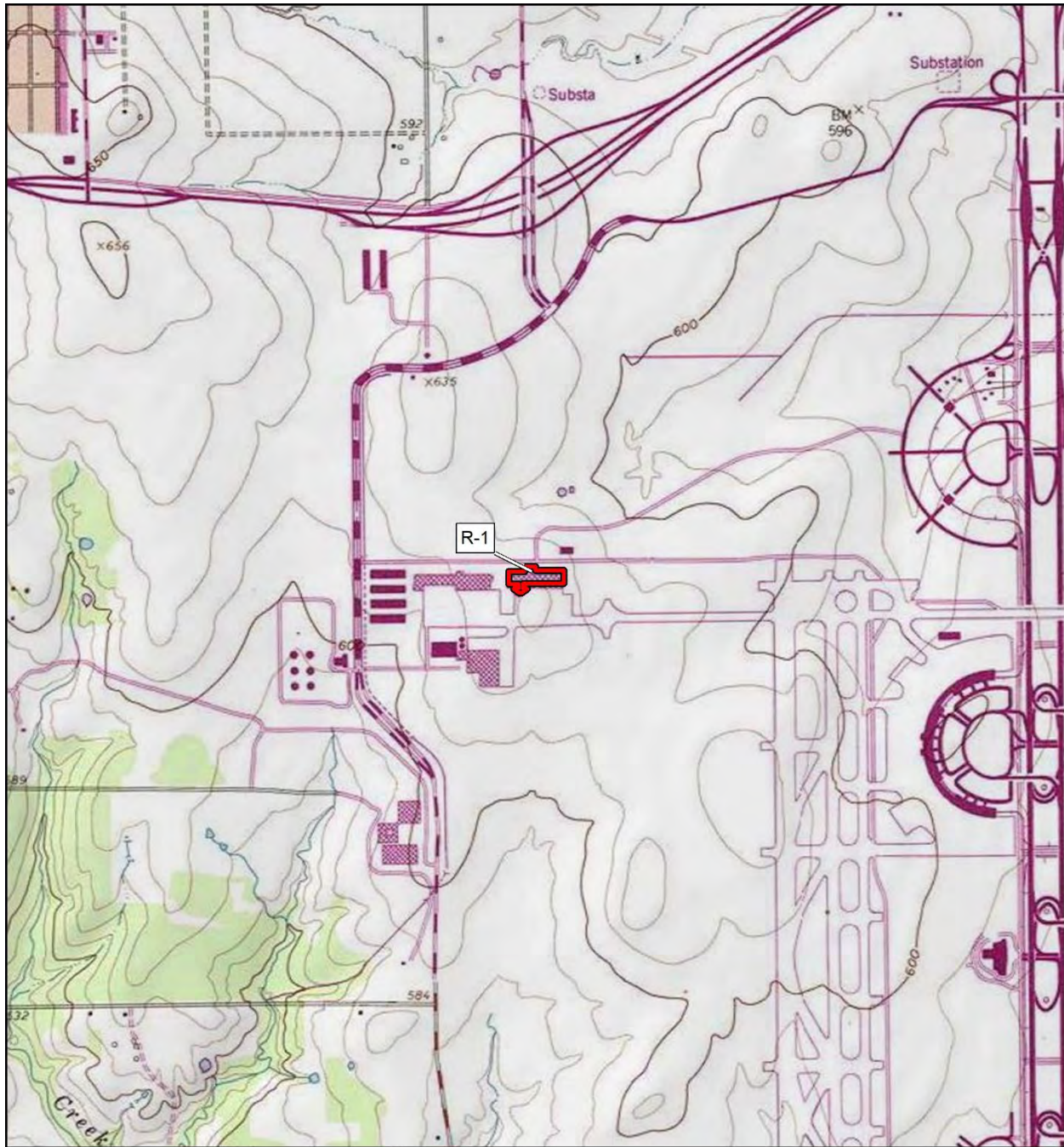
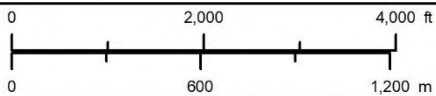
