



30 September 2021

Ms. Sandy Lancaster
Dallas/Fort Worth International Airport
Environmental Affairs Department
3003 South Service Road, Annex Building A
DFW Airport, Texas 75261-9428

Re: CTA Development Project - Waters of the United States Delineation & Desktop Assessment
Approximately 69 acres across 13 different sites within the DFW International Airport CTA Terminals A and C Development Project located on the DFW International Airport complex, Dallas and Tarrant Counties, Texas

Dear Ms. Lancaster,

Integrated Environmental Solutions, LLC (IES) performed a site survey and desktop review to identify any aquatic features that meet a definition of a water of the United States on approximately 69 acres across 13 different sites within the DFW Airport CTA Terminals A and C Development Project located on the DFW International Airport complex, Dallas and Tarrant Counties, Texas. A desktop evaluation was conducted on Sites 1 through 7 as they were not able to be accessed due to airport regulations. A site survey was conducted on Sites 8 through 13 as they were able to be accessed via public roadways (**Attachment A, Figure 1**). This report will ultimately assess and delineate potentially jurisdictional aquatic features to ensure compliance with Sections 401 and 404 of the Clean Water Act (CWA).

INTRODUCTION

Waters of the United States are protected under guidelines outlined in Sections 401 and 404 of the CWA, in Executive Order (EO) 11990 (Protection of Wetlands), and by the review process of the Texas Commission on Environmental Quality (TCEQ). Agencies that regulate impacts to the nation's water resources within Texas include the U.S. Army Corps of Engineers (USACE), the U.S. Environmental Protection Agency (USEPA), the U.S. Fish and Wildlife Service (USFWS), and the TCEQ. The USACE has the primary regulatory authority for enforcing Section 404 requirements for waters of the United States.

The decision for whether a Section 404 of the CWA permit is required on a property is determined if there are waters of the United States present and the extent of losses of those features. The USACE and EPA have gone through rulemaking to define what is a water of the United States, independently and jointly, several times since the initial CWA. The longest standing definitions of waters of the United States were those published in 1986; however, these definitions were challenged in 2001 and 2007 U.S. Supreme Court decisions. Since then, both the Obama and Trump administration completed rulemaking to modify the definitions of waters of the United States in the Clean Water Rule in 2016 and the Navigable Water Protection Rule (NWPR) in 2020. A recent federal district court decision in Arizona struck down the NWPR but was silent on which definitions of waters of the United States would replace it. As of the date of this letter report, the USACE Fort Worth District has provided verbal guidance that the USACE will be utilizing the pre-2015 definitions (i.e., 1986 definitions combined with the *Rapanos* and *Carabell* U.S. Supreme Court decisions) to define waters of the United States. Please note, at this time there is no written guidance from USACE on this decision and whether the federal district court ruling actually applies nationwide. Furthermore, it is uncertain as to whether there will be any appeal to the federal appellate court. Therefore, this report will analyze all aquatic features within the project site to determine their applicability under both NWPR and the 1986 Rule.

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Navigable Waters Protection Rule (Effective 22 June 2020)

The streamlined regulations have redefined waters of the United States as the following at 33 Code of Federal Regulations (CFR) 328.3 (a) as:

1. *The territorial seas, and waters which are currently used or were used in the past, or may be susceptible to use in interstate or foreign commerce, including waters which are subject to the ebb and flow of the tide;*
2. *Tributaries;*
3. *Lakes and ponds, and impoundments of jurisdictional waters; and*
4. *Adjacent wetlands*

The following features are excluded from jurisdiction at 33 CFR 328.3 (b) as:

1. *Lake/pond/impoundment or wetland that does not contribute surface water flow directly or indirectly to an (a)(1) water and is not inundated by flooding from an (a)(1)-(a)(3) water in a typical year, surface water channel that does not contribute surface water flow directly or indirectly to an (a)(1) water in a typical year, or Water or water feature that is not identified in (a)(1)-(a)(4) and does not meet the other (b)(1) sub-categories;*
2. *Groundwater, including groundwater drained through subsurface drainage systems;*
3. *Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool;*
4. *Diffuse stormwater run-off over upland or directional sheet flow over upland;*
5. *Ditch that is not an (a)(1) or (a)(2) water;*
6. *Prior converted cropland;*
7. *Artificially irrigated area, including fields flooded for agricultural production, that would revert to upland should application of irrigation water to that area cease;*
8. *Artificial lake/pond constructed or excavated in upland or a non-jurisdictional water, so long as the artificial lake or pond is not an impoundment of a jurisdictional water;*
9. *Water-filled depression constructed/excavated in upland/non-jurisdictional water incidental to mining/construction or pit excavated in upland/non-jurisdictional water to obtain fill/sand/gravel;*
10. *Stormwater control feature constructed or excavated in upland or in a non-jurisdictional water to convey, treat, infiltrate, or store stormwater runoff;*
11. *Groundwater recharge, water reuse, or a wastewater recycling structure constructed or excavated in upland or in a non-jurisdictional water; and*
12. *Waste treatment system.*

Further definitions located at 33 CFR 328.3 (c) include:

- (1) *Adjacent wetlands.* The term adjacent wetland means wetlands that:
 - i. *Abut, meaning to touch at least one point or side of, a water identified in paragraph (a)(1), (2), or (3) of this section;*
 - ii. *Are inundated by flooding from a water identified in paragraph (a)(1), (2), or (3) of this section in a typical year;*
 - iii. *Are physically separated from a water identified in paragraph (a)(1), (2), or (3) of this section only by an artificial dike, barrier, or similar artificial structure so long as that structure allows for a direct hydrologic surface connection between the wetlands and the water identified in paragraph (a)(1), (2), or (3) of the section in atypical year, such as through a culvert, flood or tide gate, pump, or similar artificial feature. An adjacent wetland is jurisdictional in its entirety when a road or similar*

artificial structure divides the wetland, as long as the structure allows for direct hydrologic connection through or over that structure in a typical year.

- (6) *Lakes and ponds, and impoundments of jurisdictional waters.* The term lakes and ponds, and impoundments of jurisdictional waters means standing bodies of open water that contribute surface water flow to a water identified in paragraph (a)(1) of this section in a typical year either directly or through one or more waters identified in paragraph (a)(2), (3), or (4) of this section. A lake, pond, or impoundment of a jurisdictional water does not lose its jurisdictional status if it contributes surface water flow to a downstream jurisdictional water in a typical year through a channelized nonjurisdictional surface water feature, through a culvert, dike, spillway, or similar artificial feature, or through a debris pile, boulder field, or similar natural feature. A lake or pond, or impoundment of a jurisdictional water is also jurisdictional if it is inundated by flooding from a water identified in paragraph (a)(1), (2), or (3) of this section in a typical year.
- (12) *Tributary.* The term tributary means a river, stream, or similar naturally occurring surface water channel that contributes surface water flow to a water identified in paragraph (a)(1) of this section in a typical year either directly or through one or more waters identified in paragraph (a)(2), (3), or (4) of this section. A tributary must be perennial or intermittent in a typical year. The alteration or relocation of a tributary does not modify its jurisdictional status as long as it continues to satisfy the flow conditions of this definition. A tributary does not lose its jurisdictional status if it contributes surface water flow to a downstream jurisdictional water in a typical year through a channelized nonjurisdictional surface water feature, through a subterranean river, through a culvert, dam, tunnel, or similar artificial feature, or through a debris pile, boulder field, or similar natural feature. The term tributary includes a ditch that either relocates a tributary, is constructed in a tributary, or is constructed in an adjacent wetland as long as the ditch satisfies the flow conditions of this definition.

1986 Waters of the United States Definitions and Rapanos Decision

The definition of waters of the United States, in 33 CFR 328.3, includes waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, wetlands, sloughs, wet meadows, or natural ponds and all impoundments of waters otherwise defined as waters of the United States. Also included are wetlands adjacent to waters (other than waters that are themselves wetlands). The term *adjacent* is defined as bordering, contiguous, or neighboring. Jurisdictional wetlands are a category of waters of the United States and have been defined by the USACE as areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Waters of the United States are defined in 33 CFR 328.3 (a), 13 November 1986, as:

1. *All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;*
2. *All interstate waters including interstate wetlands;*
3. *All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce including any such waters:*
 - i. *Which are or could be used by interstate or foreign travelers for recreational or other purposes; or*
 - ii. *From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or*
 - iii. *Which are used or could be used for industrial purposes by industries in interstate commerce;*
4. *All impoundments of waters otherwise defined as waters of the United States under the definition;*
5. *Tributaries of waters identified in paragraphs (a)(1)-(4) of this section;*
6. *The territorial seas;*

7. *Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a)(1)-(6) of this section.*

On 05 June 2007, the USACE and the USEPA issued joint guidance on delineation of waters on the United States based on the U.S. Supreme Court decisions in *Rapanos* and *Carabell*. Under this guidance, potential waters of the United States have been classified as traditional navigable waters (TNW), relatively permanent waters (RPW) (i.e., having flow most of the year or at least seasonally), or non-RPWs. This guidance states that TNWs and RPWs and contiguous or adjacent wetlands to these aquatic features are waters of the United States. Wetlands that are bordering, contiguous, or neighboring another water of the United States is considered adjacent. Additionally, wetlands that are within the 100-year floodplain of another water of the United States are also considered adjacent. Non-RPWs, wetlands contiguous or adjacent to non-RPWs, and isolated wetlands must undergo a “significant nexus” test on a case-by-case basis to determine the jurisdictional nature of these aquatic features. Under the “significant nexus” test a water feature must have substantial connection to a TNW by direct flow, or by indirect biological, hydrologic, or chemical connection. Under the “significant nexus” test the USACE District Engineer must submit the jurisdictional determination (JD) to the regional USEPA office, which makes the decision whether to move the JD to Headquarters USACE to make the final determination.

This guidance does not void the January 2001 decision of the U.S. Supreme Court in *Solid Waste Agency of Northern Cook County (SWANCC) v. USACE* which disallowed regulation of isolated wetlands under the CWA through the “Migratory Bird Rule.” Previously, the USACE assumed jurisdiction over isolated waters of the United States based on its 1986 preamble stating that migratory birds used these habitats. The “Migratory Bird Rule” provided the nexus to interstate commerce and thus protection under the CWA. However, the new guidance does require that the “significant nexus” test be performed in addition to an analysis of other potential interstate commerce uses for isolated waters.

METHODOLOGY

Prior to conducting the desktop evaluation and fieldwork, the U.S. Geological Survey (USGS) topographic map (**Attachment A, Figures 2A and 2B**), the *Soil Survey of Dallas County* and the *Soil Survey of Tarrant County, Texas*, and the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) digital soil databases for Dallas and Tarrant Counties (**Attachment A, Figure 3**), the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) (**Attachment A, Figure 4**), and recent and historic aerial photographs of the proposed survey area were studied to identify possible aquatic features that could meet the definition of waters of the United States and areas prone to wetland development. Ms. Karisa Fenton and Ms. Claire Unruh of IES conducted the delineation in the field in accordance with the USACE procedures on 22 September 2021.

Wetland determinations and delineations were performed on location using the methodology outlined in the 1987 Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineer Wetland Delineation Manual: Great Plains Region (Version 2.0). The presence of a wetland is determined by the positive indication of three criteria (i.e., hydrophytic vegetation, hydrology, and hydric soils). Potential jurisdictional boundaries for other water features (i.e., non-wetland) were delineated in the field at the ordinary high-water mark (OHWM). The 33 CFR 328.3 (c)(7) defines OHWM as the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Water feature boundaries were recorded on a Trimble GeoExplorer XT Global Positioning System (GPS) unit capable of sub-meter accuracy. Photographs were also taken at representative points within the survey area (**Attachment B**). Routine wetland determination data forms are provided in **Attachment C**. Historic aerial photographs, from Environmental Data Resources, Inc. (EDR), were used in the jurisdictional determination of some aquatic features, are included in **Attachment D**.