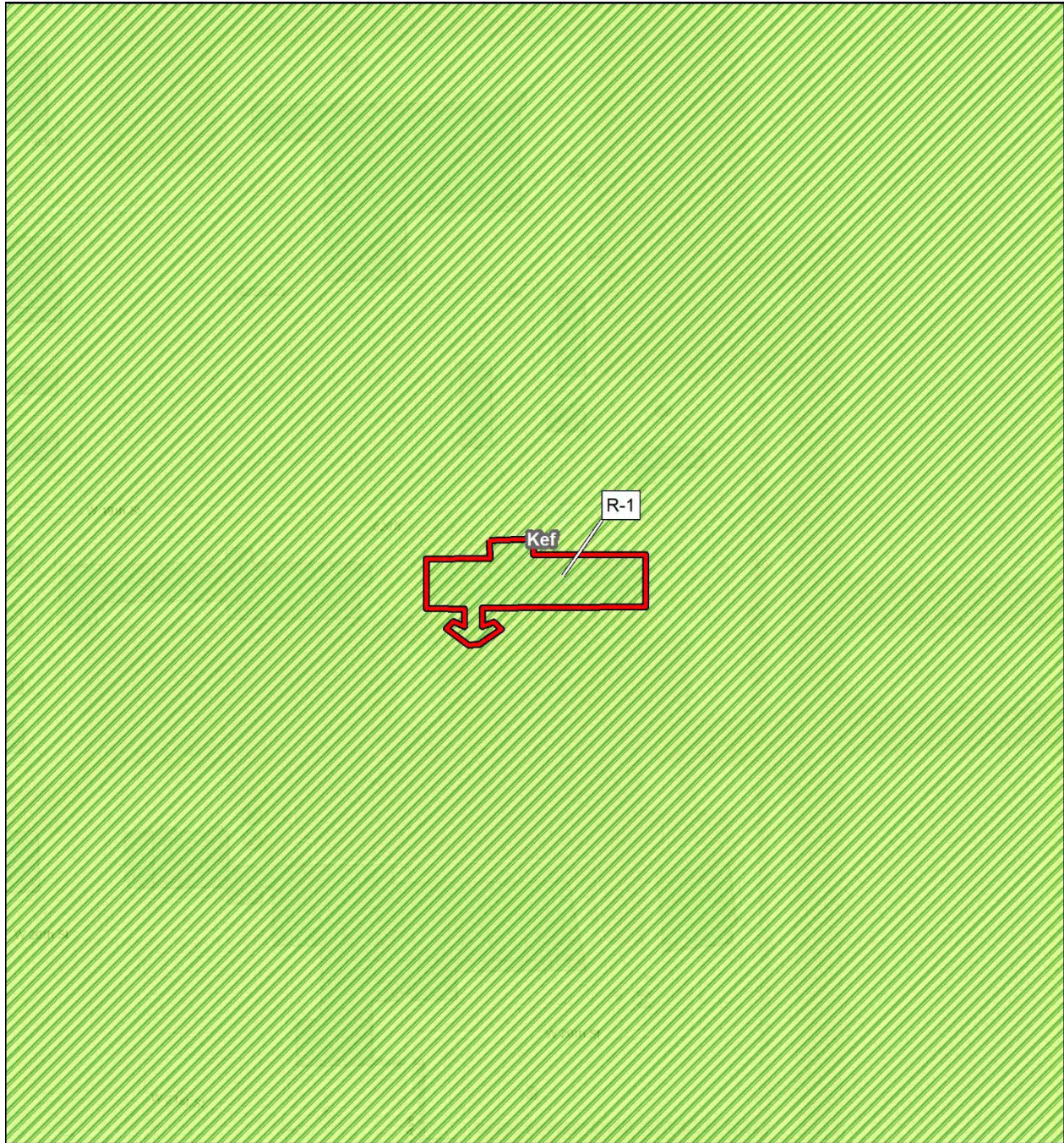