RESULTS

Background Review

Topographic Setting

The USGS topographic maps (Grapevine 7.5' Quadrangle 1959, revised 1982; Eules 7.5' Quadrangle 1959; revised 1992) illustrate one blue line feature within the survey area. The blue line feature is depicted meandering through the southern region of Site 8 and continuing into the northwestern region of Site 9, oriented southwest-to-northeast (see **Attachment A, Figure 2A**). The 2019 version of the Grapevine and Eules 7.5' Quadrangle maps illustrates the blue line feature in similar alignment (see **Attachment A, Figure 2B**). The overall topography was illustrated with slopes oriented west-to-east in Sites 1 through 11 and north-to-south in Sites 12 and 13. The maximum elevation of the property was approximately 580 feet above mean sea level (amsl) and a minimum elevation of approximately 520 feet amsl.

Soils

The *Soil Survey of Dallas County, Texas* identified four soil map units within the survey area, Ferris-Heiden complex, 5 to 12 percent slopes; Heiden clay, 1 to 3 percent slopes; Heiden clay, 2 to 5 percent slopes, eroded; and Houston Black-Urban land complex, 0 to 4 percent slopes. The *Soil Survey of Tarrant County, Texas* identified four soil map units within the survey area, Heiden clay, 1 to 3 percent slopes; Houston Black clay, 1 to 3 percent slopes; Houston Black-Urban land complex, 1 to 4 percent slopes; and Urban land. None of these soil map units were listed as a hydric soil on the Hydric Soils of Texas list prepared by the National Technical Committee for Hydric Soils (accessed 29 September 2021, Dallas and Tarrant Counties, Texas) (see **Attachment A, Figure 3**). Hydric soils are described as those soils that are sufficiently wet in the upper part to develop anaerobic conditions during the growing season.

FEMA FIRM

The FEMA FIRM (Dallas and Tarrant Counties; Map Panel 4439C0120K; effective 25 September 2009; 48113C0145K; effective 07 July 2014 and Map Panels 48439C0235L, and 48113C0285L; effective 03 March 2019) shows the entire survey area to be within Zone X (Areas determined to be outside the 0.2 percent annual chance floodplain) (see **Attachment A, Figure 4**).

Historic Aerial Photographs

Historic aerial photographs from an aerial photograph decade package from EDR were also reviewed to understand the sequence of events that have occurred in Site 10 of the survey area (see **Attachment D**). Site 10 was evaluated due to the presence of a pond and wetland. The following paragraphs provide a description of the aerial photographs based on site conditions:

1942-1968 – Site 10 is characterized as an active agricultural property comprised of pastureland. A drainage is depicted outside of the western boundary. The surrounding area is comprised of pastureland, drainages, and scattered homesteads.

1972 – Dirt roads are visible across Site 10. The drainage to the west has been channelized and an impoundment has been excavated to the north.

1979 – The roads are no longer visible and the impoundment to the north has been filled. A commercial complex has been constructed south of Site 10.

1984 – Site 10 has been entirely cleared.

1990 – Dark color signatures are visible in the channel to the west, indicating potential inundation.

1995 – Airport runways and buildings have been constructed surrounding Site 10 and a road has been cleared along the northern boundary. The drainage to the north that was previously impounded has been channelized and routed through a concrete channel.

2005-2012 – The eastern region of Site 10 has been cleared. Canopy cover has increased along the drainage to the west, and the area to the south.

2016 – A lot has been partially cleared in the southern region.

Weather History

The weather history for Wunderground.com Edwards weather station (KTXEULES47) recorded no rainfall in the 7-day period prior to and during the evaluation, and a total of 0.20 inch during the 30-day period prior to the site visit. The Antecedent Precipitation Tool (APT) indicated that the conditions on-site at the time of the evaluation were considered hydrologically “normal” based on the 30-year climactic average (32.885619 °N, -97.040544 °W).

Field Investigation

The 13 sites within the survey area consisted of four distinct vegetation communities: **urban matrix, frequently maintained grassland, infrequently maintained grassland, and shrub-scrub upland**. The **urban matrix** was found throughout a majority of Sites 1 through 6, 8 through 10, and the eastern side of Site 12. The urban matrix was comprised of concrete lots, roads, buildings, and active construction areas. The entirety of Sites 7 and 11, and the western portions of Sites 5 and 8 contained the **frequently maintained grassland** vegetation community, dominated by mowed Bermudagrass (*Cynodon dactylon*). The **infrequently maintained grassland** was observed in the central region of Site 12 and was comprised of Maximilian sunflower (*Helianthus maximiliani*), meadow dropseed (*Sporobolus compositus*), Johnsongrass (*Sorghum halepense*), white heath aster (*Symphotrichum ericoides*), King Ranch bluestem (*Bothriochloa ischaemum*), sumpweed (*Iva annua*), Canada goldenrod (*Solidago canadensis*), prairie broomweed (*Amphiachyris dracunculoides*), Bermudagrass, and annual sunflower (*Helianthus annuus*). The **shrub-scrub** upland vegetation community was observed on the western side of Site 12 and throughout Site 13, dominated by honey mesquite (*Prosopis glandulosa*), sugarberry (*Celtis laevigata*), giant ragweed (*Ambrosia trifida*), Johnsongrass, Bermudagrass, and annual sunflower.

Water from Sites 1 through 10 flows east into Hackberry Creek, then into the Elm Fork Trinity River, and ultimately into the Trinity River, a TNW. Water from Sites 11 through 13 flows south into Big Bear Creek, then into the West Fork Trinity River, and ultimately into the Trinity River, a TNW.

Desktop Evaluation

Aquatic features within Sites 1 through 7 were identified and delineated using both the National Hydrography Dataset (NHD) and historic and recent aerial photography. Sites 8 through 13 were field verified after a review of the available secondary data. **Table 1** and the following paragraphs detail the aquatic features identified within the survey sites at the time of evaluation (**Attachment A, Figure 5 and 6**).

Table 1. Aquatic Features Identified within the Survey Area

Water Identification	Hydrology Characteristics	Area (Acre)	Length (Linear Feet)
Wetland 1	Seasonally Saturated	0.01	---
Ditch 1	Ephemeral	0.03	267
Pond 1	Seasonally Inundated	0.03	---

**Actual acreage less than 0.01 acre*

Wetland 1 was an emergent wetland observed along the western boundary of Site 10, adjacent to Pond 1. The wetland appeared to form when the construction site to the east was cleared, and construction activities resulted in the formation of a berm outside of the construction fenceline allowing water to pool in the space between the fence and berm after rainfall. Hydrologic vegetation was dominated by saltmarsh aster (*Symphotrichum subulatum*), and sumpweed (*Iva annua*). Hydric soils were indicated by a Depleted Matrix with a matrix color of 10YR 4/2 with redoximorphic concentrations of 5YR 4/6 in the pore linings and matrix. Hydrologic indicators consisted of drainage patterns, surface soil cracks, and a positive FAC-Neutral test.

Ditch 1 was a shallow, concrete-lined, stormwater drainage ditch within Site 5. Based on historic and recent aerial photography, Ditch 1 appears to have been constructed prior to 1995 to convey excess stormwater from the surrounding roads, lots, and fields. The USGS topographic map does not illustrate a blue line feature in the location of Ditch 1 and the shallow nature of the concrete channel suggests that the man-made feature replaced a swale.

Ditch 1 appeared dry in all aerial photographs. As such, it is IES' professional opinion that Ditch 1 would be considered an ephemeral feature.

Pond 1 was a small, artificial pond located along the western boundary of Site 10 with no OHWMs entering or exiting the pond. A review of aerial photography indicates Pond 1 was excavated in 2020, along the edge of a construction site with a small berm constructed across the gradient to capture sheet flow. Pond 1 was inundated at the time of the evaluation. Given the relatively small size of the pond and its location high in the watershed, it is IES' professional opinion that Pond 1 be considered seasonally inundated.

POTENTIAL JURISDICTIONAL ASSESSMENT

Due to the uncertainty associated with the definitions of waters of the United States and thereby the jurisdiction of features, IES is providing an analysis of jurisdiction based on the current NWPR and the former definitions using the *Rapanos* and *Carabell* decisions.

Navigable Waters Protection Rule (Effective 22 June 2020)

Table 2 provides an overview of the jurisdictional assessment of the aquatic features located within the survey area under the NWPR. Under this rule, none of the aquatic features located within the survey area would be considered a water of the United States (see **Attachment A, Figure 5**). **Wetland 1** was adjacent to an isolated pond and **Ditch 1** was a man-made ephemeral ditch; therefore, these features do not meet the definition of an adjacent wetland, or a replacement of a jurisdictional water and would not be subject to regulation. **Pond 1** does not contribute water flow through a surface connection to any intermittent or perennial water; therefore, it would not meet a definition of a jurisdictional pond or impoundment under the NWPR.

Table 2. Jurisdictional Assessment of Aquatic Features under the NWPR

Water Identification	Hydrology Characteristics	NWPR Classification
Wetland (b)(1)		
Wetland 1	Seasonally Saturated	Wetland
Ditch (b)(5)		
Ditch 1	Ephemeral	Ditch
Artificial Pond (b)(8)		
Pond 1	Seasonally Inundated	Artificial Pond

¹(a)(1-4) definitions are regulated under Section 404 of the CWA, while (b)(1-12) are excluded from regulation

1986 Waters of the United States Definitions and Rapanos Decision

The 05 June 2007 USACE and USEPA jointly published instructional guidebook is intended to provide the USACE field staff a national standard operating procedure for conducting jurisdictional determinations. The guidebook was prepared by combining all prior applicable provisions, regulations, statutes, and case laws pertaining to the CWA. All terms, definitions, and conclusions regarding the jurisdictional nature of the aquatic features used within this report are derived directly, as they are practiced, from the guidance. The following outlines the applicable interpretations of the guidance appropriate for this situation. **Table 3** provides an overview of the jurisdictional assessment of the aquatic features under the 1986 Waters of the United States definitions and the *Rapanos* decision (**Attachment A, Figure 6**).

Table 3. Jurisdictional Assessment of Aquatic Features Under the 1986 Definitions

Water Identification	Post-Rapanos Water Classification	33 CFR 328.3 Definition
Non-Jurisdictional Features		
Wetland 1	Seasonally Saturated	---
Ditch 1	Ephemeral	---
Pond 1	Artificial Pond	---

Non-Jurisdictional Features

Wetland 1

Wetland 1 was identified along a short swale, upstream of a pond that ran along a construction fence. Wetland 1 was neither adjacent to or abutting any non-RPWs or RPWs and lacked a significant nexus to a TNW. As such, Wetland 1 does not meet a definition of a water of the United States and would not be regulated under Section 404 of the CWA.

Ditch 1

Based on the historic aerial photography, Ditch 1 was excavated in an upland area prior to 1995 to convey surface hydrology off the surrounding roads, concrete lots, and fields. The entire ditch was dry in all aerial photographs. The USGS topographic map does not illustrate a blue line feature in the location of Ditch 1 and the shallow, concrete-lined channel suggests that the stormwater ditch replaced a swale. Current site conditions indicate that the ditch is ephemeral and does not carry relatively permanent flow. Under the 2007 guidance:

Drainage ditches would not be subject to jurisdiction under Section 404 of the CWA by definition, as such features;

- are not tributaries of waters, impoundment of waters, or are waters as defined in paragraphs (a)(1) through (7) of the CWA 33 CFR 328.3;
- are not TNW's or wetlands adjacent to a TNW, nor are they non-navigable tributaries of a TNW with relatively permanent flow or wetlands that abut such tributaries; and
- in accordance with the Rapanos guidance, ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water, are generally not considered to be waters of the United States.

Generally, under the guidance, features that do not have the physical characteristics of a tributary or a wetland and only convey sporadic flow with a speculative connection to a TNW are not considered waters of the United States.

Pond 1

Based on evidence provided by recent aerial photographs, Pond 1 was an artificial pond constructed in 2020. Pond 1 was constructed along a fence line on the edge of a construction site by excavating and placing earthen fill across the natural gradient of the landscape in such a manner to collect and redirect upslope sheet flow. Under the 2007 guidance:

Pond 1 would not be subject to jurisdiction under Section 404 of the CWA, by definition, as it;

- is not a natural pond, impoundment of waters, or a water as defined in paragraphs (a)(1)-(7) of the CWA 33 CFR 328.3;
- is not a TNW or wetland adjacent to a TNW, nor is it a non-navigable tributary of a TNW with relatively permanent flow or wetlands that abut such tributaries; and
- as clarified under 33 CFR 323.2 (b), The term *lake* ... As used in this regulation, the term does not include artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water for such purposes as stock watering, irrigation, settling basins, cooling, and rice growing.

CONCLUSIONS

To summarize the delineation, a wetland, a ditch, and a pond were identified and delineated within the survey area. A summary of these features' characteristics is presented in **Table 1** and a summary of the jurisdictional assessment is presented in **Table 2** under the NWPR and in **Table 3** for the 1986 waters of the United States definitions and the *Rapanos* decision.

Under the *NWPR*, and the **1986 waters of the United States definitions** and the *Rapanos* decision, none of the identified aquatic features would be waters of the United States.

This delineation is based on professional experience in the approved methodology, photograph interpretation and assessing the desktop resources, and from experience with the USACE Fort Worth District regulators; however, this delineation does not constitute a jurisdictional determination of waters of the United States. This delineation has been based on the professional experience of IES staff and our interpretation of USACE regulations at 33 CFR 328.3, the joint USACE/USEPA guidance regarding the *Rapanos* and *Carabell* decisions, IES' interpretation of the NWPR, current judicial reviews, and the Regulatory Guidance Letter (RGL) 08-02. While, IES believes our delineation to be accurate, final authority to interpret the regulations lies solely with the USACE and USEPA. The USACE Headquarters in association with the USEPA often issue guidance that changes the interpretation of published regulations. USACE/USEPA guidance issued after the date of this report has the potential to invalidate the report conclusions and/or recommendations, which may create the need to reevaluate the report conclusions. IES has no regulatory authority, as such, proceeding based solely upon this report does not protect the Client from potential sanction or fines from the USACE/USEPA. The Client acknowledges that they have the opportunity to submit this report to the USACE for a preliminary jurisdictional determination for concurrence prior to proceeding with any work within aquatic features located on the survey area. If the Client elects not to do so, then the Client proceeds at their sole risk.

IES appreciates the opportunity to work with you and the Dallas Fort Worth International Airport Environmental Affairs Department on this project, and we hope we may be of assistance to you in the future. If you have any comments, questions, or concerns, please do not hesitate to contact us. We can be reached at 972-562-7672 or by email at skipp@intenvsol.com or rreinecke@intenvsol.com.

Sincerely,

Integrated Environmental Solutions, LLC.



Mr. Shae Kipp
Ecologist

Attachments

File ref: 03.006.094

ATTACHMENT A
Figures

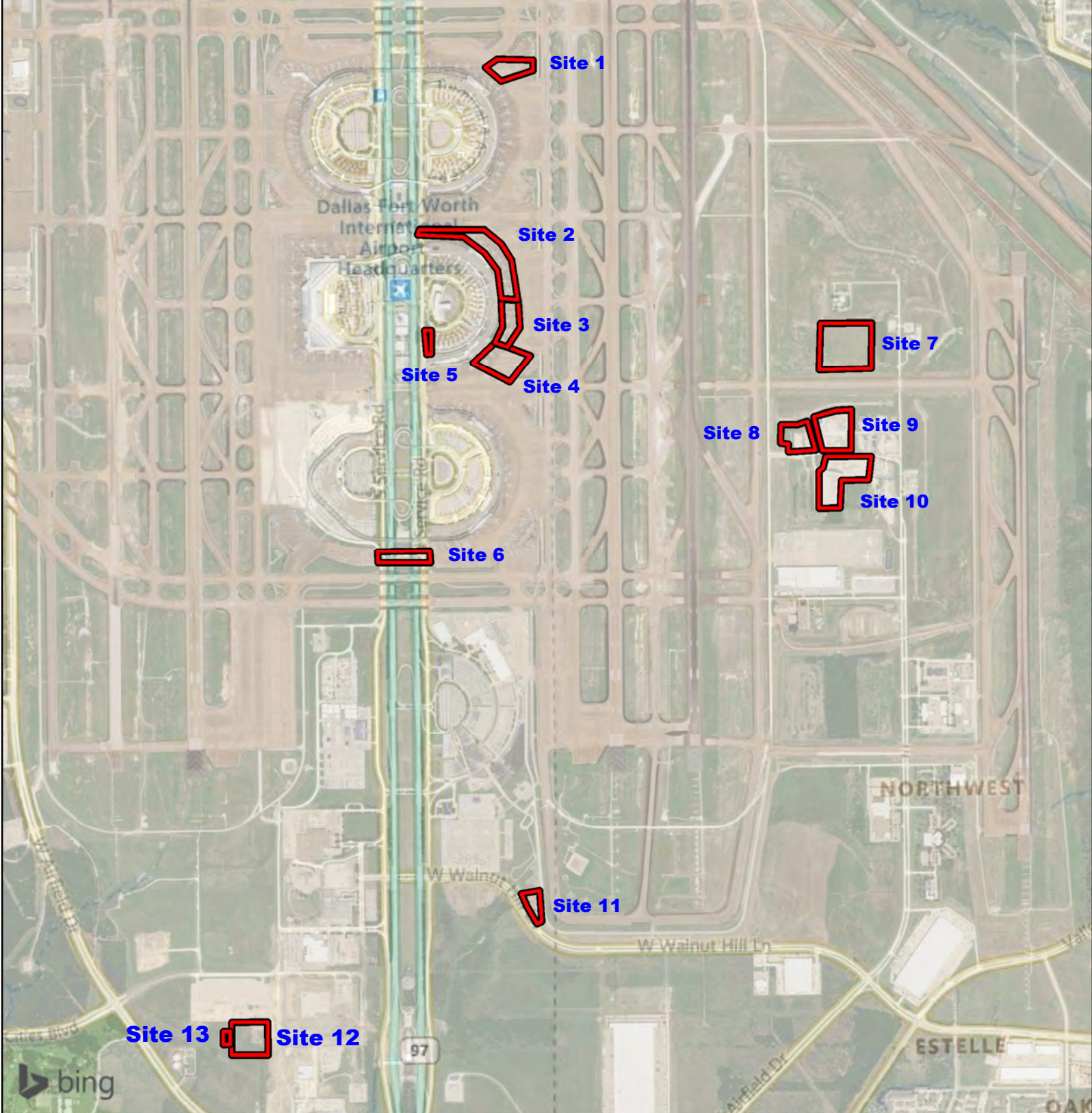



Figure 1.
General Location Map

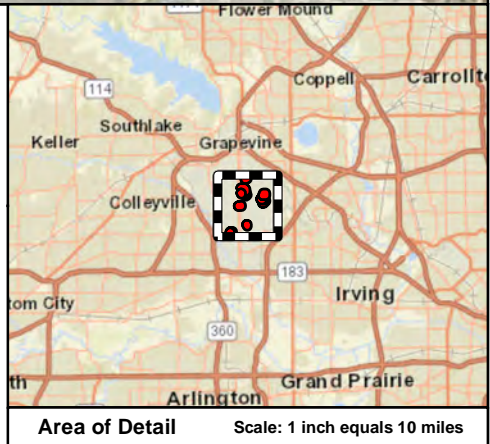
CTA Development
 Cities of Irving, Euless, Grapevine,
 and Coppell
 Dallas and Tarrant Counties, Texas

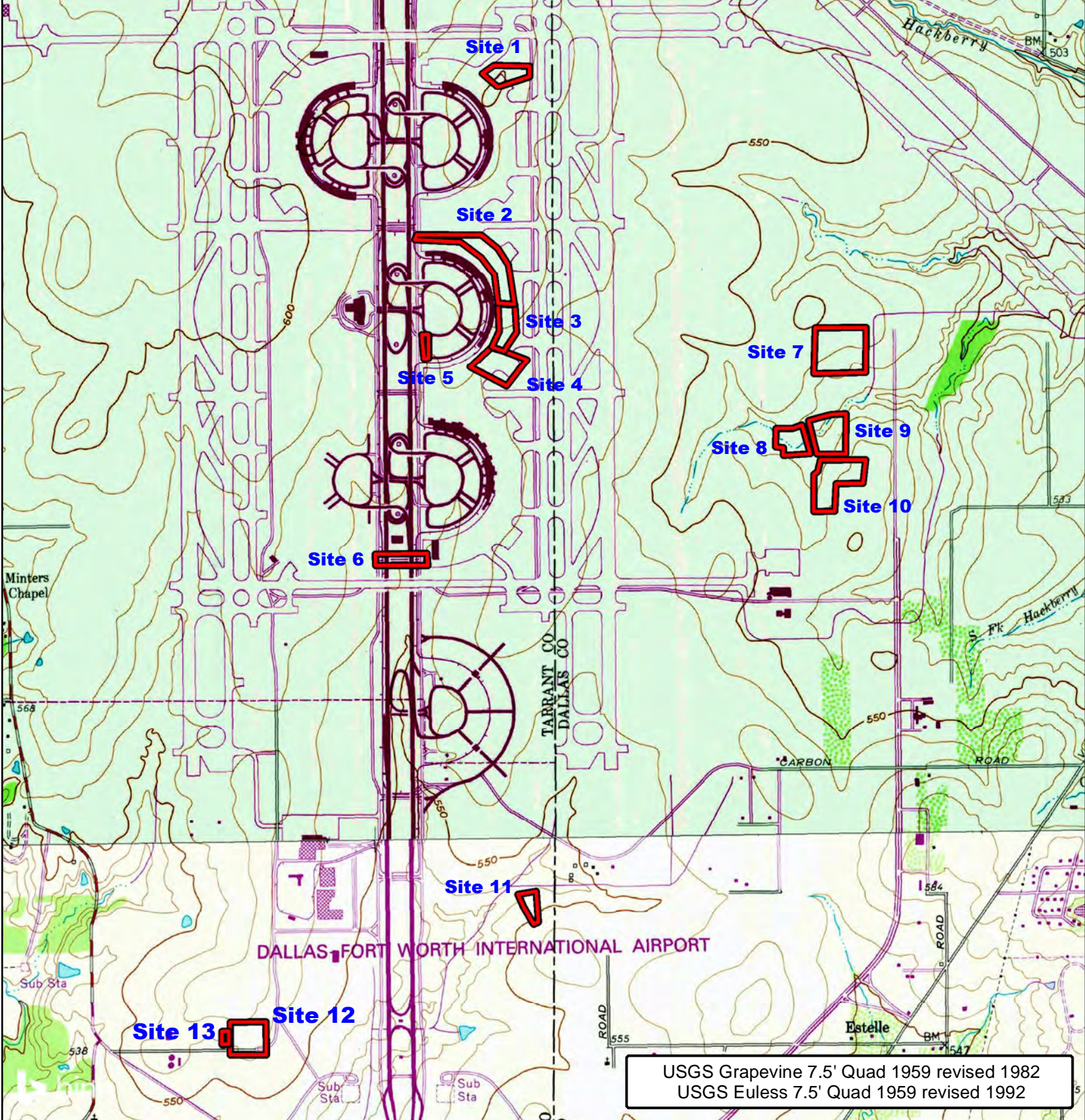
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0 2,000