Figure 2.1  
Topographic Setting

 Area of Potential Effects - Direct

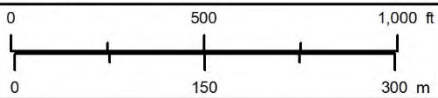
County: Tarrant  
State: Texas  
Date map created: 7/21/2022  
Source: USGS 7.5' Quad Grapevine 1982,  
IES Project Ref: 03.006.099



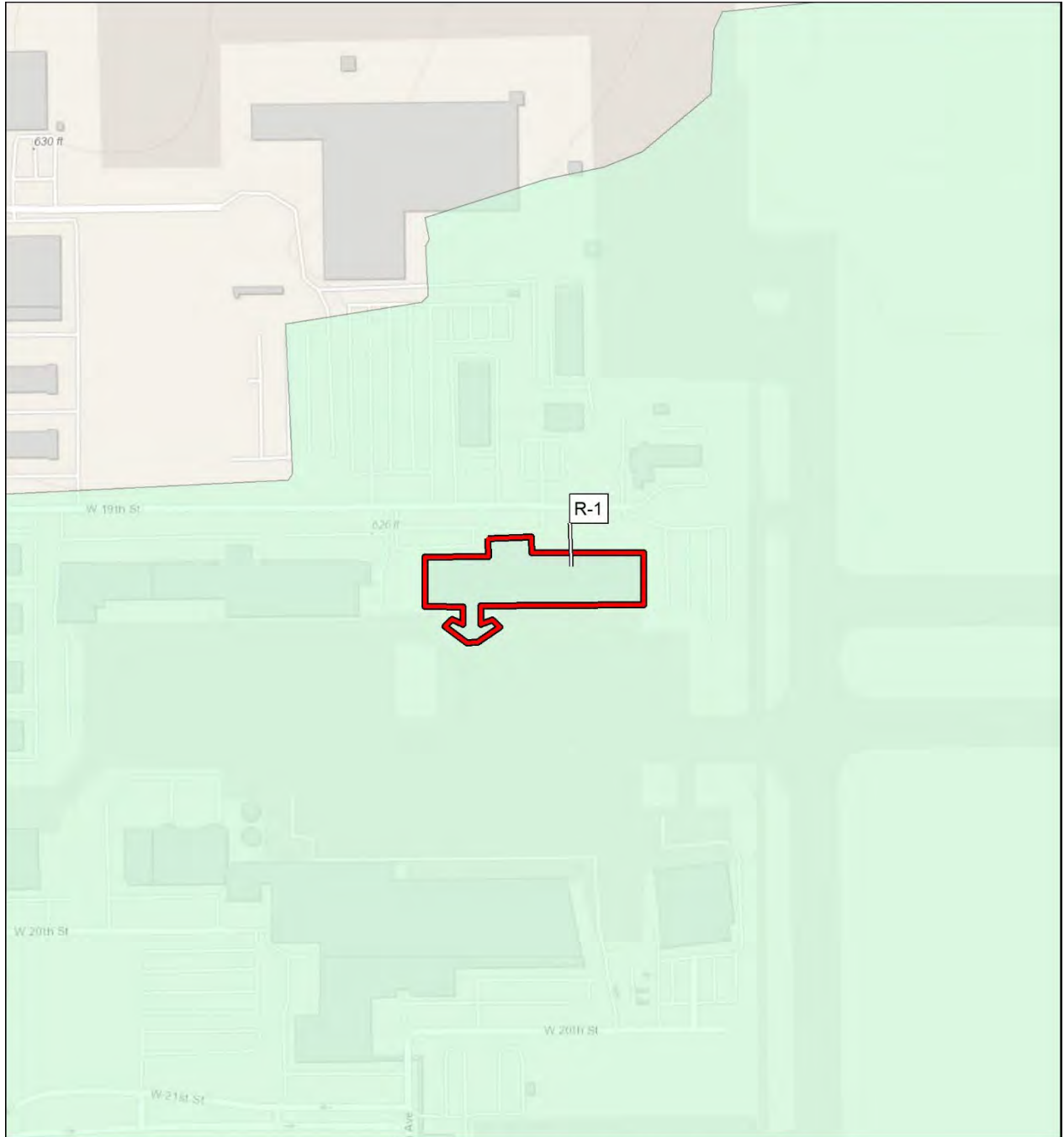


**Figure 2.2**  
Geologic Setting

County: Tarrant  
 State: Texas  
 Date map created: 7/21/2022  
 Source: TRNIS Geologic Atlas; Dallas Sheet  
 IES Project Ref: 03.006.099

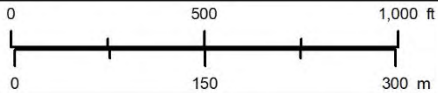


- Area of Potential Effects - Direct
- Geologic Formation-Northeast Texas**
- Kef - Eagle Ford Formation



**Figure 2.3**  
Soil Map Units Located Within  
and Adjacent to the APE

County: Tarrant  
State: Texas  
Date map created: 7/21/2022  
Source: NRCS Digital Soils Database  
IES Project Ref: 03.006.099



 Area of Potential Effects - Direct

**Soil Map Unit** (see Table 2.1)

 HuB - Houston Black-Urban land complex,  
1 to 4 percent slopes

## CHAPTER 3: BACKGROUND RESEARCH

### 3.1 Texas Archeological Sites Atlas Review

The Texas Archeological Sites Atlas (TASA) database, maintained by the THC, indicates that 16 previous professional archeological resources surveys have been conducted within one mi (1.6 km) of the APE (TASA 2022; **Table 3.1**; **Figure 3.1**). In addition to these professional surveys conducted for compliance purposes, one academic survey (Prikryl 1990) included a limited archeological reconnaissance survey along Bear Creek in proximity to the APE. The Texas Historic Site Atlas (THSA) database, also maintained by the THC, indicates that no National Register properties or historical markers are located within the APE (THSA 2022).

The TASA and THSA databases illustrate the vicinity of the former Lipscomb Cemetery approximately 700 ft north of APE. The graves of the cemetery were moved to Bluebonnet Hills and Colleyville cemeteries before DFW development in 1969.