File Ref. 03.006.094
 Date: 9/28/2021

 Survey Area

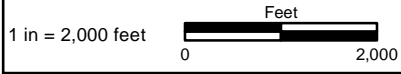




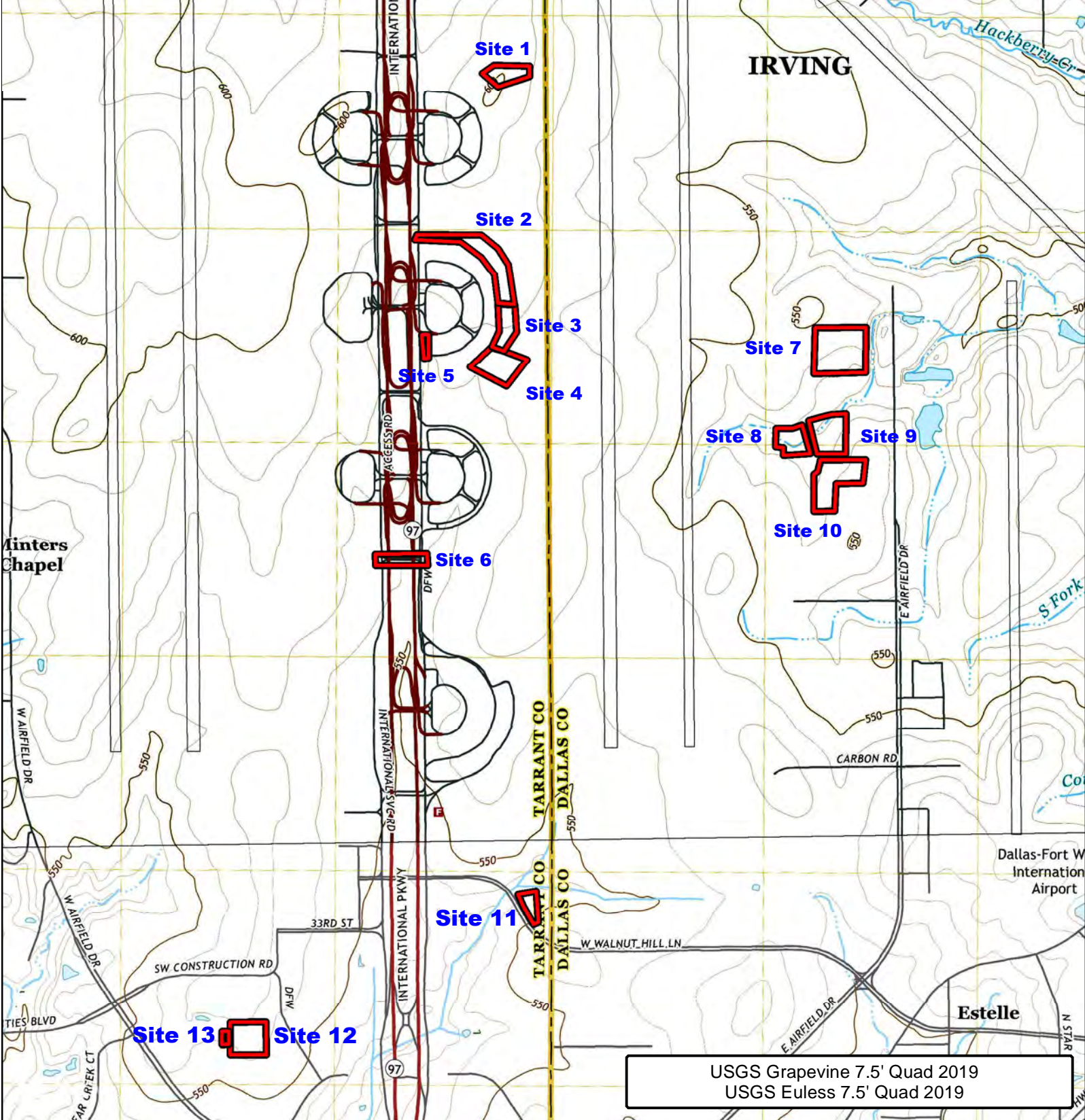
**Figure 2A.
Topographic Setting**

 Survey Area

CTA Development
 Cities of Irving, Euless, Grapevine,
 and Coppell
 Dallas and Tarrant Counties, Texas



File Ref. 03.006.094
 Date: 9/28/2021



USGS Grapevine 7.5' Quad 2019
 USGS Euless 7.5' Quad 2019


Figure 2B.
Topographic Setting

CTA Development
 Cities of Irving, Euless, Grapevine,
 and Coppell
 Dallas and Tarrant Counties, Texas

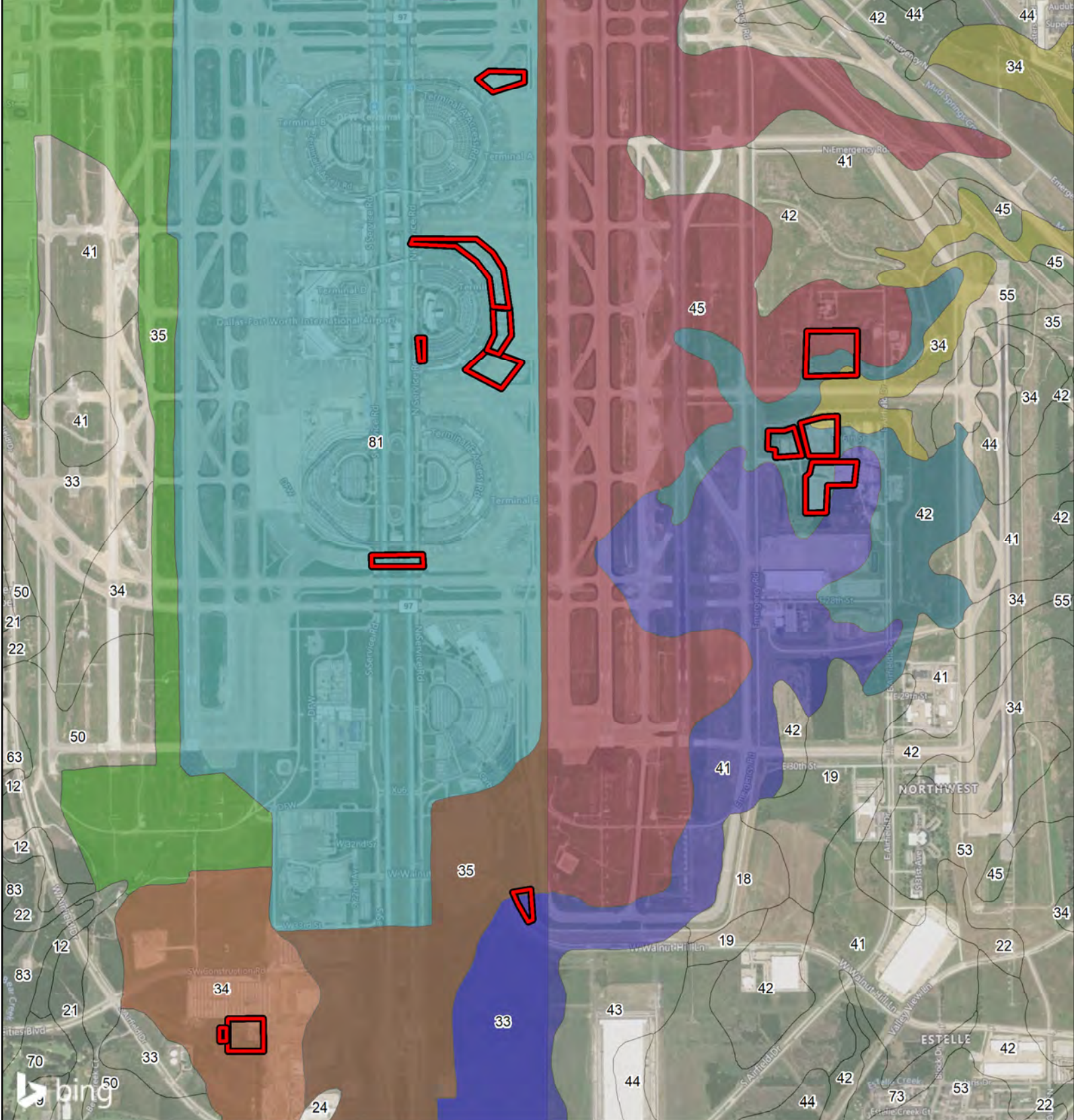
1 in = 2,000 feet

0 2,000

File Ref. 03.006.094
 Date: 9/28/2021

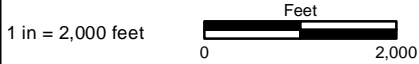
 Survey Area

N
 W E
 S



**Figure 3.
Soils Map**

CTA Development
 Cities of Irving, Euless, Grapevine,
 and Coppell
 Dallas and Tarrant Counties, Texas



File Ref. 03.006.094
 Date: 9/29/2021

Survey Area

Soil map units outside survey area

Soil Map Units - Dallas County

34- Ferris-Heiden complex, 5 to 12 percent slopes

41- Heiden clay, 1 to 3 percent slopes

42- Heiden clay, 2 to 5 percent slopes, eroded

45- Houston Black-Urban land complex, 0 to 4 percent slopes

Soil Map Units - Tarrant County

33 - Heiden clay, 1 to 3 percent slopes

34 - Houston Black clay, 1 to 3 percent slopes

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

81 - Urban land

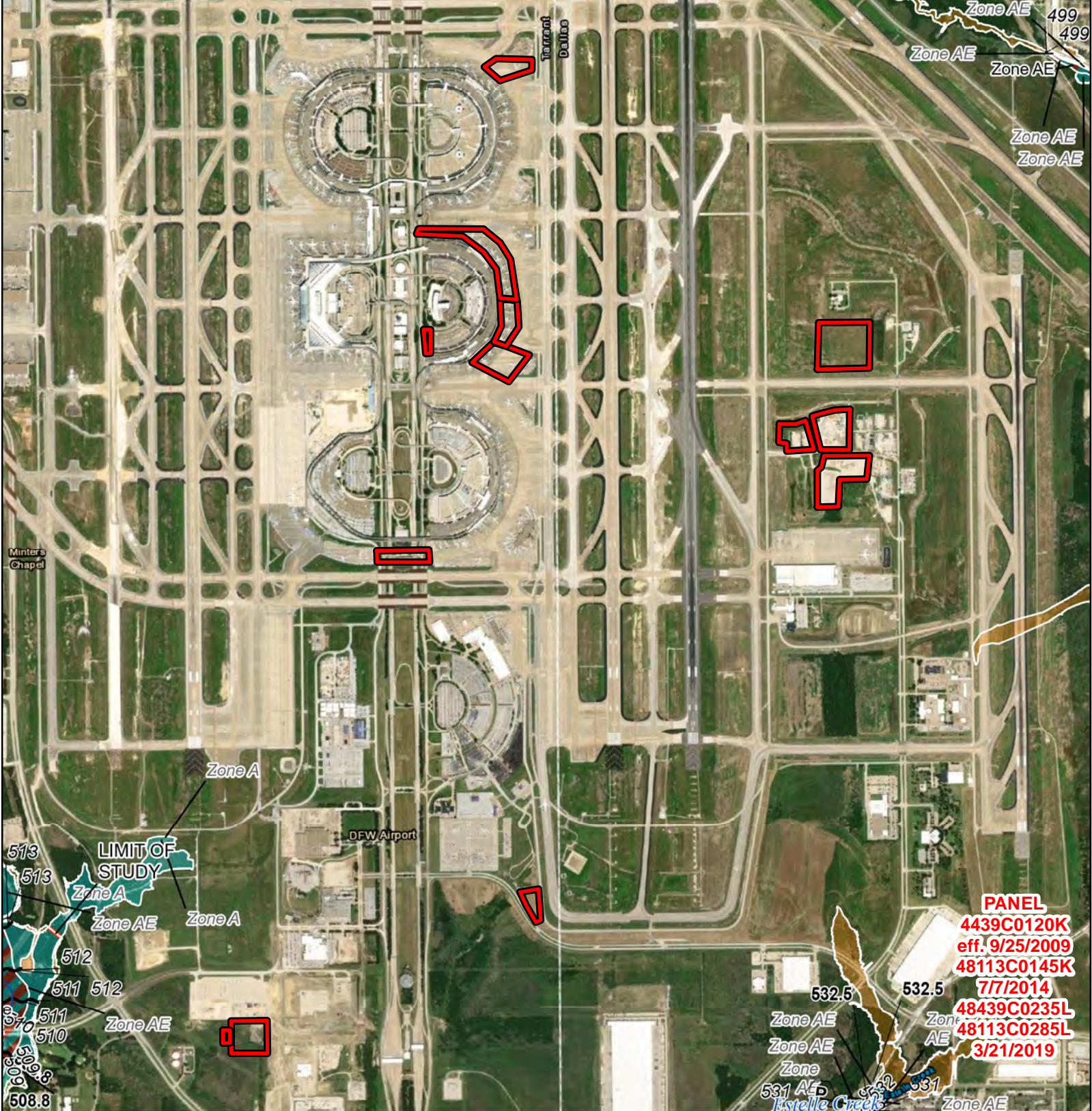


Figure 4.
Federal Emergency
Management Agency
Flood Insurance Rate Map

CTA Development
 Cities of Irving, Euless, Grapevine,
 and Coppell
 Dallas and Tarrant Counties, Texas