**Table 3.1:** Previously Conducted Archeological Surveys within 1 Mi.

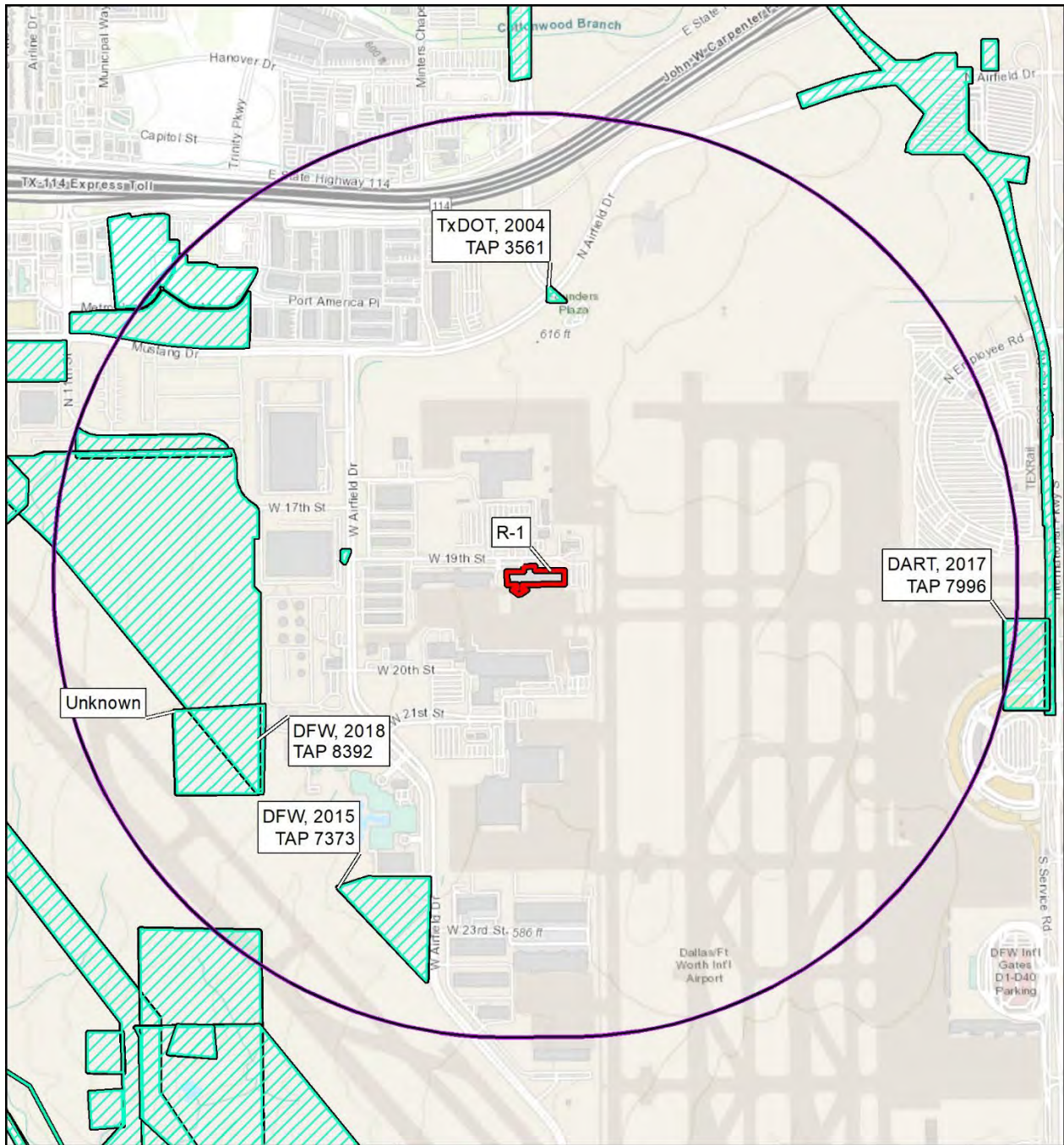
Agency	ACT Permit No.	Firm/Institution	Date	Survey Type	Location (Approximate)
DFW; FAA	1010	Greiner, Inc.	1991	Area	0.85 mi southwest of APE
Texas Department of Transportation (TxDOT)	3561	Geo-Marine, Inc.	2004	Area	0.91 mi north of APE
DFW; FAA	7373	IES	2015	Area	0.93 mi southwest of APE
Dallas Area Rapid Transit (DART)	7996	AmaTerra Environmental, Inc.	2017	Area	0.98 mi east of APE
DFW; FAA	8392	IES	2018	Area	0.87 mi west of APE

### 3.2 Archeological Resource Potential

#### 3.2.1 *Disturbance Analysis*

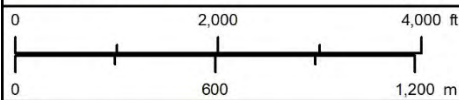
Prior to the construction of DFW in the early 1970s, the APE was used for agricultural and ranching purposes (**Figure 3.2**). Historical maps and aerial photographs depict a roadway along the northern APE boundary, which would later be incorporated into DFW property development as 18<sup>th</sup> Street. Since 1972, significant ground disturbances have transpired throughout the APE related to large-scale surface grading and contouring, the construction of DFW, as well as associated supporting building areas and infrastructure. A 1973 aerial photograph indicates the American Airlines West Warehouse and associated infrastructure projects were under construction (**Figure 3.3**). Currently, the APE occupies a heavily developed area on DFW property.





**Figure 3.1**  
**Previous Investigations Within**  
**1 Mile of the APE**

County: Tarrant  
 State: Texas  
 Date map created: 7/21/2022  
 Source: (c) 2009 Microsoft Corp; ESRI 10.8  
 IES Project Ref: 03.006.099

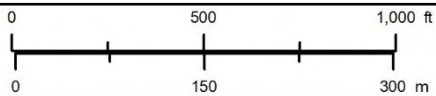



- Area of Potential Effects - Direct
- Area of Potential Effects - 1 Mile Buffer
- Previous Archeological Survey - Area
- Previous Archeological Survey - Line



Figure 3.2  
1971 Aerial Photograph

County: Tarrant  
State: Texas  
Date map created: 8/10/2022  
IES Project Ref: 03.006.099



 Area of Potential Effects

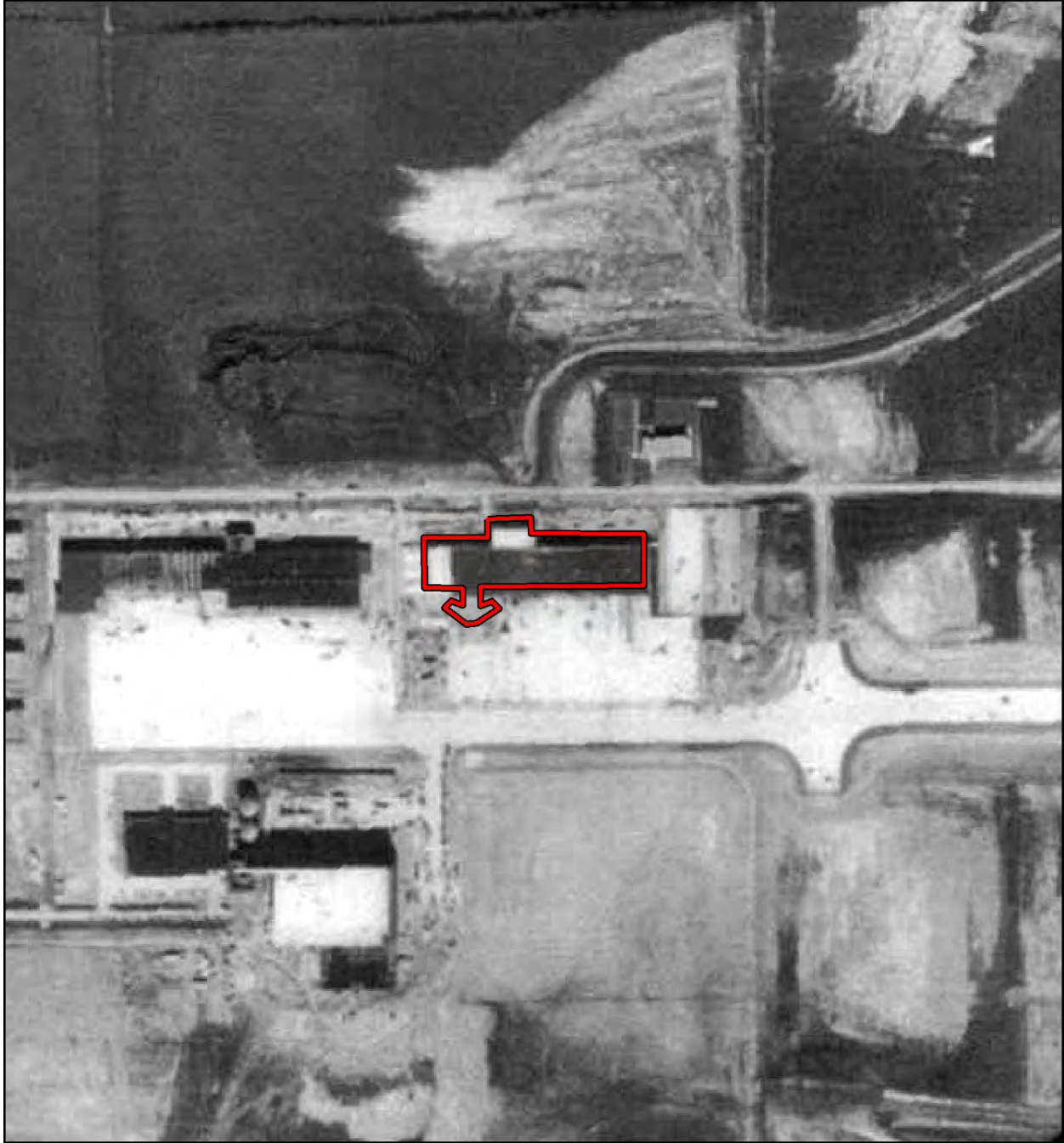
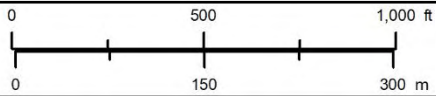



Figure 3.3  
1973 Aerial Photograph

County: Tarrant  
State: Texas  
Date map created: 8/10/2022  
IES Project Ref: 03.006.099



 Area of Potential Effects

### 3.2.2 Prehistoric Archeological Potential

Data presented within the Texas Department of Transportation (TxDOT) Potential Archeological Liability Map (PALM) for Tarrant County indicates that the entire APE features negligible potential for both shallow and deeply buried cultural deposits with reasonable contextual integrity. Similar conclusions were reported by AR Consultants, Inc. (ARC) in 2007 and 2008. ARC conducted intensive pedestrian surveys of 1,210 ac on DFW property under Texas Antiquities Permit Number 4491 and published their results in the report *An Archaeological Survey for Chesapeake Energy Corporation at DFW International Airport, Dallas and Tarrant Counties, Texas* (Shelton et al. 2008). Through this study, three environmental zones were identified within DFW that contain varying amounts of cultural resources probability. The APE is located in Zone 1 (**Figure 3.4**). Zone 1 is comprised of the Blackland Prairie Uplands ecoregion, which consists of mostly level clay or clay loam soils over a thin layer of limestone bedrock. Water permeates very slowly to the water table causing fast surface run-off and high shrink and swell potential. This setting has a low biotic diversity and is dominated by short grasses. Due to the limited resources available within the area, it has a low probability for containing prehistoric sites.

### 3.2.3 Historic-Period Archeological Resources

Historical aerial photographs indicate that the APE was used for agricultural and ranching activities until groundbreaking for the construction of DFW in 1970. The 1895 Sam Street's Map of Tarrant County, the 1920 USDA Soils Map of Dallas County, and 1936 State Highway Map for Tarrant County illustrates the APE was devoid of buildings and structures. This was verified by aerial photography as early as 1942. Based on this background research and the current warehouse occupying the entire APE, there is a low potential for encountering historic-age archeological resources within the APE.