1 in = 2,000 feet
 Feet
 0 2,000



File Ref. 03.006.094
 Date: 9/29/2021

Survey Area

FEMA FIRM Zone Descriptions

- Zone X - Areas determined to be outside the 0.2% annual chance floodplain
- Zone X - Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood
- Zone A - Special Flood Hazard Areas subject to inundation by the 1% annual chance flood; No base flood elevations determined
- Zone AE - Special Flood Hazard Areas subject to inundation by the 1% annual chance flood; Base flood elevations determined
- Zone AE - Floodway areas in Zone AE

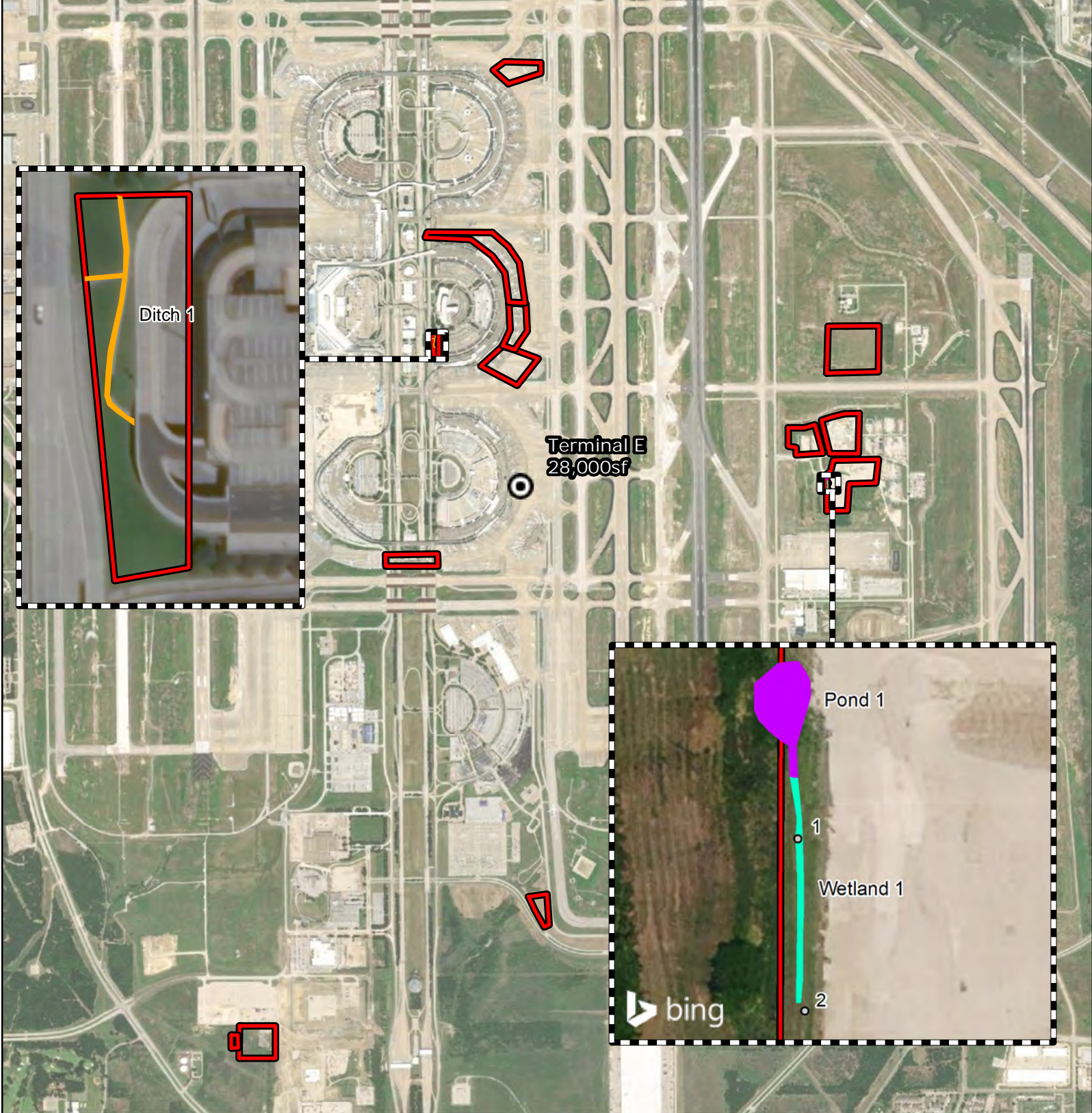
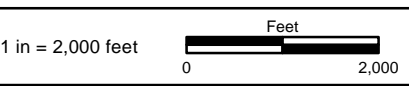


Figure 5.
NWPR Aquatic Features Identified
within the Survey Area

CTA Development
 Cities of Irving, Euless, Grapevine,
 and Coppell
 Dallas and Tarrant Counties, Texas



File Ref. 03.006.094
 Date: 9/29/2021

- Survey Area
- Wetland Determination Data Form
- Aquatic Features Excluded From Jurisdiction**
- Wetland (b)(1)
- Ditch (b)(5)
- Artificial Pond (b)(8)

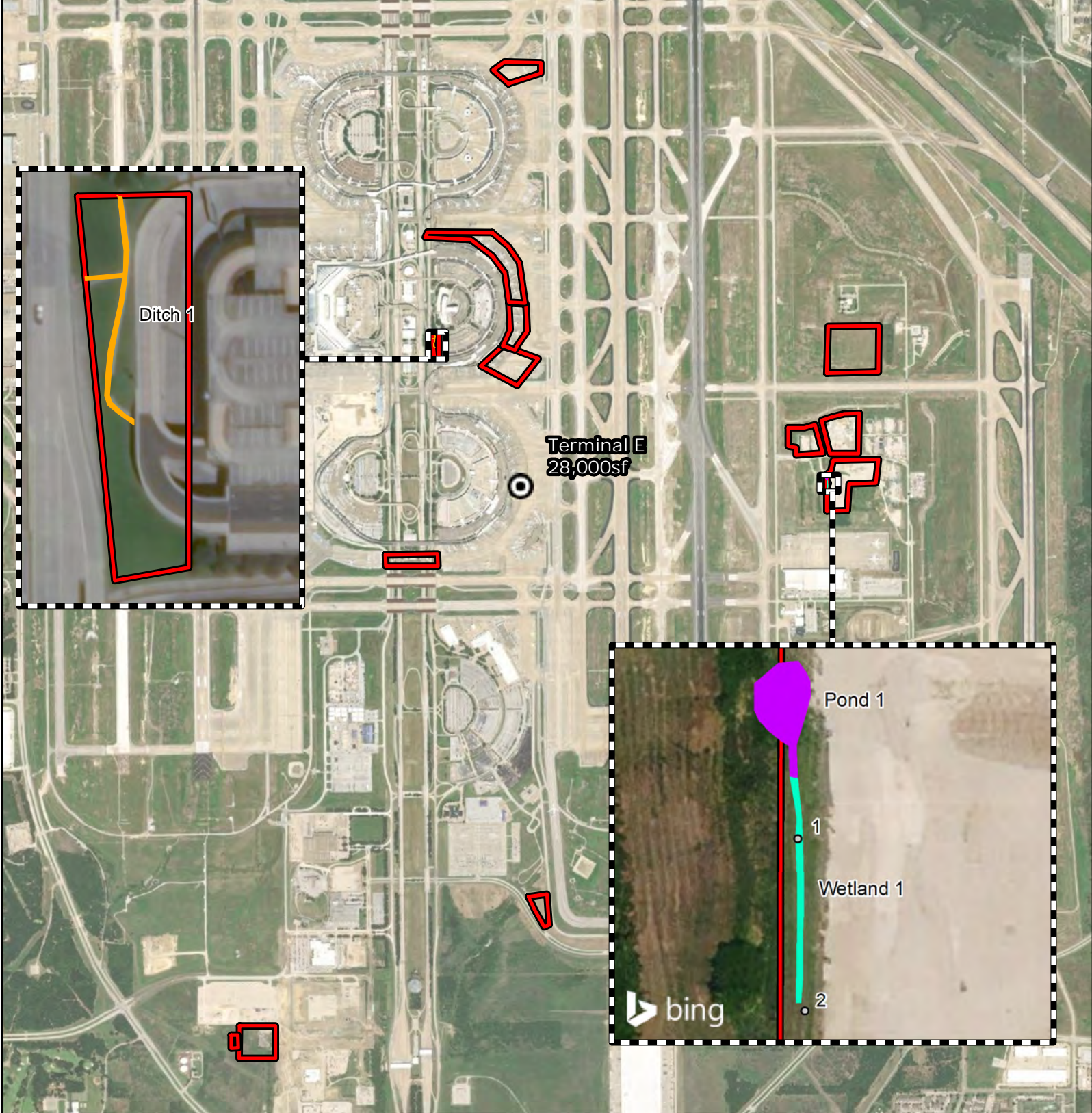


Figure 6.
Pre-2015 Aquatic Features
Identified within the Survey Area

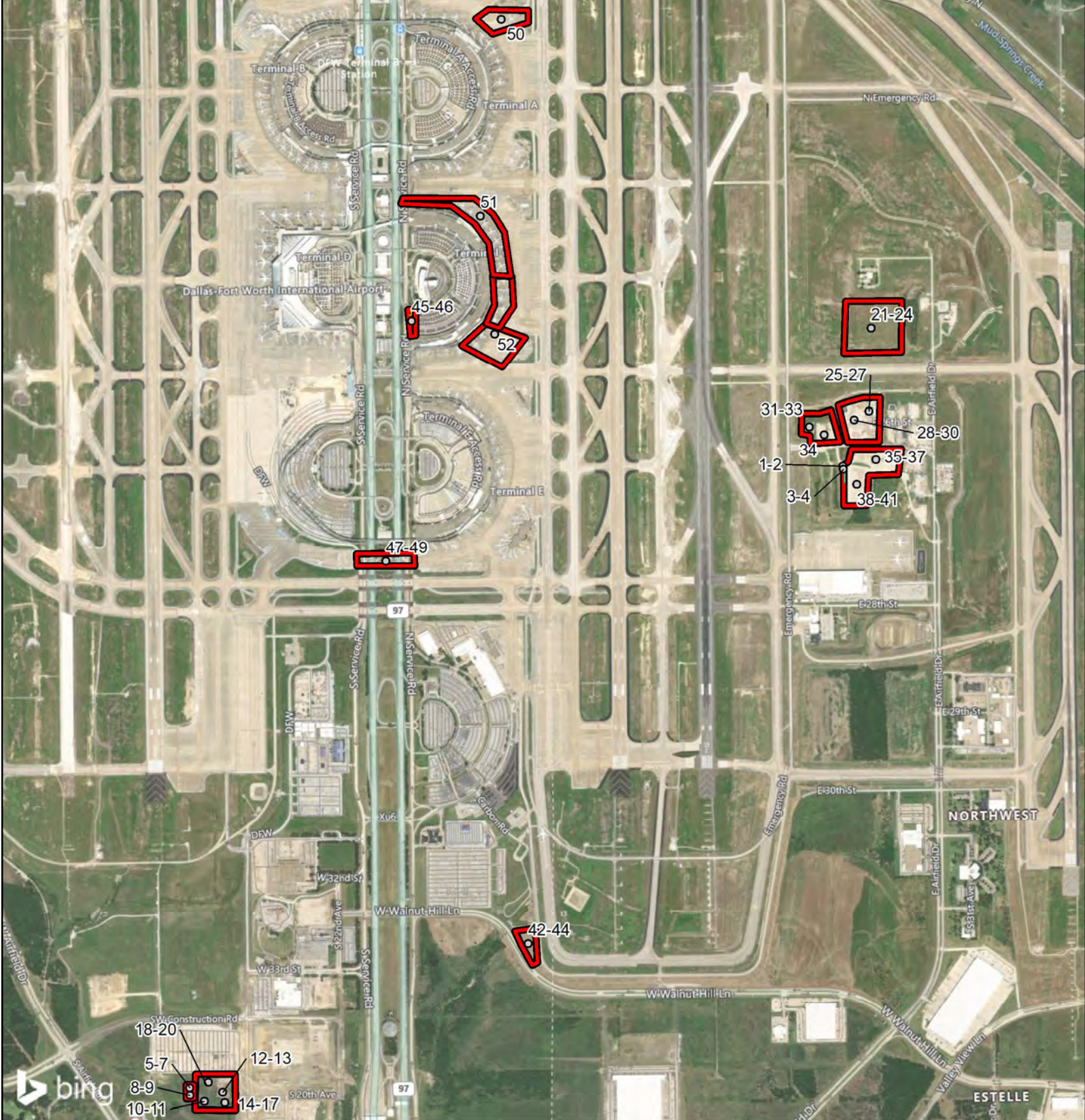
CTA Development
 Cities of Irving, Euless, Grapevine,
 and Coppell
 Dallas and Tarrant Counties, Texas



File Ref. 03.006.094
 Date: 9/29/2021

- Survey Area
- Wetland Determination Data Form
- Aquatic Features Excluded From Jurisdiction**
- Wetland, Isolated
- Ditch, Ephemeral
- Artificial Pond

ATTACHMENT B
Site Photographs



Photograph Location Map

CTA Development
DFW International Airport
Dallas and Tarrant Counties, Texas



File Ref. 03.006.094
Date: 9/29/2021

- Survey Area
- Photograph Location
- Aquatic Features Excluded From Jurisdiction**
- Wetland, Isolated
- Ditch, Ephemeral
- Artificial Pond



Photograph 1



Photograph 2



Photograph 3



Photograph 4



Photograph 5



Photograph 6



Photograph 7



Photograph 8



Photograph 9



Photograph 10



Photograph 11



Photograph 12



Photograph 13



Photograph 14



Photograph 15



Photograph 16



Photograph 17



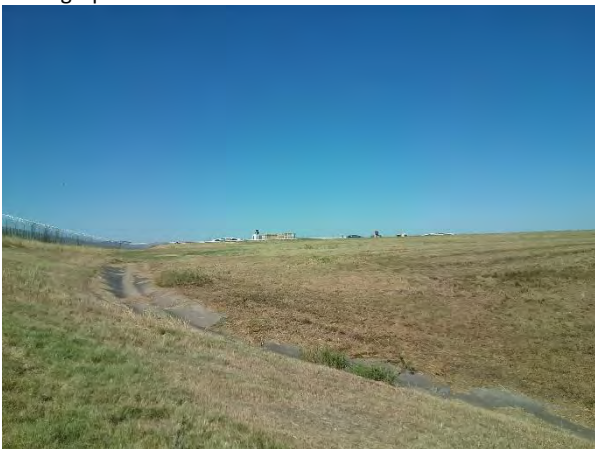
Photograph 18



Photograph 19



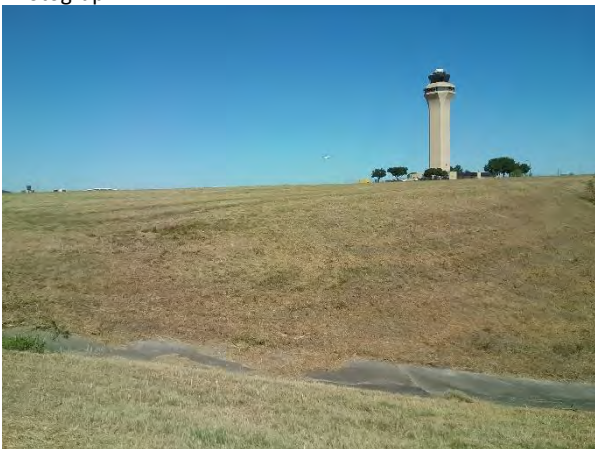
Photograph 20



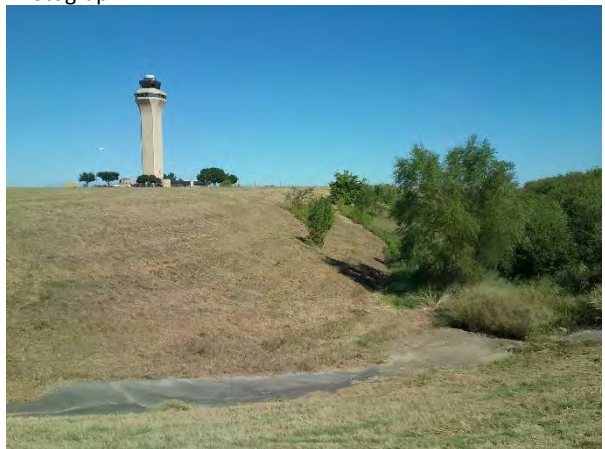
Photograph 21



Photograph 22



Photograph 23



Photograph 24



Photograph 25



Photograph 26



Photograph 27



Photograph 28



Photograph 29



Photograph 30



Photograph 31



Photograph 32



Photograph 33



Photograph 34



Photograph 35



Photograph 36



Photograph 37



Photograph 38



Photograph 39



Photograph 40



Photograph 41



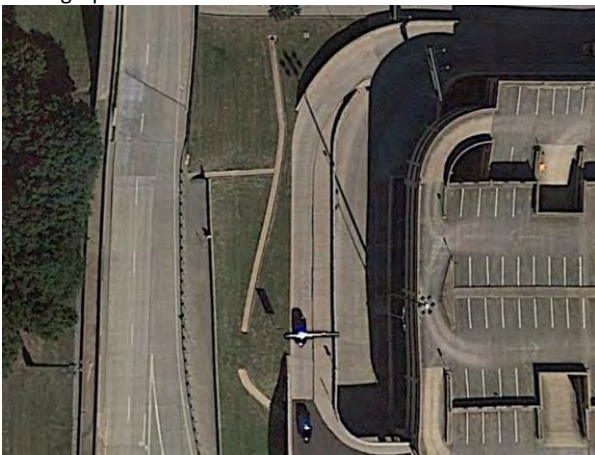
Photograph 42



Photograph 43



Photograph 44



Photograph 45*



Photograph 46*



Photograph 47*



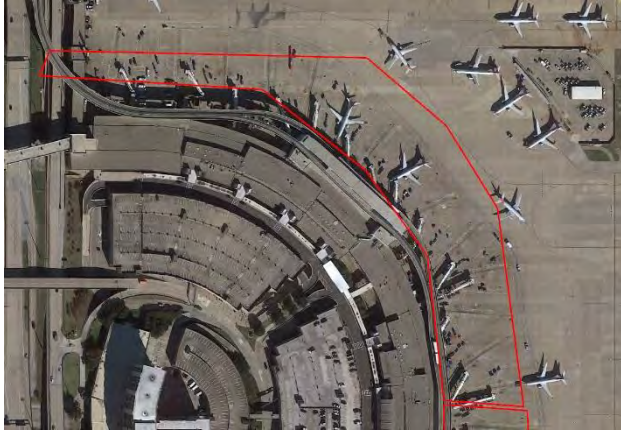
Photograph 48*



Photograph 49*



Photograph 50*



Photograph 51*



Photograph 52*

*Aerial Images and Street View Images from Google Earth

ATTACHMENT C
Routine Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: CTA Development Project City/County: DFW Airport/Tarrant Sampling Date: 9/22/2021
 Applicant/Owner: Dallas/Fort Worth International Airport, Environmental Affairs Department State: TX Sampling Point: 1
 Investigator(s): Karisa Fenton; Claire Unruh Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope %: 0-1
 Subregion (LRR): J Lat: 32.889606 N Long: -97.019763 W Datum: NAD 1983
 Soil Map Unit Name: Heiden clay, 2 to 5 percent slopes, eroded NWI Classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are vegetation, Soil, Or hydrology Significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are vegetation, Soil, Or hydrology Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Remarks: <u>Swale adjacent to pond along construction fence line.</u>			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot Size: <u>30' Radius</u>)	Absolute % Coverage	Dominant Species?	Indicator Status	
1. <u>N/A</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____				
3. _____				
4. _____				
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot Size: <u>15' Radius</u>)				
1. <u>N/A</u>				Prevalence Index Worksheet: Total % Cover of: _____ Multiply By: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
2. _____				
3. _____				
4. _____				
5. _____				
	<u>0</u>	= Total Cover		
Herb Stratum (Plot Size: <u>5' Radius</u>)				
1. <u>Iva annua</u>	<u>40</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation Yes _____ 2 - Dominance Test is > 50% _____ 3 - Prevalence Index is ≤ 3.0 ¹ _____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Symphytotrichum subulatum</u>	<u>35</u>	<u>Yes</u>	<u>OBL</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
	<u>75</u>	= Total Cover		
Woody Vine Stratum (Plot Size: <u>15' Radius</u>)				
1. <u>N/A</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____				
	<u>0</u>	= Total Cover		
% Bare Ground in Herb Stratum <u>25</u>				
Remarks:				

SOILS

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-16	10 YR 4/2	97	5 YR 4/6	3	C	PL/M	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix

<p>Hydric Soil indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR F) <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) <input type="checkbox"/> Depleted below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) 	<ul style="list-style-type: none"> <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> High Plains Depressions (F16 (MLRA 72 & 73 of LRR H)) 	<p>Indicators for Problematic Hydric Soils³:</p> <ul style="list-style-type: none"> <input type="checkbox"/> 1 CM Muck (A9) (LRR I, J) <input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H) <input type="checkbox"/> Dark Surface (S7) (LRR G) <input type="checkbox"/> High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks) <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless distributed or problematic.</p>
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<p>Restrictive Layer (if present):</p> <p>Type: <u>N/A</u></p> <p>Depth (inches): <u>N/A</u></p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
---	--

Remarks:

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p>Primary indicators (minimum of one required; check all that apply)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water Stained Leaves (B9) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) (where not tilled) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks) 	<p>Secondary Indicators (minimum of two required)</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) (where tilled) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)
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<p>Field Observations:</p> <p>Surface Water Present? Yes? <input type="checkbox"/> No? <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u></p> <p>Water Table Present? Yes? <input type="checkbox"/> No? <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u></p> <p>Saturation Present? (includes capillary fringe) Yes? <input type="checkbox"/> No? <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u></p>	<p>Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
---	--

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: CTA Development Project City/County: DFW Airport/Tarrant Sampling Date: 9/22/2021
 Applicant/Owner: Dallas/Fort Worth International Airport, Environmental Affairs Department State: TX Sampling Point: 2
 Investigator(s): Karisa Fenton; Claire Unruh Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope %: 0-1
 Subregion (LRR): J Lat: 32.889606 N Long: -97.019763 W Datum: NAD 1983
 Soil Map Unit Name: Heiden clay, 2 to 5 percent slopes, eroded NWI Classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are vegetation, Soil, Or hydrology Significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are vegetation, Soil, Or hydrology Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Remarks: <u>Hillslope upslope of wetland swale, along construction fence line. Upland berm evident between wetland and downslope area.</u>			

VEGETATION – Use scientific names of plants.