## 3.3 Above-Ground Resource Potential

### 3.3.1 *Direct APE*

Groundbreaking for the airport began in 1969, with runway and building construction completed by the end of 1973. Through background research, it was determined that the American Airlines West Warehouse was constructed as part of the initial phase of DFW construction in 1973. Currently, the warehouse is still standing within the APE. As such, the APE contains a high potential for above-ground resources.

### 3.3.2 *Indirect APE*

No historic-age above-ground resources were identified within the indirect APE.

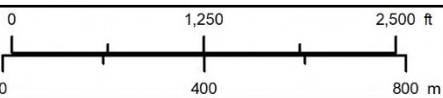
## 3.4 Historic Context

Prior to DFW development, air travel in the region was concentrated primarily at Love Field in Dallas and Meacham Field in Fort Worth. As air traffic demand gradually increased in the first half of the twentieth century, both Love and Meacham Fields required improvements to handle the growth in the commercial airline industry (Bleakey 2013). Meacham Field later transferred its flights to the Amon Carter Field, (renamed Greater Southwest International Airport [GSW]); however, Love Field was burdened with almost half of Texas air traffic while Fort Worth carried only one percent. The separation raised questions of efficiency, capacity, and locational issues. Instead of funding expansions for each airport, the Civil Aeronautics Administration encouraged the building of a single regional airport to serve both cities in the 1940s (Leatherwood 2019). Plans for a regional airport were eventually finalized after two decades of disagreements between Dallas and Fort Worth (Leatherwood 2019). After negotiations, the airport's location was selected between Dallas and Fort Worth at the intersection of the cities of Euless, Irving, and Grapevine. Land was purchased by both Dallas and Fort Worth in the mid-1960s with airport construction continuing into the early 1970s.



**Figure 3.4**  
**Archeological-Environmental**  
**Zone Map**

County: Tarrant  
 State: Texas  
 Date map created: 8/10/2022  
 Source: Streetmap; ESRI  
 IES Project Ref: 03.006.099



- Area of Potential Effects
- Archeological Environmental Zone**
- ZONE 1 - Blackland Prairies Uplands
- ZONE 2 - Eastern Cross Timbers
- ZONE 3 - Bear Creek Floodplain

The airport terminal core was designed by architect Gyo Obata at the firm Hellmuth, Obata, and Kassabaum (HOK) of St. Louis in coordination with the firm, Brodsky, Hopf, and Adler of New York City (Engineering News-Record 1972). Obata studied at Washington University in St. Louis under the father of noted architect Eero Saarinen, who was responsible for designing Washington Dulles International Airport in Washington D.C. and the Trans World Flight Center (TWA) in New York City (Berger 1997). Obata's most well-known works include the National Air and Space Museum in Washington D.C., the James S. McDonnell Planetarium in St. Louis, the Abraham Lincoln Presidential Library and Museum in Springfield, Illinois, the Houston Galleria, the Saint Louis Abbey, and Independence Temple in Independence, Missouri.

The original conceptual designs for DFW included 13 airline passenger terminals, one field transit terminal, and one mass transit terminal (Engineering News-Record 1972). The 14 buildings were to form symmetrical semicircles along a 10-lane spine roadway, International Parkway (Engineering News-Record 1972). The first construction phase began in 1969 and was completed by the end of 1973 (Leatherwood 2019). Phase I included the construction of runways, taxiways, taxiway bridges, a 10-lane spine highway system, four terminal buildings, a hotel, cargo facilities, and parking lots (Landrum and Brown 1978). DFW's terminals and transportation infrastructure featured a modular system of prefabricated concrete units (Prestressed Concrete Institute 1973). When the airport opened, DFW featured three terminals (Terminals A, C, and E) on the east side of International Parkway and Terminal B on the west side. The remaining nine terminals proposed in the original master plan by Obata were designed to be constructed as needed in the future on either side of the central spine highway (Payne and Fitzpatrick 1999).

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## CHAPTER 4: METHODS

### 4.1 Archeological Desktop Analysis

To complete the archeological desktop analysis, a variety of literature and online sources were referenced to determine if potential cultural resources were located within the APE. These sources included: the *Soil Survey of Tarrant County, Texas*; the Geologic Atlas of Texas (Dallas Sheet); the U.S. Geological Survey (USGS) topographic map; USDA NRCS digital soil database for Tarrant County; the 1936 State Highway Map for Tarrant County; the Texas Historic Overlay; TxDOT PALM of Tarrant County; and both past and current aerial photography of the proposed APE. Additionally, a file search of the TASA and THSA were performed to identify if archeological sites or any previously designated or identified historic properties were within the APE. This review was performed by Project Archeologist Anne Gibson on 05 August 2022.

All photographs used within the report were taken by IES architectural historian Daniel Norwid; no archeological field assessments were conducted. IES archeologists used the photographs to assist in determining potential effects to archeological resources and if an archeological survey would be required.