Tree Stratum	Absolute % Coverage	Dominant Species?	Indicator Status	
1. <u>N/A</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
2. _____				
3. _____				
4. _____				
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot Size: <u>15' Radius</u>)				
1. <u>N/A</u>				Prevalence Index Worksheet: Total % Cover of: _____ Multiply By: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
2. _____				
3. _____				
4. _____				
5. _____				
<u>0</u> = Total Cover				
Herb Stratum (Plot Size: <u>5' Radius</u>)				
1. <u>Helianthus annuus</u>	<u>40</u>	<u>Yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: _____ 1 - Rapid Test for Hydrophytic Vegetation _____ 2 - Dominance Test is > 50% _____ 3 - Prevalence Index is ≤ 3.0 ¹ _____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Sorghum halepense</u>	<u>40</u>	<u>Yes</u>	<u>FACU</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
<u>80</u> = Total Cover				
Woody Vine Stratum (Plot Size: <u>15' Radius</u>)				
1. <u>N/A</u>				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
2. _____				
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum <u>20</u>				
Remarks:				

SOILS

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-16	10 YR 4/2	100					Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix

<p>Hydric Soil indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR F) <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) <input type="checkbox"/> Depleted below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) 	<ul style="list-style-type: none"> <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> High Plains Depressions (F16 (MLRA 72 & 73 of LRR H) 	<p>Indicators for Problematic Hydric Soils³:</p> <ul style="list-style-type: none"> <input type="checkbox"/> 1 CM Muck (A9) (LRR I, J) <input type="checkbox"/> Coast Prairie Redox (A16) (LRR F, G, H) <input type="checkbox"/> Dark Surface (S7) (LRR G) <input type="checkbox"/> High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks) <p>³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless distributed or problematic.</p>
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<p>Restrictive Layer (if present):</p> <p>Type: <u>N/A</u></p> <p>Depth (inches): <u>N/A</u></p>	<p>Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>
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Remarks:

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p>Primary indicators (minimum of one required; check all that apply)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water Stained Leaves (B9) 		<ul style="list-style-type: none"> <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) (where not tilled) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks) 	<p>Secondary Indicators (minimum of two required)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) (where tilled) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)
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<p>Field Observations:</p> <p>Surface Water Present? Yes? <input type="checkbox"/> No? <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u></p> <p>Water Table Present? Yes? <input type="checkbox"/> No? <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u></p> <p>Saturation Present? (includes capillary fringe) Yes? <input type="checkbox"/> No? <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u></p>	<p>Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

ATTACHMENT D
Historic Aerial Photographs



CTA Development Project

2682 E Airfield Dr

Dallas, TX 75261

Inquiry Number: 6681807.1

September 28, 2021

The EDR Aerial Photo Decade Package



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

09/28/21

Site Name:

CTA Development Project
2682 E Airfield Dr
Dallas, TX 75261
EDR Inquiry # 6681807.1

Client Name:

Integrated Env. Solutions, Inc.
610 Elm St Suite 300
McKinney, TX 75069
Contact: Claire Unruh



Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

<u>Year</u>	<u>Scale</u>	<u>Details</u>	<u>Source</u>
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2008	1"=500'	Flight Year: 2008	USDA/NAIP
2005	1"=500'	Flight Year: 2005	USDA/NAIP
1995	1"=500'	Acquisition Date: January 31, 1995	USGS/DOQQ
1990	1"=500'	Flight Date: January 29, 1990	NAPP
1984	1"=500'	Flight Date: May 10, 1984	TXDOT
1979	1"=500'	Flight Date: November 11, 1979	USDA
1972	1"=500'	Flight Date: February 13, 1972	USDA
1968	1"=500'	Flight Date: September 18, 1968	USGS
1958	1"=500'	Flight Date: January 07, 1958	ASCS
1950	1"=500'	Flight Date: December 17, 1950	USDA
1942	1"=500'	Flight Date: January 27, 1942	USDA

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INQUIRY #: 6681807.1

YEAR: 2016

— = 500'





INQUIRY #: 6681807.1

YEAR: 2012

— = 500'



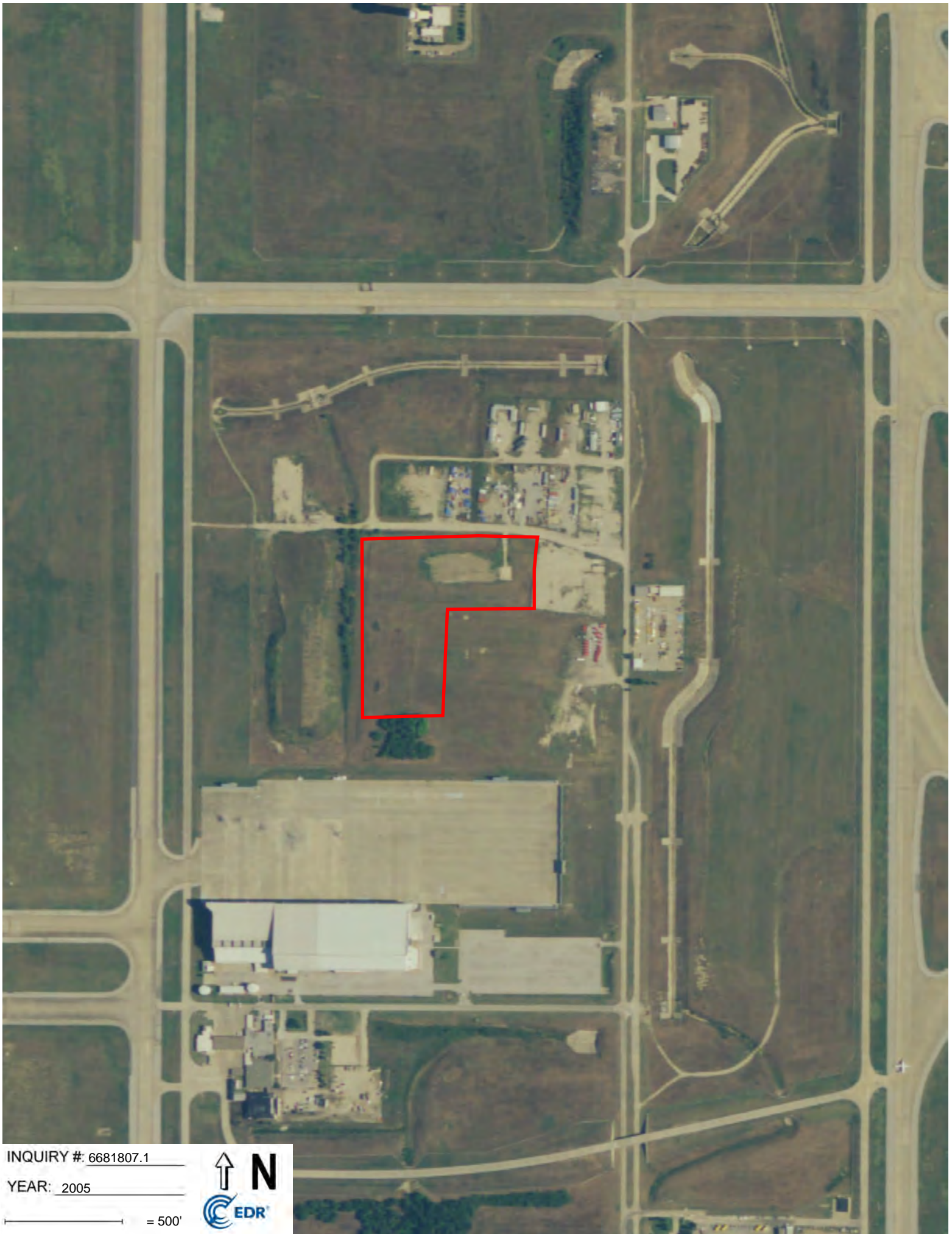


INQUIRY #: 6681807.1

YEAR: 2008

— = 500'



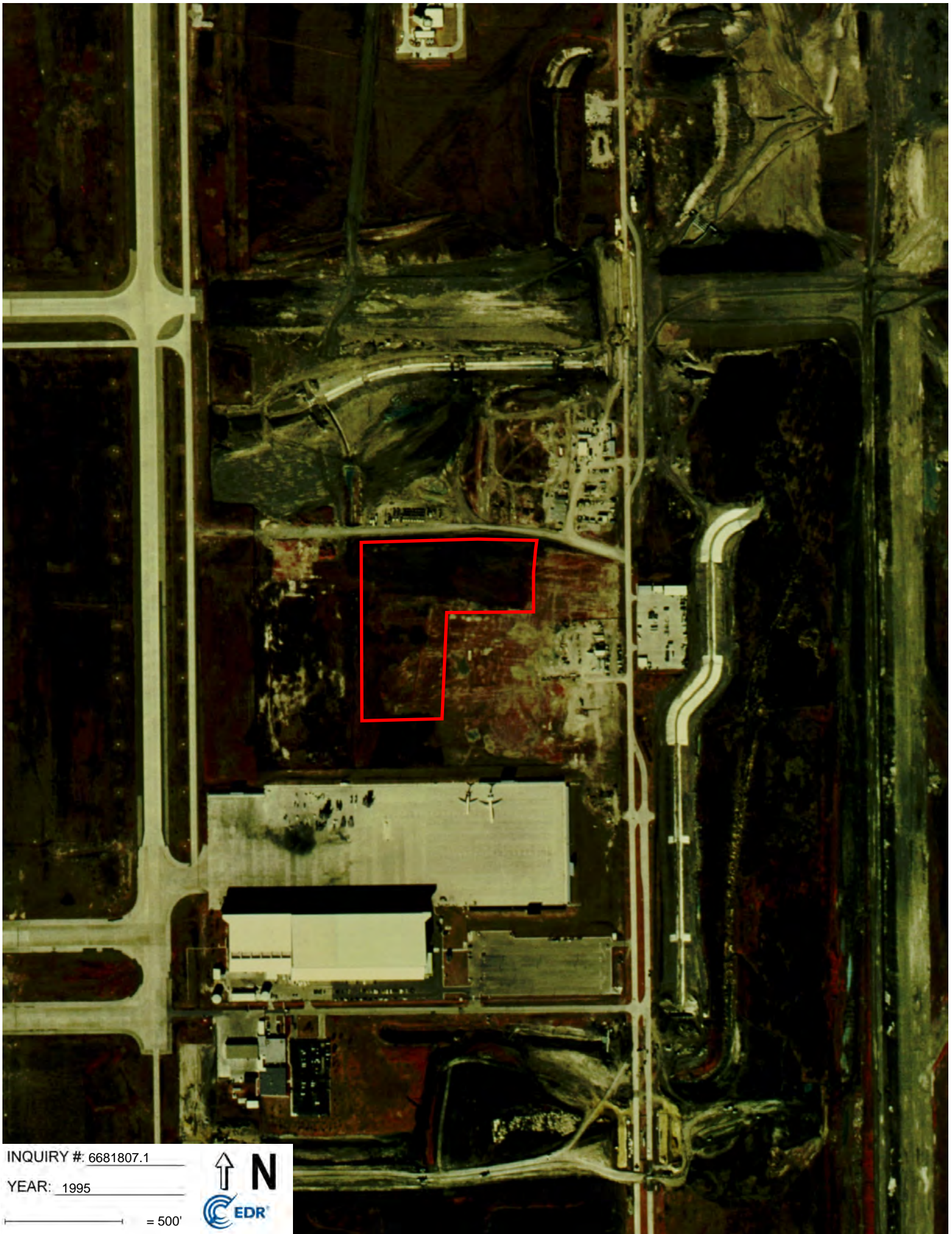


INQUIRY #: 6681807.1

YEAR: 2005

— = 500'





INQUIRY #: 6681807.1

YEAR: 1995

— = 500'