### 4.2 Above-Ground Resource Survey

The purpose of the above-ground resource survey is to:

- 1) locate both previously identified and unidentified architectural or structural properties in the APE;
- 2) identify the characteristics which the properties must possess to be eligible for NRHP listing;
- 3) identify whether the properties retain sufficient integrity to be qualify for NRHP listing;
- 4) determine if any properties require additional evaluation to determine historic significance; and
- 5) determine if any historic properties are affected by the project.

Typical methods accepted by the THC establish historic-aged resources as those determined to be 50 years old or greater, which, for this project, translates to resources from 1972 or earlier. However, as detailed previously in this report, above-ground resources 45 years in age or older were visited, primarily through photographs and field notes, to observe and briefly document location, type, age, material, and integrity. The existing conditions and architectural elements of each resource were evaluated for NRHP eligibility and potential adverse effects.

### 4.3 Resource Evaluation

#### 4.3.1 *National Register Evaluation Criteria*

The assessment of significance of a cultural resource is based on federal guidelines and regulations. The criteria for evaluating resources for inclusion in the NRHP are codified under the authority of the NHPA, as amended (36 CFR 60.4 [a–d]), and the Advisory Council on Historic Preservation (ACHP) has set forth guidelines to use in determining site eligibility. Federal regulations indicate that “[t]he term ‘eligible for inclusion in the National Register’ includes both properties formally determined as such by the Secretary of the Interior and all other properties that meet National Register listing criteria” (36 CFR 800.2[e]). Based on ACHP guidelines, any cultural resource that is included in or eligible for inclusion in the NRHP is a historic property.

After the identification of relevant historical themes and related research questions for the evaluation of a resource, four criteria for NRHP eligibility are applied (36 CFR 60.4[a–d]). The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, material, workmanship, feeling, and association and:

- Criterion A: that are associated with events that have made a significant contribution to the broad patterns of our history; or



- Criterion B: that are associated with the lives of persons significant in our past; or
- Criterion C: that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- Criterion D: that have yielded, or may be likely to yield, information important in prehistory or history.

#### 4.3.2 National Register Integrity Requirements

In addition to meeting one or more of the criteria outlined in 36 CFR 60.4, a cultural resource must possess integrity of various aspects of its character to be considered a significant cultural resource. In the most general sense, integrity refers to the “ability of a property to convey its significance” (*National Register Bulletin* 15:44). The determination of integrity is intrinsically related to the physical features or aspects of a cultural resource and their ability to contribute to the significance of the resource.

Typically, the cultural resource must also retain the defining features and characteristics that were present during the property’s period of significance to be considered eligible NRHP listing. The NRHP defines seven aspects of integrity as: design, location, setting, materials, workmanship, feeling, and association. Design typically refers to elements such as form, structure, space, plan, or style of a structure or archeological site. Whereas location refers to the specific place where a property was built or an event occurred, setting refers to the character of the place in which the property played its historical role. Materials describe the physical elements of a site such as the building materials used to construct a structure or remnants of raw materials that provided the subsistence base for past human occupation of a site. Workmanship encompasses physical aspects of labor or craft industries through the application of both technological practices and aesthetic principles and can be expressed either as common traditions or innovative techniques. Feeling refers to an expression of the aesthetic character of a site and is typically applied to sites that include visible structural features. Association references the direct link between an important historic event or person and a historic property.

Resources that may be considered eligible under Criteria A and B are those associated with events or broad patterns in history or persons affiliated with those activities. Although it is necessary to consider the architectural and physical integrity for resources evaluated under Criteria A or B, attributes of historical integrity will be more highly valued for these criteria. Thus, the most important aspects of integrity for evaluating resources under these criteria are location, feeling, and association.

Properties eligible for the NRHP under Criterion C derive significance from the physical qualities of their design, construction, and/or craftsmanship, which includes elements like engineering or architecture. A property significant under Criterion C is one that represents a noteworthy example of a defined property type, dates from a period of significance of one or more historic context(s) and exhibits the character-defining features of its property type. Therefore, a property must retain a high degree of physical integrity, as well as having relation to historic context.

For a cultural resource to be eligible under Criterion D, the property must have the potential to answer questions, in part or full, about human history that can only be answered by the actual physical material of the resource and the information to be obtained must also be significant. The most common cultural resources listed under this criterion are archeological sites; however, non-archeological resources can be eligible under Criterion D also.

Guidance from the National Parks Service within *National Register Bulletin 15* states the NRHP Criteria Evaluation exclude properties that are 50 years or less unless they are of exceptional importance. Cultural resources less than 50 years in age can be evaluated for NRHP eligibility under Criteria Consideration G, which allows for NRHP eligibility if the resource has achieved exceptional importance on the local, state, or national level within the last 50 years. As all above ground elements in the APE are less than 50 years in age, they were evaluated under this framework.

## CHAPTER 5: RESULTS

### 5.1 Archeological Resources

Through the background review and review of photographs taken during the architectural survey, IES determined that the APE was significantly disturbed and contained no potential for archeological resources and would not require an archeological survey to be performed prior to construction.

### 5.2 Above-Ground Resources


Through a detailed background research and reconnaissance architectural survey, no historic-age architectural resources 50 years in age or older were identified within the APE. However, the direct APE contained one building, the American Airlines West Warehouse, which is at least 45 years in age. The building, Resource 1 (R-1) was photographed and assessed for potential NRHP eligibility. Representative photographs are provided within **Appendix A**.