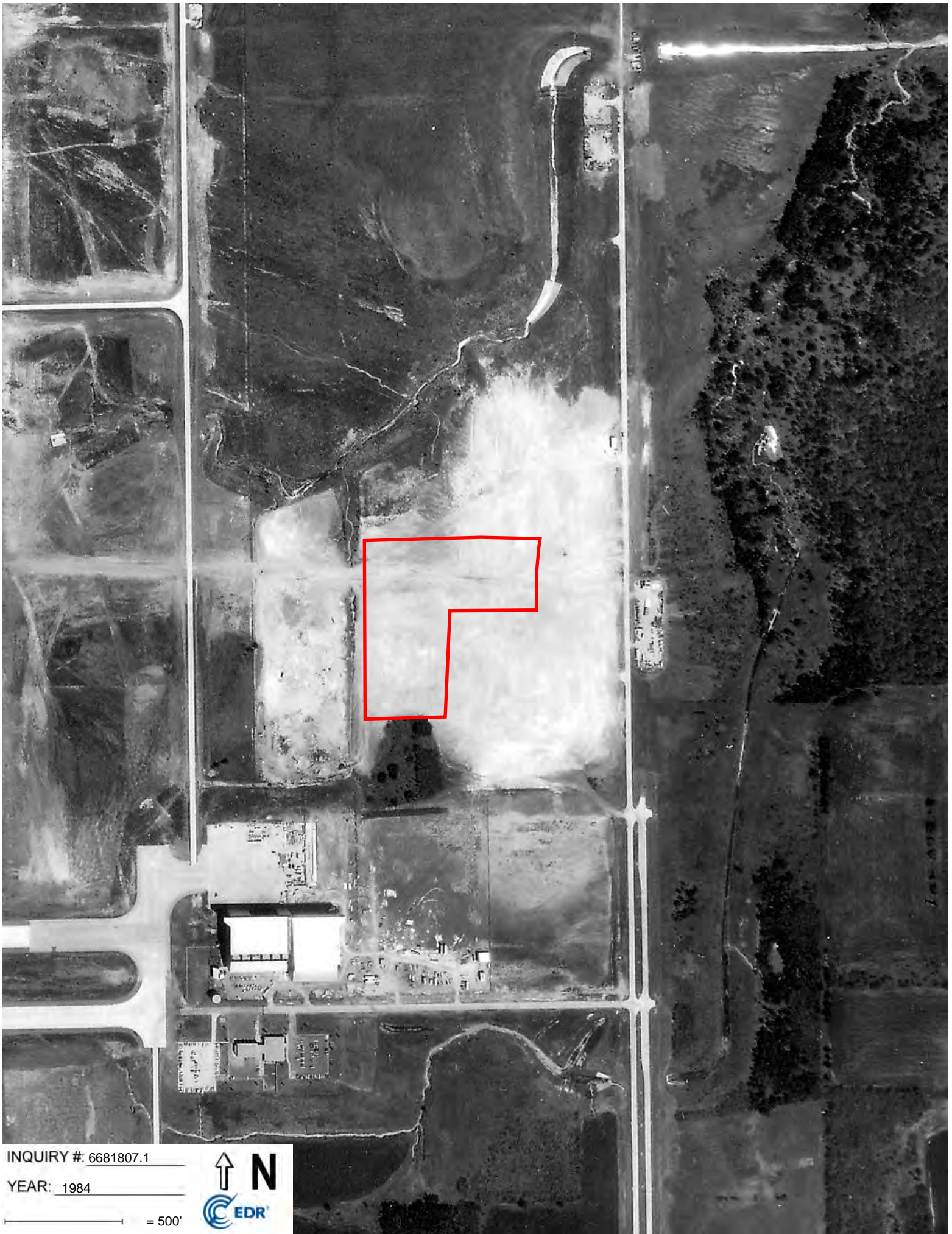


INQUIRY #: 6681807.1

YEAR: 1990

— = 500'



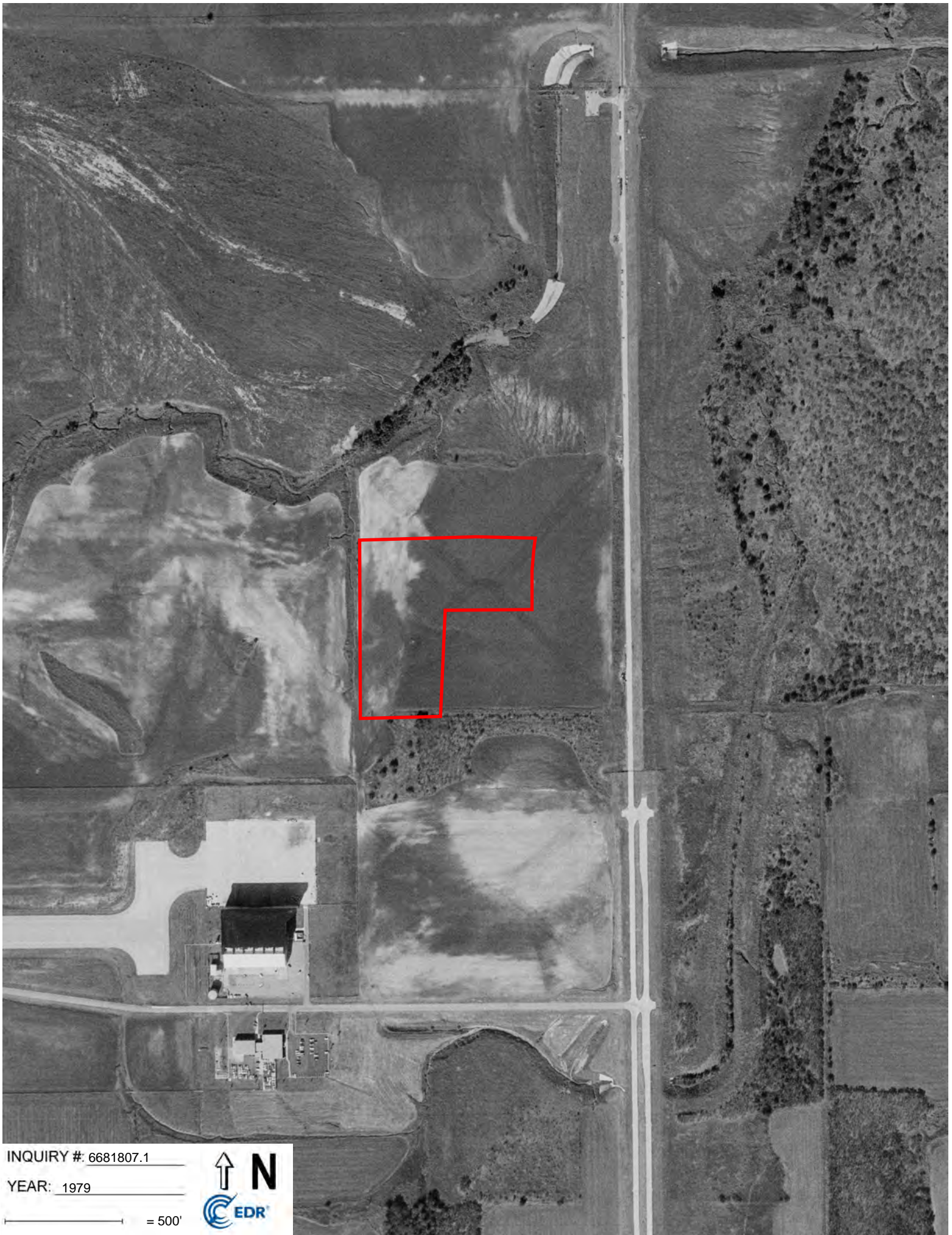


INQUIRY #: 6681807.1

YEAR: 1984

— = 500'





INQUIRY #: 6681807.1

YEAR: 1979

— = 500'





INQUIRY #: 6681807.1

YEAR: 1972

— = 500'



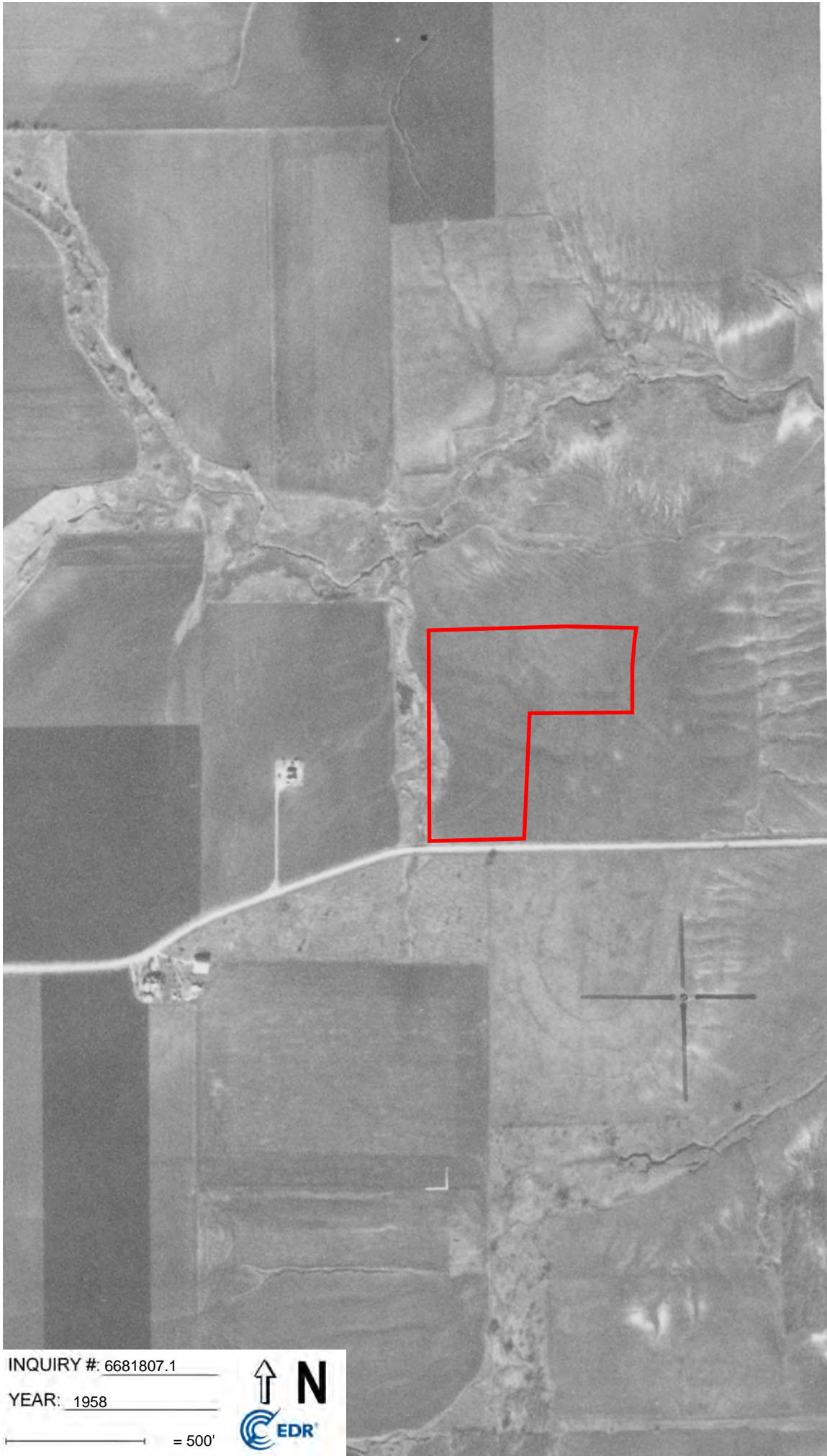


INQUIRY #: 6681807.1

YEAR: 1968

— = 500'





INQUIRY #: 6681807.1

YEAR: 1958

— = 500'





INQUIRY #: 6681807.1

YEAR: 1950

— = 500'





INQUIRY #: 6681807.1

YEAR: 1942

— = 500'