#### 5.2.1 *R-1*

R-1 is associated with the initial construction phase of DFW completed at end of 1973 (**Table 5.1**). Construction date of this building was confirmed through a review of historical and modern aerial photographs and archival records. Aerial photographs also indicate that this building's structural composition has remained primarily unaltered, with one arrow-shaped garage addition at the building's rear.

R-1 was designed in the Brutalism-style of architecture, which was prevalent in 1970s commercial design. Reflective of the style, the building contains sharp, geometric dimensions and features a beige concrete exterior. The fenestration throughout the building varies in sizes; however, most of the windows are fixed with large glass panes and metal framing. The footprint of the building had a rectangular body that had two wings connected to its main central body. One wing (along the northern elevation) was just east of the main entrance and featured a large-pane window. The second wing was an arrow-shaped garage constructed of ribbed corrugated metal along its exterior walls and roof. This wing's roof and walls extend to almost double the height of the rest of the building; because of the scale of the building, however, the addition is only minimally visible within the roofline from the ground's surface. This wing was added to the building between 1973 and 1979. While each elevation features rolling slat-style garage doors, the north and south elevations feature the most doors and mostly on their eastern ends. The west elevation is almost completely composed of these garage doors. The concrete building is like other concrete structures used for the construction of DFW in the early 1970s in that it shares the same texture and consistency (**Appendix A, Photographs 01 through 05**).

**Table 5.1:** Modern Architectural Resources within the APE

Resource	Property Name	Potential Effects Type	Construction Date/ Architectural Elements	Photograph 1
R-1	American Airlines West Warehouse (facing southwest)	Direct	c. late 1973, Brutalism-style, single story building.	

## CHAPTER 6: SUMMARY AND RECOMMENDATIONS

### 6.1 Archeological Resources

The entirety of the APE has been exposed to significant previous ground disturbances and contains negligible potential for containing prehistoric or historic-age archeological sites.

### 6.2 Architectural Resources

Although no historic-age architectural resources 50 years in age or older were identified within the APE, one architectural resource 45 years in age or older was photographed and assessed for NRHP eligibility (Table 6.1).

#### NRHP Eligibility Recommendations

Although no historic-age architectural resources 50 years in age or older were identified within the APE, one architectural resource 45 years in age or older was photographed and assessed for NRHP eligibility (Table 6.1).

**Table 6.1:** Modern Architectural Resources within the APE

Property Name	Resource	Impact Type	NRHP Eligibility Recommendation
American Airlines West Warehouse	R-1	Direct	Not Eligible

Through the assessment, R-1 was identified as not eligible for listing on the NRHP under Criteria Consideration G. Although the building resource was associated with the initial construction phase and administrative period of DFW, background research determined that the resource lacked significant contribution to the history of the area. Although the terminal core of the airport was associated with the renowned aviation architect Gyo Obata, his design was focused on the terminal core and road/rail aspects of the airport. R-1 has no known association of significant person(s). Although R-1 contains distinctive characteristics attributed to mid-twentieth century design and has retained a high degree of integrity since construction, this resource lacks unique design characteristics of exceptional importance that would qualify it as eligible under Criteria Consideration G.

Therefore, the FAA requests concurrence with the findings of this study and the recommendation that no historic properties will be affected under 36 CFR Part 800.4(d)(1) within the current APE. In addition, the FAA requests that the undertaking be permitted to continue without the need for further cultural resources investigations. However, in the event that any prehistoric or historic features or deposits are encountered during construction, work should cease in that area immediately and the THC should be contacted for further consultation.

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**APPENDIX A**  
**Photograph Location Map and Photographs**







Photograph 1: American Airlines West Warehouse, north and west elevations, facing southeast.



Photograph 2: American Airlines West Warehouse, north and west elevations, facing east.



Photograph 3: American Airlines West Warehouse, west elevation, facing east.



Photograph 4: American Airlines West Warehouse, north elevation, facing southeast.



Photograph 5: American Airlines West Warehouse, north (western section) elevation, facing south.



Photograph 6: American Airlines West Warehouse, north (center section) elevation, facing south.



Photograph 7: American Airlines West Warehouse, north (eastern section) elevation, facing south.



Photograph 8: American Airlines West Warehouse, north and east elevations, facing southwest.



Photograph 9: American Airlines West Warehouse, north and east elevations, facing west.



Photograph 10: American Airlines West Warehouse, east elevation, facing west.



Photograph 11: American Airlines West Warehouse, south and east elevations, facing northwest.



Photograph 12: American Airlines West Warehouse, south and east elevations, facing west.



Photograph 13: American Airlines West Warehouse, south and east elevations, facing northwest.



Photograph 14: American Airlines West Warehouse, south (eastern section) elevation, facing north.



Photograph 15: American Airlines West Warehouse, south (western section) elevation, facing north.



Photograph 16: American Airlines West Warehouse, south (western section) elevation, facing northeast.





Photograph 17: American Airlines West Warehouse, south and west elevations, facing east.



Photograph 18: American Airlines West Warehouse, south and west elevations, facing northeast.



Photograph 19: American Airlines West Warehouse, south (western section) elevation, facing north.



Photograph 20: American Airlines West Warehouse, south and east elevations, facing northwest.

